ภาคผนวก จ

ค่าสถิติสำคัญที่ได้จากการวิเคราะห์ข้อมูล

- ผลการวิเคราะห์ค่าความเชื่อมั่น (Reliability)

- ผลการวิเคราะห์องค์ประกอบเชิงยืนยัน (CFA)

- ผลการวิเคราะห์สมการโครงสร้าง (SEM)

ผลการวิเคราะห์ค่าความเชื่อมั่น (Reliability)

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.971	69

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PRO1	286.0333	813.482	.448	.970
PRO2	285.8667	815.430	.332	.971
PRO3	285.9667	803.620	.575	.970
PRO4	286.1333	810.395	.476	.970
PRI1	286.2667	810.478	.447	.971
PRI2	286.0000	815.862	.259	.971
PRI3	285.9000	808.990	.514	.970
PRI4	285.7000	811.528	.511	.970
PRI5	285.8333	822.351	.177	.971
PLA1	286.4333	793.564	.684	.970
PLA2	286.3333	806.782	.540	.970
PLA3	286.3667	794.654	.580	.970
PLA4	286.1667	806.557	.477	.970
PROM1	285.8000	805.476	.616	.970
PROM2	285.9667	807.068	.528	.970
PROM3	286.2333	803.702	.568	.970
PROM4	286.2000	795.545	.752	.970
PROM5	286.1000	804.576	.628	.970

PROM6	286.2000	816.028	.306	.971
KNO1	285.9333	812.340	.466	.970
KNO2	285.9333	809.720	.495	.970
KNO3	286.3667	805.413	.554	.970
SKI1	286.2000	801.407	.610	.970
SKI2	286.3667	800.792	.628	.970
SKI3	286.4000	802.110	.578	.970
SKI4	286.6333	796.102	.535	.970
PRE1	286.1000	811.955	.362	.971
PRE2	286.4000	785.972	.728	.970
PRE3	286.3333	798.644	.591	.970
NEE1	286.4333	794.323	.588	.970
NEE2	286.6000	775.697	.693	.970
NEE3	286.6333	783.068	.769	.970
INDI1	286.4667	791.568	.680	.970
INDI2	286.1000	820.714	.227	.971
INDI3	286.2000	811.062	.543	.970
SER1	286.1000	808.300	.483	.970
SER2	286.1667	798.489	.629	.970
SER3	286.2000	803.959	.636	.970
SER4	286.1000	805.679	.550	.970
SER5	286.1000	801.955	.647	.970
SER6	286.1000	804.645	.577	.970
SER7	286.0333	805.757	.628	.970
DEL1	286.4333	806.254	.639	.970
DEL2	286.1000	805.748	.654	.970
DEL3	286.0667	798.685	.720	.970
DEL4	285.9667	807.206	.571	.970
DEL5	286.2000	811.476	.430	.971
DEL6	286.1000	806.231	.581	.970
DEL7	286.2667	795.375	.701	.970
DEL8	286.4000	809.628	.641	.970
DEL9	286.2333	800.530	.646	.970
DEL10	285.9667	803.068	.589	.970
DEL11	285.7667	803.289	.684	.970
DEL12	286.0333	804.861	.555	.970
HAN1	286.1000	810.921	.558	.970
HAN2	286.2000	802.786	.734	.970
HAN3	286.3333	804.299	.607	.970

HAN4	285.9667	803.689	.672	.970
HAN5	286.1333	799.154	.640	.970
HAN6	286.1333	794.671	.745	.970
HAN7	285.9000	822.300	.179	.971
STA1	286.3667	803.413	.478	.971
STA2	286.4667	800.740	.658	.970
STA3	285.9333	798.340	.702	.970
STA4	286.0333	801.689	.685	.970
STA5	286.0000	802.966	.596	.970
STA6	286.1667	806.075	.563	.970
STA7	286.1333	808.051	.543	.970
STA8	286.1333	808.464	.488	.970

ผลการวิเคราะห์องค์ประกอบเชิงยืนยัน (CFA):การขนส่งและกระจายสินค้าที่มีผลต่อการตลาด

DATE: 3/ 3/2018
TIME: 0:25

L I S R E L 8.72

BY

Karl G. Jöreskog & Dag Sörbom

This program is published exclusively by
Scientific Software International, Inc.
7383 N. Lincoln Avenue, Suite 100
Lincolnwood, IL 60712, U.S.A.
Phone: (800)247-6113, (847)675-0720, Fax: (847)675-2140

The following lines were read from file E:\YA CFA STRATEGY.LPJ:

```
TI CFA STRATEGY
!DA NI=19 NO=400 MA=CM
SY='E:\YA CFA STRATEGY.dsf' NG=1
MO NY=19 NK=1 NE=4 BE=FU GA=FI PS=SY TE=SY
LE
PROD PRIC PLAC PROM
LK
STRA
FI TE(1,1) TE(4,4)
FR LY(2,1) LY(3,1) LY(4,1) LY(6,2) LY(7,2) LY(8,2) LY(9,2) LY(11,3) LY(12,3)
FR LY(13,3) LY(15,4) LY(16,4) LY(17,4) LY(18,4) LY(19,4) GA(1,1) GA(2,1) GA(3,1)
FR GA(4,1) TE(3,1) TE(4,1) TE(4,3) TE(6,1) TE(6,2) TE(6,4) TE(8,2) TE(8,5)
FR TE(8,7) TE(9,2) TE(9,5) TE(10,7) TE(11,1) TE(11,7) TE(11,10) TE(12,1) TE(12,7)
FR TE(12,10) TE(12,11) TE(13,9) TE(14,2) TE(14,4) TE(14,5) TE(14,13) TE(15,2) TE(15,3)
FR TE(15,8) TE(15,13) TE(15,14) TE(16,9) TE(16,10) TE(16,13) TE(17,2) TE(17,5) TE(17,7)
FR TE(17,9) TE(17,10) TE(17,16) TE(18,5) TE(18,11) TE(18,13) TE(18,17) TE(19,9)
TE(19,10)
VA 1 LY(1,1)
VA 1 LY(5,2)
VA 1 LY(10,3)
VA 1 LY(14,4)
PD
OU AM RS EF FS SS SC AD=OFF
```

TI CFA STRATEGY

Number of Input Variables 19
Number of Y - Variables 19
Number of X - Variables 0
Number of ETA - Variables 4
Number of KSI - Variables 1
Number of Observations 400

TI CFA STRATEGY

Covariance Matrix

	PRO_1	PRO_2	PRO_3	PRO_4	PRI_5	PRI_6
PRO_1	0.40					
PRO_2	0.24	0.45				
PRO_3	0.21	0.21	0.47			

PRO_4	0.20	0.24	0.18	0.46		
PRI_5	0.18	0.13	0.16	0.18	0.43	
PRI_6	0.14	0.14	0.10	0.18	0.21	0.43
PRI_7	0.12	0.10	0.17	0.14	0.21	0.16
PRI_8	0.13	0.16	0.13	0.16	0.19	0.17
PRI_9	0.15	0.17	0.17	0.17	0.16	0.18
PLA_10	0.12	0.06	0.15	0.11	0.20	0.12
PLA_11	0.07	0.06	0.15	0.11	0.18	0.13
PLA_12	0.09	0.05	0.15	0.12	0.17	0.14
PLA_13	0.18	0.11	0.17	0.19	0.21	0.15
PRM_14	0.15	0.17	0.15	0.19	0.15	0.13
PRM_15	0.18	0.17	0.19	0.19	0.18	0.14
PRM_16	0.13	0.09	0.13	0.17	0.20	0.12
PRM_17	0.13	0.11	0.14	0.17	0.14	0.11
PRM_18	0.13	0.09	0.14	0.14	0.14	0.10
PRM_19	0.17	0.10	0.15	0.15	0.21	0.15

Covariance Matrix

	PRI_7	PRI_8	PRI_9	PLA_10	PLA_11	PLA_12
PRI_7	0.58					
PRI_8	0.27	0.48				
PRI_9	0.21	0.26	0.52			
PLA_10	0.25	0.16	0.15	0.55		
PLA_11	0.24	0.16	0.15	0.38	0.58	
PLA_12	0.25	0.18	0.14	0.28	0.32	0.60
PLA_13	0.21	0.20	0.19	0.24	0.24	0.27
PRM_14	0.16	0.18	0.21	0.13	0.13	0.15
PRM_15	0.15	0.21	0.22	0.15	0.16	0.16
PRM_16	0.20	0.16	0.11	0.24	0.22	0.25
PRM_17	0.16	0.18	0.12	0.24	0.20	0.24
PRM_18	0.14	0.16	0.16	0.14	0.12	0.18
PRM_19	0.19	0.15	0.11	0.20	0.16	0.19

Covariance Matrix

	PLA_13	PRM_14	PRM_15	PRM_16	PRM_17	PRM_18
PLA_13	0.63					
PRM_14	0.30	0.49				
PRM_15	0.26	0.30	0.50			
PRM_16	0.28	0.16	0.18	0.51		
PRM_17	0.26	0.18	0.20	0.31	0.46	
PRM_18	0.17	0.17	0.21	0.23	0.25	0.47
PRM_19	0.21	0.15	0.16	0.20	0.19	0.17

Covariance Matrix

	PRM_19
PRM_19	0.50

TI CFA STRATEGY

Parameter Specifications

LAMBDA-Y

	PROD	PRIC	PLAC	PROM
PRO_1	0	0	0	0
PRO_2	1	0	0	0
PRO_3	2	0	0	0
PRO_4	3	0	0	0
PRI_5	0	0	0	0
PRI_6	0	4	0	0
PRI_7	0	5	0	0
PRI_8	0	6	0	0
PRI_9	0	7	0	0

