

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

Description	Menu	Syntax	Option
Remarks and examples	Stored results	Reference	Also see

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 [ , fformat(%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

<code>r(N_groups)</code>	number of groups
<code>r(CD[_#])</code>	overall coefficient of determination (for group #)

Matrices

<code>r(nobs)</code>	sample size for each group
<code>r(eqfit[_#])</code>	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

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