HW6

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A

```
. probit insured selfemp

Iteration 0:   log likelihood = -4390.0862
Iteration 1:   log likelihood = -4346.5569
Iteration 2:   log likelihood = -4346.4536
Iteration 3:   log likelihood = -4346.4536

Probit regression                                 Number of obs     =      8,802
                                                  LR chi2(1)        =      87.27
                                                  Prob > chi2       =     0.0000
Log likelihood = -4346.4536                       Pseudo R2         =     0.0099

------------------------------------------------------------------------------
     insured |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     selfemp |  -.4096735   .0433363    -9.45   0.000    -.4946111   -.3247358
       _cons |   .9029054   .0165806    54.46   0.000      .870408    .9354028
------------------------------------------------------------------------------
```

It appears as though increases in the independent variable selfemp decreases the probability of one being insured.

```
. display normal(_b[_cons] + _b[selfemp])
.68907563
```

The probability being insured if self employed is 68%. This is statistically significant.

B

b. The self-employed might systematically differ from wage earners in their age, education, and so forth. After you control for these other factors, are the self-employed less likely to have health insurance?

```
. probit insured healthy age anylim deg_nd deg_ged deg_hs deg_ba deg_ma deg_phd
deg_oth
> married selfemp familysz reg_ne reg_mw reg_so reg_we race_bl race_ot race_wht

note: deg_oth omitted because of collinearity
note: reg_we omitted because of collinearity
note: race_wht omitted because of collinearity
Iteration 0:   log likelihood = -4390.0862
Iteration 1:   log likelihood = -3775.1771
Iteration 2:   log likelihood = -3766.2863
Iteration 3:   log likelihood = -3766.2728
Iteration 4:   log likelihood = -3766.2728
```

```
Probit regression                                 Number of obs     =      8,802
                                                  LR chi2(17)       =    1247.63
                                                  Prob > chi2       =     0.0000
Log likelihood = -3766.2728                       Pseudo R2         =     0.1421

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     insured |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     healthy |   .1452004   .0610701     2.38   0.017     .0255052    .2648956
         age |   .0156538   .0016364     9.57   0.000     .0124466     .018861
      anylim |   -.006817   .0493553    -0.14   0.890    -.1035515    .0899176
      deg_nd |  -.9404056   .0752637   -12.49   0.000     -1.08792   -.7928915
     deg_ged |  -.5118696   .0952636    -5.37   0.000    -.6985828   -.3251564
      deg_hs |  -.1476416   .0674976    -2.19   0.029    -.2799344   -.0153488
      deg_ba |   .1532648   .0775821     1.98   0.048     .0012067    .3053229
      deg_ma |    .364914   .1106101     3.30   0.001     .1481223    .5817058
     deg_phd |   .4865034   .1921965     2.53   0.011     .1098052    .8632016
     deg_oth |           0  (omitted)
     married |   .5259058   .0373189    14.09   0.000     .4527622    .5990495
     selfemp |  -.6947605   .0476311   -14.59   0.000    -.7881158   -.6014051
    familysz |  -.0537275   .0108292    -4.96   0.000    -.0749524   -.0325026
      reg_ne |   .1502451    .051516     2.92   0.004     .0492756    .2512145
      reg_mw |   .2301247   .0498371     4.62   0.000     .1324457    .3278037
      reg_so |   .0050604   .0436257     0.12   0.908    -.0804444    .0905653
      reg_we |           0  (omitted)
     race_bl |  -.1032383    .049104    -2.10   0.036    -.1994803   -.0069963
     race_ot |  -.1972757   .0789717    -2.50   0.012    -.3520574    -.042494
    race_wht |           0  (omitted)
       _cons |   .2512034   .1168098     2.15   0.032     .0222604    .4801465
------------------------------------------------------------------------------
```

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.