PLA_10	0	0	0	0
PLA_11	0	0	8	0
PLA_12	0	0	9	0
PLA_13	0	0	10	0
PRM_14	0	0	0	0
PRM_15	0	0	0	11
PRM_16	0	0	0	12
PRM_17	0	0	0	13
PRM_18	0	0	0	14
PRM_19	0	0	0	15

GAMMA

	STRA
PROD	16
PRIC	17
PLAC	18
PROM	19

PSI

PROD	PRIC	PLAC	PROM
20	21	22	23

THETA-EPS

	PRO_1	PRO_2	PRO_3	PRO_4	PRI_5	PRI_6
PRO_1	0					
PRO_2	0	24				
PRO_3	25	0	26			
PRO_4	27	0	28	0		
PRI_5	0	0	0	0	29	
PRI_6	30	31	0	32	0	33
PRI_7	0	0	0	0	0	0
PRI_8	0	35	0	0	36	0
PRI_9	0	39	0	0	40	0
PLA_10	0	0	0	0	0	0
PLA_11	44	0	0	0	0	0
PLA_12	48	0	0	0	0	0
PLA_13	0	0	0	0	0	0
PRM_14	0	55	0	56	57	0
PRM_15	0	60	61	0	0	0
PRM_16	0	0	0	0	0	0
PRM_17	0	70	0	0	71	0
PRM_18	0	0	0	0	77	0
PRM_19	0	0	0	0	0	0

THETA-EPS

	PRI_7	PRI_8	PRI_9	PLA_10	PLA_11	PLA_12
PRI_7	34					
PRI_8	37	38				
PRI_9	0	0	41			
PLA_10	42	0	0	43		
PLA_11	45	0	0	46	47	
PLA_12	49	0	0	50	51	52
PLA_13	0	0	53	0	0	0
PRM_14	0	0	0	0	0	0
PRM_15	0	62	0	0	0	0
PRM_16	0	0	66	67	0	0
PRM_17	72	0	73	74	0	0
PRM_18	0	0	0	0	78	0
PRM_19	0	0	82	83	0	0

THETA-EPS

PLA_13	PRM_14	PRM_15	PRM_16	PRM_17	PRM_18

PLA_13	54					
PRM_14	58	59				
PRM_15	63	64	65			
PRM_16	68	0	0	69		
PRM_17	0	0	0	75	76	
PRM_18	79	0	0	0	80	81
PRM_19	0	0	0	0	0	0

THETA-EPS

	PRM_19
PRM_19	84

TI CFA STRATEGY

Number of Iterations =114

LISREL Estimates (Maximum Likelihood)

LAMBDA-Y

	PROD	PRIC	PLAC	PROM
PRO_1	1.00	- -	- -	- -
PRO_2	0.56 (0.04) 14.51	- -	- -	- -
PRO_3	0.93 (0.08) 12.36	- -	- -	- -
PRO_4	1.10 (0.05) 23.71	- -	- -	- -
PRI_5	- -	1.00	- -	- -
PRI_6	- -	0.69 (0.07) 10.05	- -	- -
PRI_7	- -	0.84 (0.08) 10.31	- -	- -
PRI_8	- -	0.88 (0.08) 11.49	- -	- -
PRI_9	- -	0.99 (0.09) 10.93	- -	- -
PLA_10	- -	- -	1.00	- -
PLA_11	- -	- -	1.01 (0.08) 12.09	- -
PLA_12	- -	- -	1.09 (0.11) 9.93	- -
PLA_13	- -	- -	1.34 (0.14)	- -

			9.69	
PRM_14	- -	- -	- -	1.00
PRM_15	- -	- -	- -	1.10
				(0.09)
				12.12
PRM_16	- -	- -	- -	1.20
				(0.12)
				9.88
PRM_17	- -	- -	- -	1.20
				(0.12)
				10.03
PRM_18	- -	- -	- -	1.06
				(0.11)
				9.39
PRM_19	- -	- -	- -	1.08
				(0.12)
				9.33

GAMMA

	STRA
PROD	0.34
	(0.03)
	13.48
PRIC	0.43
	(0.03)
	14.21
PLAC	0.38
	(0.04)
	10.66
PROM	0.39
	(0.03)
	11.33

Covariance Matrix of ETA and KSI

	PROD	PRIC	PLAC	PROM	STRA
PROD	0.39				
PRIC	0.15	0.26			
PLAC	0.13	0.17	0.17		
PROM	0.13	0.17	0.15	0.15	
STRA	0.34	0.43	0.38	0.39	1.00

PHI

STRA
1.00

PSI
Note: This matrix is diagonal.

PROD	PRIC	PLAC	PROM
0.27	0.07	0.02	0.00
(0.02)	(0.02)	(0.01)	(0.01)
14.63	4.49	2.20	-0.03

Squared Multiple Correlations for Structural Equations

PROD	PRIC	PLAC	PROM
0.30	0.72	0.86	1.00

Squared Multiple Correlations for Reduced Form

PROD	PRIC	PLAC	PROM
0.30	0.72	0.86	1.00

THETA-EPS

	PRO_1	PRO_2	PRO_3	PRO_4	PRI_5	PRI_6
PRO_1	- -					
PRO_2	- -	0.32 (0.02) 16.04				
PRO_3	-0.16 (0.02) -7.15	- -	0.12 (0.04) 3.12			
PRO_4	-0.23 (0.02) -14.48	- -	-0.22 (0.03) -8.57	- -		
PRI_5	- -	- -	- -	- -	0.16 (0.02) 7.47	
PRI_6	0.03 (0.01) 2.42	0.07 (0.02) 4.11	- -	0.06 (0.02) 4.04	- -	0.30 (0.02) 13.66
PRI_7	- -	- -	- -	- -	- -	- -
PRI_8	- -	0.05 (0.01) 3.99	- -	- -	-0.04 (0.02) -2.30	- -
PRI_9	- -	0.06 (0.02) 3.97	- -	- -	-0.11 (0.02) -5.87	- -
PLA_10	- -	- -	- -	- -	- -	- -
PLA_11	-0.06 (0.01) -4.22	- -	- -	- -	- -	- -
PLA_12	-0.03 (0.01) -2.30	- -	- -	- -	- -	- -
PLA_13	- -	- -	- -	- -	- -	- -
PRM_14	- -	0.07 (0.01) 4.47	- -	0.03 (0.01) 2.25	-0.03 (0.01) -2.03	- -
PRM_15	- -	0.04 (0.01) 2.94	0.03 (0.01) 2.14	- -	- -	- -
PRM_16	- -	- -	- -	- -	- -	- -

PRM_17	- -	0.04 (0.01) 3.04	- -	- -	-0.07 (0.01) -5.34	- -
PRM_18	- -	- -	- -	- -	-0.05 (0.01) -3.09	- -
PRM_19	- -	- -	- -	- -	- -	- -

THETA-EPS

	PRI_7	PRI_8	PRI_9	PLA_10	PLA_11	PLA_12
PRI_7	0.39 (0.03) 13.44					
PRI_8	0.07 (0.02) 3.67	0.26 (0.02) 11.52				
PRI_9	- -	- -	0.25 (0.03) 9.62			
PLA_10	0.08 (0.02) 4.27	- -	- -	0.37 (0.03) 12.65		
PLA_11	0.08 (0.02) 3.71	- -	- -	0.20 (0.02) 8.10	0.39 (0.03) 12.57	
PLA_12	0.09 (0.02) 4.20	- -	- -	0.08 (0.02) 3.42	0.12 (0.02) 4.92	0.39 (0.03) 12.31
PLA_13	- -	- -	-0.05 (0.02) -2.63	- -	- -	- -
PRM_14	- -	- -	- -	- -	- -	- -
PRM_15	- -	0.03 (0.01) 2.54	- -	- -	- -	- -
PRM_16	- -	- -	-0.09 (0.02) -4.96	0.03 (0.01) 2.26	- -	- -
PRM_17	-0.03 (0.01) -2.36	- -	-0.08 (0.02) -4.96	0.05 (0.01) 3.69	- -	- -
PRM_18	- -	- -	- -	- -	-0.04 (0.01) -2.55	- -
PRM_19	- -	- -	-0.07 (0.02) -4.25	0.04 (0.02) 2.45	- -	- -

THETA-EPS

	PLA_13	PRM_14	PRM_15	PRM_16	PRM_17	PRM_18

PLA_13	0.32					
	(0.03)					
	10.44					
PRM_14	0.11	0.33				
	(0.02)	(0.03)				
	5.16	13.13				
PRM_15	0.05	0.12	0.31			
	(0.02)	(0.02)	(0.02)			
	2.62	6.51	13.11			
PRM_16	0.05	- -	- -	0.29		
	(0.02)			(0.02)		
	3.00			12.23		
PRM_17	- -	- -	- -	0.08	0.24	
				(0.02)	(0.02)	
				4.93	11.24	
PRM_18	-0.06	- -	- -	- -	0.05	0.30
	(0.02)				(0.02)	(0.02)
	-3.73				3.01	12.76
PRM_19	- -	- -	- -	- -	- -	- -

THETA-EPS

	PRM_19
PRM_19	0.32
	(0.02)
	12.99

Squared Multiple Correlations for Y - Variables

PRO_1	PRO_2	PRO_3	PRO_4	PRI_5	PRI_6
1.00	0.28	0.74	1.00	0.62	0.30

Squared Multiple Correlations for Y - Variables

PRI_7	PRI_8	PRI_9	PLA_10	PLA_11	PLA_12
0.32	0.44	0.51	0.32	0.31	0.34

Squared Multiple Correlations for Y - Variables

PLA_13	PRM_14	PRM_15	PRM_16	PRM_17	PRM_18
0.49	0.32	0.38	0.43	0.48	0.37

Squared Multiple Correlations for Y - Variables

PRM_19
0.35

Goodness of Fit Statistics

Degrees of Freedom = 106
Minimum Fit Function Chi-Square = 134.59 (P = 0.032)
Normal Theory Weighted Least Squares Chi-Square = 130.06 (P = 0.056)
Estimated Non-centrality Parameter (NCP) = 24.06
90 Percent Confidence Interval for NCP = (0.0 ; 57.09)

