Graduate Program in Economics

IDEA

Course:	**Dynamic Models of Optimal Policy and Expectations**
Faculty:	Albert Marcet
Term:	First Semester
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Description

The course has two distinct parts: the first part will be about models of expectations, the second about optimal fiscal and monetary policy.

PART A: MODELS OF EXPECTATIONS

We introduce models of learning about expectations in dynamic, stochastic models and discuss implications of these models for asset prices and for current policy issues. During the 80's, the assumption of rational expectations became the dominant paradigm for modeling agents' expectations, it quickly extended to all fields of economics that use dynamic models. Nowadays, Rational Expectations (RE) is the standard assumption in dynamic economic models. Assuming that agents have full knowledge of the model generating the data is clearly a very strong assumption, we should understand if deviations from RE generate very different behavior on the part of the agents. If agents do not know the true model but they learn to form expectations based on past experience, will the economy converge to rational expectations?. The answer is not obvious because, if agents are not born with knowledge of the true model they never actually see the outcomes of the true model.

A separate issue is the following: if agents have a very good forecast model (but still imperfect) will the economy behave close to the rational expectations outcome? Will policy recommendations be very different?

There has been much research on these issues since the 90's, but the recent financial crisis as spurred the interest. Many think it is clear that the observed behavior of the economy can only be understood with models where agents have an imperfect knowledge of the true model.

We start by analyzing issues of convergence. We will then discuss learning in asset prices. First in terms of Bayesian rational expectations equilibriat, hen in terms of a model where agents learn about prices which can explain stock price volatility. Finally we address issues of macro policy: how do standard recommendations about monetary and fiscal policy change when we take into account issues of learning?

PART B: MODELS OF OPTIMAL POLICY

We discuss tools recently developped in the analysis of macro policy in dynamic stochastic models. We will discuss standard results under complete markets and new results under incomplete markets. One objective of the course is to become familiar with the technique of recursive contracts. The course is therefore useful for a wide range of areas in macroeconomics and other disciplines. The emphasis is in learning how to do research and to arrive at the current frontier of research as quickly as possible. We will put the emphasis on building and solving these models, characterizing their equilibria, drawing their empirical and policy implications.

A useful book is Ljunqvist and Sargent Recursive Macroeconomic Theory. The book by Lucas and Stokey Recursive Methods in Economic Dynamics contains many technical details that are not the focus of the course but that may be necessary in your own research in the future, students should take this chance to familiarize themselves with these books. Chari and Kehoe (1999) is also a useful survey of traditional contributions on optimal policy under full commitment. Here are the full references, asterisk on those that are particularly useful.

References

PART A:

-Evans, G. and S. Honkapohja, 2001, Learning and Expectations in Macroeconomics,Princeton University Press. This reference focuses on the issues of convergence.

Sargent. T, 1993, Bounded Rationality in Macroeconomics,

Oxford University Press. Below there is a detailed description

of each topic and some readings.

PART B:

- Ljungqvist, L. and T.J. Sargent (2004), Recursive Macroeconomic Theory, 2nd edition MIT Press.

- Lucas, R.E., and N. L. Stokey (1989); Recursive Methods in Economic Dynamics, Harvard University Press.

- *Chari, V.V. and P. Kehoe (1999): "Optimal Fiscal and Monetary Policy" in, Handbook of Macroeconomics, John

Taylor and MikeWoodford, eds. (North Holland: Amsterdam)

Grading

The evaluation of the course will be drawn from a final exam and a research project.