

Economics 214
Topics in Empirical Macroeconomics

Overview of Course

The goals for this course are the following:

- (i) Introduce students to important papers and research questions with high empirical content and relevance to macroeconomics, broadly defined.
- (ii) Introduce students to a variety of empirical methods and data sources that can be used to test, calibrate and develop models of interest for macroeconomics and related fields.
- (iii) Inspire students to think hard about best practices in empirical work, and how to combine creativity, tools, and high standards to produce successful research.

Note that I will not provide problem set solutions or extensive comments on individual problem sets. Basically, I will just make sure you did it. As a part of the regular homework assignments, I will also require you to write computer projects. The computer projects may be done in small groups (no more than three students per group), but each homework must be submitted individually. You can use any programming language that you like. I will be talking mostly about (1) Dynare (for simulating DSGE models); (2) Stata for estimation; and (3) Matlab for estimation.

Grade:

- 60% for homework assignments. Acceptable homework must have both report and code (if applicable). The code should be self-contained so that anyone can run it (which means that I should be able to run it and reproduce the results you present in your report). You should plan on each homework assignment taking about a day or more to complete.
- 40% for a written paper related to the material covered. (10 to 20 pages including graphs and tables, main text double-spaced with 1.50-inch right-hand margin.) Include a brief summary of the literature on the topic and relevance of your contribution. A project that does no more than replicate a study on a different or

extended data set would be acceptable, but it nevertheless needs to be written as if it were a short article to be submitted to a journal and include a self-contained explanation of the methodology. You must meet with me by **Friday May 8** to discuss your proposed paper and get approval. The paper should be turned in to my mailbox no later than **Monday June 8**. NOTE: By University rules on Academic Integrity, you cannot submit the same (or extremely similar) work to two classes for credit. If your paper for this class is on the same topic as your paper for another class (such as 3rd year paper), you need to make sure that there is enough difference in content that you are not violating rules of academic integrity.

Resources for Class

We will be doing some “real-time” programming, model simulation, and empirical estimation in class, so you should bring your laptop to class. (If you do not have a laptop, talk to me and we will arrange something.) You have access to the following programs.

1. Matlab
2. Dynare (available for free at: <http://www.dynare.org/>)
3. Harald Uhlig's Smets-Wouter Simulator (available for free at: http://www2.wiwi.hu-berlin.de/wpol/html/toolkit/MacAppSoft/Smets_Wouters_DYNARE_CODE_IN_TOOLKIT_installer.exe)
4. Software for empirical estimation (such as Matlab, Stata, Eviews, etc.)

The following reading list includes many papers on each topic. You must read all * papers, preferably before class. I expect you to read some, but certainly not the majority of the papers. This reading list is meant to be a useful bibliographic reference so that you may concentrate on topics that interest you.

I. Credibility in Macroeconomic Empirical Work

Sims, Christopher, “Macroeconomics and Reality,” *Econometrica* 48 (January 1980): 1-48.

* Uhlig, Harald, “Economics and Reality,” *Journal of Macroeconomics* 34 (March 2012): 29-41.

* Cochrane, John, “Shocks,” *Carnegie-Rochester Conference Series on Public Policy*, 41 (December 1994): 295-364.

“Symposium: Con out of Economics,” *Journal of Economic Perspectives*, Spring 2010, in particular: (i) Angrist, Joshua D., and Jörn-Steffen Pischke. 2010. "The

Credibility Revolution in Empirical Economics: How Better Research Design Is Taking the Con out of Econometrics." *Journal of Economic Perspectives*, 24(2): 3-30. (ii) Sims, Christopher A., Spring 2010. "But Economics Is Not an Experimental Science." *Journal of Economic Perspectives*, 24(2): 59-68.

Canova, Fabio and Luca Sala, "Back to Square One: Identification Issues in DSGE Models," *Journal of Monetary Economics* 56 (May 2009): 431-449.

II. Identifying Macroeconomic Shocks in Practice

*Ramey, Valerie A., "Macroeconomic Shocks and Their Propagation," Sections 1 and 2.

III. The Effects of Government Spending and Taxes

A. Theory

1. Neoclassical Models

Aiyagari, Rao, Laurence Christiano, and Martin Eichenbaum, "The Output, Employment and Interest Rate Effects of Government Consumption," *Journal of Monetary Economics*, 30 (1992), 73-86.

