



UNIVERSITÀ DEGLI STUDI
DI TRENTO

Dipartimento di Psicologia
e Scienze Cognitive

Department of Psychology and Cognitive Science

SEMINARY DiPSCo

Standard errors and information matrices in structural equation modeling: an overview

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Sala Convegni – Department of Psychology and Cognitive Science - Corso Bettini, 31 – Rovereto

Abstract:

Depending on the estimator, the software package, and the characteristics of the data (e.g., continuous or categorical, with or without missing values), you may see a bewildering variety of standard errors in the output of your favorite SEM software package. This presentation will attempt to give a comprehensive overview and explain how standard errors are computed. We will start with basic theory about the multivariate normal distribution, and introduce the notion of an information matrix. We will discuss different types of information matrices (observed, expected, first-order), and the related 'Gamma' matrices. It will turn out that these matrices are the ingredients of the variance matrices of the model parameters that we need to compute both classic and robust (sandwich type) standard errors. Once we have discussed the basics, I will briefly show how we need to adapt our computations to handle missing values, categorical data, and other characteristics of the data.

Contacts

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