Stata Graphics

Pros:

Many graph types and plot types provided
Multiple plot types may be overlaid
Can easily change overall look of graphs
Same options available for most types of graphs
Very flexible

Cons:

Large syntax: 665 page graphics manual!
Rather slow
Interactive, point-and-click Graph Editor
  - However, can record edits and apply them to other graphs

Stata Graphics References:

http://data.princeton.edu/stata/Graphics.html, by German Rodriguez
Stata Graphics Manual (may want to start with “graph intro”)
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
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(slmono)

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))
```

![Graph showing life expectancy trends with a spike in 1918 due to the Influenza Pandemic.]
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

```stata
#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
```

![Graph showing US Male and Female Life Expectancy, 1950-2000]
Showing Confidence Intervals, Labelling Axes, Modifying Legend

sysuse lifeexp.dta, clear
#delimit ;
twoway
  (lfitci lexp safewater if region == 2) /* North America */
  (scatter lexp safewater if region == 2)
,title("Life expectancy at birth by access to safe water, 1998")
ytitle("Life expectancy at birth")
xtitle("Percent of population with access to safe water")
legend(ring(0) pos(5) order(2 "Linear fit" 1 "95% CI"));
#delimit cr
Markers Labels and Subtitles

```
#delimit ;
twoway
  (lfitci lexp safewater if region == 2) /* North America */
  (scatter lexp safewater if region == 2, mlabel(country))
  ,title("Life expectancy at birth by access to safe water, 1998")
  subtitle("North America")
  ytitle("Life expectancy at birth")
  xtitle("Percent of population with access to safe water")
  legend(ring(0) pos(5) order(2 "Linear fit" 1 "95% CI"));
#delimit cr
```
generate pos = 12 if country == "Panama"
replace pos = 12 if country == "Honduras"
replace pos = 10 if country == "Cuba"
replace pos = 9 if country == "Jamaica"
replace pos = 9 if country == "El Salvador"
replace pos = 9 if country == "Trinidad and Tobago"
replace pos = 9 if country == "Dominican Republic"
#delimit ;
twoway
(lfitci lexp safewater if region == 2) /* North America */
(scatter lexp safewater if region == 2 , mlabel(country) mlabvposition(pos))
title("Life expectancy at birth by access to safe water, 1998")
subtitle("North America")
ytitle("Life expectancy at birth")
xtitle("Percent of population with access to safe water")
legend(ring(0) pos(5) order(2 "Linear fit" 1 "95% CI"))
plotregion(margin(r+10));
#delimit cr
Position of Marker Labels

```
#delimit ;
twoway
(scatter lexp safewater if region == 2 | region == 3 ,mlabel(country))
,title("Life expectancy at birth by access to safe water, 1998")
subtitle("North and South America")
ytitle("Life expectancy at birth")
xtitle("Percent of population with access to safe water")
plotregion(margin(r+10));
#delimit cr
```
Position of Marker Labels and Legend Display

replace pos = 9 if country == "Argentina"
replace pos = 9 if country == "Canada"
replace pos = 9 if country == "Cuba"
replace pos = 9 if country == "Panama"
replace pos = 9 if country == "Venezuela"
replace pos = 9 if country == "Jamaica"
replace pos = 9 if country == "Dominican Republic"
replace pos = 9 if country == "Ecuador"
replace pos = 9 if country == "El Salvador"
replace pos = 12 if country == "Puerto Rico"
#delimit ;
twoway
   (scatter lexp safewater if region == 2 ,mlabel(country) mlabvposition(pos))
   (scatter lexp safewater if region == 3 ,mlabel(country) mlabvposition(pos))
   ,title("Life expectancy at birth by access to safe water, 1998")
   subtitle("North and South America")
   ytitle("Life expectancy at birth")
   xtitle("Percent of population with access to safe water")
   legend(ring(0) pos(5) order(1 "North America" 2 "South America") cols(1));
#delimit cr
Marker Size and Symbol, Line Color

