

ECON 920: Advanced Macroeconomics I
Prof. María Pía Olivero
Winter 2017

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Meeting times: Wednesdays 1PM-3:50PM – GHall 939.

Office hours: Tuesdays 4-5pm, Thursdays 1-2pm, or by appointment.

Course Objective:

This course introduces students to the basic tools and models used by the literature on modern macroeconomics.

Required textbooks:

(R) D. Romer, 2006, Advanced Macroeconomics.

(S) Sargent, 1987, Dynamic Macroeconomic Theory.

(B) Barro, 1997, Macroeconomics, 5th edition.

(D) Doepke, Lehnert, Sellgren, Macroeconomics, 1st edition. (Available to download online- <http://faculty.wcas.northwestern.edu/~mdo738/book.htm>) This textbook complements Barro, Macroeconomics, providing a more mathematical treatment of the topics there.

(BF) Blanchard and Fischer, 1998, Lectures on Macroeconomics.

(BSM) Barro and Sala-i-Martin, Economic Growth.

Other material:

- Papers are assigned to each unit (see below).

Requirements and Grading:

- 1) There will be **one midterm exam** and **one final exam**.
- 2) There will be several **homework assignments**. No late homework will be accepted. You are strongly encouraged to work in groups on homework.
- 3) There will be **in-class presentations of academic papers** related to the course materials, one per student, 1 hour each.

Your course grade will be determined as follows:

- a. Homework 10% (graded on a check-, check, check+ scale).
- b. In class presentation 15%
- b. Midterm exam 35%
- c. Final exam 40%

MIDTERM EXAM: It will be scheduled for the week of February 13th.

UNIT 1: Consumption (weeks 1 and 2)

- 1) The Robinson Crusoe one-period model.
- 2) The Fisher (1930) two-period optimal consumption problem.
- 3) A simple infinite period model of household consumption under both perfect foresight and uncertainty.
- 4) Permanent income hypothesis.
- 5) Consumption and labor supply.
- 6) Durable consumption goods.
- 7) Habits in consumption.
- 8) The Diamond OLG model.

MATERIALS:

- [1] Barro – Macroeconomics – chapters 2 & 3 (and corresponding chapters in Doepke et al).
- [2] Sargent – Dynamic Macro Theory – chapter 1.
- [3] Romer – Advanced Macroeconomics – chapter 7.
- [4] Fisher, Irving (1930), *The Theory of Interest*. MacMillan, New York.
- [5] Hall, Robert E. (1978), “Stochastic Implications of the Life Cycle-Permanent Income Hypothesis: Theory and Evidence”, *Journal of Political Economy*, Vol. 86, pp. 971-987.
- [6] Hall, Robert E. (1988), “Intertemporal Substitution in Consumption”, *Journal of Political Economy*, Vol. 96 (2), pp. 339-357.
- [7] King, Robert G., Charles I. Plosser, and Sergio T. Rebelo (1988), “Production, Growth, and Business Cycles, I: The Basic Neoclassical Model and II: New Directions,” *Journal of Monetary Economics*, 21(2/3), 195–232 and 309–341.
- [8] Ramey, Valerie A., and Neville Francis (2006), “A Century of Work and Leisure,” NBER Working Paper # 12264.
- [9] Mankiw, N. Gregory (1982), “Hall’s Consumption Hypothesis and Durable Goods,” *Journal of Monetary Economics*, 10(3), 417–425.
- [10] Campbell, J. and G. Mankiw (1989), “Consumption, Income and Interest Rates: Reinterpreting the Time Series Evidence”, *NBER Macroeconomics Annual* 4, pp. 185-216.
- [11] Shea, J. (1995), “Union Contracts and the Life-Cycle Permanent Income Hypothesis”, *American Economic Review* 85 (March), pp. 186-200.
- [12] Carroll, Christopher D. (2000): “Solving Consumption Models with Multiplicative Habits,” *Economics Letters*, 68(1), 67–77.
- [13] Weil, Philippe (2008): “Overlapping Generations: The First Jubilee,” *Journal of Economic Perspectives*, 22(4), 115–34.

