

Bootstrap Standard Error and Confidence Interval

Abstract

A Monte Carlo experiment is conducted to investigate the performance of the bootstrap methods in the construction of confidence intervals for factor loadings in exploratory factor analysis. Coverage probabilities of the confidence intervals are studied. The results show that a larger number of variables, a smaller sample size, and secondary loadings yield a higher coverage probability. Also, comparisons between percentile approach and standard normal approach in confidence interval construction shows that the percentile approach is a more liberal method in estimating the sampling variability of factor loadings.