Credit Card Borrowing in Heterogeneous-Agent Models: Reconciling Theory and Data

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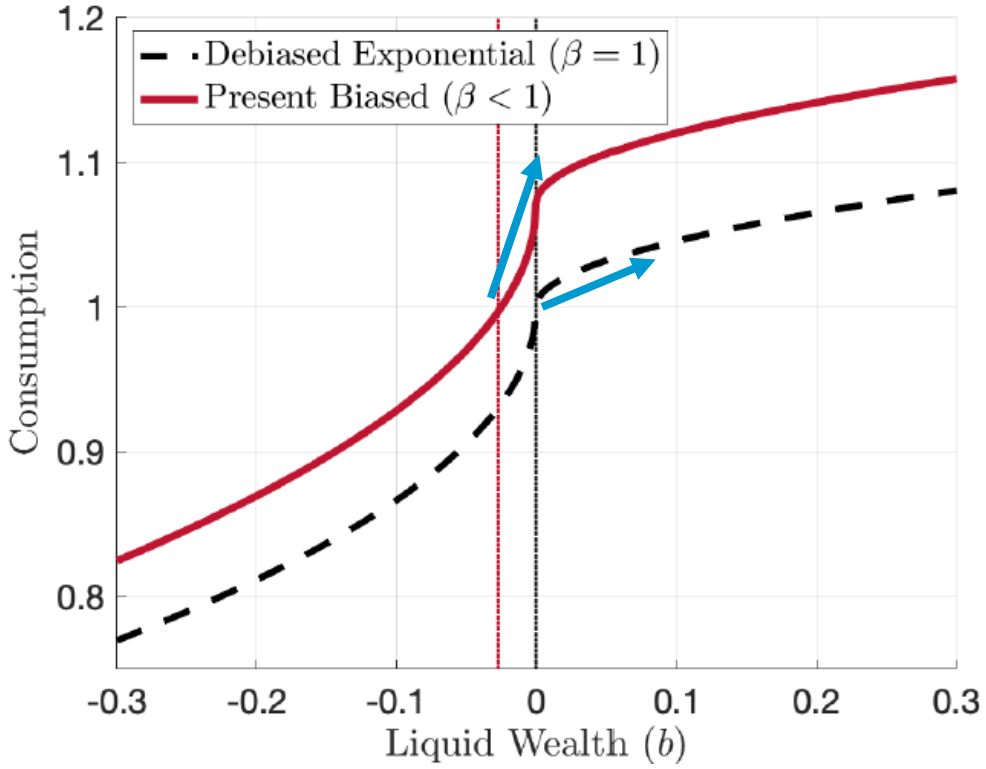
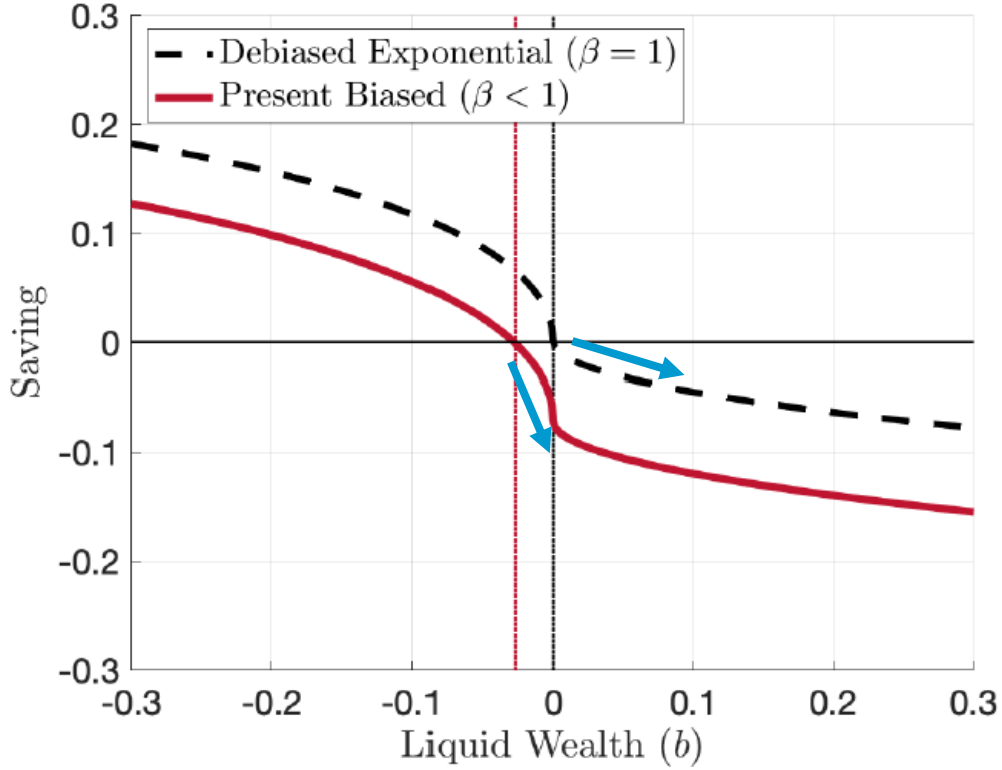
This paper: what drives consumption choices of households and how does it matter for macro?

