

ภาคผนวก จ

ผลการวิเคราะห์ข้อมูลโมเดล ภาวะผู้นำที่มีประสิทธิผล

มหาวิทยาลัยราชภัฏสุราษฎร์ธานี

มหาวิทยาลัยราชภัฏสุพรรณบุรี

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BY

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The following lines were read from file C:\Documents and Settings\compag\Desktop\new effective leadership\second CFA\second CFA Effective Leadership.SPO:

Confirmatory Factor analysis  
second effective leadership  
Raw Data from file 'C:\Documents and Settings\compag\Desktop\new effective leadership\second CFA\second cfa effective leadership.psf'  
Latent Variables PS MT SA EL  
Relationships  
PS1 = PS  
PS2 = PS  
PS3 = PS  
PS4 = PS  
PS5 = PS  
MT1 = MT  
MT2 = MT  
MT3 = MT  
SA1 = SA  
SA2 = SA  
SA3 = SA  
SA4 = SA  
PS = EL  
MT = EL  
SA = EL  
Path Diagram  
End of Problem  
Sample Size = 342  
Confirmatory Factor analysis

Covariance Matrix

|     | PS1  | PS2  | PS3  | PS4  | PS5  | MT1  |
|-----|------|------|------|------|------|------|
| PS1 | 0.24 |      |      |      |      |      |
| PS2 | 0.17 | 0.25 |      |      |      |      |
| PS3 | 0.14 | 0.19 | 0.23 |      |      |      |
| PS4 | 0.14 | 0.16 | 0.15 | 0.18 |      |      |
| PS5 | 0.15 | 0.14 | 0.12 | 0.12 | 0.16 |      |
| MT1 | 0.17 | 0.17 | 0.16 | 0.13 | 0.13 | 0.22 |
| MT2 | 0.13 | 0.12 | 0.11 | 0.10 | 0.10 | 0.14 |
| MT3 | 0.15 | 0.17 | 0.15 | 0.13 | 0.13 | 0.18 |

|     |      |      |      |      |      |      |
|-----|------|------|------|------|------|------|
| SA1 | 0.17 | 0.15 | 0.15 | 0.11 | 0.13 | 0.18 |
| SA2 | 0.16 | 0.14 | 0.13 | 0.10 | 0.12 | 0.15 |
| SA3 | 0.16 | 0.15 | 0.15 | 0.12 | 0.13 | 0.18 |
| SA4 | 0.15 | 0.15 | 0.14 | 0.11 | 0.12 | 0.16 |

## Covariance Matrix

|     | MT2  | MT3  | SA1  | SA2  | SA3  | SA4  |
|-----|------|------|------|------|------|------|
| MT2 | 0.20 |      |      |      |      |      |
| MT3 | 0.15 | 0.26 |      |      |      |      |
| SA1 | 0.12 | 0.16 | 0.25 |      |      |      |
| SA2 | 0.12 | 0.14 | 0.16 | 0.22 |      |      |
| SA3 | 0.13 | 0.16 | 0.19 | 0.16 | 0.23 |      |
| SA4 | 0.12 | 0.15 | 0.18 | 0.15 | 0.16 | 0.19 |

## Confirmatory Factor analysis

Number of Iterations = 28

LISREL Estimates (Maximum Likelihood)

## Measurement Equations

|  |
|--|
| PS1 = 0.41*PS, Errorvar.= 0.072 , R <sub>y</sub> = 0.70<br>(0.0065)<br>11.20               |
| PS2 = 0.44*PS, Errorvar.= 0.050 , R <sub>y</sub> = 0.78<br>(0.021) (0.0051)<br>21.19 9.92  |
| PS3 = 0.40*PS, Errorvar.= 0.072 , R <sub>y</sub> = 0.69<br>(0.021) (0.0064)<br>18.88 11.20 |
| PS4 = 0.35*PS, Errorvar.= 0.057 , R <sub>y</sub> = 0.68<br>(0.019) (0.0050)<br>18.73 11.32 |
| PS5 = 0.33*PS, Errorvar.= 0.045 , R <sub>y</sub> = 0.71<br>(0.017) (0.0041)<br>19.35 11.06 |
| MT1 = 0.44*MT, Errorvar.= 0.033 , R <sub>y</sub> = 0.85<br>(0.0046)<br>7.10                |
| MT2 = 0.33*MT, Errorvar.= 0.091 , R <sub>y</sub> = 0.55<br>(0.019) (0.0076)<br>17.59 11.92 |
| MT3 = 0.42*MT, Errorvar.= 0.083 , R <sub>y</sub> = 0.68<br>(0.019) (0.0075)<br>21.45 11.07 |
| SA1 = 0.45*SA, Errorvar.= 0.044 , R <sub>y</sub> = 0.82<br>(0.0046)<br>9.75                |
| SA2 = 0.38*SA, Errorvar.= 0.081 , R <sub>y</sub> = 0.64<br>(0.019) (0.0069)<br>20.03 11.82 |

