Econ 211: Advanced Macroeconomics

University of California, San Diego - Fall 2010
Davide Debortoli (Part I) and Giacomo Rondina (Part II)
Thursday, 8:00am-10:50am, SH 244

Course description

The object of this course is to introduce students to a variety of tools used in advanced dynamic macroeconomic models. The focus will be on the theoretical aspects of these models, rather than on the specific economic implications or on the numerical solution methods (the objective of ECON 216). Indeed, the goal is to provide examples of how some specific problems are addressed and how the tools can be used in a variety of contexts. In the first part (taught by Davide Debortoli), we introduce techniques to analyze policy problems in dynamic models and discuss some applications to optimal policy problems. By way of contrast with some of the complete markets models you saw in Econ210C, we will discuss the implications of some sources of inefficiencies like market incompleteness, lack of commitment and imperfect information. In the second part of the course (taught by Giacomo Rondina) we will begin by studying a general ”global game” framework that proved to be particularly effective in modeling coordination problems in macroeconomics (such as financial crisis or bank runs). We then study how such framework can be embedded into dynamic settings by analyzing incomplete information models of the business cycle. If time permits, we will introduce some concepts and methods in the robust design of macroeconomic policies.

Textbooks

We will make use of pieces of the following textbook:


References to papers are provided at the end of the syllabus. Additional references about specific topics will be provided during the lectures.

Requirements

Your performance will be evaluated according to the following scheme: 4 or 5 homeworks (10%), a cumulative final take-home exam (40%) and an individual research proposal (50%). The latter should be a brief illustration (between 5 and 10 pages) of an original research idea where the techniques analyzed in class are applied. It should include a clear statement of the research question, a motivation, an essential literature review and an outline of the methodology to be used. The proposals will be presented in class during the last week of the quarter and should be delivered at the end of the final exams week.
PART I: OPTIMAL POLICY IN DYNAMIC MODELS  
(Davide Debortoli)  

1. Equilibrium under Complete Markets, Perfect Information and Full-Commitment.  

(a) The Arrow-Debreu Economy and Sequential trading. Competitive Equilibrium and Pareto Optimality. Recursive representation. [Ljungqvist and Sargent (2004), Ch. 8]  


(d) Optimal debt policies under complete markets. [Lucas and Stokey (1983)].  


(b) Methodologies  

i. Recursive contracts. [Marcet and Marimon (1994)].  

ii. The Abreu-Pierce and Stacchetti approach. [Abreu, Pearce, and Stacchetti (1990)]  

3. Optimal Policies with Incomplete Markets.  

(a) Optimal debt polices with incomplete markets [Aiyagari, Marcet, Sargent, and Seppala (2002)].  

(b) How to restore market completeness. Debt maturity structure and nominal bonds [Lucas and Stokey (1983)].  

(c) Inflationary policies and the zero-lower bound on nominal interest rates. [Schmitt-Grohe and Uribe (2004)].  


(a) Time inconsistency of optimal policies. [Kydland and Prescott (1977)].  

(b) How to restore time consistency. Debt maturity structure [Lucas and Stokey (1983)] and reputation mechanisms [Chari and Kehoe (1999)].  

(c) Time consistent (Markov Perfect) policies [Klein, Krusell, and Rios-Rull (2008)]. Loose Commitment [Debortoli and Nunes (2009)].  

(d) Dynamic Models with political turnover. Theories and Evidence. [Alesina and Tabellini (1990), Battaglini and Coate (2008)].
5. **Heterogenous Agents and Imperfect information.**

(a) Efficiency vs. Redistribution. Participation Constraints. [Alvarez and Jermann (2001)].

(b) Imperfect information. The Mirleess approach to optimal taxation. [Albanesi and Sleet (2006)].
Part II: Topics in Macroeconomic Theory

(Giacomo Rondina)

Topic 1: Global Coordination Games in Macroeconomics

1. Motivation and Methods
   (a) Rethinking Multiple Equilibria in Macroeconomics
   (b) Methods for Global Games in Macroeconomics

2. Games of Regime Changes and Endogenous Information
   (a) Signaling through Policy Actions
   (b) Information in Financial Markets and Regime Changes
       Angeletos and Werning (2006).

3. The Role of Public Information in Global Games
   (a) The Social Value of Public Information
   (b) The Efficient Use of Public Information

Topic 2: Business Cycle Models of Incomplete Information

1. Incomplete Information in Real Business Cycle Models
   Lucas (1975); Townsend (1983).

2. Real Effects of Nominal Shocks
   Woodford (2003); Lucas (1972); Hellwig (2005).

3. Incomplete Information Theories of Demand Shocks and Stabilization Policies
   Lorenzoni (2009); King (1982); Lorenzoni (2007).

4. The Pervasive Role of Global Games in Business Cycle Models of Incomplete Information
   Angeletos and La’O (2009).
References


