Discussion of *Consumption Wedges: Measuring and Diagnosing Distortions* by Indarte, Kluender, Malmendier, and Stepner

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- MPC out of a temporary income shock is a key statistic in macroeconomic models
  - Old Keynesian models: structural parameter that determines fiscal multiplier
  - NK models: endogenous object that also determines monetary policy transmission
- Large body of empirical work using different variation to estimate MPCs
  - Example = Johnson et al. (2006): MPC out of $\sim$\$500 transfer check is $\sim$0.3

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- High MPCs inconsistent with PIH $\Rightarrow$ **incomplete markets models**
  - Borrowing constraints generate high MPCs, but only for low wealth households
- To generate high **average** MPCs, literature has settled on two core models:
  1. One-asset incomplete markets model $+$ **heterogeneous** β Auclert et al. 2025
  2. **Two**-asset (liquid $+$ illiquid) incomplete markets model Kaplan-Violante 2014, 2022

Current State of the Literature: How to Distinguish Models?

1. Examine other characteristics of MPCs
   - MPCs decay slowly after shock, consistent with **two-asset model** Auclert et al. 2024
   - MPCs non-trivial for big shocks, inconsistent with **two-asset model** Beraja-Zorzi 2024
   - MPCs are asymmetric, consistent with **mental accounting** Baugh et al. 2021

2. Require the model to be consistent with aggregates
   - **Two-asset model** can also generate a realistic wealth distribution, while **one-asset** model has a “missing-middle” Kaplan-Violante 2022

3. Examine other decisions
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4. **This paper**: use consumption wedges!

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This Paper in One Slide

1. Derive an **approximation** for consumption under complete markets that is a function of β, γ, and data

2. Compute the "**wedge**" between the **approximated** and **observed** consumption using (awesome) data on consumption, income, and expectations
   - Note: Big innovation to have the latter with the former two!

3. Document facts using estimated **wedges**:
   - Are large on average $\Rightarrow$ deviate from frictionless models (less surprising)
   - Are often positive $\Rightarrow$ borrowing constraints alone not enough (more surprising)
   - Positively correlate with MPCs, consumption commitments, and financial distress

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Main comment: Sharpen analysis of which theories can explain results

1. Would increase impact by showing readers how to use wedges
2. This literature is **quantitative** $\Rightarrow$ want to know what models predict for your facts!

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My discussion: A preliminary attempt at doing this

1. Solve and simulate several benchmark incomplete markets models ▸ Calibration
   - **One-asset model** (Bewley): infinite horizon, stochastic and mean-reverting income, hard borrowing constraint, constant return
   - **Two-asset model** (Kaplan-Violante): one-asset model $+$ higher return illiquid asset, fixed transaction costs, stochastic arrival of adjustment opportunities
   - Add “naive” **present bias** to both models

Computing Consumption Wedges in Canonical Models

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2. Compute frictionless consumption, following the paper as closely as possible
   - Solve models assuming rational expectations $\Rightarrow$ use these to compute wedges
   - Impose perfect foresight about portfolio choice in two-asset model for $E_t R_{t+j}$
   - No inflation, so ignore it in computation
   - Approximate around model-implied steady-states
   - Note: I found this computation to be non-trivial, which is part of why an exercise along these lines in the paper would be helpful!

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3. Compute wedges $=$ simulated choice $-$ frictionless choice at current states

	Mean (Abs.)	Median (Abs.)	Fraction Positive	Mean	Median
Data	**39.0%**	**35.3%**	**29.6%**	**-14.8%**	**-23.7%**

Consumption Wedges: Data versus Models

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Unsigned wedges are too large in one-asset model

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Unsigned wedges are smaller in two-asset model, but still too large

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Two-Asset	50.1%	51.5%	0.0%	-50.1%	-51.5%

Both one-asset and two-asset models **cannot** generate positive wedges

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One-Asset + $\hat{\beta} = 0.8$	58.3%	59.1%	0.0%	-58.3%	-59.1%

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One-Asset + $\hat{\beta} = 0.3$	55.4%	59.2%	2.1%	-54.6%	-59.2%

Adding present bias helps qualitatively, but not **quantitatively**

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Two-Asset + $\hat{\beta} = 0.8$	49.9%	52.2%	1.6%	-49.8%	-52.2%

