

Jeff Grogger  
Harris School

Fall 2022  
University of Chicago

### PP 346: Program Evaluation

Section I: MW 9:00-10:20 am, Keller 0010  
Section II: MW 10:30-11:50 am, Keller 0010  
**NOTE:** All times are Chicago time

**Instructor:** Jeffrey Grogger  
[jgrogger@uchicago.edu](mailto:jgrogger@uchicago.edu)  
Office hours TBA

#### Teaching Assistants:

Name	Email
Smriti Ganapathi	<a href="mailto:sganapathi@UCHICAGO.EDU">sganapathi@UCHICAGO.EDU</a>
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**Discussion sections:** Thursdays, 2-3:20 pm, room TBA  
Fridays, 9-10:20 am, room TBA

**Web site:** All materials for the class will be posted to its site on Canvas.

**Course content:** To introduce students to program evaluation, provide an overview of current issues and methods, and impart applied experience with several methods and datasets.

**Texts:** There are no required texts, but you may find it useful to refer to a standard econometrics text such as *Introductory Econometrics: A Modern Approach*, by Jeffrey Wooldridge. Specific readings for each topic appear below. Other useful references are:

Richard Blundell and Monica Costa Dias. "Alternative Approaches to Evaluation in Empirical Microeconomics," *Journal of Human Resources* 44 (3), 2009, 565-640.

Joshua Angrist and Joern-Steffen Pischke. *Mostly Harmless Econometrics*. Princeton Press.

**Grading:** Grades will be based on five problem sets and a final exam. The problem sets will count collectively for 80 percent of the grade and the final exam will count for 20 percent.

Problem sets: The problem sets are mostly empirical exercises that have you employ a number of evaluation techniques, using real data and writing real computer programs. Most students have found the problem sets to be quite challenging. Ideally, you will have taken, or be taking concurrently, PPHA 30535/30536 - Data and Programming for Public Policy. *If you struggled with the empirical exercises during the econometrics sequence, this is not the right section for you.* PP 346 is taught every quarter, and different instructors teach it differently.

Problem sets must be submitted electronically following the guidelines posted under the Assignments section of the class Canvas site. Late problem sets will not be accepted. Each assignment will receive equal weight. Only four of the five problem sets will count toward your grade; I will automatically drop the one with the lowest score. You may ask classmates or the TA's for help with the problem sets, subject to the conditions below, but you must hand in your own work. Copying the work of another student is cheating, as is allowing another student to copy yours. Cheaters can expect no leniency.

Final exam. For the final exam, you will read a set of evaluation articles, then critique them according to a set of questions with which you will be provided. The readings and questions will be posted during the last class on Wednesday, November 30. The exam will be due on Wednesday, December 7, at 11:59 pm. The exam must be submitted through Canvas; details will be forthcoming.

**Logistics.** Unless something changes, all instruction will be in person. Students are expected to attend class, and recordings of class will not be generally available. There is one major exception to this rule:

**If you are experiencing COVID-19 symptoms or are required to isolate, do not come to class.**

Contact me or the TA if you cannot attend class for this reason, and we will seek to arrange an accommodation.

On a more minor note, the schedule this year gives us only 8.5 weeks for class, rather than the usual 9. By way of compensation, please watch the three videos labeled Topic 1 before attending the first class. You can find them on Canvas.

More general points:

#### Communication with TAs and other students

You can use Piazza to communicate with the TA's and other students. TA's will respond in a reasonable amount of time, but immediate turnaround is not a reasonable expectation.

Piazza posts will be public, for several reasons. First, it is efficient. Singleton questions are rare. If you have a question, probably someone else has the same question. Everyone can benefit from the answer. Another reason is that questions beget questions. If one

student sees others posting, he/she is more likely to post him/herself. And more questions are better. Third, part of professional education is learning to make yourself heard, even in situations you may find awkward. So grit your teeth and post your question! The sky will not fall, I promise.

**Academic Integrity.** To reiterate, you may consult with others while you work, but you must follow these procedures:

- Your problem set must be solely your authorship (written up by yourself, in your own language, including your own code.)
- Your code must have a comment at the top listing the students/TA's/consultants with whom you consulted.
- Any part of your code that was substantially altered because of your discussion with other students/TA's/consultants should cite others' contributions with names and descriptions in a comment at the place where it is applicable.
- Any code based on code that you found on line must be documented as such. This includes single lines of code and code that you found but then modified to fit your purpose. Documentation must include the URL and the date and time of access.

Students who violate these procedures, or otherwise violate academic honesty policies, will receive a zero for the problem set or exam in question AND for a second problem set. These problem sets will **NOT** be dropped for the purpose of calculating your grade.

