

Heterogeneous Agent Models in Macroeconomics

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The aim of the course is to study the most important models with heterogeneous agents and incomplete markets in macroeconomics. We study questions such as the welfare analysis of economic policy; asset pricing; aggregate labor supply; nominal rigidities and the monetary transmission mechanism.

We also learn the tools to solve these models numerically. Some prior experience in programming (ideally in Matlab, but sufficient knowledge in other programming languages would also be OK) is necessary.

Models

- Models with a finite number of types of agents
 1. New Keynesian Models with Taylor price staggering
 2. OLG models with and without asset trade
- The stochastic neoclassical growth model with heterogeneous households (Krusell and Smith 1998)
- The stochastic neoclassical growth model with portfolio choice (Krusell and Smith 1997),
- Models of aggregate labor supply (Chang and Kim 2006; Chang and Kim 2007)
- Models of lumpy investment (Thomas 2002)
- Models of state dependent pricing (Dotsey, King, and Wolman 1999)
- Shocks to aggregate uncertainty (Bloom 2009)
- Dispersed information and stock prices (Mertens 2011)

Methods

1. Approximate aggregation (Krusell and Smith 1998)
2. Linearization around stationary state (Reiter 2009b)
3. State reduction (Reiter 2009a)
4. Perturbation (Mertens and Judd 2011)
5. Measuring accuracy (Den Haan 2007)

References

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