

Office: Heady Hall 375 L. Tesfatsion
Department of Economics Last Taught: Spring 1997
Iowa State University Last Revised 12/4/97
Ames, Iowa 50011-1070

Office Hours: MW 1:30-3:30
and by appointment

Telephone: (515) 294-0138

Email Address: tesfatsi@iastate.edu

Home Page: <http://www.econ.iastate.edu/tesfatsi/>

Econ 604 Website: <http://www.econ.iastate.edu/classes/econ604/tesfatsion/>

Economics 604

MACRODYNAMICS: COMPETING PERSPECTIVES

The basic problem of macrodynamics is to provide a cohesive understanding for the way in which key macro variables (output, employment, price levels, capital stocks,...) move together over time. At present there is no consensus among macroeconomists concerning which paradigm best explains the movement in key macro variables for decentralized market economies. Consequently, it is not surprising to see major policy disagreements persist concerning which macro variables government should attempt to control in order to achieve price stability, growth, and high employment.

Econ 604 will examine a spectrum of competing paradigms for macrodynamics in an attempt to understand the fundamental agreements and disagreements that underly current research in growth, business cycles, and coordination issues. Part I of the course will focus on key paradigms that are currently being used to study the sources of economic growth: standard neoclassical descriptive and optimal growth models; overlapping generations models; and endogenous growth models. Part II will focus on alternative approaches to business cycle theory. Part III will focus on coordination issues arising in dynamic macroeconomic systems: for example, time inconsistency; adaptation and learning; and self-organization and emergent behavior.

Prerequisites: Economics 602

Lecture Meeting Time and Place: MW, xxxxx, xxxxxxxxxxxxxxxx; **Discussion Section** (Moderated by the T.A.): F xxxxxxxxxxx, xxxxxxxxxxxxxxxx.

Grading: Grades will be determined on the basis of one midterm exam (100 points), one final exam (100 points), and various graded exercises (approximately 60 points). Class discussion will count for extra credit in case of a borderline grade.

Recommended Overview Texts: Kevin D. Hoover, *The New Classical Macroeconomics*, Basil Blackwell, c. 1988, reprinted in paperback in 1991, 1992 (ISBN 0-631-17263-7); and Steven M. Sheffrin, *The Making of Economic Policy*, Basil Blackwell, c. 1989, reprinted in paperback 1991 (ISBN 1-55786-294-X).

Reading Assignments: Required readings will be assigned from a variety of journal articles, monographs, and books. All required readings have been placed on closed reserve in the Econ/Soc Reading Room (Third

Floor, Heady Hall), together with a selection of recommended readings. The books placed on closed reserve for Econ 604 are listed below.

Books Placed on Closed Reserve for Econ 604

- R. G. D. Allen, *Macro Theory*, Macmillan, N.Y., 1968 (paperback).
- R. Barro and X. Sala-i-Martin, *Economic Growth*, McGraw-Hill, Inc., 1995. [ISBN 0-07-003697-7]
- O. Blanchard and S. Fischer, *Lectures on Macroeconomics*, MIT Press, 1989.
- G. Feiwel, ed., *Issues in Contemporary Macroeconomics and Distribution*, SUNY Press, N.Y., 1985 (paperback).
- D. Gale, *Money: In Equilibrium*, Cambridge U Press, Cambridge, 1982.
- D. Harris, *Capital Accumulation and Income Distribution*, Stanford U Press, Stanford, 1978.
- T. Havrilesky, *Modern Concepts in Macroeconomics*, Harlan Davidson, Illinois, 1985.
- K. Hoover, *The New Classical Macro*, Oxford University Press, Oxford, 1988.
- J. Kareken and N. Wallace, eds., *Models of Monetary Economies* Federal Reserve Bank of Minneapolis, Minneapolis, 1980.
- J. M. Keynes, *The General Theory of Employment, Interest, and Money*, Harcourt, Brace and World, Inc., 1965.
- A. Klammer, *Conversations With Economists*, Rowman and Allenheld, New Jersey, 1983.
- R. E. Lucas, Jr., *Studies in Business Cycle Theory*, MIT Press, 1987.
- N. Gregory Mankiw and D. Romer, eds., *New Keynesian Economics*, Volumes 1 and 2, MIT Press, Cambridge, 1991.
- G. McCandless, Jr., with N. Wallace, *Introduction to Dynamic Macro Theory: An Overlapping Generations Approach*, Harvard University Press, Cambridge, MA, 1991.
- W. Peterson, *Income, Employment, and Economic Growth*, W. W. Norton, Seventh Edition, 1992.
- R. Ramanathan, *Introduction to the Theory of Economic Growth*, Springer-Verlag, New York, 1982.
- D. Romer, *Advanced Macroeconomics*, McGraw-Hill, 1996.
- S. Sheffrin, *The Making of Economic Policy*, Basil Blackwell, 1989.

