

## Course literature

### *Books*

Gelman, A & Hill, J. Data Analysis Using Regression and Multilevel/Hierarchical Models. Cambridge University Press.

Angrist, J D & Pischke, J-S. Mostly Harmless Econometrics: An Empiricist's Companion. Princeton University Press. Possibly available at

[https://www.researchgate.net/publication/51992844\\_Mostly\\_Harmless\\_Econometrics\\_An\\_Empiricist's\\_Companion/download](https://www.researchgate.net/publication/51992844_Mostly_Harmless_Econometrics_An_Empiricist's_Companion/download)

### *Scientific articles and other sources*

See the **Reading instructions** below for each lecture

## Reading instructions

\* indicates non-mandatory reading

All literature is supposed to be read prior to the lecture/seminar/lab.

*Note: Some minor additional readings may be added and some of the literature to the seminar may be replaced (in yellow)*

### **Lecture 1**

Silberzahn, R., Uhlmann, E. L., Martin, D. P., Anselmi, P., Aust, F., Awtrey, E., ... & Carlsson, R. (2018). Many analysts, one data set: Making transparent how variations in analytic choices affect results. *Advances in Methods and Practices in Psychological Science*, 1(3), 337-356. Available at <https://journals.sagepub.com/doi/pdf/10.1177/2515245917747646>

Engel, R. J. & Schutt, R. K. (Eds.). (2014). Conceptualization and measurement. Chapter 4 in *Fundamentals of social work research*. Sage Publications. Available at [https://us.sagepub.com/sites/default/files/upm-binaries/61666\\_Chapter\\_4.pdf](https://us.sagepub.com/sites/default/files/upm-binaries/61666_Chapter_4.pdf)

### **Lab1**

No readings

### **Lecture 2:1**

Gelman, A & Hill, J. Data Analysis Using Regression and Multilevel/Hierarchical Models. Cambridge University Press. Chapters 3 and 4.

Frost, J. (2017). Understanding Interaction Effects in Statistics. Blogpost available at <http://statisticsbyjim.com/regression/interaction-effects/>

\* Angrist, J D & Pischke, J-S. Mostly Harmless Econometrics: An Empiricist's Companion. Princeton University Press. Chapters 1, (2), 3.1 and 3.2 (no necessity to understand the math). Possibly available at [https://www.researchgate.net/publication/51992844\\_Mostly\\_Harmless\\_Econometrics\\_An\\_Empiricist's\\_Companion/download](https://www.researchgate.net/publication/51992844_Mostly_Harmless_Econometrics_An_Empiricist's_Companion/download)

## **Lecture 2:2**

*To be discussed at seminar. It is crucial to have read prior to seminar, reading instructions will be available on course page.*

Magnusson, C. (2010). Why Is There a Gender Wage Gap According to Occupational Prestige?: An Analysis of the Gender Wage Gap by Occupational Prestige and Family Obligations in Sweden. *Acta Sociologica*, 53(2), 99–117. Available at <https://journals.sagepub.com/doi/abs/10.1177/0001699310365627>

## **Lab 2**

Gelman, A & Hill, J. *Data Analysis Using Regression and Multilevel/Hierarchical Models*. Cambridge University Press. Chapters 3 and 4.

## **Lecture 3:1**

Gangl, M. (2010). Causal inference in sociological research. *Annual review of sociology*, 36, 21-47.

Gelman, A & Hill, J. *Data Analysis Using Regression and Multilevel/Hierarchical Models*. Cambridge University Press. Chapters 9 and 10.3

## **Lecture 3:2**

*To be discussed at seminar. It is crucial to have read prior to seminar, reading instructions will be available on course page.*

Massoglia, M. (2008). Incarceration, health, and racial disparities in health. *Law & Society Review*, 42(2), 275-306. Available at <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1540-5893.2008.00342.x>

## **Lab 3**

Gelman, A & Hill, J. *Data Analysis Using Regression and Multilevel/Hierarchical Models*. Cambridge University Press. Pages 206-209.

Olmos, A., & Govindasamy, P. (2015). Propensity scores: a practical introduction using R. *Journal of MultiDisciplinary Evaluation*, 11(25), 68-88. Available at [http://journals.sfu.ca/jmde/index.php/jmde\\_1/article/view/431/414](http://journals.sfu.ca/jmde/index.php/jmde_1/article/view/431/414)

#### Lecture 4:1

Allison, P. D. 2009. Fixed effects regression models: SAGE publications (chapter 2).