Minimum Fit Function Value = 0.34
Population Discrepancy Function Value (F0) = 0.060

90 Percent Confidence Interval for F0 = (0.0 ; 0.14)
Root Mean Square Error of Approximation (RMSEA) = 0.024
90 Percent Confidence Interval for RMSEA = (0.0 ; 0.037)
P-Value for Test of Close Fit (RMSEA < 0.05) = 1.00

Expected Cross-Validation Index (ECVI) = 0.75
90 Percent Confidence Interval for ECVI = (0.69 ; 0.83)
ECVI for Saturated Model = 0.95
ECVI for Independence Model = 22.19

Chi-Square for Independence Model with 171 Degrees of Freedom = 8815.66
Independence AIC = 8853.66
Model AIC = 298.06
Saturated AIC = 380.00
Independence CAIC = 8948.50
Model CAIC = 717.34
Saturated CAIC = 1328.38

Normed Fit Index (NFI) = 0.98
Non-Normed Fit Index (NNFI) = 0.99
Parsimony Normed Fit Index (PNFI) = 0.61
Comparative Fit Index (CFI) = 1.00
Incremental Fit Index (IFI) = 1.00
Relative Fit Index (RFI) = 0.98

Critical N (CN) = 424.29

Root Mean Square Residual (RMR) = 0.019
Standardized RMR = 0.039
Goodness of Fit Index (GFI) = 0.97
Adjusted Goodness of Fit Index (AGFI) = 0.94
Parsimony Goodness of Fit Index (PGFI) = 0.54

TI CFA STRATEGY

Fitted Covariance Matrix

	PRO_1	PRO_2	PRO_3	PRO_4	PRI_5	PRI_6
PRO_1	0.39					
PRO_2	0.22	0.44				
PRO_3	0.20	0.20	0.46			
PRO_4	0.20	0.24	0.18	0.47		
PRI_5	0.15	0.08	0.14	0.16	0.42	
PRI_6	0.14	0.12	0.10	0.18	0.18	0.43
PRI_7	0.12	0.07	0.12	0.14	0.22	0.15
PRI_8	0.13	0.13	0.12	0.14	0.19	0.16
PRI_9	0.15	0.14	0.14	0.16	0.15	0.18
PLA_10	0.13	0.07	0.12	0.14	0.17	0.12
PLA_11	0.08	0.07	0.12	0.14	0.17	0.12
PLA_12	0.11	0.08	0.13	0.16	0.18	0.13
PLA_13	0.18	0.10	0.16	0.19	0.22	0.16
PRM_14	0.13	0.14	0.12	0.18	0.14	0.12
PRM_15	0.15	0.12	0.17	0.16	0.19	0.13
PRM_16	0.16	0.09	0.15	0.18	0.20	0.14
PRM_17	0.16	0.13	0.15	0.18	0.14	0.14
PRM_18	0.14	0.08	0.13	0.15	0.13	0.13
PRM_19	0.14	0.08	0.13	0.16	0.18	0.13

Fitted Covariance Matrix

	PRI_7	PRI_8	PRI_9	PLA_10	PLA_11	PLA_12
PRI_7	0.57					
PRI_8	0.26	0.47				
PRI_9	0.22	0.23	0.51			
PLA_10	0.22	0.15	0.17	0.54		
PLA_11	0.22	0.15	0.17	0.37	0.57	
PLA_12	0.24	0.16	0.18	0.26	0.31	0.60
PLA_13	0.19	0.20	0.17	0.23	0.23	0.25

PRM_14	0.14	0.15	0.17	0.15	0.15	0.16
PRM_15	0.16	0.20	0.19	0.17	0.17	0.18
PRM_16	0.17	0.18	0.12	0.21	0.18	0.20
PRM_17	0.14	0.18	0.13	0.23	0.18	0.20
PRM_18	0.15	0.16	0.18	0.16	0.12	0.17
PRM_19	0.15	0.16	0.11	0.20	0.16	0.18

Fitted Covariance Matrix

	PLA_13	PRM_14	PRM_15	PRM_16	PRM_17	PRM_18
PLA_13	0.63					
PRM_14	0.31	0.48				
PRM_15	0.27	0.29	0.49			
PRM_16	0.29	0.18	0.20	0.51		
PRM_17	0.24	0.18	0.20	0.30	0.46	
PRM_18	0.15	0.16	0.18	0.19	0.24	0.47
PRM_19	0.22	0.17	0.18	0.20	0.20	0.18

Fitted Covariance Matrix

	PRM_19
PRM_19	0.50

Fitted Residuals

	PRO_1	PRO_2	PRO_3	PRO_4	PRI_5	PRI_6
PRO_1	0.01					
PRO_2	0.02	0.01				
PRO_3	0.01	0.01	0.01			
PRO_4	0.00	0.00	0.00	0.00		
PRI_5	0.03	0.05	0.02	0.02	0.00	
PRI_6	0.00	0.02	0.01	0.01	0.03	0.00
PRI_7	0.00	0.03	0.06	0.00	-0.01	0.01
PRI_8	0.00	0.03	0.01	0.01	0.00	0.01
PRI_9	0.00	0.03	0.03	0.01	0.01	0.00
PLA_10	-0.01	-0.02	0.02	-0.03	0.03	0.00
PLA_11	0.00	-0.02	0.03	-0.03	0.01	0.02
PLA_12	-0.01	-0.03	0.01	-0.03	-0.01	0.01
PLA_13	0.01	0.01	0.01	-0.01	-0.02	-0.01
PRM_14	0.02	0.03	0.03	0.01	0.00	0.01
PRM_15	0.03	0.04	0.02	0.03	-0.01	0.01
PRM_16	-0.03	0.00	-0.01	0.00	-0.01	-0.02
PRM_17	-0.03	-0.01	-0.01	0.00	0.01	-0.03
PRM_18	-0.02	0.01	0.01	-0.02	0.00	-0.03
PRM_19	0.02	0.02	0.02	-0.01	0.03	0.02

Fitted Residuals

	PRI_7	PRI_8	PRI_9	PLA_10	PLA_11	PLA_12
PRI_7	0.00					
PRI_8	0.01	0.01				
PRI_9	0.00	0.03	0.01			
PLA_10	0.02	0.01	-0.02	0.01		
PLA_11	0.02	0.01	-0.01	0.01	0.01	
PLA_12	0.01	0.02	-0.04	0.01	0.01	0.01
PLA_13	0.03	0.00	0.01	0.01	0.01	0.01
PRM_14	0.01	0.03	0.04	-0.02	-0.02	-0.01
PRM_15	-0.01	0.01	0.03	-0.02	-0.01	-0.02
PRM_16	0.03	-0.02	0.00	0.03	0.03	0.05
PRM_17	0.02	0.00	-0.01	0.00	0.02	0.04
PRM_18	-0.01	0.00	-0.02	-0.02	-0.01	0.01
PRM_19	0.04	-0.01	0.00	0.00	-0.01	0.02

Fitted Residuals

	PLA_13	PRM_14	PRM_15	PRM_16	PRM_17	PRM_18

PLA_13	-0.01					
PRM_14	-0.01	0.01				
PRM_15	-0.01	0.01	0.01			
PRM_16	-0.01	-0.03	-0.02	0.00		
PRM_17	0.02	-0.01	0.00	0.01	0.00	
PRM_18	0.02	0.01	0.03	0.04	0.01	0.00
PRM_19	-0.01	-0.01	-0.02	0.01	0.00	-0.01

Fitted Residuals

	PRM_19
PRM_19	0.00

Summary Statistics for Fitted Residuals

```
Smallest Fitted Residual =   -0.04
  Median Fitted Residual =    0.01
 Largest Fitted Residual =    0.06
```

Stemleaf Plot

```
- 3|65
- 3|4110
- 2|9877
- 2|4432211
- 1|998777766
- 1|44444322111
- 0|9998888877777666655
- 0|443333321110000
  0|111122223334444
  0|555555566677777888889999999
  1|000000001111122333334444
  1|55555557789
  2|00244444
  2|55556667888899
  3|01122223
  3|55789
  4|0
  4|59
  5|1
  5|6
```

Standardized Residuals

	PRO_1	PRO_2	PRO_3	PRO_4	PRI_5	PRI_6
PRO_1	1.64					
PRO_2	2.19	1.68				
PRO_3	1.41	0.52	2.51			
PRO_4	1.00	0.24	0.53	-0.17		
PRI_5	2.04	2.63	1.41	1.27	1.67	
PRI_6	-0.02	1.53	0.49	0.66	2.83	1.77
PRI_7	-0.06	1.44	2.75	0.06	-0.82	0.60
PRI_8	0.16	2.12	0.45	0.82	-0.44	0.51
PRI_9	0.23	2.26	1.93	0.78	1.49	-0.02
PLA_10	-0.50	-0.79	1.28	-1.58	2.03	0.04
PLA_11	-0.29	-0.74	1.58	-1.59	0.93	0.81
PLA_12	-1.27	-1.28	0.67	-1.79	-0.94	0.53
PLA_13	0.38	0.57	0.40	-0.36	-1.35	-0.43
PRM_14	1.10	2.21	1.49	0.99	0.19	0.82
PRM_15	1.91	3.14	2.39	1.94	-0.70	0.85
PRM_16	-1.80	-0.21	-0.83	-0.02	-0.68	-1.41
PRM_17	-2.22	-0.74	-0.84	-0.15	0.93	-2.37
PRM_18	-1.08	0.64	0.75	-1.03	0.14	-1.76
PRM_19	1.58	1.16	0.85	-0.73	2.08	1.47