TOPICS AND READINGS

PLEASE NOTE: The syllabus contains many more topics than can be covered in a one semester course (or perhaps a lifetime). The exact selection of topics to be covered in Econ 604 will depend on the backgrounds and interests of the students.

For those topics that are selected for coverage, **double-starred** readings are **required** readings and **single-starred** readings are **highly recommended** readings that complement the required readings by providing a more general contextual overview of the literature and that may be useful for understanding class lectures and for answering exercise and exam questions. [Some of the single-starred readings may be assigned as required discussion section readings as the course proceeds.] Other supplemental (un-starred) readings are also listed for students wishing more specialized and detailed coverage. Additional required and recommended readings may be added at a later time.

All required readings are on closed reserve in the Reading Room (Third Floor, Heady Hall 368). When book chapters are required, generally the books themselves will be on closed reserve rather than individual chapters. When journal articles are required, it will generally be the articles that are on closed reserve rather than the journal issues in which they appear.

PART ONE: MAJOR PARADIGMS FOR MACRO GROWTH

I. INTRODUCTION

A. Background and Overview

- ** R. Barro and X. Sala-i-Martin, *Economic Growth*, McGraw-Hill, 1995, Chapter 1: Introduction, pp. 1-13, CLOSED RESERVE.
- ** N. Gregory Mankiw, "A Quick Refresher Course in Macroeconomics," *Journal of Economic Literature* 28 (December 1990), 1645-1660, CLOSED RESERVE.
- ** Review Time Series Data Hand-Outs from Econ 602
- * O. Blanchard and S. Fischer, Chapter 1 (pp. 1-36), CLOSED RESERVE.
- * J. H. Stock and M. W. Watson, "Variable Trends in Economic Time Series," *Journal of Economic Perspectives* 2 (Sept. 1988), 147-174. CLOSED RESERVE
- * W. Peterson, op. cit. , Chapters on Growth, Business Cycles, and Forecasting, Intermediate-Level Review, CLOSED RESERVE.
- * "What Have We Learned from Recent Empirical Growth Research?," Symposium with comments by R. Hall and C. Jones, X. Sala-i-Martin, J. Sachs and A. Warner, *The American Economic Review: Papers and Proceedings* 87 (May 1997). CLOSED RESERVE.

B. Construction and Analysis of Macrodynamic Models

- ** Hand-Outs (Structure of Macrodynamic Models; Seven Basic Steps for Analyzing a Macrodynamic Model; The Concept of the "Basic Causal Differential System")
- ** D. Harris, Chapter 1 (pp. 3-24), CLOSED RESERVE.
- ** R. Ramanathan, Chapter 1 (pp. 1-4), CLOSED RESERVE.

Other Suggested Readings:

