xtline — Panel-data line plots

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Syntax

Graph by panel

xtline varlist [if] [in] [ , panel_options ]

Overlaid panels

xtline varname [if] [in] , overlay [ overlaid_options ]

panel_options Description

Main

i(varname_i) use varname_i as the panel ID variable
t(varname_t) use varname_t as the time variable

Plot

cline_options affect rendition of the plotted points connected by lines

Add plots

addplot(plot) add other plots to the generated graph

Y axis, Time axis, Titles, Legend, Overall

twoway_options any options other than by() documented in [G-3] twoway_options
byopts(byopts) affect appearance of the combined graph

overlaid_options Description

Main

overlay overlay each panel on the same graph

i(varname_i) use varname_i as the panel ID variable
t(varname_t) use varname_t as the time variable

Plots

plot#opts(cline_options) affect rendition of the # panel line

Add plots

addplot(plot) add other plots to the generated graph

Y axis, Time axis, Titles, Legend, Overall

twoway_options any options other than by() documented in [G-3] twoway_options

A panel variable and a time variable must be specified. Use xtsset (see [XT] xtsset) or specify the i() and t() options. The t() option allows noninteger values for the time variable, whereas xtsset does not.
Menu
Statistics > Longitudinal/panel data > Line plots

Description

xtline draws line plots for panel data.

Options for graph by panel

\[$(i(varname_i)$ \text{ and } t(varname_t)$ \text{ override the panel settings from } \texttt{xtset}; see [XT] \texttt{xtset}. varname_i$ is allowed to be a string variable. varname_t can take on noninteger values and have repeated values within panel. That is to say, it can be any numeric variable that you would like to specify for the $x$-dimension of the graph. It is an error to specify $i()$ without $t()$ and vice versa.\]

\[$cline\_options$ affect the rendition of the plotted points connected by lines; see [G-3] \texttt{cline\_options}.\]

\[$addplot(plot)$ provides a way to add other plots to the generated graph; see [G-3] \texttt{addplot\_option}.\]

\[$twoway\_options$ are any of the options documented in [G-3] \texttt{twoway\_options}, excluding by(). These include options for titling the graph (see [G-3] \texttt{title\_options}) and for saving the graph to disk (see [G-3] \texttt{saving\_option}).\]

\[$byopts(byopts)$ allows all the options documented in [G-3] \texttt{by\_option}. These options affect the appearance of the by-graph. byopts() may not be combined with overlay.\]

Options for overlaid panels

\[$overlay$ causes the plot from each panel to be overlaid on the same graph. The default is to generate plots by panel. This option may not be combined with byopts() or be specified when there are multiple variables in \texttt{varlist}.\]

\[$i(varname_i)$ \text{ and } t(varname_t)$ \text{ override the panel settings from } \texttt{xtset}; see [XT] \texttt{xtset}. varname_i$ is allowed to be a string variable. varname_t can take on noninteger values and have repeated values within panel. That is to say, it can be any numeric variable that you would like to specify for the $x$-dimension of the graph. It is an error to specify $i()$ without $t()$ and vice versa.\]

\[$plot\#opts(cline\_options)$ affect the rendition of the $\#$th panel (in sorted order). The \texttt{cline\_options} can affect whether and how the points are connected; see [G-3] \texttt{cline\_options}.\]

\[$addplot(plot)$ provides a way to add other plots to the generated graph; see [G-3] \texttt{addplot\_option}.\]
Remarks and examples

Example 1

Suppose that Tess, Sam, and Arnold kept a calorie log for an entire calendar year. At the end of the year, if they pooled their data together, they would have a dataset (for example, xtline1.dta) that contains the number of calories each of them consumed for 365 days. They could then use xtset to identify the date variable and treat each person as a panel and use xtline to plot the calories versus time for each person separately.

```
. use http://www.stata-press.com/data/r13/xtline1
. xtset person day
   panel variable: person (strongly balanced)
   time variable: day, 01jan2002 to 31dec2002
   delta: 1 day
. xtline calories, tlabel(#3)
```

Specify the overlay option so that the values are plotted on the same graph to provide a better comparison among Tess, Sam, and Arnold.
Also see

[XT] xtset — Declare data to be panel data

[G-2] graph twoway — Twoway graphs

[TS] tsline — Plot time-series data