Macroeconomics and Inequality (Macro III)

1 Syllabus

The purpose of the course is to acquaint the students with the rapidly growing class of macroeconomic models that do not impose the fiction of a representative agent. To address a large number of questions in macroeconomics it is very important to model heterogeneity explicitly, and recent developments in numerical methods and computing power have made this possible.

We recommend (but do not require) that students who have not already taken Lars Ljungqvist’s Recursive Macroeconomic Theory class (Macro II) take both classes simultaneously, as these classes complement each other.

The reading list below is more extensive than the lectures, which will focus on the starred items (several of which are in Marimon & Scott (1999), a new book we recommend). The applications discussed will to a certain extent depend on the interests of the students.

1.1 Introduction

Some empirical facts on inequality, and a short survey of some of the questions that can be addressed by incorporating heterogeneity into macro-models. R: Díaz-Giménez, Quadrini & Ríos-Rull (1997), Domeij & Klein (1998).

1.2 Basic numerical tools

This will involve the review of more than one method. As the techniques are best learnt through hands-on experience, there will be several homeworks, which will involve writing and running computer-programs.

1. Local methods: methods for computing optimal decision rules and characterizing the behaviour of an economy at a particular point in the state space (usually the non-stochastic steady state).


2. Global methods: methods for computing decision rules that are (close to) optimal across the entire state space.


• Iteration on (piecewise linear) policy functions. R: Coleman (1990)*


3. Methods for dealing with both aggregate and idiosyncratic risk.


• Special problems. R: Veracierto (1997)

1.3 Theory

We start by considering the simplest case: inequality in models with complete markets. Then we move on to the main topic of the class: models with idiosyncratic risk, in which this risk is assumed to be at least partially uninsurable.

1. Models with complete markets.

Overlapping generations economies (heterogeneity in age). This class of models assumes that a complete set of assets is traded within each generation, but that some markets for trade between generations do not exist. For example, it is usually not possible to trade with unborn agents. We consider the basic Auerbach and Kotlikoff model as a vehicle to study issues such as pension system reform, immigration, and the role of bequests. R: Auerbach & Kotlikoff (1987), Storesletten (2000)*, Kotlikoff & Summers (1981).

2. Models with **uninsurable idiosyncratic risk**.

- Economies with both idiosyncratic and aggregate risk. R: Krusell & Smith (1998)*.

1.4 Applications
We then move on to study more closely various applications of heterogeneous agent models.


1.5 Class Schedule

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2 Examination: project/term paper

A central part of the class is an individual project or term paper. This is an alternative or addition to a regular exam. The intention is that each student should come up with an original research project that is small enough to make progress on within the scope of a class. The purpose is twofold: to get hands-on experience in solving current macroeconomic problems, and to get started on research. The stages involved in the project will be:

1. To think of well-posed economic question.
2. To describe a model well suited to addressing this question.
3. To describe a numerical algorithm well suited to solving this model.
4. To write a computer program (in MATLAB, GAUSS or FORTRAN) that is well suited to implementing this algorithm.
5. To perform numerical experiments on the model that are well suited to answering the initial question.
6. To present the results in class.
7. To write up a paper (optional).
2.1 Time schedule for term paper

- **December 16, 1999**: Well posed economic question and suitable model ready.
- **January 31, 2000**: Project in presentable form. An outline of the question, the model, the solution method, and at least some preliminary results are necessary components of this presentation.
- **February 7, 2000**: Half-hour presentation in front of the rest of the class.
- Students who are interested can complete their papers (for extra points).

References


Cooley, T. F. & Quadrini, V. (1999), Financial markets and firm dynamics. mimeo, Stern School of Business, NYU.


1. macroeconomic shocks and policies affect inequality. Inequality affects macroeconomic aggregates. This idea may sound obvious to you, but it only made its way into mainstream macro relatively recently. Lots of people (economists, journalists, ...) frequently forget. Another theme: large gap between current research in academic macroeconomics and macroeconomics in mediablogs, undergraduate teaching.

1. Inequality in macroeconomics: a history of thought. How inequality affects how we should think about monetary policy. Based on joint work with Yves Achdou, SeHyoun Ahn, A Part III. Structural Adjustment, New Macroeconomic Approaches, and Remaining Challenges.

Plan.

1. Inequality in macroeconomics: a history of thought.
2. How inequality affects how we should think about monetary policy. Based on joint work with Yves Achdou, SeHyoun Ahn, A Part III. Structural Adjustment, New Macroeconomic Approaches, and Remaining Challenges.

OUP UNCORRECTED PROOF â€“ FIRSTPROOFS, Fri Nov 15 2013, NEWGEN. oxfordhb-9780198706083-Part-3-9.indd 173 11/20/2013 8:31:46 PM 11/20/2013 8:31:46 PM. OUP UNCORRECTED PROOF â€“ FIRSTPROOFS, Fri Nov 15 2013, NEWGEN. Approach appears to have improved growth and income inequality while helping to preserve a reasonable macro stability during the financial crisis of 2008–11. Unlike traditional macroeconomics (which broadly ignored social issues), the new approach constitutes an important tool to promote the.

Macroeconomics is the study of the economical structure and behavior of the entire state, region or nation. This could even be extended to the global economy. Macroeconomic issues can only be dealt with on a macro-scale, so unlike microeconomics, and to help us envisage these macro-matters, it is usual to view the situation from afar without too much micro-detail and to build a macroeconomics model which applies to what in effect is the whole social system being taken. Important concepts of macroeconomics include the circulation of money, GDP, unemployment, and inflation. Contents. [show]. Nati