Angrist, J D & Pischke, J-S. Mostly Harmless Econometrics: An Empiricist's Companion. Princeton University Press. Chapter 5. Possibly available at

[https://www.researchgate.net/publication/51992844\\_Mostly\\_Harmless\\_Econometrics\\_An\\_Empiricist's\\_Companion/download](https://www.researchgate.net/publication/51992844_Mostly_Harmless_Econometrics_An_Empiricist's_Companion/download)

Gelman, A & Hill, J. Data Analysis Using Regression and Multilevel/Hierarchical Models. Cambridge University Press. Chapter 10.7

Collischon, M., & Eberl, A. (2020). Let's talk about fixed effects: Let's talk about all the good things and the bad things. *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 72(2), 289-299.

<https://link.springer.com/article/10.1007/s11577-020-00699-8>

#### Lecture 4:2

*To be discussed at seminar. It is crucial to have prepared prior to the seminar, reading instructions will be available on course page. Note that all groups will be assigned to read one paper each, to present and discuss in class.*

**Group 1:** Gangl, M., & Ziefle, A. (2009). Motherhood, labor force behavior, and women's careers: An empirical assessment of the wage penalty for motherhood in Britain, Germany, and the United States. *Demography*, 46(2), 341-369. Available at

<https://link.springer.com/content/pdf/10.1353%2Fdem.0.0056.pdf>

**Group 2:** De Neve, J. E., & Oswald, A. J. (2012). Estimating the influence of life satisfaction and positive affect on later income using sibling fixed effects. *Proceedings of the National Academy of Sciences*, 109(49), 19953-19958. Available at

<http://www.pnas.org/content/pnas/109/49/19953.full.pdf>

**Group 3:** Amato, P. R., & Anthony, C. J. (2014). Estimating the effects of parental divorce and death with fixed effects models. *Journal of Marriage and Family*, 76(2), 370-386. Available at

<https://onlinelibrary.wiley.com/doi/abs/10.1111/jomf.12100>

**Group 4:** Bygren, M., & Szulkin, R. (2010). Ethnic environment during childhood and the educational attainment of immigrant children in Sweden. *Social Forces*, 88(3), 1305-1329. Available at

<https://academic.oup.com/sf/article-abstract/88/3/1305/1936392>

#### Lab 4

Gelman, A & Hill, J. Data Analysis Using Regression and Multilevel/Hierarchical Models. Cambridge University Press. Chapter 10.7

Colonescu, C. 2016 . Principles of Econometrics with R. Chapter 15. Available at

<https://bookdown.org/ccolonescu/RPoE4/panel-data-models.html> (html-version) and at

<https://bookdown.org/ccolonescu/RPoE4/RPoE.pdf> (pdf-version).

### **Lecture 5:1**

Gelman, A & Hill, J. Data Analysis Using Regression and Multilevel/Hierarchical Models. Cambridge University Press. 10.5 and 10.6, and p.228-229

Angrist, J D & Pischke, J-S. Mostly Harmless Econometrics: An Empiricist's Companion. Princeton University Press. Chapter 4.1 and 5.2. Possibly available at

[https://www.researchgate.net/publication/51992844\\_Mostly\\_Harmless\\_Econometrics\\_An\\_Empiricist's\\_Companion/download](https://www.researchgate.net/publication/51992844_Mostly_Harmless_Econometrics_An_Empiricist's_Companion/download)

\* Abadie, A., Diamond, A., & Hainmueller, J. (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.

\* Angrist, J. D., & Krueger, A. B. (2001). Instrumental variables and the search for identification: From supply and demand to natural experiments. Journal of Economic perspectives, 15(4), 69-85.

### **Lecture 5:2**

*To be discussed at seminar. It is crucial to have read prior to seminar, reading instructions will be available on course page.*

Hjalmarsson, R & Lindquist, M. J. The causal effect of military conscription on crime. The economic journal. 129, 2522-2562.

