

POL478H1F: Topics in Methods
Causal Inference in Political Science Research
University of Toronto
Fall 2014

Meeting Room:	UC 177
Meeting Time:	Thursday, 10:00am–12:00pm
Instructor:	Kenichi Ariga
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Office:	SS 3047
Office Hours:	Wednesday, 10:00am-12:00pm

Course Description and Objectives

Those who have taken courses on statistical inference and regression must have heard a mantra that goes “Correlation is not causation.” It correctly describes the fact that statistically and substantively significant coefficients in a linear regression model do not necessarily imply a causal relationship of the variables in question. Quantitative empirical evidence in social science research — many of which has been based on observational data — is to be carefully interpreted with this fact in mind.

Recent development in quantitative empirical analysis on social science research, however, has shifted its attention to the question of when our analysis can provide empirical support to a causal claim. Based on the counterfactual framework — often called the Neyman or Rubin causal model, specific conditions under which statistical analysis of observational data can provide causal inference have been identified. Moreover, many researchers have also begun to adopt various “design-based” researches in which they try to identify a causal relationship mainly from how to design empirical research rather than from how to statistically adjust observed data.

This class will review these recent attempts of causal inference in political science research. Two weeks of lectures will cover the basic theoretical framework of causal inference and the principles of various research designs. There will be six weeks of reading seminar on recent applications in political science research of major research designs for causal inference, such as laboratory experiments, field experiments, survey experiments, natural experiments, instrumental variable analysis, and regression discontinuity design. As a final research project, students will write a proposal of empirical research design to identify causal claim of their interest. The final two weeks will be devoted to student presentation and discussion of their proposals. Through these exercises, students are expected to learn the basic theoretical framework of causal inference and various research designs applied in the current political science research.

Required Textbook

Thad Dunning. 2012. *Natural Experiments in the Social Sciences: A Design-Based Approach*. Cambridge: Cambridge University Press.

The textbook is available at the UofT BookStore. All other readings on the syllabus will be made available through the class Blackboard site.

Blackboard / Learning Portal

The class Blackboard site (<https://portal.utoronto.ca/webapps/portal/frameset.jsp>) or the Learning Portal will be the primary means through which class announcements and assignments will be distributed. Readings other than the above textbook, lecture slides, and assignments will be made available in the class Blackboard site as well. Its Discussion Board will be the primary method by which you will ask questions about the course materials and get them answered (more on this below). It will be your responsibility to obtain access to the class Blackboard site and regularly check it. There will be an important update to the class Blackboard site at least once a week.

Grading and Evaluation

Your grade of the course will be based on the following measures:

Midterm Test (Oct. 16):	35%
Final Paper (due, Dec. 1):	35%
Final Paper Presentation (Nov. 20 & 27):	10%
Seminar Presentation:	10%
Seminar Participation:	10%

Six weeks of the class will be devoted to a seminar on recent applications of various research designs in political science. Each week, we will read and discuss several articles published in leading political science journals. For each article, one student will make a brief presentation on the main findings of the article and the characteristics of its research design and initiate the discussion by providing constructive critiques to the article or raising important discussion questions. You will be assigned to this role at least twice, and possibly more, throughout the semester (the exact number of occasions will be decided and adjusted based on the number of students taking the class). This seminar presentation will count for 10% of your final mark.

For the reading seminar part, you are required to post a short paragraph of critiques and discussion questions to each of the assigned readings of the week on the Discussion Board of the class Blackboard site before 1:00 pm on Wednesday. The post will be used as a reference for our in-class discussions. Do not read your classmates' posts on the Discussion Board before you post your own critiques and discussion questions. In addition, you are expected to actively participate in the in-class discussions of these articles. Your post on the Discussion Board and your participation in the in-class discussions will count for 10% toward your final mark. Your response to your classmates' questions on the Discussion Board will also contribute to your seminar participation grade.

There will be a midterm test, scheduled on Oct. 16, which will ask you to write a short essay on a case study of an experimental research. You are expected to creatively apply

what you will have learned about causal inference and social science experiments in this test. The midterm test will be 35% of your final mark.

You are also required to write a final paper, in which you will propose a research design to empirically examine a causal theory of your interest. Your final paper is expected to reflect what you will have learned about causal inference and various research designs. The last two weeks of the class will be spent on the presentation and discussions of your research proposal. The presentation will count for 10% of your final mark and the final paper 35%.

Turnitin

Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.

Students who wish to not use Turnitin.com may make an alternative arrangement with the instructor. They will need to let the instructor know well before the deadline of the assignment and ask for an alternative way to submit the essay. They will be required to save every version/draft of their essay electronically, and submit all of them at the time they submit the essay. They will also be required to hand in all notes, outlines, and bibliographic research at the same time.

