



ภาคผนวก

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

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--> DSTAT;Rhs=X1,X2,X3,X4,X5,X6,X7,X8,X9,X10,X11,X12,X13,X14,X15,X16;Output=2\$

Descriptive Statistics

All results based on nonmissing observations.

Variable	Mean	Std.Dev.	Minimum	Maximum	Cases

All observations in current sample					
X1	25622.7825	16413.3608	4600.00000	100000.000	400
X2	3.42000000	1.59214866	1.00000000	6.00000000	400
X3	5.17500000	.831325903	2.00000000	6.00000000	400
X4	305055.028	157927.935	14142.0000	847320.000	400
X5	2.40000000	.991189256	1.00000000	4.00000000	400
X6	.482500000	.500319447	.000000000	1.00000000	400
X7	.860000000	.347421580	.000000000	1.00000000	400
X8	.867500000	.339458141	.000000000	1.00000000	400
X9	.925000000	.263721202	.000000000	1.00000000	400
X10	.517500000	.500319447	.000000000	1.00000000	400
X11	96085.9450	81314.1121	12000.0000	690000.000	400
X12	2.16000000	.909101845	1.00000000	5.00000000	400
X13	494656.305	186291.764	30040.0000	1836340.00	400
X14	.242500000	.429131839	.000000000	1.00000000	400
X15	.905000000	.293582146	.000000000	1.00000000	400
X16	.862500000	.344805710	.000000000	1.00000000	400

Correlation Matrix for Listed Variables

	X1	X2	X3	X4	X5	X6	X7	X8
X1	1.0000	.26605	-.07134	.09652	.25809	-.34071	.18907	.01402
X2	.26605	1.0000	.00871	-.05478	.77469	-.28021	.41014	-.09154
X3	-.07134	.00871	1.0000	.42190	-.00304	-.01672	-.00174	.01132
X4	.09652	-.05478	.42190	1.0000	-.12301	-.10890	-.06827	-.00931
X5	.25809	.77469	-.00304	-.12301	1.0000	-.26381	.48326	-.03575
X6	-.34071	-.28021	-.01672	-.10890	-.26381	1.00000	-.15832	.06748
X7	.18907	.41014	-.00174	-.06827	.48326	-.15832	1.00000	.11858
X8	.01402	-.09154	.01132	-.00931	-.03575	.06748	.11858	1.00000

	X1	X2	X3	X4	X5	X6	X7	X8
X9	.02008	.00955	.14004	-.06746	.08629	.00902	.10395	.33665
X10	.02876	-.12566	-.06161	-.11426	-.15566	.61197	-.02913	.12436
X11	.14679	.11812	.03113	-.04597	.14206	.02469	.12993	.10674
X12	-.20384	-.06386	-.07362	-.04374	-.08511	-.04893	-.14315	-.23974
X13	.29603	.05439	.29484	.65544	.00283	-.10029	-.08362	.07282
X14	.12972	-.04673	-.06305	-.13483	-.03417	.03732	.02656	.18672
X15	-.07376	-.10209	-.07548	-.10571	-.04995	.07397	-.03244	.17516
X16	.05108	.00046	.00546	-.16068	.03667	.09498	.15273	.46492

	X9	X10	X11	X12	X13	X14	X15	X16
X9	1.00000	.08595	.12834	-.15890	.07447	.16111	.00486	.35486
X10	.08595	1.00000	.17489	-.28719	.08797	.05606	.06254	.13747
X11	.12834	.17489	1.00000	-.51827	.29459	.09684	.03876	.10949
X12	-.15890	-.28719	-.51827	1.00000	-.44114	-.18322	-.08376	-.14552
X13	.07447	.08797	.29459	-.44114	1.00000	-.01905	-.01336	-.06195
X14	.16111	.05606	.09684	-.18322	-.01905	1.00000	.14353	.22591
X15	.00486	.06254	.03876	-.08376	-.01336	.14353	1.00000	.01919
X16	.35486	.13747	.10949	-.14552	-.06195	.22591	.01919	1.00000

--> RESET

--> READ;FILE="C:\Documents and Settings\Administrator\My Documents\data_lim....

--> PROBIT;Lhs=Y;Rhs=ONE,X1,X2,X3,X4,X5,X6,X7,X8,X9,X10,X11,X12,X13,X14,X15
,X16\$

Normal exit from iterations. Exit status=0.

