Syllabus: Economics 704a · Macroeconomics

Prof. Adam M. Guren · Boston University · Spring 2021

Logistics

Location:

This course will be entirely not in person and taught on Zoom. Professor Guren will also hold office hours exclusively on Zoom. TA sections will be in person.

Instructor:

Adam Guren
guren@bu.edu
Office Hours: M 4-5, F 9-10 and by appointment on Zoom (link on website, recommended you email and let me know you are coming ahead of time)

Teaching Assistant:

Michele Marcaletti
mmarcale@bu.edu
Section: F 10:10-11:25 at CAS 313 (and online through *LFA*)
Office Hours: F 1-2:30 on Zoom (link on course website)

Overview:

This is the first half of the second semester first-year Ph.D. course in macroeconomics. The course focuses on Monetary Economics and particularly the New Keynesian Model. The course begins with a review of the Real Business Cycle framework. After considering the evidence for monetary non-neutrality, the course develops the basic building blocks of the New Keynesian framework by adding money, imperfect competition, and nominal rigidity to the RBC model. The course then turns to the conduct of monetary policy. After discussing the liquidity trap and policy in a liquidity trap, we will turn to recent topics in macroeconomics related to the Great Recession and its aftermath.

Textbooks and Course Materials:

- Lecture Notes, Algebra Guides, and Readings will be posted on the course website.
  - Readings outside of textbook and readings listed below each topic will be added and announced via e-mail.
- Textbook:

  - Gali, Jordi. *Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian Framework and Its Applications,* 2nd Edition. Princeton University Press: Princeton, NJ.

- Other Suggested Macroeconomics Textbooks

  - Sargent, Thomas and Lars Ljungqvist. *Recursive Macroeconomic Theory*, Third Edition. MIT Press: Cambridge, MA.
  - Romer, David. *Advanced Macroeconomics,* 4th Edition, McGraw-Hill.
  - Woodford, Michael. *Interest and Prices: Foundations of a Theory of Monetary Policy.* Princeton University Press: Princeton NJ.

Requirements:

- 13 Lectures From January 25 to March 11

- Exam: 24 hour take home in lieu of class on March 16th, details to be announced.

- Problem Sets

  - You are encouraged to work in groups.
  - If you do so you must indicate who you worked with on your write up.
  - Each student must hand in their own write up and submit it to the Blackboard online portal as a PDF in LaTeX.
  - Grading: Check+, Check, Check-, 0.
    If you make an effort to answer every problem you will get a check, which is considered full credit.
    The problem sets will be difficult, and I want to reward tackling the problem rather than getting everything right.
  - There will be five problem sets. Four are standard problem sets. The last "problem set" will consist of three e-mailed student responses to recent papers on the monetary transmission mechanism. This assignment will be discussed in class.

- Grading For This Half of Course: 75% Final, 25% Problem Sets

  - Regrade Policy: If you do not agree with your score, you may ask me for a regrade. I will personally regrade the *entire* test, and you may lose points as well as gain them. Note that I tend to be harsher than the TA.

- You are encouraged to stop me if you are confused and ask questions. I want this to be a discussion rather than a lecture as frequently as possible!

- I want the course to be fun.

- I will try to reference interesting recent research.
- The focus will be on theory, but I will also discuss related empirics.
- Please ask questions and be engaged. Even if you do not become a macroeconomist, you will be asked about monetary policy for the rest of your life. Now is the time to learn something about it.

Pandemic-Related Course Policies

Zoom Engagement

I realize it is not ideal for the class to be entirely remote, but I am committed to making the class as rich and rewarding as possible. Given this, when on Zoom I ask that you *please turn your cameras on* so that I can make learning as engaging as possible under the circumstances. I readily admit that we are far more likely to be on email, chat, surfing the internet, etc. when my camera is off. In fact, I believe it is very difficult for all of us not to engage in these distractions when our cameras are turned off. If this policy poses an unreasonable challenge for you, please contact me.

I also ask that you do not use cellular phones, social media, or similar devices in class. I also ask that you not use laptops or tablets for reasons other than zoom. If you need to use a laptop or tablet for educational/learning reasons, please come talk to me about it and I can exempt you from this policy.

