

STATA OUTPUT FOR WEIGHTING EXEMPLAR 5

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. .
. /*-----
> run a regression model for non response
>
> Only the final model is shown here
> not the model building steps
>
> To get categorical variables in STATA a set of
> dummy variables need to be created
>
> first calculate variables making sex numeric
> and calculating interaction variables
> -----*/
. generate sex=0

. replace sex=1 if match(gender,"F")
(6237 real changes made)

. generate agegrpsq=agegrp*agegrp

. generate sexage=agegrp*sex

. generate sex2age=agegrp*agegrp*sex

. generate sexinc=sinc*sex

. glm ayra_num agegrp sex sexage sex2age sinc sexinc sacc, f(bin npop) link(logit)
note: npop has non-integer values

Iteration 0:  log likelihood = -9706.4317
Iteration 1:  log likelihood = -9062.1124
Iteration 2:  log likelihood = -9057.7472
Iteration 3:  log likelihood = -9057.7441
Iteration 4:  log likelihood = -9057.7441

Generalized linear models              No. of obs      =       12473
Optimization      : ML: Newton-Raphson  Residual df    =       12465
                                                Scale parameter =         1
Deviance          = 11071.29384          (1/df) Deviance = .8881904
Pearson          = 14532.76795          (1/df) Pearson  = 1.165886

Variance function: V(u) = u*(1-u/npop)      [Binomial]
Link function      : g(u) = ln(u/(npop-u))   [Logit]
Standard errors   : OIM

Log likelihood    = -9057.744071          AIC              = 1.453659
BIC              = -106490.1297

-----
      ayra_num |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      agegrp   |   .1284079   .0070475    18.22  0.000     .114595   .1422207
        sex    |   .8600035   .1178021     7.30  0.000     .6291157   1.090891
      sexage   |  -.1149884   .0277591    -4.14  0.000    -.1693953  -.0605815
    sex2age   |   .0021792   .0018124     1.20  0.229    -.0013731   .0057315
        sinc   |  -.0108381   .0022407    -4.84  0.000    -.0152297  -.0064464
      sexinc   |  -.0045198   .0029784    -1.52  0.129    -.0103574   .0013178
        sacc   |   .0446326   .023689     1.88  0.060    -.0017971   .0910622
       _cons   |  -5.011847   .0703457   -71.25  0.000    -5.149722  -4.873972
-----

. predict phat
(option mu assumed; predicted mean ayra_num)

. /*-----
> stata predicts number not probability
> so need to multiply weight by npop
> -----*/
. generate gweight=npop/phat

.
end of do-file

. edit
- preserve

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