**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