Econ 9454: Advanced Macroeconomic Theory II  
University of Missouri-Columbia

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Class Meets: Tues-Thurs, 3:30-4:45  
Respect Residence Hall 105  
Office Hours Wednesday 2:00-3:00 and by appointment

The course will teach you how to solve and then evaluate the empirical performance of macroeconomic models. In doing so we will study issues in macroeconomic theory. We will cover a range of topics including: 1) Evaluating the empirical fit of DSGE and asset pricing models; 2) Estimation methods for DSGE and asset pricing models; 3) Recent innovations for identifying structural VARs; 4) Monetary DSGE models and Monetary Policy


A recent NBER working paper by Jesús Fernández-Villaverde, Juan F. Rubio Ramírez Frank Schorfheide, “Solution and Estimation Methods for DSGE Models” cover many of the topics in this course, as well as some newer innovations to the literature.

Grades will be determined by take-home assignments (20% of grade), 2 midterms (25% each of grade), and an exam (30% of grade).

Course Outline

1) 1st order approximate solution methods for DSGE models


2) Trends and Cycles in Data and DSGE Models

DeJong, David and Chetan Dave, Structural Macroeconometrics, 2007, Chapter 3.

The frequency domain sections of Hamilton (1994) or Sargent (1987, chapters 9-11) are also helpful background reading.

3) Evaluating Model Fit

a) Persistence Problems: Autocorrelation Functions, 2nd Moments and Impulse response functions
DeJong, David and Chetan Dave, Structural Macroeconometrics, 2007, Chapter 4 through page 79.

b) Spectral Fit of DSGE models
DeJong, David and Chetan Dave, Structural Macroeconometrics, 2007, Chapter 6, p145-150.

4) Likelihood Estimation of DSGE Models
a) Maximum Likelihood of DSGE models
DeJong, David and Chetan Dave, Structural Macroeconometrics, 2007, Chapter 8

b) Bayesian Estimation of DSGE models

5) Money and Monetary Policy in DSGE models
*DeJong, David and Chetan Dave, Structural Macroeconometrics, 2007, Chapter 5, pp 96-106.

Rabanal Rubio_ramirez JME paper
6) Medium scale DSGE models

7) Vector Autoregressions
Hamilton Chapters 10 and 11.

a) “Old” shocks: monetary, productivity, and fiscal shocks
Uhlig, Harald, 2005 "What are the effects of monetary policy on output? Results from an agnostic identification procedure", Journal of Monetary Economics.

b) “New” shocks: uncertainty, news, credit

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8) Generalized Method of Moments Estimation of Asset Pricing and DSGE Models
*DeJong, David And Chetan Dave, Structural Macroeconometrics, 2007, Chapter 7
9) Volatility Bounds for Asset Pricing Models


11) Models of Small Open Economies

Business Cycles:


Overborrowing:


One Period Models of Sovereign Debt