



User: LIANGJIAYI WANG
Project: sad

name: <unnamed>
log: C:\Users\WLJY8\Desktop\Courses\YEAR 4\WINTER\ECO475\HW1\log file.smcl
log type: smcl
opened on: 22 Feb 2021, 23:47:24

```
1 . do "C:\Users\WLJY8\AppData\Local\Temp\STD4e0c_000000.tmp"
2 . clear all
3 .
4 . use "C:\Users\WLJY8\Desktop\Courses\YEAR 4\WINTER\ECO475\HW1\hw1data.dta"
5 .
6 . *Q3
7 .
8 . * Fit probit model
9 . probit y x1 x2 x3 x4 x5 x6
```

```
Iteration 0: log likelihood = -82.760511
Iteration 1: log likelihood = -30.299996
Iteration 2: log likelihood = -28.400517
Iteration 3: log likelihood = -28.336254
Iteration 4: log likelihood = -28.336104
Iteration 5: log likelihood = -28.336104
```

```
Probit regression              Number of obs   =      120
                              LR chi2(6)         =     108.85
                              Prob > chi2         =     0.0000
Log likelihood = -28.336104    Pseudo R2       =     0.6576
```

| y | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|-------|-----------|-----------|-------|-------|----------------------|-----------|
| x1 | 2.011708 | .5337449 | 3.77 | 0.000 | .9655868 | 3.057828 |
| x2 | -3.323863 | .7132776 | -4.66 | 0.000 | -4.721861 | -1.925864 |
| x3 | 2.656909 | .5679074 | 4.68 | 0.000 | 1.543831 | 3.769987 |
| x4 | .9049947 | .2688554 | 3.37 | 0.001 | .3780479 | 1.431941 |
| x5 | -2.380636 | .550527 | -4.32 | 0.000 | -3.459649 | -1.301623 |
| x6 | .3098398 | .1558339 | 1.99 | 0.047 | .004411 | .6152687 |
| _cons | -.9246096 | .4787586 | -1.93 | 0.053 | -1.862959 | .0137399 |

Note: 8 failures and 3 successes completely determined.

```
10 .
11 . * Average marginal effects
12 . margin, dydx(x2 x5)
```

```
Average marginal effects      Number of obs   =      120
Model VCE      : OIM
```

```
Expression   : Pr(y), predict()
dy/dx w.r.t. : x2 x5
```

| | Delta-method | | | | [95% Conf. Interval] | |
|----|--------------|-----------|-------|-------|----------------------|-----------|
| | dy/dx | Std. Err. | z | P> z | | |
| x2 | -.4302913 | .0455122 | -9.45 | 0.000 | -.5194935 | -.341089 |
| x5 | -.3081857 | .0412259 | -7.48 | 0.000 | -.3889869 | -.2273845 |

```

13 .
14 . * Fit logit model
15 . logit y x1 x2 x3 x4 x5 x6

```

```

Iteration 0:  log likelihood = -82.760511
Iteration 1:  log likelihood = -30.57662
Iteration 2:  log likelihood = -28.750296
Iteration 3:  log likelihood = -28.672363
Iteration 4:  log likelihood = -28.672342
Iteration 5:  log likelihood = -28.672342

```

```

Logistic regression              Number of obs   =       120
                                LR chi2(6)       =      108.18
                                Prob > chi2       =      0.0000
Log likelihood = -28.672342      Pseudo R2      =      0.6536

```

| y | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] | |
|-------|-----------|-----------|-------|-------|----------------------|-----------|
| x1 | 3.415127 | .9586819 | 3.56 | 0.000 | 1.536145 | 5.294109 |
| x2 | -5.768404 | 1.321964 | -4.36 | 0.000 | -8.359406 | -3.177402 |
| x3 | 4.609453 | 1.064614 | 4.33 | 0.000 | 2.522848 | 6.696058 |
| x4 | 1.544106 | .4804108 | 3.21 | 0.001 | .602518 | 2.485694 |
| x5 | -4.106603 | .9933383 | -4.13 | 0.000 | -6.053511 | -2.159696 |
| x6 | .5345794 | .2733479 | 1.96 | 0.051 | -.0011727 | 1.070331 |
| _cons | -1.565264 | .8618573 | -1.82 | 0.069 | -3.254473 | .1239449 |

```

16 . * Average marginal effects
17 . margin, dydx(x2 x5)

```

```

Average marginal effects              Number of obs   =       120
Model VCE      : OIM

```

```

Expression   : Pr(y), predict()
dy/dx w.r.t. : x2 x5

```

| | Delta-method | | | | [95% Conf. Interval] | |
|----|--------------|-----------|-------|-------|----------------------|-----------|
| | dy/dx | Std. Err. | z | P> z | | |
| x2 | -.4303442 | .0469477 | -9.17 | 0.000 | -.52236 | -.3383285 |
| x5 | -.3063677 | .0407848 | -7.51 | 0.000 | -.3863045 | -.226431 |

```

18 .
    end of do-file

```

```

19 . log close
    name: <unnamed>
    log:  C:\Users\WLJY8\Desktop\Courses\YEAR 4\WINTER\EC0475\HW1\log file.smcl
    log type: smcl
    closed on: 22 Feb 2021, 23:47:35

```