Positive wedges with less present bias in two-asset model due to higher return

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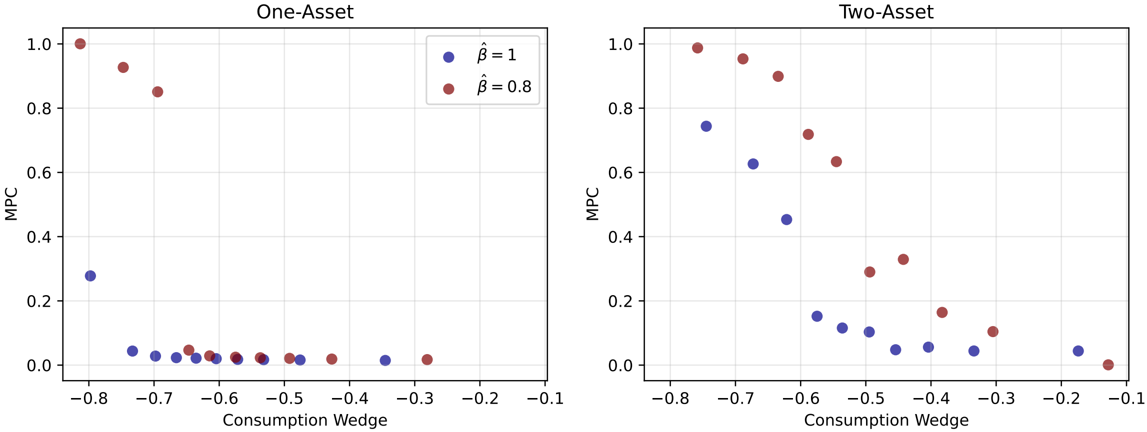
Two-Asset + $\hat{\beta} = 0.8$	49.9%	52.2%	1.6%	-49.8%	-52.2%
Two-Asset + $\hat{\beta} = 0.53$	64.4%	68.4%	0.0%	-64.4%	-68.4%

Present bias has another effect in two-asset model: eventually, it stops saving in high return asset $\Rightarrow$ lower return on savings $\Rightarrow$ higher frictionless consumption



Canonical models have correlation between wedges and MPCs with **wrong** sign

Why Doesn't Present Bias Help Much?

$$\overline{C}_t = \int \underbrace{\mathcal{C}(\text{assets}, \text{income})}_{\text{consumption function}} \times \underbrace{dF_t(\text{assets}, \text{income})}_{\text{X/S distribution across states}}$$

- Want something that generates positive consumption wedges $\Rightarrow \overline{C}_t$ **high**

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- **Problem**: $\uparrow \mathcal{C}(\cdot)$ shifts $dF_{t+1}(\text{assets}, \text{income})$ towards low-asset states $\Rightarrow \downarrow \overline{C}_t$
  - Implication: consumption wedges may be **smaller** not bigger!

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  - Implication: consumption wedges may be **smaller** not bigger!
- In words: persistent overconsumption is impossible because I'll run out of money
- Note: this is a generic for any model of overconsumption $+$ borrowing constraints!

- In canonical one- and two-asset models:
  1. Naive present bias struggles to **quantitatively** give positive wedges in the data
  2. Correlation between wedges and MPCs is **negative**, independent of present bias

Taking Stock

- In canonical one- and two-asset models:
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- Some other possible deviations from frictionless models to match the data:
  - Consumption inertia — **Q**: how would consumption be so high in the first place?
  - Consumption commitments — **Q**: why would HHs take on these commitments?

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  - Gul-Pescendorfer temptation utility — maybe can give $cov(\text{wedge}, MPC) > 0$?

