Econometrics 814 (EKT 814)

Qualification	Postgraduate
Faculty	Faculty of Economic and Management Sciences
Module credits	10.00
Programmes	MCom Econometrics (Coursework)
	MCom Economics (Coursework)
Prerequisites	Only for students in relevant programme
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Academic organisation	Economics
Period of presentation	Semester 1

Module content

In this module, "panel data" refers to the pooling of observations on a cross-section of countries, households, firms, etc. over a number of time periods. We use panel data techniques for example to control for individual heterogeneity or to study the dynamics of adjustment. Panel data allows for more informative results, more variability, more degrees of freedom and more efficiency. This module focuses on statistical theory and empirical estimation, interpretation and evaluation of economic relationships, within a panel data context. The module covers both techniques applicable to stationary and non-stationary panel data sets, and begins with an introduction to one-way error component models (either including individual-specific or period-specific (time) effects), followed by two-way error component models (including individual-specific and time effects simultaneously). Estimation techniques include fixed effects (LSDV or "Within" estimation) and random effects estimation. Hypothesis testing includes tests for poolability (pooled vs. individual regressions), tests for fixed effects, random effects, and specification (exogeneity of the X-regressors). It also includes various tests for serial correlation and heteroscedasticity and the correction thereof. The section on stationary panel data techniques concludes with a discussion of seemingly unrelated regression (SUR) models. In the non-stationary panel data section we discuss unit root testing in the panel context, estimation of non-stationary panels and tests for co integration.