- W. Carl Biven, *Who Killed John Maynard Keynes: Conflicts in the Evolution of Economic Policy*, Irwin, IL, 1989.
- O. Blanchard and S. Fischer, Chapter 10:Some Useful Models (pp. 505-565) and Chapter 11:Monetary and Fiscal Policy Issues (pp. 566-629). [Advanced but interesting overview of state-of-the-art macro]
- M. Blaug, *Economic Theory in Retrospect*, Cambridge University Press, latest edition.
- A. Chiang, *Elements of Dynamic Optimization*, N.Y., 1992.
- George R. Feiwel, ed., *Arrow and the Ascent of Modern Economic Theory*, New York University Press, N.Y., 1987.
- G. R. Feiwel, ed., *The Economics of Imperfect Competition and Employment: Joan Robinson and Beyond*, New York University Press, N.Y., 1989.
- M. I. Kamien and N. L. Schwartz, *Dynamic Optimization: The Calculus of Variations and Optimal Control in Economics and Management*, 2nd Edition, North Holland, 1993.
- M. Rukstad, *Macroeconomic Decision-Making in the World Economy*, Third Edition, Dryden Press, New York, 1992. [Harvard Business School case studies of major economic events such as the Great Depression, the Bush/Reagan deficits, the European monetary union, the third world debt crisis, etc.]
- A. Takayama, *Analytical Methods in Economics*, N.Y., 1994.
- L. Taylor, *Income Distribution, Inflation, and Growth: Lectures on Structuralist Macro Economic Theory*, MIT Press, Cambridge, MA, 1991. [Emphasizes the need to construct models appropriate to specific institutions, constraints, and practices found in particular developing economies...historically specific models of the development process.]
- S. J. Turnovsky, *Methods of Macroeconomic Dynamics*, The MIT Press, Cambridge, MA, 1995.

II. NEOCLASSICAL AGGREGATE GROWTH MODELS

A. Introduction

- ** D. Harris, Chapter 2 (pp. 25-48), CLOSED RESERVE.
- ** W. Peterson, Chapter on Growth. CLOSED RESERVE
- * R. Solow, "Growth Theory and After," *American Economic Review* 78 (June 1988), 307-317, CLOSED RESERVE.

B. A Simple Fore-Runner of the Solow-Swan Descriptive Growth Model

- ** In-Class Exercise
- * R. G. D. Allen, Chapter 11 (pp. 197-211), CLOSED RESERVE.
- * R. Ramanathan, Chapter 2 (pp. 5-17) and Chapter 3 (pp. 18-31), CLOSED RESERVE.

C. Neoclassical Descriptive Growth Models

- ** Hand-Outs (The Basic Solow-Swan Descriptive Growth Model; Notes on Differential Equations; Summary: Solow-Swan Model Equations; An Illustrative Two-Sector Descriptive Growth Model)
- * Barro and Sala-i-Martin, Chapter 1:Growth Models with Exogenous Savings Rate (the Solow-Swan Model), pp. 14-58, CLOSED RESERVE.
- * Romer, Chapter 1:The Solow Growth Model, pp. 5-37, CLOSED RESERVE.
- * R. Ramanathan, Chapter 3:Basic Neoclassical Growth Models, pp. 32-72, CLOSED RESERVE.
- * D. Harris, Chapter 9:The Neoclassical Approach, pp. 212-230, CLOSED RESERVE.
- * Ramanathan, Chapter 10:Two-Sector Growth Models (pp. 272-295), CLOSED RESERVE.
- E. Drandakis, "Factor Substitution in the Two-Sector Growth Model," *Review of Economic Studies* 30 (1963), 217-228.

D. Neoclassical Optimal Growth Models

- ** Hand-Outs (The Basic Optimal Growth Model; Critique of Neoclassical Growth Models.)
- * Barro and Sala-i-Martin, Chapter 2:Growth Models with Consumer Optimization (the Ramsey Model), pp. 59-95, CLOSED RESERVE.
- * Romer, Chapter 2:Behind the Solow Model–Infinite Horizon and Overlapping Generations Models, pp. 38-72, CLOSED RESERVE.
- * R. Ramanathan, Chapter 9:Optimal Growth (pp. 254-272), CLOSED RESERVE.