Standardized Residuals

	PRI_7	PRI_8	PRI_9	PLA_10	PLA_11	PLA_12

PRI_7	1.12					
PRI_8	1.62	1.93				
PRI_9	-0.23	2.76	1.74			
PLA_10	2.98	0.79	-1.09	2.57		
PLA_11	2.20	0.49	-0.79	1.93	1.53	
PLA_12	1.32	0.85	-2.05	2.65	1.42	1.96
PLA_13	1.32	0.28	1.13	0.82	0.41	1.17
PRM_14	0.80	1.78	2.63	-1.31	-1.16	-0.62
PRM_15	-0.37	0.81	2.04	-1.15	-0.31	-0.95
PRM_16	1.85	-1.47	-0.36	2.74	2.13	3.13
PRM_17	2.23	-0.07	-0.90	0.51	1.38	2.69
PRM_18	-0.70	0.00	-1.37	-1.53	-0.61	0.55
PRM_19	2.05	-0.91	0.48	0.43	-0.33	0.87

Standardized Residuals

	PLA_13	PRM_14	PRM_15	PRM_16	PRM_17	PRM_18
PLA_13	-2.03					
PRM_14	-0.97	1.42				
PRM_15	-1.49	2.37	1.90			
PRM_16	-1.26	-1.95	-1.74	1.12		
PRM_17	1.49	-0.74	-0.23	1.97	0.39	
PRM_18	2.35	0.73	2.02	2.92	1.28	-1.45
PRM_19	-0.41	-0.72	-1.68	0.44	-0.40	-0.46

Standardized Residuals

	PRM_19
PRM_19	0.39

Summary Statistics for Standardized Residuals

Smallest Standardized Residual = -2.37
Median Standardized Residual = 0.54
Largest Standardized Residual = 3.14

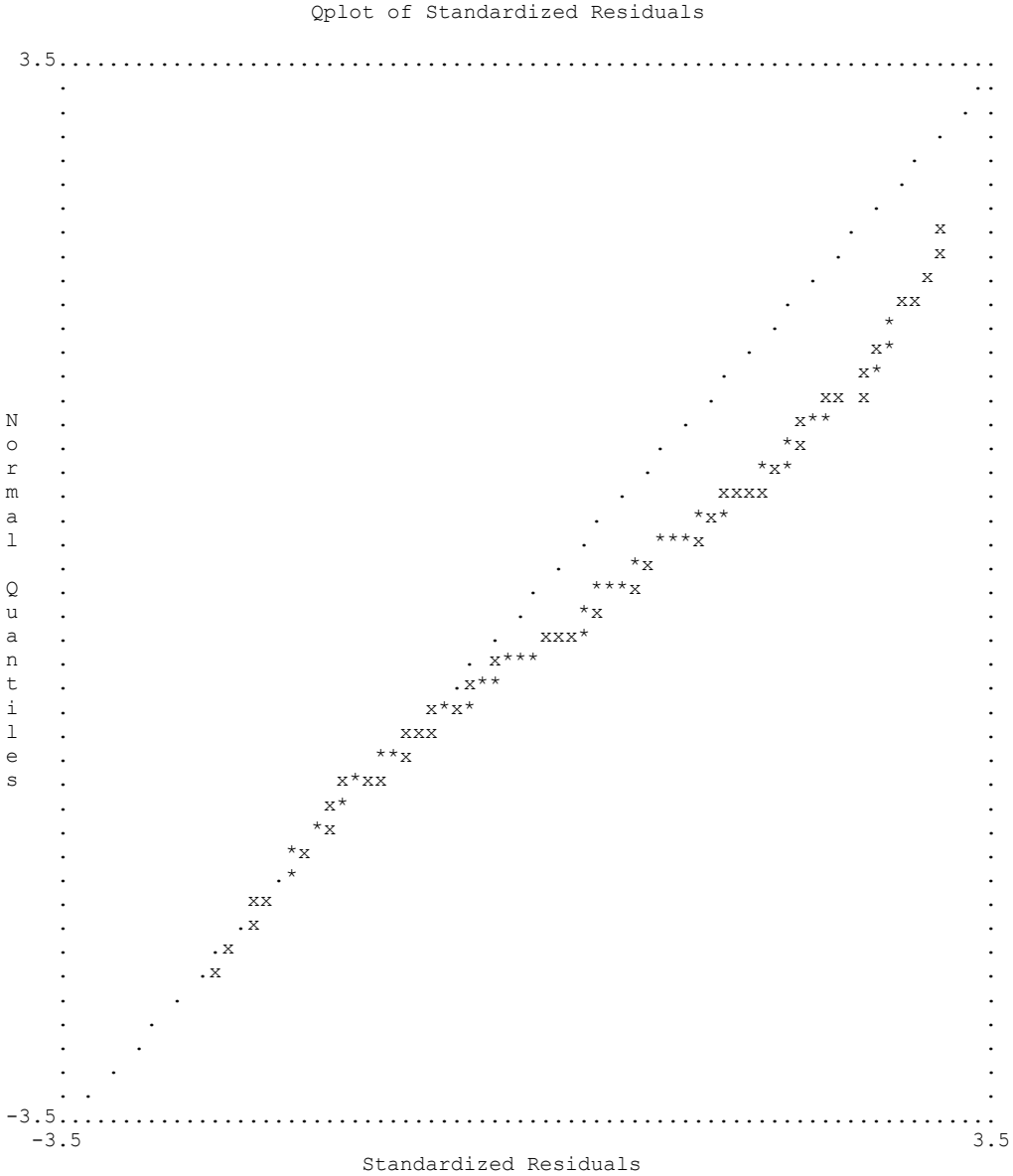
Stemleaf Plot

```
- 2|4200
- 1|98887766555
- 1|444333332111000
- 0|99988888777777776655
- 0|4444444333222221100000
  0|11222234444444
  0|55555555556667778888888888889999
  1|0011112233333444444
  1|5555566667777888999999
  2|000000111122223444
  2|56667777889
  3|011
```

Largest Positive Standardized Residuals

Residual for	PRI_5	and	PRO_2	2.63
Residual for	PRI_6	and	PRI_5	2.83
Residual for	PRI_7	and	PRO_3	2.75
Residual for	PRI_9	and	PRI_8	2.76
Residual for	PLA_10	and	PRI_7	2.98
Residual for	PLA_12	and	PLA_10	2.65
Residual for	PRM_14	and	PRI_9	2.63
Residual for	PRM_15	and	PRO_2	3.14
Residual for	PRM_16	and	PLA_10	2.74
Residual for	PRM_16	and	PLA_12	3.13
Residual for	PRM_17	and	PLA_12	2.69
Residual for	PRM_18	and	PRM_16	2.92

TI CFA STRATEGY



TI CFA STRATEGY

Modification Indices and Expected Change

Modification Indices for LAMBDA-Y

	PROD	PRIC	PLAC	PROM
PRO_1	- -	1.00	0.62	1.01
PRO_2	- -	4.79	1.76	3.32
PRO_3	- -	0.94	1.20	0.84
PRO_4	- -	0.02	1.06	0.38
PRI_5	1.37	- -	0.00	0.23
PRI_6	0.06	- -	0.16	0.73
PRI_7	0.09	- -	3.45	3.24
PRI_8	0.15	- -	0.12	1.15
PRI_9	0.46	- -	0.98	0.12
PLA_10	0.00	2.34	- -	0.02

PLA_11	0.06	0.01	- -	0.02
PLA_12	1.45	0.99	- -	0.10
PLA_13	0.10	0.92	- -	- -
PRM_14	0.21	4.29	0.24	- -
PRM_15	5.40	0.86	0.40	- -
PRM_16	1.04	1.34	2.73	- -
PRM_17	0.16	0.80	3.69	- -
PRM_18	1.42	2.82	0.59	- -
PRM_19	0.00	2.38	0.30	- -

Expected Change for LAMBDA-Y

	PROD	PRIC	PLAC	PROM
PRO_1	- -	-0.06	-0.07	-0.09
PRO_2	- -	0.14	0.11	0.16
PRO_3	- -	0.08	0.14	0.12
PRO_4	- -	-0.01	-0.10	-0.06
PRI_5	0.04	- -	0.00	0.15
PRI_6	-0.02	- -	-0.07	-0.21
PRI_7	0.01	- -	0.43	0.49
PRI_8	-0.01	- -	-0.07	-0.29
PRI_9	0.03	- -	-0.25	-0.11
PLA_10	0.00	0.20	- -	0.07
PLA_11	-0.01	0.01	- -	0.06
PLA_12	-0.06	-0.16	- -	-0.20
PLA_13	-0.01	-0.20	- -	- -
PRM_14	0.02	0.36	-0.25	- -
PRM_15	0.10	-0.15	-0.31	- -
PRM_16	-0.04	-0.20	0.93	- -
PRM_17	-0.01	-0.16	0.87	- -
PRM_18	-0.05	-0.32	-0.43	- -
PRM_19	0.00	0.28	-0.26	- -

Standardized Expected Change for LAMBDA-Y

	PROD	PRIC	PLAC	PROM
PRO_1	- -	-0.03	-0.03	-0.03
PRO_2	- -	0.07	0.05	0.06
PRO_3	- -	0.04	0.06	0.05
PRO_4	- -	-0.01	-0.04	-0.02
PRI_5	0.03	- -	0.00	0.06
PRI_6	-0.01	- -	-0.03	-0.08
PRI_7	0.01	- -	0.18	0.19
PRI_8	-0.01	- -	-0.03	-0.11
PRI_9	0.02	- -	-0.10	-0.04
PLA_10	0.00	0.10	- -	0.03
PLA_11	-0.01	0.01	- -	0.02
PLA_12	-0.04	-0.08	- -	-0.08
PLA_13	-0.01	-0.10	- -	- -
PRM_14	0.01	0.18	-0.10	- -
PRM_15	0.06	-0.08	-0.13	- -
PRM_16	-0.02	-0.10	0.39	- -
PRM_17	-0.01	-0.08	0.36	- -
PRM_18	-0.03	-0.16	-0.18	- -
PRM_19	0.00	0.15	-0.11	- -

