

STANFORD UNIVERSITY

Public Policy 105 (5)

SPRING 2021

Empirical Methods in Public Policy

- Instructors:** Gopi Shah Goda (she/her) Becky Staiger (she/her)
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- Time and Location:** Mondays/Wednesdays 1:00 – 2:20 pm PT, remotely via Zoom
- Virtual Office Hours:** Goda – Fridays 2:00 – 3:00 pm, or by appointment, via Zoom
Staiger – Thursdays 2:00 – 3:00 pm, or by appointment, via Zoom
- Teaching Assistant:** Mark Walsh (mwalsh24@stanford.edu)
- Section Time and Location:** Wednesdays 3-3:50 PM, Thursdays 1-1:50 PM, via Zoom
- TA Office Hours:** Tuesdays 10:00–11:00 am/Thursdays 4–5 pm, via Zoom
- Course Description:** This course is designed to equip students with tools to 1) critically evaluate evidence used to make policy decisions and 2) perform empirical analysis to answer questions in public policy. Specifically, by the end of the course students will be able to interpret regression coefficients, evaluate whether a regression estimate is biased, understand research methods commonly used in policy analysis, and use Stata to perform basic empirical analysis. Throughout the course, we will cover different methods of empirical analysis and their applications in public policy, focusing on the interpretation and application of results. Applications include topics related to health care and aging. Assignments include hands-on data analysis, evaluation of existing literature, and an original research project.
- Prerequisite:** Students must complete and have a firm grasp of material covered in ECON 102B prior to taking this course.
- Goals of the Course:** Through active engagement with and successful completion of this course, students will be able to:
- (1) Interpret and critically evaluate research findings and understand their policy implications

(2) Perform empirical analysis to answer research questions

We will accomplish the first goal by analyzing current research with applications in public policy. You will read current research on related topics and learn how to interpret research findings and apply them to policy questions.

We will accomplish the second goal through the development of an empirical research project. This project will be on topics related to the material presented in this course, though exceptions for other topics are possible with approval from the instructor.

Course Structure

This course will be facilitated online through Canvas. Announcements will be made through the Canvas site, and any questions should be posted to the Discussions tab no later than 24 hours before the due date. Assignments should be submitted via the Canvas Assignments tab.

The course will primarily consist of synchronous discussions and lectures on Zoom, and will generally not be recorded. Prior to most course meetings, there is a required course reading and corresponding quiz to complete through Canvas.

There will also be required sections with the TA each week held on Zoom. These meetings will be recorded and uploaded to Canvas.

Technology

It is required that you have a device that connects to the internet so that you can access email, Canvas, and Zoom. All course details and materials will be posted on our Canvas course site and all class meetings will occur in Zoom. Please download Zoom and follow [these instructions](#) to help you get set up. It is important that you do not share our course Zoom links or meeting passwords with anyone outside of our course to protect the privacy of everyone in attendance.

Students must use Stata for the problem sets and research project. Students can purchase a Stata license for this course or access Stata through Stanford servers. Students will need Stata/IC or higher. More information on Stata student purchases can be found [here](#).

Course Expectations:

Students and instructors are adjusting to the changes that have been put in place in response to COVID-19. We hope we can work together to adapt to these times as best as we can. If you find yourself facing additional challenges that make it difficult for you to keep up with the course work, please let us know and we can figure out a way to support you.

What you can expect from us. We are here to guide your learning and will challenge you to actively engage in the learning process through class discussion and assignments. We will strive for an inclusive and collaborative classroom and welcome any suggestions for improvement. We will do my best to give you the tools, feedback, and support to succeed. We highly encourage

everyone to visit office hours or to set up a meeting with one or both of us. The best way to reach us is by email (see contact information above) and you can expect a response within 24 hours.

What we expect from you. A large part of the learning in this course occurs through class discussion and the timely completion of assignments which build on one another. As such, attendance is required, and late assignments are not accepted.

It can be easy to get distracted during online meetings (we've been there!). So, we ask that you [try as best as you can to remain focused and engaged during class](#). We expect you to take an active role in your learning by coming to our virtual class meetings prepared and ready to engage in discussion. Moreover, online settings can often feel less personal, sometimes making it easier to misinterpret comments or to share thoughts with less filtering. Keep in mind that each member of this class has different ideas and perspectives that will enrich the experience for us all. We expect all of us to speak and listen with compassion and not make assumptions about others.

