Additional Stata v11.1 Example: Use of the post-estimation estat gof option

This example provides information on how to use the new estat gof option after svy: logistic. The estat gof option is a new svy post-estimation option available with binary outcome models. The Stata v11.1 help provides this description:

  estat gof reports a goodness-of-fit test for binary response models using survey data. This command is available only after svy: logistic, svy: logit, and svy: probit.

In this example, the NCS-R data set is used. After reading in the data, svyset is specified to set the survey variables and weight. Then, use of svy: logistic along with estat gof (postestimation command) provides the goodness of fit test for logistic regression. Use of the NCS-R Part 2 weight (ncsrwtlg) along with the strata and cluster variables (sestrat and seclustr) for the logistic regression is demonstrated.

For more information about the svy: logistic and estat gof commands, see the Stata v11.1 Survey documentation.

* read in NCS-R data set
  . use "F:\brahms\applied_analysis_book\ncsrsubset_nov29_2008.dta", clear
  .* use part 2 weight with complex sample design variables (alcohol dependence is a Part 2 variable)
  . svyset seclustr [pweight=ncsrwtlg ], strata(sestrat)
    pweight: ncsrwtlg
    VCE: linearized
    Single unit: missing
    Strata 1: sestrat
    SU 1: seclustr
    FPC 1: <zero>

  . svy: logistic mde i.sex i.racecat ald age i.anyanx
  (running logistic on estimation sample)
  
  Survey: Logistic regression
  Number of strata   =        42                  Number of obs      =      5692
  Number of PSUs     =        84                  Population size    = 5692.0005
  Design df          =        42
  F(   7,     36)    =     95.42
  Prob > F           =    0.0000
  
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          |             Linearized
          |          Odds Ratio     Std. Err.     t    P>|t|     [95% Conf. Interval]
  -------------+---------------------------------------------------------------
         2.sex  |   1.583501   .1344062     5.42   0.000     1.334217    1.879359
          |                |                |                |                |                |
         racecat |                |                |                |                |                |
          |       2 |   .759788   .1762806    -1.18   0.243      .475715    1.213496
          |       3 |   .652544   .1606548    -1.73   0.090     .3970384    1.072477
          |       4 |   1.097691   .2236876     0.46   0.650     .7275764    1.656081
          |                |                |                |                |                |
          |       ald   |   2.805802   .4575198     6.33   0.000     2.019029    3.899163
          |                |                |                |                |                |
      1.anyanx |   4.418182   .3367375    19.49   0.000     3.788301    5.152794
  -------------+---------------------------------------------------------------
  
  . estat gof
  Logit model for mde, goodness-of-fit test
          F(9,34) =   1.89
    Prob > F =   0.0877