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| Binomial Probit Model |
| Maximum Likelihood Estimates |
| Model estimated: Sep 06, 2008 at 03:04:03PM. |
| Dependent variable Y |
| Weighting variable None |
| Number of observations 400 |
| Iterations completed 8 |
| Log likelihood function -126.3937 |
| Restricted log likelihood -277.2589 |
| Chi squared 301.7304 |
| Degrees of freedom 16 |
| Prob[ChiSq > value] = .0000000 |
| Hosmer-Lemeshow chi-squared = 2.35760 |
| P-value= .88405 with deg.fr. = 6 |

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|Variable | Coefficient | Standard Error |b/St.Er.|P[|Z|>z] | Mean of X|

+-----+-----+-----+-----+-----+

Index function for probability

Constant	-6.08781998	1.43759204	-4.235	.0000	
X1	.161331D-04	.721960D-05	2.235	.0254	25622.7825
X2	.19366748	.09549201	2.028	.0425	3.42000000
X3	.30683790	.13980509	2.195	.0282	5.17500000
X4	-.460559D-05	.103140D-05	-4.465	.0000	305055.028
X5	-.21425050	.16071482	-1.333	.1825	2.40000000
X6	.05556858	.28141944	.197	.8435	.48250000
X7	.18724686	.31125491	.602	.5474	.86000000
X8	.92059224	.49004187	1.879	.0603	.86750000
X9	-.19349956	.45023838	-.430	.6674	.92500000
X10	.26734268	.26066707	1.026	.3051	.51750000
X11	.250268D-05	.152053D-05	1.646	.0998	96085.9450
X12	-.26191207	.14390338	-1.820	.0688	2.16000000
X13	.450696D-06	.962527D-06	.468	.6396	494656.305
X14	2.29040922	.34284612	6.681	.0000	.24250000
X15	2.72962192	.85726706	3.184	.0015	.90500000
X16	1.60736192	.51012718	3.151	.0016	.86250000

+-----+
| Fit Measures for Binomial Choice Model |

| Probit model for variable Y |

+-----+

| Proportions P0= .500000 P1= .500000 |

| N= 400 N0= 200 N1= 200 |

| LogL = -126.39365 LogL0 = -277.2589 |

| Estrella = 1-(L/L0)^(-2L0/n) = .66345 |

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| Efron | McFadden | Ben./Lerman |
| .59464 | .54413 | .79524 |
| Cramer | Veall/Zim. | Rsqrd_ML |
| .59048 | .74015 | .52967 |
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| Information Akaike I.C. Schwarz I.C. |
| Criteria .71697 354.64220 |
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Frequencies of actual & predicted outcomes

Predicted outcome has maximum probability.

Threshold value for predicting $Y=1 = .5000$

		Predicted		
		0	1	Total
Actual	0	170	30	200
	1	32	168	200
Total		202	198	400

Analysis of Binary Choice Model Predictions Based on Threshold = .5000

Prediction Success

Sensitivity = actual 1s correctly predicted 84.000%

Specificity = actual 0s correctly predicted 85.000%

Positive predictive value = predicted 1s that were actual 1s 84.848%

Negative predictive value = predicted 0s that were actual 0s 84.158%

Correct prediction = actual 1s and 0s correctly predicted 84.500%

Prediction Failure

False pos. for true neg. = actual 0s predicted as 1s 15.000%

False neg. for true pos. = actual 1s predicted as 0s 16.000%

False pos. for predicted pos. = predicted 1s actual 0s 15.152%

False neg. for predicted neg. = predicted 0s actual 1s 15.842%

False predictions = actual 1s and 0s incorrectly predicted 15.500%

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ประวัติผู้เขียน

ชื่อ	นางสาวกนกอร วาฤทธิ
วัน เดือน ปีเกิด	9 กุมภาพันธ์ 2524
ประวัติการศึกษา	สำเร็จการศึกษามัธยมศึกษาตอนปลาย โรงเรียนนวมินทราชูทิศ พายัพ ปีการศึกษา 2540 สำเร็จการศึกษาระดับปริญญาตรี เศรษฐศาสตรบัณฑิต สาขาเศรษฐศาสตร์ มหาวิทยาลัยรามคำแหง ปีการศึกษา 2544
ประสบการณ์	เจ้าหน้าที่บริหารหนี้ ธนาคารชนชาติ จำกัด (มหาชน) สาขาเชียงใหม่

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