

Abstract

There are many situations in social research that require statistical tests to compare the equality of two Cronbach's alphas, α , coefficients that measure the reliability of a test. Two cases were considered. Under the independent case, the same test was administered to two independent samples. Under the dependent case, two different tests were administered to the same sample. Different statistical tests had been developed under these two cases to compare the alpha coefficients. However, they required a large number of examinees and item numbers to perform well. In this paper, a bootstrap testing procedure was proposed to compare the equality of two alpha coefficients. Computer simulations were carried out to examine the performance of the proposed methods under both the independent and the dependent case, and results were compared with the traditional methods. Simulation results indicated that the bootstrap approach had better control of Type I error than the traditional tests, especially when the sample size was small.