

Course Syllabus
Health Economics (ECON 850)
Department of Economics
University of South Carolina
Spring 2020

Class Information

Lectures

Time: Wednesdays, 9:30am – 12:30pm
Location: DMSB 461F

Instructor

Name: Lindsey Woodworth
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Office Hours: Mondays & Wednesdays, 3:45 – 4:45pm (or by appointment)
Office: DMSB 452E (southwest corner of the building)

Required Texts

“Mostly Harmless Econometrics: An Empiricist's Companion”,
by Joshua D. Angrist & Jorn-Steffen Pischke

“Mastering 'Metrics: The Path from Cause to Effect”,
by Joshua D. Angrist & Jorn-Steffen Pischke

Materials

You will need a copy of Stata for this course. Any version of Stata is fine. It may be helpful for you to install Stata on a laptop that you can bring to class. If you are unable to install Stata on a laptop, please let Professor Woodworth know as soon as possible so alternative arrangements can be made.

Course Description

This course will focus on how to draw valid statistical inference when the question of interest relates to health/healthcare. Typically, it is very difficult for researchers to draw causal inference (i.e., estimate causal effects) when considering health-related questions because (i) there are strong selection biases, and (ii) treatment cannot safely or feasibly be randomized across individuals. Yet, causal inference is especially important in health-related studies as there are significant – and potentially life-threatening – ramifications that may come from misguided estimates. As such, this course will have an “applied micro” flavor. The goal of the course is to fill the student’s toolbox with an array of quasi-experimental study design methodologies that they can apply correctly to answer a variety of empirical questions, including those within the field of health economics.

Learning Objectives

- Students will be able to implement various quasi-experimental study designs, including instrumental variables estimation, regression discontinuity, and difference-in-differences designs
- Students will be able to judge the quality of research ideas and investigators' proposed (and implemented) empirical/identification strategies
- Students will gain proficiency in academic writing
- Students will gain proficiency in presenting scholarly work

Grading

Grades will be based on participation, assigned work, presentations, and the quality of research ideas as perceived by classmates (more information on this to come). No exams will be administered. Letter grades will be assigned using the following rubric:

A	90-100%
B+	87-89.9̄%
B	80-86.9̄%
C+	77-79.9̄%
C	70-76.9̄%
D+	67-69.9̄%
D	60-66.9̄%
F	0-59.9̄%

Students wishing to appeal a grade should refer to the Darla Moore School of Business' grade grievance policy for correct protocol:

https://www.sc.edu/study/colleges_schools/moore/internal/rights_and_responsibilities/grievances.php

Academic Honesty and Classroom Behavior

Students caught cheating will be given a zero.

The community of scholars at the University of South Carolina is dedicated to personal and academic excellence. Choosing to join the community obligates each member to the Carolinian Creed. Academic dialogue and civil discourse are the cornerstone of the educational system and crucial to individual growth. Students are encouraged to practice personal and academic integrity, respect the rights and dignity of all persons, respect the rights and property of others, discourage bigotry, while striving to learn from differences in people, ideas, and opinions, and demonstrate concern for others, their feelings, and their need for conditions which support their work and development.

If you are unclear about the activities that constitute cheating, please refer to the University of South Carolina Honor Code Policy: <https://www.sa.sc.edu/academicintegrity/honor-code-policy-information/>

Special Accommodations

If you are in need of special accommodations for a disability (or other reason), please let me know as soon as possible and I am happy to make arrangements.

If you have a documented disability, you should contact the Student Disability Resource Center at 777-6142 to arrange appropriate accommodations.

Course Outline

The course content will tentatively progress in the following order:

1. Sampling and the Pitfalls of OLS
2. Randomized Control Trials – The “Gold Standard”
3. Instrumental Variables Estimation
4. Regression Discontinuity Designs
5. Difference-in-Differences Estimation

Class Meetings

Wednesday, January 15

Wednesday, January 22

Wednesday, January 29

Wednesday, February 5

Wednesday, February 12

Wednesday, February 19

Wednesday, February 26

Wednesday, March 4

Wednesday, March 11 – *SPRING BREAK*

Wednesday, March 18

Wednesday, March 25

Wednesday, April 1

Wednesday, April 8

Wednesday, April 15

Wednesday, April 22

Useful Reading

(The specific papers you have read will be announced as the semester progresses.)