Other Suggested Readings:

- R. G. D. Allen, Chapter 11 (pp. 211-215), Chapter 13 (pp. 236-258), and Chapter 14 (pp. 259-274), CLOSED RESERVE.
- E. Burmeister, *Capital Theory and Dynamics*, Cambridge University Press, Cambridge, 1980.
- A. C. Chiang, *Elements of Dynamic Optimization*, McGraw-Hill, N.Y., 1993.
- G. Gandolfo, *Economic Dynamics: Methods and Models*, North-Holland, 1980.
- J. Gray, "Dynamic Instability in Rational Expectations Models: An Attempt to Clarify," *International Economic Review* 25 (Feb 1984), 93-122. [Explores conditions under which the popular procedure of focusing only on stable solutions for dynamic macroeconomic rational expectations models can be justified. Also provides economic motivation for transversality conditions.]
- R. G. King, C. I. Plosser, and S. T. Rebelo, "Production, Growth, and Business Cycles: I. The Basic Neoclassical Model," *Journal of Monetary Economics* 21 (March/May 1988), 195-232.
- R. G. King and S. Rebelo, "Public Policy and Economic Growth: Developing Neoclassical Implications," *Journal of Political Economy* 98 (1990), S126-S150.
- Policies for Long-Run Economic Growth: A Symposium sponsored by the Federal Reserve Bank of Kansas City , August 1992, edited collection of articles by A. Greenspan, M.

Darby, C. Plosser, N. G. Mankiw, L. Summers, R. Barro, and S. Fischer, among others.

E. Prescott, "Robert M. Solow's Neoclassical Growth Model: An Influential Contribution to Economics," *Scandinavian Journal of Economics* 90 (1988), 7-12.

R. Solow, *Growth Theory*, Oxford University Press, Oxford, 1970.

N. Stokey and R. E. Lucas, Jr., *Recursive Methods in Economic Dynamics*, Harvard University Press, 1989.

A. Takayama, *Mathematical Economics*, Cambridge U Press, Cambridge, 1985, Chapter 5.

III. THE OVERLAPPING GENERATIONS ECONOMY

A. Introduction

** Hand-Out (The Basic Pure Exchange OG Economy)

* G. Becker, "Family Economics and Macro Behavior," *American Economic Review* 78 (March 1988), 1-13 (Presidential Address), CLOSED RESERVE.

Other Suggested Readings:

A. Auerbach, J. Gokhale, and L. Kotlikoff, "Generational Accounting: A Meaningful Way to Evaluate Fiscal Policy," *Journal of Economic Perspectives* 8 (Winter 1994), 73-94. [Critiqued by R. Haveman, "Should Generational Accounts Replace Public Budgets and Deficits?," *Ibid.*, 95-111.]

David Gale, "Pure Exchange Equilibrium of Dynamic Economic Models", *Journal of Economic Theory* 6 (1973), 12-36. [Famous paper that first rigorously demonstrated the failure of the first welfare theorem for the overlapping generations model.]

J. Geanakoplos and H. M. Polemarchakis, "Overlapping Generations," in *Handbook of Mathematical Economics*, Vol. IV (1991), 1899-1960. [Technical introduction to the math econ literature using OG models.]

G. McCandless, with N. Wallace, *Introduction to Dynamic Macroeconomic Theory: An Overlapping Generations Approach*, Harvard University Press, Cambridge, MA, 1991. [Middle-brow theoretical treatment of the OG model.] CLOSED RESERVE.

M. Pingle and L. Tesfatsion, "Walras' Law in Overlapping Generations Economies," ISU Economic Report No. 34, revised October 1997.

P. Samuelson, "An Exact Consumption-Loan Model of Interest With or Without the Social Contrivance of Money," *Journal of Political Economy* 66 (1958), 467-482. [Seminal paper that first introduced the overlapping generations model.]

M. Shubik, "Society, Land, Love, or Money: A Strategic Model of How to Glue the Generations Together," *Journal of Economic Behavior and Organization* 2 (1981), 359-385. [An interesting discussion of the intergenerational equity and efficiency issues raised by the OG model, but watch out for an unusually large number of typographical errors.]

