Introduction to causal inference

Instructed by **Michael Kühhirt** (University of Cologne)

Venue

Centre d'Estudis Demogràfics, Universitat Autònoma Barcelona
Carrer de Ca n'Altayó, Edifici E2, 08193 Bellaterra, Barcelona

About the event: The course provides an introduction to recent advances in causal inference. After providing a formal definition of causal effects based on graphical causal models and the potential outcome framework ("Rubin-Causal-Model"), we discuss the basic logic of different research designs for causal inference and their underlying substantive assumptions. The course concludes with an overview of causal mediation analysis, that is, the investigation of the mechanisms that produce a specific causal effect. For each topic, theoretical lectures are supplemented by paper-and-pencil exercises or practical computer applications.

Schedule:

Thursday 14th of September 2017

10.00 – 11.30	Graphical causal models, counterfactuals, and covariate adjustment
11.45 – 13.15	Randomised controlled trials
14.30 – 16.00	Instrumental variables
16.15 – 17.45	Regression discontinuity designs

Friday 15th of September 2017

10.00 – 11.30	Multilevel and longitudinal designs
11.45 – 13.15	Causal mediation analysis I
14.30 – 16.00	Causal mediation analysis II
16.15 – 17.45	Limitations and current frontiers, round-up, group discussion

Pre-requisites: The only necessary participation prerequisite to fully benefit from this workshop is a solid understanding of basic statistics (distributions, probability, standard error, confidence intervals etc.) and common regression techniques (OLS and binary outcome regression).

Michael Kühhirt is a lecturer and post-doctoral researcher at the Institute of Sociology and Social Psychology at the University of Cologne. He studied sociology and history at the University of Mannheim, where he also completed his PhD in social science in 2014. His main research and teaching interests are social stratification, family sociology and quantitative research methods.