

Spring 2009  
Econ 646.600  
Texas A&M University  
Hwagyun (Hagen) Kim

1.25  
Spring 2009 (2009-10-10-2010-01-10)  
Hagen

### Course Outline and Reading List Macroeconomic Theory II

This course surveys recent advances in macroeconomic theory. Modern macroeconomic theory is built on dynamic stochastic general equilibrium (DSGE) models and stochastic dynamic programming (SDP) is an important element in understanding the dynamic stochastic models. Therefore, SDP methods and DSGE models will be the main technical tools that students will learn throughout the semester. In terms of macroeconomic topics, we will cover fiscal and monetary policy, consumption, saving, investment, labor market dynamics, and financial market dynamics. Lectures will focus on theoretical sides of the models, but related empirical issues and methodologies will also be introduced.

Items on the reading list with “\*” are required reading; and should be available either online or from me for photocopying.

There is no single text book, but the following books will be very useful:

Lucas Jr., Robert E. *Models of Business Cycles*. The Blackwell press. 1987

Lars I. Jungqvist, and Thomas J. Sargent (LS). *Recursive macroeconomic theory*. The MIT press. 2000 or new edition

Nancy Stokey, Robert E. Lucas, Jr. w/ Edward Prescott (SLP). *Recursive Methods in Economic Dynamics*. The Harvard press. 1989

Class meets Monday and Wednesday, 8:45 to 10:00, in Allen 1004. There will be TA sessions on Friday (location and time is to be announced.) TA for the course is Ha Il Park.

My office hour is Monday, 2:30-4:30pm in my office (Allen 3063).

Several problem sets (Roughly 7) will be assigned. These are to be handed in for grading, and will count for 10% of the course grade. The first exam (25%) will be given on February 25 and the second exam (25%) will be given on April 15. The final exam (40%) will be given in the Final week unless otherwise noted.

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## Class Roadmap

### 1. Dynamic Programming (3 weeks) + Readings (Not Required)

#### 1) Deterministic Setup

- a. Math and Economic Preliminaries (SLP Ch 3-4.1) *some Questions Study*
- b. Bounded Returns, Differentiability of Value Functions (SLP Ch 4-5)
- c. Unbounded Returns, Homogenous Returns (SLP Ch 4-5)
- d. Global and local Dynamics and Stability (SLP Ch6)

#### 2) Stochastic Dynamic Programming

- e. Some Measure Theory (SLP Ch7-8)
- f. Markov Chain and Applications (SLP 9-11)
- g. Weak Coverage and Applications (SLP 12-13)

#### 3) Some Applications (Warming up)

- a. Optimal investment problem (SLP Ch15)
- b. Stochastic growth problem (SLP Ch2 and Ch15)
- c. Asset pricing models (Note)

### 2. Fiscal Policy (Theory of Second Best) (3 weeks)

#### (1) Ramsey Style Approach

Ramsey, Frank. "A Contribution to the Theory of Taxation," *Economic Journal* 37: 47-61 (1927)

Barro, Robert J. "On the determination of the public debt," *Journal of Political Economy* 87: 940-971 (1979)

\* Lucas, Robert E. Jr., and Nancy Stokey. "Optimal fiscal and monetary policy in an economy without capital," *Journal of Monetary Economics* 12: 55-93 (1983)

\* Lucas, Robert E. Jr., "Supply side Economics: An analytical review," *Oxford Economic Papers* 42: 293-316

\* Chamley, Christophe P. "The Welfare Cost of Capital Income Taxation in general equilibrium with infinite lives," *Econometrica* 54: 607-622 (1986)

Jones, Larry E., Rodolfo E. Manuelli, and Peter E. Rossi, "Optimal Taxation in Models

Incomplete  
Markets

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of Endogenous Growth," *Journal of Political Economy*, 101: 485-517 (1993)

Rebelo, Sergio, and Nancy L. Stokey. "Growth effects of Flat Rate Taxes," *Journal of Political Economy*, 103: 519-550.

