



EC 603
ADVANCED MACROECONOMICS I
SPRING 2017
SYLLABUS

Course Description: EC 603 Advanced Macroeconomics I is the first course of the elective graduate-level advanced macroeconomics sequence of the Ph.D. program in Economics at Boğaziçi University. The course aims to achieve two objectives. It intends to familiarize students to selected issues in macroeconomics and introduce students to the models and technical tools to analyze these topics. Both theoretical and computational frontiers in macroeconomics research are priorities of the course. The course is divided into two parts: the first part, taught by [Orhan Torul](#) will focus mainly on the macroeconomic methodology part by the use of computational methods, and [Malik Çürük](#) will concentrate on the use of a variety of modern macroeconomic topics, as well as on modern economic growth subjects. Below please find the details of the two parts.

PART I

Instructor: [Orhan Torul](#)

Time and Location: T 567 13:00-15:50, NBB 10

Telephone: 212-359-6677

Email: orhan.torul@boun.edu.tr

Office Hours: T78 16:00-17:00 or by appointment, NB225A

Course Website: [Boğaziçi University Department of Economics](#) → [Courses](#) → [EC 603.01](#)

PART II

Instructor: [Malik Çürük](#)

Time and Location: T 567 13:00-15:50, NBB 10

Telephone: 212-359-7650

Email: malik.curuk@boun.edu.tr

Office Hours: M 78 15:00-16:50 and by appointment, NB208B

Course Website: [Boğaziçi University Department of Economics](#) → [Courses](#) → [EC 603.01](#)

Prerequisites

EC 503 Macroeconomics I and EC 504 Macroeconomics II (master's level core courses in the macroeconomics sequence) are the official prerequisites of this course.

Course requirements

Class participation

You are expected to attend all lectures and and participate in discussions.

Assignments

During the first part of the course, you will hand in 5 ± 1 homework assignments. During the second part of the course, you are required to post three questions for each paper that will be presented that week. A selection will be discussed in class. The questions should be sent to m.curuk@uvt.nl by Monday at the latest.

Paper Presentation

Each student will be assigned two papers from the reading list provided below to present in class. To keep consistency in the main flow among presentations and to ease communication, a latex template and suggestions on the organization of the presentations will be provided.

Quizzes

In the second part, there will two *pop-up* quizzes about the subjects covered in class and the papers presented.

Project Paper

A major element of this course is the completion of a project paper. This exercise is intended to get students started thinking about a particular topic and conduct an extensive research on it. The project paper should not be a repository of the literature, it must have an original contribution to the literature. This may sound daunting right now, but it is exactly what you need to get started on something.

In the last lecture of the course (on Dec. 12) you will present your project topic and progress to get feedback from us and your classmates before the final submission (deadline Jan. 5). The paper should be written in a clear form submittable to the *Economics Bulletin*. Details will on this will be discussed in class.

Grading Policy and Grading Scale

The weights for the overall score will be as follows:

Part 1	Percentage of final grade
5±1 Assignments	30%
Part 2	Percentage of final grade
Quizzes	5%
Participation	5%
Presentations	20%
End of the Semester	
Project Paper	40%

As a reminder, the standard catalog grading protocol accepted at Boğaziçi University is as follows:

Grade Scale			
Letter Grade	Interpretation	Weight	Grade Percentage
AA	Excellent	4.0	90%
BA	Good-Excellent	3.5	85-89%
BB	Good	3.0	80-84%
CB	Passing-Good	2.5	75-79%
CC	Passing	2.0	70-74%
F	Failed	0.0	0-59%

Communication

E-mail will be used as the primary means of communication outside the classroom, and we will be sending e-mails whenever necessary to inform you on updates regarding the course. Please make sure that the e-mail address you have at the Registrar's Office is up-to-date so that you will not miss any of the announcements.

Accommodations

Students who require special accommodations for exams must get in touch with us within the first two weeks of class.

Academic Integrity

The graduate program of the Department of Economics is conducted within the framework of the Student Discipline Regulations by the Turkish Council of Higher Education (TCHE, Yükseköğretim Kurulu, YÖK in Turkish), and rules accepted by the Boğaziçi University Committee on Ethical Conduct.

For student discipline regulations by the TCHE (YÖK), see (in Turkish): bit.ly/yokdisiplin

For the ethics code accepted by Boğaziçi University, see: bit.ly/bounethics

EC 103 Orientation to Economics course also discusses basics of integrity. For a brief refresher, see bit.ly/ec103notes

Copyrights

All course materials are copyrighted. Selling or distributing copies or modified copies of course materials or assisting another person or entity in selling or distributing those materials without permission is strictly prohibited.

