PHD CLASS IN EMPIRICAL METHODS IN CORPORATE FINANCE Fall 2017

Instructor: Philipp Schnabl

Contact Information

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Class Times: Mondays, 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 in 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 podcats 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

You will be asked to download data and write code to implement some of the tools taught in the course. The four 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 three 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 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

Angrist-Pischke, Sections 5.1, 5.3
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

Roberts-Whited, Sections 2.2 and 4
Angrist-Pischke, Section 5.2

Regression Discontinuity

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

Standard Errors, Limited Dependent Variables

 Angrist-Pischke, Chapter 8 and Sections 3.4.2, 4.6.3
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.

Date	Class		Paper 1	Paper 2	Podcast
		Intro, Linear			
9/11/2017	1	Regression I			
			Hanson, Samuel, Andrei	Nagel, Stefan, 2014. The	
			Shleifer, Jeremy C. Stein, and	liquidity premium of near-	
			Robert W. Vishny, 2015. Banks	money assets. NBER Working	
			as patient fixed-income	Papers 20265 National Bureau	
		later lines.	investors. Journal of Financial	of Economic Research, Inc.	Face Tally with
0/10/2017	2	Intro, Linear	Economics 117, 449–469		Econ Talk With
9/18/2017	2	Regression II	Kashusa Asil K. Dashusan	Durahalan I. Caway A. Cabuahi D	Josh Angrist
			Rasnyap, Anii K, Ragnuram	Drechsler I, Savov A, Schnabl P,	
			Rajan, and Jeremy C Stein,	Transfermation with out Interest	
			2002. Banks as inquidity	Pate risk	
			the energistence of londing and	Raterisk	
			deposit taking. The Journal of		
			Einanco EZ 22 72		
9/25/2017	3	Causality	Finance 57, 55–75.		
572572527		cudouncy	Atif Mian and Amir Sufi. "The	S Agarwal, D Lucca and E Trebbi	
			Consequences of Mortgage	A= Seru, Inconsistent	
			Credit Expansion: Evidence	Regulators: Evidence from	
			from the U.S. Mortgage Default	Banking, <i>Ougrterly Journal of</i>	
			Crisis." Quarterly Journal of	Economics	
			Economics. November 2009.		
			124(4), 1449-1496.		Econ Talk with
10/2/2017	4	Panel Data			Susan Athey
	No				
10/9/2017	class				

			Khwaja, Asim Ijaz, and Atif	Kashyap, Anil and Stein, Jeremy,	
			Mian, 2008, "Tracing the	2000, What do a million	
			Shocks: Evidence from an	about the transmission of	
			Emerging Market." American	monetary policy?. American	Econ Talk with
		Instrumental	Economic Review, 98(4), 1413-	Economic Review 90, 407–428	James
10/16/2017	5	Variables	1442.		Heckman
10/23/2017	6	Natural Experiment I			
			Jayaratne, Jith, and Philip	Joe Peek and Eric S Rosengren,	
			Strahan, 1996, "The finance-	Collateral Damage: Effects of	
			growth nexus evidence from	the Japanese Bank Crisis on Real	
			bank branch deregulation,"	Activity in the United States,	Tyler Cowen
		Natural Experiment	Quarterly Journal of Economics,	American Economic Review, 90	Interview with
10/30/2017	7		111(3), 639-670.	(1), 2000	Raj Chetty
			Gilje, Erik, Elena Loutskina, and	Zombie Lending and Depressed	
			Philip Strahan, 2016, "Exporting	Restructuring in Japan By	
			Liquidity: Branch Banking and	Ricardo J. Caballero, Takeo	
			Financial Integration", Journal	Hoshi, and Anil K Kashyap,	
			of Finance, 71(3), 1159-1184.	American Economic Review,	Econ Talk with
		Regression		December 2008, vol. 98(5), pp.	
11/6/2017	8	Discontinuity		1943-77.	Gelman
			Keys, Benjamin, Ranmoy	The Value of a Good Credit	
			Mukherjee, Amit Seru, and	Reputation: Evidence from	
			Vikrant Vig, 2010, Did	Credit Card	
			securitization lead to lax	Renegotiations, Journal of	
			screening? Evidence from	Financial Economics, June 2016,	
			subprime loans, Quarterly	120(3), 644-660.	
			Journal of Economics 125, 307-		
11/12/2017	0	Kandomized	362.		Econ Talk with
11/13/2017	9 No	Experiments			Eu Leamer
	INU				

11/27/2017	10	Standard Errors, Binary Outcome Variables	Cole, Shawn, Martin Kanz, and Leora Klapper, 2015, "Incentivizing calculated risktaking: Evidence from an experiment with commercial bank loan officers," Journal of Finance 70(2), 537-575.	Dean Karlan, Jonathan Zinman, 2009, Econometrica, Observing Unobservables: Identifying Information Asymmetries With a Consumer Credit Field Experiment	
			Hoai-Luu Q. Nguyen, 2017, Are	Chodorow-Reich, Gabriel, and	
			Evidence from Bank Branch	Covenant Channel: How Bank	
		Common Empirical	Closings Working Paper	Health Transmits to the Real	
12/4/2017	11	Problems		Economy", Working Paper	
			Drechsler I, Savov A, Schnabl P,	Acharya, V, Schnabl P, Suarez,	
			Banking on Deposits: Maturity	G, Securitization Without Risk	
			Transformation without	Transfer, Journal of Financial	
			Interest Rate risk, Quarterly	Economics, 107(3), March 2013,	
12/11/2017	12	Writing Papers	Journal of Economics	515-536	