COVID and Unforeseen Bumps in the Road

I know that this is an extremely difficult time to be a Ph.D. student and to be making decisions that may impact your health. I empathize with these challenges and will be working to support you to the best of my ability. Please reach out at any time if I can be of help. I care about your health, mental health, and well-being just as I care about your learning in our course. I hope you are in graduate school because you love research and love economics; if circumstances are making it difficult to feel that way and the course is becoming an undue source of stress, please let me know so I can accommodate you.

If you do test positive for COVID or find yourself required to quarantine, I encourage you to be in touch with me, just as we would ask you to let us know of any illness or life circumstance that would impact your performance in my course. With this information, I will be better able to support you and make course accommodations as needed. I will certainly keep any personal information in confidence.

I also know that unforeseen circumstances may arise in the course of the pandemic that may limit your ability to engage with the course or even my ability to teach the course. I will be as lenient as reasonably possible so long as things do not seem to be turning into a worrisome pattern (e.g., every problem set is a week late - I cannot post solutions until everyone turns their problem set in).

Reading List

Required readings are starred. Readings may be changed over the course of the semester.

This reading list is extensive because it is not only be a list of required readings but also a guide to the literature should you become interested in the topics we cover.

- Business Cycle Facts
  - Rebelo, Sergio T. and Robert G. King (1999). "Resuscitating Real Business Cycles." In *Handbook of Macroeconomics*: 927-1007.
  - Stock, James and Mark Watson (1999). "Business Cycle Fluctuations in U.S. Macroeconomic Time Series." In *Handbook of Macroeconomics*: 3-64.
- Real Business Cycle Model: Review, Criticisms, and Business Cycle Accounting
  - * Rebelo, Sergio and Robert G. King (1999). "Resuscitating Real Business Cycles." in *Handbook of Macroeconomics*": 927-1007.
  - * Prescott, Edward (1986). "Theory Ahead of Business Cycle Measurement." *MN FRB QR*. 10(4): 9-22.
  - * Summers, Lawrence (1986). "Some Skeptical Observations on Real Business Cycle Theory." *MN FRB QR*. 10(4): 23-27.
  - * Prescott, Edward (1986). "Response to a Skeptic." *MN FRB QR*. 10(4): 28-33.
  - Chetty, Raj, Adam Guren, Day Manoli, and Andrea Weber (2013). "Does Indivisible Labor Explain the Difference Between Micro and Macro Elasticities? A Meta-Analysis of Extensive Margin Elasticities." *NBER Macro Annual 2012*: 1-56.
  - Gali, Jordi (1999). "Technology, Employment, and the Business Cycle: Do Technology Shocks Explain Aggregate Fluctuations?" *AER* 89(1): 249-271.
  - Basu, Susanto, John Fernald, and Miles Kimball. (2006). "Are Technology Improvements Contractionary?" *AER* 96(5): 1418-1448.
  - Rotemberg, Julio and Michael Woodford. (1996). "Real-Business-Cycle Models and the Forecastable Movements in Output, Hours, and Consumption." *AER* 86(1): 71-89.
  - Gali, Jordi, Mark Gertler, and David Lopez-Salido (2007). "Markups, Gaps, and the Welfare Costs of Business Cycle Fluctuations." *ReStat* 89(1) 44-59.
  - Chari, V.V., Patrick Kehoe, and Ellen McGrattan (2007). "Business Cycle Accounting." *Emca* 75(3): 781-836.
  - Shimer, Robert (2009). "Convergence in Macroeconomics: The Labor Wedge." *AEJ: Macro* 1(1): 280-297.
  - Bils, Mark, Peter Klenow, and Benjamin Malin (2018). "Resurrecting the Role of the Product Market Wedge in Recessions." *AER* 108(4-5): 1118-1146.