```stata
#delimit ;
twoway
(scatter lexp safewater if region == 2
    ,mlabel(country) mlabvposition(pos) msize(small))
(scatter lexp safewater if region == 3
    ,mlabel(country) mlabvposition(pos) msize(small) msymbol(circle_hollow))
(lfit lexp safewater if region == 2, clcolor(navy))
(lfit lexp safewater if region == 3, clcolor(maroon))
, title("Life expectancy at birth by access to safe water, 1998")
    subtitle("North and South America")
    ytitle("Life expectancy at birth")
    xtitle("Percent of population with access to safe water")
    legend(ring(0) pos(5) cols(1) order(1 "North America" 2 "South America"
        3 "North America linear fit" 4 "South America linear fit"));
#delimit cr
```

![Graph showing life expectancy at birth by access to safe water in North and South America in 1998. The graph includes scatter plots for each country with different markers and line fits for each region.]
#delimit ;
twoway 
(scatter lexp safewater if region == 2 
 ,mlabel(country) mlabvposition(pos) msize(small) mcolor(black) mlabcolor(black))
(scatter lexp safewater if region == 3 
 ,mlabel(country) mlabvposition(pos) msize(small) mcolor(black) mlabcolor(black) 
 msymbol(circle_hollow))
(lfit lexp safewater if region == 2, clcolor(black))
(lfit lexp safewater if region == 3, clcolor(black) clpattern(dash))
,title("Life expectancy at birth by access to safe water, 1998", color(black))
subtitle("North and South America")
ytitle("Life expectancy at birth")
xtitle("Percent of population with access to safe water")
legend(ring(0) pos(5) cols(1) order(1 "North America" 2 "South America" 
 3 "North America linear fit" 4 "South America linear fit"));
#delimit cr
By-Graph: Separate Graphs for Each Subset of Data

#delimit ;
twoway scatter lexp safewater, by(region, total)
    ,ytitle("Life expectancy at birth")
    xtitle("Percent of population with access to safe water");
#delimit cr

Graphs by Region
By-Graph Options

```
#delimit ;
twoway scatter lexp safewater ,by(region,total style(compact)
    title("Life expectancy by access to safe water") note(""))
    ytitle("Life expectancy at birth")
xtitle("Percent of population with access to safe water");
#delimit cr
```
Axis Scale, Ticks and Labels

```plaintext
#delimit ;
twoway scatter lexp safewater
, by(region,total style(compact)
    title("Life expectancy by access to safe water") note(""))
xscale(range(20 100))
xtick(20(10)100)
xlabel(30(10)100, labsize(small))
xtitle("Percent of population with access to safe water")
ytitle("Life expectancy at birth")
ylabel(55(5)80, angle(0));
#delimit cr
```

![Graph showing life expectancy by access to safe water](image)
Storing Graphs in Memory

```stata
#delimit ;
twoway
(scatter lexp safewater if region == 2, mcolor(black) msize(small)
  mlabel(country) mlabvposition(pos) mlabcolor(black))
(lfit lexp safewater if region == 2, clcolor(black))
, name(north_america, replace)
subtitle("North America", color(black))
ylabel(,angle(0))
ytitle("Life expectancy at birth")
xtitle("Percent of population with access to safe water")
legend(off);
#delimit cr
```

---

**North America**

- Canada
- Cuba
- Dominican Republic
- El Salvador
- Guatemala
- Haiti
- Jamaica
- Mexico
- Nicaragua
- Panama
- Puerto Rico
- Trinidad and Tobago

---

**Graph Details**

- Y-axis: Life expectancy at birth (range 55 to 80)
- X-axis: Percent of population with access to safe water (range 20 to 100)

---

**Graph Description**

The graph illustrates the relationship between life expectancy and access to safe water in North America. The data points represent various countries in the region, with a trend line showing a positive correlation between the two factors. The graph highlights the disparities in health outcomes across different countries within the region.
Storing Graphs in Memory

```
#delimit ;
twoway
(scatter lexp_sa safewater if region == 3, 
mcolor(black) msize(small)
mlabel(country) mlabvposition(pos) mlabcolor(black))
(lfit lexp safewater if region == 3, clcolor(black))
,name(south_america, replace)
subtitle("South America", color(black))
ylabel(, angle(0))
ytitle("Life expectancy at birth")
xtitle("Percent of population with access to safe water")
legend(off);
#delimit cr
```
Combining Graphs

```
#delimit ;
graph combine north_america south_america
   ,title("Life expectancy by access to safe water", color(black)) col(1);
#delimit cr
```

Life expectancy by access to safe water

North America

South America

