

Draft Syllabus:

Causal Inference for the Political Economy of Development

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Course Goals

This is a course in the application of causal inference methods for research on the political economy of development. In this course you will learn how to:

1. Analyze primary and secondary data using a range of causal inference methodologies;
2. Read, understand and critique political economy research;
3. Identify the frontiers of political economy research and articulate compelling research questions;
4. Produce automated, reproducible analyses.

The course is intended to complement the following other courses:

- FLS 6397 - This class provides the core introduction to software tools and programming which will use;
- FLS 5028 & 6183 - the quantitative methods courses provide the statistical tools while the focus here is on the application of those tools for causal inference;
- FLS 6363 - game theory provides powerful tools for theorizing behaviour and many of the papers we discuss will use these tools to understand development processes;
- FLS 6387 - a comparative/international political economy class that focuses on literature in the developed world; here we focus on the politics of the development process specifically.

Prerequisites - students are required to have taken either FLS 6397 or FLS 5028 to ensure they are familiar with the basic tools for the class.

What is Causal Inference?

All good political science research projects are causal - they do not just describe the world but seek to explain it. But explanation is hard because societies are extremely complex - much more so than the physical world - and we cannot directly 'see' how one factor affects another or what would have happened if that factor never occurred. Instead, we have to gather lots of data that help us rule out lots of explanations as inconsistent and confirms one connection between an explanatory variable and an outcome variable.

Causal inference is the practice of extracting an explanation from messy data. It involves both theory - understanding the range of possible explanations - and practice - research design and statistical tools to isolate compelling explanations. The aim of this class is to enable you to be precise about what a dataset allows us to explain, and with how much confidence.

What is the Political Economy of Development?

Economics is about the mechanics of how resources are produced and distributed. Politics is about how societies make decisions over economics, or more generally about “who gets what”. Explaining processes of development - by which we mean both reduced poverty and greater political freedom and accountability - relies on both of these disciplines and their methodological tools. For example, if we want to explain why some societies choose policies which reduce poverty while others do not, we need to understand both the distributive consequences of those policies on people’s incomes *and* the political circumstances that lead to the introduction of those policies. Because the political effects of policies may be different from their economic effects, it is only by understanding both aspects that we are able to explain when development does or does not occur.

A key advantage of the political economy approach is that it uses a common set of methodological tools that overcome divisions in the social sciences. Rather than being concerned with the amount of data (Large-N or Small-N) or how data is recorded (qualitative or quantitative), the emphasis is on what the data are convincingly able to *explain* - on causal inference. In the chaos of political life and an interconnected economy, that means isolating the precise effects of one causal factor from all the other possible causes. Most importantly, it does *not* mean identifying an interesting outcome and then searching ‘backwards’ for a cause. Instead, it means identifying a specific causal variable and measuring its downstream effects.

Course Structure

Each week we will discuss one topic in the literature drawing from a range of papers. We will discuss the methods used to tackle these questions and the conclusions we are able (and not able) to draw. The literature is not organized around economic or social sectors, or particular variables, but around distinct political-economic processes.

Part I focuses on the *effects* of institutions, particularly on how the formal rules of social interaction reshape political behaviour and economic incentives. Part II focuses on the agency of individual actors within a specific institutional context - on the decision to participate, on coordinating to work as a group, on efforts to mobilize broader support and on how information alters individual choices. Part III no longer takes institutions as fixed but investigates how institutional rules are altered over time, either by gradual changes in economic processes or the more dramatic efforts of elites to maximize their power.

This is an applied course, so we are interested not just in the substantive conclusions of the literature, but also in the methods that are used to derive these conclusions. The second half of each class will therefore focus on the methodologies of causal inference that the papers use. In addition, we will discuss in depth and practice one specific causal inference methodology each week. This will begin with the simplest research design - a randomized control trial - and progress to more complex designs such as difference-in-differences and regression discontinuity. The best way of learning is by doing, so the second half of the class will be in a workshop format where we will jointly practice coding the methodology on real data.