Tentative Course Schedule

The material that will be covered is summarized below. In the course of progress this schedule may change. We will try to notify you in advance if and when such a change occurs.

Part 1 by Orhan Torul

Course Outline

1. Introduction to Computing
2. Introduction to DYNARE
3. Incomplete Markets with Aggregate Uncertainty
4. Calibration versus Estimation

Reference Textbooks

- “*Dynamic Economics: Quantitative Methods and Applications*” by Jerome Adda and Russell W. Cooper, MIT Press, August 2003. (A+D hereafter)
- “*Numerical Methods in Economics*” by Kenneth L. Judd, MIT Press, September 1998. (Judd hereafter)
- “*Dynamic General Equilibrium Modeling: Computational Methods and Applications*”, 2nd Edition by Burkhard Heer and Alfred Maussner, Springer Press, August 2009. (H+M hereafter)

Introduction to Computing

- Introduction to MATLAB
 - Handley, Kyle (2009), “MATLAB Mini Course Notes”, mimeo
- Deterministic Steady-State Derivation of Stochastic DSGE Models

- Lecture Notes on DSGE Models
 - Chapter 5 in Judd.
 - Basics Computational Approximation of Finite Markov Chains and Principles of Local Approximation Techniques
 - Lecture Notes on Autoregressive Processes and Local Approximation Techniques
 - Chapter 3 in A+C, Chapters 1, 2, 5, 6 and 7 in Judd.
 - Local Approximation Techniques and Perturbation Methods for the Numerical Analysis
 - Schmitt-Grohe and Uribe (2004, JEDC)
 - Introduction to DYNARE
 - “DYNARE: Reference Manual Version 4” by Adjemian et al. (2014).
 - “DYNARE User Guide” by Tommaso Mancini Griffoli (2007-2008), mimeo
 - Fernandez-Villaverde, Jesus (2005), “Real Business Cycle Models”, mimeo
 - Introduction to Global Approximation Techniques and Essentials of Value Function Iteration
 - Lecture Notes on Value Function Iteration and Heterogeneous-Agent Models
 - Chapter 2 in A+C, Chapters 12, 13, 16, and 17 in Judd
- Incomplete Markets with No Aggregate Uncertainty***
- Aiyagari, S. Rao, (1994), “Uninsured Idiosyncratic Risk and Aggregate Saving,” *Quarterly Journal of Economics*, 109, 659-684.
 - Huggett, Mark (1993), “The Risk-Free Rate in Heterogeneous-Agent Incomplete-Insurance Economies,” *Journal of Economic Dynamics and Control*, 17, 953-969.
 - Rios-Rull, Victor (1999), “Computing of Equilibria in Heterogeneous-Agent Model”, Chapter 11 in “Computational Methods for the Study of Dynamic Economics” by Marimon, Ramon and Andrew Scott (1999).
- Incomplete Markets with Aggregate Uncertainty***
- Krusell, Per and Anthony A. Smith Jr., (1998), “Income and Wealth Heterogeneity in the Macroeconomy,” *Journal of Political Economy*, 106(5), 867-896.
- Calibration versus Estimation**
- Canova, Fabio (1994), “Statistical Inference in Calibrated Models”, *Journal of Applied Econometrics*, 9, 123-145.

- Kydland, Finn E. and Edward C. Prescott (1996), “The Computational Experiment: An Econometric Tool”, *Journal of Economic Perspectives*, 10, 69-85.
- Hansen, Lars Peter and James J. Heckman (1996), “The Empirical Foundations of Calibration”, *Journal of Economic Perspectives*, 10, 87-104.
- Sims, Christopher A. (1996), “Macroeconomics and Methodology”, *Journal of Economic Perspectives*, 10, 105-120.
- Dridi, Ramdan, Alain Guay and Eric Renault (2007), “Indirect Inference and Calibration of Dynamic Stochastic General Equilibrium Models”, *Journal of Econometrics*, 2, 397-430.

Part 2 by Malik Çürük

Course Description

In the second half of the course we will get familiarize with the recent advances in macroeconomics. For each lecture, I will start with the main questions and empirical observations relevant for the particular strand of literature to be discussed. Then, I will show the fundamental mechanisms, predictions and puzzles in a canonical model. This introduction will be followed by your presentations and discussion mainly based on the questions you are required to post before the lecture.

Textbook

There is no required textbook of the course. Course readings and lecture notes will be made available online and/or hard-copy.