B. Government Fiscal Policy in OG Economies

- ** Hand-Out (Government Intervention in Pure Exchange OG Economies)
- ** P. Orazem and L. Tesfatsion, “Macrodynamics Implications of Income Transfer Policies for Human Capital Investment and School Effort” (with P. Orazem), *Journal of Economic Growth* 2 (November 1997), 305–329. CLOSED RESERVE.
- * K. Hoover, *The New Classical Macroeconomics*, op. cit., Chapter 7: “The Limits of Policy: Micro Models,” (pp. 138-163). [An OG exposition of Ricardian equivalence.] CLOSED RESERVE.
- * Romer, Chapter 2: Behind the Solow Model – Infinite Horizon and OG Models, pp. 72-88 (the Diamond OG Model), CLOSED RESERVE.
- O. Blanchard and S. Fischer, op. cit., Chapter 4 (pp. 154-212), CLOSED RESERVE.
- Douglas Gale, *Money: In Equilibrium*, Chapters 4-7 plus Bibliographical Notes (pp. 337-340), CLOSED RESERVE.
- Symposium on social security, *Journal of Economic Perspectives* 10 (Summer 1996). Articles by E. Gramlich (“Different Approaches for Dealing with Social Security,” pp. 55-66) and P. Diamond (“Proposals to Restructure Social Security,” pp. 67-88).

Other Suggested Readings:

- R. Barro, “Are Government Bonds Net Wealth?,” *Journal of Political Economy* 82 (1974), 1095-1117. [Seminal Paper on Ricardian Equivalence].
- B. Douglas Bernheim and Kyle Bagwell, “Is Everything Neutral?,” *Journal of Political Economy* 96 (April 1988), 308-338. [Ricardian Equivalence Critiqued]
- O. Blanchard and S. Fischer, Chapter 3 (pp. 91-114) and Chapter 5 (especially pp. 226-232). CLOSED RESERVE.
- P. Diamond, “National Debt in a Neoclassical Growth Model,” *American Economic Review* 55 (1965), 1126-1150.
- Douglas Gale, *Money: In Disequilibrium*, Cambridge U Press, Cambridge, 1983, Chapter 2 (pp. 51-83) plus Bibliographical Notes (pp. 351-352).
- T. M. Havrilesky, *Modern Concepts in Macroeconomics*, Part III, Chapters 10-19 (pp.205-342), CLOSED RESERVE.
- J. J. Seater, “Ricardian Equivalence,” *Journal of Economic Literature* 31 (March 1993), 142-190.
- L. Tesfatsion, “Welfare Implications of Net Social Security Wealth,” *Journal of Public Economics* 24 (1984), 1-27.
- J. Tirole, “Asset Bubbles and Overlapping Generations: A Synthesis,” *Econometrica* 53 (1985), 1499-1528. [NOTE: This is the corrected reprint of an earlier version of the paper appearing in *Econometrica* 53 (1985) which had sections deleted due to printer error.]

C. Intermediation and Financial Institutions in OG Economies

- * K. Hoover, *The New Classical Macroeconomics*, op. cit., Chapter 5: “The New Monetary Economics,” (pp. 87-110). [What constitutes an adequate integration of monetary and value theory?] CLOSED RESERVE.
- * K. Hoover, *The New Classical Macroeconomics*, op. cit., Chapter 6: “Formal Models of Monetary Economies,” (pp. 111-137). [OG investigations of the role of fiat money both as a store of value and as a medium of exchange.] CLOSED RESERVE.
- * D. Cass and K. Shell, “In Defense of a Basic Approach,” pp. 251-260 in *Models of Monetary Economies*, ed. by J. H. Kareken and N. Wallace, Federal Reserve Bank of Minneapolis, Minnesota, 1980. CLOSED RESERVE
- * M. Pingle and L. Tesfatsion, “Active Intermediation in a Monetary Overlapping Generations Model,” *Journal of Economic Dynamics and Control*, to appear. CLOSED RESERVE.

Other Suggested Readings:

