INTRODUCTION TO STRUCTURAL EQUATIONS MODELING WITH LISREL:

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Course Objectives

The purpose of this intensive course is to provide a user-friendly, in-depth introduction to (covariance-based) structural equations modeling (SEM) using the LISREL program and the SIMPLIS command language. The course’s emphasis is on understanding and applying SEM as a tool in substantive research and its target audience includes doctoral students and academic researchers involved in quantitative modeling and data analysis. Important: The course assumes prior knowledge of data analysis and multivariate statistics (including factor analysis and regression).

Scope & Approach

The course seeks to familiarize participants with the various stages associated with conceptualizing, identifying, estimating, and evaluating structural equation models, highlighting key decisions and potential problems at each stage. Following an introduction of SEM as an analytical approach, issues associated with the theoretical specification and graphical representation of a full latent variable model are discussed. These set the background for applying the LISREL program to estimate the model and assess its fit along different criteria. Strategies for model modification and cross-validation are also outlined. To enable participants experience SEM “in action”, the above issues are illustrated with a concrete example of a model estimated by the LISREL program. Detailed guidance for setting up and interpreting the relevant input/output files of the program is also provided.

Once course participants have become familiar with the basic principles of SEM and the use of the LISREL program, several different types of models will be illustrated, such as regression-type models, path analysis models, measurement models, and MIMIC models. In addition, various LISREL programming issues (e.g., fixing specific parameters, incorporating equality constraints, undertaking an effect decomposition) will be discussed as will problems that might be encountered.

The course will take the form of interactive workshop sessions, placing particular emphasis on student participation.

Participants are expected to download the (free) student version of the LISREL program from www.ssccentral.com and also read widely on the subject (see Course Text and Additional Readings below).
Topics

- Introduction to SEM
- Model Conceptualization I: Structure
- Model Conceptualization II: Measurement
- Path Diagram Construction
- Model Identification
- Introduction to the LISREL Program
- Parameter Estimation
- Model Fit Evaluation
- Model Modification
- Model Cross-Validation
- Examples of different types of SEM models

Textbook:

The main textbook used in the course is:


Student should also read the relevant chapters on SEM in:


Additional Readings


Univ-Prof. DDr. Adamantios Diamantopoulos holds the Chair of International Marketing at the University of Vienna, Austria. He is also Visiting Professor at the University of Ljubljana, Slovenia and Senior Fellow at the Dr. Theo and Friedl Schoeller Research Center for Business & Society, Nuremburg, Germany. During the academic year 2012/13, he was the “Joseph A. Schumpeter Fellow” at Harvard University, USA.


He has been the recipient of several Best Paper Awards, including the 1994 and 2013 Hans B. Thorelli Awards for articles published in Journal of International Marketing that have made significant, long-term contributions to international marketing theory or practice. He sits on the Editorial Review Boards of a dozen academic journals, and acts as a referee for several professional associations and funding bodies. In 2000, he was elected Fellow of the British Academy of Management and in 2013 Fellow of the European Marketing Academy. He is also ranked #4 worldwide (among 2333 scholars) based on publications in the top six international business journals during 1995-2015 (Leonidou et al., 2018). In 2018, he was identified by Clarivate Analytics as one of the most cited researchers worldwide (top 1% across all disciplines) and in 2019 he was awarded the JIBS Silver Medal.