

PHD CLASS IN EMPIRICAL METHODS IN CORPORATE FINANCE
Fall 2018

Instructor: Philipp Schnabl

Contact Information

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Class Times:

Tuesdays, 9am-11:50am

Location:

Gruber Conference Room

Office Hours:

By appointment. Just send me an email.

Course Websites:

[Nyuclasses](#)

Course Description: This course will provide you with a toolbox and working knowledge of the main empirical methods used in corporate finance research. We will achieve this objective using three approaches:

- (1) Lectures and econometric readings will help you learn the intuition behind each method. This is not a theory course; this is a course for end-users of econometric tools. Accordingly, my lectures and the readings will focus on how to use each tool for research, not how to derive its econometric properties.
- (2) You will see examples of the methods being used in recently published papers and ongoing work. Seeing how the tools are actually used by other researchers is often far more helpful than just reading about the underlying econometrics. I will rely on examples from the financial intermediation literature when possible, though I will also reference examples from other areas.
- (3) You will apply the methods using actual data; i.e. you will learn by doing. There will be a number of exercises that will have you manipulate and analyze data using the various econometric techniques, and there will be assignments where you analyze and criticize other researchers' use of these tools.

Reading Materials: I will teach from slides, which I will make available to you before each class on the course website. I will be drawing from a variety of sources including various textbooks, journal articles, working papers, and other professors' lecture notes. I will make note of the

appropriate references for each lecture. The relevant methodology readings for each lecture are provided at the bottom of this syllabus, and you are expected to read these prior to the lecture. Additionally, most lectures will contain student presentations related to the previous week's lecture topic. A list of papers to be presented is given below.

Podcasts: I assign a podcast for most classes. Please listen to the podcast before class. I will ask questions about the podcast in class.

Prerequisites: You should have taken a graduate sequence in econometrics.

Coursework: There will be four graded components to the course. These are designed to help you learn the econometric tools used in the literature while also preparing you for a successful career in academic research. The three assignments are as follows:

1. Empirical exercises

There will be three data exercises. You will be asked to download data and write code to implement some of the tools taught in the course. The three exercises are designed to teach you how to actually use these tools. It's one thing to learn about a difference-in-difference-in-difference estimation and another thing to actually estimate one. The assignments will be completed in STATA.

2. In-class presentations/discussions

For most classes, there will be two papers assigned that students (regardless of whether you are just auditing) must read and present a discussion of in-class. I will assign papers in the week ahead. E.g. If I give a lecture on instrumental variable estimations, then at the end of the lecture, I will assign papers that make use of IV strategies. Students will present their discussions of these two papers in the second half of the next class. Each student will need to make a 10 minute presentation that discusses the paper, and each presentation will be followed by in-class discussion. The purpose of the assignment is twofold: (1) Presentations are one key way people in academia will come to know (and assess) you. So, it's a good idea to get some practice now. And (2), this will help you apply and think critically about the empirical tools discussed in the previous lecture.

To ensure participation following each presentation, each student must also type up one concern they had about each of the two papers their group did NOT present and hand these in at the start of class. I will (quasi-randomly) select 1 submission for each assigned paper and have that randomly selected student elaborate upon their comment in class. The comments should be very short [2-3 sentences maximum] and isolate what you thought the biggest problem of the paper was. Every failure to turn in this sheet of comments will result in a reduction in participation points.

3. Write a research proposal

Basically, you will be asked to sketch out an outline for a possible empirical paper you could write using tools taught in the course. You'll need to come up with an interesting question,

place your question in the relevant literature, sketch out an identification strategy for answering that question, and identify the necessary datasets to implement your identification strategy. If you want, you can think of this as a possible start to your eventual second year paper.

4. Final exam

We will have a final take-home exam covering the main techniques covered in the course.

Limitations: Time limitations impose certain restrictions on what we can accomplish in this course. For example, we will not cover all of the methods you might need or should know. We also will not cover each method in excruciating detail. Arguably, you could build an entire course around each method.

NYU Classes: Important course materials, such as lecture notes, required assignments, and other useful information will be available on the course web page at NYU classes. You will also use this website to turn in all of your exercises & research proposals.