Completely Standardized Expected Change for LAMBDA-Y

	PROD	PRIC	PLAC	PROM
PRO_1	- -	-0.05	-0.04	-0.06
PRO_2	- -	0.11	0.07	0.10
PRO_3	- -	0.06	0.08	0.07
PRO_4	- -	-0.01	-0.06	-0.04
PRI_5	0.04	- -	0.00	0.09
PRI_6	-0.02	- -	-0.05	-0.12
PRI_7	0.01	- -	0.24	0.25
PRI_8	-0.01	- -	-0.04	-0.17
PRI_9	0.03	- -	-0.15	-0.06

PLA_10	0.00	0.14	- -	0.04
PLA_11	-0.01	0.01	- -	0.03
PLA_12	-0.05	-0.11	- -	-0.10
PLA_13	-0.01	-0.13	- -	- -
PRM_14	0.02	0.27	-0.15	- -
PRM_15	0.09	-0.11	-0.19	- -
PRM_16	-0.03	-0.14	0.54	- -
PRM_17	-0.01	-0.12	0.53	- -
PRM_18	-0.05	-0.24	-0.26	- -
PRM_19	0.00	0.21	-0.15	- -

Modification Indices for BETA

	PROD	PRIC	PLAC	PROM
PROD	- -	2.18	1.42	- -
PRIC	2.18	- -	0.01	1.42
PLAC	1.42	0.01	- -	2.18
PROM	0.01	1.42	2.18	- -

Expected Change for BETA

	PROD	PRIC	PLAC	PROM
PROD	- -	0.20	-0.37	- -
PRIC	0.05	- -	-0.04	45.75
PLAC	-0.03	-0.01	- -	-57.84
PROM	0.00	-0.16	0.61	- -

Standardized Expected Change for BETA

	PROD	PRIC	PLAC	PROM
PROD	- -	0.63	-1.43	- -
PRIC	0.17	- -	-0.17	228.02
PLAC	-0.13	-0.06	- -	-355.47
PROM	-0.01	-0.81	3.74	- -

No Non-Zero Modification Indices for GAMMA

No Non-Zero Modification Indices for PHI

Modification Indices for PSI

	PROD	PRIC	PLAC	PROM
PROD	- -			
PRIC	2.18	- -		
PLAC	1.42	0.01	- -	
PROM	0.01	1.42	2.18	- -

Expected Change for PSI

	PROD	PRIC	PLAC	PROM
PROD	- -			
PRIC	0.01	- -		
PLAC	-0.01	0.00	- -	
PROM	0.00	-0.01	0.02	- -

Standardized Expected Change for PSI

	PROD	PRIC	PLAC	PROM
PROD	- -			
PRIC	0.05	- -		
PLAC	-0.04	0.00	- -	
PROM	0.00	-0.06	0.09	- -

Modification Indices for THETA-EPS

	PRO_1	PRO_2	PRO_3	PRO_4	PRI_5	PRI_6
PRO_1	0.01					
PRO_2	1.18	- -				
PRO_3	- -	0.83	- -			
PRO_4	- -	2.43	- -	2.36		
PRI_5	0.72	1.62	0.20	0.02	- -	
PRI_6	- -	- -	0.00	- -	1.92	- -
PRI_7	1.85	0.78	3.78	0.32	3.60	0.00
PRI_8	0.00	- -	0.92	0.17	- -	0.02
PRI_9	0.45	- -	0.59	0.80	- -	0.46
PLA_10	0.14	0.65	0.36	0.17	2.42	0.03
PLA_11	- -	0.02	0.61	0.64	0.04	0.56
PLA_12	- -	1.80	0.05	0.56	2.45	1.35
PLA_13	0.29	0.00	0.16	0.35	0.98	0.59
PRM_14	0.03	- -	0.70	- -	- -	0.29
PRM_15	1.59	- -	- -	2.27	0.37	0.08
PRM_16	1.36	0.33	0.77	0.17	0.18	0.40
PRM_17	1.82	- -	0.48	2.15	- -	3.09
PRM_18	0.33	1.27	0.03	2.24	- -	0.78
PRM_19	1.30	0.76	0.00	2.49	1.30	1.67

Modification Indices for THETA-EPS

	PRI_7	PRI_8	PRI_9	PLA_10	PLA_11	PLA_12
PRI_7	- -					
PRI_8	- -	- -				
PRI_9	0.02	1.19	- -			
PLA_10	- -	0.84	0.03	- -		
PLA_11	- -	0.31	0.03	- -	- -	
PLA_12	- -	1.28	2.48	- -	- -	- -
PLA_13	0.69	0.01	- -	0.01	0.02	0.09
PRM_14	0.00	1.10	1.31	0.01	0.52	0.02
PRM_15	1.28	- -	0.02	0.73	0.87	0.65
PRM_16	2.11	2.87	- -	- -	0.39	1.25
PRM_17	- -	0.17	- -	- -	0.02	0.37
PRM_18	0.49	0.00	0.58	2.39	- -	0.24
PRM_19	3.05	3.12	- -	- -	0.89	0.17

Modification Indices for THETA-EPS

	PLA_13	PRM_14	PRM_15	PRM_16	PRM_17	PRM_18
PLA_13	- -					
PRM_14	- -	- -				
PRM_15	- -	- -	- -			
PRM_16	- -	1.95	0.28	- -		
PRM_17	2.73	0.26	0.02	- -	- -	
PRM_18	- -	0.08	2.44	1.61	- -	- -
PRM_19	0.06	0.03	1.90	0.17	0.01	0.13

Modification Indices for THETA-EPS

	PRM_19
PRM_19	- -

Expected Change for THETA-EPS

	PRO_1	PRO_2	PRO_3	PRO_4	PRI_5	PRI_6
PRO_1	0.00					
PRO_2	0.02	- -				
PRO_3	- -	-0.02	- -			
PRO_4	- -	-0.03	- -	0.07		
PRI_5	0.01	0.02	-0.01	0.00	- -	
PRI_6	- -	- -	0.00	- -	0.02	- -
PRI_7	-0.02	0.01	0.03	-0.01	-0.04	0.00
PRI_8	0.00	- -	-0.01	0.01	- -	0.00
PRI_9	-0.01	- -	0.01	0.01	- -	-0.01

PLA_10	0.01	-0.01	0.01	-0.01	0.02	0.00
PLA_11	- -	0.00	0.01	-0.01	0.00	0.01
PLA_12	- -	-0.02	0.00	-0.01	-0.02	0.02
PLA_13	0.01	0.00	-0.01	-0.01	-0.02	-0.01
PRM_14	0.00	- -	0.01	- -	- -	0.01
PRM_15	0.02	- -	- -	0.02	-0.01	0.00
PRM_16	-0.01	0.01	-0.01	0.01	-0.01	-0.01
PRM_17	-0.02	- -	-0.01	0.02	- -	-0.02
PRM_18	-0.01	0.02	0.00	-0.02	- -	-0.01
PRM_19	0.02	0.01	0.00	-0.02	0.02	0.02

Expected Change for THETA-EPS

	PRI_7	PRI_8	PRI_9	PLA_10	PLA_11	PLA_12
PRI_7	- -					
PRI_8	- -	- -				
PRI_9	0.00	0.02	- -			
PLA_10	- -	0.01	0.00	- -		
PLA_11	- -	-0.01	0.00	- -	- -	
PLA_12	- -	0.02	-0.03	- -	- -	- -
PLA_13	0.02	0.00	- -	0.00	0.00	0.01
PRM_14	0.00	0.02	0.02	0.00	-0.01	0.00
PRM_15	-0.02	- -	0.00	-0.01	0.01	-0.01
PRM_16	0.02	-0.02	- -	- -	0.01	0.02
PRM_17	- -	0.01	- -	- -	0.00	0.01
PRM_18	-0.01	0.00	-0.01	-0.03	- -	0.01
PRM_19	0.03	-0.03	- -	- -	-0.02	0.01

Expected Change for THETA-EPS

	PLA_13	PRM_14	PRM_15	PRM_16	PRM_17	PRM_18
PLA_13	- -					
PRM_14	- -	- -				
PRM_15	- -	- -	- -			
PRM_16	- -	-0.02	-0.01	- -		
PRM_17	0.03	-0.01	0.00	- -	- -	
PRM_18	- -	0.00	0.02	0.06	- -	- -
PRM_19	0.00	0.00	-0.02	0.01	0.00	-0.01

Expected Change for THETA-EPS

	PRM_19
PRM_19	- -

Completely Standardized Expected Change for THETA-EPS

	PRO_1	PRO_2	PRO_3	PRO_4	PRI_5	PRI_6
PRO_1	-0.01					
PRO_2	0.04	- -				
PRO_3	- -	-0.05	- -			
PRO_4	- -	-0.06	- -	0.15		
PRI_5	0.03	0.04	-0.01	0.00	- -	
PRI_6	- -	- -	0.00	- -	0.06	- -
PRI_7	-0.04	0.03	0.06	-0.02	-0.08	0.00
PRI_8	0.00	- -	-0.03	0.01	- -	0.00
PRI_9	-0.02	- -	0.03	0.03	- -	-0.03
PLA_10	0.01	-0.02	0.02	-0.01	0.04	-0.01
PLA_11	- -	0.00	0.02	-0.02	0.01	0.02
PLA_12	- -	-0.04	0.01	-0.02	-0.05	0.04
PLA_13	0.01	0.00	-0.01	-0.02	-0.03	-0.02
PRM_14	-0.01	- -	0.03	- -	- -	0.02
PRM_15	0.04	- -	- -	0.05	-0.02	0.01
PRM_16	-0.03	0.02	-0.03	0.01	-0.01	-0.02
PRM_17	-0.04	- -	-0.02	0.04	- -	-0.05
PRM_18	-0.02	0.04	0.01	-0.05	- -	-0.03
PRM_19	0.04	0.03	0.00	-0.05	0.04	0.05

