

Table 1. Information criteria reported by current versions of SEM programs.

Version		Reported Output													
		AIC	AICc	CAIC	BIC	ssBIC	SPBIC	HBIC	IBIC	BCC	CENT	ECVI	HQC	SIC	DIC
R packages															
<i>lavaan</i>	0.6-9	✓	✓**		✓	✓	✓**	✓**	✓**			✓*	✓**	✓**	✓***
<i>sem</i>	3.1-11	✓	✓*	✓*	✓										
<i>lava</i>	1.6.9	✓			✓										
<i>OpenMx</i>	2.18.1	✓	✓		✓	✓									
Software															
Mplus	8.6	✓			✓	✓									✓*
AMOS	27	✓		✓	✓					✓		✓*			✓**
EQS	6	✓		✓											
LISREL	9.13	✓			✓							✓*			
Onyx	1.0-1026	✓	✓		✓										
SAS PROC CALIS	13.1	✓		✓	✓**						✓	✓*			

Note. AIC = Akaike Information Criterion; AICc = small sample-adjusted AIC; CAIC = consistent AIC; BIC = Bayesian Information Criterion; ssBIC = sample size-adjusted BIC; SPBIC = Scaled Unit Information Prior BIC; HBIC = Haughton's BIC; IBIC = Information matrix-based BIC; BCC = Browne-Cudeck Criterion; CENT = McDonald's Measure of Centrality; ECVI = Expected Cross-validation Index; HQC = Hannan-Quinn Information Criterion; SIC = Stochastic Information Complexity; DIC = Deviance Information Criterion. ✓: reported in default summary output.

lavaan notes:

- ✓: included only if *fit.measures=TRUE* is specified.
- ✓*: obtained using the *fitMeasures()* function.
- ✓**: obtained using the *moreFitIndices()* function from the *semTools* package. This function also yields BIC with specified prior sample size: “this is similar to BIC but explicitly specifying the sample size on which the prior is based.”
- ✓***: DIC can be obtained through use of the *fitMeasures()* function in the *blavaan* package, which is the Bayesian counterpart to *lavaan*.

sem notes:

- ✓*: obtained by specifying *fit.indices = c(“AIC”, “BIC”, “AICc”, “CAIC”)* in summary command.

OpenMx notes:

- Three versions each of AIC and BIC are reported using different penalty terms (df penalty, parameters penalty, and sample-size adjusted).
- AICc is reported here as sample-size adjusted AIC.
- ssBIC is reported here as sample-size adjusted BIC.
- TIC can also be obtained through the *imxRobustSE()* function, but only with complete data.

Mplus notes:

- ✓*: reported only if the *ESTIMATOR=BAYES* argument is specified.

AMOS notes:

- ✓*: ECVI is included along with its 90% confidence interval. MECVI is also included, which is equal to BCC/n .
- ✓**: DIC is reported only if Bayesian estimation is used.

LISREL notes:

- ✓*: ECVI is included along with its 90% confidence interval.

SAS PROC CALIS notes:

- ✓*: ECVI is included with its confidence interval – default is 90%, but this can be manually set to something else.
 - ✓**: BIC is referred to as SBC (Schwarz’s Bayesian Criterion).
- All criteria are classified as “parsimony indices” in the fit summary table.