BUSFIN 8240
EMPIRICAL CORPORATE FINANCE
SPRING 2026

Instructor: Professor Michael Wittry

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Class Times: Mondays and Wednesdays, 9:00am – 10:30am

Office Hours: By appointment.
(*Outside of the classroom, this is the best way to interact with me.*)

Course Websites: https://osu.instructure.com/courses/207337

Course Description: This course will provide students with a toolbox and working knowledge of cross-sectional and panel data empirical methods for use in corporate finance research. This will be accomplished by exposing the students to a variety of methods commonly employed in empirical research. Because of time constraints, not all widely used empirical methods will be covered.

The course is designed to help you learn these methods via a three-pronged approach.

(1) Lectures and light econometric readings will help you learn the econometric intuition behind each method. This is *not* a theory course; this is a course for end-users of econometric tools. Accordingly, I will teach you how to use each tool properly, not how to derive its asymptotic properties.

(2) Course readings will expose you to examples of the methods being used in published and working papers. Seeing how the tools are actually used by other researchers is often far more useful in helping students understand the tools. I will rely on examplesfrom corporate finance when possible, though I will also reference examples from other fields in economics including: labor, development, and public finance.

(3) Course assignments (replications) will require you to use the methods analyzed in the course; 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. Since this is a finance course, the applications will typically be corporate finance related.

Reading Materials: I will teach from slides, which I will make available to you before each class on the course website, Canvas. I will be drawing from a variety of sources including various textbooks, journal articles, working papers, and other professors' lecture notes. As such, there is no required "textbook," but 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 students are expected to read these prior to the lecture. Additionally, most lectures will contain student presentations of three papers related to the previous week's lecture topic. A list of papers to be presented is given below.

Prerequisites: You should have taken a graduate sequence in econometrics. Practically speaking, you should be comfortable with econometrics at the level of William Greene's *Econometric Analysis* and Jeffrey Wooldridge's *Econometric Analysis of Cross-Section and Panel Data*.

Coursework: There will be four graded components to the course (outside of the final exam). 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 four assignments are as follows:

1. Replication exercises

   You will be asked to download data and write code to implement some of the tools taught in the course. The 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**, and to receive credit for the assignment,you need to upload your DO file and data in Carmen, which I will run on a dataset to check whether your programming and regressions are correct.

   More information on the replication exercises will provided in class and on Carmen.

   You replication assignments will be due on the following dates:
   1) Exercise #1: Wednesday, March 25th , 2026 at 8:59am (before class)
   2) Exercise #2: Wednesday, April 15th, 2026 at 9:59am (before class)
   3) Exercise #3: Wednesday, May 13th, 2026 at 11:59pm

2. In-class presentations/discussions

   For most classes, there will be three papers assigned that students must read and present a discussion of in-class.

   Students are to form groups of two students each (one group of three), and we will assign papers in the class ahead. E.g. If I give a lecture on instrumental variable estimations, then at the end of the lecture, I will assign three papers that make use of IV strategies. Students will present their discussions of these papers in the next class. Each group will need to make a

10 minute presentation that discusses the paper, and each presentation will be followed by in-class discussion. Only one of the group members needs to present at a time. 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.

Because students find it helpful to study for the final exam, I will also post each presentation on Canvas after class is finished.

To ensure participation following each presentation, each student (individually) must also type up one concern they had about each of the papers *they are not presenting* and hand these in at the start of class. I will 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 [2-3sentences maximum] and designed to do one of two things: (1) isolate what you thought the biggest problem of the paper was, or (2) identify a concern you think the presenting group might overlook. Every failure to turn in this sheet ofcomments will result in a 2-point 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 first or third year paper, or you can think bigger and plan for it to become your job market paper or a co-authored paper with a faculty member.

An initial research proposal will be due on Wednesday, April 8th, 2026, at 9:59am (start of class). The final research proposal will be due on Monday, May 4th, 2026 at 11:59pm.

4. Prepare a referee report

You will be asked to carefully read a current working paper that is likely to be submitted to a good finance or economics journal soon. You should (1) briefly summarize the paper, (2) point out any major flaws in econometrics, economic reasoning, contribution to the literature (You should evaluate contribution to the literature to the best of your current ability; this skill will improve with experience), and (3) point out smaller but important points the author(s) should be aware of and address. The assignment will provide additional details.

The referee report will be due on Wednesday, April 22nd, 2026, at 9:59am (start of class).

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(research agenda) around each method.

Carmen: Important course materials, such as lecture notes, required assignments, and other usefulinformation will be available on the course web page at Canvas: https://osu.instructure.com/courses/207337. 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. I can't guarantee to always have an immediate answer, especially for questions of a more technical nature, but I promise to always find one and get back to you.

Participation: You will be graded on participation. Basically, I expect each student to give in- class presentations during the semester and to turn in weekly comments on each paper. (You may be working in groups to write the presentation, but ultimately, only one of you will get up to give the presentation for each paper.) You should consider yourself likely to get "full participation credit" if you present when you should and turn in your weekly comments on each paper. But, failure to do presentations or to turn in weekly comments on the assigned readings will result in a lower grade.