UNIT 2: Savings and Asset Markets (weeks 3 and 4)

- 1) The Lucas Tree asset pricing model.
- 2) The equity premium puzzle.
- 3) Bubbles in asset pricing.
- 4) The consumption capital asset pricing model (C-CAPM).

MATERIALS:

- [1] Sargent, Dynamic Macroeconomic Theory – chapter 3.
- [2] Blanchard, Lectures on Macroeconomics – chapter 10.
- [3] Lucas, Robert E. (1978), “Asset Prices in an Exchange Economy,” *Econometrica*, 46, pp. 1429-1445.
- [4] Mankiw, N. Gregory, and Stephen P. Zeldes (1989), “The Consumption of Stockholders and Non Stockholders,” *Journal of Financial Economics*, 15, pp. 145-61.
- [5] Mehra, Rajnish, and Edward C. Prescott (1985), “The Equity Premium: A Puzzle,” *Journal of Monetary Economics*, 15, pp. 145-61.
- [6] Blanchard, Olivier J. (1989), “Speculative Bubbles, Crashes, and Rational Expectations,” *Economics Letters*, 3, pp. 387-389.

UNIT 3: Investment (weeks 5 and 6)

- 1) General introduction to investment choices in a DSGE model.
- 2) The Hall-Jorgenson (1967) model of investment.
- 3) The q model of investment.
- 4) Adjustment costs to investment.
- 5) Capital market imperfections and investment.
- 6) Savings and investment in an open economy – intertemporal trade and the current account balance.

MATERIALS:

- [1] Barro – Macroeconomics – chapter 9 (and corresponding chapters in Doepke et al).
- [2] Romer – Advanced Macroeconomics – chapter 8.
- [3] Hall, Robert E., and Dale Jorgenson (1967), “Tax Policy and Investment Behavior,” *American Economic Review*, 57.
- [4] Tobin, James (1969), “A General Equilibrium Approach to Monetary Theory,” *Journal of Money Credit and Banking*, 1(1), pp. 15-29.
- [5] Abel, Andrew B. (1981), “A Dynamic Model of Investment and Capacity Utilization,” *Quarterly Journal of Economics*, 96(3), pp. 379-403.
- [6] Hayashi, Fumio (1982), “Tobin's Marginal Q and Average Q: A Neoclassical Interpretation,” *Econometrica*, 50(1), pp. 213-224.
- [7] Obstfeld, M. and K. Rogoff, Foundations of International Macroeconomics, MIT Press - chapter 1.

UNIT 4: Government Spending, Taxes, Budget Deficits and Fiscal Policy (weeks 7 and 8)

- 1) Models of government spending: consumption and production services.
- 2) Taxation models: Lump-sum and distortionary taxes.
- 3) Budget deficits and Ricardian equivalence.
- 4) Optimal fiscal policy in a Ramsey model.

MATERIALS:

[1] Barro – Macroeconomics – chapters 12, 13 & 14 (and corresponding chapters in Doepke et al).

[2] Sargent – Dynamic Macro Theory – chapter 13.

[3] Barro, R. (1979), “On the Determination of the Public Debt”, *Journal of Political Economy*, Vol. 87, pp.940-971.

[4] Barro, R. (1981), “Output Effects of Government Purchases”, *Journal of Political Economy*, Vol. 89, pp. 1086-1121.

[5] Barro, R. (1974), “Are Government Bonds Net Wealth?”, *Journal of Political Economy*, Vol. 82, pp. 1095-1117.

[6] Seater, J. (1993), “Ricardian Equivalence”, *Journal of Economic Literature*, Vol. 31, pp. 142-190.

[7] Lucas, R. (1986), “Principles of Fiscal and Monetary Policy”, *Journal of Monetary Economics*, Vol. 17, pp. 117-134.

