Quantitative Methodology in the Social Sciences Seminar
Political Science 236B
Statistics 239B

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Class: Monday 11–2
791 Barrows Hall

Description

This course is intended to be a seminar in which we discuss research designs which have at least in part succeeded. Few causal inferences in the social sciences are compelling. We carefully examine successful examples to see why they work. The seminar is also a forum for students to discuss the research designs and methods needed in their own work. It should be particularly helpful for students writing their prospectus or designing a major research project. The seminar will be supplemented by lectures to cover the statistical and computational material needed to understand the readings such as matching methods, instrumental variables, regression discontinuity, maximum likelihood, and robust estimation. Applications are drawn from a variety of fields including political science, statistics, economics, sociology, and public health.

Prerequisites

Prerequisites: Political Science 231A and 231B or equivalent. Experience with R is assumed.

Evaluation

The primary purpose of this class is to read and reflect on each set of readings (often work by other students) and for students to write a term paper. We do not assign a lot of pages, but students are expected to read what is assigned very carefully. Class discussion is absolutely essential to the success of a seminar, and active participation is an important component of your overall evaluation.
The course evaluation is based on on class participation and discussion (25%), a research paper (50%), and a presentation of a paper in section (25%).

It is recommended that students work on the project and the term paper jointly with one or at most two other students. Experience has shown that this greatly facilitates learning as well as increases the likelihood that the paper will eventually become a published article. Students may hand in papers they are working on for other classes.

**Course Software and Books**

The programming language for this course is the \texttt{R} variant of the \texttt{S} statistical programming language. It is available for download from: [http://www.r-project.org/](http://www.r-project.org/) \texttt{R} is open source software (released under the GNU public license) and is available at no charge.

**Section outline**

See the linked section syllabus at [https://goo.g1/p33zkJ](https://goo.g1/p33zkJ).

**Course outline**

The readings for the first few weeks are as follows. The readings after that will be adapted to the interest of the students or borrowed from the Additional Topics section below.

1. (January 22) GOTV experiments:
   \cite{Gerber2008}: Social pressure and vote turnout: Evidence from a large-scale field experiment. \textit{APSR} 102: 1–33. [LINK]. Data available.

   Background readings that are also required:
   \begin{itemize}
   \item Deaton (2009): “Instruments of Development: Randomization in the tropics, and the search for the elusive keys to economic development”. [LINK]
   \end{itemize}

2. (January 29) Immigration #1
   \begin{itemize}
   \item Bansak, Ferwerda, Hainmueller, Dillon, Hangartner, Lawrence, and Weinstein (2018): “Improving refugee integration through data-driven algorithmic assignment.” \textit{Science}. [LINK]
   \end{itemize}


   Background readings that are also required:
   \begin{itemize}
   \end{itemize}

4. (February 12) RD and Early Childhood Education:


5. (February 19) Presidents Day: No class

6. (February 26) Political Campaigns #1


7. (March 5) Political Campaigns #2, 2016 and Fake News

• Groseclose and Milyo (2005): “A Measure of Media Bias.” *QJE*. [LINK]


10. (March 26) Spring Break: No class


12. (April 9) Macro-Questions #1


13. (April 16) Macro-Questions #2

• Piketty, Capital in the 21st Century. Reading TBD.

14. (April 23) Estimating the reproducibility of psychological science

• “Estimating the reproducibility of psychological science.” *Science* [LINK]
• “Comment on ‘Estimating the reproducibility of psychological science’.” *Science* [LINK]
Additional Topics

1. • D.A. Freedman. “On types of scientific enquiry.” [Freedman’s webpage]

If you want some more background, see


2. Placebos: Computers, Pencils, and Controls


3. Estimating media effects in the field

   • Lenz and Ladd: “Exploiting a Rare Shift in Communication Flows: Media Effects in the 1997 British Election”

4. Education as a treatment: returns to Education


5. Regression-Discontinuity

   • Eggers and Hainmueller: “The Value of Political Power: Estimating Returns to Office in Post-War British Politics”

For background on Regression Discontinuity Design see:

• Thistlethwaite and Campbell (1960): “Regression-Discontinuity Analysis: An alternative to the ex post facto experiment”
6. Experiments, RD, and Design

- **Hahn, Todd, and van der Klaauw (2001)**: “Identification and Estimation of Treatment Effects with a Regression-Discontinuity Design”

7. RD for Incumbency Advantage


8. When Natural Experiments Are Neither Natural Nor Experiments


- **Sekhon and Titiunik (2012)**: “When Natural Experiments Are Neither Natural Nor Experiments”

9. Fixing Experiments?


- **Imai, Kosuke.** “Do Get-Out-The-Vote Calls Reduce Turnout? The Importance of Statistical Methods for Field Experiments.” *American Political Science Review*

- **Green and Gerber Reply**

- **Bowers, Jake and Ben Hansen. 2005.** “Attributing Effects to A Cluster Randomized Get-Out-The-Vote Campaign.”

10. Synthetic Cohorts

- **Abadie and Gardeazabal (2003)**: “The Economic Costs of Conflict: A Case-Control Study for the Basque Country”

11. Voting Irregularities

- **Wand, Shotts, Sekhon, Walter R. Mebane, Herron, and Brady (2001)**: The Butterfly Did It: The Aberrant Vote for Buchanan in Palm Beach County, Florida

- **Herron and Sekhon (2005)**: Black Candidates and Black Voters: Assessing the Impact of Candidate Race on Uncounted Vote Rates

For additional examples see:
• Mebane and Sekhon (2004): Robust Estimation and Outlier Detection for Overdispersed Multinomial Models of Count Data


References


Diamond, R., T. McQuade, and F. Qian (2017). The effects of rent control expansion on tenants, landlords, and inequality: Evidence from san francisco. NBER.