- Empirical Motivation for Nominal Rigidity
  - * Stock, James and Mark Watson (2001). "Vector Autoregressions." *JEP* 15(4): 101-115.
  - Econometrics Reference: Enders, Walter (2014). "Applied Econometric Time Series." Wiley.
  - Christiano, Lawrence, Martin Eichenbaum, and Charles Evans (2005). "Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy." *JPE* 113(1): 1-45.
  - Romer and Romer (2004). "A New Measure of Monetary Shocks: Derivation and Implications." *AER* 94(4): 1055-1084.
  - Nakamura and Steinsson (2018). "Identification in Macroeconomics." *JEP* 32(3): 59-68.
  - Velde, Francois (2009). "Chronicle of a Deflation Unforetold." *JPE*. 117(4): 591-634.
- Money, Money Demand, and Output
  - * Gali Chapter 2.
- Monopolistic Competition and Markups
  - * Gali Chapter 3, appendix.
  - Blanchard, Olivier, and Nobuhiro Kiyotaki (1987). "Monopolistic Competition and the Effects of Aggregate Demand." *AER* 77(4): 647-666.
- The New Keynesian Model
  - * Gali Chapter 3.
  - Gali, Jordi and Mark Gertler (2007). "Macroeconomic Models for Monetary Policy Evaluation." *JEP* 21(4): 24-45.
  - Ball, Laurence (1994). "Credible Disinflation With Staggered Price Setting." *AER* 84(1): 282-289.
  - Goodfriend, Marvin, and Robert King (2005). "The Incredible Volcker Disinflation." *JME* 52: 981-1015.
  - Fuhrer, Jeff (2011). "Inflation Persistence." In *Handbook of Monetary Economics*: 423-486.
  - Mankiw, N. Gregory, and Ricardo Reis (2002). "Sticky Information Versus Sticky Prices: A Proposal To Replace the New Keynesian Phillips Curve." *QJE* 117(4):1295-1328.
  - Christiano, Lawrence, Martin Eichenbaum, and Charles Evans (2005). "Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy." *JPE* 113(1): 1-45.

  - Smets, Frank and Rafael Wouters (2007). "Shocks and Frictions in U.S. Business Cycle Models." *AER* 97(3): 586-606.
  - Chari, V.V., Patrick Kehoe, and Ellen McGrattan (2009). "New Keynesian Models: Not Yet Useful for Policy Analysis." *AEJ: Macro* 1(1): 242-266.
  - Cochrane, John (2011). "Determinacy and Identification With Taylor Rules." *JPE* 119(3): 565-615.
  - Sbordone, Argia (2002). "Prices and Unit Labor Costs: A New Test of Price Stickiness." *JME* 49: 265-292.
  - Gali, Jordi and Mark Gertler (1999). "Inflation Dynamics: A Structural Econometric Analysis." *JME* 44: 195-222.
  - Mavroeidis, Sophocles, Mikkel Plagborg-Moller, and James Stock (2014). "Empirical Evidence on Inflation Expectations in the New Keynesian Phillips Curve." *JEL* 52(1): 124-188.

- Optimal Monetary Policy in a New Keynesian Framework
  - * Clarida, Richard, Jordi Gali, and Mark Gertler (1999). "The Science of Monetary Policy: A New Keynesian Perspective." *JEL* 37(4): 1661-1707.
  - * Gali Chapters 4-5.1-3

- The Liquidity Trap
  - Eggertsson, Gauti and Paul Krugman (2012). "Debt, Deleveraging, and the Liquidity Trap: A Fisher-Minsky-Koo Approach. *QJE* 127(3): 1469-1513.
  - Guerrieri, Veronica and Guido Lorenzoni (2017). "Credit Crises, Precautionary Savings, and the Liquidity Trap." *QJE* 132(3): 1427-1467.

- Policy in a Liquidity Trap
  - * Gali Chapter 5.4.
  - Eggertsson, Gauti and Michael Woodford (2003). "Optimal Monetary and Fiscal Policy in a Liquidity Trap." *BPEA* 2003(1): 139-233.
  - Werning, Ivan (2012). "Managing a Liquidity Trap: Monetary and Fiscal Policy." WP.
  - Simsek, Alp and Anton Korinek (2016). "Liquidity Trap and Excessive Leverage." *AER* 106(3): 699-738.
  - Carlstrom, Charles, Timothy Fuerst, and Matthias Paustian (2015). "Inflation and Output in New Keynesian Models With a Transient Interest Rate Peg." *JME* 76: 230-243.
  - Del Negro, Marco, Marc Giannoni, and Christina Patterson (2015). "The Forward Guidance Puzzle." WP.

