Econ 212a: Business Cycles
Spring 2023

Instructor: Adrien Auclert, aauclert@stanford.edu

Lectures: Tuesdays and Thursdays, 1:30pm-3:20pm, in 380-380W. Classes run 4 April to 5 May.

Adrien's Office Hours: Wednesdays 4:30pm-5:30pm, Landau 348.

Teaching Assistant: Cedomir Malgieri, cedomir@stanford.edu

TA sections: TBD

Fred's Office Hours: TBD

Course objective: This course covers the two 'canonical' business-cycle macro models—the standard real business cycle (RBC) model and the standard new keynesian (NK) model. These models are used by macroeconomists to think about business cycle fluctuations, inflation dynamics, and the effects of monetary and fiscal policy. They are the building block for a large part of modern macro research, and for the models used by policy institutions. We discuss macroeconomic facts, successes and failures of the theories, and extensions of the standard models.

Class material: My lecture slides and supplementary readings provided in the syllabus are the primary material for this class. Classes will be recorded on Zoom but please attend. The following textbooks are helpful for background reading:

- Blanchard, O. and S. Fisher (1989). *Lectures on Macroeconomics.* MIT Press. (**BF**)
- Romer, D. (2011). *Advanced Macroeconomics.* McGraw-Hill, 4th edition. (**Romer**)
- Gali, J. (2008). *Monetary, Inflation, and the Business Cycle.* Princeton University Press. (**Gali**)
- Ljunqvist, L. and Sargent, T. *Recursive Macroeconomic Theory*. MIT Press, 3rd edition (**LS**)

BF is a little dated but remains a classic. Romer is a very good introduction, pitched to an advanced undergraduate level. Gali is short, concise, and a highly recommended read for the second part of this class. LS is a useful reference on a variety of topics.

Grading: Your grade will be based on:

a) Four problem sets designed to develop a mixture of theoretical, empirical, and quantitative skills. You are allowed to work in groups of up to three and submit a problem set for the group. Problem sets are due on Fridays, each Friday starting in week 2, on Canvas (worth 40% of your grade).

b) A final exam. The exam will be a timed midterm, to be taken on Friday 30 April on Gradescope. You will have 3 hours over a 24 hour window to do the exam (worth 60% of your grade).

Prerequisites: First-year PhD core classes in micro, macro and econometrics up to this point. I assume basic knowledge and familiarity with a) dynamic programming, b) the neoclassical growth model, c) general equilibrium analysis, and d) time series analysis.

Students with Documented Disabilities: Students who may need an academic accommodation based on the impact of a disability must initiate the request with the Office of Accessible Education (OAE). Students should contact the OAE as soon as possible since timely notice is needed to coordinate accommodations. The OAE is located at 563 Salvatierra Walk (phone: 723-1066, URL).

Class plan. The plan for each class is outlined below. There may be small deviations from the plan, especially towards the end if we are falling behind schedule.

Lecture #	Date		Topic
1	Tuesday	4-Apr	Business cycle facts and comovements
2	Thursday	6-Apr	RBC model, part I: planner's solution
S1	Friday	7-Apr	
3	Tuesday	11-Apr	RBC part II: decentralization & asset pricing
4	Thursday	13-Apr	RBC part III: topics & critiques
S2	Friday	14-Apr	*Problem set 1 due*
5	Tuesday	18-Apr	Money and Prices
6	Thursday	20-Apr	Monopolistic Competition and Sticky Prices
S3	Friday	21-Apr	*Problem set 2 due*
7	Tuesday	25-Apr	NK model, part I: derivation
8	Thursday	27-Apr	NK model, part II: positive analysis
S4	Friday	28-Apr	*Problem set 3 due*
9	Tuesday	2-May	NK model, part III: optimal policy
10	Thursday	4-May	Review session
S5	Friday	5-May	*Exam + Problem set 4 due*

Background reading: macroeconomic debates

*Prescott, E.C. (1986b). Theory Ahead of Business Cycle Measurement. *Federal Reserve Bank of Minneapolis Quarterly Review* (Fall):9–22

*Summers, L.H. (1986). Some Skeptical Observations on Real Business Cycle Theory. *Federal Reserve Bank of Minneapolis Quarterly Review* (Fall):23–27

Prescott, E.C. (1986a). Response to a Skeptic. *Federal Reserve Bank of Minneapolis Quarterly Review* (Fall):28–33

*Ball, L. and Mankiw, N.G. (1994). A Sticky-Price Manifesto. *Carnegie-Rochester Conference Series on Public Policy* 41:127–151

*Lucas, R.E. (1994). Comments on Ball and Mankiw. *Carnegie-Rochester Conference Series on Public Policy* 41:153–155

1 Business cycles facts and methods

BF, Chapter 1

Stock, J.H. and Watson, M.W. (1999). Chapter 1–Business Cycle Fluctuations in U.S. Macroeconomic Time Series. In: J.B. Taylor and M. Woodford (eds.) *Handbook of Macroeconomics*, vol. Volume 1, Part A, pp. 3–64. Elsevier

Baxter, M. and King, R.G. (1999). Measuring Business Cycles: Approximate Band-Pass Filters for Economic Time Series. *Review of Economics and Statistics* 81(4):575–593

2 Real Business Cycles

BF, Chapter 2

*King, R.G. and Rebelo, S.T. (1999). Chapter 14–Resuscitating real business cycles. In: J.B. Taylor and M. Woodford (eds.) *Handbook of macroeconomics*, vol. Volume 1, Part B, pp. 927–1007

