



Empirical Methods in Corporate Finance

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Fall 2019

COURSE SYLLABUS

1 Course Description

This course is designed to introduce students to modern empirical techniques in corporate finance. The course is designed to act as a bridge between a typical graduate course in econometrics and the practice of empirical research in finance. The main focus will be on causal inference. That is, how we attempt to make causal statements using observational data where self-selection and endogeneity are everywhere. It is assumed that students have taken an introductory course in econometrics and are familiar with, among other things, evaluation of econometric estimators and problems with omitted variables.

Given the short nature of this course, we will not dive into the details and properties of the estimators we discuss. Rather, and probably more important, we will have discussions that focus on the intuition behind the empirical approaches. Anyone with advanced training in econometrics can understand the estimators. The more difficult thing, however, is incorporating the ideas of causal inference into your actual research.

My hope in this class is that it sparks an interest in empirical research in corporate finance. There is currently a very high demand for empirical researchers in this area and there are still a lot of unresolved research questions to pursue. I also hope that our class discussions give you a sense for the level of empirical analysis that is required to publish in the top journals in finance.

2 Discussion Topics and Reading List

Below I list the five topics we will be discussing during the week. Below each topic is a list of recommended readings. I highly recommend these papers. You are not required to read them in preparation for our discussions, but you should try to fit them into your reading

schedule this year.

2.1 Issues and Perspectives on Empirical Analysis (October 14)

- Angrist, J. and J.S. Pischke, 2010, The credibility revolution in empirical economics: How better research design is taking the con out of econometrics, *Journal of Economic Perspectives*.
- Nevo, A. and M. Whinston, 2010, Taking the dogma out of econometrics: Structural modeling and credible inference, *Journal of Economic Perspectives*.
- Shadish, W., T. Cook, and D. Campbell, 2002, Experimental and Quasi-Experimental Designs for Generalized Causal Inference.
- Angrist, J. and J.S. Pischke, 2009, Mostly Harmless Econometrics, Chapters 1–2.
- Hennessy, C. and I. Strebulaev, 2016, Beyond random assignment: Credible inference of causal effects in dynamic economies, LBS Working Paper.
- Roberts, M. and T. Whited, 2012, Endogeneity in Empirical Corporate Finance, in George Constantinides, Milton Harris, and Rene Stulz, eds. Handbook of the Economics of Finance.

2.2 Instrumental Variables (October 15)

- Angrist, J. and J.S. Pischke, 2009, Mostly Harmless Econometrics, Chapter 4.1–4.6.
- Atanasov, V. and B. Black, 2016, Shock based causal inference in corporate finance and accounting research, *Critical Finance Review*.
- Atanasov, V. and B. Black, 2016, The trouble with instruments: Re-examining shock based IV designs, Northwestern University working paper.
- Giroud, X., H. Mueller, A. Stomper, and A. Westerkamp, 2011, Snow and leverage, *Review of Financial Studies*.
- Bernstein, S., 2015, Does Going Public Affect Innovation?, *Journal of Finance*.

2.3 Diff-in-Diff and Natural Experiments (October 16)

- Angrist, J. and J.S. Pischke, 2009, Mostly Harmless Econometrics, Chapter 5.

- **Barrot, J.N., 2016 , Trade credit and industry dynamics: Evidence from trucking firms, *Journal of Finance*.**
- Bertrand, M., E. Du o, and S. Mullainathan, 2004, How much should we trust differences-in-differences estimates?, *Quarterly Journal of Economics*.
- Bertrand, M. and S. Mullainathan, 2003, Enjoying the Quiet Life: Corporate Governance and Managerial Preferences, *Journal of Political Economy*.
- Karpoff, J. and M. Wittry, 2016, Institutional and legal context in natural experiments: The case of state antitakeover laws, working paper.
- Shadish, W., T. Cook, and D. Campbell, 2002, Experimental and Quasi-Experimental Designs for Generalized Causal Inference, Chapters 5–6.

2.4 Regression Discontinuity Design (October 17)

- Angrist, J. and J.S. Pischke, 2009, Mostly Harmless Econometrics, Chapter 6.
- McCrary, J., 2008, Manipulation of the running variable in the regression discontinuity design: A density test, *Journal of Econometrics*.
- Lee, D. and T. Lemieux, 2010, Regression Discontinuity Designs in Economics, *Journal of Economic Literature*.
- **Keys, B., T. Mukherjee, A. Seru, and V. Vig, 2008, Did securitization lead to lax screening? Evidence from subprime loans, *Quarterly Journal of Economics*.**
- Cunat, V., M. Gine, and M. Guadalupe, 2016, Price and Probability: Decomposing the Takeover Effects of Anti-Takeover Provisions, working paper.
- Angrist, J. and M. Rokkanen, 2014, Wanna Get Away? RD Identification Away from the Cutoff, *Journal of the American Statistical Association*.
- Card, D., Lee, D., Pei, Z., and A. Weber, 2015, Inference on Causal Effects in a Generalized Regression Kind Design, *Econometrica*.
- Dobridge, C., 2016, Fiscal Stimulus and Firms: A Tale of Two Recessions, working paper.

2.5 Writing a Good Empirical Paper (October 18)

Other Methods and Common Problems

- Abadie, A. and J. Gardezebal, 2003, The economic costs of conflict: A case study of the Basque Country, *The American Economic Review*.
- Angrist, J. and J.S. Pischke, 2009, Mostly Harmless Econometrics, Chapter 8.
- Bertrand, M., E. Duflo, and S. Mullainathan, 2004, How much should we trust differences-in-differences estimates?, *Quarterly Journal of Economics*.
- Petersen, M., 2009, Estimating standard errors in finance panel data sets: Comparing approaches, *Review of Financial Studies*.
- Gormley, T. and D. Matsa, 2014, Common errors: How to (and not to) control for unobserved heterogeneity, *Review of Financial Studies*.
- Kothari, S., and J. Warner, 2004, Econometrics of Event Studies, working paper.
- Greene, W., 2004, The behaviour of the maximum likelihood estimator of limited dependent variable models in the presence of fixed effects, *Econometrics Journal*.
- Ai, C. and E. Norton, 2003, Interaction Terms in Logit and Probit Models, *Economic Letters*.

3 Research Proposal

The main goal of this course is to help you develop a deep understanding of modern empirical methods used in corporate finance (and other fields) research. It is hard to master the material over a few days. The main part of the learning will come from diving into a particular literature, replicating some results, and coming up with a research idea of your own. To this end, I suggest that students submit a detailed research proposal. The proposal should outline the main idea and hypotheses, the data required, and a detailed outline of the empirical strategy. The proposal should be at least 5 pages but no more than 10 pages. Note that the submission of a research proposal is not required. I'm offering my time to give you feedback on research ideas should you choose to email me a research proposal.