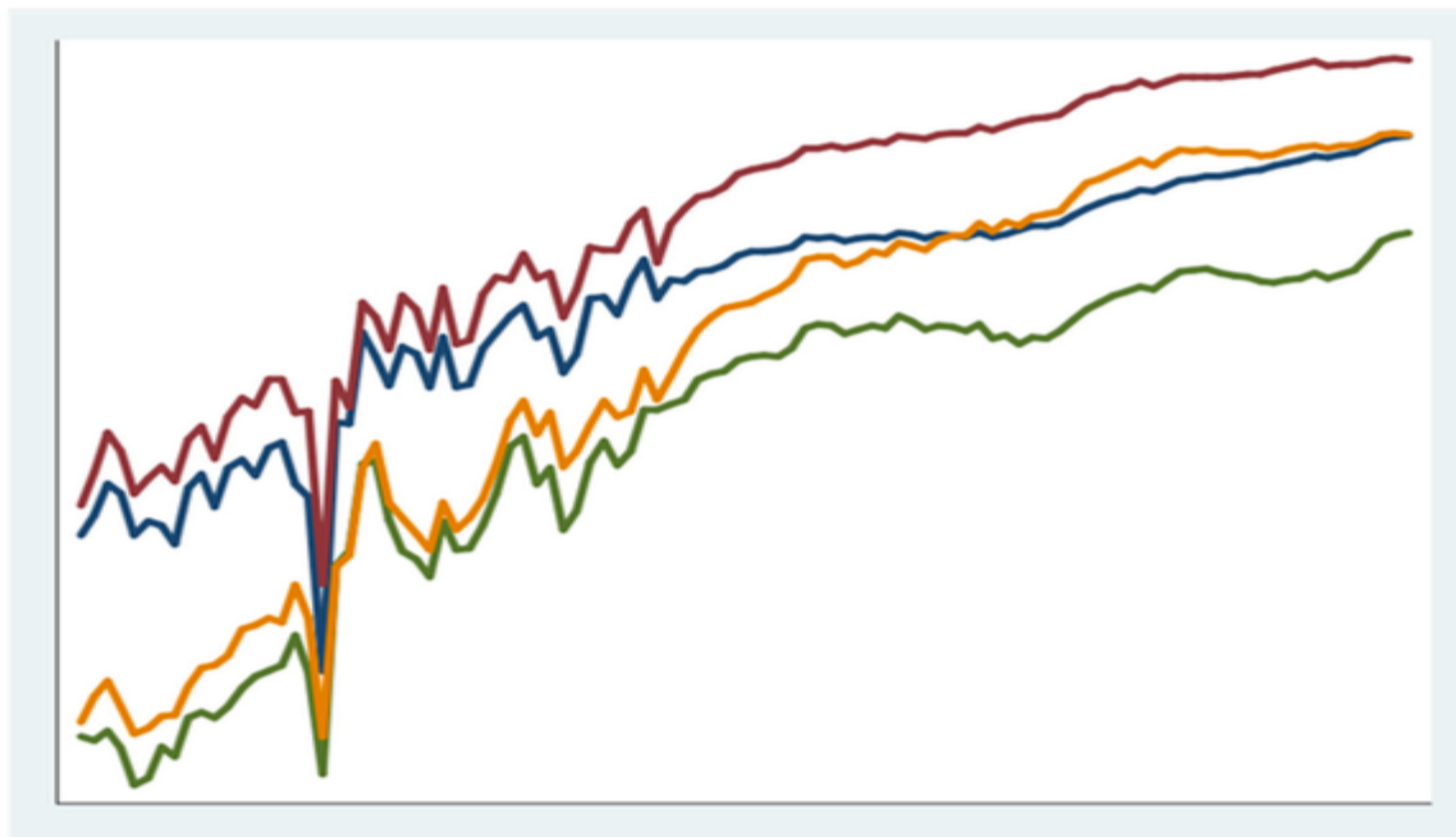


Stata Graphics



Stata Graphics Syntax

graph <graphtype>

`graph bar`

graph twoway <plottype>

`graph twoway scatter`

`graph twoway line`

`graph twoway lfit`

`graph twoway lfitci`

graphs commands may have options

some options have suboptions or a list of options

`graph twoway scatter var1 var2, xlabel(30(10)100, labsize(small))`

appearance of graph defined by graph elements:

