Factor models with covariate effects on the manifest and latent variables: a comparison of the LISREL and the IRT approach

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Abstract
We discuss latent variable models for ordinal indicators that allow for covariate effects both on the indicators and on the latent variables. The paper does not aim to develop new methodology for handling ordinal data but rather to compare existing methodologies in the literature in terms of easiness in fitting the models, model parameters and goodness-of-fit. The two approaches are the structural equation modelling (SEM) approach and the item response theory (IRT) approach. Regarding the SEM approach we will concentrate here in the PRELIS-LISREL approach (PLA).
In this paper, we present two examples that differ in terms of the covariate effects included. The first example includes only direct effects of covariates on the ordinal indicators and the second example includes both direct and indirect effects of covariates.