```
Combining Graphs

#delimit ;
graph combine north_america south_america
   ,title("Life expectancy by access to safe water", color(black)) col(1);
#delimit cr
```
Combining Graphs

#delimit ;
graph combine north_america south_america ,title
("Life expectancy by access to safe water",
 color(black))
xcommon ycommon
xsize(7) ysize(10.5)
col(1);
#delimit cr
Saving Stata Graphs

save graph in portable format (format determined by filename extension)

    vector formats contain drawing instructions (.wmf .emf .ps .eps .pdf)
    resolution independent
    work well if graph may be resized

    graph export north_amERICA.wmf

raster formats save graph pixel-by-pixel (.png)
    use current resolution
    work well if including graph on web pages

    graph export north_amERICA.png
## Country Level Data

<table>
<thead>
<tr>
<th>Country</th>
<th>TV Home (%)</th>
<th>Births in Last 5 Years</th>
<th>Ideal Number of Children</th>
<th>Age at First Birth</th>
<th>Years of School</th>
<th>Age at First Marriage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>33.9</td>
<td>2.3</td>
<td>17.7</td>
<td>4.5</td>
<td>15.2</td>
<td></td>
</tr>
<tr>
<td>Bolivia</td>
<td>74.8</td>
<td>2.6</td>
<td>20.3</td>
<td>7.6</td>
<td>20.1</td>
<td></td>
</tr>
<tr>
<td>Colombia</td>
<td>93.4</td>
<td>2.4</td>
<td>20.7</td>
<td>8.6</td>
<td>20.3</td>
<td></td>
</tr>
<tr>
<td>DR</td>
<td>83</td>
<td>3.2</td>
<td>19.9</td>
<td>8.6</td>
<td>18.3</td>
<td></td>
</tr>
<tr>
<td>Egypt</td>
<td>95.9</td>
<td>2.9</td>
<td>21.3</td>
<td>7.3</td>
<td>19.7</td>
<td></td>
</tr>
<tr>
<td>Haiti</td>
<td>27.9</td>
<td>3.2</td>
<td>20.7</td>
<td>4.3</td>
<td>19.4</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>47.9</td>
<td>2.4</td>
<td>19.2</td>
<td>4.3</td>
<td>17.1</td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td>74</td>
<td>2.8</td>
<td>20.7</td>
<td>7.5</td>
<td>19.3</td>
<td></td>
</tr>
<tr>
<td>Morocco</td>
<td>66.6</td>
<td>3.3</td>
<td>21.4</td>
<td>2.7</td>
<td>19.6</td>
<td></td>
</tr>
<tr>
<td>Nepal</td>
<td>50.7</td>
<td>2.2</td>
<td>19.6</td>
<td>3.6</td>
<td>17.4</td>
<td></td>
</tr>
<tr>
<td>Pakistan</td>
<td>57.8</td>
<td>4.1</td>
<td>20.5</td>
<td>2.8</td>
<td>18.4</td>
<td></td>
</tr>
<tr>
<td>Peru</td>
<td>78.1</td>
<td>2.5</td>
<td>21.1</td>
<td>8.8</td>
<td>20.6</td>
<td></td>
</tr>
</tbody>
</table>

Creating a Matrix of Scatterplots

Source: Most recent DHS std survey: bangladesh bolivia colombia dr egypt haiti india indonesia morocco nepal pakistan peru, as of 5/2013

#delimit ;
local note "Source: Most recent DHS std survey: bangladesh bolivia colombia dr egypt haiti india indonesia morocco nepal pakistan peru, as of 5/2013";
graph matrix school tvhome idealnum agemarriage age1stbirth birth5years, half note("`note'", size(vsmall));
#delimit cr
Using Loops to Create Many Graphs

#delimit ;
local sample MARRIED;
local note "Source: Most recent DHS standard survey, as of 5/2013";
foreach x in school tvhome {
    foreach y in idealnum agemarriage agel1stbirth birth5years {
        twoway scatter `y' `x', mlabel(country) mlabsize(large) ylabel(, angle(0)) note("`note'") name("`x'`y'", replace);
        graph export `x'`y'`sample'mostrecent.emf, replace;
    }
};
#delimit cr
## Country Level Data: Time 1, Time 2

