

Reading list for SOS9019 - Research Designs for Causal Inference 2016

** We will assume you have read these.

* Will be covered extensively during the lectures. It is good if you have a look at these. Non marked are good references, especially if you will be using these methods on your own.

AK: Andreas Kotsadam

NJ: Niklas Jakobsson

Lecture 1: Introduction, potential outcomes, and randomization. (AK)

This lecture will give an introduction to the course. We will cover the nuts and bolts of doing a randomized experiment: Pitfalls, power calculations, clustered designs, ethical discussion, and practical tips. But we will also take the opportunity to discuss some recent advances in regression analysis (yes, there are actually quite interesting things happening here) and we will also cover some discussions on external and internal validity.

Books:

The following two books are highly recommended and can be seen as the Bibles for causal inference. The first one is a really good description of the topics during this course and the second is extremely valuable once you want to implement any of the methods using Stata.

Angrist and Pischke. 2009. *Mostly Harmless Econometrics*. Princeton University Press. (and the undergrad version Angrist, J. D., & Pischke, J. S. (2014). *Mastering Metrics: The Path from Cause to Effect*. Princeton University Press.)

Cameron, Colin and Pravin Trivedi (2010), "Microeconometrics Using Stata", Stata Press.

There is also an introductory book by Angrist and Pischke that is good:

Angrist, JD & Pischke, JS (2015) *Mating Metrics: The Path from Cause to Effect*, Princeton University Press

The following books are also good references:

Cameron, Colin and Pravin Trivedi (2005), "Microeconometrics: Methods and Applications", Cambridge University Press.

Wooldridge, Jeffrey M. (2001), "Econometric Analysis of Cross Section and Panel Data", MIT Press.

Morgan, SL & Winship, C (2015) *Counterfactuals and Causal Inference: Methods and Principles for Social Research*, Cambridge University Press 2nd edition.

Overview articles:

The following cover most of the material in the course:

Angrist, J. D., and A. B. Krueger (1999), "Empirical Strategies in Labor Economics". In O. Ashenfelter and D. Card (editors), *Handbook of Labor Economics*, 3A. North-Holland.

Imbens, G. I. and J. M. Wooldridge (2009) "Recent Developments in the Econometrics of Program Evaluation", *Journal of Economic Literature*, 47(1): 5–86.

Articles

Required reading before class:

** Duflo, Esther, Rachel Glennerster, and Michael Kremer. 2006. "Using Randomization in Development Economics Research: A Toolkit." BREAD Working Paper 136. (At least read pages 1-14 and 66-75)

** Miguel, E. et al. 2014. "Promoting Transparency in Social Science Research" *Science*, 343(6166), 30-31.

Good if you have a look at before class:

* Finseraas and Kotsadam (2014). Pre-Analysis Plan for the project “Does Exposure to Ethnic Minorities Affect Support for Welfare Dualism? Evidence From a Field Experiment.” <https://andreakotsadam.files.wordpress.com/2012/02/pre-analysis-plan.pdf>

Advances in regression analysis:

* Oster, Emily. *Unobservable selection and coefficient stability: Theory and validation*. No. w19054. National Bureau of Economic Research, 2013.

Newer version on her homepage: <http://faculty.chicagobooth.edu/emily.oster/papers/selection.pdf>

* Altonji, Joseph G., Todd E. Elder, and Christopher R. Taber. "Selection on Observed and Unobserved Variables: Assessing the Effectiveness of Catholic Schools." *Journal of Political Economy* 113.1 (2005).

* Altonji, Joseph, Timothy Conley, Todd Elder, and Christopher Taber, 2013. “Methods for Using Selection on Observed Variables to Address Selection on Unobserved Variables.” On Elders homepage: <https://www.msu.edu/~telder/>

* Conley, T. G., Hansen, C. B., & Rossi, P. E. (2012). Plausibly exogenous. *Review of Economics and Statistics*, 94(1), 260-272. (Will also be covered on the IV lecture). We will also discuss the application of AET stats in:

* Nunn, N., & Wantchekon, L. (2011). The Slave Trade and the Origins of Mistrust in Africa. *American Economic Review*, 101(7), 3221-52.