- Y. Balasko, “Extrinsic Uncertainty Revisited,” *Journal of Economic Theory* 31 (1983), 203-210.
- D. Cass and K. Shell, “Do Sunspots Matter?,” *Journal of Political Economy* 91 (1983), 193-227.
- Douglas Gale, *Money: In Equilibrium*, Chapter 4 (pp. 163-181), plus Bibliographical Notes (pp. 337-338), CLOSED RESERVE.
- J.-M. Grandmont, *Money and Value: A Reconsideration of Classical and Neoclassical Monetary Theories*, Cambridge University Press, Cambridge, 1983.
- I. Hansson and C. Stuart, “Malthusian Selection of Preferences,” *American Economic Review* 80 (June 1990), 529-544.
- J. Kareken and N. Wallace, eds., *Models of Monetary Economies*, Federal Reserve Bank of Minneapolis, January 1980.
- M. Pingle and L. Tesfatsion, “Overlapping Generations, Intermediation, and the First Welfare Theorem,” *Journal of Economic Behavior and Organization* 15 (1991), 325-345.
- M. Pingle and L. Tesfatsion, “Active Intermediation in Overlapping Generations Economies with Production and Unsecured Debt,” *Macroeconomic Dynamics*, to appear.
- Symposium on Bubbles, *Journal of Economic Perspectives* 4 (1990), pp. 13-101.

IV. ENDOGENOUS GROWTH MODELS

A. Introductions to the Literature

- ** C. Plosser, “The Search for Growth,” pp. 57-86 in *Policies for Long-Run Economic Growth*, A Symposium Sponsored by the Federal Reserve Bank of Kansas City, August 1992, followed by “Commentary,” pp. 87-92, by N. Gregory Mankiw. CLOSED RESERVE.
- * P. Romer, “The Origins of Endogenous Growth,” *Journal of Economic Perspectives* 8 (Winter 1994), 3-22. CLOSED RESERVE.

* Barro and Sala-i-Martin, Chapter 4:One-Sector Models of Endogenous Growth, pp. 140-170, CLOSED RESERVE.

* Romer, Chapter 3:Beyond the Solow Model – New Growth Theory, pp. 95-145, CLOSED RESERVE.

H. Pack, “Endogenous Growth Theory: Intellectual Appeal and Empirical Shortcomings,” *Journal of Economic Perspectives* 8 (Winter 1994), 55-72.

E. W. Tallman and P. Wang, “Human Capital Investment and Economic Growth: New Routes in Theory Address Old Questions,” *Economic Review*, Federal Reserve Bank of Atlanta, Vol. 77, September/October, 1992.

B. Research Stressing Human Capital and Innovation

* G. M. Grossman and E. Helpman, “Endogenous Innovation in the Theory of Growth,” *Journal of Economic Perspectives* 8 (Winter 1994), 23-44. CLOSED RESERVE.

** R. E. Lucas, Jr., “Making a Miracle,” *Econometrica* 61 (1993), 251-272, CLOSED RESERVE.

P. Aghion and P. Howitt, “A Model of Growth Through Creative Destruction,” *Econometrica* 60 (March 1992), 322-352. [Treats the case of cost-reducing innovations.]

Barro and Sala-i-Martin, Chapter 5:Two-Sector Models of Endogenous Growth, pp. 171-211, CLOSED RESERVE. [A detailed technical discussion of Lucas, “On the Mechanics... ” (JME,1988), a precursor to Lucas, “Making a Miracle” (Econometrica, 1993).]

G. Grossman and E. Helpman, *Innovation and Growth in the Global Economy*, MIT Press, 1991.

R. E. Lucas, Jr., “On the Mechanics of Economic Development,” *Journal of Monetary Economics* 22 (1988), 3-42.

C. Research Stressing Income Distribution

* S. Durlauf, “Spillovers, Stratification, and Inequality,” *European Economic Review* 38 (1994), 836–845.

D. Research Stressing Endogenous Fertility

G. Becker, K. Murphy, and R. Tamura, “Human Capital, Fertility, and Economic Growth,” *Journal of Political Economy* 98:5 (October 1990, Part 2), pp. 12-37.

G. Becker, *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*, 3rd Edition, University of Wisconsin Press, 1993.

Other Suggested Readings:

O. Blanchard and S. Fischer, Chapter 2 (pp. 37-47), CLOSED RESERVE.

N. G. Mankiw, D. Romer, and D. Weil, “A Contribution to the Empirics of Economic Growth,” *Quarterly Journal of Economics* 107 (May 1992), 71-102.

