

## sem model description options — Model description options

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## Description

*paths* and the options above describe the model to be fit by `sem`.

## Syntax

`sem` *paths* ..., ... *model\_description\_options*

<i>model_description_options</i>	Description
* <u>covariance</u> ()	path notation for treatment of covariances; see <a href="#">[SEM] sem and gsem path notation</a>
* <u>variance</u> ()	path notation for treatment of variances; see <a href="#">[SEM] sem and gsem path notation</a>
* <u>means</u> ()	path notation for treatment of means; see <a href="#">[SEM] sem and gsem path notation</a>
* <u>covstructure</u> ()	alternative method to place restrictions on covariances; see <a href="#">[SEM] sem and gsem option covstructure()</a>
<u>noconstant</u>	do not fit intercepts
<u>nomeans</u>	do not fit means or intercepts
<u>noanchor</u>	do not apply default anchoring
<u>forcenoanchor</u>	programmer's option
* <u>reliability</u> ()	reliability of measurement variables; see <a href="#">[SEM] sem and gsem option reliability()</a>
<u>constraints</u> ()	specify constraints; see <a href="#">[SEM] sem and gsem option constraints()</a>
<u>from</u> ()	specify starting values; see <a href="#">[SEM] sem and gsem option from()</a>

\* Option may be specified more than once.

## Options

`covariance()`, `variance()`, and `means()` fully describe the model to be fit. See [\[SEM\] sem and gsem path notation](#).

`covstructure()` provides a convenient way to constrain covariances in your model. Alternatively or in combination, you can place constraints by using the standard path notation. See [\[SEM\] sem and gsem option covstructure\(\)](#).

`noconstant` specifies that all intercepts be constrained to 0. See [\[SEM\] sem and gsem path notation](#).

`nomeans` specifies that means and intercepts not be fit. The means and intercepts are concentrated out of the function being optimized, which is typically the likelihood function. Results for all other parameters are the same whether or not this option is specified.

This option is seldom specified. `sem` issues this option to itself when you use summary statistics data that do not include summary statistics for the means.

`noanchor` specifies that `sem` is not to check for lack of identification and fill in anchors where needed. `sem` is instead to issue an error message if anchors would be needed. You specify this option when you believe you have specified the necessary normalization constraints and want to hear about it if you are wrong. See *Identification 2: Normalization constraints (anchoring)* in [SEM] [intro 4](#).

`forcenoanchor` is similar to `noanchor` except that rather than issue an error message, `sem` proceeds to estimation. There is no reason you should specify this option. `forcenoanchor` is used in testing of `sem` at StataCorp.

`reliability()` specifies the fraction of variance not due to measurement error for a variable. See [SEM] [sem and gsem option reliability\(\)](#).

`constraints()` specifies parameter constraints you wish to impose on your model; see [SEM] [sem and gsem option constraints\(\)](#). Constraints can also be specified as described in [SEM] [sem and gsem path notation](#), and they are usually more conveniently specified using the path notation.

`from()` specifies the starting values to be used in the optimization process; see [SEM] [sem and gsem option from\(\)](#). Starting values can also be specified by using the `init()` suboption as described in [SEM] [sem and gsem path notation](#).

## Remarks and examples

[stata.com](http://www.stata.com)

To use `sem` successfully, you need to understand *paths*, `covariance()`, `variance()`, and `means()`; see *Using path diagrams to specify standard linear SEMs* in [SEM] [intro 2](#) and [SEM] [sem and gsem path notation](#).

`covstructure()` is often convenient; see [SEM] [sem and gsem option covstructure\(\)](#).

## Also see

[SEM] [sem](#) — Structural equation model estimation command

[SEM] [intro 2](#) — Learning the language: Path diagrams and command language

[SEM] [sem and gsem path notation](#) — Command syntax for path diagrams

[SEM] [sem and gsem option covstructure\(\)](#) — Specifying covariance restrictions

[SEM] [sem and gsem option reliability\(\)](#) — Fraction of variance not due to measurement error

[SEM] [sem and gsem option constraints\(\)](#) — Specifying constraints

[SEM] [sem and gsem option from\(\)](#) — Specifying starting values