SA3 = 0.41\*SA, Errorvar.= 0.056 , Ry = 0.75  
 (0.017) (0.0052)  
 23.92 10.87

SA4 = 0.40\*SA, Errorvar.= 0.028 , Ry = 0.85  
 (0.014) (0.0031)  
 27.70 9.00

#### Structural Equations

PS = 0.92\*EL, Errorvar.= 0.15 , Ry = 0.85  
 (0.055) (0.027)  
 16.92 5.58

MT = 0.97\*EL, Errorvar.= 0.059 , Ry = 0.94  
 (0.047) (0.025)  
 20.83 2.32

SA = 0.94\*EL, Errorvar.= 0.12 , Ry = 0.88  
 (0.049) (0.024)  
 19.22 5.16

#### Correlation Matrix of Independent Variables

| EL   |
|------|
| 1.00 |

#### Covariance Matrix of Latent Variables

|    | PS   | MT   | SA   | EL   |
|----|------|------|------|------|
| PS | 1.00 |      |      |      |
| MT | 0.89 | 1.00 |      |      |
| SA | 0.86 | 0.91 | 1.00 |      |
| EL | 0.92 | 0.97 | 0.94 | 1.00 |

#### Goodness of Fit Statistics

Degrees of Freedom = 8  
 Minimum Fit Function Chi-Square = 10.59 (P = 0.23)  
 Normal Theory Weighted Least Squares Chi-Square = 10.31 (P = 0.24)  
 Estimated Non-centrality Parameter (NCP) = 2.31  
 90 Percent Confidence Interval for NCP = (0.0 ; 14.81)

Minimum Fit Function Value = 0.031  
 Population Discrepancy Function Value (FO) = 0.0068  
 90 Percent Confidence Interval for FO = (0.0 ; 0.043)  
 Root Mean Square Error of Approximation (RMSEA) = 0.029  
 90 Percent Confidence Interval for RMSEA = (0.0 ; 0.074)  
 P-Value for Test of Close Fit (RMSEA < 0.05) = 0.73

Expected Cross-Validation Index (ECVI) = 0.15  
 90 Percent Confidence Interval for ECVI = (0.14 ; 0.18)  
 ECVI for Saturated Model = 0.16  
 ECVI for Independence Model = 8.41

Chi-Square for Independence Model with 21 Degrees of Freedom = 2852.81  
 Independence AIC = 2866.81  
 Model AIC = 50.31

Saturated AIC = 56.00  
 Independence CAIC = 2900.66  
 Model CAIC = 147.00  
 Saturated CAIC = 191.37

Normed Fit Index (NFI) = 1.00  
 Non-Normed Fit Index (NNFI) = 1.00  
 Parsimony Normed Fit Index (PNFI) = 0.38  
 Comparative Fit Index (CFI) = 1.00  
 Incremental Fit Index (IFI) = 1.00  
 Relative Fit Index (RFI) = 0.99

Critical N (CN) = 648.20

Root Mean Square Residual (RMR) = 0.0027  
 Standardized RMR = 0.013  
 Goodness of Fit Index (GFI) = 0.99  
 Adjusted Goodness of Fit Index (AGFI) = 0.97  
 Parsimony Goodness of Fit Index (PGFI) = 0.28

The Modification Indices Suggest to Add the

| Path to | from | Decrease in Chi-Square | New Estimate |
|---------|------|------------------------|--------------|
| PS1     | MT   | 11.3                   | 0.17         |
| PS1     | SA   | 31.3                   | 0.23         |
| PS4     | MT   | 13.4                   | -0.16        |
| PS4     | SA   | 25.9                   | -0.18        |
| MT1     | SA   | 11.1                   | 0.24         |
| SA1     | PS   | 15.7                   | -0.14        |
| SA3     | MT   | 24.3                   | 0.25         |

The Modification Indices Suggest to Add an Error Covariance

| Between | and | Decrease in Chi-Square | New Estimate |
|---------|-----|------------------------|--------------|
| PS3     | PS1 | 36.7                   | -0.03        |
| PS3     | PS2 | 41.8                   | 0.03         |
| PS4     | PS3 | 8.0                    | 0.01         |
| PS5     | PS1 | 18.3                   | 0.02         |
| PS5     | PS2 | 8.4                    | -0.01        |
| PS5     | PS3 | 18.1                   | -0.02        |
| MT3     | MT2 | 16.0                   | 0.02         |
| SA1     | PS1 | 12.9                   | 0.01         |
| SA1     | PS2 | 9.2                    | -0.01        |
| SA1     | PS4 | 8.7                    | -0.01        |
| SA2     | SA1 | 13.1                   | -0.02        |
| SA3     | MT1 | 24.3                   | 0.02         |
| SA4     | SA1 | 34.4                   | 0.02         |
| SA4     | SA3 | 38.7                   | -0.02        |

Time used: 0.063 Seconds

