Institute of Economics
Prof. Dr. Alexander Spermann
Summer term 2020

Labor Economics using R

for Master Students

The course is taught digitally via Zoom.

If you are interested in taking the course, please sign-in to the course on Ilias, we will then send you the invitation link on time.

CONTENT

The course covers empirical labor economics and modern econometrics. 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
- Introduction to Causal Machine Learning
- Labor Market and Education

LECTURE

Time & Location:
Friday, June 26, 3 pm – 6 pm
Saturday, June 27, 10 am - 1pm
Friday, July 10, 3 pm – 6 pm
Saturday, July 11, 10 am – 1 pm
Friday, July 24, 3 pm – 6 pm
Saturday, July 25, 10 am – 1 pm

EXAMINATION MODALITIES

Students who wrote the exam in "Modern Econometrics Using R" cannot write the exam in this course

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

VWL-Master, PO 2014:

Wahlpflichtbereich II:	VWL
	Quantitative Methoden

In case of any issues, please send an email to spermann@alexander-spermann.de or judith.mueller@vwl.uni-freiburg.de

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.

James, G. et al. (2017): An Introduction to Statistical Learning, Springer, New York.

Klinkhammer, D., & Spermann, A. (2020): Eine Einführung in die empirische Kausalanalyse und Machine Learning mit R, UTB-Lehrbuch, wbv, Gütersloh, forthcoming.

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

June 26 & 27

Introduction to modern econometrics: Randomized Controlled Trials (RCTs), 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.

Heckman, J.J. (2020): Randomization and Social Policy Evaluation Revisited, IZA Discussion Paper No. 12882.

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

Klinkhammer, D., & Spermann, A. (2020): Eine Einführung in die empirische Kausalanalyse und Machine Learning mit R, UTB-Lehrbuch, wbv, Gütersloh, forthcoming, R codes on Github.

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

July 10 & 11

RDD, IV and DiD

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.

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

Klinkhammer, D., & Spermann, A. (2020): Eine Einführung in die empirische Kausalanalyse und Machine Learning mit R, UTB-Lehrbuch, wbv, Gütersloh, forthcoming, R codes on Github.

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

July 24 & 25

Matching, Simulation-based Inference (SBI) and Machine Learning

James, G. et al. (2017): An Introduction to Statistical Learning, Springer, New York, Chapter 5 & 6.

Goller, D. et al. (2019): Does the Estimation of the Propensity Score by Machine Learning

Improve Matching Estimation? The Case of Germany's Programmes for Long Term Unemployed

IZA Discussion Papers, No. 12526

Klinkhammer, D., & Spermann, A. (2020): Eine Einführung in die empirische Kausalanalyse und Machine Learning mit R, UTB-Lehrbuch, wbv, Gütersloh, forthcoming, R codes on Github.