Questions: Please, just ask. I don't anticipate that everything I say in class or my lecture notes will be crystal clear. So, if something is confusing, please just ask me.

Participation: You will be graded on participation. Basically, I expect each student to give an in-class presentation during the semester and to turn in weekly comments on each paper. You should consider yourself likely to get "full participation credit" if you do the presentation, turn in your weekly comments on each paper, and participate in the discussion.

Final Take-Home Exam: The date of the final exam will be scheduled in class.

Grading: You should not be too worried about your grade; instead, you should focus on learning the tools taught in this course. Using these tools to write a solid job market paper and dissertation is far more important than your actual grade. When you're on the job market, no one will care what grade you got in your PhD courses. Instead, you should view your grade in this course as a signal of where I think you stand in terms of your understanding and ability to apply the tools of this course.

Your grade for the course will be determined by participation, research proposal, empirical exercises, and an exam. There will be a total of 100 points available, and the points are allocated as follows:

Data Exercises 30 points
In-Class Discussions/Participation 25 points
Research Proposal 20 points
Final Exam 25 points

Grades are *non-negotiable*. If you have a question about feedback or an assigned grade, please ask.

Code of Ethics: I follow the NYU Code of Ethics.

Office Hours and E-mail: If you have any questions or need assistance, just e-mail me so that we can arrange a mutually convenient time to meet in my office. You may also send me questions via e-mail.

Readings for Each Topic

For each lecture, I've listed some readings that will be helpful with understanding the methodology being discussed. My lectures will be largely based off of these readings, and students are expected to read these papers prior to the lecture. The lectures primarily draw from the three sources below, and I've provided abbreviations that will be used to refer to each.

1. Wooldridge, Jeffrey M., 2010, *Econometric Analysis of Cross-Section and Panel Data*, MIT Press, Massachusetts, Second Edition [**Wooldridge**]
2. Angrist, Joshua D., and Jorn-Steffen Pischke, 2009, *Mostly Harmless Econometrics*, Princeton University Press, New Jersey. [**Angrist-Pischke**]
3. Roberts, Michael R., and Toni M. Whited, 2011, "Endogeneity in Empirical Corporate Finance," University of Rochester, working paper, <http://ssrn.com/abstract=1748604> [**Roberts-Whited**]

Linear Regression:

1. Angrist-Pischke, Sections 3.1-3.2, 3.4.1
2. Wooldridge, Sections 4.1-4.2

Causality

1. Roberts-Whited, Section 2
2. Angrist-Pischke, Section 3.2
3. Wooldridge, Sections 4.3, 4.4

Panel Data

1. Angrist-Pischke, Sections 5.1, 5.3
2. Wooldridge, Chapter 10

Instrumental Variables

1. Roberts-Whited, Section 3
2. Angrist-Pischke, Sections 4.1, 4.4, 4.6
3. Wooldridge, Chapter 5

Natural Experiments

1. Roberts-Whited, Sections 2.2 and 4

2. Angrist-Pischke, Section 5.2

Regression Discontinuity

1. Roberts-Whited, Section 5
2. Angrist-Pischke, Chapter 6

Standard Errors, Limited Dependent Variables

1. Angrist-Pischke, Chapter 8 and Sections 3.4.2, 4.6.3
2. Petersen, M. A. 2009. Estimating Standard Errors in Finance Panel Data Sets: Comparing Approaches. *Review of Financial Studies* 22:435–80.

Class Schedule: The tentative class schedule is below. The topics covered and the date in which they are covered may change, but if this occurs, I will notify you of any changes. Papers indicated with **Instructor** will be presented by the instructor.

