

# gsem group options — Fitting models on different groups

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## Description

`gsem` can fit combined models across subgroups of the data while allowing some parameters to vary and constraining others to be equal across subgroups. These subgroups could be males and females, age category, and the like.

`gsem` performs such estimation when the `group(varname)` option is specified. The `ginvariant(pclassname)` option specifies which parameters are to be constrained to be equal across the groups.

## Syntax

`gsem paths ... , ... group_options`

| <i>group_options</i>                       | Description                                     |
|--|---|
| <code>group(<i>varname</i>)</code>         | fit model for different groups                  |
| <code>ginvariant(<i>pclassname</i>)</code> | specify parameters that are equal across groups |

| <i>pclassname</i>    | Description                               |
|----------------------|---|
| <code>cons</code>    | intercepts and cutpoints                  |
| <code>coef</code>    | fixed coefficients                        |
| <code>loading</code> | latent variable coefficients              |
| <code>errvar</code>  | covariances of errors                     |
| <code>scale</code>   | scaling parameters                        |
| <code>means</code>   | means of exogenous variables              |
| <code>covex</code>   | covariances of exogenous latent variables |
| <code>all</code>     | all the above                             |
| <code>none</code>    | none of the above                         |

`ginvariant(cons coef loading)` is the default if `ginvariant()` is not specified.

## Options

`group(varname)` specifies that the model be fit as described above. *varname* specifies the name of a numeric variable that records the group to which the observation belongs.

`ginvariant(pclassname)` specifies which classes of parameters of the model are to be constrained to be equal across groups. The classes are defined above. The default is `ginvariant(cons coef loading)` if the option is not specified.

## Remarks and examples

See [\[SEM\] intro 6](#) and [\[SEM\] example 49g](#).

## Also see

[\[SEM\] gsem](#) — Generalized structural equation model estimation command

[\[SEM\] intro 6](#) — Comparing groups

[\[SEM\] example 49g](#) — Multiple-group Weibull survival model