(2) Mirrlees Style Approach

Mirrlees, James A. "Optimal Tax Theory: A Synthesis," *Journal of Public Economics* 6: 327-358 (1976)

Saez, Emmanuel. "Using Elasticities to Derive Optimal Income Tax Rates" *Review of Economic Studies*, 68, 2001, 205-229

Werning, Ivan. "Dynamic Optimal Taxation," *The University of Chicago PhD thesis*. (2002)

### **3. Money, Inflation, and Monetary Policy (3 weeks)**

(1) Welfare Cost of Inflation

Imrohorglu, Ayse "The Welfare Cost of Inflation Under Imperfect Insurance." *Journal of Economic Dynamics and Control* Vol. 16, No. 1 Jan (1992): 79-92.

\* Lucas, Robert E., Jr. "Inflation and Welfare." *Econometrica* (2000).

Ijungqvist and Sargent : Chapter 14

(2) Liquidity Effect (Market Segmentation)

\* Lucas, Robert E., Jr. and Nancy L. Stokey. "Money and Interest in a Cash-in-Advance Economy," *Econometrica* 55 (1983): 491-5123.

\* Grossman, Sanford J., and Laurence A. Weiss. "Transactions Based Model of the Monetary Transmission Mechanism," *American Economic Review* 73 (1983): 871-880.

\* Lucas, Robert E., Jr. "Liquidity and Interest Rates," *Journal of Economic Theory*, 50 (1990): 871-880.

\* Lucas, Robert E., Jr. "Monetary Neutrality," *Journal of Political Economy* 104 (1996):

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661-682.

Christiano, Lawrence J., Martin Eichenbaum, and Charles L. Evans. "Monetary Policy Shocks: What Have We Learned and to What End?" *NBER Working Paper* 6400, (1998).

(3) Inflation Targeting and the Taylor Rule (Price Setting)

\* Taylor, John B. "Discretion versus Policy Rules in Practice," *Carnegie-Rochester Conference Series in Public Policy* 39 (1993): 195-214.

\* Clarida, Richard, Jordi Gali, and Mark Gertler. "The Science of Monetary Policy: A New Keynesian Perspective," *Journal of Economic Literature* 37 (1999): 1661-1707.

\* Alvarez F. , R. E. Lucas, Jr. and W. Weber. "Interest Rate and Inflation," *American Economic Review* (2001)

\* Kim, Hwagyun and Chetan Subramanian. "Transaction Costs and Interest Rate Rules," *Journal of Money, Credit, and Banking* (2006) Vol 38 1077-1091

Golosov, Mikhail, and Robert E. Lucas, Jr. "Menu Costs and Phillips Curves," *NBER working Paper* #10187 (2003) or published version in *Journal of Political Economy* (2007) 171-199

#### **4. Labor Market (Equilibrium Unemployment) (2 weeks)**

\* Ljungqvist and Sargent : Chapter 5 and 19

\* Mortensen, Dale T. and Christopher A. Pissarides. "Job Creation and job destruction in a theory of unemployment," *Review of Economic Studies*, 61: 397-416 (1994)

\* Moen, Espen R. "Competitive Search Equilibrium," *Journal of Political Economy*, 105: 385-411. (1997)

Shimer, Robert. "The Assignment of Workers to Jobs in an Economy with Coordination Frictions" (2005) *Journal of Political Economy*, 113(5): 996-1025.

#### **4. Consumption, Saving, and Investment (4 weeks)**

(1) Welfare Cost of Business Cycles

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\* Lucas Jr., Robert E. "Macroeconomic Priorities." *American Economic Review* 93: 1-14.

\* Lucas Jr., Robert E. *Models of Business Cycles*. Oxford: Blackwell 1987

(2) First Deviation: Recursive Preference

\* Epstein, Larry G., and Stanley E. Zin. "Substitution, Risk Aversion, and the Temporal Behavior of Consumption and Asset Returns: An Empirical Analysis," *Journal of Political Economy* 99 no. 2 (1991): 263-286.

Epstein, Larry G., and Stanley E. Zin. "Substitution, Risk Aversion, and the Temporal Behavior of Consumption and Asset Returns: A Theoretical Framework," *Econometrica* 57 no. 4 (1989): 937-969.