Date	Class		Paper 1	Paper 2	Podcast
9/4/2018	1	Intro, Linear Regression I			
9/11/2018		Holiday			
9/18/2018	2	Intro, Linear Regression II	Drechsler, Itamar, Alexi Savov Alexi, Philipp Schnabl, "Banking on Deposits: Maturity Transformation without Interest Rate risk", 2017 Working Paper (Instructor)		Econ Talk with Josh Angrist
9/25/2018	3	Intro, Linear Regression III	Kashyap, Anil K, Raghuram Rajan, and Jeremy C Stein, 2002, "Banks as liquidity providers: An explanation for the coexistence of lending and deposit-taking." <i>The Journal of Finance</i> 57, 33–73.	Hanson, Samuel, Andrei Shleifer, Jeremy C. Stein, and Robert W. Vishny, 2015, "Banks as patient fixed-income investors" <i>Journal of Financial Economics</i> 117, 449–469	
10/2/2018	4	Causality and Randomized Experiments	Dean Karlan, Jonathan Zinman, 2009, "Observing Unobservables: Identifying Information Asymmetries With a Consumer Credit Field Experiment," <i>Econometrica</i> , 1993-2008	Yueran Ma, "Low Interest Rates and Risk Taking: Evidence from Individual Investment Decisions," <i>Review of Financial Studies</i> , forthcoming	Eco Tyler Cowen Interview with Raj Chetty
10/9/2018	Holiday				

10/16/2018	5	Panel Data	Scharfstein, David and Adi Sunderam, "Market Power in Mortgage Lending and the Transmission of Monetary Policy," Working Paper 2017	Kashyap, Anil and Jeremy Stein, Jeremy, 2000, "What do a million observations on banks say about the transmission of monetary policy?" <i>American Economic Review</i> , 90, 407–428	Econ Talk with James Heckman
10/23/2018	6	Instrumental Variables	Chodorow-Reich, Gabriel, and Antonio Falato, 2017, "The Loan Covenant Channel: How Bank Health Transmits to the Real Economy", Working Paper	Jayaratne, Jith, and Philip Strahan, 1996, "The finance-growth nexus evidence from bank branch deregulation," <i>Quarterly Journal of Economics</i> , 111(3), 639-670.	
10/30/2018	7	Natural Experiment I	Khwaja, Asim Ijaz, and Atif Mian, 2008, "Tracing the Impact of Bank Liquidity Shocks: Evidence from an Emerging Market," <i>American Economic Review</i> , 98(4), 1413-1442.	Mian, Atif and Amir Sufi, "Credit Supply and the Housing Boom", 2018 Working Paper	Econ Talk with Susan Athey
11/6/2018	8	Natural Experiment II	Gilje, Erik, Elena Loutskina, and Philip Strahan, 2016, "Exporting Liquidity: Branch Banking and Financial Integration", <i>Journal of Finance</i> , 71(3), 1159-1184.	Agarwal, Sumit, David Lucca, Francesco Trebbi, and Amit Seru, 2014, "Inconsistent Regulators: Evidence from Banking," <i>Quarterly Journal of Economic</i> , May 2014, 129(2), 889–938	

11/13/2018	9	Regression Discontinuity	Keys, Benjamin, Ranmoy Mukherjee, Amit Seru, and Vikrant Vig, 2010, "Did securitization lead to lax screening? Evidence from subprime loans," <i>Quarterly Journal of Economics</i> 125, 307-362.	Chava, Sudheer and Michael Roberts, 2008, "How Does Financing Impact Investment? The Role of Debt Covenants", <i>Journal of Finance</i> , 2085-2121	Econ Talk with Andrew Gelman
11/20/2018	10	Bartik instrument /Standard errors	Chen, Brian, Samuel Hanson, and Jeremy Stein, "The Decline of Big-Bank Lending to Small Business: Dynamic Impacts on Local Credit and Labor Markets", Working Paper 2017	Greenstone, Michael, Mas Alexandre, and Hoai-Luu Nguyen, "Do Credit Market Shocks Affect the Real Economy? Quasi-Experimental Evidence from the Great Recession and 'Normal' Economic Times, Working Paper 2012	
11/27/2018	11	Combining reduced form/ structural estimation	Lenzo, Simone, "Do Marginal Products Differ from User Costs? Micro-Level Evidence from Italian Firms" (Instructor)		
12/4/2018	12	Writing and publishing papers	Drechsler I, Savov A, Schnabl P, 2017, The Deposits Channel of Monetary Policy, 103(4), <i>Quarterly Journal of Economics</i> (Instructor)		

12/11/2018	13	Final Exam			
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