For those with an extra interest in the topic:

Interesting discussions in The Journal of Economic Perspectives, Volume 24, Number 2, Spring 2010. Starting with:

Angrist and Pischke, “The Credibility Revolution in Empirical Economics: How Better Research Design Is Taking the Con out of Econometrics”

Overview in Norwegian:

Finseraas and Kotsadam (2013) "Hvordan identifisere årsakssammenhenger i ikke-eksperimentelle data? En ikke-teknisk introduksjon" *Tidsskrift for Samfunnsforskning* VOL 54, NR 3, 390–406. Pre-publication version available here: <http://www.uio.no/studier/emner/sv/oekonomi/ECON4915/v13/undervisningsmateriale/finseraas-and-kotsadam-2013.pdf>

Other good references

Berk, R. 2005. "Randomized experiments as the bronze standard". *Journal of Experimental Criminology* 1: 417-433.

Dahl, G. B., Kostøl, A. R., & Mogstad, M. (2014). Family Welfare Cultures*. *Quarterly Journal of Economics*, 129(4).

Gangl, Markus. 2010. "Causal Inference in Sociological Research". *Annual Review of Sociology*, 36(21-47).

Gelman, A., & Imbens, G. (2013). *Why ask why? Forward causal inference and reverse causal questions* (No. w19614). National Bureau of Economic Research.

Miriam Bruhn and David McKenzie (2009) "In Pursuit of Balance: Randomization in Practice in Development Field Experiments", *American Economic Journal: Applied Economics*, 1(4): 200-232.

Pritchett, L., & Sandefur, J. (2013). Context Matters for Size: Why External Validity Claims and Development Practice do not Mix. *Journal of Globalization and Development*, 4(2), 161-197.

Video

Glennster, Rachel, Abhijit Banerjee, and Esther Duflo. *RES.14-002 Abdul Latif Jameel Poverty Action Lab Executive Training: Evaluating Social Programs 2011, Spring 2011*. (Massachusetts Institute of Technology: MIT OpenCourseWare):

<http://ocw.mit.edu/resources/res-14-002-abdul-latif-jameel-poverty-action-lab-executive-training-evaluating-social-programs-2011-spring-2011/index.htm>

Podcast

EconTalk Episode with Austin Frakt. An interesting discussion about power analysis.

http://www.econtalk.org/archives/2013/05/frakt_on_medica.html

Blog

Development Impact: <http://blogs.worldbank.org/impactevaluations/>

A good blog discussing RCT's but also many other topics that we cover. Mostly development economics but many issues of general interest as well.

Excellent collection of their technical posts here:

<http://blogs.worldbank.org/impactevaluations/curated-list-our-postings-technical-topics-your-one-stop-shop-methodology>

Lecture 2: Diff-in-diff and panel strategies. (NJ)

The relevant chapters in Angrist and Pische (2015**, 2009)

Andreas' suggestions for interested reder: Morgan and Winship (1999), and Cameron and Trivedi (2010) are key texts. Finseraas and Kotsadam (2015) is a non-technical introduction, see also Schlotter et al. (2009) Econometric Methods for Causal Evaluation of Education Policies and Practices: A Non-Technical Guide IZA DP No. 4725. In addition, the following articles will be discussed:

David Card and Alan B. Krueger (1994) Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania, American Economic Review 84(4):772-793.

Tarjei Havnes and Magne Mogstad (2011) No Child Left Behind: Subsidized Child Care and Children's Long-Run Outcomes, American Economic Journal: Economic Policy 3(May 2011): 97-129.

Bertrand, Marianne, Esther Duflo and Sendhil Mullainathan (2004) How Much Should We Trust Differences-in-Differences Estimates? *Quarterly Journal of Economics*, 119(1), 249-275

Pål Schøne (2004) Labour supply effects of a cash-for-care subsidy, *Journal of Population Economics* 17(4):703-727.