### **Lab 5**

Angrist, J D & Pischke, J-S. Mostly Harmless Econometrics: An Empiricist's Companion. Princeton University Press. Chapter 5.2. Possibly available at

[https://www.researchgate.net/publication/51992844\\_Mostly\\_Harmless\\_Econometrics\\_An\\_Empiricist's\\_Companion/download](https://www.researchgate.net/publication/51992844_Mostly_Harmless_Econometrics_An_Empiricist's_Companion/download)

**Remaining meetings:** No required readings

## Extra readings (not mandatory)

*Below are some highly cited or interesting papers, or useful blogs/websites for the different themes covered at the seminars*

### OLS Seminar

#### **Articles:**

Colquhoun, D. (2014). An investigation of the false discovery rate and the misinterpretation of p-values. *Royal Society open science*, 1(3), 140216. (P-values)

Wasserstein, R. L., & Lazar, N. A. (2016). The ASA statement on p-values: context, process, and purpose. *The American Statistician*, 70(2), 129-133. (P-values)

Benjamin, D. J., Berger, J. O., Johannesson, M., Nosek, B. A., Wagenmakers, E. J., Berk, R., ... & Johnson, V. E. (2018). Redefine statistical significance. *Nature human behaviour*, 2(1), 6-10. (P-values)

Schiegg, H. (2010). Simple means to improve the interpretability of regression coefficients. *Methods in Ecology and Evolution*, 1(2), 103-113. (interpretability of coefficients)

Brambor, T., Clark, W. R., & Golder, M. (2006). Understanding interaction models: Improving empirical analyses. *Political analysis*, 14(1), 63-82. (Interaction)

VanderWeele, T. J. (2019). Principles of confounder selection. *European journal of epidemiology*, 34, 211-219. (variable selection)

Cinelli, C., Forney, A., & Pearl, J. (2022). A crash course in good and bad controls. *Sociological Methods & Research*, 00491241221099552. (variable selection)

#### **Blogs/websites:**

What's a good value for R-squared? Robert Nau. <https://people.duke.edu/~rnau/rsquared.htm>

Andrew Gelman (2018). You need 16 times the sample size to estimate an interaction than to estimate a main effect. <https://statmodeling.stat.columbia.edu/2018/03/15/need16/#comment-685197>

### Matching Seminar

#### **Articles:**

King, G., & Nielsen, R. (2019). Why propensity scores should not be used for matching. *Political analysis*, 27(4), 435-454.

Stuart, E. A. (2010). Matching methods for causal inference: A review and a look forward. *Statistical science: a review journal of the Institute of Mathematical Statistics*, 25(1)

#### **Blogs/Websites:**

DAVID MCKENZIE. (2021). "What do you need to do to make a matching estimator convincing? Rhetorical vs statistical checks". World Bank Blog.

<https://blogs.worldbank.org/impactevaluations/what-do-you-need-to-make-matching-estimator-convincing-rhetorical-vs-statistical>

## **Fixed Effect Seminar**

### **Articles:**

Imai, K., & Kim, I. S. (2021). On the use of two-way fixed effects regression models for causal inference with panel data. *Political Analysis*, 29(3), 405-415.

Imai, K., & Kim, I. S. (2019). When should we use unit fixed effects regression models for causal inference with longitudinal data? *American Journal of Political Science*, 63(2), 467-490.

## **Instrumental Variable Seminar**

### **Articles:**

Betz, T., Cook, S. J., & Hollenbach, F. M. (2018). On the use and abuse of spatial instruments. *Political Analysis*, 26(4), 474-479.

Mellon, J. (2023). Rain, Rain, Go Away: 195 Potential Exclusion-restriction Violations for Studies Using Weather as an Instrumental Variable. Available at SSRN 3715610.

Felton, C., & Stewart, B. M. (2022). Handle with care: a sociologist's guide to causal inference with instrumental variables.

Lal, A., Lockhart, M., Xu, Y., & Zu, Z. (2023). How much should we trust instrumental variable estimates in political science? Practical advice based on over 60 replicated studies. arXiv preprint arXiv:2303.11399.

### **Blogs/Websites:**

Andrew Gelman (2020) Piranhas in the rain: Why instrumental variables are not as clean as you might have thought. <https://statmodeling.stat.columbia.edu/2020/10/20/piranhas-in-the-rain-why-instrumental-variables-are-not-as-clean-as-you-might-have-thought/>

## **General**

FLORENCE KONDYLIS and DAVID MCKENZIE. (2023). "A Curated List of Our Postings on Technical Topics – Your One-Stop Shop for Methodology". World Bank Blog.

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