Respect for Diversity

It is our intent that students from all diverse backgrounds, perspectives, and situations be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is our intent to present materials and activities that are respectful of diversity, which may include but not limited to: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, religion, political affiliation, culture, and so on. We acknowledge that there is likely to be a diversity of access to resources among students and plan to support all of you as best as we can. Please let us know ways to improve the effectiveness of the course for you personally or for other students.

Textbook (optional): Stock and Watson (2015) *Introduction to Econometrics*, 4th Edition, hereafter referred to as SW.

Public Policy Common Course Policies: This course is governed by the Public Policy Program Common Course Policies, available [here](#). Please familiarize yourself with these rules and contact me if you have any questions.

Course Privacy Statement

As noted in the University's [recording and broadcasting courses policy](#), students may not audio or video record class meetings without permission from the instructor (and guest speakers, when applicable). If the instructor grants permission or if the teaching team posts videos themselves, students may keep recordings only for personal use and may not post recordings on the Internet, or otherwise distribute them. These policies protect the privacy rights of instructors and students, and the intellectual property and other rights of the university. Students who need lectures recorded for the purposes of an academic accommodation should contact the [Office of Accessible Education](#).

Grading:

Class participation	25
Course reading quizzes	50
Problem sets	75
Research project proposal	50
Preliminary results	100
Research project write-up	200
Total:	500 points

A brief description of these assignments is below; more details regarding the assignments will be provided in class. Written assignments should be completed in a suitable font (e.g. Times New Roman, 12 point size) and double spaced so there is room for comments.

Class participation: You should be prepared to participate in the discussion of class readings throughout the quarter. Part of the class participation grade will also come from your engagement with in-class exercises.

Course reading discussions and quizzes: You will need to complete a course reading and quiz prior to each of 10 course discussions. Each quiz will be worth 5 points.

Problem sets: You will be given step-by-step instructions to partially replicate an academic paper using a publicly-available data source and statistical software. To get full credit for the assignment, you will be asked to submit your code, the output of the code, and responses to a set of questions about the exercise.

Research project proposal and preliminary results: These assignments will help you make progress towards your final project and will be discussed during required meetings with the professors and teaching assistant.

Research project write-up: Your research project write-up should be 4-7 pages in length (not including tables and figures) and make a substantive argument backed up by evidence and data.

Course Schedule and Due Dates*

*See Reading List below for full citation and method.

Week	Date	Complete before class (<i>asynchronous</i>)	Class discussion (<i>synchronous</i>)
1	3/29 (Goda)	<ul style="list-style-type: none"> Complete Technology Accessibility Survey quiz on Canvas Review SW Ch.2-3 	<ul style="list-style-type: none"> Review course syllabus Lecture: Review of probability and statistics
	3/31 (Staiger)	<ul style="list-style-type: none"> Review Problem Set #1 and Handout #1, Course Reading Guide Review SW Ch. 4-8, 10, 11 	<ul style="list-style-type: none"> Review handouts Lecture: Linear regression, binary dependent variables, fixed effects
2	4/5 (Staiger)	<ul style="list-style-type: none"> Complete class reading and quiz: Case and Paxson 2008 Review Handout #4, Research Project Proposal Review SW Ch. 6.1, 9.1, 9.2 	<ul style="list-style-type: none"> Review handout Class discussion: Case and Paxson 2008 Lecture: Endogeneity and causal inference
	4/7 (Staiger)	<ul style="list-style-type: none"> Complete class reading and quiz: Goda et al. 2013 Review SW Ch. 13.4 	<ul style="list-style-type: none"> Class discussion: Goda et al. 2013 Lecture: Difference-in-difference
3	4/12 (Goda)	<p><i>Problem Set 1 due before class</i></p> <ul style="list-style-type: none"> Complete class reading and quiz: Garthwaite et al. 2014 <i>Optional: Watch recorded Lecture 6</i> Review SW Ch. 13.4 	<ul style="list-style-type: none"> Class discussion: Garthwaite et al. 2014 Lecture: Regression discontinuity
	4/14 (Goda)	<ul style="list-style-type: none"> Complete class reading and quiz: Card et al. 2008 <i>Optional: Watch recorded Lecture 4</i> 	<ul style="list-style-type: none"> Class discussion: Card et al. 2008 Lecture: Event study
4	4/19	<i>Research Project Proposal due prior to individual meetings</i>	Individual meetings with Professor Goda re: Research Project Assignment #1
	4/21	<i>Problem Set 2 due by 5pm</i>	
5	4/26 (Goda)	<ul style="list-style-type: none"> Complete class reading and quiz: Molitor 2018 <i>Optional: Watch recorded Lecture 3</i> Review Handout #5, Preliminary Results 	<ul style="list-style-type: none"> Review handout Class discussion: Molitor 2018