All University of Chicago students are expected to uphold the highest standards of academic integrity and honesty. Among other things, this means that students shall not represent another's work as their own, use un-allowed materials during exams, or otherwise gain unfair academic advantage. All students suspected of academic dishonesty will be reported to the Harris Dean of Students for investigation and adjudication. The disciplinary process can result in sanctions up to and including suspension or expulsion from the University, in addition to the grade penalty mentioned above. The Harris policy and procedures related to academic integrity can be found at <https://harris.uchicago.edu/gateways/current-students/policies>. The University of Chicago Policy on Academic Honesty & Plagiarism can be found at <https://studentmanual.uchicago.edu/academic-policies/academic-honesty-plagiarism/>

## **Topics and readings**

### **I. The Evaluation and Selection Problems**

Heckman, James J., Robert J. Lalonde and Jeffrey A. Smith, "The Economics and Econometrics of Active Labor Market Programs" in *Handbook of Labor Economics*, Volume 3, eds. Orley Ashenfelter and David Card. Amsterdam: North-Holland Chapter 3, sections 1 through 3.

Smith, Jeffrey. 2000. "A Critical Survey of Empirical Methods for Evaluating Active

Labor Market Policies.” *Swiss Journal of Economics and Statistics*. 136(3):1-22

Earth Institute. 2010. *Harvests of Development in Rural Africa: The Millennium Villages after Three Years*.

Clemens, Michael A., and Gabriel Demombynes. 2011. “When Does Rigorous Impact Evaluation Make a Difference? The Case of the Millennium Villages.” *Journal of Development Effectiveness* 3 (3): 305-339.

## **II. Treatment Parameters**

Blundell and Dias, section II

Heckman, James J., Robert J. Lalonde and Jeffrey A. Smith, “The Economics and Econometrics of Active Labor Market Programs” in *Handbook of Labor Economics*, Volume 3, eds. Orley Ashenfelter and David Card. Amsterdam: North-Holland Chapter 3, sections 1 through 3.

Smith, Jeffrey. 2000. “A Critical Survey of Empirical Methods for Evaluating Active Labor Market Policies.” *Swiss Journal of Economics and Statistics*. 136(3):1-22

## **III. Instrumental Variables**

Blundell and Dias, section VI

Joshua D. Angrist and Alan B. Krueger. “Instrumental Variables and the Search for Identification: From Supply and Demand to Natural Experiments” *Journal of Economic Perspectives*(15:4) Autumn, 2001 69-85.

Joshua Angrist, Guido W. Imbens, and Donald B. Rubin. “Identification of Causal Effects using Instrumental Variables” (with discussion) *Journal of the American Statistical Association* 91 1996, 444-72.

Aizer, A., & Doyle, J. J. (2017). Juvenile Incarceration, Human Capital, and Future Crime: Evidence From Randomly Assigned Judges, *Quarterly Journal of Economics*, (December), 759–804. <https://doi.org/10.1093/qje/qjv003>

Dobbie, Will, et al. (2018). “The Effects of Pretrial Detention on Conviction, Future Crime, and Employment: Evidence from Randomly Assigned Judges.” *American Economic Review* 108, 201-240. DOI: 10.1257/aer.20161503

## **IV. Social Experiments**

Blundell and Dias, section III

James Heckman and Jeffrey Smith. “Assessing the Case for Social Experiments” *Journal*

*of Economic Perspectives* (9:2) Spring 1995 85-110.

Finkelstein, A. N., Taubman, S. L., Wright, B. J., Bernstein, M., Gruber, J., Newhouse, J. P., Oregon Health Study Group. (2012). The Oregon Health Insurance Experiment: Evidence From The First Year. *Quarterly Journal of Economics*, 127(August (3)), 1057–1106. <https://doi.org/10.1093/qje/qjs020.Advance>

King, G., Gakidou, E., Imai, K., Lakin, J., Moore, R. T., Nall, C., Llamas, H. H. (2009). Public policy for the poor? A randomised assessment of the Mexican universal health insurance programme. *The Lancet*, 373(9673), 1447–1454. [https://doi.org/10.1016/S0140-6736\(09\)60239-7](https://doi.org/10.1016/S0140-6736(09)60239-7)

## **V. Regression Discontinuity**

Guido Imbens and Thomas Lemieux. “Regression Discontinuity Designs: A Guide to Practice” *Journal of Econometrics* 142(2) 2008. 615-635.

McCrary, J. (2008). Manipulation of the running variable in the regression discontinuity design: A density test. *Journal of Econometrics*, 142(2), 698–714. <https://doi.org/10.1016/j.jeconom.2007.05.005>

Almond, Douglas, et al (2010). “Estimating Marginal Returns to Medical Care: Evidence from At-Risk Newborns.” *Quarterly Journal of Economics*, 591-634.