data - marker symbols, lines

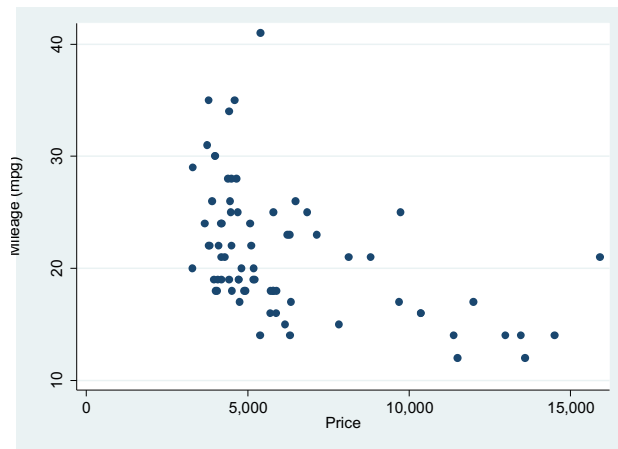
elements within plot region – text, marker labels, line labels

elements outside plot region – titles, legend, notes, axis labels, tick marks, axis titles

size and shape of plot region and entire graph

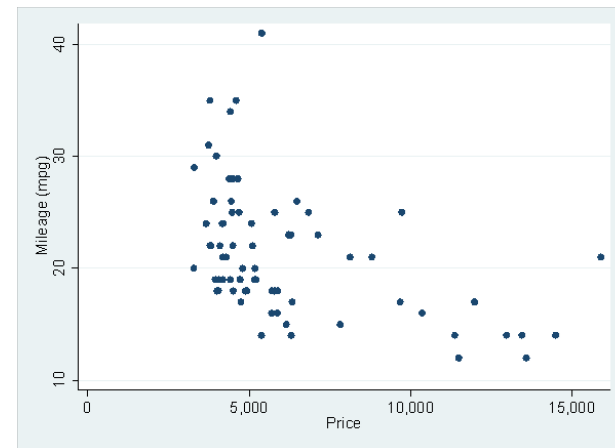
Intro To Graphing In Stata

```
. sysuse auto, clear  
. graph twoway scatter mpg weight
```



“graph” is often optional. So is
“twoway” in this case.

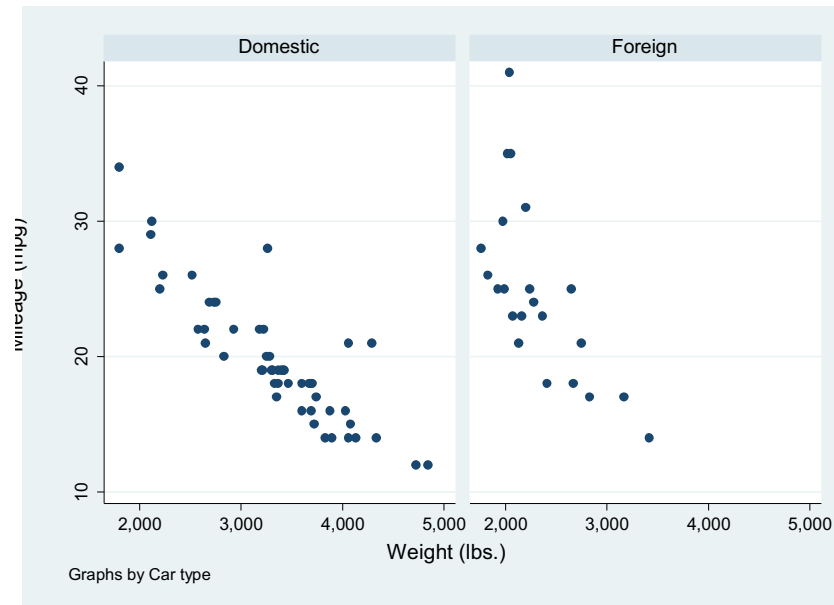
```
. scatter mpg weight
```



Note: Nearly all graphing commands start with “graph”, and “twoway” is a large family of graphs.

Creating Multiple Graphs with “by():”

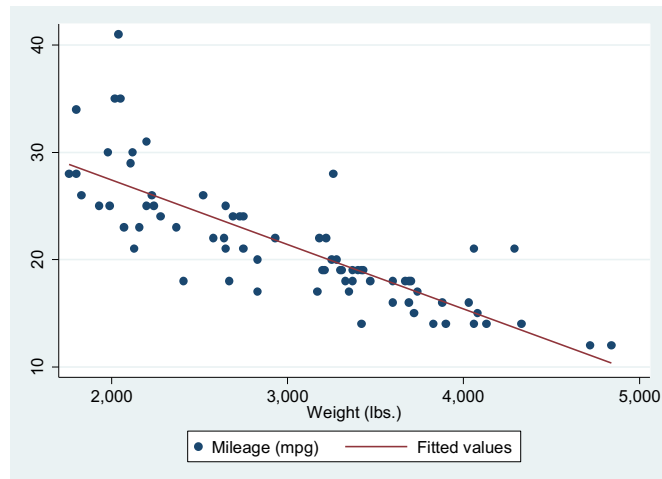
```
. twoway scatter mpg weight, by(foreign)
```



Note that the value label is displayed above the graphs, and the variable label is displayed in the bottom right hand corner.