Reading List

The papers that will be covered and discussed in class are provided below. The list is tentative and subject to changes.

Pre-Modern Era

- Quamrul Ashraf and Oded Galor. Dynamics and stagnation in the malthusian epoch. *The American Economic Review*, 101(5):2003–2041, 2011
- Nico Voigtländer and Hans-Joachim Voth. The three horsemen of riches: Plague, war, and urbanization in early modern europe. *The Review of Economic Studies*, 2012
- Quamrul Ashraf and Stelios Michalopoulos. Climatic fluctuations and the diffusion of agriculture. *Review of Economics and Statistics*, 97(3):589–609, 2015
- Ola Olsson and Christopher Paik. Long-run cultural divergence: evidence from the neolithic revolution. *Journal of Development Economics*, 2016
- Thomas Barnebeck Andersen, Carl-Johan Dalgaard, and Pablo Selaya. Climate and the emergence of global income differences. *The Review of Economic Studies*, 2016

Endogenous Growth

- Charles I Jones. The facts of economic growth. Technical report, National Bureau of Economic Research, 2015

- Gene M Grossman, Elhanan Helpman, Ezra Oberfield, and Thomas Sampson. Balanced growth despite uzawa. *The American Economic Review*, 107(4):1293–1312, 2017
- Thomas Sampson. Dynamic selection: An idea flows theory of entry, trade, and growth. *The Quarterly Journal of Economics*, 131(1):315–380, 2016
- Costas Arkolakis. A unified theory of firm selection and growth. *The Quarterly Journal of Economics*, 131(1):89–155, 2016
- Albert Bollard, Peter J Klenow, and Huiyu Li. Entry costs rise with development. 2014
- Daniel Garcia-Macia, Chang-Tai Hsieh, and Peter J Klenow. How destructive is innovation?, 2017
- Gene M Grossman and Elhanan Helpman. Globalization and growth. *The American Economic Review*, 105(5):100–104, 2015

(Mis)Allocation Across Countries, Sectors and Firms

- Daron Acemoglu and Veronica Guerrieri. Capital deepening and nonbalanced economic growth. *Journal of Political Economy*, 116(3), 2008
- L Rachel Ngai and Christopher A Pissarides. Structural change in a multisector model of growth. *The American Economic Review*, 97(1):429–443, 2007
- Berthold Herrendorf and Todd Schoellman. Why is measured productivity so low in agriculture? *Review of Economic Dynamics*, 18(4):1003–1022, 2015
- Francisco J Buera and Joseph Kaboski. The rise of the service economy. *The American Economic Review*, 102(6):2540–2569, 2012
- Pierre-Olivier Gourinchas and Olivier Jeanne. Capital flows to developing countries: The allocation puzzle. *The Review of Economic Studies*, page rdt004, 2013
- Gita Gopinath, Şebnem Kalemli-Özcan, Loukas Karabarbounis, and Carolina Villegas-Sanchez. Capital allocation and productivity in south europe. *The Quarterly Journal of Economics*, page 024, 2017
- Chang-Tai Hsieh and Pete Klenow. Misallocation and manufacturing tfp in china and india. *The Quarterly Journal of Economics*, 124(4):1403–1448, 2009
- John Asker, Allan Collard-Wexler, and Jan De Loecker. Dynamic inputs and resource (mis) allocation. *Journal of Political Economy*, 122(5):1013–1063, 2014

Recessions and Aggregate Demand

- Gauti B Eggertsson and Paul Krugman. Debt, deleveraging, and the liquidity trap: A fisher-minsky-koo approach. *The Quarterly Journal of Economics*, 127(3):1469–1513, 2012
- Anton Korinek and Alp Simsek. Liquidity trap and excessive leverage. *The American Economic Review*, 106(3):699–738, 2016
- Gary B Gorton and Guillermo Ordonez. The supply and demand for safe assets. Technical report, National Bureau of Economic Research, 2013
- Ricardo J Caballero. A caricature (model) of the world economy. 2010
- Gauti B Eggertsson and Neil R Mehrotra. A model of secular stagnation. Technical report, National Bureau of Economic Research, 2014

