

**POLITICAL SCIENCE 293**  
**RESEARCH DESIGN**  
Spring Quarter 2013-14  
Wednesdays, 9 a.m. to 12 p.m.

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*Lab Section Time:* Wednesdays, 5 to 7 p.m.

### **Course Description**

This course is about how to write a social scientific paper. The emphasis of the class is on learning how to turn an interest in a topic or issue into an open-ended question, and then learning how to answer that question through the systematic retrieval and dispassionate analysis of evidence. This means that a large portion of this course focuses on understanding quantitative analytic tools.

The best way to learn how to write a scientific paper is to actually write one. Students will therefore prepare a 15-page scientific paper in this course. The best way to learn about the advantages and disadvantages of different statistical techniques is to read published papers that have employed those techniques, and then work through those papers in class. This not only permits students to grasp the intuition beneath a particular approach to data, it also allows students to see the pitfalls of applying inappropriate techniques. Thus, the assigned papers are not meant to be read as sacred texts, but should be approached as exercises in evaluating logical consistency, the sources and quality of the quantitative evidence, the appropriateness of the statistical techniques, and the validity of inferences.

### **Requirements**

- *Class Participation (20%)*: Students are expected to complete the required readings each week and to contribute to the class discussion.
- *Response Papers (30%)*: Each student is required to write three short reaction papers (2-3 pages) presenting a critical evaluation of at least one of the readings covered for the sessions on April 9, April 16, and April 23. These papers are to be disseminated to the members of

this course via email and serve as the basis for discussion. They must be submitted prior to the discussion of the material.

- The first paper is due no later than on April 8 by 5:00 pm.
  - The second paper is due no later than April 15 by 5:00 pm.
  - The third paper is due no later than April 22 by 5:00 pm.
- *Final Paper (50%)*: In addition, students are required to write a 15-page research paper that identifies an empirical or theoretical puzzle that has not been adequately addressed in the extant literature and that then explores an approach to solving it. The final paper is due on June 11 at 5 pm. No late work will be accepted except by prior written agreement.

### **Submission of Written Assignments**

All papers should be submitted to me as attachments to email and sent to the following address: [stephenhaber@sbcglobal.net](mailto:stephenhaber@sbcglobal.net). I will then send you an email acknowledging that I have received, opened, and printed your attachment. If I cannot open your attachment, or if your attachment does not contain a readable paper, I will consider the paper not to have been submitted.

All of the short papers should also be circulated to the other students in the course at the same time you send them to me. We will create an email distribution list the first week of the course.

### **Students with Disabilities**

Students who may need an academic accommodation based on the impact of a disability must initiate the request with the Office of Accessible Education (OAE). Professional staff will evaluate the request with required documentation, recommend reasonable accommodations, and prepare an Accommodation Letter for faculty dated in the current quarter in which the request is being made. Students should contact the OAE as soon as possible since timely notice is needed to coordinate accommodations. The OAE is located at 563 Salvatierra Walk; phone: 723-1066; web site <http://studentaffairs.stanford.edu/oea>."

### **Class Schedule and Reading List**

NOTE: There are required readings for the first meeting of Class on April 2.

[Week 1] *April 2: The Difference between Journalism and Science*

Thomas Friedman, "The First Law of Petropolitics." *Foreign Policy* (April 25, 2006).

Michael Ross, "Does Oil Hinder Democracy?" *World Politics* 53 (April 2001), pp. 325-61.

Issues to be discussed in the analysis of the quantitative evidence in the Friedman and Ross papers:

1. The pitfalls of missing data, or why missing observations are usually not randomly distributed.
2. Why it is dangerous to draw inferences about a time-series process from cross-sectional data.
3. How do researchers deal with truncation with respect to time.

4. Outliers, or why it is always a good idea to graph the data first.

*Lab Section: Discussion and Analysis of Cross-Sectional OLS Regressions, Omitted Variables, Endogeneity—and the importance of graphing data first.*

[Week 2] ***April 9: The Quality of Evidence***

Daron Acemoglu, Simon Johnson, and James Robinson. “The Colonial Origins of Comparative Development: An Empirical Investigation.” *American Economic Review* 91 (2001), pp. 1369-1401.