Jane Waldfogel (1997) The Effect of Children on Women's Wages, *American Sociological Review* 62(2): 209-217.

Lecture 3: The Synthetic Control Method. (NJ)

Abadie, Diamond and Hainmueller (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.

Abadie, Diamond and Hainmueller (2015) Comparative Politics and the Synthetic Control Method, *American Journal of Political Science* 59(2): 495-510.

Lecture 4: Instrumental variables. (AK)

Required reading before class:

**Murray, Michael (2006b). "Avoiding invalid instruments and coping with weak instruments." *The Journal of Economic Perspectives* 20.4: 111-132.

** Deaton, Angus S. *Instruments of development: Randomization in the tropics, and the search for the elusive keys to economic development*. No. w14690. National Bureau of Economic Research, 2009.

** Imbens, Guido W. *Better LATE than nothing: Some comments on Deaton (2009) and Heckman and Urzua (2009)*. No. w14896. National Bureau of Economic Research, 2009.

Good if you have a look at before class:

*Acemoglu, D., S. Johnson, and J. A. Robinson (2001). The colonial origins of comparative development: an empirical investigation, *American Economic Review* 91(5), 1369-1401.

*Angrist, J. 2005. "Instrumental variables methods in experimental criminological research: what, why and how". *Journal of Experimental Criminology* 2:1-22.

* Apel, Robert, et al. "Using state child labor laws to identify the causal effect of youth employment on deviant behavior and academic achievement." *Journal of Quantitative Criminology* 24.4 (2008): 337-362.

*Glaeser E, La Porta L., Lopez-de-silanes F., and Schleifer, A. Do institutions cause growth? *Journal of Economic Growth*, Vol. 9(3): 271-303.

* Imbens, G. W. (2014). *Instrumental Variables: An Econometrician's Perspective* (No. w19983). National Bureau of Economic Research. (*I liked chapter 4 (pp. 25-46 of this paper)*)

* Conley, T. G., Hansen, C. B., & Rossi, P. E. (2012). Plausibly exogenous. *Review of Economics and Statistics*, 94(1), 260-272.

* Sovey, A. J. and Green, D. P. (2011). Instrumental variables estimation in political science: A readers' guide. *American Journal of Political Science*, 55(1):188 -200.

The IV chapters in Mostly harmless and Mastering metrics are also very good. I will also take some examples from Winship and Morgan (2015).

For those with an extra interest in the topic:

Bollen, K. A. (2012). "Instrumental variables in sociology and the social sciences." *Annual Review of Sociology*, 38, 37-72.

Hernan, M. and Robins, J. 2006. "Instruments for Causal Inference – An Epidemiologist's dream?" *Epidemiology* 17:4.

Murray, Michael (2006a). "The bad, the weak, and the ugly: Avoiding the pitfalls of instrumental variables estimation."

Lecture 5: Regression discontinuity. (NJ)

Angrist and Pischke (2015) *Mastering 'Metrics*. Princeton University Press, Princeton. Chapter 4:147-177.

**Angrist and Pischke (2009) *Mostly Harmless Econometrics*. Princeton University Press, Princeton. Chapter 6:249-267.

**Jacob, Zhu, Somers and Bloom (2012) *A Practical Guide to Regression Discontinuity*, MDCR, Building Knowledge to Improve Social Policy.

Andreas recommends: Lee, David S., and Thomas Lemieux. Regression discontinuity designs in economics. No. w14723. National Bureau of Economic Research, 2009. The paper includes a long list of references to applied work.

Home assignment: Write referee reports of the following two papers:

Paper number 1:

Jensen, R., & Oster, E. (2009). The power of TV: Cable television and women's status in India. *The Quarterly Journal of Economics*, 1057-1094.

