estat ginvariant — Tests for invariance of parameters across groups

Description

estat ginvariant is for use after estimation with sem, group(); see [SEM] sem group options.

estat ginvariant performs score tests (Lagrange multiplier tests) and Wald tests of whether parameters constrained to be equal across groups should be relaxed and whether parameters allowed to vary across groups could be constrained.


Menu

Statistics > SEM (structural equation modeling) > Group statistics > Test invariance of parameters across groups

Syntax

    estat ginvariant [ , options ]

options                Description

    showpclass(pclassname) restrict output to parameters in the specified parameter class
    class                  include joint tests for parameter classes
    legend                 include legend describing parameter classes

pclassname                Description

    scoef                 structural coefficients
    scons                 structural intercepts
    mcoef                 measurement coefficients
    mcons                 measurement intercepts
    serrvar               covariances of structural errors
    merrvar               covariances of measurement errors
    smerrcov              covariances between structural and measurement errors
    meanex                means of exogenous variables
    covex                 covariances of exogenous variables
    all                   all the above
    none                  none of the above
Options

showpclass\textit{(classname)} displays tests for the classes specified. showpclass\textit{(all)} is the default. class displays a table with joint tests for group invariance for each of the nine parameter classes. legend displays a legend describing the parameter classes. This option may only be used with the class option.

Remarks and examples

See \textit{SEM Example 22}.

Score tests are not available after \textit{gsem}; therefore, \textit{estat ginvariant} is not for use after estimation with \textit{gsem, group()}.

Stored results

\textit{estat ginvariant} stores the following in \textit{r()}:

 Scalars
 r(N\_groups) number of groups

 Matrices
 r(nobs) sample size for each group
 r(test) Wald and score tests
 r(test\_pclass) parameter classes corresponding to \textit{r(test)}
 r(test\_class) joint Wald and score tests for each class

References


Also see

\textit{SEM} \textit{sem} — Structural equation model estimation command
\textit{SEM} \textit{sem postestimation} — Postestimation tools for \textit{sem}
\textit{SEM} \textit{estat mindices} — Modification indices
\textit{SEM} \textit{estat scoretests} — Score tests
\textit{SEM} \textit{Example 22} — Testing parameter equality across groups
\textit{SEM} \textit{Methods and formulas for sem} — Methods and formulas for \textit{sem}