The software to be used in this class is all open source: R (and Rstudio) for data analysis, latex for report writing and Rmarkdown for connecting R to latex and generating reproducible analyses. We will help you setup your computer to run this software if necessary.

Expectations

The best way to learn political economy is through exposure to lots of different papers that apply these methods. It is therefore essential that students read and understand the weekly readings. It is more important to understand the argument and the method of five papers than to read every single word of one paper. Students are expected to

participate fully in class discussions of the papers, and this will count for 20% of the final course grade.

Each week, there are three deliverables that students are required to upload to the course website by midnight the day before the class:

1. **A one-page (maximum) summary of the readings (20% of final course grade).** The aim is to help you structure your thoughts about the literature. This should focus on very efficiently explaining the big questions addressed by the literature, the arguments made by each author, the causal inference methods they use and the evidence they present. Note any major criticisms you have of the readings and end by summarising what we 'know' about that week's topic and what we still do not know.
2. **A reproducible data analysis (30% of final course grade)** produced in Rmarkdown (or similar) that documents your implementation of that week's methodology to a provided dataset. The aim is to increase your confidence and familiarity applying core causal inference methodologies. You will be guided through the core coding techniques in the weekly class.¹ Your analysis should combine a text explanation of the technique you are using and your conclusions with any relevant tables or charts. Please submit both your Rmarkdown file and a PDF version of the final analysis.
3. **A commented file of another student's analysis (10% of final course grade)** from the preceding week. This aim is to improve your ability to read, interpret and improve code. Comments should be provided in the rMarkdown file itself, with in-line comments marked with '#***'. Your comments should note whether the code runs without error and should always be constructive, not just identifying errors or inefficiencies but proposing alternatives. Do not spend too long on this.

At the end of the semester there will be a short test of your ability to undertake a political economy analysis on an unknown dataset. The test will be maximum 2 hours in duration and will provide you with a 'case' description, a dataset and a research question. Your task will be to identify and implement a causal inference methodology to answer the research question. You can use a computer. The final output will be a reproducible report that explains the methodology you have chosen, why it is appropriate, the assumptions required and whether they are met, and the results of your analysis. This test is not intended to be intimidating, but to make sure that everyone is able to meet the core skills of the course. It will count for 20% of the course grade.

¹The focus here is actually less on the specific regression command to be used - this will be discussed in class and is usually straightforward - and more on the preparatory and processing steps needed to make the data amenable for analysis, and on generating reproducible results.

1 Introduction to Political Economy and Causal Inference

Political Economy

1. Abhijit Banerjee and Esther Duflo. *Poor Economics*. PublicAffairs, 2012.
2. Douglass C North. *Institutions, Institutional Change and Economic Performance*. Cambridge University Press, 1990.
3. Daniel Rogger. Delivering Public Services in the Developing World : Frontiers of Research. *Society*, 4(December 2008):19–24, 2009.

Causal Inference

1. Joshua D Angrist and Steve Pischke. *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press, 2009.
2. Thad Dunning. *Natural Experiments in the Social Sciences: A Design-Based Approach*. Yale University Press, 2012.
3. Alan S. Gerber and Donald P. Green. *Field Experiments: Design, Analysis and Interpretation*. W.W. Norton & Company, 2012.
4. Miguel A Hernán and James M Robins. *Causal Inference*. 2013.

Methods - Reproducible Research Refresher

We review the fundamentals from FLS 6397 on how to generate Rmarkdown documents, how to code data analysis in R and how to generate reproducible research documents.

2 Institutional Effects

2.1 Political Effects of Institutions

1. Benjamin a. Olken. Direct Democracy and Local Public Goods: Evidence from a Field Experiment in Indonesia. *American Political Science Review*, 104(02):243–267, may 2010.
2. Daniel W. Gingerich. Can Institutions Cure Clientelism? Assessing the Impact of the Australian Ballot in Brazil. *Working paper*, (1119908), 2014.
3. Robin Harding and David Stasavage. What Democracy Does (and Doesn't do) for Basic Services: School Fees, School Inputs, and African Elections. *Journal of Politics*, (January 2012), 2014.
4. Shelby Grossman, Jonathan Phillips, and Leah R. Rosenzweig. Opportunistic Accountability : State-Society Bargaining Over Shared Interests. *Comparative Political Studies*, pages 1–31, 2017.
5. Katrina Kosec. Preschool and Politics: The Political Economy of Investment in Pre-Primary Education. 2010.
6. John R. Lott, Jr. and Lawrence W. Kenny. Did Women's Suffrage Change the Size and Scope of Government? *Journal of Political Economy*, 107(6, Part 1):1163, dec 1999.