Paper number 2:

Acharya, Avidit, Matthew Blackwell, and Maya Sen. In Press, 2016. "The Political Legacy of American Slavery." *Journal of Politics*.

Lates version on Maya Sen's homepage:

<http://scholar.harvard.edu/files/msen/files/slavery.pdf?m=1457214683>

The instructions are written in the last slides of IV lecture sent out earlier.

Lectures final day:

The lectures during the final days will cover GIS, Peer and neighborhood effects, as well as mechanisms in causal analysis. If we have time we will also discuss the Epidemiological approach.

Peer effects. (AK)

Required reading before class:

** Henning Finseraas, Åshild A. Johnsen, Andreas Kotsadam and Gaute Torsvik (2016) Exposure to female colleagues breaks the glass ceiling-Evidence from a combined vignette and field experiment. *European Economic Review*.

** Sacerdote, Bruce. "Peer effects in education: How might they work, how big are they and how much do we know thus far?." *Handbook of the Economics of Education* 3 (2011): 249-277.

Good if you have a look at before class:

* Angrist, J. D. (2014). The perils of peer effects. *Labour Economics*.

* Bramoullé, Yann, Habiba Djebbari, and Bernard Fortin. "Identification of peer effects through social networks." *Journal of econometrics* 150.1 (2009): 41-55.

* Raj Chetty, Nathaniel Hendren, and Lawrence F. Katz. May 2015. "The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment". Most recent version:

http://www.equality-of-opportunity.org/images/mto_paper.pdf

* Raj Chetty and Nathaniel Hendren. May 2015. "The Impacts of Neighborhoods on Intergenerational Mobility: Childhood Exposure Effects and County-Level Estimates". Most recent version:

http://www.equality-of-opportunity.org/images/nbhds_paper.pdf

- * Fryer, R., and L. Katz. "Achieving Escape Velocity: Neighborhood and School Interventions to Reduce Persistent Inequality." *American Economic Review* 103.3 (2013): 232-37.

- * Harding, David J. "Counterfactual Models of Neighborhood Effects: The Effect of Neighborhood Poverty on Dropping Out and Teenage Pregnancy¹." *American Journal of Sociology* 109.3 (2003): 676-719.

- * Hoxby, Caroline. *Peer effects in the classroom: Learning from gender and race variation*. No. w7867. National Bureau of Economic Research, 2000.

- * Hoxby, Caroline M., and Gretchen Weingarth. *Taking race out of the equation: School reassignment and the structure of peer effects*. Working paper, 2005.

- * Manski, Charles F. *Economic analysis of social interactions*. No. w7580. National Bureau of Economic Research, 2000. (Pages 23-27 are very good for our purposes)

- * Lauen, Douglas Lee, and S. Michael Gaddis. "Exposure to Classroom Poverty and Test Score Achievement: Contextual Effects or Selection?" *American Journal of Sociology* 118.4 (2013): 943-979.

- * Ludwig, J., Duncan, G. J., Gennetian, L. A., Katz, L. F., Kessler, R. C., Kling, J. R., & Sanbonmatsu, L. (2012). Neighborhood effects on the long-term well-being of low-income adults. *Science*, 337(6101), 1505-1510.

- * Lyons, Christopher J., María B. Vélez, and Wayne A. Santoro. "Neighborhood Immigration, Violence, and City-Level Immigrant Political Opportunities." *American Sociological Review* (2013).

- * Manski, Charles F. "Identification of endogenous social effects: The reflection problem." *The review of economic studies* 60.3 (1993): 531-542.

* Stinebrickner, Ralph, and Todd R. Stinebrickner. "What can be learned about peer effects using college roommates? Evidence from new survey data and students from disadvantaged backgrounds." *Journal of public Economics* 90.8 (2006): 1435-1454.

*Vigdor, Jacob, and Thomas Nechyba. "Peer effects in North Carolina public schools." *Schools and the equal opportunity problem* (2007): 73-101.