UNIT 5: Dynamic, Stochastic, General Equilibrium Models (weeks 9 and 10)

- 1) The Brock-Mirman (1972) stochastic growth model.
- 2) The Prescott (1986) RBC model.
- 3) DSGE models with financial frictions.
- 4) DSGE models with risk and volatility.

MATERIALS:

[1] Brock, William, and Leonard Mirman (1972): “Optimal Economic Growth and Uncertainty: The Discounted Case,” *Journal of Economic Theory*, 4(3), pp. 479–513.

[2] Prescott, Edward C. (1986): “Theory Ahead of Business Cycle Measurement,” *Carnegie-Rochester Conference Series on Public Policy*, 25, 11–44.

Paper presentations by students:

Chahrour, R., S. Schmitt-Grohe, and M. Uribe (2012) A Model-Based Evaluation of the Debate on the Size of the Tax Multiplier, *American Economic Journal: Economic Policy* 4, May 2012, 28-45.

Guerrieri, Luca, and Matteo Iacoviello “[Collateral Constraints and Macroeconomic Asymmetries](#)” June 2015.

Gertler, M. and P. Karadi, A Model of Unconventional Monetary Policy, *Journal of Monetary Economics*, January 2011.

Gertler, M. and N. Kiyotaki, Banking, Liquidity and Bank Runs in an Infinite Horizon Economy, *American Economic Review*, July 2015.

Angeloni, I. and E. Faia (2013), Capital Regulation and Monetary Policy with Fragile Banks, *Journal of Monetary Economics*, lead article, 60, 3, 311-382, April.

UNIT 6: Economic Growth (if time allows)

- 1) The Solow-Swan model with exogenous savings rates.
- 2) The Ramsey (1928)/Cass (1965)-Koopmans (1965) growth model.
- 3) The Romer (1986) model.
- 4) The Rebelo (1991) AK model.
- 5) The Lucas (1988) endogenous growth model.

MATERIALS:

- [1] Barro – Macroeconomics – chapter 11 (and corresponding chapters in Doepke et al).
- [2] Romer – Advanced Macroeconomics – chapters 1 & 2.
- [3] Barro – Sala-i-Martin – Economic Growth – chapters 1, 2 & 3 (including the introduction).
- [4] Sala-i-Martin, X. (1997), “I Just Ran Two Million Regressions, *American Economic Review Papers and Proceedings*, Vol. 87 (2), pp. 178-183.
- [5] Cass, David (1965), “Optimum growth in an aggregative model of capital accumulation,” *Review of Economic Studies*, 32, pp. 233-240.
- [6] Koopmans, Tjalling C. (1965), “On the concept of optimal economic growth,” in (Study Week on the) *Econometric Approach to Development Planning*, chap. 4, pp. 225-87. North-Holland Publishing Co., Amsterdam.
- [7] Phelps, Edmund S. (1961), “The Golden Rule of Accumulation,” *American Economic Review*, pp. 638-642.
- [8] Ramsey, Frank (1928), “A Mathematical Theory of Saving,” *Economic Journal*, 38(152), pp. 543-559.
- [9] Arrow, Kenneth J. (1962), “The Economic Implications of Learning by Doing,” *The Review of Economic Studies*, 29(3), pp. 155-173.
- [10] Romer, Paul M. (1986), “Increasing Returns and Long Run Growth,” *Journal of Political Economy*, 94, pp. 1002-37.
- [11] Rebelo, Sergio T. (1991), “Long-Run Policy Analysis and Long-Run Growth,” *Journal of Political Economy*, 99(3), pp. 500-521.
- [12] Lucas, Robert E. (1988), “On the Mechanics of Economic Development,” *Journal of Monetary Economics*, Vol. 22, pp. 3-42.
- [13] Mankiw, N. Gregory (1995), “The Growth of Nations,” *Brookings Papers on Economic Activity*, 1995(1), pp. 275-326.
- [14] Rebelo, Sergio T. (1991), “Long-Run Policy Analysis and Long-Run Growth,” *Journal of Political Economy*, 99(3), pp. 500-521.