

# Econometrics II

## Reading List

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### Lecturer:

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### Textbooks

#### 1) Main Textbooks

- WD - Wooldridge (2016) *Introductory Econometrics*, MIT Press, 2016
- MM - Angrist and Pischke (2014) *Mastering Metrics*, Princeton University Press, Princeton and Oxford.
- MHE - Angrist and Pischke (2009) *Mostly Harmless Econometrics*, Princeton University Press, Princeton and Oxford.

An older version of WD should also be fine. You will have to look for the content in the right places

#### 2) Additional Textbooks

A more advanced treatment of some of these materials can be found in:

- JD - Johnston and DiNardo (1997) *Econometric Methods*, McGraw Hill
- Greene (2018) *Econometric Analysis*, Pearson
- Wooldridge (2010) *Econometric Analysis of Cross Section and Panel Data*, MIT Press

### Lecture 1: OLS with Matrix Algebra

#### Required Reading:

- WD – Appendix E (pp. 720-722)  
You can also review Chapters 2 and 3 in WD

#### Additional Reading:

- JD – pp. 69-72

- If you want to read more on matrix algebra (highly recommended that will have very large benefits for the whole rest of the course) you should read the relevant chapters in Simon and Blume (see LSF).

### **Lecture 2: OLS – GM Assumptions, Unbiasedness, Variance-Covariance Matrix***Required*

*Reading:*

- *WD* – Appendix E (pp. 723-725)  
You can also review Chapters 2 and 3 in *WD*

*Additional Reading:*

- *JD* – pp. 71 -72, pp. 86-88

### **Lecture 3: Projection Matrix, Gauss-Markov Theorem, Normality Assumption and t-Tests**

*Required Reading:*

- *WD* – Appendix E.3 (pp. 725-728) plus Sections 3-4c, 3-5, 4-2  
Note: the proof that OLS is BLUE in the appendix of *WD* is the same as in the lecture but *WD* calls the alternative estimator  $\tilde{\beta} = A'y$  while in the lecture notes we use  $\tilde{\beta} = A(X)y$  (without the prime).

*Additional Reading:*

- *JD* – pp. 87-90

### **Lecture 4: Testing, Dummy Variables, Perfect Multicollinearity**

*Required Reading:*

- *WD* – Sections 4.5, 7-1, 7-2, 7-3, 7-4

*Additional Reading:*

- *JD* – pp. 90-97

### **Lecture 5: Violation of GM3: Omitted Variable Bias, Measurement Error**

*Required Reading:*

- *WD* – Sections 3-3b, 3-3c, 9-2, 9-4b

### **Lecture 6: Violation of GM3: Simultaneity, Introduction to Randomized Experiments**

*Required Reading:*

- *WD* – Sections 16-1, 16-2, *MM* – Section 1.1

*Additional Reading:*

- *MHE* – Sections 2.1, 2.2

## Lecture 7: Randomized Experiments

### Required Reading:

- MM – Chapter 1

### Additional Reading:

- MHE – Chapter 2
- Krueger, A. “Experimental Estimates of Education Production Functions”, *The Quarterly Journal of Economics*, vol. 114, no. 2, pp. 497-532.  
<http://www.jstor.org/stable/2587015?origin=JSTOR-pdf>
- Nicholas Bloom, James Liang, John Roberts, Zhichun Jenny Ying; Does Working from Home Work? Evidence from a Chinese Experiment , *The Quarterly Journal of Economics*, Volume 130, Issue 1, 1 February 2015, Pages 165–218  
<https://academic.oup.com/qje/article/130/1/165/2337855>

## Lecture 8: Instrumental Variables – Part 1

### Required Reading:

- WD – Sections 15-1, 15-1a, 15-2, 15-3

### Additional Readings:

- MHE – Sections 4.1, 4.1.1.,4.1.2.  
Angrist, Joshua D., and Alan B. Krueger. “Does Compulsory School Attendance Affect Schooling and Earnings?” *The Quarterly Journal of Economics*, vol. 106, no. 4, 1991, pp. 979-1014  
[www.jstor.org/stable/2937954](http://www.jstor.org/stable/2937954)

## Lecture 9: Instrumental Variables – Part 2

### Required Reading:

- JD 5.5
- MHE – Section 4.4.

## Lecture 10: Panel Data

### Required Reading:

- WD 14-1, 14-2

## Lecture 11: Differences-in-Differences

### Required Reading:

- WD 13-2, MM - Chapter 5

### Additional Reading:

- MHE – Chapter 5

- Card, D. and A. Krueger (1994) “Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania”, *American Economic Review*, vol. 84, pp. 772-93.  
<http://emlab.berkeley.edu/users/card/papers/min-wage-ff-nj.pdf>
- Waldinger, F. (2010) “Quality Matters: The Expulsion of Professors and the Consequences for PhD Student Outcomes in Nazi Germany”, *Journal of Political Economy*, vol. 118, no. 4, pp. 787-831.  
<http://www.jstor.org/stable/pdfplus/10.1086/655976.pdf?acceptTC=true>

## Lecture 12: Regression Discontinuity Design

### *Required Reading:*

- MM - Chapter 4

### *Additional Reading:*

- MHE – Chapter 6
- Lee, D. and T. Lemieux (2010) “Regression Discontinuity Designs in Economics,” *Journal of Economic Literature*, vol. 48, no. 2, pp. 281-355.  
<http://www.princeton.edu/~davidlee/wp/RDDEconomics.pdf>
- Abdulkadiroğlu, Atila, Joshua Angrist, and Parag Pathak (2014) "The Elite Illusion: Achievement Effects at Boston and New York Exam Schools," *Econometrica* 82, no. 1 pp: 137-96.  
<http://www.jstor.org/stable/24029173>