TECHNIQUES AND APPLICATIONS OF STRUCTURAL EQUATION MODELING

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Course Description

Structural equation modelling (SEM) is a statistical technique that combines elements of traditional multivariate models, such as regression analysis, factor analysis and simultaneous equation modelling. SEM has been increasingly popular in psychological and social science research where measurement error and uncertain causal conditions are commonly encountered. Students will acquire knowledge of common applications of SEM to cross-sectional, continuous, multivariate normal distributed data as well as to multi group data, longitudinal data, non-normal data and other discrete data. The course will include lectures and practical exercises in specifying, estimating and testing basic SEM models by means of STATA.

Topics Covered:

1. Review of regression analysis and factor analysis
2. Path diagrams and factor variable notation
3. Model specification and evaluation
4. SEM with latent variables
   a. Modelling mean structures
   b. Models for multiple group data
   c. Models for longitudinal data
5. Effects of Errors in Measurement on regression
6. Structural regression models
7. Longitudinal models
8. Multi-group analysis

Reference:


Web Links

SmallWatersCorp. SEM-related links: http://www.smallwaters.com/weblinks/