Stata Textbook Examples
Introductory Econometrics: A Modern Approach by Jeffrey M. Wooldridge (1st & 2d eds.)
Chapter 5 - Multiple Regression Analysis: OLS Asymptotics

Example 5.2: Standard Errors in a Birth Weight Equation

use http://fmwww.bc.edu/ec-p/data/wooldridge/BWGHT

Regression with 694 observations

reg lbwght cigs lfaminc in 1/694

```
  Source |       SS       df       MS                  Number of obs =     694
---------+------------------------------               F(  2,   691) =   10.52
   Model |  .809213892     2  .404606946               Prob > F      =  0.0000
Residual |  26.5787089   691  .038464123               R-squared     =  0.0295
---------+------------------------------               Adj R-squared =  0.0267
   Total |  27.3879228   693  .039520812               Root MSE      =  .19612

------------------------------------------------------------------------------
  lbwght |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
    cigs |  -.0046368   .0013319     -3.481   0.001      -.0072519   -.0020216
 lfaminc |   .0194044   .0081884      2.370   0.018       .0033274    .0354815
   _cons |   4.705583    .027053    173.939   0.000       4.652467    4.758699
------------------------------------------------------------------------------
```

Regression with 1388 observations

reg lbwght cigs lfaminc

```
  Source |       SS       df       MS                  Number of obs =    1388
---------+------------------------------               F(  2,  1385) =   18.31
   Model |  1.29879046     2   .64939523               Prob > F      =  0.0000
Residual |  49.1215342  1385  .035466812               R-squared     =  0.0258
---------+------------------------------               Adj R-squared =  0.0244
   Total |  50.4203246  1387  .036352073               Root MSE      =  .18833

------------------------------------------------------------------------------
  lbwght |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
    cigs |  -.0040816   .0008582     -4.756   0.000      -.0057651    -.002398
 lfaminc |   .0162657   .0055833      2.913   0.004        .005313    .0272183
   _cons |   4.718594   .0182445    258.631   0.000       4.682804    4.754383
------------------------------------------------------------------------------
```

Example 5.3: Economic Model of Crime

use http://fmwww.bc.edu/ec-p/data/wooldridge/CRIME1

reg narr86 pcnv ptime86 qemp86

```
  Source |       SS       df       MS                  Number of obs =    2725
---------+------------------------------                F(  3,  2721) =   39.10
   Model |  83.0741941     3   27.691398                Prob > F      =  0.0000
Residual |  1927.27296  2721  .708295833                R-squared     =  0.0413
---------+------------------------------                Adj R-squared =  0.0403
   Total |  2010.34716  2724  .738012906                Root MSE      =   .8416

------------------------------------------------------------------------------
  narr86 |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
    pcnv |  -.1499274   .0408653     -3.669   0.000      -.2300576   -.0697973
 ptime86 |  -.0344199    .008591     -4.007   0.000      -.0512655   -.0175744
  qemp86 |   -.104113   .0103877    -10.023   0.000      -.1244816   -.0837445
   _cons |   .7117715   .0330066     21.565   0.000       .647051     .776492
------------------------------------------------------------------------------
```

predict ubar, resid

reg ubar pcnv ptime86 qemp86 avgsen tottime

```
  Source |       SS       df       MS                  Number of obs =    2725
---------+------------------------------                F(  5,  2719) =    0.81
   Model |  2.87904835     5  .575809669                Prob > F      =  0.5398
Residual |  1924.39392  2719  .707757969                R-squared     =  0.0015
---------+------------------------------                Adj R-squared = -0.0003
   Total |  1927.27297  2724  .707515773                Root MSE      =  .84128

------------------------------------------------------------------------------
    ubar |      Coef.   Std. Err.       t     P>|t|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
    pcnv |  -.0012971    .040855     -0.032   0.975      -.0814072    .0788129
 ptime86 |  -.0048386   .0089166     -0.543   0.587      -.0223226    .0126454
  qemp86 |   .0010221   .0103972      0.098   0.922      -.0193652    .0214093
  avgsen |  -.0070487   .0124122     -0.568   0.570       -.031387    .0172897
 tottime |   .0120953   .0095768      1.263   0.207      -.0066833     .030874
   _cons |  -.0057108   .0331524     -0.172   0.863      -.0707173    .0592956
------------------------------------------------------------------------------
```

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Send your questions/comments/suggestions to Kit Baum at **baum@bc.edu**
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