

## estat framework — Display estimation results in modeling framework

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## Description

`estat framework` is a postestimation command for use after `sem` but not `gsem`.

`estat framework` displays the estimation results as a series of matrices derived from the Bentler–Weeks form; see [Bentler and Weeks \(1980\)](#).

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## Syntax

```
estat framework [ , options ]
```

| <i>options</i>                   | Description                                      |
|----------------------------------|--|
| <code>standardized</code>        | report standardized results                      |
| <code>compact</code>             | display matrices in compact form                 |
| <code>fitted</code>              | include fitted means, variances, and covariances |
| <code>format(<i>%fmt</i>)</code> | display format to use                            |

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

## Options

`standardized` reports results in standardized form.

`compact` displays matrices in compact form. Zero matrices are displayed as a description. Diagonal matrices are shown as a row vector.

`fitted` displays the fitted mean and covariance values.

`format(%fmt)` specifies the display format to be used. The default is `format(%9.0g)`.

## Remarks and examples

[stata.com](#)

See [\[SEM\] Example 11](#).

## □ Technical note

If `sem`'s `nm1` option was specified when the model was fit, all covariance matrices are calculated using  $N - 1$  in the denominator instead of  $N$ .

**Stored results**

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

## Scalars

`r(N_groups)`            number of groups  
`r(standardized)`        indicator of standardized results (+)

## Matrices

`r(nobs)`                    sample size for each group  
`r(Beta[_#])`                endogenous coefficients, paths between endogenous variables (for group #)  
`r(Gamma[_#])`              exogenous coefficients, paths from exogenous variables to endogenous variables (for group #)  
`r(alpha[_#])`                intercepts (for group #) (\*)  
`r(Psi[_#])`                  covariances of errors (for group #)  
`r(Phi[_#])`                  covariances of exogenous variables (for group #)  
`r(kappa[_#])`                means of exogenous variables (for group #) (\*)  
`r(Sigma[_#])`                fitted covariances (for group #)  
`r(mu[_#])`                    fitted means (for group #) (\*)

(+) If `r(standardized)=1`, the returned matrices contain standardized values.

(\*) If there are no estimated means or intercepts in the `sem` model, these matrices are not returned.

**Reference**

Bentler, P. M., and D. G. Weeks. 1980. Linear structural equations with latent variables. *Psychometrika* 45: 289–308. <https://doi.org/10.1007/BF02293905>.

**Also see**

[SEM] **sem** — Structural equation model estimation command

[SEM] **sem postestimation** — Postestimation tools for `sem`

[SEM] **Intro 7** — Postestimation tests and predictions (*Replaying the model (sem and gsem)*)

[SEM] **Intro 7** — Postestimation tests and predictions (*Accessing stored results*)

[SEM] **Example 11** — `estat framework`

[SEM] **Methods and formulas for sem** — Methods and formulas for `sem`  
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