Welcome and Overview

NBER Heterogeneous-Agent Macro Workshop

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Spring 2023

Welcome

- This is the NBER Heterogeneous-Agent Macro Workshop

- All taking place here at 1050 Mass Ave
    - lunches also here, dinner Monday at Barcelona Wine Bar, Tuesday at Daedalus

- Generously funded by the NSF and Chae Initiative at Harvard

- Fantastic planning help from the NBER staff

- 40 students from US & Europe selected from 120 outstanding applications

- Teaching material is collaboration between Adrien Auclert, Bence Bardóczy, Michael Cai, Rodolfo Rigato, Matt Rognlie, Martin Souchier & Ludwig Straub

Workshop objectives

- 11 lectures and 4 tutorials covering:

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- The syllabus is online. Relative to last year's workshop (material online):
  - **New:** HANK at NY Fed, lumpy investment, deviations from FIRE
  - Not this year: open-economy, discrete choice in consumption-savings models

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    - Price setting, financial frictions, firm dynamics, banking industry dynamics, search models of the labor market, the money market...

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- Exciting and fast growing literature. We're looking forward to your answers!

Working in the sequence space

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- Our sequence-space-jacobian toolbox automates several of the hard steps

- In your own application, you may want to:

  1. use SSJ with its pre-programmed heterogeneous-agent models
  2. customize SSJ with your own heterogeneous-agent model
  3. write up your own sequence-space solution method

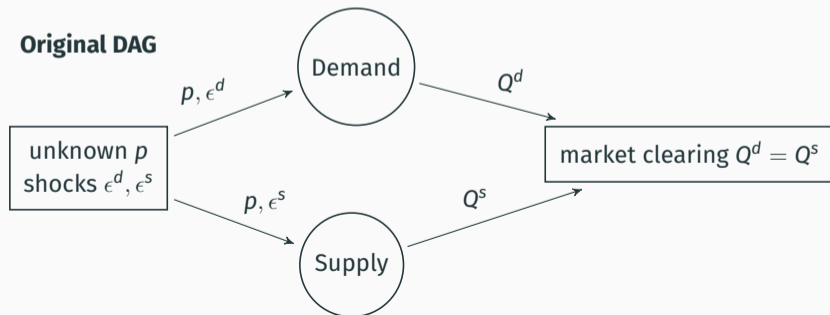 We'll cover examples of each of these approaches

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Original DAG

$$p, \epsilon^d \rightarrow \text{Demand} \rightarrow Q^d$$

unknown p
shocks ϵ^d, ϵ^s

$$p, \epsilon^s \rightarrow \text{Supply} \rightarrow Q^s$$

market clearing $Q^d = Q^s$

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Solved model

$$\boxed{\text{shocks } \epsilon^d, \epsilon^s} \xrightarrow{\;\;\epsilon^d, \epsilon^s\;\;} \boxed{\text{equilibrium } p, Q}$$

Course material

- Schedule, syllabus, and lecture notes posted at:
  nber.org/conferences/heterogeneous-agent-macro-workshop-spring-2023

- Code for lecture notebooks and tutorials posted at:
  github.com/shade-econ/nber-workshop-2023

- Please come to tutorials with your laptops

- Please ask questions in class or during breaks!

- Please respect the code of conduct for NBER meetings

- Let's dive in!