RISIS
RESEARCH INFRASTRUCTURE FOR SCIENCE AND INNOVATION POLICY STUDIES

This project is funded by the European Union under Horizon2020 Research and Innovation Programme Grant Agreement n°824091

RISIS TRAINING – CALL FOR SUBMISSION

Università della Svizzera italiana

APPLICATIONS OF MULTI-LEVEL MODELS TO RESEARCH POLICY AND HIGHER EDUCATION STUDIES

ONLINE COURSE
19th and 26th of October 2020

COURSE PRESENTATION

Recent developments in multilevel modelling have made available to social scientists powerful statistical techniques for analyzing individuals as members of social groups. The techniques are also especially useful for repeated measures data

Multilevel models are known by many synonyms (i.e., hierarchical linear models, general linear mixed models). The defining feature of these models is their capacity to provide quantification and prediction of random variance due to multiple sampling dimensions (across occasions, persons, or groups). Multilevel models offer many advantages for analyzing longitudinal data, such as flexible strategies for modeling change and individual differences in change, the examination of time-invariant or time-varying predictor effects, and the use of all available complete observations.

Multilevel models are also useful in analyzing clustered data (e.g., persons nested in groups), in which one wishes to examine predictors pertaining to individuals or to groups. The structure of higher education and research policy data makes it well suited for multi-level modeling. For instance, researchers tend to be nested into laboratories within universities or in comparative analysis, universities are nested into countries. In order to demonstrate the analytical value for the research policy field, the course will include demonstrations and practical exercises done with datasets available in RISIS.

OBJECTIVES:

- To introduce basic concepts and rationales of multilevel analysis.
- To understand applicability of the method, specifically to datasets in research policy and higher education studies.

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- To know and practice the basic steps for conducting analysis with statistical software.
- To develop competence in interpreting results and driving implications for analysis and policy.

EXPECTED OUTCOMES:

On completion of the course, participants should be able to recognise a multilevel structure; specify a multilevel model with complex variation at a number of levels; and fit and interpret a range of multilevel models.

This course is appropriate if you are analysing dataset with complex structure, are interested in the importance of contextual questions, or if you need to undertake a quantitative performance review of an organization.

TARGET AUDIENCE:

Target audience for this course are researchers in research policy and higher education with a quantitative orientation, which aim to extend their competence to Multilevel Modelling. Basic requisite for admission will be:

- Knowledge of basic principle of statistics, as well as of standard regression techniques (OLS).
- Good working knowledge of statistical software (Stata).

PROGRAM OF COURSE

DAY 1 – 19th of October

Morning

9:00-09:15 Introduction to Webinar Course

09:15-10:00 Lecture: Conceptual bases of Multilevel Modelling (Barbara Antonioli Mantegazzini)

Break

10:30-11:00 Lecture: Multilevel Modelling with STATA. Several examples (Barbara Antonioli Mantegazzini)

Afternoon

13:30-14:15 Lecture: Applications of Multilevel Modelling in Research Policy and Higher Education (Benedetto Lepori)

Break

14:30 – 15:00 Introduction to Group Exercise and Group Planning Session

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DAY 2 – 26th of October

Morning

9:00-9:45 Group presentation (first block)

Break

10:00-10:45 Group presentation (second block)

Break

11:00-11:45 Group Presentations (third block)

Break

12:00-12:30 Closing Remarks and Recap (Benedetto Lepori)

A midweek virtual meeting/appointment will be scheduled to help and support in the group exercises.

CONDITIONS FOR PARTICIPATION

SELECTION CRITERIA:

- Specific interest to Multilevel Modelling.
- Working on empirical problems, which, by their structure, require this type of models.
- Availability of suitable datasets.
- Basic statistical competences and knowledge of statistical software

ORGANISATIONAL DETAILS:

The course will be held in online mode.

HOW TO APPLY:

Please send an email with your updated CV together with the **application form** to: **barbara.antonioli@usi.ch**

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ORGANISING COMMITTEE AND CONTACT DETAILS

Prof. Dr. Benedetto Lepori is titular professor at the Faculty of Communication science and rector delegate for research analysis at the Università della Svizzera italiana (USI). He is senior researcher at the University of Paris Est. His research deals with a broad range of topics in the fields of higher education studies, university management and theory of S&T indicators. He is a recognized specialist in the analysis of research policies and, especially, public research funding. He also worked extensively in the domain of higher education indicators and governance.

Dr. Barbara Antonioli Mantegazzini is senior lecturer and researcher at the Faculty of Economics at the Università della Svizzera italiana (USI). Her research interests include economics, regulation and management of public services (mainly energy - both renewable and non-renewable, water, waste) and education. She is a recognized specialist in the analysis of economics of regulation and public policies.

Contact: barbara.antonioli@usi.ch