

ตัวอย่างการวิเคราะห์แบบจำลองการตัดสินใจเลือกระบบขนส่งสาธารณะขนาดกลาง

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| Binary Logit Model for Binary Choice
| Maximum Likelihood Estimates
| Model estimated: Sep 28, 2010 at 00:55:35AM.
| Dependent variable          CHOICE
| Weighting variable          None
| Number of observations      4000
| Iterations completed        5
| Log likelihood function     -2188.050
| Number of parameters        4
| Info. Criterion: AIC =      1.09602
|   Finite Sample: AIC =      1.09603
| Info. Criterion: BIC =      1.10232
| Info. Criterion:HQIC =      1.09826
| Restricted log likelihood   -2368.974
| McFadden Pseudo R-squared  .0763725
| Chi squared                 361.8490
| Degrees of freedom          3
| Prob[ChiSq > value] =       .0000000
| Hosmer-Lemeshow chi-squared = 19.06683
| P-value = .01451 with deg.fr. = 8
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Variable	Coefficient	Standard Error	b/St.Er.	P[Z >z]	Mean of X
-----+Characteristics in numerator of Prob[Y = 1]					
Constant	2.99182922	.24965243	11.984	.0000	
FARE	-.10051359	.01486633	-6.761	.0000	12.5000000
TTIME	-.03902687	.00374964	-10.408	.0000	30.0000000
FREQ	-.03598940	.00253663	-14.188	.0000	45.0000000

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| Information Statistics for Discrete Choice Model.
| M=Model MC=Constants Only M0=No Model
| Criterion F (log L) -2188.04982 -2368.97430 -2772.58872
| LR Statistic vs. MC 361.84897 .00000 .00000
| Degrees of Freedom 3.00000 .00000 .00000
| Prob. Value for LR .00000 .00000 .00000
| Entropy for probs. 2188.04982 2368.97430 2772.58872
| Normalized Entropy .78917 .85443 1.00000
| Entropy Ratio Stat. 1169.07781 807.22884 .00000
| Bayes Info Criterion 1.10025 1.19071 1.39251
| BIC(no model) - BIC .29227 .20181 .00000
| Pseudo R-squared .07637 .00000 .00000
| Pct. Correct Pred. 74.07500 .00000 50.00000
| Means: y=0 y=1 y=2 y=3 y=4 y=5 y=6 y>=7
| Outcome .7208 .2793 .0000 .0000 .0000 .0000 .0000 .0000
| Pred.Pr .7207 .2793 .0000 .0000 .0000 .0000 .0000 .0000
| Notes: Entropy computed as Sum(i)Sum(j)Pfit(i,j)*logPfit(i,j).
| Normalized entropy is computed against M0.
| Entropy ratio statistic is computed against M0.
| BIC = 2*criterion - log(N)*degrees of freedom.
| If the model has only constants or if it has no constants,
| the statistics reported here are not useable.
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ระบบขนส่งสาธารณะขนาดกลาง กรณีศึกษา รถโดยสารประจำทางและรถตู้โดยสารสาธารณะ

ได้รับเงินสนับสนุนจากงบประมาณแผ่นดินประจำปีงบประมาณ 2553 (สำนักงานคณะกรรมการสภาพัฒนาการวิจัยแห่งชาติ)

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| Partial derivatives of probabilities with |
| respect to the vector of characteristics. |
| They are computed at the means of the Xs. |
| Observations used are All Obs.          |
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Variable	Coefficient	Standard Error	b/St.Er.	P[Z >z]	Elasticity
-----+Marginal effect for variable in probability					
Constant	.57315118	.04785783	11.976	.0000	
FARE	-.01925561	.00283194	-6.799	.0000	-.93190988
TTIME	-.00747646	.00070841	-10.554	.0000	-.86840861
FREQ	-.00689457	.00047237	-14.596	.0000	-1.20123023

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| Marginal Effects for |
+-----+
| Variable | All Obs. |
+-----+
| ONE      | .57315 |
| FARE     | -.01926 |
| TTIME    | -.00748 |
| FREQ     | -.00689 |
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| Fit Measures for Binomial Choice Model |
| Logit model for variable CHOICE       |
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| Proportions P0= .720750 P1= .279250 |
| N = 4000 N0= 2883 N1= 1117          |
| LogL= -2188.050 LogL0= -2368.974    |
| Estrella = 1-(L/L0)^(-2L0/n) = .08981 |
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| Efron | McFadden | Ben./Lerman |
| .09440 | .07637   | .63443      |
| Cramer | Veall/Zim. | Rsqrd_ML   |
| .09183 | .15299   | .08649     |
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| Information Akaike I.C. Schwarz I.C. |
| Criteria      1.09602      1.10232   |
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| Predictions for Binary Choice Model. Predicted value is |
| 1 when probability is greater than .500000, 0 otherwise. |
| Note, column or row total percentages may not sum to    |
| 100% because of rounding. Percentages are of full sample. |
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| Actual | Predicted Value | Total Actual |
| Value  | 0                | 1            |
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| 0      | 2673 ( 66.8%)  | 210 ( 5.3%) | 2883 ( 72.1%) |
| 1      | 827 ( 20.7%)   | 290 ( 7.2%) | 1117 ( 27.9%) |
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| Total  | 3500 ( 87.5%) | 500 ( 12.5%) | 4000 (100.0%) |
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 Analysis of Binary Choice Model Predictions Based on Threshold = .5000

Prediction Success

 Sensitivity = actual 1s correctly predicted 25.962%
 Specificity = actual 0s correctly predicted 92.716%
 Positive predictive value = predicted 1s that were actual 1s 58.000%
 Negative predictive value = predicted 0s that were actual 0s 76.371%
 Correct prediction = actual 1s and 0s correctly predicted 74.075%

Prediction Failure

 False pos. for true neg. = actual 0s predicted as 1s 7.284%
 False neg. for true pos. = actual 1s predicted as 0s 74.038%
 False pos. for predicted pos. = predicted 1s actual 0s 42.000%
 False neg. for predicted neg. = predicted 0s actual 1s 23.629%
 False predictions = actual 1s and 0s incorrectly predicted 25.925%
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