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estat eqgof — Equation-level goodness-of-fit statistics

Description

estat eqgof is for use after sem but not gsem.

estat eqgof displays equation-by-equation goodness-of-fit statistics. Displayed are R^2 and the Bentler–Raykov squared multiple-correlation coefficient (Bentler and Raykov 2000).

These two concepts of fit are equivalent for recursive SEMs and univariate linear regression. For nonrecursive SEMs, these measures are distinct.

Equation-level variance decomposition is also reported, along with the overall model coefficient of determination.

Menu

Statistics > SEM (structural equation modeling) > Goodness of fit > Equation-level goodness of fit

Syntax

estat eqgof [, format(%fmt)]

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

Option

format(%fmt) specifies the display format. The default is format(%9.0f).

Remarks and examples

See [SEM] **Example 3**.

In rare circumstances, these equation-level goodness-of-fit measures in nonrecursive structural equations have unexpected values. It is possible to obtain negative R^2 and multiple-correlation values.

It is recommended to use the Bentler–Raykov squared multiple correlations as a measure of explained variance for nonrecursive systems that involve endogenous variables with reciprocal causations.

Stored results

estat eqgof stores the following in r():

Scalars
  r(N_groups)   number of groups
  r(CD[_#])   overall coefficient of determination (for group #)
Matrices
  r(nobs)   sample size for each group
  r(eqfit[_#])   fit statistics (for group #)

Reference

Bentler, P. M., and T. Raykov. 2000. On measures of explained variance in nonrecursive structural equation models. *Journal of Applied Psychology* 85: 125–131. https://doi.org/10.1037/0021-9010.85.1.125.

Also see

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

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

[SEM] **estat gof** — Goodness-of-fit statistics

[SEM] **estat ggof** — Group-level goodness-of-fit statistics

[SEM] **Example 3** — Two-factor measurement model

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