LONGITUDINAL DATA ANALYSIS
Thursday, 10 September 2020: 09:00 - 18:00 (full day) via Zoom

Speakers

Dr Diarmuid McDonnell (University of Manchester, UK Data Service)

Overview

This is a theoretical workshop on longitudinal (panel) data analysis.

Longitudinal analysis offers great advantages through its unique feature of having multiple observations for the same person over multiple time periods. It is therefore of tremendous benefit for researchers to get acquainted with how to analyse such data.

This is a one full-day workshop (9am to 5pm) on longitudinal data and research using statistical methods. The workshop is primarily designed for social scientists, and so the examples will be taken from that discipline, and the focus will be on understanding and interpreting results of published papers in that area.

The course will allow participants to build a strong theoretical foundation and intuitive understanding of the different types of panel data models. This will make it easier for participants to get hands on training afterwards. That said, while this is not a practical workshop on how to use statistical software, Stata and R code on how to execute the different types of panel data models will be shared with participants. This code will be detailed enough for participants to work through them in their own time.

A high level of mathematical ability is not required to participate in this course, however, good, solid knowledge of simple/multiple linear regression is a prerequisite.

The key topics that will be covered in the workshop are:
- o Advantages and limitations of longitudinal data and panel data analysis
- o Repeated cross-sectional data, and Repeated contacts data (panel data)
- o Methods of analysis: Pooled OLS regression, Between Effects regression, Fixed Effects regression, Random Effects regression, Hybrid models regression
- o How to select the "correct" method
- o Overview of advanced longitudinal data analysis approaches (e.g., growth curve models)

The course will not cover survival / event-history analysis

Learning outcomes

After completion of this workshop, participants will:
- Understand the value of longitudinal data and some potential sources (e.g. large-scale social surveys, administrative data)
- Understand the difference between types of longitudinal data (repeated cross-sectional vs repeated contacts)
- Have a solid understanding of the different types of panel data models
- Be able to recognise the advantages of different types of longitudinal analysis models and when to use them
- Be able to interpret published papers that use longitudinal analysis

Pre-requisites
- Some prior knowledge, specifically, simple/multiple linear regression, cross-section analysis

Cost
- Free. The workshop is possible thanks to the generous support of the Bristol Doctoral College (PGR Development fund).

Registration
- To register for the course, please visit: https://www.eventbrite.co.uk/e/111690912526
- If you have any questions please email: *samir.sweida-metwally@bristol.ac.uk*