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  - Misperception of borrowing and/or default costs
  - Access to lower cost informal credit/insurance
  - Measurement issues — example = missing wealth and/or income

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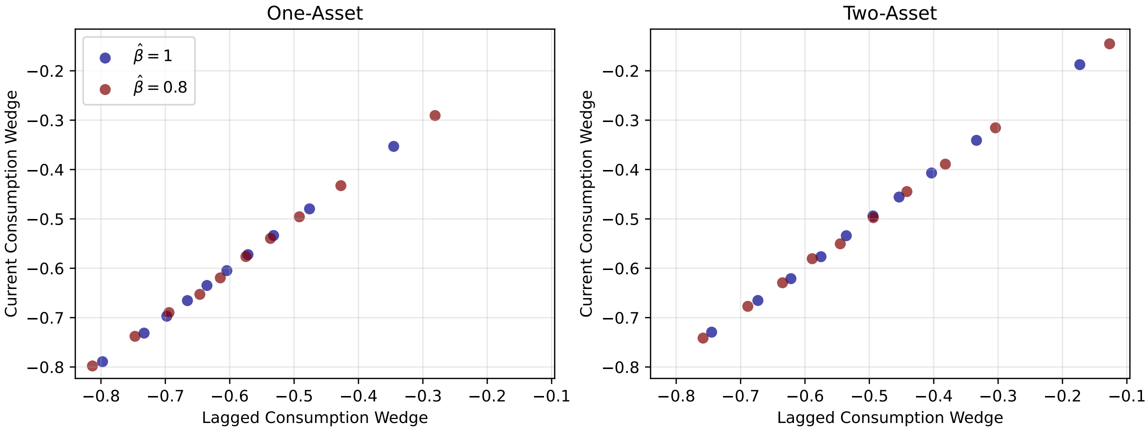
- I'd like to see more progress on **distinguishing** these/other theories
  - Suggestion: explore **panel** dimension more in data, especially persistence!

Negative Wedges are Very Persistent in Models: 2 Years



Is this true in data? If not, want to think of deviations that can break this persistence!

Other Comments for Authors (Skip)

- Can you isolate the effects of beliefs by computing wedges using rational expectations? Maybe you could do this by replacing expectations with future realizations? Or alternatively, just ignore forward-looking expectations terms entirely and plug-in averages.
- Can you address concerns about not perfectly observing income and wealth by using your data to evaluate the budget constraint directly and seeing how big the residual is?
- I find the "wedge" terminology somewhat confusing when compared with other papers, like Chari et al. or Berger et al. In those settings, measuring the wedge only requires data. Here, it requires taking a stand on structural parameters.
- I found calling wedges "sufficient statistics" confusing. The Chetty (2009) view of a sufficient statistic is something that I can compute using only data and allows me to make directional statements about welfare. You need to take a stand on structural parameters to measure wedges, and you're not interested in using these for welfare. Instead, they are used more as a model diagnostic (which I like!), so maybe a better term is wedges as a "identifying moment" or "model diagnostic".
- Can you do anything to address the concern that your sample is potentially very selected to be the most constrained (your net worth to income ratio is quite low)?
- It's not obvious to me that the steady-state around which you linearize is going to exist generically. In some reasonable calibrations of an infinite-horizon one-asset model, some of my quantitative results suggested it might not. Maybe the infinite horizon assumption is the problem here, but it would be helpful to work this out.

Conclusion

- Nice paper that makes a step forward by providing a new set of moments for consumption-savings models to match: **consumption wedges**
  - Approach and findings are very thoughtful-provoking (got me to solve models!)

- **Main comment**: sharpen analysis of which theories work quantitatively
  - Generating **persistent** overconsumption is very challenging
  - Present bias doesn't seem to help, but happy to be corrected!

- Three promising clues for a candidate theory:
  1. Canonical models: $cov(MPC, \text{wedge}) < 0$, Data: $cov(MPC, \text{wedge}) > 0$
  2. Canonical models = wedges are very persistent, Data = ?
  3. Data = positive wedges concentrated among those without mortgages

- I look forward to seeing future versions of this paper and follow-ups!

Calibrated Parameters

Parameter	One–Asset	Two–Asset	Description
δ	0.005	0.005	Quarterly death rate
β	0.995	0.985	Quarterly discount factor
γ	2.0	2.0	Relative risk-aversion
ρ	0.988	0.988	Income persistence
σ_ε^2	0.0108	0.0108	Variance of income shocks
r	1.0025	0.995	Liquid asset gross return
τ	$\cdot$	0.0205	Illiquidity premium
λ	$\cdot$	0.95	Probability of adjustment opportunity
κ_f	$\cdot$	0.087	Fixed adjustment cost

Back