Late Penalties and Extension

All work is late if submitted after the date and time specified as the due date.

- A final paper handed in late will result in a penalty of 20-percentage-points reduction per day (e.g., from 90% to 70%). Submitting a paper within 24 hours from the due date and time will be considered one day late; submitting after 24 hours but before 48 hours will be two days late, and so forth. A paper handed in more than five calendar days late will receive a zero grade.
- Critiques and discussion questions to the assigned readings posted on the Discussion Board after the due date and time (1:00pm on Wednesday) will receive half credit assigned, if they are posted before the class starts (10:00am on Thursday). Those posted after the class starts will receive a zero grade.

Extension may be made if there is a legitimate reason, such as an unforeseeable medical emergency. You may be requested to provide documentation.

Grade Appeals

Grade appeals must be received within one month from when the grade is assigned. When you make appeals, you are required to submit a documentation substantiating why you believe your grade is not appropriate.

Discussion Board

We will use the Discussion Board in the class Blackboard site as the main medium through which you can ask questions regarding class materials and get answers. Given the nature of the course materials, someone else may have the same question as yours and s/he would benefit from your posting the question and getting an answer through the Discussion Board. You are also encouraged to post an answer to the questions posted by your classmates on the Discussion Board so that we can maintain a mutually-supporting learning community from which all of you benefit. The instructor will regularly check the Discussion Board on Mondays, Wednesdays, and Fridays, and answer questions which have not been adequately addressed by peers. For more complex questions or those that would require an extensive treatment, you are best advised to visit office hours.

Office Hours

You are welcome to visit during the instructor's office hours, which will be held during the time and date specified at the beginning of the syllabus, if you have any questions on the class materials.

As I teach four classes this semester, including a large class for undergraduates, I expect many students visiting my office hours. In the past, there were several occasions on which there was a long waiting line of students for my office hours and some students had to leave before they saw me as time had run out. To avoid such a disappointing event, I will maintain a sign-up sheet for my office hours online. Please sign up for a 10-minute block on this sign-up sheet. More details about the sign-up sheet will be posted on the class Blackboard site.

Email Policy

If you have questions of personal nature (e.g., accessibility, deadline extension), you may email the instructor and expect a response within two working days. Please start the subject heading of your email with "POL478:..." I will not answer, however, any questions over email that are of substantive nature concerning the class materials. You will need to post those questions on the Discussion Board or visit office hours to get them answered.

Please note that I will not be able to answer email or Discussion Board questions during weekends.

In the case of your questions of substantive nature on the Discussion Board or those of personal nature over email not answered within two working days (excluding weekends), send me an email to let me know they have not been addressed. Please include "POL478: Unanswered Question" in the subject heading of your email.

Accessibility

The University of Toronto is committed to accessibility. If you require accommodation for a

disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services at www.accessibility.utoronto.ca or (416) 978-8060 as soon as possible.

Academic Integrity

Academic integrity is fundamental to learning and scholarship at the University of Toronto. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that the U of T degree that you earn will be valued as a true indication of your individual academic achievement, and will continue to receive the respect and recognition it deserves.

You are expected to be familiar with the Code of Behaviour on Academic Matters, available at <http://www.artsci.utoronto.ca/osai/students>, which is the rule book for academic behaviour at the U of T. Potential offenses include, but are not limited to, plagiarism, cheating on tests and exams, fraudulent medical documentation and improper collaboration on marked work. For further clarification and information on plagiarism, please see *Writing at the University of Toronto* (<http://www.writing.utoronto.ca/advice/using-sources/>).

The University of Toronto treats cases of academic misconduct very seriously. All suspected cases of academic dishonesty will be investigated following the procedures outlined in the Code. The consequences for academic misconduct can be severe, including a failure in the course and a notation on your transcript. If you have any questions about what is or is not permitted in this course, do not hesitate to contact the instructor.

Class Schedule

Class schedule and the assigned readings for each session are specified below. During the semester, the class schedule may be adjusted according to the actual progress of the class. If this is the case, the due dates of assignments may also be slightly modified. In addition, some assigned readings may be replaced by others. If these are to happen, you will be given an advance notice during class sessions.

Week 1 (Sep. 11): Introduction: Class Organization

Week 2 (Sep. 18): Basic Theoretical Framework of Causal Inference (Lecture)

Dunning 2012, Chapters 1 and 5.1.

Cindy D. Kam, and Carl L. Palmer. 2008. "Reconsidering the Effects of Education on Political Participation." *Journal of Politics* 70(3).