*Rebelo, S. (2005). Real Business Cycle Models: Past, Present and Future. *The Scandinavian Journal of Economics* 107(2):217–238

Cooley, T.F. and Prescott, E.C. (1995). Economic Growth and Business Cycles. In: *Frontiers of business cycle research*, pp. 1–38. Princeton University Press

Hansen, L.P. and Heckman, J.J. (1996). The Empirical Foundations of Calibration. *Journal of Economic Perspectives* 10(1):87–104

Methods

Campbell, J.Y. (1994). Inspecting the Mechanism: An Analytical Approach to the Stochastic Growth Model. *Journal of Monetary Economics* 33(3):463–506

Uhlig, H. (1995). A Toolkit for Analyzing Nonlinear Dynamic Stochastic Models Easily. *mimeo Tilburg University*

Asset pricing

LS, Chapters 8 and 14

Campbell, J.Y. (2003). Chapter 13 Consumption-based asset pricing. In: *Handbook of the Economics of Finance*, vol. 1, Part B, pp. 803–887. Elsevier

Kocherlakota, N.R. (1996). The Equity Premium: It's Still a Puzzle. *Journal of Economic Literature* 34(1):42–71

Fiscal policy: the neoclassical view

*Baxter, M. and King, R.G. (1993). Fiscal Policy in General Equilibrium. *American Economic Review* 83(3):315–334

RBC critiques and responses: labor supply, wedges

*Galí, J. (1999). Technology, Employment, and the Business Cycle: Do Technology Shocks Explain Aggregate Fluctuations? *American Economic Review* 89(1):249–271

Basu, S., Fernald, J.G. and Kimball, M.S. (2006). Are Technology Improvements Contractionary? *American Economic Review* 96(5):1418–1448

Hansen, G.D. (1985). Indivisible labor and the business cycle. *Journal of Monetary Economics* 16(3):309–327

*Chetty, R., Guren, A., Manoli, D. and Weber, A. (2012). Does Indivisible Labor Explain the Difference Between Micro and Macro Elasticities? A Meta-Analysis of Extensive Margin Elasticities. In: *NBER Macroeconomics Annual 2012, Volume 27*, pp. 1–56. University of Chicago Press

*Chari, V.V., Kehoe, P.J. and McGrattan, E.R. (2007). Business Cycle Accounting. *Econometrica* 75(3):781–836

Bils, M., Klenow, P.J. and Malin, B.A. (2018). Resurrecting the Role of the Product Market Wedge in Recessions. *American Economic Review* 108(4-5):1118–46

Alexopoulos, M. (2011). Read All about It!! What Happens Following a Technology Shock? *American Economic Review* 101(4):1144–1179

3 Money, Prices and Output

*Sargent, T.J. (1982). The Ends of Four Big Inflations. In: R.E. Hall (ed.) *Inflation: Causes and effects*, pp. 41–98. University of Chicago Press

*Velde, F.R. (2009). Chronicle of a Deflation Unforetold. *Journal of Political Economy* 117(4):591–634

Stock, J.H. and Watson, M.W. (2001). Vector Autoregressions. *The Journal of Economic Perspectives* 15(4):101–115

Christiano, L.J., Eichenbaum, M. and Evans, C.L. (1999). Chapter 2–Monetary Policy Shocks: What Have We Learned and to What End? In: J.B. Taylor and M. Woodford (eds.) *Handbook of Macroeconomics*, vol. Volume 1, Part A, pp. 65–148. Elsevier

Romer, C.D. and Romer, D.H. (2004). A New Measure of Monetary Shocks: Derivation and Implications. *American Economic Review* 94(4):1055–1084

4 Money, monopolistic competition, markups

*Gali, chapter 2 & appendix to 3

Blanchard, O.J. and Kiyotaki, N. (1987). Monopolistic Competition and the Effects of Aggregate Demand. *American Economic Review* 77(4):647–666

5 The New Keynesian model

*Gali, chapter 3

Mankiw, N.G. (1989). Real Business Cycles: A New Keynesian Perspective. *The Journal of Economic Perspectives* 3(3):79–90

Galí, J. and Gertler, M. (2007). Macroeconomic Modeling for Monetary Policy Evaluation. *Journal of Economic Perspectives* 21(4):25–46

Christiano, L.J., Eichenbaum, M. and Evans, C.L. (2005). Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy. *Journal of Political Economy* 113(1):1–45

Smets, F. and Wouters, R. (2007). Shocks and Frictions in US Business Cycles: A Bayesian DSGE Approach. *American Economic Review* 97(3):586–606

Chari, V.V., Kehoe, P.J. and McGrattan, E.R. (2009). New Keynesian Models: Not Yet Useful for Policy Analysis. *American Economic Journal: Macroeconomics* 1(1):242–266

Fiscal policy: the New Keynesian view

*Woodford, M. (2011). Simple Analytics of the Government Expenditure Multiplier. *American Economic Journal: Macroeconomics* 3(1):1–35

Christiano, L., Eichenbaum, M. and Rebelo, S. (2011). When Is the Government Spending Multiplier Large? *Journal of Political Economy* 119(1):78–121

Optimal policy

*Gali, chapters 4&5

Clarida, R., Galí, J. and Gertler, M. (1999). The Science of Monetary Policy: A New Keynesian Perspective. *Journal of Economic Literature* 37(4):1661–1707

Benigno, P. and Woodford, M. (2005). Inflation Stabilization and Welfare: The Case of a Distorted Steady State. *Journal of the European Economic Association* 3(6):1185–1236

Werning, I. (2012). Managing a Liquidity Trap: Monetary and Fiscal Policy. *Manuscript*