

EPUNet Training Course on Advanced Panel Analysis

The fifth EPUNet training course, on advanced panel analysis, was held from November 21-25 2005. It was organised at CEPS/INSTEAD with Jacques Brosius, Carlo Klein and Philippe Van Kerm as instructors. There were 11 participants from Belgium, Germany, Greece, Italy, the Netherlands, Finland, Spain and the UK, as shown in Table 1.

Table 1: Participants at the CEPS/INSTEAD Training Course

<i>Title</i>	<i>Forename</i>	<i>Surname</i>	<i>Institution</i>	<i>Nationality</i>
Mr	Stijn	Lefebure	Centre for Social Policy, Antwerp University, Belgium	Belgian
Ms	Effrosyni	Adamopoulou	University of Patras Greece	Greek
Dr	Camila	Arza	European University Institute, Florence, Italy	Argentinian
Dr	Elena	Barcena-Martin	Universidad de Malaga, Spain	Spanish
Ms	Chungyan	Ip	Nuffield College, Oxford, UK	Chinese
Ms	Maria	Navarro Paniagua	Zaragoza University, Spain	Spanish
Ms	Pilar	Garcia-Gomez	University of Pompeu Fabra, Barcelona, Spain	Spanish
Mr	Victor	Cebotari	University of Bremen, FVG-West, Germany	Moldavian
Mr	Christian	Brzinsky-Fay	WZB Berlin, Germany	German
Ms	Carmen	Petrovici	University of Tilburg, NL	Romanian
Ms	Ioana	Salagean	Université Nancy-2, France	Romanian

Coverage and Goals

The objective of the session was to introduce participants to the statistical methods most commonly used for panel data analysis in the socio-economic disciplines. The aim was at imparting upon the students sufficient knowledge to make them able to start using the methods for their applied, empirical research. It was demonstrated how these techniques can be implemented with the statistical software Stata. The course consisted of a mix of presentations and lab sessions with hands-on exercises using a training subset of the ECHP (with data for Germany, Ireland, Luxembourg and the UK). Exposition was relatively informal. Formal econometric theory was kept to a strict minimum.

In particular, the course was designed to enable students to

- Understand the main differences between panel-data and cross-sectional data analyses, and understand the advantages offered by panel data for statistical/econometric modelling
- Understand the methodology of various panel data analysis techniques (with a focus on the assumptions underlying their validity): survival data analysis, panel data regression

models (fixed effects, random effects, multi-level modelling, endogeneity and selection correction)

- Know how to use longitudinal data and to prepare the data for panel-data analyses, and in particular how to work with the ECHP User Database file
- Acquire the ability to implement the various techniques with the statistical software Stata
- Have a basic understanding of data issues such as attrition and weighting and how it affects estimation

An outline of the material covered in the course is shown below in Table 2.

Table 2: Outline of Course on Advances Panel Analysis at CEPS/INSTEAD

Day/Time	Topic	Instructor
Monday 11:30-13:30	• <i>Registration</i>	
14:00-18:30	<ul style="list-style-type: none"> • Introduction and welcome • Presentation of the ECHP: content, coverage, sampling, follow-up rules, weighting, data structure • Overview of panel data methods • Workshop planning • Introduction to Stata for panel data handling • Hands-on confrontation to ECHP training dataset 	Philippe Van Kerm
Tuesday 9:30-12:30	• Survival data analysis I: Preparing the data	Jacques Brosius
14:00-17:30	• Survival data analysis II: Methods and analysis, hands-on exercises	Jacques Brosius
Wednesday 9:30-12:30	• Panel regression models I: Linear regression models	Philippe Van Kerm
14:00-15:00	• Panel regression models II: Binary outcome models	Philippe Van Kerm
15:30-18:00	• Panel regression models III: Hands-on exercises	Philippe Van Kerm
Thursday 9:30-12:30	• Large-scale replication exercise on “Marriage and wages”: data manipulation, variable creation, panel analysis	Philippe Van Kerm
14:30-17:30	• Endogeneity and selection in panel data models I: Methods	Carlo Klein
Friday 8:30—11:30	• Endogeneity and selection in panel data models II: Hands-on exercises	Carlo Klein
13:30-17:00	<ul style="list-style-type: none"> • Resampling-based inference with panel data • Weighting and attrition in panel data models • Cross-country comparison methods 	Philippe Van Kerm