```plaintext
clear
input str14 country school1 school2 agemarriage1 agemarriage2
  bangladesh   3.3   4.5   14.8   15.2
  bolivia      6.9   7.6   19.8   20.1
  colombia     7.9   8.6   20.3   20.3
  dr           7.9   8.6   18.3   18.3
  egypt        5.5   7.3   18.9   19.7
  haiti        3.1   4.3   19.6   19.4
  india        3.6   4.3   16.9   17.1
  indonesia     5.9   7.5   18.1   19.3
  morocco      1.6   2.7   18.7   19.6
  morocco      2.4   3.6   16.9   17.4
  pakistan     1.5   2.8   17.9   18.4
  peru         8.1   8.8   20.2   20.6
end
```

Displaying Changes

local sample MARRIED
local x school
local y agemarriage
local note "Source: Two most recent DHS standard surveys, as of 5/2013"
local xtitle "years of school"
local ytitle "age at marriage"
local ylabel ",, angle(0)"
gen pos = 3
replace pos = 12 if country == "morocco"
#delimit ;
twoway pcarrow `y'1 `x'1 `y'2 `x'2,
   barbsize(1) lcolor(black) mcolor(black)
|| scatter `y'2 `x'2, mcolor(none)
   mlabel(country) mlabvposition(pos)
|| scatter `y'1 `x'1, msym(o)
   mcolor(black) msize(small)
note("`note'", size(vsmall))
ytitle("`ytitle'") xtitle("`xtitle'")
ylabel(`ylabel')
legend(off);
#delimit cr
set scheme s2mono
sysuse nlsw88.dta, clear
keep if age >=40 | age <= 44
\#delimit ;
twoway histogram wage if wage <= 20, percent fcolor(gs12) lcolor(gs12) bin(30)
title("Hourly Wage Distribution, Women 40-44")
note("Source: Stata 12 NLSW 1988 extract", span)
ylabel(, angle(0)); \#delimit cr
Overlaying Histograms

Source: Stata 12 NLSW 1988 extract
Boxplot

#delimit ;
graph box wage if age >= 40 & age <= 44, over(race)
title("Hourly Wage by Race, Women 40-44 (n=918)")
note("Source: Stata 12 NLSW 1988 extract")
ylabel(, angle(0));
#delimit cr

Source: Stata 12 NLSW 1988 extract
Scatter and Categorical Variable

#delimit ;
twoway scatter wage race if age >= 40 & age <= 44,
title("Hourly Wage by Race, Women 40–44 (n=918)")
note("Source: Stata 12 NLSW 1988 extract")
xlabel(1 "white" 2 "black" 3 "other")
xttitle("") xscale(range(0.5 3.5))
ylabel(, angle(0));
#delimit cr

Source: Stata 12 NLSW 1988 extract
Scatter with Jitter and Categorical Variable

#delimit ;
twoway scatter wage race if age >= 40 & age <= 44, 
jitter(25) msize(tiny) mcolor(gs5) 
title("Hourly Wage by Race, Women 40-44 (n=918)"") 
note("Source: Stata 12 NLSW 1988 extract") 
xlabel(1 "white" 2 "black" 3 "other", noticks) 
xtitle(""") xscale(range(0.5 3.5)) ylabel(, angle(0)); 
#delimit cr
egen median = median(wage), by(race)
egen upq = pctile(wage), p(75) by(race)
egen loq = pctile(wage), p(25) by(race)
egen iqr = iqr(wage), by(race)
#delimit ;
twoway rbar med upq race, barwidth(0.7) blc(black) bfc(none) lwidth(medthick) ||
rbar med loq race, barwidth(0.7) blc(black) bfc(none) lwidth(medthick)
title("Hourly Wage by Race, Women 40-44 (n=918)"
note("Source: Stata 12 NLSW 1988 extract")
xlabel(1 "white" 2 "black" 3 "other", noticks) xtitle(""
xscale(range(0.5 3.5))
yscale(range(0 42))
ylabel(0 (10) 40, angle(0))
ytitle("hourly wage")
legend(off);
#delimit cr
egen median = median(wage), by(race)
egen upq = pctile(wage), p(75) by(race)
egen loq = pctile(wage), p(25) by(race)
egen iqr = iqr(wage), by(race)
#delimit ;
twoway scatter wage race, jitter(25) msize(tiny) mcolor(gs9) ||
    rbar med upq race, barwidth(0.70) blc(black) bfc(none) lwidth(medthick) ||
    rbar med loq race, barwidth(0.70) blc(black) bfc(none) lwidth(medthick)
title("Hourly Wage by Race, Women 40-44 (n=918)")