Methods - Randomized Control Trials

An RCT is the simplest and cleanest design that can be analyzed. It provides maximum causal leverage and minimal modeling assumptions. However, is an RCT really that simple? We outline the counterfactuals framework in which RCTs take place and look at the challenges of implementation, estimation and generalizability.

We examine the evidence by analyzing the data of Olken (2010), available at <https://economics.mit.edu/files/5414>

2.2 Economic Effects of Institutions

1. Markus Goldstein and Christopher Udry. The Profits of Power: Land Rights and Agricultural Investment in Ghana. *Journal of Political Economy*, 116(6):981–1022, dec 2008.
2. Daron Acemoglu, Simon Johnson, and James A Robinson. The Colonial Origins of Comparative Development : An Empirical Investigation. *American Economic Review*, 91(5):1369–1401, 2001.
3. Lakshmi Iyer. Direct versus Indirect Colonial Rule in India : Long-term Consequences. *The Review of Economic Studies*, 42(4), 2010.
4. Stanley L Engerman and Kenneth Sokoloff. Factor Endowments, Institutions and Differeential Paths of Growth among the New World Economies: A View from Economic Historians of the United States. 1994.
5. Timothy Besley and Stephen Coate. Centralized versus Decentralized Provision of Local Public Goods: a Political Economy Approach. *Journal of Public Economics*, 87(12):2611–2637, dec 2003.
6. BenjaminA. Olken. Monitoring Corruption: Evidence from a Field Experiment in Indonesia. *Journal of Political Economy*, 115(2):200–249, apr 2007.
7. E Glaeser, Rafael La Porta, and Andrei Shleifer. Do Institutions Cause Growth ? *Journal of Economic Growth*, 9:271–303, 2004.

Methods - Instrumental Variables What if institutions aren't randomly allocated but are introduced in ways which aren't obviously biased? Instrumental variables allow us to extract the effects of 'exogenous' variation. But is any instrument really exogenous?

To understand how instrumental variables work we analyze the classic paper of Acemoglu, Johnson and Robinson (2001).

3 Organizing within Institutions

3.1 Individual Participation

1. T. Besley, R. Pande, and V. Rao. Just Rewards? Local Politics and Public Resource Allocation in South India. *The World Bank Economic Review*, 26(2):191–216, oct 2011.
2. Kate Baldwin. Why Vote with the Chief? Political Connections and Public Goods Provision in Zambia. *American Journal of Political Science*, 57(4):794–809, 2013.
3. Abhijit V Banerjee, Rukmini Banerji, Esther Duflo, Rachel Glennerster, and Stuti Khemani. Pitfalls of Participatory Programs: Evidence from a Randomized Evaluation in Education in India. *American Economic Journal: Economic Policy*, 2(1):1–30, feb 2010.
4. Martina Bjorkman, Jakob Svensson, Martina Björkman, and Jakob Svensson. Power to the People: Evidence from a Randomized Field Experiment on Community-Based Monitoring in Uganda. *Quarterly Journal of Economics*, 124(2), 2009.
5. Benjamin A. Olken. Monitoring Corruption: Evidence from a Field Experiment in Indonesia. *Journal of Political Economy*, 115(2):200–249, apr 2007.
6. Noah L. Nathan. Local Ethic Geography, Expectations of Favoritism, and Voting in Urban Ghana. *Comparative Political Studies*, (Forthcoming), 2016.

Methods - Multi-Level Modeling Individuals’ political choices are shaped by social and economic context. To study complex environments we use multi-level models that capture the level at which variation in context arises.

We draw on the analysis of Nathan (2016) to investigate how to apply multi-level models.

