Longitudinal Data Analysis: Analysing Complex Datasets
Delivered by University of Queensland researchers at the Institute for Social Science Research

20 - 24 November 2017

This five-day intensive course is specifically designed for organisations that use longitudinal data for research, policy development or decision making. The course includes a mix of foundation and advanced modules on longitudinal data analysis techniques, and will deepen the specialist knowledge of research teams and enhance the quality and meaning of data used when making crucial business decisions.

An engaging teaching mix of presentations, exercise-based and group activities cover the latest in statistical methods, as well as how and where to apply them to best effect. Participants will hone their longitudinal research skills through practical hands-on sessions using real world data, and will leave with a better ability to manage longitudinal datasets and apply methods used in this type of research.

Course participants use real world data to learn how to apply longitudinal techniques to a range of longitudinal datasets, as well as how to interpret the results.

Practice material includes two longitudinal surveys funded and administered by the Department of Social Services:

- Household, Income and Labour Dynamics in Australia Survey (HILDA)
- Growing up in Australia: Longitudinal Study of Australian Children (LSAC)

The course also includes opportunities to review participants’ specific research challenges.

Who should attend?

Analysts and researchers working with longitudinal data who wish to strengthen evidence-based decision-making for government, private organisations and universities will benefit from this course.

Participants will ideally have a working knowledge of ordinary least squares (OLS) regression techniques; however, the course will include a brief refresher on regression modelling.

Familiarity with Stata® software is desirable, but not required, with a basic understanding of programming.

Course program

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<td>Session 1</td>
<td>Longitudinal Data: What is it and what can it tell us?</td>
<td>Panel data regression models: Fixed-effect models</td>
<td>Understanding the multilevel data framework</td>
<td>Multilevel models for binary response data</td>
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<td>Session 2</td>
<td>Understanding data structure and managing longitudinal datasets, with an introduction to Stata® software</td>
<td>Panel data regression models: Random-effect models</td>
<td>Random effects in multilevel models</td>
<td>Summarising and interpreting event histories</td>
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<td>Session 4</td>
<td>Panel data regression models: Pooled OLS models</td>
<td>Summary, questions, extra time for exercises</td>
<td>Modelling variance over time</td>
<td>Hands-on Stata exercises</td>
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What is included?
Course materials include a practical exercise manual and a course handbook, which is a valuable reference document including detailed summaries, scenarios, and further reading recommendations to support participants’ ongoing learning.

Participants also receive two hours of post-course support from ISSR’s expert training team, for up to six months after completing the course.

Most sessions will include practical activities using Stata® software. All tools and resources needed for the course are provided, including laptops, data, software, and course materials.

Registration
Alternatively, you can register by calling ISSR’s Education Program Coordinator on (07) 3346 9686.

Invoices must be paid in full by the commencement of the course. Refer to our website for full terms and conditions.

Testimonials
Thank you for an excellent course…the lecturers are very knowledgeable, and take a lot of time to discuss individual participants’ topics.

Barbara Wimmer, University of Tasmania

This is a thoroughly insightful course, presented in an easy to understand and logical manner…

…the work put into the preparation of materials and slides was outstanding and it is now sitting in an easy to reach location at my desk. I’ve already referred to it numerous times…

I commend the organisers and facilitators on one of the best pieces of learning I have undertaken and I highly recommend this course to anyone interested in longitudinal techniques.

Leon Colombo, Department of Employment

I found this course extremely interesting. Five full days of new terminology and procedures…there was never a dull moment.

…as I was new to longitudinal data analysis, I didn’t have a research question and found every new model exciting as my mind began exploring ways in which I could apply it. I look forward particularly to being able to apply event history analysis to my work in the near future.

Laura Walsh, Australian Bureau of Statistics

Course facilitators

Dr Francisco (Paco) Perales

Paco uses a life course approach to better understand gender-based socioeconomic inequality, subjective wellbeing, quality of life, social disadvantage, migration, and careers.

He has methodological expertise in advanced quantitative research methods, and conducting econometric analysis of cross-sectional and longitudinal large-scale social surveys.

Research focus: social stratification, inequality, and social determinants of wellbeing over the life course

Dr Melanie Spallek

Melanie has more than 10 years of project experience in longitudinal data management and analysis using both survey and administrative data. She applies her methodological knowledge to real life projects with a policy development focus, including for government and non-government organisations.

Research focus: administrative and linked data uses and life course methodology

Dr Danilo Bolano

Danilo is a demographer and social statistician with extensive training in econometrics and quantitative methods for social sciences. He brings a methodological expertise in Markov models, sequence analysis, linear mixed models, multilevel models, and structural equation modelling.

Research focus: life course studies of health and income dynamics

Mr Martin O’Flaherty

Martin draws on extensive experience in quantitative analysis and data collection, with an emphasis on research based on longitudinal data. He also brings substantial experience managing large projects with diverse stakeholder groups.

Research focus: public health, including physical activity in middle age, adolescent substance use and use of allied health care