

WWS 582d: Evaluating Empirical Studies for Public Policy, Spring 2009

Instructor: Professor David S. Lee

Course Day/Time: MW 10:40 - 12:10

Blackboard Website: https://blackboard.princeton.edu/pucourse/WWS582D_S2009

Office Hours: Sign-up online at <http://www.princeton.edu/~davidlee>

Course Description and Objectives

For every important policy issue, decision-makers will be faced with the results from numerous data-based analyses. Often, perhaps because the issue is controversial, various studies will give very different answers. How can they decide which studies are reliable or unreliable? This course introduces students to a disciplined approach to evaluating the credibility of empirical studies. The goal is to develop the ability to identify the crucial assumptions that are made to justify the inferences made from the data, and also to explore ways of assessing the validity of those assumptions, and hence the studies' conclusions. We will discuss the various "research designs" – experimental, quasi-experimental, and descriptive – on which empirical analyses are based, primarily in the context of labor market policies in the U.S. Examples in other areas – environmental economics, health, and political economy – will be discussed as well.

By the end of the course, the hope is that you will be able to provide a reasoned assessment – based on the principles that you have learned about about statistical and causal inference – of what we know and don't know from an empirical literature on public policy-related areas of interest.

References and Required Reading

1. Reference: Kennedy, Peter, "A Guide to Econometrics" 6th Edition.
2. Required Reading: Articles assigned below (available online via www.jstor.org).

Pre-requisite: WWS 508b/c (or equivalent) OR 507b/c with instructor approval.

Course Requirements

Class Participation: 10 percent

Weekly Submission of Questions/Comments: 40 percent

Take-home Mid-term: 15 percent

Empirical Exercise: 20 percent

Take-home Final: 15 percent

1. Class participation: Contributions to class discussion
2. Weekly Submission of Questions: Each week's lectures will focus on 1 research paper, which you will be required to read carefully. A typical cycle will look like this: 1) You will have begun reading through the research paper, 2) On Wednesday, I will introduce some basic concepts that will help in understanding the paper, 3) By the end of the day on Thursday, you will have e-mailed me (in .doc, or .tex format), questions that you have about the paper/topic, 4) the following week's lecture and discussion will directly address your questions/issues; meanwhile you will have started to read through next week's readings.

Your questions can be on anything, but should be detailed enough to convey what you do and what you don't understand about a particular issue. Prioritize your questions/comments. If you do not have questions, per se, submit comments or critiques on the paper. Explain why you do or do not believe in the conclusions made by the authors.

3. Take-home Mid-term: You will be tested on the concepts learned so far in an open-book exam.
4. Empirical Exercise: You will carry out a empirical replication exercise, and report on your findings towards the end of the semester. Details on this exercise will be given on 3/4/09.
5. Take-home Final: This open-book exam will test all concepts covered throughout the semester.

Course Schedule (subject to minor modification)

1. 2/2/09: Lecture: Introduction, Probability and Statistics Review
2. 2/4/09: Lecture: Probability and Statistics Review, Introduction to Causality
Questions on Card and Robins (1996) DUE 2/5/09
3. 2/9/09: Lecture: Randomized Experiments, Perfect Compliance. Discussion: Card and Robins (1996)
4. 2/11/09: Discussion continued. Introduction to Imperfect Compliance.
Questions on Angrist (1990) DUE 2/12/09
5. 2/16/09: Lecture: Randomized Experiments, Imperfect Compliance. Discussion: Angrist (1990)
6. 2/18/09: Discussion continued. Introduction: Instrumental Variables.
Questions on Angrist and Evans (1998) DUE 2/19/09
7. 2/23/09: Lecture: Instrumental Variables. Discussion: Angrist and Evans (1998)

8. 2/25/09: Discussion continued.
Questions on Angrist (1991) DUE 2/26/09
9. 3/2/09: Lecture: More on Instrumental Variables. Discussion: Angrist (1991)
10. 3/4/09: Discussion continued. Empirical Exercise.
11. 3/9/09: Mid-term summary. Introduction: Regression discontinuity designs.
Questions on Lee (2008) DUE 3/19/09
12. 3/11/09: Mid-term
13. 3/23/09: Lecture: Regression discontinuity designs. Discussion: Lee (2008)
14. 3/25/09: Discussion continued. Introduction to Difference-in-differences
Questions on Card and Krueger (1994) DUE 3/26/09
15. 3/30/09: Lecture: Difference-in-differences. Discussion: Card and Krueger (1994)
16. 4/1/09: Discussion continued.
Questions on Ashenfelter and Card (1985) DUE 3/2/09
17. 4/6/09: Lecture: More on Difference-in-differences. Discussion: Ashenfelter and Krueger (1994)
18. 4/8/09: Discussion continued. Introduction: Event-study Analyses.
Questions on Jacobson et al. (1993) DUE 3/9/09
19. 4/13/09: Lecture: Event-study analyses. Discussion: Jacobson et al. (1993)
20. 4/15/09: Discussion continued. Introduction: Matching on Observables
Questions on Angrist (1998) DUE 4/16/09
21. 4/20/09: Lecture: Matching on Observables, Discussion: Angrist (1998)
22. 4/22/09: Student Presentations: Empirical Exercise
23. 4/27/09: Student Presentations: Empirical Exercise
24. 4/29/09: Summary

References

- Angrist, J.**, “Lifetime Earnings and the Vietnam Era Draft Lottery: Evidence from Social Security Administrative Records,” *American Economic Review*, 1990, 80 (3), 313–336.
- Angrist, Joshua**, “Grouped-data Estimation and Testing in Simple Labor Supply Models,” *Journal of Econometrics*, February/March 1991, 47 (2/3), 243–267.
- Angrist, Joshua D.**, “Estimating the Labor Market Impact of Voluntary Military Service using Social Security Data on Military Applicants,” *Econometrica*, 1998, 66, 249–288.
- **and Willian N. Evans**, “Children and Their Parents’ Labor Supply: Evidence from Exogenous Variation in Family Size,” *American Economic Review*, 1998, 88, 450–477.

- Ashenfelter, Orley and Alan B. Krueger**, “Estimates of the Economic Returns to Schooling from a New Sample of Identical Twins,” *American Economic Review*, December 1994, *84* (5), 1157–1173.
- **and David Card**, “Using the Longitudinal Structure of Earnings to Estimate the Effect of Training Programs,” *Review of Economics and Statistics*, 1985, *67*.
- Card, David and Alan B. Krueger**, “Minimum Wages and Employment – A Case Study of the Fast-food Industry in New Jersey and Pennsylvania,” *American Economic Review*, September 1994, *84* (4), 772–793.
- **and Philip K. Robins**, “Do Financial Incentives Encourage Welfare Recipients to Work? Evidence from a Randomized Evaluation of the Self-Sufficiency Project,” Working Paper 5701, National Bureau of Economic Research August 1996.
- Jacobson, L., Robert LaLonde, and Daniel Sullivan**, “Earnings Losses of Displaced Workers,” *American Economic Review*, September 1993, *83* (4), 685–709.
- Lee, David S.**, “Randomized Experiments from Non-random Selection in U.S. House Elections,” *Journal of Econometrics*, 2008, *142* (2), 675–697.