For those with an extra interest in the topic:

Acemoglu, Daron, and Joshua Angrist. "How large are human-capital externalities? evidence from compulsory-schooling laws." *NBER Macroeconomics Annual 2000, Volume 15*. MIT PRes, 2001. 9-74.

Anelli, Massimo, and Giovanni Peri. *The Long Run Effects of High-School Class Gender Composition*. No. w18744. National Bureau of Economic Research, 2013.

Beaman, Lori, et al. "Powerful women: does exposure reduce bias?." *The Quarterly Journal of Economics* 124.4 (2009): 1497-1540.

Boisjoly, Johanne, et al. "Empathy or antipathy? The impact of diversity." *The American economic review* 96.5 (2006): 1890-1905.

Brock, William A., and Steven N. Durlauf. "Interactions-based models." *Handbook of econometrics* 5 (2001): 3297-3380.

Carrell, Scott E., Bruce I. Sacerdote, and James E. West. *From natural variation to optimal policy? The Lucas critique meets peer effects*. No. w16865. National Bureau of Economic Research, 2011.

Chetty, Raj, et al. "How does your kindergarten classroom affect your earnings? Evidence from Project STAR." *The Quarterly Journal of Economics* 126.4 (2011): 1593-1660.

Dahl, Gordon B., Katrine V. Løken, and Magne Mogstad. *Peer effects in program participation*. No. w18198. National Bureau of Economic Research, 2012.

Duncan, Greg J., et al. "Peer effects in drug use and sex among college students." *Journal of Abnormal Child Psychology* 33.3 (2005): 375-385.

Epple, Dennis, and Richard Romano. "Peer effects in education: A survey of the theory and evidence." *Handbook of Social Economics* 1.11 (2011): 1053-1163. (Very good from page 41, a lot of theory before that).

Glaeser, Edward L., Bruce I. Sacerdote, and Jose A. Scheinkman. "The social multiplier." *Journal of the European Economic Association* 1.2-3 (2003): 345-353.

Sacerdote, Bruce. "Peer effects with random assignment: Results for Dartmouth roommates." *The Quarterly Journal of Economics* 116.2 (2001): 681-704.

Sampson, Robert J., Jeffrey D. Morenoff, and Thomas Gannon-Rowley. "Assessing" neighborhood effects": Social processes and new directions in research." *Annual review of sociology* (2002): 443-478.

Sampson, Robert J. "Moving and the neighborhood glass ceiling." *Science* 337.6101 (2012): 1464-1465.

Washington, Ebonya. *Female Socialization: How Daughters Affect Their Legislator Fathers' Voting on Women's Issues*. No. w11924. National Bureau of Economic Research, 2006.

Zimmerman, David J. "Peer effects in academic outcomes: Evidence from a natural experiment." *Review of Economics and Statistics* 85.1 (2003): 9-23.

Using ArcGIS for causal inference. (AK)

Good if you have a look at some of these before class:

* Knutsen et al. (2016). "Mining and local corruption in Africa" Most recent version on my homepage (see revised version):

<https://andreaskotsadam.wordpress.com/publications/>

* Flatø and Kotsadam (2015). "Droughts and gender bias in infant mortality". Most recent version on my homepage: <http://andreaskotsadam.wordpress.com/3-work-in-progress/>

* Madestam, A., Shoag, D., Veuger, S., & Yanagizawa-Drott, D. (2013). Do Political Protests Matter? Evidence from the Tea Party Movement*. *The Quarterly Journal of Economics*, 128(4):1633-1685.

* Madestam, Andreas, and David Yanagizawa-Drott. 2012. Shaping the Nation: The Effect of Fourth of July on Political Preferences and Behavior in the United States. HKS Faculty Research Working Paper Series RWP12-034, John F. Kennedy School of Government, Harvard University

* Nunn, N., & Wantchekon, L. (2011). The Slave Trade and the Origins of Mistrust in Africa. *American Economic Review*, 101(7), 3221-52.