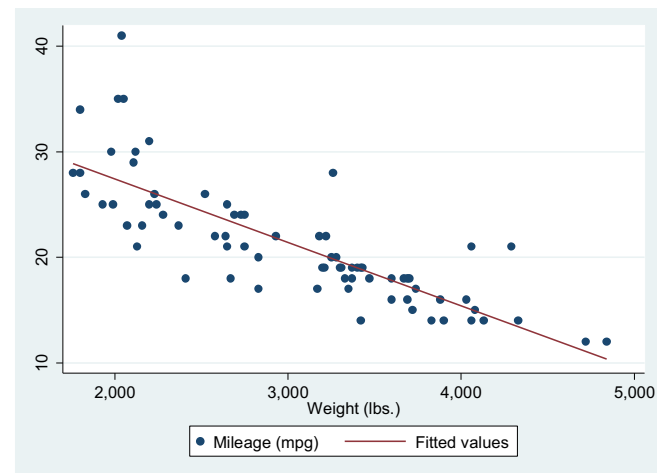
Overlaying “twoway” graphs

```
. twoway scatter mpg weight || lfit mpg weight
```



The `||` tells Stata to put the second graph on top of the first one – order matters! You don’t need to type “twoway” twice; it applies to both.

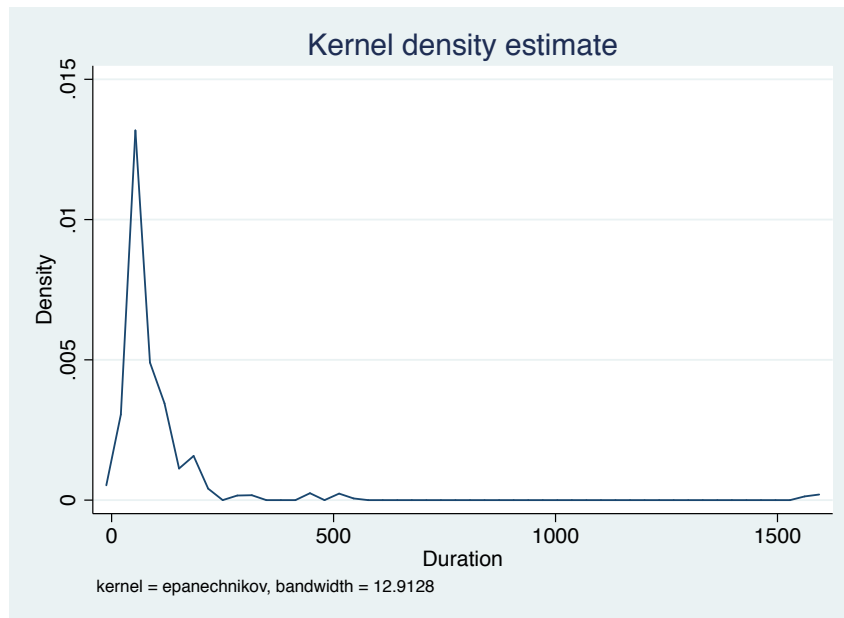
```
. twoway (scatter mpg weight) (lfit mpg weight)
```



