



DEPARTMENT OF POLITICAL SCIENCE

SK30007 Advanced statistical approaches for social scientists, 7.5 credits

Avancerade statistiska metoder för samhällsvetare , 7,5 högskolepoäng

Third-cycle level / Forskarnivå

Reading and reference list for SK30007

This reading and reference list was confirmed by Department of Political Science 2022-10-27,
and is valid from Spring semester 2023.

The reading and reference list is available on the next page.

List of Literature

Books:

Mehmetoglu, M., & Jakobsen, T. G. (2016). *Applied statistics using Stata: a guide for the social sciences*. Sage. **(for Stata users)**

Menard, S. (2002). *Applied logistic regression analysis*. London: Sage publications.

Lewis-Beck, C., & Lewis-Beck, M. (2015). *Applied regression: An introduction*. London: Sage publications.

Long, J. S. & Freese, J. (2014). *Regression Models for Categorical and Limited Dependent Variables Using Stata*, 3:rd Edition. Stata Press, Texas. **(for Stata users)**

Snijders, T. A. B. & Bosker, R. J. (2012). *Multilevel analysis: An introduction to basic and advanced multilevel modeling* (2nd ed.). Los Angeles: Sage.

Brown, T. A. (2015). *Confirmatory factor analysis for applied research* (2nd edition). New York: Guilford Press.

Recommended:

Cotton, R. (2013). *Learning R: a step-by-step function guide to data analysis*. " O'Reilly Media, Inc."

Klein, R. B. (2016). *Principles and practice of Structural Equation Modeling* (4th ed.). New York: Guilford Press

i. Linear regression analysis/Logit

- Lewis-Beck and Lewis-Beck
- Menard
- Brambor, T., Clark, W. R., & Golder, M. (2006). Understanding Interaction Models: Improving Empirical Analyses. *Political Analysis*, 14: 63-82.
- Berry, W. D., DeMeritt, J. H., & Esarey, J. (2010). Testing for interaction in binary logit and probit models: is a product term essential?. *American Journal of Political Science*, 54(1), 248-266.
- Mehmetoglu & Jakobsen ch. 3-7 **(for Stata users)**
- Long & Freese, ch. 5-8 **(for Stata users)**

ii. Causal research designs with observational data

Difference in Difference (DD)

Bertrand, Marianne, Esther Dufo, and Sendhil Mullainathan. 2004. How Much Should We Trust Differences-in-Differences Estimates? *Quarterly Journal of Economics* 119(1): 249-75.

Wing, C., Simon, K., & Bello-Gomez, R. A. (2018). Designing difference in difference studies: best practices for public health policy research. *Annual review of public health*, 39.

Goodman-Bacon, A. (2021). Difference-in-differences with variation in treatment timing. *Journal of Econometrics*.

Instrumental Variables (IV)

Angrist, Joshua, D., and Alan B. Krueger. 2001. "Instrumental Variables and the Search for Identification: From Supply and Demand to Natural Experiments." *Journal of Economic Perspectives*, 15 (4): 69-85.

Stock, J. H., and M. Yogo. 2005. Test for weak instruments in linear IV regression.
<https://www.nber.org/papers/t0284>

Regression Discontinuity (RD)

Imbens, G. W., & Lemieux, T. (2008). Regression discontinuity designs: A guide to practice. *Journal of econometrics*, 142(2), 615-635.

De la Cuesta, B., & Imai, K. (2016). Misunderstandings about the regression discontinuity design in the study of close elections. *Annual Review of Political Science*, 19, 375-396.

Cattaneo, M. D., Idrobo, N., & Titiunik, R. (2019). A Practical Introduction to Regression Discontinuity Designs: Foundations. *arXiv preprint arXiv:1911.09511*. (**Pages 88-108** on validation of RD designs)

Matching Approaches

Elizabeth A. Stuart. 2010. "Matching Methods for Causal Inference: A Review and a Look Forward." *Statist. Sci.* 25 (1) 1 - 21. <https://doi.org/10.1214/09-STS313>

Ho et. al. 2007. Matching as Nonparametric Preprocessing for Reducing Model Dependence in Parametric Causal Inference. *Political Analysis*, Vol. 15: 199-236

Some helpful R links:

https://rpubs.com/wsundstrom/t_ivreg

<https://rdpackages.github.io/rdrobust/>)

<https://cran.r-project.org/web/packages/Matching/index.html>

iii. Multilevel analysis

Textbook:

Snijders, T. A. B. & Bosker, R. J. (2012). *Multilevel analysis: An introduction to basic and advanced multilevel modeling* (2nd ed.). Los Angeles: Sage

Articles:

Enders, C. K., & Tofighi, D. (2007). Centering predictor variables in cross-sectional multilevel models: A new look at an old issue. *Psychological Methods*, 12(2), 121-138.

Peugh, J. L. (2010). A practical guide to multilevel modeling. *Journal of School Psychology*, 48, 85-112.

Raudenbush, S. W. (2001). Comparing personal trajectories and drawing causal inferences from longitudinal data. *Annual Review of Psychology*, 52, 501-525.

Steenbergern M. R., & Jones, B. S. (2002). Modeling multilevel data structures. *American Journal of Political Science*, 46(1), 218-237.

West, S. G., Ryu, E., Kwok, O-M., & Cham, H. (2011). Multilevel modeling: Current and future applications in personality research. *Journal of Personality*, 79(1), 2-55.

iv. CFA/SEM

Textbook:

Brown, T. A. (2015). *Confirmatory factor analysis for applied research* (2nd edition). New York: Guilford Press.

Klein, R. B. (2016). *Principles and practice of Structural Equation Modeling* (4th ed.). New York: Guilford Press

Articles:

Bollen, K. A., & Noble, M. D. (2011). Structural equation models and the quantification of behavior. *PNAS*, 108(3), 15639-15646.

Beran, T., & Violato, C. (2010). Structural equation modeling in medical research: A primer. *BMC Research Notes*, 3:267.