**grmeanby — Graph means and medians by categorical variables**

### Syntax

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

### Options

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main</strong></td>
</tr>
<tr>
<td>* <code>summarize(varname)</code></td>
</tr>
<tr>
<td><code>median</code></td>
</tr>
<tr>
<td><strong>Plot</strong></td>
</tr>
<tr>
<td><code>cline_options</code></td>
</tr>
<tr>
<td><code>marker_options</code></td>
</tr>
<tr>
<td><code>marker_label_options</code></td>
</tr>
<tr>
<td><strong>Y axis, X axis, Titles, Legend, Overall</strong></td>
</tr>
<tr>
<td><code>twoway_options</code></td>
</tr>
</tbody>
</table>

* `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

- `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.
**grmeanby** — Graph means and medians by categorical variables

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 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