note("Source: Stata 12 NLSW 1988 extract")
xlabel(1 "white" 2 "black" 3 "other", noticks) xtitle("")
xscale(range(0.5 3.5))
yscale(range(0 42))
ylabel(0 (10) 40, angle(0))
ytitle("hourly wage")
legend(off);
#delimit cr
egen median = median(wage), by(race)
egen upq = pctile(wage), p(75) by(race)
egen loq = pctile(wage), p(25) by(race)
egen iqr = iqr(wage), by(race)
egen upper = max(min(wage, upq + 1.5 * iqr)), by(race)
egen lower = min(max(wage, loq - 1.5 * iqr)), by(race)

twoway scatter wage race, jitter(25) msize(tiny) mcolor(gs9) ||
    rbar med upq race, barwidth(0.70) blc(black) bfc(none) lwidth(medthick) ||
    rbar med loq race, barwidth(0.70) blc(black) bfc(none) lwidth(medthick) ||
    rspike upq upper race, lwidth(medthick) ||
    rspike loq lower race, lwidth(medthick)

title("Hourly Wage by Race, Women 40-44 (n=918)")
ote("Source: Stata 12 NLSW 1988 extract")
xlabel(1 "white" 2 "black" 3 "other", noticks) xtitle(""")
xscale(range(0.5 3.5))
yscale(range(0 42))
ylabel(0 (10) 40, angle(0))
ytitle("hourly wage")
legend(off);

delimit cr
egen median = median(wage), by(race)
egen upq = pctl(wage), p(75) by(race)
egen loq = pctl(wage), p(25) by(race)
egen iqr = iqr(wage), by(race)
egen upper = max(min(wage, upq + 1.5 * iqr)), by(race)
egen lower = min(max(wage, loq - 1.5 * iqr)), by(race)

twoway scatter wage race, jitter(25) msize(tiny) mcolor(gs9) ||
   rbar med upq race, barwidth(0.70) blc(black) bfc(none) lwidth(medthick) ||
   rbar med loq race, barwidth(0.70) blc(black) bfc(none) lwidth(medthick) ||
   rcap loq lower race, lcolor(black) msize(*4) lwidth(medthick) ||
   rcap upq upper race, lcolor(black) msize(*4) lwidth(medthick)

title("Hourly Wage by Race, Women 40-44 (n=918)")
note("Source: Stata 12 NLSW 1988 extract")
xlabel(1 "white" 2 "black" 3 "other", noticks) xtitle(""
xscale(range(0.5 3.5))
yscale(range(0 42))
ylabel(0 (10) 40, angle(0))
ytitle("hourly wage")
legend(off);
#delimit cr

Boxplot with Whiskers, Caps and Scatter

Hourly Wage by Race, Women 40-44 (n=918)

Source: Stata 12 NLSW 1988 extract
Boxplot with Whiskers, Caps, Scatter and Means

Hourly Wage by Race, Women 40-44 (n=918)

Source: Stata 12 NLSW 1988 extract
Bar Graph

#delimit ;
graph bar (mean) wage,
over(union) over(married) over(collgrad)
blabel(bar, format(%9.2f)) yscale(off)
title("1988 Mean Hourly Wage of Women Age 40-44")
subtitle("by union status, marital status, and college graduation")
note("Source: Stata 12 NLSW 1988 extract", span);
#delimit cr

1988 Mean Hourly Wage of Women Age 40-44
by union status, marital status, and college graduation

<table>
<thead>
<tr>
<th></th>
<th>single not college grad</th>
<th>married not college grad</th>
<th>single college grad</th>
<th>married college grad</th>
</tr>
</thead>
<tbody>
<tr>
<td>nonunion</td>
<td>6.41</td>
<td>6.35</td>
<td>10.64</td>
<td>9.82</td>
</tr>
<tr>
<td>union</td>
<td>8.04</td>
<td>7.66</td>
<td>11.41</td>
<td>10.00</td>
</tr>
</tbody>
</table>

Source: Stata 12 NLSW 1988 extract

Graph based on example shown in Stata Graphics Reference Manual, Release 12, page 58.
Horizontal Bar Graph

Graph based on example shown in Stata Graphics Reference Manual, Release 12, page 70.
#delimit ;

graph dot wage, over(ind, sort(1))
over(collgrad)
title("1988 Mean Hourly Wage of Women Age 40-44", span size(med))
note("Source: Stata 12 NLSW 1988 extract", span)
nofill ytitle("" ysize(8);
#delimit cr
Dot Plot with 2 Variables