Completely Standardized Expected Change for THETA-EPS

	PRI_7	PRI_8	PRI_9	PLA_10	PLA_11	PLA_12
PRI_7	- -					
PRI_8	- -	- -				
PRI_9	-0.01	0.04	- -			
PLA_10	- -	0.03	0.00	- -		
PLA_11	- -	-0.02	0.00	- -	- -	
PLA_12	- -	0.04	-0.05	- -	- -	- -
PLA_13	0.03	0.00	- -	0.00	0.00	0.01
PRM_14	0.00	0.03	0.04	0.00	-0.02	0.00
PRM_15	-0.03	- -	0.00	-0.02	0.02	-0.02
PRM_16	0.05	-0.05	- -	- -	0.02	0.03
PRM_17	- -	0.01	- -	- -	0.00	0.02
PRM_18	-0.02	0.00	-0.03	-0.05	- -	0.02
PRM_19	0.06	-0.06	- -	- -	-0.03	0.01

Completely Standardized Expected Change for THETA-EPS

	PLA_13	PRM_14	PRM_15	PRM_16	PRM_17	PRM_18
PLA_13	- -					
PRM_14	- -	- -				
PRM_15	- -	- -	- -			
PRM_16	- -	-0.04	-0.01	- -		
PRM_17	0.06	-0.01	0.00	- -	- -	
PRM_18	- -	-0.01	0.05	0.11	- -	- -
PRM_19	-0.01	0.01	-0.04	0.01	0.00	-0.01

Completely Standardized Expected Change for THETA-EPS

	PRM_19
PRM_19	- -

Maximum Modification Index is 9.61 for Element (18,16) of THETA-EPS

TI CFA STRATEGY

Factor Scores Regressions

ETA

	PRO_1	PRO_2	PRO_3	PRO_4	PRI_5	PRI_6
PROD	0.84	0.46	0.49	0.85	-0.09	-0.20
PRIC	0.03	-0.12	0.02	0.02	0.36	0.04
PLAC	0.07	-0.07	0.02	0.05	0.11	-0.02
PROM	0.08	-0.09	0.03	0.06	0.14	-0.02

ETA

	PRI_7	PRI_8	PRI_9	PLA_10	PLA_11	PLA_12
PROD	-0.04	0.07	-0.03	-0.09	0.10	0.01
PRIC	0.03	0.10	0.30	-0.06	0.02	-0.01
PLAC	-0.04	0.02	0.12	0.01	0.07	0.06
PROM	-0.01	0.01	0.14	-0.04	0.05	0.03

ETA

	PLA_13	PRM_14	PRM_15	PRM_16	PRM_17	PRM_18
PROD	-0.08	-0.02	-0.05	-0.07	-0.02	-0.09
PRIC	0.01	0.04	-0.04	0.01	0.20	0.01
PLAC	0.13	0.00	0.02	0.02	0.10	0.07
PROM	0.05	0.03	0.03	0.05	0.13	0.06

ETA

	PRM_19
PROD	-0.07
PRIC	0.05
PLAC	0.06
PROM	0.07

TI CFA STRATEGY

Standardized Solution

LAMBDA-Y

	PROD	PRIC	PLAC	PROM
PRO_1	0.62	- -	- -	- -
PRO_2	0.35	- -	- -	- -
PRO_3	0.58	- -	- -	- -
PRO_4	0.68	- -	- -	- -
PRI_5	- -	0.51	- -	- -
PRI_6	- -	0.36	- -	- -
PRI_7	- -	0.43	- -	- -
PRI_8	- -	0.45	- -	- -
PRI_9	- -	0.51	- -	- -
PLA_10	- -	- -	0.42	- -
PLA_11	- -	- -	0.42	- -
PLA_12	- -	- -	0.45	- -
PLA_13	- -	- -	0.56	- -
PRM_14	- -	- -	- -	0.39
PRM_15	- -	- -	- -	0.43
PRM_16	- -	- -	- -	0.47
PRM_17	- -	- -	- -	0.47
PRM_18	- -	- -	- -	0.42
PRM_19	- -	- -	- -	0.42

GAMMA

	STRA
PROD	0.55
PRIC	0.85
PLAC	0.93
PROM	1.00

Correlation Matrix of ETA and KSI

	PROD	PRIC	PLAC	PROM	STRA
PROD	1.00				
PRIC	0.46	1.00			
PLAC	0.51	0.78	1.00		
PROM	0.55	0.85	0.93	1.00	
STRA	0.55	0.85	0.93	1.00	1.00

PSI
Note: This matrix is diagonal.

PROD	PRIC	PLAC	PROM
0.70	0.28	0.14	0.00

TI CFA STRATEGY

Completely Standardized Solution

LAMBDA-Y

	PROD	PRIC	PLAC	PROM
PRO_1	1.00	- -	- -	- -
PRO_2	0.53	- -	- -	- -

PRO_3	0.86	- -	- -	- -
PRO_4	1.00	- -	- -	- -
PRI_5	- -	0.79	- -	- -
PRI_6	- -	0.54	- -	- -
PRI_7	- -	0.57	- -	- -
PRI_8	- -	0.66	- -	- -
PRI_9	- -	0.71	- -	- -
PLA_10	- -	- -	0.56	- -
PLA_11	- -	- -	0.55	- -
PLA_12	- -	- -	0.59	- -
PLA_13	- -	- -	0.70	- -
PRM_14	- -	- -	- -	0.56
PRM_15	- -	- -	- -	0.61
PRM_16	- -	- -	- -	0.66
PRM_17	- -	- -	- -	0.69
PRM_18	- -	- -	- -	0.61
PRM_19	- -	- -	- -	0.60

GAMMA

	STRA
PROD	0.55
PRIC	0.85
PLAC	0.93
PROM	1.00

Correlation Matrix of ETA and KSI

	PROD	PRIC	PLAC	PROM	STRA
PROD	1.00				
PRIC	0.46	1.00			
PLAC	0.51	0.78	1.00		
PROM	0.55	0.85	0.93	1.00	
STRA	0.55	0.85	0.93	1.00	1.00

PSI
Note: This matrix is diagonal.

PROD	PRIC	PLAC	PROM
0.70	0.28	0.14	0.00

THETA-EPS

	PRO_1	PRO_2	PRO_3	PRO_4	PRI_5	PRI_6
PRO_1	- -					
PRO_2	- -	0.72				
PRO_3	-0.39	- -	0.26			
PRO_4	-0.53	- -	-0.47	- -		
PRI_5	- -	- -	- -	- -	0.38	
PRI_6	0.08	0.15	- -	0.15	- -	0.70
PRI_7	- -	- -	- -	- -	- -	- -
PRI_8	- -	0.12	- -	- -	-0.08	- -
PRI_9	- -	0.13	- -	- -	-0.23	- -
PLA_10	- -	- -	- -	- -	- -	- -
PLA_11	-0.12	- -	- -	- -	- -	- -
PLA_12	-0.07	- -	- -	- -	- -	- -
PLA_13	- -	- -	- -	- -	- -	- -
PRM_14	- -	0.14	- -	0.07	-0.06	- -
PRM_15	- -	0.09	0.07	- -	- -	- -
PRM_16	- -	- -	- -	- -	- -	- -
PRM_17	- -	0.08	- -	- -	-0.16	- -
PRM_18	- -	- -	- -	- -	-0.10	- -
PRM_19	- -	- -	- -	- -	- -	- -

THETA-EPS

PRI_7	PRI_8	PRI_9	PLA_10	PLA_11	PLA_12

PRI_7	0.68					
PRI_8	0.13	0.56				
PRI_9	- -	- -	0.49			
PLA_10	0.15	- -	- -	0.68		
PLA_11	0.13	- -	- -	0.35	0.69	
PLA_12	0.15	- -	- -	0.13	0.21	0.66
PLA_13	- -	- -	-0.08	- -	- -	- -
PRM_14	- -	- -	- -	- -	- -	- -
PRM_15	- -	0.07	- -	- -	- -	- -
PRM_16	- -	- -	-0.17	0.06	- -	- -
PRM_17	-0.07	- -	-0.16	0.11	- -	- -
PRM_18	- -	- -	- -	- -	-0.07	- -
PRM_19	- -	- -	-0.15	0.07	- -	- -

THETA-EPS

	PLA_13	PRM_14	PRM_15	PRM_16	PRM_17	PRM_18
PLA_13	0.51					
PRM_14	0.19	0.68				
PRM_15	0.09	0.25	0.62			
PRM_16	0.08	- -	- -	0.57		
PRM_17	- -	- -	- -	0.17	0.52	
PRM_18	-0.11	- -	- -	- -	0.10	0.63
PRM_19	- -	- -	- -	- -	- -	- -

THETA-EPS

	PRM_19
PRM_19	0.65

TI CFA STRATEGY

Total and Indirect Effects

Total Effects of X on ETA

	STRA
PROD	0.34
	(0.03)
	13.48
PRIC	0.43
	(0.03)
	14.21
PLAC	0.38
	(0.04)
	10.66
PROM	0.39
	(0.03)
	11.33

BETA*BETA' is not Pos. Def., Stability Index cannot be Computed

Total Effects of ETA on Y

	PROD	PRIC	PLAC	PROM
PRO_1	1.00	- -	- -	- -
PRO_2	0.56	- -	- -	- -
	(0.04)			
	14.51			
PRO_3	0.93	- -	- -	- -

	(0.08)			
	12.36			
PRO_4	1.10	- -	- -	- -
	(0.05)			
	23.71			
PRI_5	- -	1.00	- -	- -
PRI_6	- -	0.69	- -	- -
		(0.07)		
		10.05		
PRI_7	- -	0.84	- -	- -
		(0.08)		
		10.31		
PRI_8	- -	0.88	- -	- -
		(0.08)		
		11.49		
PRI_9	- -	0.99	- -	- -
		(0.09)		
		10.93		
PLA_10	- -	- -	1.00	- -
PLA_11	- -	- -	1.01	- -
			(0.08)	
			12.09	
PLA_12	- -	- -	1.09	- -
			(0.11)	
			9.93	
PLA_13	- -	- -	1.34	- -
			(0.14)	
			9.69	
PRM_14	- -	- -	- -	1.00
PRM_15	- -	- -	- -	1.10
				(0.09)
				12.12
PRM_16	- -	- -	- -	1.20
				(0.12)
				9.88
PRM_17	- -	- -	- -	1.20
				(0.12)
				10.03
PRM_18	- -	- -	- -	1.06
				(0.11)
				9.39
PRM_19	- -	- -	- -	1.08
				(0.12)
				9.33