3.2 Masses - Cooperation and Collective Action

1. Joan Esteban and Debraj Ray. Collective Action and the Group Size Paradox. *American Political Science Review*, 95(3):663–672, 2001.
2. James Habyarimana, Macartan Humphreys, Daniel N. Posner, Jeremy M. Weinstein, N Daniel, and M Jeremy. Why Does Ethnic Diversity Undermine Public Goods Provision? *American Political Science Review*, 101(04):709–725, nov 2007.
3. Daniel N. Posner. Political Salience of Cultural Difference: Why Chewas and Tumbukas are Allies in Zambia and Adversaries in Malawi. *American Political Science Review*, 98(4):529–545, nov 2004.
4. Melissa Dell. The Persistent Effects of Peru’s Mining Mita. *Econometrica*, 78(6):1863–1903, 2010.
5. Nathan Nunn and Leonard Wantchekon. The Slave Trade and the Origins of Mistrust in Africa. *American Economic Review*, 101(7):3221–3252, 2011.
6. Lily Tsai. Social Goods, Informal Accountability and Local Public Goods Provision in Rural China. *American Journal of Political Science*, 101(2):355–372, 2007.
7. Stelios Michalopoulos and Elias Papaioannou. Divide and Rule or the Rule of the Divided ? Evidence from Africa. *NBER Working Paper*, 17184, 2010.

Methods - Survey and Lab Experiments Sometimes it’s possible for us to create experimental variation through primary data collection that incorporates survey experiments and games. However, these are inherently artificial settings and it is unclear whether behaviour might carry over to real-world settings.

We analyze the survey experiments conducted by Habyarimana et al (2007).

3.3 Elites - Political Mobilization

1. Leonard Wantchekon. Clientelism and Voting Behavior : Evidence from a Field Experiment in Benin. *World Politics*, 55(3):399–422, 2003.
2. Eddie Dekel, Matthew O Jackson, and Asher Wolinsky. Vote Buying : General Elections. *Journal of Political Economy*, 116(2), 2008.
3. Pedro C Vicente. Is Vote-buying Effective? Evidence from a Field Experiment in West Africa. *The Economic Journal*, 124(574):356–387, 2012.
4. Simeon Nichter. Vote Buying or Turnout Buying? Machine Politics and the Secret Ballot. *American Political Science Review*, 102(01):19–31, feb 2008.
5. Pablo Querubin. Political Reform and Elite Persistence: Term Limits and Political Dynasties in the Philippines. 2011.
6. .

Methods - Difference in Differences The main concern with data not drawn from experiments is that selection processes might bias the results for one group over another. But where we have data from before the experiment started, we might be able to reassure ourselves that prior differences can't explain outcomes. The difference-in-differences strategy therefore looks at relative changes rather than absolute differences. However, it's not always the case that cases that were originally similar would evolve in the same way and produce the same counterfactuals.

We explore this methodology using the data from Ejdemeyr (2015).

3.4 Information and Media

1. Tim Besley, Sandy Black, Ken Chay, Caroline Hoxby, Alain De Janvry, Seema Jayachandran, Torsten Persson, Andrea Prat, James Robinson, Elisabeth Sadoulet, David Stromberg, Duncan Thomas, Claudio Ferraz, and Frederico Finan. Exposing Corrupt Politicians: the Effects of Brazil's Publicly Released Audits on Electoral Outcomes. *Quarterly Journal of Economics*, (May), 2008.
2. Alberto Chong, Ana L De La O, and Dean Karlan. Looking Beyond the Incumbent: The Effects of Exposing Corruption on Electoral Outcomes. 2011.
3. Macartan Humphreys and Jeremy M Weinstein. Policing Politicians: Citizen Empowerment and Political Accountability in Uganda, Preliminary Analysis. 2012.
4. Ruben Enikolopov, Maria Petrova, and Ekaterina Zhuravskaya. Media and Political Persuasion: Evidence from Russia. *American Economic Review*, 101(December):3253–3285, 2011.
5. Taylor C. Boas and Daniel F. Hidalgo. Controlling the Airwaves: Incumbency Advantage and Community Radio in Brazil. *American Journal of Political Science*, 55(4):869–885, oct 2011.
6. Timothy Besley and Robin Burgess. The Political Economy of Government Responsiveness; Theory and Evidence from India. *Quarterly Journal of Economics*, 117(4):1415–1451, 2002.

