CB-SEM latent interaction: unconstrained and orthogonalized approaches

ABSTRACT

Covariance Based – Structural Equation Modelling (CB-SEM) is often used to investigate moderation and latent interaction effects. This study illustrates and compares the application of constrained, unconstrained and orthogonalized CB-SEM approaches to latent variable interaction analysis using AMOS. Although all three techniques provided similar parameter estimates, the orthogonalized approach provided reduced standard errors resulting in identifying a significant latent interaction, suggesting the orthogonalized approach may be better suited for exploratory research. The illustrated example demonstrates three CB-SEM techniques, and the simplicity of the three approaches to test for interaction effects. The three approaches can be comfortably implemented in available software programs. Guidelines and recommendations for the use of the three approaches are identified with a step-wise process of assessing the latent interaction effect in CB-SEM. As far as we are aware this is the first investigation comparing and recommending specific CB-SEM latent variable moderation analysis techniques in marketing research.