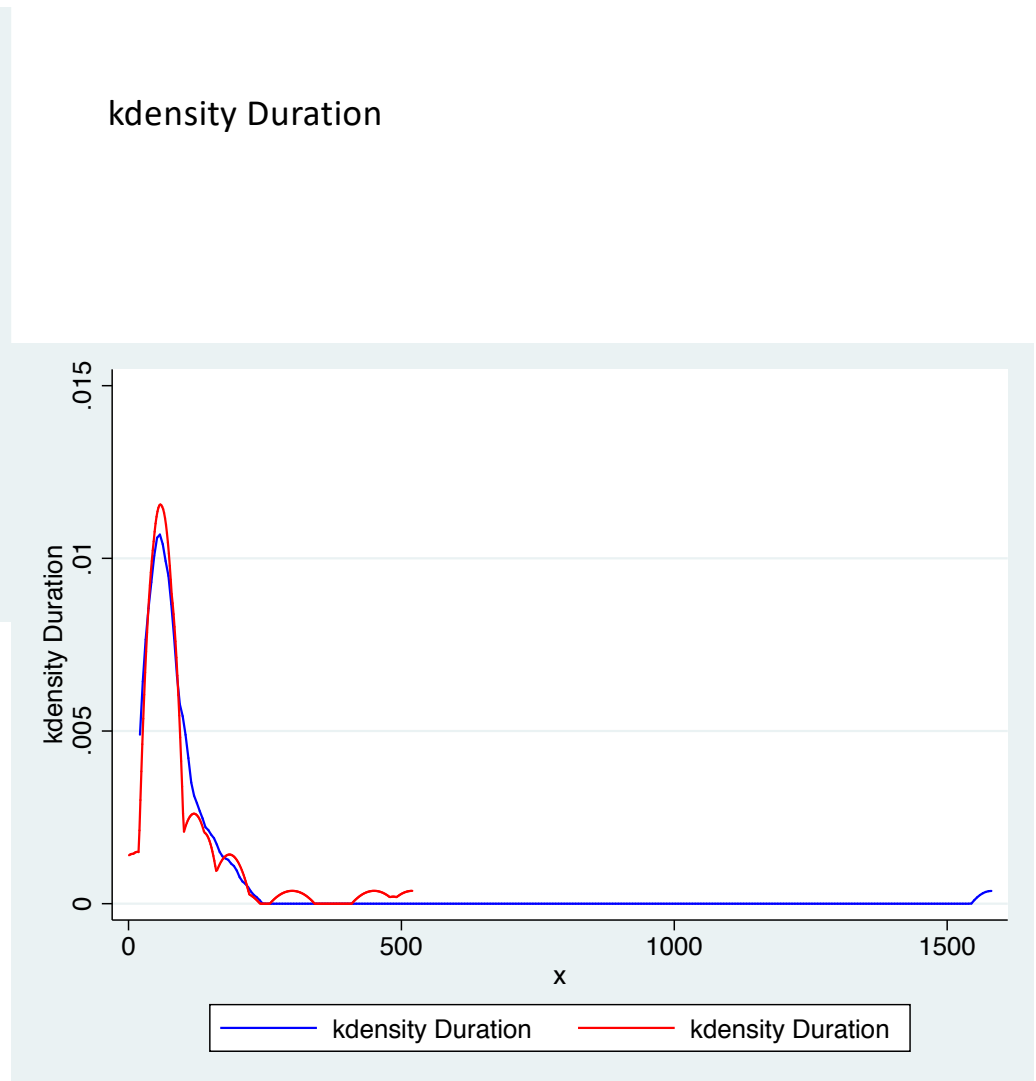
This is another way of writing the command – it doesn’t matter which one you use.