RCT Papers

- “Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment” (AER, 1987) [Link](#)
- “Does Free Care Improve Adults’ Health?” (NEJM, 1983) [Link](#)
- “The RAND Health Insurance Experiment, Three Decades Later.” (J Econ Pers, 2013) [Link](#)
- “The Oregon Health Insurance Experiment: Evidence from the First Year.” (QJE, 2012) [Link](#)
- “The Oregon Experiment – Effects of Medicaid on Clinical Outcomes.” (NEJM, 2013) [Link](#)
- “Sixty Years after the Magic Carpet Ride: The Long-Run Effect of the Early Childhood Environment on Social and Economic Outcomes.” (ReStud, 2011) [Link](#)

IV Papers

- “The Benefits of Prenatal Care: Evidence from the PAT Bus Strike.” (J of Econometrics, 2005) [Link](#)
- “Measuring Returns to Hospital Care: Evidence from Ambulance Referral Patterns.” (JPE, 2015) [Link](#)
- “The War on Drugs: Methamphetamine, Public Health, and Crime.” (AER, 2009) [Link](#)
- “Income and Health Spending: Evidence from Oil Price Shocks.” (ReStat, 2013) [Link](#)
- “Multiple Experiments for the Causal Link Between the Quantity and Quality of Children.” (JOLE, 2010) [Link](#)

RD Papers

- “After Midnight: A Regression Discontinuity Design in Length of Postpartum Hospital Stays.” (AEJ: Policy, 2011) [Link](#)
- “The Effect of Education on Adult Mortality and Health: Evidence from Britain.” (AER, 2013) [Link](#)
- “The Impact of Nearly Universal Insurance Coverage on Health Care Utilization: Evidence from Medicare” (AER, 2008) [Link](#)
- “Does Medicare Save Lives?” (QJE, 2009) [Link](#)
- “Measuring Marginal Returns to Medical Care: Evidence from At-Risk Newborns.” (QJE, 2009) [Link](#)
- “Saving Babies? Revising the Effect of Very Low Birthweight Classification.” (QJE, 2011) [Link](#)
- “Does Head Start Improve Children’s Life Chances? Evidence from a Regression Discontinuity Design.” (QJE, 2007) [Link](#)

DD Papers

- “Public Health Insurance, Labor Supply and Employment Lock.” (QJE, 2014) [Link](#)
- “The Incidence of Mandated Maternity Benefits.” (AER, 1994) [Link](#)
- “Is More Information Better? The Effects of “Report Cards” on Health Care Providers.” (JPE, 2003) [Link](#)
- “Water for Life: The Impact of the Privatization of Water Services on Child Mortality.” (JPE, 2005) [Link](#)
- “What Does a Deductible Do? The Impact of Cost-Sharing on Health Care Prices, Quantities, and Spending Dynamics.” (QJE, 2017) [Link](#)
- “Semiparametric Difference-in-Differences Estimators.” (ReStud, 2005) [Link](#)
- “Welfare Reform and Health.” (JHR, 2005) [Link](#)

- “Chernobyl’s Subclinical Legacy: Prenatal Exposure to Radioactive Fallout and School Outcomes in Sweden.” (QJE, 2009) [Link](#)
- “Defensive Medicine: Evidence from Military Immunity.” (AEJ: Policy, 2019) [Link](#)
- “Medical Care Spending and Labor Market Outcomes: Evidence from Workers’ Compensation Reforms.” (AER, 2018) [Link](#)
- “Disease and Development: Evidence from Hookworm Eradication in the American South.” (QJE, 2007) [Link](#)
- “Tuskegee and the Health of Black Men.” (QJE, 2018) [Link](#)
- “Death by Market Power: Reform, Competition, and Patient Outcomes in the National Health Service.” (AEJ: Policy, 2013). [Link](#)