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.

Quick start

Graph means of `v1` for each level of categorical variables `cvar1`, `cvar2`, and `cvar3`
```
grmeanby cvar1 cvar2 cvar3, sum(v1)
```
As above, but graph medians
```
grmeanby cvar1 cvar2 cvar3, sum(v1) median
```
As above, but use `+` as the marker
```
grmeanby cvar1 cvar2 cvar3, sum(v1) median msymbol(+)
```

Menu

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

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

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<td>graph mean (or median) of <code>varname</code></td>
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<td><code>median</code></td>
<td>graph medians; default is to graph means</td>
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`*summarize(varname)` is required.

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

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

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 https://www.stata-press.com/data/r16/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
