estat lcgof — Latent class goodness-of-fit statistics

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

### 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**

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

r(chi2_ms)	test of target model against saturated model
r(df_ms)	degrees of freedom for r(chi2_ms)
r(p_ms)	<i>p</i> -value for r(chi2_ms)
r(aic)	Akaike information criterion
r(bic)	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, edited by J. A. Hagenaars and A. L. McCutcheon, 3–55. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511499531.002.
- Raftery, A. E. 1993. Bayesian model selection in structural equation modelse. Reprinted in *Testing Structural Equation Models*, 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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