- In a standard HANK model, zero-liquid-wealth hand-to-mouth ("ZHtM") households are key source of large MPCs
  - High cost of credit deters borrowing → large mass point at exactly 0 wealth
  - But these models feature unrealistically low levels of credit card debt

- Present bias can help deliver both high MPCs *and* realistic CC borrowing, key mechanisms:
  1. Large mass with negative net worth
  2. High MPCs arise from "indebted savings behavior" (expensive debt limits spending)

Mechanism: *Desire* to borrow (vs *inability*) → high MPCs

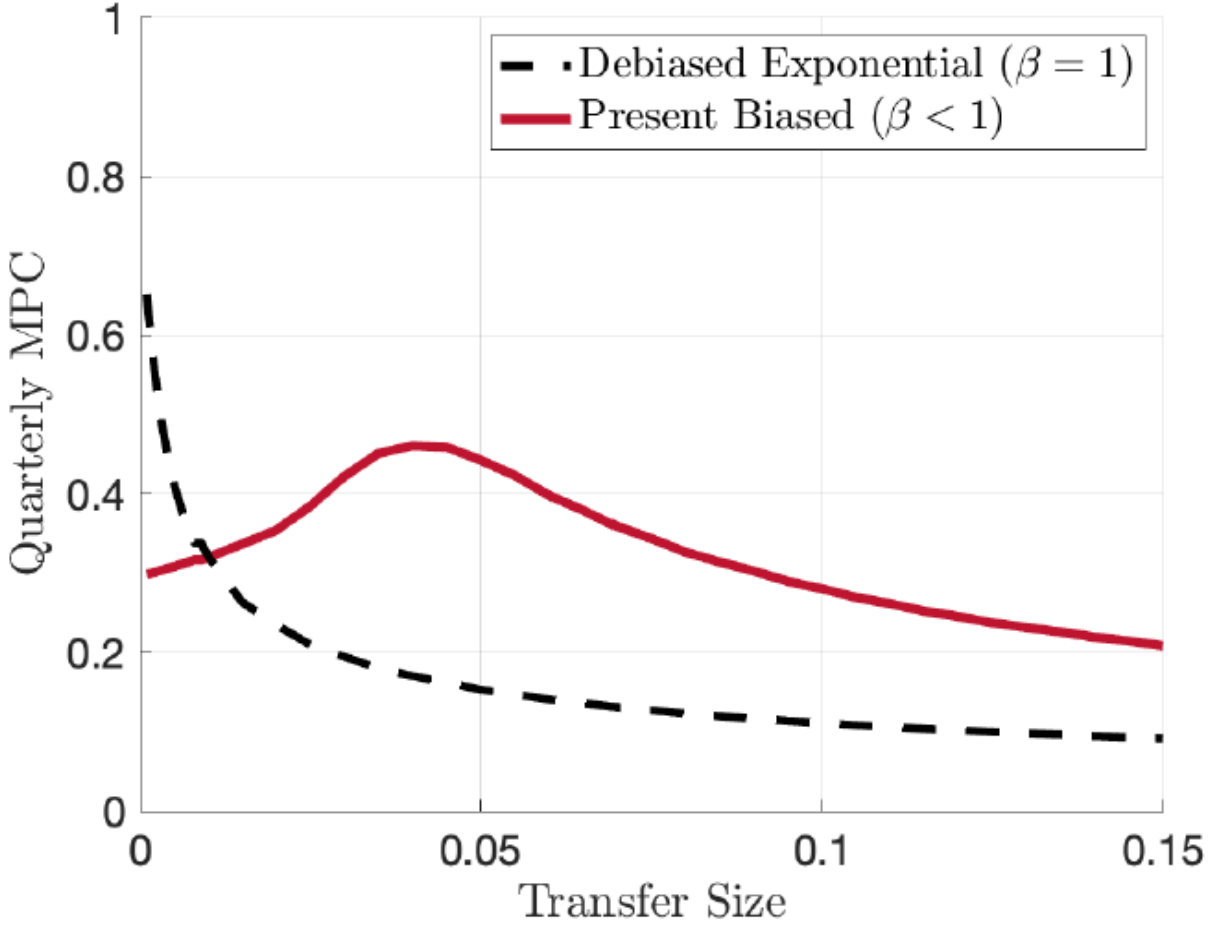




- Similarly-shaped policy functions with present bias
- But HHs hold more debt → tend to locate where the policy function is steepest!
- With present bias, after a positive wealth shock, HHs aim to resume borrowing

Choice of friction is important for macro transmission

- Both present bias and financial constraints can deliver high average MPCs, why does the choice of friction matter?
  - Because macro transmission works differently! I.e., business cycles, monetary policy, and fiscal policy
  - Example: MPC remains elevated for even large wealth transfers



Comment 1:
Can we reject standard HANK (“ZHtM”) with credit card data?

Does scale of credit card borrowing reject HANK?

- HANK: 15% of households have liquid debt (Kaplan Moll Violante, 2018)
  - SCF/PSID: ~50% have CC debt
  - Experian: 60% have CC debt (in Bornstein Indarte, 2023)
  - This paper *matches* the share with CC debt (52%)

- Empirically, many **people co-hold**: revolve CC debt while holding liquid assets
  - Implication: **gross debt != net debt** ← impossible to match both in a net wealth model
  - Note: paper's goal is not to explain/study co-holding, so it's not necessary to feature it (see Boutros Mijakovic, 2024 for innovative work in this area)

- HANK *matches* % of households with **net** negative liquid wealth
  - SCF/PSID: ~15%-25%

Key difference: choice of calibration targets

- Gross and net debt stats don't reject either model

- Should a model of net wealth target gross or net debt in its calibration?
  - Not obvious to me…could argue that if the goal is to write a good model of borrowing decisions, it's best to target **gross** debt
  - Paper argues true liquid wealth is difficult to measure due to lumpy spending & income
  - Since choice of calibration target is a key difference, can the paper do more to motivate this?

Comment 2:
Present bias vs impatience

Are households present biased or impatient?

