Inequality in Macroeconomics

Spring 2021

Basic Information:

Instructor:	Nawid Siassi
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Class dates:	See detailed schedule below (first class: March 11)

Description:

This course covers the foundations of modern macroeconomic theories of inequality. We will develop economic models where people differ by income, wealth and other characteristics. These models of heterogeneous households are helpful to analyze the sources and consequences of inequality. We will assess quantitatively to what extent these theories can account for empirical observations, how aggregate allocations and prices are shaped by cross-sectional inequality, and how fiscal policy can affect inequality. Besides covering the methodological background, you will learn how to solve these models numerically on the computer.

Organization:

The class will be organized around a sequence of lectures and tutorials (a tentative schedule can be found below). Throughout the course, the emphasis is on applications: based on a series of coding exercises, you will learn how to independently implement and solve the models discussed in class. We will discuss your solutions to these exercises in the tutorial classes. The course concludes with a final project where students present a paper of their own choice from the literature and attempt a partial replication of it. There will be no final exam.

Material:

Most of the material will be provided through lecture slides. I will mention additional references (textbooks, scripts, research papers) throughout the course.

Prerequisites:

Students should have completed intermediate courses in microeconomics and/or macroeconomics. Prior knowledge with dynamic economic models is beneficial but not absolutely necessary. Since the course will be centered around computational work, having some experience in programming is advantageous.

Programming Language:

Throughout the course, we will perform numerical computations using Matlab. If you have not worked with Matlab before or need to refresh your knowledge, please consult a tutorial guide before the course (I can provide some practice exercises upon request). Students can get a free licensed Matlab copy from the TU Wien IT webpage (http://www.sss.tuwien.ac.at/sss/mla/).

Grades:

The final grade will be based on problem sets (30%) and a final project (70%).

Schedule:

March 11	11:00-12:30	Lecture	April 22	11:00-12:30 13:30-14:30	Lecture Tutorial
March 18	11:00-12:30	Lecture	April 29	11:00-12:30 13:30-14:30	Lecture Tutorial
March 25	11:00-12:30 13:30-14:30	Lecture Tutorial	May 6	11:00-12:30 13:30-14:30	Lecture Tutorial
April 15	11:00-12:30 13:30-14:30	Lecture Tutorial	June/July		Presentations

All classes are taught online via Zoom.

Outline:

I. Facts and theory

- Empirical facts
- Dynamic programming
- Income fluctuation problem
- Standard incomplete markets model
- Applications

II. Numerical methods

- Value function iteration
- Monte Carlo simulation
- Calibration

References:

- Guvenen, F. (2011), "Macroeconomics with Heterogeneity: A Practical Guide," Federal Reserve Bank of Richmond Economic Quarterly.

- Heathcote, J., Storesletten, K. and Violante, G. (2009), "Quantitative Macroeconomics with Heterogeneous Households," Annual Review of Economics, 1, p. 319-354.

- Heer, B. and Maussner, A. (2009), "Dynamic General Equilibrium Modeling: Computational Methods and Applications," 2nd edition, Springer.

- Quadrini, V. and Ríos-Rull, J. (2015), "Inequality in Macroeconomics," Handbook of Income Distribution, ed. by A. Atkinson and F. Bourguignon, vol 2, Chapter 15.