Title

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grmeanby — Graph means and medians by categorical variables

Syntax

```
grmeanby varlist [if] [in] [weight] , summarize(varname) [, options]
```

options	Description
Main	
* `summarize(`*varname*`)`	graph mean (or median) of *varname*
`median`	graph medians; default is to graph means
Plot	
cline_options	change the look of the lines
marker_options	change look of markers (color, size, etc.)
marker_label_options	add marker labels; change look or position
Y axis, X axis, Titles, Legend, Overall	
twoway_options	any options other than `by()` documented in [G-3] ***twoway_options***

*`summarize(`*varname*`)` is required.

`aweights` and `fweights` are allowed; see **[U] 11.1.6 weight**.

Menu

Statistics > Summaries, tables, and tests > Summary and descriptive statistics > Graph means/medians by groups

Description

`grmeanby` graphs the (optionally weighted) means or medians of *varname* according to the values of the variables in *varlist*. The variables in *varlist* may be string or numeric and, if numeric, may be labeled.

Options

Main

`summarize(`*varname*`)` is required; it specifies the name of the variable whose mean or median is to be graphed.

`median` specifies that the graph is to be of medians, not means.

Plot

cline_options affect the rendition of the lines through the markers, including their color, pattern, and width; see [G-3] ***cline_options***.

marker_options affect the rendition of markers drawn at the plotted points, including their shape, size, color, and outline; see [G-3] ***marker_options***.

marker_label_options specify if and how the markers are to be labeled; see [G-3] ***marker_label_options***.

Y axis, X axis, Titles, Legend, Overall

twoway_options are any of the options documented in [G-3] ***twoway_options***, excluding `by()`. These include options for titling the graph (see [G-3] ***title_options***) and for saving the graph to disk (see [G-3] ***saving_option***).

Remarks and examples

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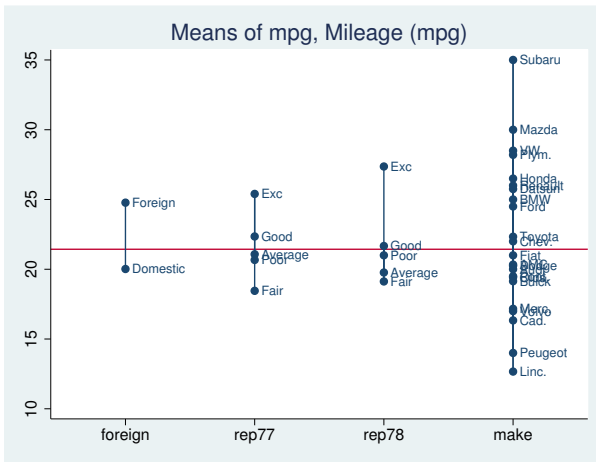
The idea of graphing means of categorical variables was shown in Chambers and Hastie (1992, 3). Because this was shown in the context of an S function for making such graphs, it doubtless has roots going back further than that. `grmeanby` is, in any case, another implementation of what we will assume is their idea.

Example 1

Using a variation of our auto dataset, we graph the mean of `mpg` by `foreign`, `rep77`, `rep78`, and `make`:

```
. use http://www.stata-press.com/data/r13/auto1
(Automobile Models)
. grmeanby foreign rep77 rep78 make, sum(mpg)
```



If we had wanted a graph of medians rather than means, we could have typed

```
. grmeanby foreign rep77 rep78 make, sum(mpg) median
```

References

Chambers, J. M., and T. J. Hastie, ed. 1992. *Statistical Models in S*. Pacific Grove, CA: Wadsworth and Brooks/Cole.

Gould, W. W. 1993. gr12: Graphs of means and medians by categorical variables. *Stata Technical Bulletin* 12: 13. Reprinted in *Stata Technical Bulletin Reprints*, vol. 2, pp. 44–45. College Station, TX: Stata Press.