## Economics 8186

# **Quantitative Macroeconomics**

# Ellen McGrattan - erm@ellen.mpls.frb.fed.us

Spring Semester 2014

Class time and place: Thursdays 9–12, Hanson 4-190

Prerequisites: Economics 8101-8106

Class requirements: class participation and homeworks

FTP site: ftp.mpls.frb.fed.us/pub/research/mcgrattan

### Overview of the course:

In this course, I plan to study some open questions in macroeconomics that will require the interaction of theory and data. I include a long list of references that I draw from. I do not plan on working through any papers section by section; I prefer to think about the ideas and claims in these papers and think about future research projects. My goal is to get all students to the point that they can quickly and easily evaluate the promise of a new project before wasting many months hoping for their computer code to run. Thus, the course will be data and computation-intensive. My hope is that students are working on new and interesting applied projects by the end of the course. I also plan to set aside some time during the course for some practical lessons (for example, how to give a good seminar). All students must complete a required set of homeworks.

#### **Useful Textbooks:**

- Stokey, Nancy L., Robert E. Lucas Jr., with Edward C. Prescott, 1989, *Recursive Methods in Economic Dynamics* (Cambridge MA: Harvard University Press).
- Sargent, Thomas J., and Lars Ljungqvist, 2000, Recursive Macroeconomic Theory (Cambridge MA: MIT Press).
- Computational Methods for the Study of Dynamic Economies, 1999, R. Marimon and A. Scott, eds., (Oxford University Press, now available in paperback).

## Primary Data Sources:

- Bureau of Economic Analysis (BEA), National Income and Product Accounts of the United States, along with Fixed Assets and International Transactions in the Survey of Current Business. (www.bea.gov)
- Federal Reserve's Flow of Funds Accounts of the United States (FOF). (www.federal-reserve.gov/releases/z1/current/data.htm)
- Bureau of Labor Statistics (BLS), Current population Survey (CPS) at the Minnesota Population Center (home of IPUMS). (www.ipums.org)
- Bureau of Labor Statistics, American Time Use Survey (ATUS). (www.bls.gov/tus)
- Federal Reserve's Survey of Consumer Finances (SCF). (www.federalreserve.gov/pubs/oss/oss2/scfindex.html)
- Wharton Research Data Services (WRDS) for financial data. (wrds.wharton.upenn.edu)
- Congresional Budget Office (CBO). (www.cbo.gov)
- Goldsmith, Raymond W., 1962, The National Wealth of the United States in the Postwar Period (Princeton N.J.: Princeton University Press).
- Kendrick, John W., 1961, *Productivity Trends in the United States* (Princeton, NJ: Princeton University Press).

## **Topics:**

- Are all business cycles alike?
- Why is labor productivity no longer procyclical?
- Is the U.S. Great Recession a repeat of the U.S. Great Depression?
- Why hasn't there been a recovery in U.S. employment and hours of work?

## References

- Aguiar, Mark A., Erik Hurst, and Loukas Karabarbounis, 2011 "Time Use During Recessions," NBER working paper 17259. (www.nber.org)
- Aiyagari, Rao, 1994, "Uninsured Idiosyncratic Risk and Aggregate Saving," *Quarterly Journal of Economics*, 109 (3), 659-84. (qje.oxfordjournals.org)
- Aiyagari, Rao and Ellen R. McGrattan, 1998, "The Optimum Quantity of Debt," Journal of Monetary Economics, 42(3), 447-469. (www.sciencedirect.com)
- Arellano, Cristina, Yan Bai, and Patrick Kehoe, 2012, "Financial Frictions and Fluctuations in Volatility," Federal Reserve Bank of Minneapolis, Staff Report 466.
- Bernanke, Ben, and Mark Gertler, 1989, "Agency Costs, Net Worth, and Business Fluctuations," American Economic Review, 79, 14–31. (www.jstor.org)
- Bernanke, Ben, Mark Gertler, and Simon Gilchrist, 1999, "The Financial Accelerator in a Quantitative Business Cycle Framework," in *Handbook of Macroeconomics*, Vol. 1C, ed. by J. Taylor and M. Woodford. Amsterdam: North-Holland, 1341–1393.
- Bloom, Nicholas, 2009, "The Impact of Uncertainty Shocks" *Econometrica*, 77(3): 623–85. (www.jstor.org)
- Bloom, Nicholas, Max Floetotto, Nir Jaimovich, Itay Saporta-Eksten, Stephen J. Terry,
  2012, "Really Uncertain Business Cycles" NBER working paper 18245. (www.nber.org)
- Buera, F. and B. Moll, 2011, "Aggregate Implications of a Credit Crunch," mimeo, Princeton University.
- Cagetti, M., M. De Nardi, and M. Bassetto, 2011, "Credit Crunches and Credit Allocation in a Model of Entrepreneurship," mimeo, Federal Reserve Bank of Chicago. (www.chicagofed.org)
- Carlstrom, Charles T., and Timothy S. Fuerst, 1997, "Agency Costs, Net Worth, and Business Fluctuations: A Computable General Equilibrium Analysis," *American Economic Review*, 87: 893–910. (www.jstor.org)
- Cerra, Valerie and Sweta Chaman Saxena, 2008, "Growth Dynamics: The Myth of Economic Recovery," *American Economic Review*, 98(1): 439–457. (www.jstor.org)

