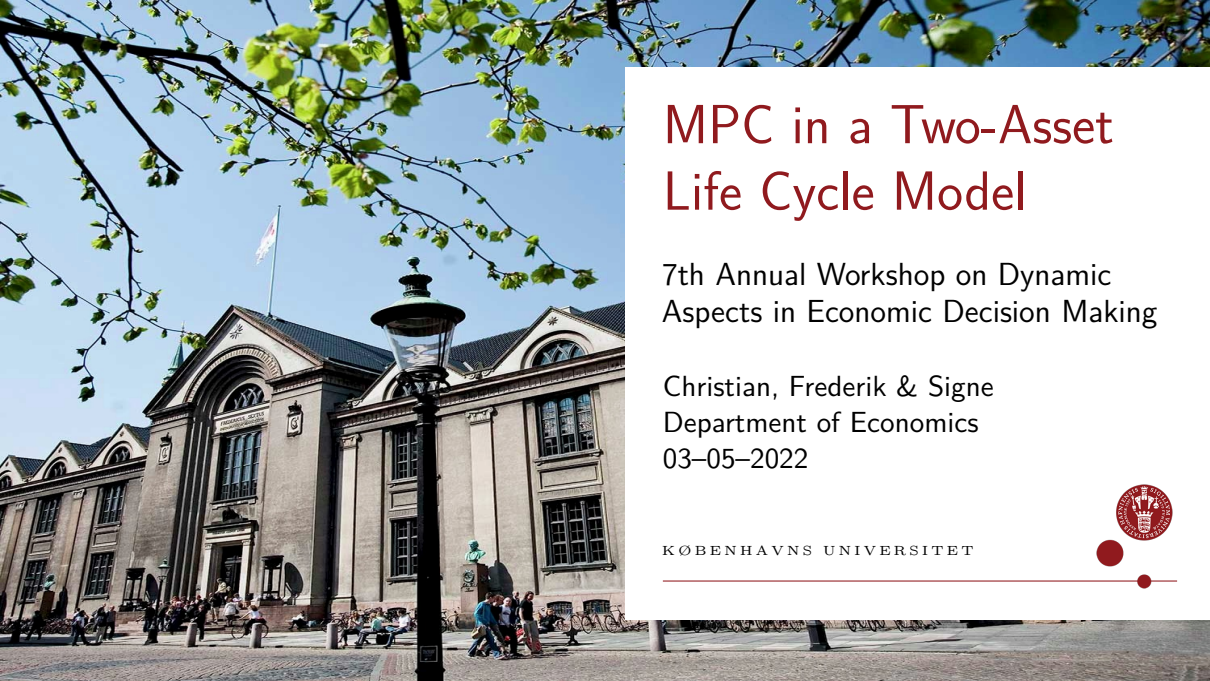

MPC in a Two-Asset Life Cycle Model

7th Annual Workshop on Dynamic Aspects in Economic Decision Making

Christian, Frederik & Signe
Department of Economics
03–05–2022

KØBENHAVNS UNIVERSITET

Motivation

- The canonical Carroll-Deaton type buffer-stock model is not very good at fitting empirically estimated marginal propensities to consume out of transitory income shocks

Table: MPCs - Theory vs. empirics

Buffer-stock	US data	DK data
negligible	≈ 0.25	≈ 0.5 (but lots of heterogeneity)

- More recent research (e.g. Kaplan and Violante, 2014) suggests that introducing multiple asset types with varying degrees of liquidity or consumer wealth heterogeneity in the model leads to more empirically realistic MPCs

Research question

Does a two-asset model better replicate empirically observed MPCs?

- Two assets: liquid (savings) and illiquid (housing)
- Adjustments on housing stock subject to a cost
- Inspired by the work of Kaplan and Violante (2014), but our approach will be more stylized

Progression Roadmap

1. Build and solve a simple one-asset buffer stock model
2. Extend the model to a two-asset buffer stock model (liquid, illiquid)
   Other possible extensions:
   - Change preferences: CRRA $\rightarrow$ Epstein-Zin
   - Introduce consumer heterogeneity: 2-3 consumer types
   - Endogenenous collateral constraint(s) depending on the stock of illiquid assets?
3. Solve the model and compare the performance of the different solution methods seen during DP: (N)VFI vs. (N)EGM
4. Run a counterfactual/experiment based on a structural estimation of relevant parameters using Simulated Method of Moments.

Feedback, questions and comments