*Baxter, Marianne, and Robert G. King, "Fiscal Policy in General Equilibrium," *American Economic Review*, 83 (1993), 315-334.

Atkeson, Andrew, V.V. Chari and Patrick Kehoe, "Taxing Capital Income: A Bad Idea," *Federal Reserve Bank of Minneapolis Quarterly Review*, Summer 1999.

2. New Keynesian Models

*Gali, Jordi, J. David López-Salido, and Javier Vallés, "Understanding the Effects of Government Spending on Consumption," *Journal of the European Economic Association*, 5 (2007): 227-270.

Drautzburg, Thorsten and Harald Uhlig, "Fiscal Stimulus and Distortionary Taxation," NBER Working Paper No. 17111, June 2011.

Eggertsson, Gauti, "What Fiscal Policy is Effective at Zero Interest Rates?" *NBER Macroeconomics Annual* 2010.

B. Measuring the Aggregate Effects of Government Spending

Rotemberg, Julio, and Woodford, Michael, "Oligopolistic Pricing and the Effects of Aggregate Demand on Economic Activity," *Journal of Political Economy*, 100 (1992), 1153–1297.

Ramey, Valerie A. and Matthew Shapiro, "Costly Capital Reallocation and the Effects of Government Spending," *Carnegie Rochester Conference on Public Policy* (1998).

*Blanchard, Olivier, and Roberto Perotti, "An Empirical Characterization of the Dynamic Effects of Changes in Government Spending and Taxes on Output," *Quarterly Journal of Economics*, 117 (2002), 1329-1368.

Mountford, Andrew and Harald Uhlig, "What are the Effects of Fiscal Policy Shocks?" *Journal of Applied Econometrics* 24 (September/October 2009): 960-992.

Ramey, Valerie A., "Defense News Shocks, 1939-2008: An Analysis Based on News Sources," UCSD manuscript, 2009a.
http://econ.ucsd.edu/~vramey/research/Defense_News_Narrative.pdf .

*Ramey, Valerie A., "Identifying Government Spending Shocks: It's All in the Timing," *Quarterly Journal of Economics*, 126 (February 2011): 1-50.

Burnside, Craig, Martin Eichenbaum, and Jonas Fisher, "Fiscal Shocks and their Consequences," *Journal of Economic Theory*, 115 (2004), 89-117.

Fisher, Jonas D.M., and Ryan Peters, "Using Stock Returns to Identify Government Spending Shocks," *The Economic Journal*, 120 (May 2010): 414-436.

Ilzetski, Ethan, Enrique G. Mendoza, Carlos A. Végh, "How Big (Small?) are Fiscal Multipliers?" 2013. "How big (small?) are fiscal multipliers?," *Journal of Monetary Economics*, Elsevier, vol. 60(2), pages 239-254.

Blanchard, Olivier J., and Daniel Leigh. 2013. "Growth Forecast Errors and Fiscal Multipliers." *American Economic Review*, 103(3): 117-20.

*Auerbach, Alan and Yuriy Gorodnichenko. 2012a. "Measuring the Output Responses to Fiscal Policy." *American Economic Journal: Economic Policy* 4 (2): 1-27.

Auerbach, Alan and Yuriy Gorodnichenko. 2012b. "Fiscal Multipliers in Recession and Expansion" forthcoming in *Fiscal Policy After the Financial Crisis*, eds. Alberto Alesina and Francesco Giavazzi, University of Chicago Press.

Ramey, Valerie A. and Sarah Zubairy, "Government Spending Multipliers in Good Times and in Bad: Evidence from 20th Century Historical Data," November 2014 working paper.

C. Measuring the Aggregate Effects of Taxes

*Blanchard, Olivier, and Roberto Perotti, "An Empirical Characterization of the Dynamic Effects of Changes in Government Spending and Taxes on Output," *Quarterly Journal of Economics*, 117 (2002), 1329-1368.

*Romer, Christina D., and David H. Romer, "The Macroeconomic Effects of Tax Changes: Estimates Based on a New Measure of Fiscal Shocks," *American Economic Review*, 100 (June 2010): 763-801 .

Barro, Robert J., and Charles J. Redlick. 2011. "Macroeconomic Effects from Government Purchases and Taxes." *Quarterly Journal of Economics* 126 (1): 51-102.