- Chari, V.V., Lawrence Christiano, and Patrick J. Kehoe, 2008, "Facts and Myths about the Financial Crisis," Federal Reserve Bank of Minneapolis, Working paper 666. (www.minneapolisfed.org)
- Chari, V.V., Patrick J. Kehoe, Ellen R. McGrattan, 2000, "Sticky price models of the business cycle: Can the contract multiplier solve the persistence problem?" (with V. V. Chari and P. Kehoe), *Econometrica*, 68(5): 1151–1179. (www.jstor.org)
- Chari, V.V., Patrick J. Kehoe, Ellen R. McGrattan, 2007, "Business Cycle Accounting," *Econometrica*, 75:781–836. (www.jstor.org)
- Chari, V.V., Patrick J. Kehoe, Ellen R. McGrattan, 2009, "New Keynesian Models: Not Yet Useful for Policy Analysis" (with V. V. Chari and P. Kehoe), *American Economic Journal: Macroeconomics*, 1(1): 242–266. (www.jstor.org)
- Christiano, Lawrence, Martin Eichenbaum, and Sergio Rebelo, 2011, "When is the Government Spending Multiplier Large?" *Journal of Political Economy*, 119(1): 78-121. (www.jstor.org)
- Congressional Budget Office, 2011, "Long-Term Projections for Social Security." (www.cbo.gov)
- Del Negro, Marco, Gauti Eggertsson, Andrea Ferrero, and Nobuhiro Kiyotaki, 2011,
  "The Great Escape? A Quantitative Evaluation of the Fed's Non-Standard Policies,"
  mimeo, Federal Reserve Bank of New York.
- Dupor, Bill, 1998, "Aggregation and Irrelevance in Multi-Sector Models," *Journal of Monetary Economics* 43(2): 391–409. (www.sciencedirect.com)
- Faulkender, Michael and Mitchell Petersen, 2009, "Investment and Capital Constraints: Repatriations Under the American Jobs Creation Act," NBER working paper 15248. (www.nber.org)
- Francis, Neville and Valerie Ramey, 2011, "A Century of Work and Leisure," *American Economic Journal: Macroeconomics*, 1(2): 189–224. (www.jstor.org)
- Gali Jordi, Frank Smets, and Raf Wouters, 2011, "Unemployment in an Estimated New Keyesian Model," *NBER Macroeconomics Annual 2011*, Volume 26.
- Gertler, Mark and Peter Karadi, 2011, "A Model of Unconventional Monetary Policy,"

