Additional Analysis Example Demonstrating Use of "estat gof" with "svy: logistic" Command, (Stata 10 and Later)
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This example shows use of the post estimation command "estat gof" with "svy: logistic" (using Stata 10 and later versions of Stata). This command replaces the command "svylogitgof" which was originally implemented as a .do file but has now been built into the svy: logistic commands as a post estimation option. This command performs a survey adjusted goodness of fit test for the logistic model. See the Stata documentation and ASDA Chapter 8 for more detail.

The example uses data from the 1999-2000 NHANES data set along with replicate weights and the Jackknife method of variance estimation. The commands will also work with the Taylor Series Linearization or BRR methods.

Stata syntax and output
* example of using estat gof with svy: logistic : note this is for Stata 10 and later only
* use of replicate weights with Jackknife method rather than design variables such as strata and PSU
* NHANES 1999 - 2000 data

use "F:\brahms\summerclasses\complexanalysis2007\demo_bpx_nhanes9900.dta", clear

.svysset _n [pweight=wtmec2yr], jkrweight(wtmrep01 wtmrep02 wtmrep03 wtmrep04 wtmrep05 wtmrep06 wtmrep07 wtmrep08 wtmrep09 ///
> wtmrep10 wtmrep11 wtmrep12 wtmrep13 wtmrep14 wtmrep15 wtmrep16 wtmrep17 wtmrep18 wtmrep19 ///
> wtmrep20 wtmrep21 wtmrep22 wtmrep23 wtmrep24 wtmrep25 wtmrep26 wtmrep27 wtmrep28 wtmrep29 ///
> wtmrep30 wtmrep31 wtmrep32 wtmrep33 wtmrep34 wtmrep35 wtmrep36 wtmrep37 wtmrep38 wtmrep39 ///
> wtmrep40 wtmrep41 wtmrep42 wtmrep43 wtmrep44 wtmrep45 wtmrep46 wtmrep47 wtmrep48 wtmrep49 ///
> wtmrep50 wtmrep51 wtmrep52) vce(jackknife)

pweight: wtmec2yr
VCE: jackknife
MSE: off

jkrweight: wtmrep01 wtmrep02 wtmrep03 wtmrep04 wtmrep05 wtmrep06 wtmrep07 wtmrep08 wtmrep09 wtmrep10 wtmrep11 wtmrep12 wtmrep13 wtmrep14 wtmrep15 wtmrep16 wtmrep17 wtmrep18 wtmrep19 wtmrep20 wtmrep21 wtmrep22 wtmrep23 wtmrep24 wtmrep25 wtmrep26 wtmrep27 wtmrep28 wtmrep29 wtmrep30 wtmrep31 wtmrep32 wtmrep33 wtmrep34 wtmrep35 wtmrep36 wtmrep37 wtmrep38 wtmrep39 wtmrep40 wtmrep41 wtmrep42 wtmrep43 wtmrep44 wtmrep45 wtmrep46 wtmrep47 wtmrep48 wtmrep49 wtmrep50 wtmrep51 wtmrep52

Single unit: missing
Strata 1: <one>
SU 1: <observations>
FPC 1: <zero>

* create a binary indicator of irregular heart beat 1=Yes 0=No
.gen irregular =0

.replace irregular=1 if bpxpuls==2
(267 real changes made)

* run svy: logistic regression with svysset replicate weights and vce(jackknife)
.svy: logistic irregular i.riagendr ridageyr bpxsyl
(running logistic on estimation sample)

Jackknife replications (52)
----------- 1 ----------- 2 ----------- 3 ----------- 4 ----------- 5
--------------------------------------------- 50

Survey: Logistic regression

Number of strata = 1
Number of obs = 6457
Population size = 211675742
Replications = 52
Design df = 51
F(  3,    49)    =      23.94
Prob > F           =     0.0000

-----------------------------------------------------------------------
  |              Jackknife
irregular | Odds Ratio   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------
2.riagendr |   .7409504    .154052     -1.44   0.155     .4881068    1.24769
ridageyr |   1.060696   .0076906     8.13   0.000     1.045368    1.076248
bpxsy1 |   .9983901   .0064608    -0.25   0.804    .9855034    1.011445
-----------------------------------------------------------------------

. * use post estimation gof (goodness of fit, survey adjusted) to obtain goodness of fit test
. estat gof

Logistic model for irregular, goodness-of-fit test

    F(9,43) =         1.89
    Prob > F =         0.0802