Topics in Advanced Macroeconomics:
Heterogeneity and Public Policy

MIE7/PhD, Winter 2012/13

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Course Description

This course deals with: (i) the origins of economic inequality, and (ii) the design and effectiveness of public policy in the presence of heterogeneity. To tackle these questions we are going to utilize computer simulated economic environments populated by agents who differ from each other in terms of luck and/or innate factors such as ability to learn or produce in the labor market. Due to these differences and the consequent actions of the agents, the models generate different patterns of income, wealth and consumption inequality. The main goals of the course are: (i) to introduce you to the major prototypes of heterogeneous agents models used in quantitative macroeconomics, and (ii) to evaluate different economic policies related to taxation, education, fertility, labor market participation, and labor market sectoral reallocation.

Basic Information about the Course

Required Courses: Advanced Macroeconomics I and II.

Readings: There are several textbooks that may prove useful for this course. We will study several chapters of (some of) these books in class (see the outline of the course):

- Stokey and Lucas (1989), Adda and Cooper (2003), and Ljungqvist and Sargent (2004).

In addition to the textbook chapters, we will study a list of research papers. They are divided in 3 categories. Papers indexed by (B) serve as a background reading for each topic. I will expect you to read the articles under this category before each class session. Papers marked by (*) will be discussed in class. The background readings will help you understand the taught material. The last category of papers, (A), is additional material that expands the models introduced in class and shows various applications to different policy questions.

Evaluation: The final grade for the course is formed by fullfilling the 3 requirements below.

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<tr>
<th>Requirement</th>
<th>% of Grade</th>
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<tr>
<td>1. Problem Sets</td>
<td>30%</td>
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<tr>
<td>2. Presentation</td>
<td>30%</td>
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<td>3. Final Exam/Assignment</td>
<td>40%</td>
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Problem Sets: There will be bi-weekly problem sets. They will include analytical problems to be solved with pen and paper, small coding exercises which will provide some insights on the solution techniques used in the papers, and a data assignment which will require manipulation of a longitudinal or a cross-sectional dataset and calculation of basic statistics out of it. In addition to that, there will be a longer (and more time-consuming) problem set which will make you replicate a modified version of one of the economic environments we will study in class. You will have at least two months to fulfill this assignment.

Presentations: The registered participants in the course need to give a presentation of around 45 minutes on a paper from group (A). We will coordinate on who will present what in the following few weeks.

Software: There are not formal requirements on the type of software you can use for the data and coding problems. Stata might be a good start when it comes to data manipulation. I will provide some example programs in Matlab for the coding exercises.

Contact and Office Hours: If you need to reach me, here is how:

- Office: F227, Phone:, Email: georgi@georgikocharkov.com
- Office Hours: Friday, 10-12am. If you would like to talk to me in a different time slot, please send me an email in advance.

Outline of the Course

1. Review (4 sessions)
   - Self-insurance (*): Ljungqvist and Sargent (2004) Chapter 16
   - Incomplete markets (*): Ljungqvist and Sargent (2004) Chapter 17

2. Risk and Inequality (2 sessions)

3. Initial Conditions and Earnings (2 sessions)
4. Taxation (2 sessions)


5. Education (2 sessions)


6. Marriages, Female Labor Supply and Fertility (3 sessions)


7. Sectoral Reallocation (1 session, optional)

References


