

12M001

6 ECTS

## Macroeconomics

### Overview and Objectives

Modern Macroeconomics is based on the idea that observations from reality are the result of decisions and actions of rational agents interacting in markets, so that what we observe are equilibrium processes. Understanding these equilibrium processes, formulating policy recommendations, and assessing the feedback of those policies on the equilibrium are key issues in Macroeconomic Theory.

The aim of this course is to provide a basic set of economic models that are broadly used to understand relevant issues in aggregate economics, and the convenient tools required for its analysis. Our main goal therefore, is not to spend too much time in technicalities but rather, to continue developing intuitions and the ability to think of macroeconomic issues.

With this goal in mind, in our syllabus we will start with a brief motivation, after that we cover the infinitely lived agents model the overlapping generations model (the two main theoretical constructions) and review a few of their applications. In the second part of the course we develop the connections between "theory" and "reality": measurement of current economic facts, test the predictions of the theory in light of reality, revise some applications regarding inequality.

### Course Outline

#### 1. INTRODUCTION

- What is macroeconomics?
- Current state of research
- Transfer from research to policy making

- Lucas, Robert E., 1989: "What economists do", manuscript.

- Krugman, Paul, 1989: "There is something about macro", manuscript.

#### 2. INFINITELY-LIVED AGENTS

- The Neoclassical model of growth
- Competitive equilibrium and welfare
- Distribution dynamics without uncertainty

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- Uncertainty and Real Business Cycles
- Recursive formulation, and a preview to finding numerical solutions
- Idiosyncratic shocks and incomplete markets economies
- Applications to fiscal and monetary policy
- On efficiency vs equality in General Equilibrium

- Christiano, Lawrence, J., 1991: "Modeling the liquidity effect of a money shock", Federal Reserve Bank of Minneapolis Quarterly Review.

- Hansen, Gary D., and Randall Wright, 1992: "The labor market in real business cycle theory", Federal Reserve Bank of Minneapolis Quarterly Review.

- Plosser, Charles, I., 1989: "Understanding real business cycles", Journal of Economic Perspectives, 3, 3, 51-77.

- Prescott, Edward C., 1986: "Theory ahead of business cycle measurement", Federal Reserve Bank of Minneapolis Quarterly Review.

- Aiyagari, S. R., 1994: "Uninsured idiosyncratic risk and aggregate saving", The Quarterly Journal of Economics, 659-684.

- Huggett, M.R., 1995: "The one-sector growth model with idiosyncratic shocks", Journal of Monetary Economics, 385-403.

### 4. Data and Measurement in Macroeconomics

- Defining Trends and Cycles
- National Income and Products Accounts and BLS
- Constructing the Labor Share
- Constructing the Relative Price of Quality-Adjusted Investment
- Measuring Productivity

#### Bibliography:

- Cooley and Prescott, Chapter 1, Economic Growth and Business Cycles, In Frontiers of Business Cycle Research, Ed. Cooley, 1995

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- Greenwood, Jeremy & Hercowitz, Zvi & Krusell, Per, "Long-Run Implications of Investment-Specific Technological Change," *American Economic Review*, vol. 87(3), pages 342-62, June, 1997.
- Corrado, Carol, John Haltiwanger, and Dan Sichel, *Measuring Capital in the New Economy*, University of Chicago Press, 2005.
- McGrattan, Ellen R. and Edward C. Prescott, "A Reassessment of Real Business Cycle Theory," *American Economic Review*, May 2014, 104 (5), 177-82.

### 5. Inequality in Macroeconomics I: The Aggregate Factor Distribution of Income

- In the Long Run: The Global Decline of the Labor Share
- In the Short Run: A Countercyclical Labor Share

#### Bibliography:

- Elsby, Michael, Bart Hobijn, and Ayseful Sahin, "The Decline of the U.S. Labor Share," *Brookings Papers on Economic Activity*, 2013, 47 (2), 1-63.
- Karabarbounis, Loukas and Brent Neiman, "The Global Decline of the Labor Share," *Quarterly Journal of Economics*, 2014, 129 (1), 61-103.
- Piketty, Thomas and Gabriel Zucman, "Capital is Back: Wealth-Income Ratios in Rich Countries, 1700-2010," *The Quarterly Journal of Economics*, 2014, pp. 1255-1310.
- Koh, Dongya, Raul Santaaulalia-Llopis, and Yu Zheng, "The Decline of the Labor Share and Intellectual Property Products Capital," 2016. Working Paper, EUI and Barcelona GSE.
- Gomme and Greenwood "On the cyclical allocation of risk," *Journal of Economic Dynamics and Control*, Elsevier, vol. 19(1-2), pages 91-124
- Ríos-Rull, José-Víctor & Santaaulàlia-Llopis, Raül, 2010. "Redistributive shocks and productivity shocks," *Journal of Monetary Economics*, Elsevier, vol. 57(8), pages 931-948, November.

### 6. Inequality in Macroeconomics II: Income and Wealth Inequality

- Getting the Wealth Distribution Right
- Entrepreneurs and the Corporate Sector.
- Wealth and Inheritance Taxation.

#### Bibliography:

- Quadrini, Vincenzo and Jose-Víctor Rios-Rull, "Chapter 14 - Inequality in Macroeconomics," in Anthony B. Atkinson and Francois Bourguignon, eds., *Handbook of Income Distribution*, Vol. 2, Elsevier, 2015, pp. 1229-1302.
- Vincenzo Quadrini, 2000, "Entrepreneurship, Saving and Social Mobility," *Review of Economic Dynamics*, Elsevier for the Society for Economic Dynamics, vol. 3(1), pages 1-40, January.
- Piketty, Thomas, *Capital in the Twenty-First Century*, Cambridge, MA: Belknap Press of Harvard University Press, 2014.

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- Piketty, Thomas and Emmanuel Saez, "A Theory of Optimal Inheritance Taxation," *Econometrica*, 2013, 81 (5), 1851-1886.
- Guvenen F., Kambourov G., Kuruscu B., Ocampo S. and Chen D. "Use It or Lose It: Efficiency Gains from Wealth Taxation", Working Paper, Minneapolis FED.

### Required Activities

There will be problem sets, which are intended to put at work the ideas introduced in class. Students are highly encouraged to discuss these exercises to detect difficulties and to develop their expertise in solving them.

### Evaluation

The evaluation of the course will be obtained in a final exam, in which there will be questions covering all the materials reviewed in the classes.

### Materials

- Blanchard, O.J. and S. Fischer (1989): Lectures on Macroeconomics, MIT press.
- Miles, D. and A. Scott (2002): Macroeconomics: understanding the wealth of nations, John Wiley and Sons, Inc.
- Cooley, T. F (1995): Frontiers of business cycle research, Princeton University Press.
- Romer, D. (2001): Advanced Macroeconomics, Ed. MacGraw-Hill.
- Ljungqvist, L., and T. Sargent (2000): Recursive Macroeconomic Theory, MIT press.