Total Effects of X on Y

	STRA
PRO_1	0.34
	(0.03)
	13.48
PRO_2	0.19

	(0.02)
	9.42
PRO_3	0.32
	(0.03)
	10.98
PRO_4	0.37
	(0.03)
	13.44
PRI_5	0.43
	(0.03)
	14.21
PRI_6	0.30
	(0.03)
	10.08
PRI_7	0.36
	(0.04)
	10.30
PRI_8	0.38
	(0.03)
	11.96
PRI_9	0.43
	(0.03)
	12.69
PLA_10	0.38
	(0.04)
	10.66
PLA_11	0.39
	(0.04)
	10.67
PLA_12	0.42
	(0.04)
	11.32
PLA_13	0.52
	(0.04)
	13.48
PRM_14	0.39
	(0.03)
	11.33
PRM_15	0.43
	(0.03)
	12.68
PRM_16	0.47
	(0.03)
	13.57
PRM_17	0.47
	(0.03)
	14.20
PRM_18	0.42
	(0.03)
	12.22
PRM_19	0.42
	(0.03)
	12.12

TI CFA STRATEGY

Standardized Total and Indirect Effects

Standardized Total Effects of X on ETA

	STRA
PROD	0.55
PRIC	0.85
PLAC	0.93
PROM	1.00

Standardized Total Effects of ETA on Y

	PROD	PRIC	PLAC	PROM
PRO_1	0.62	- -	- -	- -
PRO_2	0.35	- -	- -	- -
PRO_3	0.58	- -	- -	- -
PRO_4	0.68	- -	- -	- -
PRI_5	- -	0.51	- -	- -
PRI_6	- -	0.36	- -	- -
PRI_7	- -	0.43	- -	- -
PRI_8	- -	0.45	- -	- -
PRI_9	- -	0.51	- -	- -
PLA_10	- -	- -	0.42	- -
PLA_11	- -	- -	0.42	- -
PLA_12	- -	- -	0.45	- -
PLA_13	- -	- -	0.56	- -
PRM_14	- -	- -	- -	0.39
PRM_15	- -	- -	- -	0.43
PRM_16	- -	- -	- -	0.47
PRM_17	- -	- -	- -	0.47
PRM_18	- -	- -	- -	0.42
PRM_19	- -	- -	- -	0.42

Completely Standardized Total Effects of ETA on Y

	PROD	PRIC	PLAC	PROM
PRO_1	1.00	- -	- -	- -
PRO_2	0.53	- -	- -	- -
PRO_3	0.86	- -	- -	- -
PRO_4	1.00	- -	- -	- -
PRI_5	- -	0.79	- -	- -
PRI_6	- -	0.54	- -	- -
PRI_7	- -	0.57	- -	- -
PRI_8	- -	0.66	- -	- -
PRI_9	- -	0.71	- -	- -
PLA_10	- -	- -	0.56	- -
PLA_11	- -	- -	0.55	- -
PLA_12	- -	- -	0.59	- -
PLA_13	- -	- -	0.70	- -
PRM_14	- -	- -	- -	0.56
PRM_15	- -	- -	- -	0.61
PRM_16	- -	- -	- -	0.66
PRM_17	- -	- -	- -	0.69
PRM_18	- -	- -	- -	0.61
PRM_19	- -	- -	- -	0.60

Standardized Total Effects of X on Y

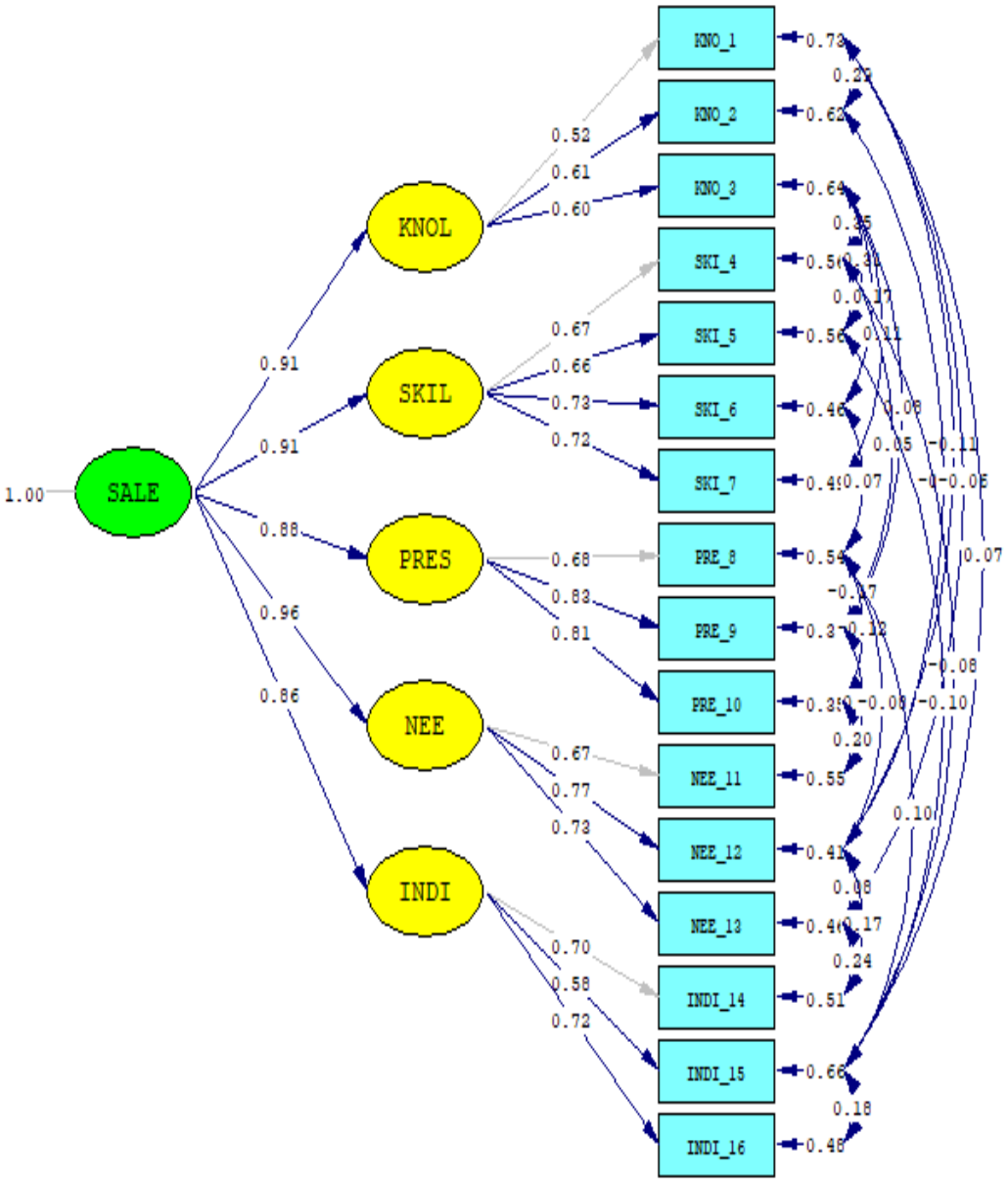
	STRA
PRO_1	0.34
PRO_2	0.19
PRO_3	0.32
PRO_4	0.37
PRI_5	0.43

PRI_6	0.30
PRI_7	0.36
PRI_8	0.38
PRI_9	0.43
PLA_10	0.38
PLA_11	0.39
PLA_12	0.42
PLA_13	0.52
PRM_14	0.39
PRM_15	0.43
PRM_16	0.47
PRM_17	0.47
PRM_18	0.42
PRM_19	0.42

Completely Standardized Total Effects of X on Y

	STRA
PRO_1	0.55
PRO_2	0.29
PRO_3	0.47
PRO_4	0.55
PRI_5	0.67
PRI_6	0.46
PRI_7	0.48
PRI_8	0.56
PRI_9	0.61
PLA_10	0.52
PLA_11	0.51
PLA_12	0.54
PLA_13	0.65
PRM_14	0.56
PRM_15	0.61
PRM_16	0.66
PRM_17	0.69
PRM_18	0.61
PRM_19	0.60

Time used: 0.047 Seconds



Chi-Square=87.24, df=74, P-value=0.13927, RMSEA=0.021

ผลการวิเคราะห์องค์ประกอบเชิงยืนยัน (CFA):การขนส่งและกระจายสินค้าที่มีผลต่อการขาย

DATE: 3/ 3/2018
TIME: 8:59

L I S R E L 8.72

BY

Karl G. Jöreskog & Dag Sörbom

This program is published exclusively by
Scientific Software International, Inc.
7383 N. Lincoln Avenue, Suite 100
Lincolnwood, IL 60712, U.S.A.
Phone: (800)247-6113, (847)675-0720, Fax: (847)675-2140

