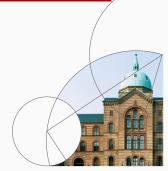


# 13b. Exam preparation

Adv. Macro: Heterogenous Agent Models

Jeppe Druedahl & Patrick Moran 2022





### **E**xam

- Exam: Similar to assignment I-II
  - 1. Starting point: Code which can run in itself
  - 2. Question 0: Extend the code to match the model description
  - 3. Questions: Use the code to analyze economic questions

### Exam

- Exam: Similar to assignment I-II
  - 1. **Starting point:** Code which can run in itself
  - 2. Question 0: Extend the code to match the model description
  - 3. Questions: Use the code to analyze economic questions

# • Grading:

- Clearly presented results in figures and tables (small coding mistakes not important)
- 2. Clear and precise text stating the economic conclusions
- 3. Well-organized code
- 4. 50 percent weight on Assignment I-III

### Exam

- Exam: Similar to assignment I-II
  - 1. Starting point: Code which can run in itself
  - 2. Question 0: Extend the code to match the model description
  - 3. Questions: Use the code to analyze economic questions

### Grading:

- Clearly presented results in figures and tables (small coding mistakes not important)
- 2. Clear and precise text stating the economic conclusions
- 3. Well-organized code
- 4. 50 percent weight on Assignment I-III

### Don't worry:

- 1. Time pressure should not be an issue (48 hours)
- 2. I understand this is a very complicated course

# Hand-in

#### You should hand-in a single zip-file. The zip-file should have the following folder and file structure:

#### Assignment\_I\

Assignment\_I.pdf – with text and all results \*files for producing the results\*

#### Assignment\_II\

Assignment\_II.pdf – with text and all results \*files for producing the results\*

#### Assignment\_III\

Assignment\_III.pdf

#### Exam\

Exam.pdf

\*files for producing the results\*

# Knowledge, Skills and Competencies

- What you need to know:
  - 1. Understand and be able to use the computational techniques
  - 2. Understand and be able to discuss the economic insights heterogeneous agent models can provide
- Next slides: Learning outcomes in Knowledge, Skills and Competencies

# Knowledge

- 1. Account for, formulate and interpret precautionary saving models
- 2. Account for stochastic and non-stochastic simulation methods
- Account for, formulate and interpret general equilibrium models with ex ante and ex post heterogeneity, idiosyncratic and aggregate risk, and with and without pricing frictions
- 4. Discuss the difference between the stationary equilibrium, the transition path and the dynamic equilibrium
- Discuss the relationship between various equilibrium concepts and their solution methods
- Identify and account for methods for analyzing the dynamic distributional effects of long-run policy (e.g. taxation and social security) and short-run policy (e.g. monetary and fiscal policy)

### Skills

- 1. Solve precautionary saving problems with dynamic programming and simulate behavior with stochastic and non-stochastic techniques
- 2. Solve general equilibrium models with ex ante and ex post heterogeneity, idiosyncratic and aggregate risk, and with and without pricing frictions (stationary equilibrium, transition path, dynamic equilibrium)
- 3. Analyze dynamics of income and wealth inequality
- 4. Analyze transitional and permanent structural changes (e.g. inequality trends and the long-run decline in the interest rate)
- Analyze the dynamic distributional effects of long-run policy (e.g. taxation and social security) and short-run policy (e.g. monetary and fiscal policy)

# Competencies

- Independently formulate, discuss and assess research on both the causes and effects of heterogeneity and risk for both long-run and short-run outcomes
- 2. Discuss and assess the importance of how heterogeneity and risk is modeled for questions about both long-run and short-run dynamics

# How to prepare for the exam

- What you should do:
  - 1. Read through slides and study the accompanying code
  - 2. Read the documentation for GEModelTools
  - 3. Glance at the central papers
  - 4. Optimize your Assignments III
- Ask questions in the GitHub forum
- **Jan 5:** I will be available for questions 12-14 in room 35-2-01.
- Jan 7-9: Exam