Final Exam: There will be a final exam in the Registrar-defined final time for our class. That time is Friday, May 1st, from 8:00am through 9:45am. On the registrar's webpage, the location will likely be listed as Gerlach or Mason. However, as with all our classes, the exam will be in FI0700.

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, referee report, replication exercise(s), and final exam. There will be a total of 150 points available, and the points are allocated as follows:

Replication Exercise(s)	35 points
In-Class Discussions/Participation	25 points
Research Proposal	25 points
Referee report	15 points
Final Exam	50 points

Grades reflect my assessment of your mastery of the material and are not subject to negotiation. If you have a question about feedback or an assigned grade, please ask.

Code of Ethics: What follows is the boiler plate statement I give in my MBA and undergraduatestudents; I don't expect they need to be said for PhD students… "I take the matters of academic integrity seriously and expect that you do, too. Submitted assignments for grading should be your own work only. Failure to observe this rule, will at a minimum, result in receiving zero points on that assignment, and may result in an automatic failing grade for the course and referral to the Office of Student Conduct. Refer to the Code of Academic Integrity if you have any questions."

Office Hours and E-mail: If you have any questions or need assistance, please visit me during my office hours. If you are unable to make my office hours, 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.

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.

SCHEDULE OF CLASSES*

Class # (Date)	**Student Presentation Topic** (Mondays)	**Lecture Topic** (Wednesdays)	**Deliverable**
1 (3/04/2026)		Linear Regression	
2 (03/09/2026)	Classics (Econ papers) [finish Linear Regression slides]		Presentation slides
3 (03/11/2026)		Causality/ Panel Data	
Spring Break (03/16 – 3/20/2026)			
4 (03/23/2026)	Causality/ Panel Data [finish Causality slides]	Causality/ Panel Data	Presentation slides
5 (03/25/2026)		Instrumental Variables	Replication #1
6 (03/30/2026)	Instrumental Variables		Presentation slides
7 (04/01/2026)		Bartik and Granular IVs	
8 (04/06/2026)	Bartik and Granular IVs		Presentation slides

9 (04/08/2026)		Natural Experiments	Initial Research Proposal
10 (04/13/2026)	Natural Experiments		Presentation slides
11 (04/15/2026)		Regression Discontinuity	Replication #2
12 (04/20/2026)	Regression Discontinuity		Presentation slides
13 (04/22/2026)		Standard Errors & Clustering	Referee report
14 (04/27/2026)	Miscellaneous		Presentation slides
(05/01/2026)		Final Exam 8:00am-9:45am	
(05/04/2026)			Final Research Proposal
(05/13/2026)			Replication #3

*Note: I will almost certainly not finish all lecture material. You will need to cover anything we do not get to in class. Additionally, I will post lecture notes from further topics that you should be aware of (but that we won't be tested on).

IN-CLASS STUDENT PRESENTATION PAPERS

Below is the list of readings to be presented in class by students. All students are expected to read these papers, and groups will need to select one paper to present. Groups cannot choose the same paper to present. I've broken down the papers into "Topics". The "Topic" corresponds to the schedule of classes and which week the papers will be presented. We will assign the groups to present each paper in the week prior to the lecture. I will lead the discussion on the third paper (the paper not selected by either group).

Classics #1 (Non-Finance)

1. Angrist, Joshua, 1990, Lifetime earnings and the Vietnam era draft lottery: Evidence from Social Security administrative records, *American Economic Review* 80, 313-336.

2. Angrist, Joshua D. and Victor Lavy, 1999, Using Maimonides' rule to estimate the effect of class size on scholastic achievement, *Quarterly Journal of Economics* 114, 533-575.

3. Acemoglu, Daron, Simon Johnson, and James A. Robinson, 2001, The colonial origins of comparative development: An empirical investigation, *American Economic Review* 91, 1369-1401.

Causality/Panel Data

4. Rajan, Raghuram G., and Luigi Zingales, 1998, "Financial dependence and growth," *American Economic Review* 88, 559-586.

5. Matsa, David A., 2010 "Capital structure as a strategic variable: Evidence from collective bargaining," *Journal of Finance*, 65(3), 1197-1232.

6. Hortacsu, Ali, Matvos, Gregor, Syverson, Chad, and Sriram Venkataraman, 2013, Indirect costs of financial distress in durable goods industries: The case of auto manufacturers, *Review of Financial Studies* 26, 1248-1290.

Instrumental Variables

7. Bernstein, Shai, 2015, Does going public affect innovation? *Journal of Finance* 70, 1365-1403.

8. Bennedsen, M., K Nielsen, F. Perez-Gonzalez, and D. Wolfenzon, 2007, Inside thefamily firm: The role of families in succession decisions and performance, *Quarterly Journal of Economics* 122, 647-691.

9. Decaire, Paul, and Michael Wittry, 2024, Strategic Learning and Corporate Investment, *Journal of Finance,* Forthcoming.

