

Abstract: Confirmatory Composite Analysis

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Abstract

We introduce confirmatory composite analysis (CCA) as a sub-type of structural equation modeling that aims at testing composite models. CCA entails the same steps as confirmatory factor analysis: model specification, model identification, model estimation, and model testing. Composite models are specified such that they consist of a set of interrelated theoretical constructs, all of which emerge as linear combinations of observed variables. Researchers must ensure theoretical identification of their specified model. For the estimation of the model, several estimators are available; in particular Kettenring's extensions of canonical correlation analysis and partial least squares path modeling provide consistent estimates. Model testing relies on the Bollen-Stine bootstrap to assess the discrepancy between the empirical and the model-implied correlation matrix. A Monte Carlo simulation examines the efficacy of CCA, and demonstrates that CCA is able to detect various forms of model misspecification.

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