Deshpande, M. (2016). Does Welfare Inhibit Success? The Long-Term Effects of Removing Low-Income Youth from the Disability Rolls. *American Economic Review*, 106(11), 3300–3330. <https://doi.org/10.1257/aer.20151129>

Hansen, B. (2015). Punishment and Deterrence: Evidence from Drunk Driving, *American Economic Review* 105, 1581–1617. <https://www.aeaweb.org/articles?id=10.1257/aer.20130189>

## **VI. Natural Experiments/Panel Data**

Blundell and Dias, section IV

Bruce D. Meyer. “Natural and Quasi-Experiments in Economics,” *JBES* (13:2) April 1995 151-162.

Goodman-Bacon, Andrew. (2021) “Difference-in-Differences with Variation in Treatment Timing.” *Journal of Econometrics*. <https://doi.org/10.1016/j.jeconom.2021.03.014>

Fadlon, Itzik, and Torben Heien Nielsen. “Family Labor Supply Responses to Severe Health Shocks: Evidence from Danish Administrative Records.” *American Economic Journal: Applied Economics* 2021, 13(3): 1–30. <https://doi.org/10.1257/app.20170604>

Martin Halla, Julia Schmieder, and Andrea Weber. “Job Displacement, Family Dynamics, and Spousal Labor Supply.” *American Economic Journal: Applied Economics* 2020, 12(4): 253–287. <https://doi.org/10.1257/app.20180671>

## **VII. Matching**

Blundell and Dias, section V

Dan Black, Amelia Haviland, Seth Sanders, and Lowell Taylor. “Gender Wage Disparities among the Highly Educated” *Journal of Human Resources* Summer 2008 42(3) 630-59.

Dan Black and Jeffrey Smith. “How Robust is the Evidence on the Effects of College Quality? Evidence from Matching” *Journal of Econometrics* August 2004 121(1-2) 99-124

Desmond and Gershenson (2016). “Housing and Employment Insecurity among the Working Poor.” *Social Problems* 63, 46-67. doi: 10.1093/socpro/spv025

## **VIII. Permutation Inference**

Fisher, S. R. A. (1971). *The Design of Experiments*. Hafner Publishing Company, pp. 1-26.

Rosenbaum, Paul R. *Observational Studies*, 2nd edition. New York: Springer-Verlag, 2002, ch. 2

Chetty, Raj, et al. (2009). “Salience and Taxation: Theory and Evidence.” *American Economic Review* 99, 1145-1177.

Cunningham, S., & Shah, M. (2017). Decriminalizing Indoor Prostitution: Implications for Sexual Violence and Public Health. *Review of Economic Studies*, (February), 1–33. <https://doi.org/10.1093/restud/rdx065>

## **IX. Synthetic Control**

Abadie, A., Diamond, A., & Hainmueller, J. (2010). Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California’s Tobacco Control Program. *Journal of the American Statistical Association*, 105(490), 493–505. <https://doi.org/10.1198/jasa.2009.ap08746>

Abadie, A., & Gardeazabal, J. (2003). The Economic Costs of Conflict : A Case Study of the Basque Country The Economic Costs of Conflict : A Case Study of the Basque Country. *The American Economic Review*, 93(1), 113–132. <https://doi.org/10.1257/000282803321455188>

Grogger, J. (2017). Soda taxes and the prices of sodas and other drinks: Evidence from Mexico. *American Journal of Agricultural Economics*, 99(2), 481–498.  
<https://doi.org/10.1093/ajae/aax024>

## **X. Multiple Hypothesis Testing**

Benjamini, Yoav and Yosef Hochberg. (1995) “Controlling the False Discovery Rate: A Practical and Powerful Approach to Multiple Testing.” *Journal of the Royal Statistical Society, Series B*, 57, 289-3000.

Anderson, M. L. (2008). Multiple inference and gender differences in the effects of early intervention: A reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects. *Journal of the American Statistical Association*, 103(484), 1481–1495.  
<https://doi.org/10.1198/016214508000000841>

Ridgeway, G., & Macdonald, J. M. (2009). Doubly robust internal benchmarking and false discovery rates for detecting racial bias in police stops. *Journal of the American Statistical Association*, 104(486), 661–668. <https://doi.org/10.1198/jasa.2009.0034>

Jacob, B. A., Ludwig, J., Devitt, C., Ferrier, M., Goerge, R., Graf, R., Wu, P. (2015). The Impact Of Housing Assistance On Child Outcomes : Evidence From A Randomized Housing Lottery. *The Quarterly Journal of Economics*, 130(1), 465–506.  
<https://doi.org/10.1093/qje/qju030>.Advance