Leeper, Eric M., Todd B. Walker, Shu-Chun Susan Yang, "Fiscal Foresight and Information Flows," *Econometrica* 81 (3) May 2013: 1115-1145.

House, Christopher L., and Matthew D. Shapiro. 2006. "Phased-In Tax Cuts and Economic Activity." *American Economic Review*, 96(5): 1835-1849.

Mertens, Karel, and Morten O. Ravn. 2012. "Empirical Evidence on the Aggregate Effects of Anticipated and Unanticipated US Tax Policy Shocks." *American Economic Journal: Economic Policy*, 4(2): 145-81.

*Mertens, Karel, and Morten O. Ravn., "A Reconciliation of SVAR and Narrative Estimates of Tax Multipliers," *Journal of Monetary Economics* 2014.

Mertens, Karel, and Morten O. Ravn. 2013. "The Dynamic Effects of Personal and Corporate Income Tax Changes in the United States." *American Economic Review*, 103(4): 1212-47.

D. Cross-Sectional and Panel Data: Theory and Evidence

Chodorow-Reich, Gabriel, Laura Feiveson, Zachary Liscow, and William Gui Woolston. 2012. Does State Fiscal Relief During Recessions Increase Employment? Evidence from the American Recovery and Reinvestment Act. *American Economic Journal: Economic Policy* 4, no. 3: 118-145.

Nakamura, Emi and Jón Steinsson, "Fiscal Stimulus in a Monetary Union: Evidence from U.S. Regions," *American Economic Review* forthcoming.

Farhi, Emmanuel and Iván Werning, "Fiscal Multipliers: Liquidity Traps and Currency Unions," NBER Working Paper No. 18381, Sept. 2012.

Nekarda, Christopher J. and Valerie A. Ramey, "Industry Evidence on the Effects of Government Spending," *American Economic Journal: Macroeconomics*: Vol. 3 No. 1 (January 2011).

*Kaplan, Greg and Giovanni L. Violante, "A Model of the Consumption Response to Fiscal Stimulus Payments," *Econometrica* Volume 82, Issue 4, pages 1199–1239, July 2014.

Kueng, Lorenz, "Tax News: Identifying the Household Consumption Response to Tax Expectations using Municipal Bond Prices," 2012 working paper.

Mertens, Karel, "Marginal Tax Rates and Income: New Time Series Evidence," NBER Working paper 19171, June 2013.

*Cloyne, James & Surico, Paolo, 2014. "Household debt and the dynamic effects of income tax changes," Bank of England working papers 491, Bank of England.

IV. Monetary Policy

A. Theoretical Models

(Review your notes from 201C)

Christiano, Lawrence J, Martin Eichenbaum, Charles L. Evans, "Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy," [*Journal of Political Economy*, Vol. 113, No. 1, February 2005.](#)

Smets, Frank and Raf Wouters, "An Estimated Dynamic Stochastic General Equilibrium Model of the Euro Area," *Journal of the European Economic Association*, [Volume 1, Issue 5](#), pages 1123–1175, September 2003.

Smets, Frank and Raf Wouters, "Shocks and Frictions in U.S. Business Cycles: A Bayesian DSGE Approach," *American Economic Review*, 97(3) June 2007: 586-606.

