Stata tip 14: Using value labels in expressions

Kenneth Higbee
StataCorp
khigbee@stata.com

Did you know that there is a way in Stata to specify value labels directly in an expression, rather than through the underlying numeric value? You specify the label in double quotes (" "), followed by a colon (:), followed by the name of the value label. If we read in this dataset and see what it contains

```
. webuse census9
(1980 Census data by state)
. describe
Contains data from http://www.stata-press.com/data/r8/census9.dta
  obs:            50                          1980 Census data by state
 vars:             5                          16 Jul 2002 18:29
 size:         1,550 (99.9% of memory free)

              storage  display     value
variable name   type   format      label      variable label

state          str14  %-14s                   State
drate          float  %9.0g                   Death Rate
pop            long   %12.0gc                  Population
medage         float  %9.2f                    Median age
region         byte   %-8.0g      cenreg       Census region

Sorted by:
```

we notice that variable `region` has values labeled by the `cenreg` value label. The correspondence between the underlying number and the value label is shown by

```
. label list
cenreg:
           1 NE
           2 N Cntrl
           3 South
           4 West
```

[R] **regress** uses this dataset to illustrate weighted regression. To obtain the regression of `drate` and `medage` restricted to the "South" region, you could type

```
. regress drate medage [aweight=pop] if region == 3
```

But, if you do not remember the underlying region number for "South", you could also obtain this regression by typing

```
. regress drate medage [aweight=pop] if region == "South":cenreg
(sum of wgt is   7.4734e+07)

      Source |       SS       df       MS              Number of obs =      16
-------------+------------------------------           F(  1,    14) =   27.29
       Model | 1072.30989      1  1072.30989           Prob > F      =  0.0001
    Residual | 550.163155     14  39.2973682           R-squared     =  0.6609
-------------+------------------------------           Adj R-squared =  0.6367
       Total | 1622.47305     15   108.16487           Root MSE      =  6.2688

------------------------------------------------------------------------------
       drate |      Coef.   Std. Err.       t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      medage |   3.905819   .7477109     5.22   0.000     2.302139    5.509499
       _cons |  -29.34031   22.33676    -1.31   0.210     -77.2479    18.56727
------------------------------------------------------------------------------
```

Typing the value label instead of the underlying number makes it unlikely that you will obtain an unintended result from entering the wrong region number. An added benefit of using the value label is that, when you later review your results, you will quickly see that the regression is for the "South" region, and you will not need to remember what region was assigned number 3.

See [U] **16.9 Label values** for further information about specifying value labels in expressions.