ABSTRACT

The Effect of Nonnormality on CB-SEM and PLS-SEM

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The two common approaches to Structural Equation Modeling (SEM) are the Covariance-Based SEM (CB-SEM) and Partial Least Squares SEM (PLS-SEM). This study evaluates the performance of CB-SEM and PLS-SEM under normality and nonnormality conditions via a simulation. The simulation in LISREL 8.80 and *Smart*PLS was employed to generate data based on the theoretical model with one endogenous and four exogenous variables. Each latent variable has three indicators. For normal distributions, CB-SEM estimates were found to be inaccurate for small sample size while PLS-SEM could produce the path estimates. Under nonnormality, CB-SEM path estimates were inaccurate for small sample size. However, CB-SEM estimates are more accurate than those of PLS-SEM for sample size of 150 and above.

Key words : CB-SEM, PLS-SEM, Normality, Nonnormality