Module C5 – Longitudinal Data Analysis: Analysing Complex Datasets

Overview

Purpose

This five-day intensive course has been specifically designed to deepen the specialist knowledge of your research teams and enhance the quality and meaning of the data you use when making crucial business decisions. It incorporates several modules from across MFSAS streams, and delves more deeply into topics that are pivotal for organisations that use longitudinal data for research and decision-making.

Learning objectives

On completing this module, participants will have an understanding of:

1. Understand the advantages of using longitudinal data for research and decision-making.
2. Manage longitudinal datasets and prepare these for statistical analysis.
3. Understand the different approaches that can be used to model multivariate relationships with longitudinal data (e.g. fixed and random effects regression models).
4. Recognise hierarchical data and the relevance of multilevel models.
5. Understand how multilevel models can be used to analyse variation and trends in growth over time with longitudinal data.
6. Understand how to model duration until an event occurs using event history analysis.
7. Determine which modelling approach is most appropriate for different types of research questions.
8. Effectively present the results of longitudinal data analyses to non-technical audiences.

Who should attend, and module pre-requisites

This course is designed for data analysts and researchers in government, universities, large organisations with research interests, and specialist research firms. We recommend that participants have a working knowledge of ordinary least squares (OLS) regression techniques. For the computer-based practical sessions, familiarity with Stata® software is desirable but not necessary for participants with a basic understanding of programming, as all software syntax will be provided in the course. We also provide resources and learning materials on Stata on our website for those who would like to familiarise themselves with it prior to the course.

The course uses data from two longitudinal surveys funded and administered by the Department of Social Services: the Household, Income and Labour Dynamics in Australia (HILDA) longitudinal survey, and the Longitudinal Survey of Australian Children (LSAC). There will be opportunities to also review some participants’ specific research challenges.

Registration

Registration in this course includes two hours of post-course support from ISSR’s expert training team, for up to six months following completion of the course. Visit http://www.issr.uq.edu.au/mfsas for course times and fees. Alternatively, call the MFSAS Training Coordinator, Cara Herington on 07 3346 9686 to discuss group bookings and custom courses.