**ภาคผนวก ค**

**ตัวอย่างคำสั่งการวิเคราะห์กลุ่มแฝง**

TITLE: LPA

DATA:

FILE IS "D:\DATA8OCTOBER\datanew.dat";

VARIABLE:

NAMES ARE STT STD REB REC SUP COM TS SS PD PE GM HR ST GA CS AO PN TC

EV LD CA CN CO LI;

USEVARIABLES ARE LD CA CN CO LI;

CLASSES IS C(4);

ANALYSIS:

TYPE = MIXTURE;

ITERATIONS = 1000;

CONVERGENCE = 0.00005;

SAVEDATA:

FILE = C2\_LCA.txt;

save = cprobabilities;

OUTPUT:

TECH11 TECH14;

MODEL FIT INFORMATION

Number of Free Parameters 28

Loglikelihood

H0 Value -1151.500

H0 Scaling Correction Factor 1.1701

for MLR

Information Criteria

Akaike (AIC) 2359.001

Bayesian (BIC) 2488.363

Sample-Size Adjusted BIC 2399.452

(n\* = (n + 2) / 24)

FINAL CLASS COUNTS AND PROPORTIONS FOR THE LATENT CLASSES

BASED ON THE ESTIMATED MODEL

Latent

Classes

1 290.29814 0.38706

2 186.88105 0.24917

3 119.26190 0.15902

4 153.55890 0.20475

FINAL CLASS COUNTS AND PROPORTIONS FOR THE LATENT CLASS PATTERNS

BASED ON ESTIMATED POSTERIOR PROBABILITIES

Latent

Classes

1 290.29814 0.38706

2 186.88105 0.24917

3 119.26190 0.15902

4 153.55890 0.20475

CLASSIFICATION QUALITY

Entropy 0.949

CLASSIFICATION OF INDIVIDUALS BASED ON THEIR MOST LIKELY LATENT CLASS MEMBERSHIP

Class Counts and Proportions

Latent

Classes

1 289 0.38533

2 187 0.24933

3 120 0.16000

4 154 0.20533

Average Latent Class Probabilities for Most Likely Latent Class Membership (Row)

by Latent Class (Column)

1 2 3 4

1 0.978 0.000 0.005 0.017

2 0.000 0.980 0.020 0.000

3 0.019 0.031 0.950 0.000

4 0.036 0.000 0.000 0.964

MODEL RESULTS

Two-Tailed

Estimate S.E. Est./S.E. P-Value

Latent Class 1

Means

LD 3.744 0.010 379.305 0.000

CA 3.704 0.015 245.752 0.000

CN 3.736 0.013 282.419 0.000

CO 3.677 0.014 268.721 0.000

LI 3.143 0.035 89.736 0.000

Variances

LD 0.037 0.003 11.139 0.000

CA 0.055 0.003 16.142 0.000

CN 0.029 0.002 12.735 0.000

CO 0.040 0.003 11.855 0.000

LI 0.494 0.018 27.367 0.000

Latent Class 2

Means

LD 4.717 0.016 288.331 0.000

CA 4.613 0.015 303.903 0.000

CN 4.575 0.014 331.824 0.000

CO 4.525 0.015 305.951 0.000

LI 3.542 0.063 55.920 0.000

Variances

LD 0.037 0.003 11.139 0.000

CA 0.055 0.003 16.142 0.000

CN 0.029 0.002 12.735 0.000

CO 0.040 0.003 11.855 0.000

LI 0.494 0.018 27.367 0.000

Latent Class 3

Means

LD 4.256 0.021 202.878 0.000

CA 4.176 0.022 191.888 0.000

CN 4.201 0.018 231.336 0.000

CO 4.201 0.019 218.244 0.000

LI 3.255 0.067 48.793 0.000

Variances

LD 0.037 0.003 11.139 0.000

CA 0.055 0.003 16.142 0.000

CN 0.029 0.002 12.735 0.000

CO 0.040 0.003 11.855 0.000

LI 0.494 0.018 27.367 0.000

Latent Class 4

Means

LD 3.344 0.030 113.238 0.000

CA 3.298 0.029 113.459 0.000

CN 3.212 0.020 164.116 0.000

CO 3.257 0.024 137.750 0.000

LI 3.329 0.061 54.790 0.000

Variances

LD 0.037 0.003 11.139 0.000

CA 0.055 0.003 16.142 0.000

CN 0.029 0.002 12.735 0.000

CO 0.040 0.003 11.855 0.000

LI 0.494 0.018 27.367 0.000

Categorical Latent Variables

Means

C#1 0.637 0.120 5.291 0.000

C#2 0.196 0.118 1.660 0.097

C#3 -0.253 0.135 -1.876 0.061

TECHNICAL 11 OUTPUT

Random Starts Specifications for the k-1 Class Analysis Model

Number of initial stage random starts 20

Number of final stage optimizations 4

VUONG-LO-MENDELL-RUBIN LIKELIHOOD RATIO TEST FOR 3 (H0) VERSUS 4 CLASSES

H0Loglikelihood Value -1413.685

2 Times the Loglikelihood Difference 524.370

Difference in the Number of Parameters 6

Mean 18.552

Standard Deviation 34.500

P-Value 0.0000

LO-MENDELL-RUBIN ADJUSTED LRT TEST

Value 511.492

P-Value 0.0000

PARAMETRIC BOOTSTRAPPED LIKELIHOOD RATIO TEST FOR 3 (H0) VERSUS 4 CLASSES

H0Loglikelihood Value -1413.685

2 Times the Loglikelihood Difference 524.370

Difference in the Number of Parameters 6

Approximate P-Value 0.0000

Successful Bootstrap Draws 5