- McKay, Alisdair, Emi Nakamura, and Jon Steinsson (2016). "The Power of Forward Guidance Revisited." *AER* 106(10): 3133-3158.
- Werning, Ivan (2015). "Incomplete Markets and Aggregate Demand." WP.

• New Perspectives on the Monetary Transmission Mechanism

- Household Finance and the Mortgage Channel of Monetary Transmission
  - * Wong, Arlene (2018). "Population Aging and the Transmission of Monetary Policy to Consumption." WP. [NOTE: Read original version on course website not new version "Refinancing and the Transmission of Monetary Policy to Consumption."]
  - Berger, David, Konstantin Milbradt, Fabrice Tourre, and Joseph Vavra (2020). "Mortgage Prepayment and the Path-Dependent Effects of Monetary Policy." WP.
  - Eichenbaum, Martin, Sergio Rebelo and Arlene Wong (2020). "State Dependent Effects of Monetary Policy: the Refinancing Channel." WP.
  - Beraja, Martin, Andreas Fuster, Erik Hust, and Joseph Vavra (2018). "Regional Heterogeneity and Monetary Policy." *QJE* 134(1): 109-183.
  - Greenwald, Daniel (2020). "The Mortgage Credit Channel of Macroeconomic Transmission." WP.
  - Di Maggio, Kermani, Keys, Piskorski, Ramcharan, Seru, and Yao (2017) "Monetary Policy Pass-Through: Mortgage Rates, Household Consumption, and Voluntary Delevarging." *AER* 107(11), 3550-3588.
  - Fuster, Andreas, and Paul Willen (2017). "Payment Size, Negative Equity, and Mortgage Default." *AEJ: Policy* 9(4): 167-191.
- Heterogenous Agents I: Liquidity Constrained Consumers and Monetary Transmission
  - * Kaplan, Greg, Benjamin Moll, and Giovanni Violante (2018). "Monetary Policy According to HANK." *AER* 108(3): 697-743.
  - Kaplan, Greg and Giovanni Violante (2014). "A Model of the Consumption Response to Fiscal Stimulus Payments." *EMCA* 82(4): 1199-1239.
  - Guvenen, Fatih, Serdar Ozkan, and Jae Song (2014). "The Nature of Countercyclical Income Risk." *JPE* 122(3): 621-660.
  - Guvenen, Fatih, Fatih Karahan, Serdard Ozkan, and Jae Song (2019). "What Do Data on Millions of U.S. Workers Reveal About Life-Cycle Earnings Risk?" WP.
  - Campbell, John, and N. Gregory Mankiw (1989). "Consumption, Income, and Interest Rates: Reinterpreting the Time Series Evidence." *NBER Macro Annual 1989*: 185-246.
  - Gali, Jordi, David Lopez-Salido, and Javier Valles (2007). "Understanding the Effects of Government Spending on Consumption." *JEEA* 5(41): 227-270.

* Parker, Jonathon, Nicholas Souleles, and David Johnson (2006). "Household Expenditure and the Income Tax Rebates of 2001." *AER* 96(5): 1589-1610.
* Parker, Jonathon, Nicholas Souleles, David Johnson, and Robert McClelland 2013). "Consumer Spending and the Economic Stimulus Payments of 2008." *AER* 103(6) 2530-2553.
* Hsieh, Chang-Tai (2003). "Do Consumers React to Anticipated Income Changes? Evidence from the Alaska Permanent Fund." *AER* 93(1): 397-405.
* Japelli, Tullio and Luigi Pistaferri (2010). "The Consumption Response to Income Changes." *Annual Review of Economics* 2: 479-506.

- Heterogenous Agents II: Redistribution and Monetary Transmission
  * * Aucltert, Adrien (2019). "Monetary Policy and the Redistribution Channel." *AER* 109(6): 2333-2367.
  * Doepke, Matthias, and Martin Schneider (2006). "Inflation and the Redistribution of Nominal Wealth." *JPE* 114(6): 1069-1097.