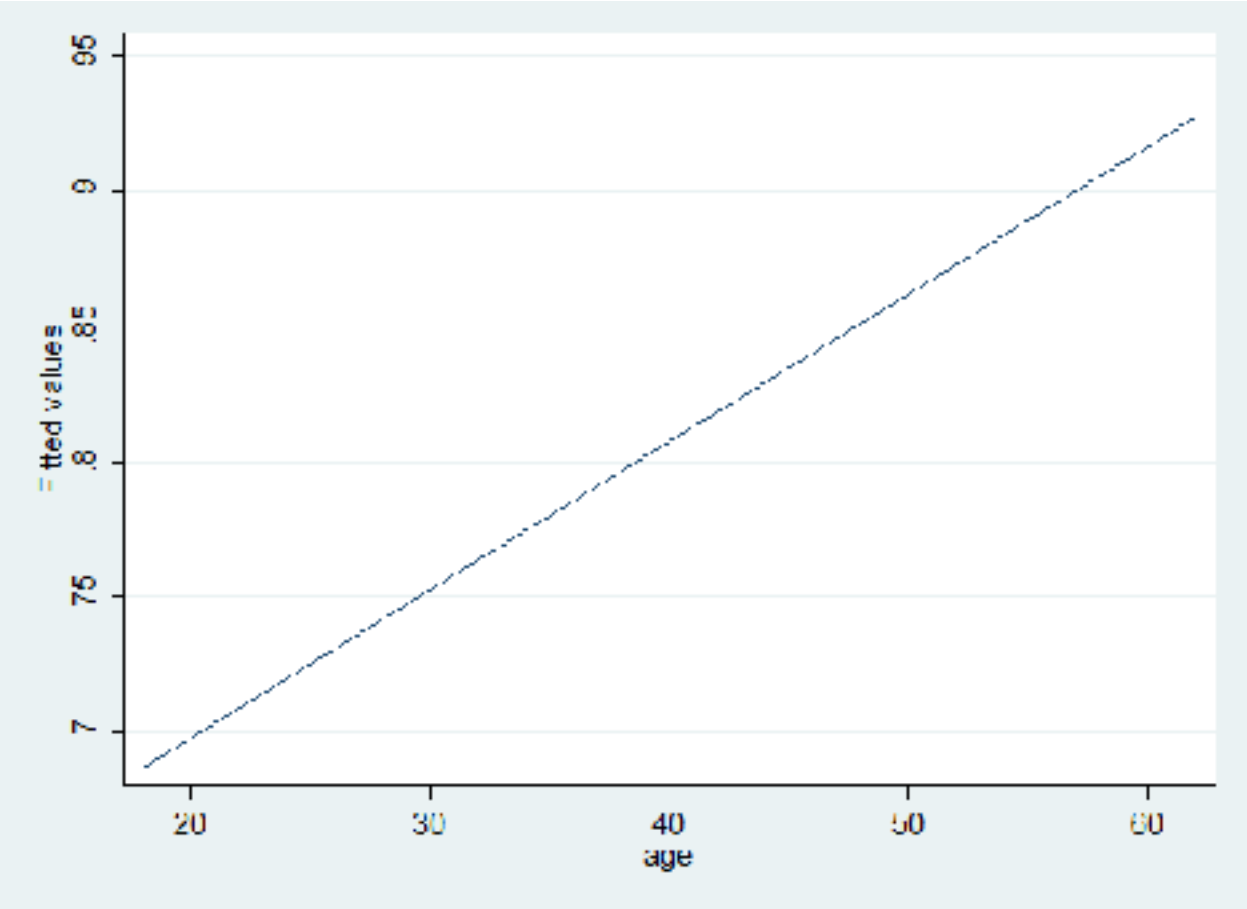
```
. display normal(_b[_cons] + _b[selfemp])
.32868143
```

The probability of being insured if one is self employed drops to 32% after controlling for other factors. This is statistically significant.

C

How does health insurance status vary with age? Are older workers more likely to have health insurance? Less likely?

People are more likely to be insured as they grow older as the following graph explains. The graph below shows the fitted line through the predictions of all the various profiles.



D

While the rate at which the workers are insured rises faster as for those who are self employed, overall people who are self employed are less likely to have health insurance.