

Graphing Confidence Intervals in Stata

For graphic options in general, see Mitchell, *A Visual Guide to Stata Graphics* (Stata Press). See also Long/Freese, *Regression Models for Categorical Dependent Variables Using Stata* (Stata Press).

CI: Quantitative variable *

```
use hsb2, clear
ci science                [, level( ) ]
bys ses: ci science

ciplot science, by(ses)   ['findit ciplot' & download; , level( )]
cihplot science, by(ses)  ['findit cihplot' & download; ,level()]
civplot science, by(ses)  ['findit civplot' & download; ,level()]
```

* To compute non-parametric confidence intervals, see downloadable commands such as *cendef*, *censlope*, & *somersd*.

* The downloadable *cid* computes confidence intervals for means of differences.

CI: Categorical-binary variable

```
gen honors_sci=science>=60 & science<.
tab honors_sci

ci honors_sci, binomial
ciplot honors_sci, bin by(ses)

ci honors_sci, bin wilson      [, level( ) agresti, jeffreys, wald]
bys ses: ci honors_sci, bin wil
```

To graph, e.g., binomial wilson CI:

```
statsby, by(ses): ci honors_sci, bin wil
list
su
ecplot mean lb ub ses          ['findit ecplot' & download]
```

Note: perhaps easier – *ciplot bivar, bin wil; cihplot bivar, bin wil; civplot bivar, bin wil*

CI: Single OLS regression coefficient

```
twoway lfitci read science    [, level( )]
twoway qfitci read science
twoway fffitci read science
```

CI: Single Logistic regression coefficient & its predicted probabilities

scatlog honors_sci math, xb ['findit scatlog' & download; xb, predicted logits]
scatlog honors_sci math, ci [ci, predicted probabilities]

CI: Multiple OLS & other regression coefficients

reg science read write
gorciv read write ['findit gorciv' & download]

logistic honors_sci read write
gorciv read write, eform point

CI: Multiple OLS & other regression coefficients

parmby "reg read math science socst", label norestore ['findit parmby' & download]
sencode label if parm~="_cons", gen(parmid) ['findit sencode' & download]
list parm label est min95 max95 parmid
ecplot estimate min95 max95 parmid, horiz ['findit ecplot' & download]