estat mindices — Modification indices

Description

`estat mindices` is for use after `sem` but not `gsem`.

`estat mindices` reports modification indices for path coefficients and covariances that were constrained or omitted in the fitted model. Modification indices are score tests (Lagrange multiplier tests) for the statistical significance of the constrained parameters. See Sörbom (1989) and Wooldridge (2010, 421–428).

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Statistics > SEM (structural equation modeling) > Testing and CIs > Modification indices

Syntax

`estat mindices` [, *options*]

options	Description
`showpclass(`*pclassname*`)`	restrict output to parameters in specified parameter classes
`minchi2(#)`	display only tests with modification index (MI) $\geq$ #

`collect` is allowed; see **[U] 11.1.10 Prefix commands**.

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(`*pclassname*`)` specifies that results be limited to parameters that belong to the specified parameter classes. The default is `showpclass(all)`.

`minchi2(#)` suppresses listing paths with modification indices (MIs) less than #. By default, `estat mindices` lists values significant at the 0.05 level, corresponding to $\chi^2(1)$ value `minchi2(3.8414588)`. Specify `minchi2(0)` if you wish to see all tests.

Remarks and examples

See [SEM] **Example 5**.

Stored results

`estat mindices` stores the following in `r()`:

Scalars

`r(N_groups)`	number of groups

Matrices

`r(nobs)`	sample size for each group
`r(mindices_pclass)`	parameter class of modification indices
`r(mindices)`	matrix containing the displayed table values

References

Sörbom, D. 1989. Model modification. *Psychometrika* 54: 371–384. https://doi.org/10.1007/BF02294623.

Wooldridge, J. M. 2010. *Econometric Analysis of Cross Section and Panel Data*. 2nd ed. Cambridge, MA: MIT Press.

Also see

[SEM] **sem** — Structural equation model estimation command

[SEM] **sem postestimation** — Postestimation tools for sem

[SEM] **estat ginvariant** — Tests for invariance of parameters across groups

[SEM] **estat scoretests** — Score tests

[SEM] **Example 5** — Modification indices

[SEM] **Methods and formulas for sem** — Methods and formulas for sem