STRUCTURAL EQUATION MODELING WITH LATENT/EMERGENT VARIABLES: RGCCAc

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ABSTRACT: We present how to use Regularized Generalized Canonical Correlation Analysis (RGCCA) in structural equation modeling with latent and/or emergent variables. This new approach, named consistent RGCCAc (RGCCAc), produces consistent and asymptotically normal estimators of the parameters. RGCCAc relies on a well-grounded optimization problem and the global convergence of the algorithm used to solve this problem is guaranteed. RGCCAc contains composite models as special case, keeps the robustness and simplicity of PLSc and cSEM and corrects their shortcomings. RGCCAc, cSEM and Maximum Likelhood (ML) based-approach are evaluated in a Monte Carlo simulation and on a case study and produce similar results.

KEYWORDS: Structural Equation Modeling, RGCCA, Consistent PLS, Composite models, composite-based SEM.