

**estat lcgof** — Latent class goodness-of-fit statistics

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## Description

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

`estat lcgof` displays a variety of overall goodness-of-fit statistics for latent class models.

## Menu

Statistics > LCA (latent class analysis) > Goodness of fit

## Syntax

```
estat lcgof [ , nodescribe ]
```

`collect` is allowed; see [U] 11.1.10 [Prefix commands](#).

## Option

`nodescribe` suppresses the descriptions of the goodness-of-fit measures.

## Remarks and examples

[stata.com](#)

`estat lcgof` reports AIC and BIC for the fitted model.

For standard latent class models, `estat lcgof` also reports a likelihood-ratio test of the fitted model versus the saturated model. The likelihood-ratio statistic is also known as the  $G^2$  statistic.

See [SEM] [Example 51g](#).

## Stored results

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

Scalars

<code>r(chi2_ms)</code>	test of target model against saturated model
<code>r(df_ms)</code>	degrees of freedom for <code>r(chi2_ms)</code>
<code>r(p_ms)</code>	<i>p</i> -value for <code>r(chi2_ms)</code>
<code>r(aic)</code>	Akaike information criterion
<code>r(bic)</code>	Bayesian information criterion

## References

- Akaike, H. 1987. Factor analysis and AIC. *Psychometrika* 52: 317–332. <https://doi.org/10.1007/BF02294359>.
- Goodman, L. A. 2002. Latent class analysis: The empirical study of latent types, latent variables, and latent structures. In *Applied Latent Class Analysis*, ed. J. A. Hagenaars and A. L. McCutcheon, 3–55. Cambridge: Cambridge University Press.
- Raftery, A. E. 1993. Bayesian model selection in structural equation models. Reprinted in *Testing Structural Equation Models*, ed. K. A. Bollen and J. S. Long, pp. 163–180. Newbury Park, CA: Sage.
- Schwarz, G. 1978. Estimating the dimension of a model. *Annals of Statistics* 6: 461–464. <https://doi.org/10.1214/aos/1176344136>.

## Also see

- [SEM] **gsem** — Generalized structural equation model estimation command
- [SEM] **gsem postestimation** — Postestimation tools for gsem
- [SEM] **Example 51g** — Latent class goodness-of-fit statistics
- [R] **estat ic** — Display information criteria

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