Recessions and Finance

- Atif Mian and Amir Sufi. The great recession: Lessons from microeconomic data. *The American Economic Review*, 100(2):51–56, 2010
- Markus K Brunnermeier, Thomas M Eisenbach, and Yuliy Sannikov. Macroeconomics with financial frictions: A survey. Technical report, National Bureau of Economic Research, 2012
- Patrick Bolton, Hui Chen, and Neng Wang. A unified theory of tobin’s q, corporate investment, financing, and risk management. *The journal of Finance*, 66(5):1545–1578, 2011
- Thomas W Bates, Kathleen M Kahle, and René M Stulz. Why do us firms hold so much more cash than they used to? *The journal of finance*, 64(5):1985–2021, 2009
- Gary Gorton and Andrew Metrick. Securitized banking and the run on repo. *Journal of Financial economics*, 104(3):425–451, 2012
- Victoria Ivashina and David Scharfstein. Bank lending during the financial crisis of 2008. *Journal of Financial economics*, 97(3):319–338, 2010
- Samuel G Hanson, Anil K Kashyap, and Jeremy C Stein. A macroprudential approach to financial regulation. *The Journal of Economic Perspectives*, 25(1):3–28, 2011

Miscellaneous

- Chang-Tai Hsieh and Peter J Klenow. Relative prices and relative prosperity. *The American Economic Review*, 97(3):562–585, 2007
- Fadi Hassan. The price of development: the penn-balassa-samuelson effect revisited. *Journal of International Economics*, 2016

- Robert C Feenstra, Robert Inklaar, and Marcel P Timmer. The next generation of the penn world table. *The American Economic Review*, 105(10):3150–3182, 2015
- Michael Waugh. International trade and income differences. *The American Economic Review*, 100(5):2093–2124, 2010
- Loukas Karabarbounis and Brent Neiman. The global decline of the labor share. *The Quarterly Journal of Economics*, 129(1):61–103, 2014
- Jonathan Eaton, Sam Kortum, Brent Neiman, and John Romalis. Trade and the global recession. 2016
- Dani Rodrik. Unconditional convergence in manufacturing. *The Quarterly Journal of Economics*, page qjs047, 2012
- Margaret McMillan, Dani Rodrik, Íñigo Verduzco-Gallo, et al. Globalization, structural change, and productivity growth, with an update on africa. *World Development*, 63(1):11–32, 2014
- Jonathan Eaton, Samuel S Kortum, and Brent Neiman. Obstfeld and rogoﬀ’s international macro puzzles: A quantitative assessment. Technical report, National Bureau of Economic Research, 2015

References

- [1] Daron Acemoglu and Veronica Guerrieri. Capital deepening and nonbalanced economic growth. *Journal of Political Economy*, 116(3), 2008.
- [2] Thomas Barnebeck Andersen, Carl-Johan Dalgaard, and Pablo Selaya. Climate and the emergence of global income differences. *The Review of Economic Studies*, 2016.
- [3] Costas Arkolakis. A unified theory of firm selection and growth. *The Quarterly Journal of Economics*, 131(1):89–155, 2016.
- [4] Quamrul Ashraf and Oded Galor. Dynamics and stagnation in the malthusian epoch. *The American Economic Review*, 101(5):2003–2041, 2011.
- [5] Quamrul Ashraf and Stelios Michalopoulos. Climatic fluctuations and the diffusion of agriculture. *Review of Economics and Statistics*, 97(3):589–609, 2015.
- [6] John Asker, Allan Collard-Wexler, and Jan De Loecker. Dynamic inputs and resource (mis) allocation. *Journal of Political Economy*, 122(5):1013–1063, 2014.
- [7] Thomas W Bates, Kathleen M Kahle, and René M Stulz. Why do us firms hold so much more cash than they used to? *The journal of finance*, 64(5):1985–2021, 2009.
- [8] Albert Bollard, Peter J Klenow, and Huiyu Li. Entry costs rise with development. 2014.
- [9] Patrick Bolton, Hui Chen, and Neng Wang. A unified theory of tobin’s q, corporate investment, financing, and risk management. *The journal of Finance*, 66(5):1545–1578, 2011.
- [10] Markus K Brunnermeier, Thomas M Eisenbach, and Yuliy Sannikov. Macroeconomics with financial frictions: A survey. Technical report, National Bureau of Economic Research, 2012.
- [11] Francisco J Buera and Joseph Kaboski. The rise of the service economy. *The American Economic Review*, 102(6):2540–2569, 2012.
- [12] Ricardo J Caballero. A caricature (model) of the world economy. 2010.
- [13] Jonathan Eaton, Sam Kortum, Brent Neiman, and John Romalis. Trade and the global recession. 2016.
- [14] Jonathan Eaton, Samuel S Kortum, and Brent Neiman. Obstfeld and rogoﬀ’s international macro puzzles: A quantitative assessment. Technical report, National Bureau of Economic Research, 2015.
- [15] Gauti B Eggertsson and Paul Krugman. Debt, deleveraging, and the liquidity trap: A fisher-minsky-koo approach. *The Quarterly Journal of Economics*, 127(3):1469–1513, 2012.