Shift-Share, Bartik, and Granular IVs

10. Calvet, Laurent, Claire Celerier, Paolo Sodini, and Boris Valle, 2024, Can Security Design Foster Household Risk-Taking? *Journal of Finance*, Forthcoming.

11. Amiti, Mary, and David Weinstein, 2018, How Much Do Idiosyncratic Bank Shocks Affect Investment? Evidence from Matched Bank-Firm Loan Data, *Journal of Political Economy* 126, 525-587.

12. Greenstone, Michael, Alexandre Mas, and Hoai-Luu Nguyen, 2020, Do Credit Market Shocks Affect the Real Economy? Quasi-experimental Evidence from the Great Recession and "Normal" Economic Times", *American Economic Journal: Economic Policy* 12, 200–225.

Natural Experiments

13. Bertrand, Marianne, and Sendhil Mullainathan, 2003, Enjoying the quiet life? Corporate governance and managerial preferences, *Journal of Political Economy* 111, 1043-1075.

14. Duchin, Ran, Janet Gao and Qiping Xu, 2024, Sustainability or Greenwashing: Evidence from the Asset Market for Industrial Pollution, *Journal of Finance*, Forthcoming.

15. Giroud, Xavier, 2013, Proximity and investment: Evidence from plant-level data, *Quarterly Journal of Economics* 128, 861-915.

Regression Discontinuity

16. Rauh, Joshua, 2006, Investment and financing constraints: Evidence from the funding of corporate pension plans, *Journal of Finance* 61, 33-71.

17. Malenko, Nadya, and Yao Shen, 2016, The role of proxy advisory firms: Evidence from a regression-discontinuity design, *Review of Financial Studies* 29, 3394-3427

18. Campello, Murillo, Janet Gao, Jiaping Qui, and Yue Zhang, 2018, Bankruptcy and the cost of organized labor: evidence from union elections, *Review of Financial Studies* 31, 980-1013.

Miscellaneous

19. Pulvino, Todd, 1998, Do asset fire sales exist? An empirical investigation of commercial aircraft transactions, *Journal of Finance* 53, 939-978.

20. Akey, Pay, and Ian Appel, 2021, The limits of limited liability: Evidence from industrial pollution, *Journal of Finance* 76, 5-55.

21. Kruger, Philipp, Landier, Augustin, and David Thesmar, 2015, The WACC fallacy: The real effects of using a unique discount rate, *Journal of Finance* 70, 1253-1285.

METHODOLOGY 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 four below sources, 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*, MITPress, Massachusetts, Second Edition **[Wooldridge]**

2. Greene, William H., 2011, *Econometric Analysis*, Prentice Hall, N.J., Seventh Edition. **[Greene]**

3. Angrist, Joshua D., and Jorn-Steffen Pischke, 2009, *Mostly Harmless Econometrics*,Princeton University Press, New Jersey. **[Angrist-Pischke]**

4. Roberts, Michael R., and Toni M. Whited, 2012, "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
3. Greene, Chapter 3 & Sections 4.1-4.4, 5.7-5.9, 6.1-6.2

Causality

1. Roberts-Whited, Section 2
2. Angrist-Pischke, Section 3.2
3. Greene, Sections 5.8-5.9
4. Wooldridge, Sections 4.3, 4.4

Panel Data

1. Angrist-Pischke, Sections 5.1, 5.3
2. Greene, Chapter 11
3. Wooldridge, Chapter 10
4. McKinnish, T. 2008. *Panel Data Models and Transitory Fluctuations in the Explanatory VariableIn Modeling and Evaluating Treatment Effects in Econometrics*, eds. Daniel L. Millimet, Jeffrey
   A. Smith, and Edward J. Vytlacil, 335–58. Amsterdam: Elsevier.

Instrumental Variables

1. Roberts-Whited, Section 3
2. Angrist-Pischke, Sections 4.1, 4.4, 4.6
3. Greene, Sections 8.2-8.5

4. Wooldridge, Chapter 5

Shift-Share, Bartik, and Granular IVs

1. Goldsmith-Pinkham, Paul, Isaac Sorkin, and Henry Swift, 2020, Bartik Instruments: What, When, Why, and How, *American Economic Review* 110, 2586–2624.
2. Borusyak, Kirill, Peter Hull, Xavier Jaravel, 2022, Quasi-Experimental Shift-Share Research Designs, *The Review of Economic Studies* 89, 181–213.

Natural Experiments

1. Roberts-Whited, Sections 2.2 and 4
2. Angrist-Pischke, Section 5.2
3. Bertrand, M., E. Duflo, and S. Mullainathan. 2004. How Much Should We Trust Difference-in-Differences Estimates? *Quarterly Journal of Economics* 119:249–75.
4. Baker, A., D.F. Larcker, and C.Y. Wang. 2022. How Much Should We Trust Staggered Difference-In-Differences Estimates? *Journal of Financial Economics*, forthcoming.

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.
3. Greene, Section 17.3

Matching (matching slides include in miscellaneous)

1. Roberts-Whited, Section 6
2. Angrist-Pischke, Sections 3.3.1-3.3.3
3. Wooldridge, Section 21.3.5