

Description

The *cat_axis_label_options* determine the look of the labels that appear on a categorical *x* axis produced by graph bar, graph hbar, graph dot, and graph box; see [G-2] **graph bar**, [G-2] **graph dot**, and [G-2] **graph box**. These options are specified inside label() of over():

```
. graph ..., over(varname, ... label(cat_axis_label_options) ...)
```

The most useful *cat_axis_label_options* are angle(), alternate, labcolor(), and labsizes().

Quick start

Increase size of categorical axis labels by 20% for plots drawn over categorical variable *catvar*

```
graph_command ..., over(catvar, label(labsize(*1.2)))
```

Place the categorical axis labels at a 45-degree angle

```
graph_command ..., over(catvar, label(angle(45)))
```

Alternate the placement of labels to increase space between adjacent labels

```
graph_command ..., over(catvar, label(alternate))
```

Make the categorical axis labels green

```
graph_command ..., over(catvar, label(labcolor(green)))
```

Suppress the display of labels on the categorical axis

```
graph_command ..., over(catvar, label(nolabels))
```

Note: Categorical axis-label options can be used only with graph bar, graph box, graph dot, or graph hbar.

Syntax

<i>cat_axis_label_options</i>	Description
<u>nolabels</u>	suppress axis labels
<u>ticks</u>	display axis ticks
<u>angle(<i>anglestyle</i>)</u>	angle of axis labels
<u>alternate</u>	offset adjacent labels
<u>tstyle(<i>tickstyle</i>)</u>	labels and ticks: overall style
<u>labgap(<i>size</i>)</u>	labels: margin between tick and label
<u>labstyle(<i>textstyle</i>)</u>	labels: overall style
<u>labsize(<i>textsizestyle</i>)</u>	labels: size of text
<u>labcolor(<i>colorstyle</i>)</u>	labels: color and opacity of text
<u>tlengt(<i>size</i>)</u>	ticks: length
<u>tposition(<i>outside crossing inside</i>)</u>	ticks: position/direction
<u>tlstyle(<i>linestyle</i>)</u>	ticks: linestyle of
<u>tlwidth(<i>linewidthstyle</i>)</u>	ticks: thickness of line
<u>tlcolor(<i>colorstyle</i>)</u>	ticks: color and opacity of line

Options

`nolabels` suppresses display of category labels on the axis. For graph bar and graph hbar, the `nolabels` option is useful when combined with the `blabel()` option used to place the labels on the bars themselves; see [G-3] [label_option](#).

`ticks` specifies that ticks appear on the categorical *x* axis. By default, ticks are not presented on categorical axes, and it is unlikely that you would want them to be.

`angle(anglestyle)` specifies the angle at which the labels on the axis appear. The default is `angle(0)`, meaning horizontal. With vertical bar charts and other vertically oriented charts, it is sometimes useful to specify `angle(90)` (vertical text reading bottom to top), `angle(-90)` (vertical text reading top to bottom), or `angle(-45)` (angled text reading top left to bottom right); see [G-4] [anglestyle](#).

Unix users: if you specify `angle(-45)`, results will appear on your screen as if you specified `angle(-90)`; results will appear correctly when you print.

`alternate` causes adjacent labels to be offset from one another and is useful when there are many labels or when labels are long. For instance, rather than obtaining an axis labeled,

with `alternate`, you obtain

`tstyle(tickstyle)` specifies the overall look of labels and ticks; see [G-4] [tickstyle](#). Here the emphasis is on labels because ticks are usually suppressed on a categorical axis. The options documented below will allow you to change each attribute of the label and tick, but the `tickstyle` specifies the starting point.

You need not specify `tstyle()` just because there is something you want to change about the look of labels and ticks. You specify `tstyle()` when another style exists that is exactly what you desire or when another style would allow you to specify fewer changes to obtain what you want.

`labgap(size)`, `labstyle(textstyle)`, `labsize(textsizestyle)`, and `labcolor(colorstyle)` specify details about how the labels are presented. Of particular interest are `labsize(textsizestyle)`, which specifies the size of the labels, and `labcolor(colorstyle)`, which specifies the color of the labels; see [G-4] `textsizestyle` and [G-4] `colorstyle` for a list of text sizes and color choices. Also see [G-4] `size` and [G-4] `textstyle`.

`tlength(size)` specifies the overall length of the ticks; see [G-4] `size`.

`tposition(outside|crossing|inside)` specifies whether the ticks are to extend `outside` (from the axis out, the usual default), `crossing` (crossing the axis line, extending in and out), or `inside` (from the axis into the plot region).

`tlstyle(linestyle)`, `tlwidth(linewidthstyle)`, and `tlcolor(colorstyle)` specify other details about the look of the ticks. Ticks are just lines. See [G-4] Concept: `lines` for more information.

Remarks and examples

You draw a bar, dot, or box plot of `empcost` by `division`:

```
. graph ... empcost, over(division)
```

Seeing the result, you wish to make the text labeling the divisions 20% larger. You type:

```
. graph ... empcost, over(division, label(labsize(*1.2)))
```

Also see

[G-2] `graph bar` — Bar charts

[G-2] `graph box` — Box plots

[G-2] `graph dot` — Dot charts (summary statistics)

