```
      name:  <unnamed>
       log:  C:\Documents and Settings\ladkins\Desktop\probit3.smcl
  log type:  smcl
 opened on:   1 Apr 2010, 15:06:29

. probit  foreign  price mpg weight

Iteration 0:   log likelihood =  -45.03321
Iteration 1:   log likelihood = -20.083125
Iteration 2:   log likelihood = -17.363271
Iteration 3:   log likelihood = -17.152935
Iteration 4:   log likelihood = -17.151715
Iteration 5:   log likelihood = -17.151715

Probit regression                                 Number of obs   =         74
                                                  LR chi2(3)      =      55.76
                                                  Prob > chi2     =     0.0000
Log likelihood = -17.151715                       Pseudo R2       =     0.6191
```

foreign	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
price	.0005185	.0001651	3.14	0.002	.000195	.0008421
mpg	-.0723615	.0556501	-1.30	0.193	-.1814337	.0367106
weight	-.0038232	.0010392	-3.68	0.000	-.00586	-.0017864
_cons	8.150001	2.962982	2.75	0.006	2.342664	13.95734

```
. estat classification

Probit model for foreign
```

	True		
Classified	D	~D	Total
+	19	4	23
-	3	48	51
Total	22	52	74

```
Classified + if predicted Pr(D) >= .5
True D defined as foreign != 0
```

Sensitivity	Pr(+| D)	86.36%
Specificity	Pr(-|~D)	92.31%
Positive predictive value	Pr(D| +)	82.61%
Negative predictive value	Pr(~D| -)	94.12%
False + rate for true ~D	Pr(+|~D)	7.69%
False - rate for true D	Pr(-| D)	13.64%
False + rate for classified +	Pr(~D| +)	17.39%
False - rate for classified -	Pr(D| -)	5.88%
Correctly classified		90.54%

```
. margins, dydx( price mpg weight)

Average marginal effects                          Number of obs   =         74
Model VCE    : OIM

Expression   : Pr(foreign), predict()
dy/dx w.r.t. : price mpg weight

------------------------------------------------------------------------------
             |            Delta-method
             |      dy/dx   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       price |   .0000675   .0000131     5.13   0.000     .0000417    .0000932
         mpg |  -.0094152   .0067443    -1.40   0.163    -.0226337    .0038033
      weight |  -.0004974    .000051    -9.75   0.000    -.0005975   -.0003974
------------------------------------------------------------------------------

. logit  foreign  price mpg weight

Iteration 0:   log likelihood =  -45.03321
Iteration 1:   log likelihood = -22.244792
Iteration 2:   log likelihood = -18.069284
Iteration 3:   log likelihood = -17.184699
Iteration 4:   log likelihood = -17.161975
Iteration 5:   log likelihood = -17.161893
Iteration 6:   log likelihood = -17.161893

Logistic regression                               Number of obs   =         74
                                                  LR chi2(3)      =      55.74
                                                  Prob > chi2     =     0.0000
Log likelihood = -17.161893                       Pseudo R2       =     0.6189

------------------------------------------------------------------------------
     foreign |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       price |   .0009264   .0003074     3.01   0.003      .000324    .0015288
         mpg |  -.1210918   .0956855    -1.27   0.206     -.308632    .0664483
      weight |  -.0068497   .0019996    -3.43   0.001    -.0107688   -.0029306
       _cons |   14.42237   5.414367     2.66   0.008      3.81041    25.03434
------------------------------------------------------------------------------

. margins, dydx( price mpg weight)

Average marginal effects                          Number of obs   =         74
Model VCE    : OIM

Expression   : Pr(foreign), predict()
dy/dx w.r.t. : price mpg weight

------------------------------------------------------------------------------
             |            Delta-method
             |      dy/dx   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       price |   .0000686   .0000136     5.04   0.000     .0000419    .0000952
         mpg |  -.0089607    .006596    -1.36   0.174    -.0218886    .0039672
      weight |  -.0005069    .000055    -9.21   0.000    -.0006148    -.000399
------------------------------------------------------------------------------
```

```
. reg foreign price mpg weight

      Source |       SS       df       MS              Number of obs =      74
-------------+------------------------------           F(  3,    70) =   29.15
       Model |  8.58623428     3  2.86207809           Prob > F      =  0.0000
    Residual |  6.87322518    70  .098188931           R-squared     =  0.5554
-------------+------------------------------           Adj R-squared =  0.5363
       Total |  15.4594595    73  .211773417           Root MSE      =  .31335

------------------------------------------------------------------------------
     foreign |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       price |   .0000794   .0000148     5.37   0.000     .0000499    .0001089
         mpg |  -.0154965   .0107635    -1.44   0.154    -.0369636    .0059707
      weight |  -.0006065    .000084    -7.22   0.000    -.0007741    -.000439
       _cons |   1.968918   .4492632     4.38   0.000      1.07289    2.864945
------------------------------------------------------------------------------

. log close
      name:  <unnamed>
       log:  C:\Documents and Settings\ladkins\Desktop\probit3.smcl
  log type:  smcl
 closed on:   1 Apr 2010, 15:07:08
```