- Simply calibrating a low discount factor isn't a good solution
  - Can get people to borrow at high rates, but hard to get them to hold illiquid assets
  - An impatient person's preference for borrowing is *time consistent*
  - Present bias introduces time inconsistency, creating a tension between acting patiently versus impatiently → helps match CC debt *and* illiquid wealth

- But what about preference heterogeneity?
  - Aguiar Bils Boar (2024) posit preference heterogeneity as reason for high MPCs
  - Alternative model: discount factor heterogeneity (i.e., mix of patient & impatient)
  - Could potentially match high incidence of borrowing and average illiquid wealth

Additional empirical evidence (1/2)

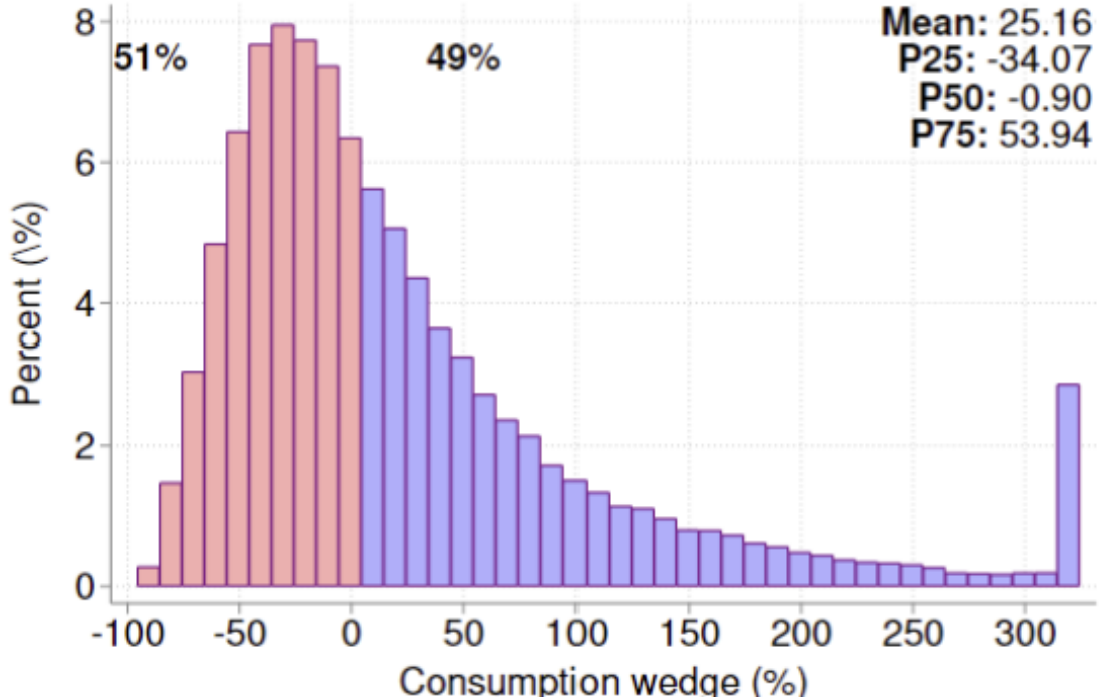
- Test: can preference heterogeneity match…
  1. High % with CC debt
  2. Modest amounts of CC
  3. % and/or amount with illiquid wealth?

- Present bias is a robust finding
  - In a meta-analysis, Imai Rutter Camerer (2021) report 77% of 220 studies reject no present bias
  - Meta-analytic average: $\beta = 0.88 - 0.97$

Additional empirical evidence (2/2)

Can measure the impact of frictions on consumption as a **wedge between actual and counterfactual "frictionless" consumption**

- Consumption, wealth, and expectations of income, interest rates and inflation are **sufficient statistics** for this wedge (Indarte Kluender Malmendier Stepner, 2024)
- Financial constraints → negative wedges
  present bias → positive wedges
- Need frictions (like present bias) *beyond* financial constraints to account for mix of positive and negative wedges
- **Q:** does the paper's model generate a similar distribution for low-income people?



Conclusion

Present bias likely an important friction for macro

- Important paper for macro and household finance
- Present bias is a plausible candidate to explain high levels of CC debt
  - And it significantly alters predictions of policy/shocks
- Note: helpful reference for understanding why and how present bias alters predictions of standard HANK (ZHtM)!