- Journal of Monetary Economics, 58: 17–34. (www.sciencedirect.com)
- Gertler, Mark and Nobuhiro Kiyotaki, 2011, "Financial Intermediation and Credit Policy in Business Cycle Analysis," in B. M. Friedman and M. Woodford (eds.), Handbook of Monetary Economics, Volume 3A, (Amsterdam: North-Holland).
- Guerrieri, Veronica and Guido Lorenzoni, 2011, "Credit Crises, Precautionary Savings, and the Liquidity Trap, NBER working paper 17583. (www.nber.org)
- Hall, Robert, 2011, "The High Sensitivity of Economic Activity to Financial Frictions," *Economic Journal*, 121, 351-378. (www.jstor.org)
- Hall, Robert, 2011, "The Long Slump," American Economic Review, 101(2), 431-469.
- Hornstein, Andreas, Per Krusell, and Gianluca Violante, 2010, "Frictional Wage Dispersion in Search Models: A Quantitative Assessment," American Economic Review, 101(7): 2873-98. (www.jstor.org)
- Horvath, Michael, 1998, "Cyclicality and Sectoral Linkages: Aggregate Fluctuations from Independent Sectoral Shocks," *Review of Economic Dynamics* 1(4): 781–808.
- Horvath, Michael, 2000, "Sectoral Shocks and Aggregate Fluctuations," *Journal of Monetary Economics* 45(1): 69–106.
- Hurst, Erik, and Benjamin W. Pugsley, 2011, "What Do Small Businesses Do?" Brookings Papers on Economic Activity 43(2): 73–142.
- Jermann, Urban and Vincenzo Quadrini, 2012, "Macroeconomic Effects of Financial Shocks," *American Economic Review*, 102(1): 238-71. (www.jstor.org)
- Jaimovich, Nir and Sergio Rebelo, 2009, "Can News about the Future Drive the Business Cycle?" American Economic Review, 99(4): 1097-1118.
- Jaimovich, Nir and Henry Siu, 2013, "The Trend is the Cycle: Job Polarization and Jobless Recoveries," mimeo, Duke University.
- Khan, Aubhik, and Julia K. Thomas, 2013, "Credit Shocks and Aggregate Fluctuations in an Economy with Production Heterogeneity," Journal of Political Economy, forthcoming.
- Kiyotaki, Nobuhiro and John Moore, 1997, "Credit Cycles," Journal of Political Econ-

- omy, 105 (2): 211248. (www.jstor.org)
- Kocherlakota, Narayana, 2000, "Creating Business Cycles Through Credit Constraints," Federal Reserve Bank of Minneapolis Quarterly Review, 24(3): 2-10. (www.minneapolisfed.org)
- Kydland, Finn E., and Edward C. Prescott, 1982, "Time to Build and Aggregate Fluctuations," *Econometrica* 50(6): 1345–70.
- Long, John B., Jr., and Charles I. Plosser, 1983, "Real Business Cycles," *Journal of Political Economy* 91(1): 39–69.
- Laeven, Luc and Fabian Valencia, 2008, "Systemic Banking Crises: A New Database," IMF working paper 8224. (www.imf.org)
- McGrattan, Ellen R., 2012, "Capital Taxation During the U.S. Great Depression," Quarterly Journal of Economics, 127(3): 1515–1550. (qje.oxfordjournals.org)
- McGrattan, Ellen R. and Edward C. Prescott, 2012 "The Labor Productivity Puzzle," Federal Reserve Bank of Minneapolis Working Paper 694. (www.minneapolisfed.org)
- McGrattan, Ellen R., and Edward C. Prescott, 2014, "A Reassessment of Real Business Cycle Theory," *American Economic Review, Paper and Proceedings*, forthcoming.
- McGrattan, Ellen R., Richard Rogerson, and Randall Wright, 1997, "An Equilibrium Model of the Business Cycle with Household Production and Fiscal Policy," *International Economic Review*, 38(2): 267–290. (www.jstor.org)
- Midrigan, Virgiliu and Thomas Philippon, 2011, "Household Leverage and the Recession," mimeo, New York University. (www.econ.nyu.edu)
- Ohanian, Lee E., John B. Taylor, and Ian J. Wright, eds., *The Great Recession and Delayed Economic Recovery*, Hoover Institution Press, 2012.
- Palumbo, Michael G. and Jonathan A. Parker, 2009, "The Integrated Financial and Real System of National Accounts for the United States: Does It Presage the Financial Crisis?" NBER working paper 14663. (www.nber.org)
- Owyang, Michael, Valerie Ramey, and Sarah Zubairy, 2013, "Are Government Spending Multipliers Greater During Periods of Slack? Evidence from 20th Century Historical Data," mimeo, UC San Diego.

- Reinhart, Carmen M., and Kenneth S. Rogoff, 2009, "The Aftermath of Financial Crises," American Economic Review, Papers and Proceedings, 99(2): 466–72.
- Rogerson, Richard and Robert Shimer, 2010, "Search in Macroeconomic Models of the Labor Market," *Handbook of Labor Economics*, Elsevier.
- Smets, Frank and Raf Wouters, 2007, "Shocks and Frictions in US Business Cycles: A Bayseian DSGE Approach," *American Economic Review*, 97(3): 586–606. (www.jstor.org)
- Taylor, John B., 2009, "The Financial Crisis and the Policy Responses: An Empirical Analysis of What Went Wrong" NBER working paper 14631. (www.nber.org)