	4/28 (Goda)	<ul style="list-style-type: none"> Complete class reading and quiz: Card et al. 2009 <i>Optional: Watch recorded Lecture 5</i> 	<ul style="list-style-type: none"> Class discussion: Card et al. 2009 Class exercise: identifying sources of bias
6	5/3 (Goda)	<ul style="list-style-type: none"> Complete class reading and quiz: Goda 2011 <i>Optional: Watch recorded Lecture 12</i> Review Handout #6, Research Project Writeup 	<ul style="list-style-type: none"> Review handout Class discussion: Goda 2011
	5/5 (Staiger)	<ul style="list-style-type: none"> Complete class reading and quiz: Miller et al. 2019 Review SW Ch. 12, 13.6 	<ul style="list-style-type: none"> Class discussion: Miller et al. 2019 Lecture: instrumental variables
7	5/10 (Staiger)	<p><i>Preliminary Results due before class</i></p> <ul style="list-style-type: none"> Complete class reading and quiz: Doyle et al. 2015 Review SW Ch. 13 	<ul style="list-style-type: none"> Class discussion: Doyle et al. 2015 Lecture: randomized control trials
	5/12 (Staiger)	<ul style="list-style-type: none"> Complete class reading and quiz: Finkelstein et al. 2012 	<ul style="list-style-type: none"> Class discussion: Finkelstein et al. 2012
8	5/17		Individual meetings with Professor Staiger and TA re: Research Project Assignment #2
	5/19		
9	5/24		<ul style="list-style-type: none"> Guest lecture: TBD Discussion
	5/26		<ul style="list-style-type: none"> Guest lecture: TBD Discussion
10	5/31	No class (Memorial Day)	
	6/2		<ul style="list-style-type: none"> Research project lightning round
	6/4	Research Project Write-Ups due by 5pm PT	

Reading List

	Full Citation	Method
1	Case, Anne, and Christina Paxson. 2008. "Height, Health, and Cognitive Function at Older Ages." <i>American Economic Review: Papers and Proceedings</i> , 98(2): 463-467.	OLS
2	Goda, Gopi Shah, John B. Shoven, and Sita Nataraj Slavov. 2013. "Does Widowhood Explain Gender Differences in Out-of-Pocket Medical Spending Among the Elderly?" <i>Journal of Health Economics</i> , 32: 647-658.	Fixed Effects
3	Garthwaite, Craig, Tal Gross and Matthew Notowidigdo. 2014. "Public Health Insurance, Labor Supply, and Employment Lock," <i>Quarterly Journal of Economics</i> , 129 (2): 653-696.	Difference-in-Difference
4	Card, David, Carlos Dobkin, and Nicole Maestas. 2008. "The Impact of Nearly Universal Insurance Coverage on Health Care Utilization and Health: Evidence from Medicare," <i>American Economic Review</i> , 98(5), pp. 2242-2258.	Regression Discontinuity
5	Molitor, David. 2018. "The Evolution of Physician Practice Styles: Evidence from Cardiologist Migration," <i>American Economic Journal: Economic Policy</i> , 10 (1): 326-356.	Event Study
6	Card, David, Carlos Dobkin, and Nicole Maestas. 2009. "Does Medicare Save Lives?" <i>Quarterly Journal of Economics</i> , 124(2): 597-636.	Regression Discontinuity
7	Goda, Gopi Shah. 2011. "The Effect of State Tax Subsidies for Private Long-Term Care Insurance on Coverage and Medicaid Expenditures," <i>Journal of Public Economics</i> , 95(7), pp. 744-757.	Difference-in-Difference
8	Miller, Sarah, Norman Johnson, Laura R. Wherry. "Medicaid and Mortality: New Evidence from Linked Survey and Administrative Data." NBER Working Paper 26081.	Event Study
9	Doyle Jr., Joseph J., John A. Graves, Jonathan Gruber, Samuel A. Kleiner. 2015. "Measuring Returns to Hospital Care: Evidence from Ambulance Referral Patterns." <i>Journal of Political Economy</i> , 123 (1): 170—214.	Instrumental Variables
10	Finkelstein, Amy, Sarah Taubman, Bill Wright, Mira Bernstein, Jonathan Gruber, Joseph P. Newhouse, Heidi Allen, Katherine Baicker, and the Oregon Health Study Group. 2012. "The Oregon Health Insurance Experiment: Evidence from the First Year." <i>Quarterly Journal of Economics</i> , 127 (3): 1056—1106.	Randomized Control Trials