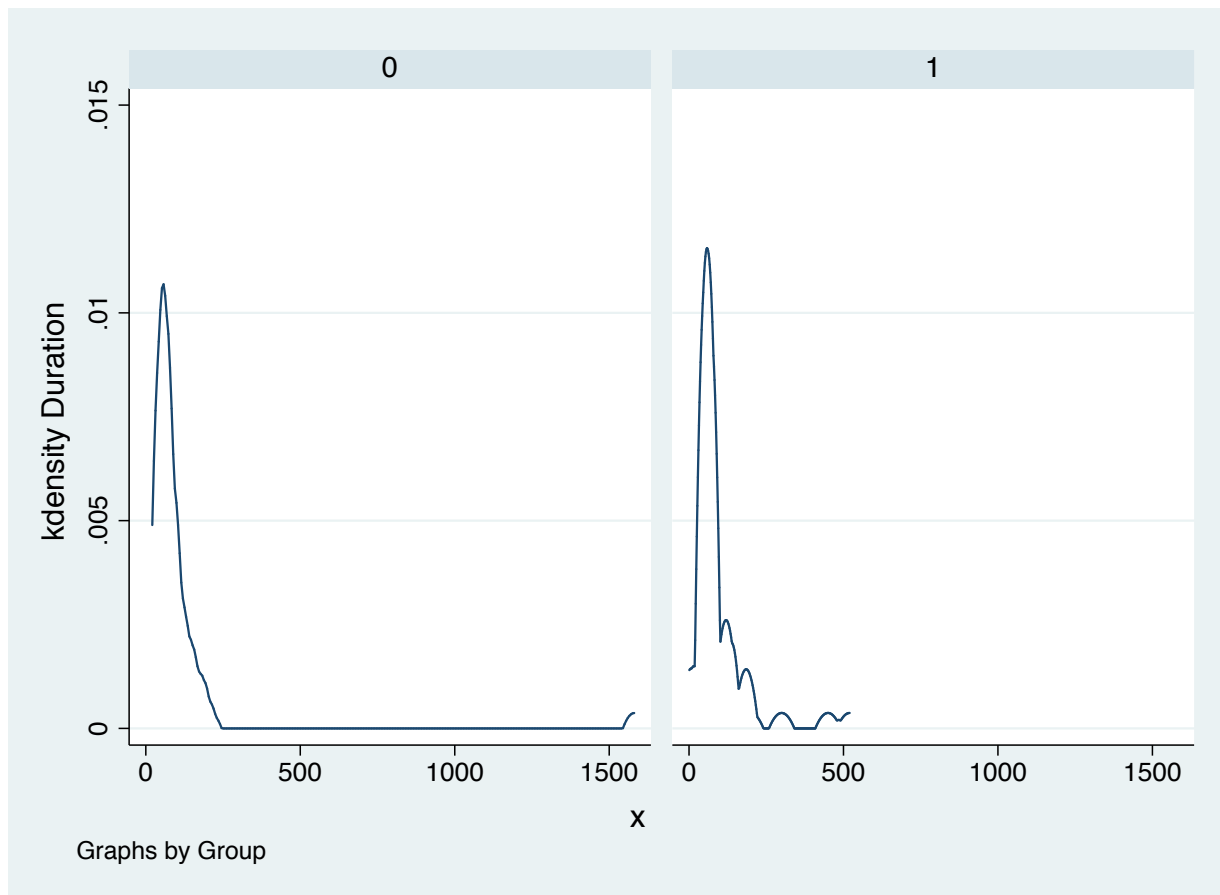
Twoway density

- Syntax
 - `graph twoway (plot1, opts) (plot2, opts), opts`
- One plot
 - `kdensity Duration`
- Two plots overlaid
 - `twoway ( kdensity Duration if Group ==0, lcolor(blue) )`
`( kdensity Duration if Group ==1, lcolor(red) )`
- Side `by` side
 - `twoway ( kdensity Duration), by(Group)`



twoway (kdensity Duration if Group ==0,
lcolor(blue)) (kdensity Duration if Group
==1, lcolor(red))





twoway (kdensity Duration),
by(Group)

Stata Graphics Syntax: A Simple Example

```
sysuse uslifeexp.dta, clear
```

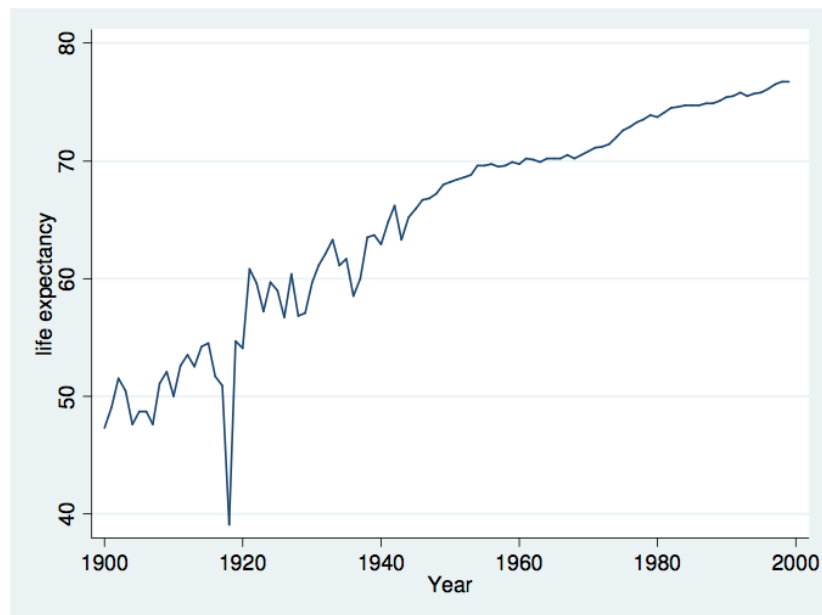
```
graph twoway line le year
```

```
/* OR */
```

```
twoway line le year
```