David Albouy. “The Colonial Origins of Comparative Development: A Reexamination Based on Improved Settler Mortality Data.” National Bureau of Economic Research Working Paper 14130 (2008). Available at:

<http://www-personal.umich.edu/~albouy/AJRreinvestigation/AJRrev.pdf>

Daron Acemoglu, Simon Johnson, and James Robinson. “Reply to the Revised (May 2006) version of David Albouy’s ‘The Colonial Origins of Comparative Development: An Investigation of the Settler Mortality Data.’” Available at: <http://econ-www.mit.edu/files/203>

Issues to be discussed in the analysis of quantitative evidence in the Acemoglu, Johnson, and Robinson, and Albouy papers:

1. What should you do, **and not do**, when fitting missing observations?
2. Approaches to mitigating endogeneity
3. The use, and misuse, of instrumental variables (two stage least squares).
4. Understanding what it means for an instrument to be valid.

*Lab Section: Discussion and Analysis of Instrumental Variables*

[Week 3] ***April 16: Drawing Inferences from Cross Sections and Panels***

Mara Faccio, “Politically Connected Firms.” *American Economic Review* 96 (March 2006), pp. 369-86.

Asim Ijaz Khwaja and Atif Mian, “Do Lenders Favor Politically Connected Firms: Rent Provision in an Emerging Financial Market.” *Quarterly Journal of Economics* 120 (Nov. 2005), pp. 1371-1411.

Issues to be discussed in the analysis of quantitative evidence in the papers by Faccio, and Khwaja and Mian.

1. The difference between cross sectional and panel data, or why Khwaja and Mian make causal statements, while Faccio does not.
2. The pitfalls of constructing indexes
3. Difference in differences estimators
4. The importance of robustness tests

*Lab Section: Discussion and Analysis of Diff-in-Diff*

[Week 4] ***April 23: The Importance of Knowing the Institutions***

Stephen Haber, Noel Maurer, and Armando Razo, "When the Law Does Not Matter: The Rise and Decline of the Mexican Oil Industry." *The Journal of Economic History* 63:1 (March 2003), pp. 1-31.

Issues to be discussed in the analysis of the quantitative evidence in the paper by Haber, Maurer, and Razo.

1. Retrieving data from historical documents (tax records, customs, and trade associations).
2. The power of simple graphs.
3. The specification of counterfactuals.

[Week 5] ***April 30: Student Presentations***

Each student will make a ten-minute presentation to the class on the question he/she is addressing and the state of the extant literature on that question. Students should circulate a bibliography in advance via the class email list. Each presentation will be followed by a roughly 15-minute discussion of the question under examination and the contributions that can be made to the literature. Particular emphasis will be placed on the sources of evidence available to address the question under study.

[Week 6] ***May 7: Student Presentations***

Each student will make a ten-minute presentation to the class on the question he/she is addressing and the state of the extant literature on that question. Students should circulate a bibliography in advance via the class email list. Each presentation will be followed by a roughly 15 minute discussion of the question under examination and the contributions that can be made to the literature. Particular emphasis will be placed on the sources of evidence available to address the question under study.

[Week 7] ***May 14: Exploiting Boundaries and Borders***

Abhijit Banerjee and Lakshmi Iyer. 2005. "History, Institutions and Economic Performance: the Legacy of Colonial Land Tenure Systems in India." *American Economic Review* 95: 1190-1213.

Nathan Nunn. 2008. "The Long Term Effects of Africa's Slave Trades," *Quarterly Journal of Economics* 123: 139-76.

Issues in the analysis of quantitative evidence to be examined in the paper by Banerjee and Iyer, and Dell.

1. The advantages of exploiting borders or boundaries for drawing causal inferences
2. How do you know when a border or boundary was randomly generated?

*Lab Section: Discussion and Analysis of the Magnitude of an Effect (not just its statistical significance).*

[Week 8] ***May 21: The Use Geographic or Climatologic Data***

Stephen Haber, “Where Does Democracy Thrive: Climate, Technology, and the Evolution of Economic and Political Institutions,” Working Paper 2013. (I will circulate a PDF in advance)

Issues in the analysis of quantitative evidence to be examined in the paper by Haber.

1. Solving the problem of endogenous variables with geo-coded data.
2. The sources of geographic and climate data.
3. How do you specify the unit of analysis with geo-coded data?
4. What do you do when a variable is bounded? (An introduction to Tobit).

[Week 9] ***May 28: Student Presentations of Research Results***

Each student will make a ten-minute presentation to the class on their research discoveries. Each presentation will be followed by a roughly 15 minute discussion of those discoveries, focusing in particular on the quality of the evidence and the inferences that may be drawn from it.

[Week 10] ***June 4: Student Presentations of Research Results***

Each student will make a ten-minute presentation to the class on their research discoveries. Each presentation will be followed by a roughly 15 minute discussion of those discoveries, focusing in particular on the quality of the evidence and the inferences that may be drawn from it.

***June 11: Research Paper Due***