

Title

intro — Introduction to multivariate statistics manual

Description

This entry describes this manual and what has changed since Stata 11.

Remarks

This manual documents Stata's multivariate analysis features and is referred to as the [MV] manual in cross-references.

Following this entry, [MV] **multivariate** provides an overview of the multivariate analysis features in Stata and Stata's multivariate analysis commands. The other parts of this manual are arranged alphabetically.

Stata is continually being updated, and Stata users are always writing new commands. To find out about the latest multivariate analysis features, type `search multivariate analysis` after installing the latest official updates; see [R] **update**.

What's new

This section is intended for previous Stata users. If you are new to Stata, you may as well skip it.

1. **Structural equation modeling (SEM)**. New command `sem` estimates multivariate linear models that can include observed and latent variables. `sem` can perform confirmatory factor analysis, multivariate regression, path analysis, and much more; see the new *Stata Structural Equation Modeling Reference Manual*.
2. **Contrasts**, which is to say, tests of linear hypotheses involving factor variables and their interactions from the most recently fit model. Tests include ANOVA-style tests of main effects, simple effects, interactions, and nested effects. Effects can be decomposed into comparisons with reference categories, comparisons of adjacent levels, comparisons with the grand mean, and more. New commands `contrast` and `margins`, `contrast` are available after `manova`; see [MV] **manova postestimation**. Also see [R] **contrast** and [R] **margins, contrast**.
3. **Pairwise comparisons** of means, estimated cell means, estimated marginal means, predictive margins of linear and nonlinear responses, intercepts, and slopes. In addition to ANOVA-style comparisons, comparisons can be made of population averages. New commands `pwcompare` and `margins`, `pwcompare` are available after `manova`; see [MV] **manova postestimation**. New command `pwmean` computes all pairwise differences of means. See [R] **pwcompare**, [R] **margins, pwcompare**, and [R] **pwmean**.
4. **Graphs of margins, marginal effects, contrasts, and pairwise comparisons**. Margins and effects can be obtained from linear or nonlinear (for example, probability) responses. New command `marginsplot` is available after `manova`; see [MV] **manova postestimation**. Also see [R] **marginsplot**.
5. **Option `addplot()` now places added graphs above or below**. Graph commands that allow option `addplot()` can now place the added plots above or below the command's plots. Affected by this are the multivariate commands `screepplot` and `cluster dendrogram`; see [MV] **screepplot** and [MV] **cluster dendrogram**.

For a complete list of all the new features in Stata 12, see [U] **1.3 What's new**.

Also see

[U] **1.3 What's new**

[R] **intro** — Introduction to base reference manual