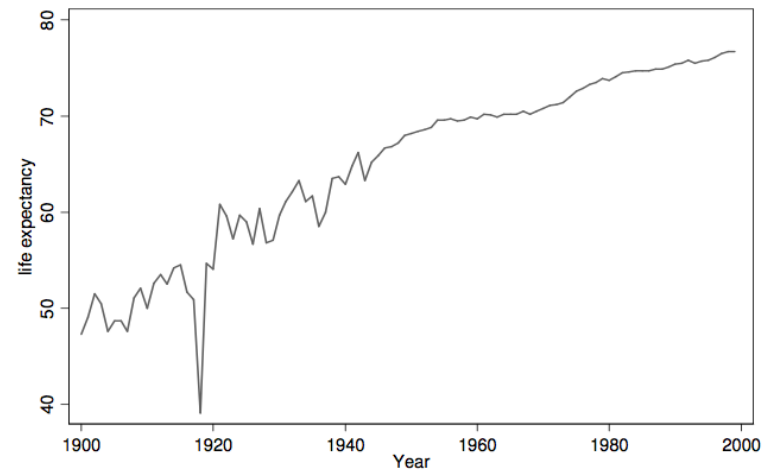
```
/* OR */
```

```
line le year
```



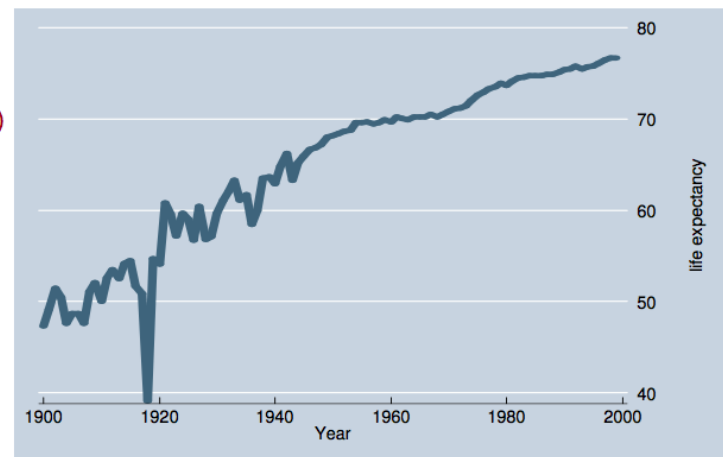
Using Schemes

```
line le year, scheme(s1mono)
```



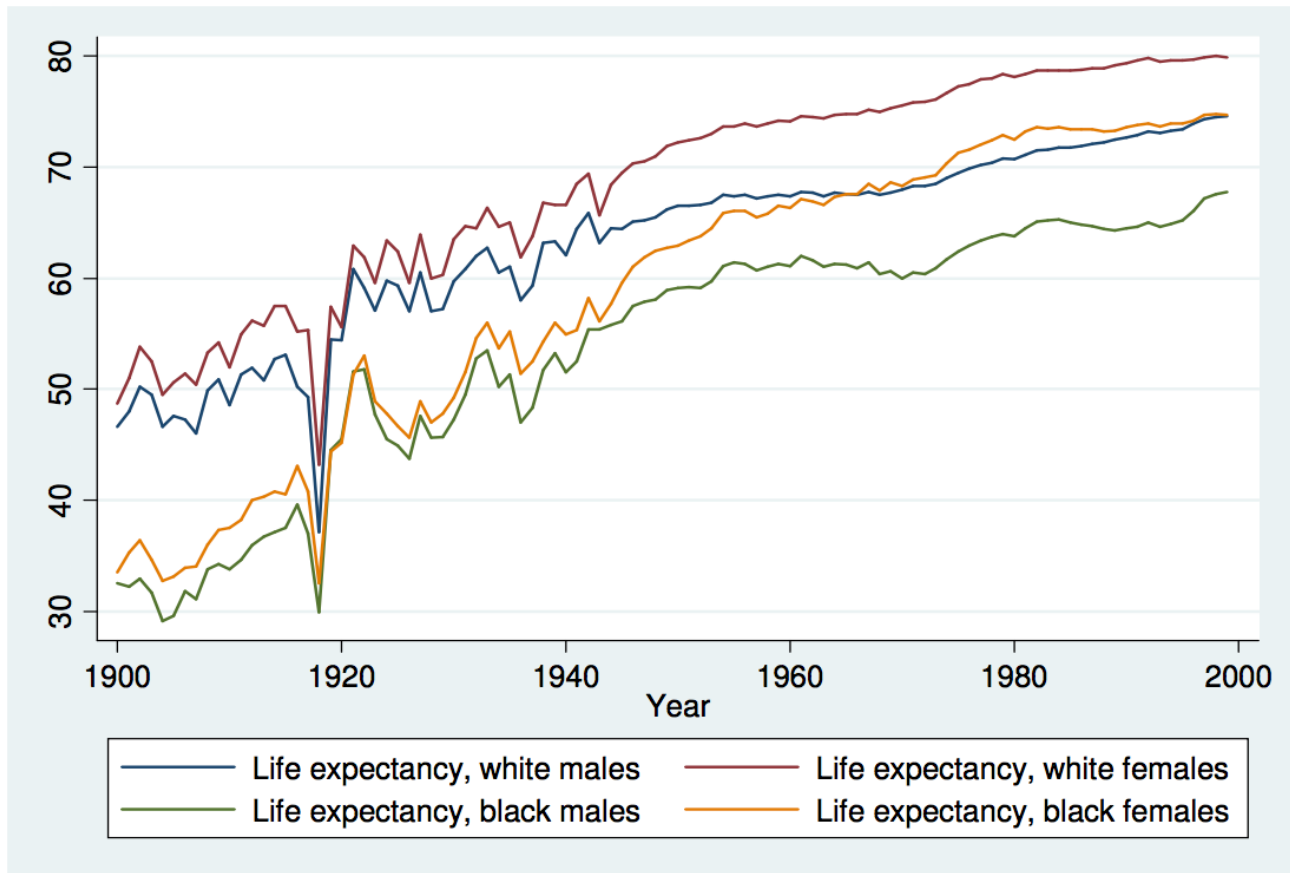
```
line le year, scheme(economist)
```

```
/* to see list of  
scheme names:  
graph query, schemes  
  
to change default scheme:  
set scheme schemename  
*/
```