R. J. Olsen, “Fertility and the Size of the U.S. Labor Force,” *Journal of Economic Literature* 32 (March 94), 60-100.

P. Romer, “Increasing Returns and Long-Run Growth,” *Journal of Political Economy* 94 (1986), 1002-1037.

- R. Solow, "Perspectives on Growth Theory," *Journal of Economic Perspectives* 8 (Winter 1994), 45-54.
- R. Summers and A. Heston, "The Penn World Table (Mark 5: An Expanded Set of International Comparisons, 1950-1988)," *Quarterly Journal of Economics* 106 (May 1991), 327-368. [Compilation of comparative national-accounts data, used to run international cross-section regressions with the average growth-rates of different countries as dependent variables and various politico-economic factors as regressor variables; critiqued by R. Levine and S. Zervos, "A Sensitivity Analysis of Cross-Country Growth Regressions," *American Economic Review* 82 (September 1992), 942-963.]

PART TWO: THEORIES OF THE BUSINESS CYCLE

I. AN OVERVIEW OF COMPETING BUSINESS CYCLE THEORIES

- * W. Peterson, Chapter on Business Cycles and Forecasting, CLOSED RESERVE.
- ** V. Zarnowitz, "Recent Work on Business Cycles in Historical Perspective: A Review of Theories and Evidence," *Journal of Economic Literature* 23 (June 1985), 523-580, CLOSED RESERVE.
- * Abel and Bernanke, *Macroeconomics*, Chapter 9: Business Cycles (pp. 289-315), *op cit.*, CLOSED RESERVE.
- * Ramanathan, Chapter 3 (pp. 56-72), CLOSED RESERVE.
- V. Zarnowitz, *Business Cycles: Theory, History, Indicators, and Forecasting*, University of Chicago Press, 1992 (paperback edition, 1996).

Other Suggested Readings:

- B. Bergstrom and A. Vredin, *Measuring and Interpreting Business Cycles*, Oxford University Press, 1994.
- S. P. Das, *New Perspectives on Business Cycles: An Analysis of Inequality and Heterogeneity*, Elgar, Aldershot, U.K., 1993.
- R. J. Gordon, *The American Business Cycle*, University of Chicago Press, Chicago, 1986.
- C. W. J. Granger, "Modelling Nonlinear Relationships Between Extended-Memory Variables," *Econometrica* 63 (March, 1995), 265-279.
- A. W. Mullineux, *Business Cycles and Financial Crises*, University of Michigan Press, Ann Arbor, 1990.
- C. R. Nelson and C. I. Plosser, "Trends and Random Walks in Macroeconomic Time Series," *Journal of Monetary Economics* 22 (1982), 129-162.
- J. H. Stock and M. Watson, eds., *Business Cycles, Indicators, and Forecasting*, University of Chicago Press, 1993.

II. EQUILIBRIUM BUSINESS CYCLE THEORIES

A. Overview

- ** K. Hoover, *The New Classical Macroeconomics*, Basil Blackwell, 1988, Chapter 3: Market Clearing Models of the Business Cycle (pp. 38-61), CLOSED RESERVE.
- * Abel and Bernanke, *Macroeconomics*, Chapter 11: Classical Business Cycle Analysis (pp. 354–395), *op cit.*, CLOSED RESERVE.
- K. Kim, *Equilibrium Business Cycle Theory in Historical Perspective*, Cambridge University Press, Cambridge, 1988.
- A. Kramer, *Conversations With Economists*, Rowman and Allanheld, 1983, CLOSED RESERVE.