B. Empirical

- Bernanke, Ben S. and Alan S. Blinder, "The Federal Funds Rate and the Channels of Monetary Transmission," *The American Economic Review* Vol. 82, No. 4 (Sep., 1992), pp. 901-921.
- Bernanke, Ben S. and Ilian Mihov, "Measuring Monetary Policy," *The Quarterly Journal of Economics* Vol. 113, No. 3 (Aug., 1998), pp. 869-902.
- Christiano, Lawrence J, Martin Eichenbaum, Charles L. Evans, "What Have We Learned and To What End?" in *Handbook of Macroeconomics*, ed. Michael Woodford and John D. Taylor, 1999.
- Bernanke, Ben S., [Jean Boivin](#) and [Piotr Elias](#), "Measuring the Effects of Monetary Policy: A Factor-Augmented Vector Autoregressive (FAVAR) Approach," *Quarterly Journal of Economics* Volume 120, Issue 1, 2002, Pp. 387-422.
- Romer, Christina D., and David H. Romer, "A New Measure of Monetary Policy Shocks: Derivation and Implications," *American Economic Review*, 94(4) (September 2004): 1055-84 .
- *Cochrane, John, "Comments on 'A new measure of monetary shocks: Derivation and implications' By Christina Romer and David Romer." July 17 2004, presented at NBER EFG meeting
- http://faculty.chicagobooth.edu/john.cochrane/research/papers/talk_notes_new_measure_2.pdf
- *Coibion, Olivier, "Are the Effects of Monetary Policy Shocks Big or Small?" [*American Economic Journal: Macroeconomics*](#), Volume 4, Number 2, April 2012, pp. 1-32(32)
- Barakchian, S. Mahdi and Christopher Crowe, "Monetary Policy Matters: Evidence from New Shocks," *Journal of Monetary Economics*, [Volume 60, Issue 8](#), November 2013, Pages 950–966
- Faust, Jon, Eric T. Swanson, and Jonathan H. Wright (2004), "Identifying VARS based on high frequency futures data," [*Journal of Monetary Economics*](#), [Volume 51, Issue 6](#), September 2004, Pages 1107–113.
- Boivin, Jean, Michael T. Kiley, and Frederick S. Mishkin, "How Has the Monetary Transmission Mechanism Evolved Over Time?" *Handbook of Monetary Economics*. 2010.
- *Gertler, Mark and Peter Karadi, "Monetary Policy Surprises, Credit Costs, and Economic Activity," *American Economic Journal: Macroeconomics*, 7(1) (January 2015) 44–76.

V. News

- * Cochrane, John, “Shocks,” *Carnegie-Rochester Conference Series on Public Policy*, 41 (December 1994): 295-364.
- Barro, Robert J., and Robert G. King. 1984. “Time-Separable Preferences and Intertemporal Substitution Models of Business Cycles,” *Quarterly Journal of Economics*, 99 (4), 817-839.
- *Beaudry, Paul and Frank Portier, “Stock Prices, News, and Economic Fluctuations,” *American Economic Review*, 2006, 96(4), 1293-1307.
- Kurmann, André and Elmar Mertens, “Stock Prices, News, and Economic Fluctuations: Comment,” *American Economic Review* " 104.4 (2014): 1439-1445.
- Olivier J. Blanchard & Jean-Paul L’Huillier & Guido Lorenzoni, 2013. "News, Noise, and Fluctuations: An Empirical Exploration," *American Economic Review*, vol. 103(7), pages 3045-70, December.
- *Jaimovich, Nir and Sergio Rebelo, “Can News about the Future Drive the Business Cycle?” *American Economic Review*, 99(4) 2009, 1097-1118.
- Jaimovich, Nir and Sergio Rebelo. 2008. “News and Business Cycles in Open Economies,” *Journal of Money, Credit and Banking*, 40 (8), 1699–1711.
- *Barsky, R. B., and E. R. Sims (2011): News shocks and business cycles," *Journal of Monetary Economics*, 58(3), 273-289.
- Barsky, Robert. B. and Eric Sims, “Information, Animal Spirits, and the Meaning of Innovations in Consumer Confidence," *American Economic Review*, 102(4), 2012.
- Beaudry, Paul and Frank Portier, ”News Driven Business Cycles: Insights and Challenges,” *Journal of Economic Literature* 2014, 52(4), 993–1074.
- Miyamoto, Wataru and Nguyen, Thuy Lan, “News Shocks and Business Cycles: Evidence from Forecast Data,” Columbia University, Nov. 2013.
- Crouzet, Nicolas and Oh, Hyunseung, “What Do Inventories tell us about News-Driven Business Cycles?” Columbia University, November 2013.
- Arezki, Rabah, Valerie Ramey, and Liugang Sheng, “News Shocks in Open Economies: Evidence from Giant Oil Discoveries,” 2015 working paper http://econweb.ucsd.edu/~vramey/research/ARS_2015Jan.pdf

VI. Time Use, Demographics, and Macroeconomics

A. Theory

Benhabib, J, Richard Rogerson, and Randy Wright (1991), “Homework in Macroeconomics: Household Production and Aggregate Fluctuations”, *Journal of Political Economy*, 99, 1166-87.

*Greenwood, Jeremy, Richard Rogerson, and Randall Wright. 1995. “Household Production in Real Business Cycle Theory.” In *Frontiers of Business Cycle Research*, ed. Thomas F. Cooley, 157–74. Princeton: Princeton University Press.