Night time light papers:

* Almås, Auglænd-Johnsen, and Kotsadam (2014). "Poverty in China as seen from outer Space". Most recent version on my homepage: <http://andreaskotsadam.wordpress.com/3-work-in-progress/>

* Michalopoulos, S., & Papaioannou, E. (2011). *Divide and Rule or the Rule of the Divided? Evidence from Africa* (No. w17184). National Bureau of Economic Research. (Which eventually turned in to two top 5 econ publications: Michalopoulos, S., & Papaioannou, E. (2013). Pre-Colonial Ethnic Institutions and Contemporary African Development. *Econometrica*, 81(1), 113-152. Michalopoulos, S., & Papaioannou, E. (2014). National Institutions and Subnational Development in Africa. *The Quarterly journal of economics*, 129(1), 151-213.)

* Hodler, R., & Raschky, P. A. (2014). Regional favoritism. *The Quarterly Journal of Economics*, 129(2), 995-1033.

For those with an extra interest in the topic:

Pinkovskiy, M. (2013). "Economic Discontinuities at Borders: Evidence from Satellite Data on Lights at Night". Newest version at his homepage: https://www.newyorkfed.org/medialibrary/media/research/economists/pinkovskiy/Economic_Discontinuities_at_Borders.pdf

Melissa Dell's Lecture notes. [GIS For Applied Economists \(Lecture Notes Only\)](#)

Masayuki Kudamatsu's fantastic course. All material is available online, I highly recommend this course: <https://sites.google.com/site/mkudamatsu/gis>

Mechanisms in casual analysis (AK)

Good if you have a look at before class:

* Bullock, J. G., Green, D. P., & Ha, S. E. (2010). Yes, but what's the mechanism?(don't expect an easy answer). *Journal of personality and social psychology*, 98(4), 550.

* Acharya, A., Blackwell, M., and Sen, M. (2015b). Explaining causal findings without bias: Detecting and assessing direct effects. Forthcoming apsr. Most recent version on Maya Sen's homepage:

<http://scholar.harvard.edu/files/msen/files/direct-effects.pdf?m=1445302372>

* Imai, K., Keele, L., Tingley, D., and Yamamoto, T. (2011). Unpacking the black box of causality: Learning about causal mechanisms from experimental and observational studies. *American Political Science Review*, 105(4):765 – 789

The Epidemiological approach (AK: Extra topic, will perhaps be squeezed in)

Good if you have a look at before class:

*Fernández, R. (2011). Does culture matter? In Benhabib, J., Jackson, M. O., and Bisin, A., editors, *Handbook of Social Economics*, pages 481{510. North-Holland: Elsevier.

*Polavieja, J. G. (2015). Capturing culture a new method to estimate exogenous cultural effects using migrant populations. *American Sociological Review*, 80(1):166{191.

For those with an extra interest in the topic:

Fernández, R. (2007). Women, work, and culture. *Journal of the European Economic Association*, 5(2-3):305-332.

Fernández, R. and Fogli, A. (2009). Culture: An empirical investigation of beliefs. *American Economic Journal: Macroeconomics*, 1(1):146-177.

Guiso, L., Sapienza, P., and Zingales, L. (2006). Does culture affect economic outcomes? *Journal of Economic Perspectives*, 20(2):23

Helliwell, J. F., Wang, S., and Xu, J. (2014). How durable are social norms? Immigrant trust and generosity in 132 countries. NBER Working Paper No. 19855, National Bureau of Economic Research.

Frank, K. and Hou, F. (2015). Source-country gender roles and the division of labor within immigrant families. *Journal of Marriage and Family*, 77(2):557{574.

Nannestad, P., Svendsen, G. T., Dinesen, P. T., and Sonderskov, K. M. (2014). Do institutions or culture determine the level of social trust? the natural experiment of migration from non-western to western countries. *Journal of Ethnic and Migration Studies*, 40(4):544.

Uslaner, E. M. (2011). Trust, diversity, and segregation in the united states and the united kingdom. *Comparative Sociology*, 10(2):221