Modern Econometrics using R

for Master Students

CONTENT

The course offers a survey of modern econometrics which is primarily designed to solve the fundamental evaluation problem. It will combine lecture style and practical exercises using R in class. Students should install RStudio and Mentimeter (App) as a Classroom Response System before the first session.

Topics covered are:		
	-	Modern approach to Econometrics
	-	Fundamental evaluation problem
	-	Potential outcome approach
	-	Methods: RCT, IV, BAE, DiD, RDD
	-	Labor Market and Education

LECTURE

Time & Location:		
	-	Friday, November 15, 3 pm – 6 pm, PC-pool 1*
	-	Saturday, November 16, 10 am – 1 pm, KG1, PC-pool 3*
	-	Friday, December 13, 3 pm – 6 pm, PC-pool 3*
	-	Saturday, December 14, 10 am – 1 pm, PC-pool 3*
	-	Friday, January 17, 3 pm – 6 pm, PC-pool 3*
	-	Saturday, January 18, 10 am – 1 pm, PC-pool 3*

*Werthmannstr. 4

EXAMINATION MODALITIES

Credit points	4 ECTS	
Examination:	Final Exam (60 minutes)	
Area of Study	M.Sc. Economics:	
	E&P:	Elective Courses
	Finance:	Elective Courses
	ISNE:	Elective Courses
	VWL-Master, PO 2014:	
	Spezialisierungsbereich:	Empirical Economics
		Labor, Human Resource Management & Organization
	BWL-Master:	
	Wahlpflichtbereich II:	VWL
		Quantitative Methoden

LITERATURE

Main references:

Angrist, J.D., & Pischke, J. (2015): Mastering 'Metrics, The Path from Cause to Effect, Princeton University Press.

Boeri, T., & Van Ours, J. (2013). The economics of imperfect labor markets. 2nd edition. Princeton University Press.

Heiss, F. (2016): Using R for Introductory Econometrics, Düsseldorf.

Wooldridge, J. (2018): Introductory Econometrics, A Modern Approach, 7th edition, Cengage Learning.

November 15 & 16

Introduction to modern econometrics: Randomized controlled Trials, Fundamental evaluation problem, Identification, OLS and binary explanatory variable, potential outcome approach

Angrist, J.D., & Pischke, J. (2015): Mastering 'Metrics, The Path from Cause to Effect, Princeton University Press, 1-97.

Angrist, J. D., & Pischke, J. (2017): Undergraduate Econometrics Instruction: Through our Classes, Darkly, Journal of Economic Perspectives, Vol. 31, 125-144.

Athey, S., & Imbens, G.W. (2017): The State of Applied Econometrics: Causality and Policy Evaluation, Journal of Economic Perspectives, Vol. 31, 3-32.

Heiss, F. (2016): Using R for Introductory Econometrics, Düsseldorf, 1-89.

Wooldridge, J. (2018): Introductory Econometrics, A Modern Approach, 7th edition, Cengage Learning, Chapters 2.7, 3.7, 4.7.

December 13 & 14

OLS and IV

Angrist, J.D., & Pischke, J. (2015): Mastering 'Metrics, The Path from Cause to Effect, Princeton University Press, 98-146 and 209-234.

Heiss, F. (2016): Using R for Introductory Econometrics, Düsseldorf, 219-225.

Hille, A., & Schupp, J. (2014): How Learning a Musical Instrument affects the Development of Skills, Economics of Education Review, 44, 56-82.

January 17 & 18

DiD and RDD

Angrist, J.D., & Pischke, J. (2015): Mastering 'Metrics, The Path from Cause to Effect, Princeton University Press, 147-208.

Heiss, F. (2016): Using R for Introductory Econometrics, Düsseldorf, 197-206.

Wooldridge, J. (2018): Introductory Econometrics, A Modern Approach, 7th edition, Cengage Learning, Chapters 13.2.