Asymptotic expansions in multi-group analysis of moment structures with an application to linearised estimators

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Abstract

Asymptotic expansions of the joint distributions of functions of sample means and central moments up to an arbitrary order in multiple populations are given by Edgeworth expansions. The asymptotic distributions of the parameter estimators in moment structures under null/fixed alternative hypotheses and the chi-square statistics based on asymptotically distribution-free theory under fixed alternatives are given as applications of the above results. Asymptotic expansions of the null distributions of the chi-square statistics are also derived. For parameter estimators with the chi-square statistic, the linearized estimators are dealt with as well as fully iterated estimators.

Keywords

Moment structure analysis, Asymptotic expansions, Multiple populations, ADF theory, Implicit functions.

References

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