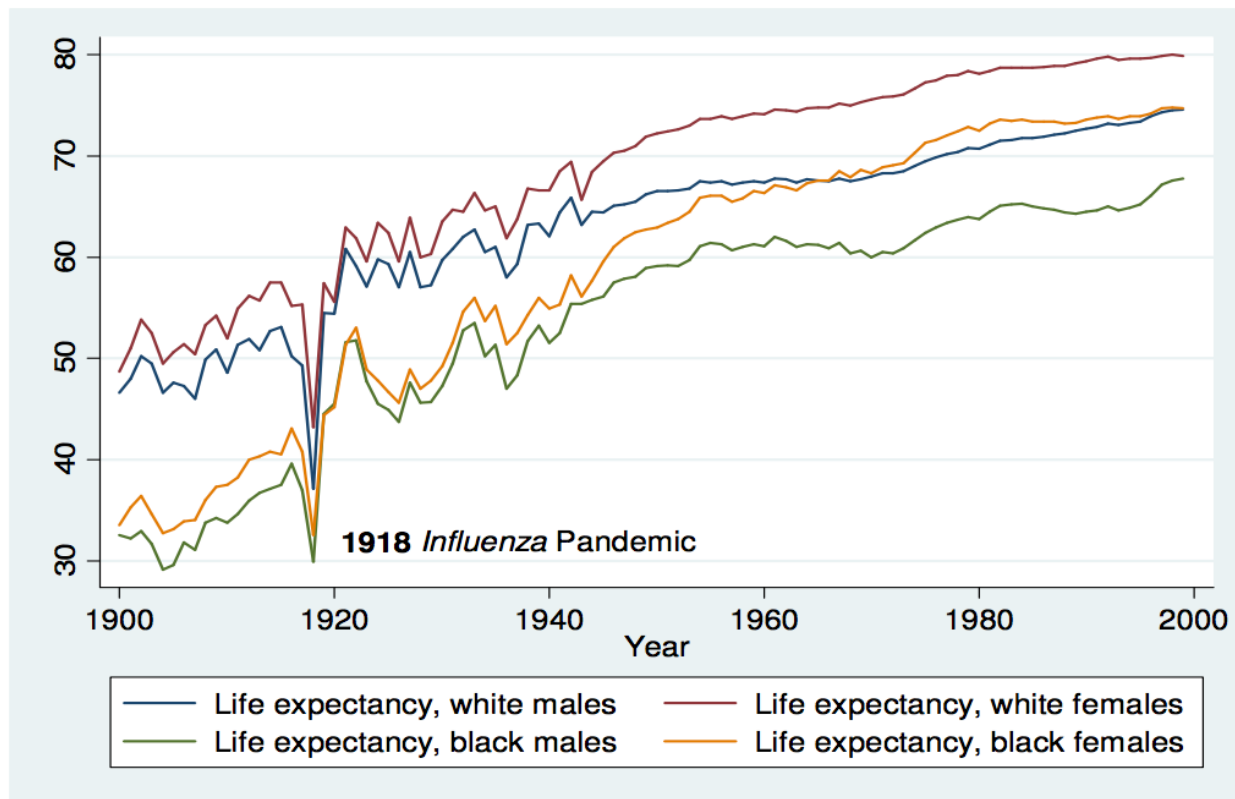
Multiple Dependent Variables

```
line le_wmale le_wfemale le_bmale le_bfemale year
```



Adding Text

```
line le_wmale le_wfemale le_bmale le_bfemale year ///  
, text(32 1920 "{bf:1918} {it:Influenza} Pandemic", place(3))
```



Overlaying Two-Way Plot Types

```
scatter le year if year >= 1950 || lfit le year if year >= 1950  
/* OR */
```

