Abstract

Product variables constitute and important class of variables in social science, but there is little systematical study on the product term reliability. Bohrnstedt & Marwell (1977) have derived a formula for the computation of product term reliability from two variables. The present study aims at using simulation study to investigate the coverage probability of the bootstrap confidence interval on the product term reliability. Results show that bootstrap confidence interval gives poor coverage performance for the product term reliability, especially when the configuration of the individual reliabilities is low and the correlation between the two variables is high. Interaction effects among sample size, individual reliabilities configuration and inter-correlation are found. It is also found that as sample size increased the coverage probability is further lower, what is contrary to expectation. The possible reason has been discussed and direction for further study has been suggested too.