(3) Second Deviation: PIH, Idiosyncratic Shocks, and Precautionary Savings

Attanasio, Orazio P. "Consumption Demand." In *Handbook of Macroeconomics*. Edited by John Taylor and Michael Woodford. Amsterdam: North-Holland. 1999 Vol. 1B ch11.

\* Campbell, John Y. and N. Gregory Mankiw. "Consumption, income, and interest rates: reinterpreting the time series evidence." In *NBER Macroeconomic Annual 1989*. Cambridge, MA pp. 185-216 (or *NBER working paper # 2924*)

Hall, Robert. "Stochastic Implications of the Life Cycle Permanent Income Hypothesis: Theory and Evidence." *Journal of Political Economy* 86, no6 (1978): 971-987.

Flavin, Marjorie. "The Adjustment of Consumption to Changing Expectations about Future Income," *Journal of Political Economy* 89, no6 (1981): 974-1009.

Ljungqvist and Sargent : Chapter 13 and 14

Aiyagari, S. Rao. "Uninsured Idiosyncratic Risk and Aggregate Savings." *Quarterly Journal of Economics* 109 no. 3 (1994): 659-684.

\* Krusell, Per, and Anthony A. Smith, Jr. "Income and Wealth Heterogeneity in the Macroeconomy." *Journal of Political Economy* 106, no. 5 (1998): 867-896.

Huggett, Mark. "The Risk Free Rate in Heterogeneous Agent Incomplete-Insurance Economies." *Journal of Economic Dynamics and Control* 17 (1993): 953-969

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(4) Risk Sharing: Complete Market

\* Ljungqvist and Sargent : Chapter 7.

\* Arrow, Kenneth. "Role of Securities in Optimal Allocation of Risk Bearing," *Review of Economic Studies* vol. 31 (1954).

Townsend, Robert. "*The Medieval Village Economy*," Princeton University Press (1993): pp. 25-38 (risk), 66-67 (storage), 77-81 (production/labor)

Townsend, Robert. "Risk and Insurance in Village India," *Econometrica* 62 (1994): 539-591

(5) Third Deviation: Risk Sharing under Incomplete Market (Incentive)

Ljungqvist and Sargent : Chapter 15.

Lucas, Jr. Robert E. "On Efficiency and Distribution," *Economic Journal* 102 (1992): 233-247

Atkeson, Andrew, and Robert E. Lucas, Jr. "On Efficient Distribution with Private Information," *Review of Economic Studies* 59 (1992): 427-453.

(6) Justifications for the deviations: Asset Prices and Puzzles

Ljungqvist and Sargent : Chapter 7 and 10.

Cochrane, John, and Lars P. Hansen. "Asset Pricing Explorations for Macroeconomics," NBER Macroeconomics Annual 1992 pp. 115-165 (NBER working papers #4088)

Mehra, Rajnish, and Ed Prescott. "The Equity Premium: A Puzzle," *Journal of Monetary Economics* 15 (1985): 145-162.

(7) Another Direction: Irreversible Investment

Dixit, A. K. and R. S. Pindyck. *Investment under Uncertainty*, Princeton Univ. Press: Chapters 2-4.

Caballero, Ricardo. "Aggregate Investment," in *Handbook of Macroeconomics* ch12.

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Caballero, Ricardo, and Eduardo Engle, "Explaining Investment Dynamics in U.S. Manufacturing: A Generalized (s,S) approach," *Econometrica* 67 (1999): 783-826.

Caballero, Ricardo, and John Leahy, "Fixed Costs, The Demise of Marginal q," NBER working papers #5508 (1996)

### **University Regulations**

#### **1) Aggie Honor Code**

"An Aggie does not lie, cheat, or steal or tolerate those who do."

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning, and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rule does not exclude any member of the TAMU community from the requirements or the processes of the Honor System. For additional information, please visit [www.tamu.edu/aggiehonor/](http://www.tamu.edu/aggiehonor/)

#### **2) ADA Policy Statement**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for students with Disabilities, in Cain Hall or call 845-1637

