

Econometrics I

Course Number	M.WIWI-QMV.0004
Course Type and Credits	Lecture, practical and tutorial, 6 ECTS
Lecturer	Prof. Herwartz
Cycle	every winter term
Examination format	Exam at the end of the semester
Course Description	<p>This course aims to study panel data econometric techniques in an intuitive and practical way and to provide the skills and understanding to read and evaluate empirical literature and to carry out empirical research. Empirical evaluation of economic models is an important feature of the study and application of economics. The course is concerned with the application of econometric methods, with little emphasis on the mathematical aspects of the subject (which may be studied in other modules). The computer software package STATA will be used for practical work. Previous knowledge of intermediate econometrics is required.</p>
Course Content	<p>1. The Multiple Regression Model</p> <ul style="list-style-type: none"> -Economic vs. econometric model-labor demand in a neoclassical setting -The basic model -Multicollinearity -The normal linear model <p>2 The linear model with nonscalar identity covariance</p> <ul style="list-style-type: none"> -The GLS-estimator -Prediction -The general linear statistical model with unknown covariance matrix -Asymptotic results -A heteroskedastic model -Testing the assumption of homoskedasticity -Testing against a shift in variance -Testing against other parametric specifications -Autocorrelation (1st order) -Testing for autocorrelation -Monte Carlo results -Heteroskedasticity and autocorrelation consistent covariance estimation
Reading List	<p>Greene, W.H. (2012): Econometric Analysis, Chapters 2,3,4,5,9,15,21 Pearson.</p> <p>Hackl, P. (2005): Einführung in die Ökonometrie, München.</p> <p>Hamilton, J.D. (1994): Time Series Analysis, Chapters 3,15,17, Princeton University Press.</p> <p>Hayashi, F. (2000): Econometrics, Chapters 1,2,9,10, Princeton University Press.</p> <p>Judge, G.G., R.C. Hill, W.E. Griffiths, H. Lutkepohl, T.S. Lee (1988): Introduction to the Theory and Practice of Econometrics, Chapters 5,6,8,9,13,14,15 John Wiley & Sons.</p> <p>Verbeek, M. (2012): A Guide to Modern Econometrics, 4th Edition, Wiley.</p> <p>Wooldridge, J.M. (2006), Introductory Econometrics - A Modern Approach, Thomson.</p>
Course prerequisites	Mathematics (Linear Algebra), Statistics