Methods - Regression Discontinuity Where institutions allocate resources according to sharp thresholds, small random variations in circumstances can produce large differences in outcomes, enabling us to estimate causal effects. Yet, knowing when decisions are close to thresholds and are not manipulated demands a high standard of evidence.

We develop an understanding of regression discontinuities using data from Boas and Hidalgo (2011).

4 Changing Institutions

4.1 Modernization Theory

1. Karl W. Deutsch. Social Mobilization and Political Development. *American Political Science Review*, 55(3):493–514, 1961.
2. Rebecca Weitz-Shapiro. What Wins Votes: Why Some Politicians Opt Out of Clientelism. *American Journal of Political Science*, 56(3):568–583, jul 2012.
3. Susan C. Stokes, Thad Dunning, Marcelo Nazareno, and Valeria Brusco. *Brokers, Voters and Clientelism*. Cambridge University Press, 2013.
4. Nancy Hite-Rubin. Economic Development, and the Retreat of Political Clientelism? An Experimental Study of Modern Banking in Manila, Philippines. 2015.

Methods - Matching Sometimes there is no trick we can use to create exogenous variation. Nevertheless, we can go some way to reducing the selection problem by making sure that the units of our analysis are as similar as possible. One way to do this without all the assumptions of regressions is to ‘match’ similar treated and control units, and to drop those that can’t be matched. But there are dozens of matching methodologies that all give different results.

We explore matching techniques using data from [].

4.2 Power and Formal Institutional Change

1. Salvador Barbera and Matthew O Jackson. Choosing how to Choose: Self-Stable Majority Rules and Constitutions. *Quarterly Journal of Economics*, (August):1011–1048, 2004.
2. Daron Acemoglu and James Robinson. Why did the West Extend the Franchise? Democracy, Inequality, and Growth in Historical Perspective. *Quarterly Journal of Economics*, (November):1167–1199, 2000.
3. Alessandro Lizzeri and Nicola Persico. Why did the Elites Extend the Suffrage? Democracy and the Scope of Government, with an Application to Britain’s Age of Reform. *Quarterly Journal of Economics*, (May), 2004.
4. Eric Chaney. Sultans , the Shari ’ a and Seven Empty Ears : Economic Catastrophes , Church and State. *Seven*, 2009.
5. Ashutosh Varshney. Ideas, Interest and Institutions in Policy Change: Transformation of India’s Agricultural Strategy in the mid-1960s. *Policy Sciences*, 22(3-4):289–323, oct 1989.
6. Douglass C North, Steven B Webb, and Barry R Weingast. Limited Access Orders in the Developing World: A New Approach to the Problems of Development. 2007.

Methods

4.3 Bargaining, Credibility and Enforcement

1. Daron Acemoglu. Why not a Political Coase Theorem? Social Conflict, Commitment, and Politics. *Journal of Comparative Economics*, 31(4):620–652, dec 2003.
2. Avner Greif. Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders’ Coalition. *American Economic Review*, 83(3):525–548, 1993.
3. David Stasavage. Credible Commitment in Early Modern Europe: North and Weingast Revisited. *Journal of Law, Economics, and Organization*, 18(1):155–186, 2002.
4. P. Keefer and R. Vlaicu. Democracy, Credibility, and Clientelism. *Journal of Law, Economics, and Organization*, 24(2):371–406, nov 2007.
5. James A Robinson and Thierry Verdier. The Political Economy of Clientelism. 2003.
6. Daron Acemoglu, James A Robinson, and Rafael J Santos. The Monopoly of Violence: Evidence from Colombia. 2010.
7. Robert Bates, Avner Greif, and Smita Singh. Organizing Violence. *Journal of Conflict Resolution*, 46(5):599–628, 2002.

Methods