B. Monetary Equilibrium Business Cycle Theory: The Lucas Viewpoint

- ** R. E. Lucas, Jr., “Understanding Business Cycles,” Reading No. 10 in Lucas (ed.), *Studies in Business-Cycle Theory*, CLOSED RESERVE.
- ** R.E. Lucas, Jr., “Methods and Problems in Business cycle Theory,” Reading No. 14 in Lucas (ed.), *Studies in Business-Cycle theory*, CLOSED RESERVE.
- * O. Blanchard and S. Fischer, *op. cit.*, Chapter 7 (pp. 356-371), CLOSED RESERVE
- * R. E. Lucas, Jr., and T. Sargent, “After Keynesian Macroeconomics,” Reading No. 7 (pp. 166–180) in T. M. Havrilesky, *Modern Concepts in Macroeconomics*, *op. cit.*, CLOSED RESERVE.
- * K. Hoover, *The New Classical Macroeconomics*, *op. cit.*, Chapter 9: Two Types of Monetarism? (pp. 213-230). [Attempts to clarify the relation between the monetarism of Milton Friedman and the role of money as perceived by Lucas and other new classical macroeconomists.] CLOSED RESERVE.
- * K. Hoover, *The New Classical Macroeconomics*, *op. cit.*, Chapter 10: An Austrian Revival? (pp. 231-257). [Challenges attempts by some to identify the philosophical underpinnings of new classical macro with the Austrian School of Hayek and Von Mises; argues, e.g., that the latter would reject the rational expectations treatment of uncertainty.] CLOSED RESERVE.
- R. E. Lucas, Jr., “An Equilibrium Model of the Business Cycle,” *Journal of Political Economy* 83 (1975), 1113-1144, Reading No. 9 in Lucas, *Studies in Business Cycle Theory*, *op. cit.*
- R. E. Lucas, Jr., *Models of Business Cycles*, Basil Blackwell, New York, N.Y., 1987 [Yrjo Jahns-son Lecture].
- R. E. Lucas, Jr., and T. Sargent, *Rational Expectations and Econometric Practice*, University of Minnesota Press, Minneapolis, 1981.

C. Real Equilibrium Business Cycle Theory

- ** E. Prescott, “Theory Ahead of Business Cycle Measurement,” pp. 9-22 in *Quarterly Review*, Federal Reserve Bank of Minneapolis, Fall 1986, followed by commentary and rebuttal, pp. 23-33, by L. Summers and E. Prescott. [Presentation of the basic Kydland-Prescott real business cycle model.] CLOSED RESERVE
- ** Romer, Chapter 4: Real Business Cycle Theory, pp. 146-194. [Detailed technical discussion of versions of the basic Kydland-Prescott real bc model.] CLOSED RESERVE

- ** G. W. Stadler, “Real Business Cycles,” *Journal of Economic Literature* 32 (December 1994), 1750-1783. [A detailed thoughtful critical assessment of recent contributions to the real business cycle literature.] CLOSED RESERVE
 - * A. Blanchard and S. Fischer, *op. cit.*, Chapter 7: Competitive Equilibrium Business Cycles, pp. 320-355. [Detailed examination of the possible role of intertemporal substitution and income effects in the propagation of shock terms in equilibrium business cycle models.] CLOSED RESERVE
 - * G. N. Mankiw, “Real Business Cycles: A New Keynesian Perspective,” *Journal of Economic Perspectives* 3 (Summer 1989), 79-90, CLOSED RESERVE.
 - * C. I. Plosser, “Understanding Real Business Cycles,” *Journal of Economic Perspectives* 3 (Summer 1989), 51-77, CLOSED RESERVE.
- S. Sheffrin, “The Challenge of Real Business Cycle Theory,” Chapter 3 (pp. 51-81) in S. Sheffrin, *The Making of Economic Policy*, CLOSED RESERVE.
- T. Cogley and J. M. Nason “Effects of the Hodrick-Prescott filter on trend and difference stationary time series,” *Journal of Economic Dynamics and Control* 19 (1995), 253-278. [The authors claim that the Hodrick-Prescott (1980) filter used to remove trends in univariate series (particularly in real bc studies) can generate business cycle periodicities and comovement even if none are present in the original data.]

Other Suggested Readings:

- R. Barro, *Money, Expectations, and Business Cycles*, Academic Press, New York, 1981.
- R. Barro, *Modern Business Cycle Theory*, Harvard University Press, Cambridge, 1989.
- T. Cooley, ed., *Frontiers of Business Cycle Research*, Princeton University Press, Princeton, N.J., 1995. [Collection of real business cycle papers.]
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PART THREE: COORDINATION ISSUES IN DYNAMIC MACROECONOMIES

I. TIME INCONSISTENCY, CREDIBILITY, AND REPUTATION

A. The Basic Problem of Time-Inconsistent Government Policy

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