Rachel Milstein Sondheimer and Donald P. Green. 2010. "Using Experiments to Estimate the Effects of Education on Voter Turnout." *American Journal of Political Science* 54(1).

Week 3 (Sep. 25): Laboratory Experiments

Tali Mendelberg, Christopher F. Karpowitz, and Nicholas Goedert. 2014. "Does Descriptive Representation Facilitate Women's Distinctive Voice? How Gender Composition and Decision Rules Affect Deliberation." *American Journal of Political Science* 58(2)

Cindy D. Kam and Elizabeth J. Zechmeister. 2013. "Name Recognition and Candidate Support." *American Journal of Political Science* 57(4).

Sam Whitt and Rick K. Wilson. 2007. "The Dictator Game, Fairness and Ethnicity in Postwar Bosnia." *American Journal of Political Science* 51(3).

Week 4 (Oct. 2): Field Experiments

Gwyneth H. McClendon. 2014. "Social Esteem and Participation in Contentious Politics: A Field Experiment at an LGBT Pride Rally." *American Journal of Political Science* 58(2)

Andrew Beath, Fotini Christia, and Ruben Enikolopov. 2013. "Empowering Women through Development Aid: Evidence from a Field Experiment in Afghanistan." *American Political Science Review* 107(3).

Toby Bolsen, Paul J. Ferraro, and Juan Jose Miranda. 2014. "Are Voters More Likely to Contribute to Other Public Goods? Evidence from a Large-Scale Randomized Policy Experiment." *American Journal of Political Science* 58(1)

Week 5 (Oct. 9): Survey Experiments

Michael C. Horowitz and Matthew S. Levendusky. 2011. "Drafting Support for War: Conscription and Mass Support for Warfare." *Journal of Politics* 73(2).

Daniel Corstange and Nikolay Marinov. 2012 "Taking Sides in Other People's Elections: The Polarizing Effect of Foreign Intervention." *American Journal of Political Science* 56(3).

Ezequiel Gonzales Ocantos, Chad Kiewiet de Jonge, and David W. Nickerson. 2011. "Vote Buying and Social Desirability Bias: Experimental Evidence from Nicaragua." *American Journal of Political Science* 56(1).

Week 6 (Oct. 16): Midterm Test

Week 7 (Oct. 23): Natural Experiments (Lecture)

Dunning 2012, Chapters 2, 3, 4, and 5.2-5.3.

Peter John Loewen, Royce Koop, Jaime Settle, and James H. Fowler. 2014. "A Natural Experiment in Proposal Power and Electoral Success." *American Journal of Political Science* 58(1).

Recommended: Dunning 2012, Chapters 8, 9, and 10.

Week 8 (Oct. 30): Standard Natural Experiments

William R. Hobbs, Nicholas A. Christakis, and James H. Fowler. 2014. "Widowhood Effects

in Voter Participation.” *American Journal of Political Science* 58(1).

Arindrajit Dube, Oeindrila Dube, Omar Gracia-Ponce. 2013. “Cross-Border Spillover: U.S. Gun Laws and Violence in Mexico.” *American Political Science Review* 107(3).

Mahvish Shami. 2012. “Collective Action, Clientelism, and Connectivity.” *American Political Science Review* 106(3).

Week 9 (Nov. 6): Natural Experiments 2: Instrumental Variable

Matthew Adam Kocher, Thomas B. Pepinsky, and Stathis N. Kalyvas. 2011. “Aerial Bombing and Counterinsurgency in the Vietnam War.” *American Journal of Political Science* 55(2).

Victor Menaldo. 2012. “The Middle East and North Africa’s Resilient Monarchs.” *Journal of Politics*. 74(3).

Kristopher W. Ramsay. 2011. “Revisiting the Resource Curse: Natural Disasters, the Price of Oil, and Democracy.” *International Organization* 65.

Week 10 (Nov. 13): Natural Experiments 3: Regression Discontinuity

Jeremy Ferwerda and Nicholas L. Miller. 2014. “Political Devolution and Resistance to Foreign Rule: A Natural Experiment.” *American Political Science Review* 108 (3).

Elisabeth R. Gerber and Daniel J. Hopkins. 2011. “When Mayors Matter: Estimating the Impact of Mayoral Partisanship on City Policy.” *American Journal of Politics* 55(2).

Taylor C. Boas, F. Daniel Hidalgo, and Neal P. Richardson. 2014. “The Spoils of Victory: Campaign Donations and Government Contracts in Brazil.” *Journal of Politics* 76(2).

Week 11 (Nov. 20) and Week 12 (Nov. 27): Final Paper Presentations

Syllabus Change Policy

The policies and contents of this syllabus may be changed by the instructor with advanced notice. If any, such a change will be announced during lectures.