B. Long-Term Trends

Keynes, John Maynard, “Economic Possibilities for Our Grandchildren” in *Essays in Persuasion*, London: The MacMillan Press Ltd., 1972, originally published 1931.

Greenwood, Jeremy, Ananth Seshadri, and Mehmet Yorukoglu, “Engines of Liberation,” *Review of Economic Studies* (2005) 72 (1): 109-133.

Greenwood, Jeremy and Ananth Seshadri, and Guillaume Vandenbroucke, “The Baby Boom and the Baby Bust,” *The American Economic Review*, Volume 95, Number 1, March 2005 , pp. 183-207(25)

Ramey, Valerie A., “Time Spent in Home Production in the 20th Century United States,” *The Journal of Economic History*, March 2009.

*Ramey, Valerie A. and Neville Francis, “A Century of Work and Leisure,” *American Economic Journal - Macroeconomics* , July 2009.

Bailey, Martha J.; Collins, William J. “Did Improvements in Household Technology Cause the Baby Boom? Evidence from Electrification, Appliance Diffusion, and the Amish,” *American Economic Journal: Macroeconomics* 3(April 2011): 189-217.

Fogli, Alessandra and Laura Veldkamp, “Nature or Nurture? Learning and the Geography of Female Labor Force Participation,” *Econometrica*, July 2011, v.79(4), p.1103-1138.

*Jones, Larry, Rodolfo Manuelli, and Ellen McGrattan, “Why are Married Women Working So Much?” Federal Reserve Bank of Minneapolis Research Department Staff Report 317, Revised October 2014

C. Recent Trends

Moffitt, Robert (2012). "The U.S. Employment-Population Reversal in the 2000s: Facts and Explanations", *Brookings Papers on Economic Activity*, Fall.

Fujita, Shigeru, "On the Causes of the Declines in the Labor Force Participation Rate," Philadelphia Federal Reserve Research Rap, November 2013. <http://www.philadelphiafed.org/research-and-data/publications/research-rap/2013/on-the-causes-of-declines-in-the-labor-force-participation-rate.pdf>

*Aaronson, Stephanie, Tomaz Cajner, Bruce Fallick, Felix Galbis-Reig, Christopher Smith and William Wascher, "Labor Force Participation: Recent Developments and Future Prospects," *Brookings Papers on Economic Activity* | Fall 2014

D. Life-Cycle Changes

*Aguiar, Mark and Erik Hurst (2005). "Consumption versus Expenditure", *Journal of Political Economy*, 113(5), 919-948.

Aguiar, Mark and Erik Hurst (2007), "Life-Cycle Prices and Production," *American Economic Review* 97 (December 2007): 1533-1559.

*Aguiar, Mark and Erik Hurst (2012). "Deconstruction Life Cycle Consumption", *Journal of Political Economy*, 121(3), 437-92.

E. Business Cycle Changes

Krueger, Alan B. and Andreas Mueller, "Job Search and Unemployment Insurance: New Evidence from Time Use Data," *Journal of Public Economics* 94 (April 2010): 298-307.

Krueger, Alan B. and Andreas Mueller, "Job Search, Emotional Well-Being, and Job Finding in a Period of Mass Unemployment: Evidence from High Frequency Longitudinal Data," *Brookings Papers on Economic Activity* Spring 2011.

*Aguiar, Mark, Erik Hurst and Loukas Karabarbounis (2012). "Time Use During the Great Recession," *American Economic Review*, 103(5), 1664-96.

VII. The Impact of Uncertainty (only if time permits)

Bloom, Nicholas, “The Impact of Uncertainty Shocks,” *Econometrica* 2009.

Bloom, Nicholas, “Fluctuations in Uncertainty,” NBER working paper 19714.

Bloom, Nicholas, Scott Baker and Steve Davis, “Measuring Economic Policy Uncertainty,” June 2013 working paper.

Ramey, Garey and Valerie Ramey, “Cross-Country Evidence on the Link between Volatility and Growth,” *American Economic Review* 85 (December 1995).

Bloom, Nicholas and Scott Baker, “Does Uncertainty Reduce Growth? Using Disasters as Natural Experiments,” NBER working paper 19475, September 2013.