```stata
#delimit ;
graph dot (p25) wage (p75) wage,
   over(ind, sort(2)) over(collgrad)
    title("Upper and Lower Quartile of Hourly Wage", span)
   subtitle("Women Age 40-44, by College Graduation Status, 1988", span)
    note("Source: Stata 12 NLSW 1988 extract", span)
nofill ytitle(""") ysize(8) xsize(6)
legend(off);
#delimit cr
```

Source: Stata 12 NLSW 1988 extract
## Population Data

<table>
<thead>
<tr>
<th>agegrp</th>
<th>maletotal</th>
<th>femtotal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 5</td>
<td>9,810,733</td>
<td>9,365,065</td>
</tr>
<tr>
<td>5 to 9</td>
<td>10,523,277</td>
<td>10,026,228</td>
</tr>
<tr>
<td>10 to 14</td>
<td>10,520,197</td>
<td>10,007,875</td>
</tr>
<tr>
<td>15 to 19</td>
<td>10,391,004</td>
<td>9,828,886</td>
</tr>
<tr>
<td>20 to 24</td>
<td>9,687,814</td>
<td>9,276,187</td>
</tr>
<tr>
<td>25 to 29</td>
<td>9,798,760</td>
<td>9,582,576</td>
</tr>
<tr>
<td>30 to 34</td>
<td>10,321,769</td>
<td>10,188,619</td>
</tr>
<tr>
<td>35 to 39</td>
<td>11,318,696</td>
<td>11,387,968</td>
</tr>
<tr>
<td>40 to 44</td>
<td>11,129,102</td>
<td>11,312,761</td>
</tr>
<tr>
<td>45 to 49</td>
<td>9,889,506</td>
<td>10,202,898</td>
</tr>
<tr>
<td>50 to 54</td>
<td>8,607,724</td>
<td>8,977,824</td>
</tr>
<tr>
<td>55 to 59</td>
<td>6,508,729</td>
<td>6,960,508</td>
</tr>
<tr>
<td>60 to 64</td>
<td>5,136,627</td>
<td>5,668,820</td>
</tr>
<tr>
<td>65 to 69</td>
<td>4,400,362</td>
<td>5,133,183</td>
</tr>
<tr>
<td>70 to 74</td>
<td>3,902,912</td>
<td>4,954,529</td>
</tr>
<tr>
<td>75 to 79</td>
<td>3,044,456</td>
<td>4,371,357</td>
</tr>
<tr>
<td>80 to 84</td>
<td>1,834,897</td>
<td>3,110,470</td>
</tr>
</tbody>
</table>
sysuse pop2000, clear
replace maletotal = -maletotal
#delimit ;
twoway bar maletotal agegrp, horizontal ||
    bar femtotal agegrp, horizontal
title("US Male and Female Population by Age, Year 2000")
note("Source: US Census Bureau, Census 2000, Tables 1, 2 and 3", span);
#delimit cr

Graph based on example shown in Stata Graphics Reference Manual, Release 12, pages 189-191.
sysuse pop2000, clear
replace maletotal = -maletotal
replace maletotal = maletotal / 1000000
replace femtotal = femtotal / 1000000
#delimit ;
twoway bar maletotal agegrp, horizontal ||
    bar femtotal agegrp, horizontal
title("US Male and Female Population by Age, Year 2000")
note("Source: US Census Bureau, Census 2000, Tables 1, 2 and 3", span)
xtitle("Population in Millions") ytitle("Age Group Number")
xlabel( -12 "12" -10 "10" -8 "8" -6 "6" -4 "4" 4(2)12)
ylabel(1(1)17, angle(0))
legend(order(1 "Male" 2 "Female")); #delimit cr
sysuse pop2000, clear
replace maletotal = -maletotal
replace maletotal = maletotal / 1000000
replace femtotal = femtotal / 1000000
gen zero = 0
#delimit ;
twoway bar maletotal agegrp, horizontal bfc(gs7) blc(gs7) ||
    bar femtotal agegrp, horizontal bfc(gs11) blc(gs11) ||
    scatter agegrp zero, mlabel(agegrp) mlabcolor(black) msymbol(none)
title("US Male and Female Population by Age, Year 2000")
note("Source: US Census Bureau, Census 2000, Tables 1, 2 and 3", span)
xtitle("Population in Millions") ytitle("Age Group Number")
ytitle("") yscale(noline) ylabel(none)
xlabel(-12 "12" -10 "10" -8 "8" -6 "6" -4 "4" 4(2)12)
legend(off) text(15 -8 "Male") text(15 8 "Female");#delimit cr

Population Pyramid:
Age Group Labels

Source: US Census Bureau, Census 2000, Tables 1, 2 and 3