- [16] Gauti B Eggertsson and Neil R Mehrotra. A model of secular stagnation. Technical report, National Bureau of Economic Research, 2014.
- [17] Robert C Feenstra, Robert Inklaar, and Marcel P Timmer. The next generation of the penn world table. *The American Economic Review*, 105(10):3150–3182, 2015.
- [18] Daniel Garcia-Macia, Chang-Tai Hsieh, and Peter J Klenow. How destructive is innovation?, 2017.
- [19] Gita Gopinath, Şebnem Kalemli-Özcan, Loukas Karabarbounis, and Carolina Villegas-Sanchez. Capital allocation and productivity in south europe. *The Quarterly Journal of Economics*, page 024, 2017.
- [20] Gary Gorton and Andrew Metrick. Securitized banking and the run on repo. *Journal of Financial economics*, 104(3):425–451, 2012.
- [21] Gary B Gorton and Guillermo Ordonez. The supply and demand for safe assets. Technical report, National Bureau of Economic Research, 2013.
- [22] Pierre-Olivier Gourinchas and Olivier Jeanne. Capital flows to developing countries: The allocation puzzle. *The Review of Economic Studies*, page rdt004, 2013.
- [23] Gene M Grossman and Elhanan Helpman. Globalization and growth. *The American Economic Review*, 105(5):100–104, 2015.
- [24] Gene M Grossman, Elhanan Helpman, Ezra Oberfield, and Thomas Sampson. Balanced growth despite uzawa. *The American Economic Review*, 107(4):1293–1312, 2017.
- [25] Samuel G Hanson, Anil K Kashyap, and Jeremy C Stein. A macroprudential approach to financial regulation. *The Journal of Economic Perspectives*, 25(1):3–28, 2011.
- [26] Fadi Hassan. The price of development: the penn-balassa-samuelson effect revisited. *Journal of International Economics*, 2016.
- [27] Berthold Herrendorf and Todd Schoellman. Why is measured productivity so low in agriculture? *Review of Economic Dynamics*, 18(4):1003–1022, 2015.
- [28] Chang-Tai Hsieh and Pete Klenow. Misallocation and manufacturing tfp in china and india. *The Quarterly Journal of Economics*, 124(4):1403–1448, 2009.
- [29] Chang-Tai Hsieh and Peter J Klenow. Relative prices and relative prosperity. *The American Economic Review*, 97(3):562–585, 2007.
- [30] Victoria Ivashina and David Scharfstein. Bank lending during the financial crisis of 2008. *Journal of Financial economics*, 97(3):319–338, 2010.
- [31] Charles I Jones. The facts of economic growth. Technical report, National Bureau of Economic Research, 2015.

- [32] Loukas Karabarbounis and Brent Neiman. The global decline of the labor share. *The Quarterly Journal of Economics*, 129(1):61–103, 2014.
- [33] Anton Korinek and Alp Simsek. Liquidity trap and excessive leverage. *The American Economic Review*, 106(3):699–738, 2016.
- [34] Margaret McMillan, Dani Rodrik, Íñigo Verduzco-Gallo, et al. Globalization, structural change, and productivity growth, with an update on africa. *World Development*, 63(1):11–32, 2014.
- [35] Atif Mian and Amir Sufi. The great recession: Lessons from microeconomic data. *The American Economic Review*, 100(2):51–56, 2010.
- [36] L Rachel Ngai and Christopher A Pissarides. Structural change in a multisector model of growth. *The American Economic Review*, 97(1):429–443, 2007.
- [37] Ola Olsson and Christopher Paik. Long-run cultural divergence: evidence from the neolithic revolution. *Journal of Development Economics*, 2016.
- [38] Dani Rodrik. Unconditional convergence in manufacturing. *The Quarterly Journal of Economics*, page qjs047, 2012.
- [39] Thomas Sampson. Dynamic selection: An idea flows theory of entry, trade, and growth. *The Quarterly Journal of Economics*, 131(1):315–380, 2016.
- [40] Nico Voigtländer and Hans-Joachim Voth. The three horsemen of riches: Plague, war, and urbanization in early modern europe. *The Review of Economic Studies*, 2012.
- [41] Michael Waugh. International trade and income differences. *The American Economic Review*, 100(5):2093–2124, 2010.