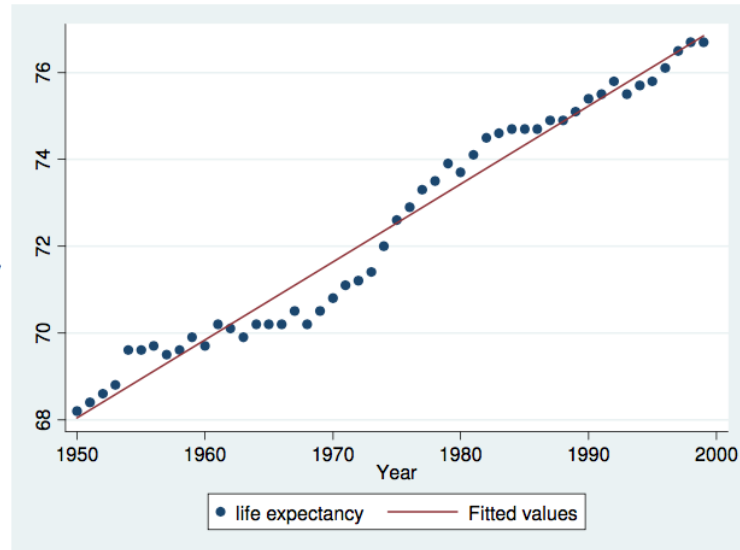
```
scatter ///  
le year if year >= 1950 ///  
|| lfit le year if year >= 1950
```

```
/* OR */
```

```
twoway ///  
(scatter le year if year >= 1950) ///  
(lfit le year if year >= 1950)
```

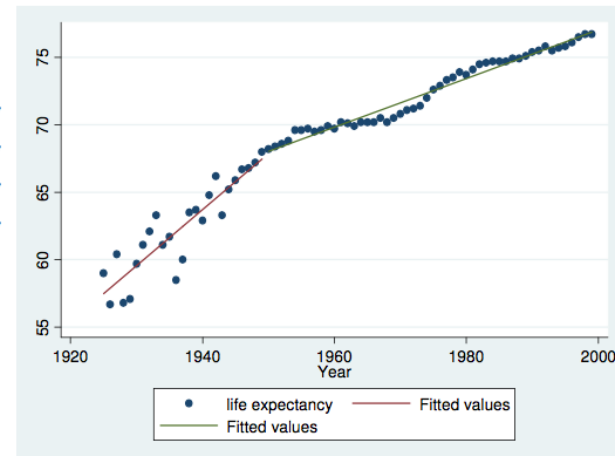
```
/* OR */
```

```
#delimit ;  
twoway  
(scatter le year if year >= 1950)  
(lfit le year if year >= 1950);  
#delimit cr
```



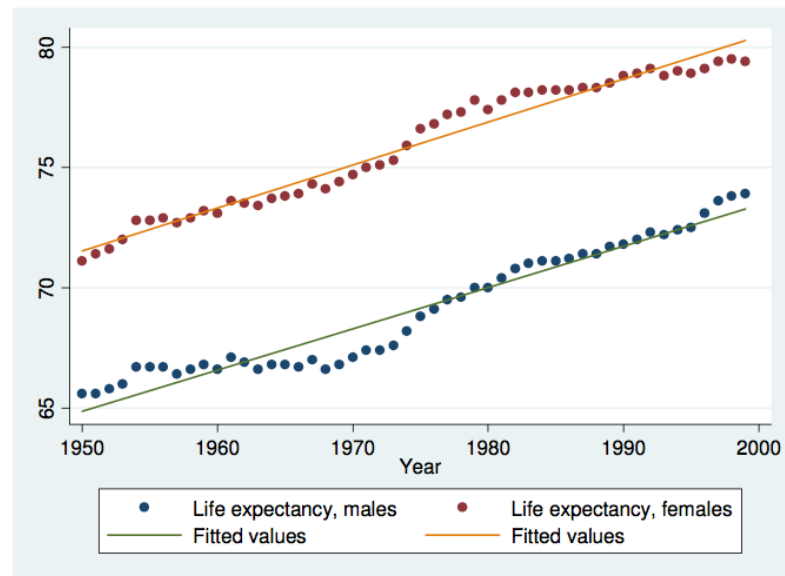
Overlaying Two-Way Plot Types

```
scatter le year if year >= 1925    ///  
|| lfit le year if year >= 1925 & ///  
    year < 1950    ///  
|| lfit le year if year >= 1950  
  
    /* OR */  
twoway                                ///  
(scatter le year if year >= 1925)    ///  
(lfit    le year if year >= 1925 & ///  
    year < 1950)    ///  
(lfit    le year if year >= 1950)  
  
    /* OR */  
  
#delimit ;  
scatter le year if year >= 1925  
|| lfit le year if year >= 1925 & year < 1950  
|| lfit le year if year >= 1950;  
#delimit cr
```



Overlaying Two-Way Plot Types

```
#delimit ;  
scatter le_male le_female year if year >= 1950  
|| lfit le_male year if year >= 1950  
|| lfit le_female year if year >= 1950;  
#delimit cr
```



Adding a Title and Removing the Legend

```
#delimit ;  
scatter le_male le_female year if year >= 1950  
|| lfit le_male year if year >= 1950  
|| lfit le_female year if year >= 1950  
,title("US Male and Female Life Expectancy, 1950-2000")  
text(75 1978 "Female", place(3))  
text(68 1978 "Male", place(3))  
legend(off);  
#delimit cr
```

