

03/27/14 04:48:48 Untitled

1 . probit foreign mpg trunk price

2

3 Iteration 0: log likelihood = -45.03321

4 Iteration 1: log likelihood = -34.790628

5 Iteration 2: log likelihood = -34.636257

6 Iteration 3: log likelihood = -34.635772

7 Iteration 4: log likelihood = -34.635772

8

9 Probit regression

Number of obs = 74

10 LR chi2(3) = 20.79

11 Prob > chi2 = 0.0001

12 Log likelihood = -34.635772 Pseudo R2 = 0.2309

13

	foreign	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
mpg		.1033184	.040166	2.57	0.010	.0245945	.1820423
trunk		-.0958474	.0540796	-1.77	0.076	-.2018415	.0101466
price		.0001641	.0000647	2.54	0.011	.0000374	.0002909
_cons		-2.590695	1.496127	-1.73	0.083	-5.523049	.34166

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22

23 . lstat

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25 Probit model for foreign

26

	True		
Classified	D	~D	Total
+	9	7	16
-	13	45	58
Total	22	52	74

32

35 Classified + if predicted Pr(D) >= .5

36 True D defined as foreign != 0

37

Sensitivity	Pr(+ D)	40.91%	- 9/22
Specificity	Pr(- ~D)	86.54%	- 45/52
Positive predictive value	Pr(D +)	56.25%	- 9/16
Negative predictive value	Pr(~D -)	77.59%	- 45/58

42

43 False + rate for true ~D Pr(+ | ~D) 13.46% - 7/52

44 False - rate for true D Pr(- | D) 59.09% - 13/22

45 False + rate for classified + Pr(~D | +) 43.75% - 7/16

46 False - rate for classified - Pr(D | -) 22.41% - 13/58

47

48 Correctly classified 72.97%

49

Use column/row totals as specified by "1" e.g.
 in $\text{prob}(+|D)$
 the $= 9/22$
 denominator.