

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 [ , 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

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

Matrices

<i>r</i> (nobs)	sample size for each group
<i>r</i> (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

Stata, Stata Press, Mata, NetCourse, and NetCourseNow are registered trademarks of StataCorp LLC. Stata and Stata Press are registered trademarks with the World Intellectual Property Organization of the United Nations. StataNow is a trademark of StataCorp LLC. Other brand and product names are registered trademarks or trademarks of their respective companies. Copyright © 1985–2025 StataCorp LLC, College Station, TX, USA. All rights reserved.



For suggested citations, see the FAQ on [citing Stata documentation](#).