The following lines were read from file E:\YA CFA SALE.LPJ:

```
TI CFA SALE
!DA NI=16 NO=400 MA=CM
SY='E:\YA CFA SALE.dsf' NG=1
MO NY=16 NK=1 NE=5 BE=FU GA=FI PS=SY TE=SY
LE
KNOL SKIL PRES NEE INDI
LK
SALE
FR LY(2,1) LY(3,1) LY(5,2) LY(6,2) LY(7,2) LY(9,3) LY(10,3) LY(12,4) LY(13,4)
FR LY(15,5) LY(16,5) GA(1,1) GA(2,1) GA(3,1) GA(4,1) GA(5,1) TE(2,1) TE(4,3)
FR TE(5,3) TE(5,4) TE(6,3) TE(7,3) TE(8,6) TE(9,3) TE(9,4) TE(9,8) TE(10,8)
FR TE(11,9) TE(11,10) TE(12,1) TE(12,2) TE(12,8) TE(13,1) TE(13,12) TE(14,12) TE(14,13)
FR TE(15,1) TE(15,4) TE(15,5) TE(15,8) TE(16,15)
VA 1 LY(1,1)
VA 1 LY(4,2)
VA 1 LY(8,3)
VA 1 LY(11,4)
VA 1 LY(14,5)
PD
OU AM RS EF FS SS SC AD=OFF
```

TI CFA SALE

Number of Input Variables	16
Number of Y - Variables	16
Number of X - Variables	0
Number of ETA - Variables	5
Number of KSI - Variables	1
Number of Observations	400

TI CFA SALE

Covariance Matrix

	KNO_1	KNO_2	KNO_3	SKI_4	SKI_5	SKI_6
KNO_1	1.00					
KNO_2	0.62	1.00				
KNO_3	0.30	0.40	1.00			
SKI_4	0.32	0.37	0.69	1.00		
SKI_5	0.32	0.41	0.65	0.72	1.00	
SKI_6	0.28	0.33	0.56	0.54	0.51	1.00
SKI_7	0.28	0.35	0.44	0.44	0.43	0.52

PRE_8	0.25	0.35	0.32	0.35	0.33	0.46
PRE_9	0.33	0.38	0.48	0.52	0.47	0.51
PRE_10	0.36	0.36	0.36	0.43	0.42	0.44
NEE_11	0.31	0.33	0.31	0.41	0.42	0.39
NEE_12	0.25	0.28	0.37	0.43	0.42	0.46
NEE_13	0.27	0.35	0.35	0.38	0.41	0.48
INDI_14	0.34	0.36	0.30	0.29	0.31	0.36
INDI_15	0.34	0.34	0.27	0.20	0.18	0.33
INDI_16	0.35	0.44	0.38	0.35	0.37	0.42

Covariance Matrix

	SKI_7	PRE_8	PRE_9	PRE_10	NEE_11	NEE_12
SKI_7	1.00					
PRE_8	0.37	1.00				
PRE_9	0.51	0.39	1.00			
PRE_10	0.47	0.42	0.67	1.00		
NEE_11	0.43	0.37	0.58	0.65	1.00	
NEE_12	0.53	0.35	0.54	0.54	0.53	1.00
NEE_13	0.49	0.43	0.51	0.54	0.50	0.65
INDI_14	0.45	0.35	0.44	0.49	0.42	0.61
INDI_15	0.33	0.41	0.31	0.35	0.28	0.36
INDI_16	0.44	0.40	0.43	0.43	0.38	0.44

Covariance Matrix

	NEE_13	INDI_14	INDI_15	INDI_16
NEE_13	1.00			
INDI_14	0.66	1.00		
INDI_15	0.33	0.43	1.00	
INDI_16	0.42	0.49	0.61	1.00

TI CFA SALE

Parameter Specifications

LAMBDA-Y

	KNOL	SKIL	PRES	NEE	INDI
KNO_1	0	0	0	0	0
KNO_2	1	0	0	0	0
KNO_3	2	0	0	0	0
SKI_4	0	0	0	0	0
SKI_5	0	3	0	0	0
SKI_6	0	4	0	0	0
SKI_7	0	5	0	0	0
PRE_8	0	0	0	0	0
PRE_9	0	0	6	0	0
PRE_10	0	0	7	0	0
NEE_11	0	0	0	0	0
NEE_12	0	0	0	8	0
NEE_13	0	0	0	9	0
INDI_14	0	0	0	0	0
INDI_15	0	0	0	0	10
INDI_16	0	0	0	0	11

GAMMA

	SALE
KNOL	12
SKIL	13
PRES	14
NEE	15
INDI	16

PSI

	KNOL	SKIL	PRES	NEE	INDI
	17	18	19	20	21

THETA-EPS

	KNO_1	KNO_2	KNO_3	SKI_4	SKI_5	SKI_6
KNO_1	22					
KNO_2	23	24				
KNO_3	0	0	25			
SKI_4	0	0	26	27		
SKI_5	0	0	28	29	30	
SKI_6	0	0	31	0	0	32
SKI_7	0	0	33	0	0	0
PRE_8	0	0	0	0	0	35
PRE_9	0	0	37	38	0	0
PRE_10	0	0	0	0	0	0
NEE_11	0	0	0	0	0	0
NEE_12	46	47	0	0	0	0
NEE_13	50	0	0	0	0	0
INDI_14	0	0	0	0	0	0
INDI_15	56	0	0	57	58	0
INDI_16	0	0	0	0	0	0

THETA-EPS

	SKI_7	PRE_8	PRE_9	PRE_10	NEE_11	NEE_12
SKI_7	34					
PRE_8	0	36				
PRE_9	0	39	40			
PRE_10	0	41	0	42		
NEE_11	0	0	43	44	45	
NEE_12	0	48	0	0	0	49
NEE_13	0	0	0	0	0	51
INDI_14	0	0	0	0	0	53
INDI_15	0	59	0	0	0	0
INDI_16	0	0	0	0	0	0

THETA-EPS

	NEE_13	INDI_14	INDI_15	INDI_16
NEE_13	52			
INDI_14	54	55		
INDI_15	0	0	60	
INDI_16	0	0	61	62

TI CFA SALE

Number of Iterations = 44

LISREL Estimates (Maximum Likelihood)

LAMBDA-Y

	KNOL	SKIL	PRES	NEE	INDI
KNO_1	1.00	- -	- -	- -	- -
KNO_2	1.18	- -	- -	- -	- -
	(0.11)				
	10.69				
KNO_3	1.14	- -	- -	- -	- -
	(0.15)				
	7.83				

SKI_4	- -	1.00	- -	- -	- -
SKI_5	- -	0.99 (0.06) 16.01	- -	- -	- -
SKI_6	- -	1.11 (0.09) 12.15	- -	- -	- -
SKI_7	- -	1.08 (0.09) 11.94	- -	- -	- -
PRE_8	- -	- -	1.00	- -	- -
PRE_9	- -	- -	1.23 (0.12) 10.57	- -	- -
PRE_10	- -	- -	1.19 (0.11) 10.73	- -	- -
NEE_11	- -	- -	- -	1.00	- -
NEE_12	- -	- -	- -	1.15 (0.10) 12.13	- -
NEE_13	- -	- -	- -	1.10 (0.09) 11.83	- -
INDI_14	- -	- -	- -	- -	1.00
INDI_15	- -	- -	- -	- -	0.82 (0.09) 9.35
INDI_16	- -	- -	- -	- -	1.03 (0.09) 11.32

GAMMA

	SALE
KNOL	0.47 (0.05) 9.35
SKIL	0.61 (0.05) 12.91
PRES	0.59 (0.05) 11.94
NEE	0.64 (0.05) 13.13
INDI	0.61 (0.05) 12.42

Covariance Matrix of ETA and KSI

	KNOL	SKIL	PRES	NEE	INDI	SALE
KNOL	0.27					
SKIL	0.29	0.44				
PRES	0.28	0.36	0.46			
NEE	0.30	0.39	0.38	0.45		
INDI	0.29	0.37	0.36	0.39	0.50	
SALE	0.47	0.61	0.59	0.64	0.61	1.00

PHI

SALE
1.00

PSI
Note: This matrix is diagonal.

KNOL	SKIL	PRES	NEE	INDI
0.05	0.08	0.10	0.04	0.13
(0.02)	(0.02)	(0.03)	(0.02)	(0.03)
2.06	3.44	3.46	1.98	4.30

Squared Multiple Correlations for Structural Equations

KNOL	SKIL	PRES	NEE	INDI
0.83	0.83	0.77	0.92	0.75

Squared Multiple Correlations for Reduced Form

KNOL	SKIL	PRES	NEE	INDI
0.83	0.83	0.77	0.92	0.75

THETA-EPS

	KNO_1	KNO_2	KNO_3	SKI_4	SKI_5	SKI_6
KNO_1	0.72					
	(0.06)					
	11.87					
KNO_2	0.29	0.62				
	(0.05)	(0.06)				
	6.01	10.69				
KNO_3	- -	- -	0.63			
			(0.05)			
			11.87			
SKI_4	- -	- -	0.34	0.55		
			(0.04)	(0.05)		
			8.92	11.98		
SKI_5	- -	- -	0.31	0.28	0.56	
			(0.04)	(0.04)	(0.05)	
			8.21	7.40	12.03	
SKI_6	- -	- -	0.17	- -	- -	0.46
			(0.03)			(0.04)
			5.34			10.98
SKI_7	- -	- -	0.11	- -	- -	- -

			(0.03) 3.41			
PRE_8	- -	- -	- -	- -	- -	0.07 (0.03) 2.24
PRE_9	- -	- -	0.08 (0.02) 3.16	0.05 (0.02) 2.28	- -	- -
PRE_10	- -	- -	- -	- -	- -	- -
NEE_11	- -	- -	- -	- -	- -	- -
NEE_12	-0.11 (0.03) -3.46	-0.11 (0.03) -3.86	- -	- -	- -	- -
NEE_13	-0.06 (0.03) -2.25	- -	- -	- -	- -	- -
INDI_14	- -	- -	- -	- -	- -	- -
INDI_15	0.07 (0.03) 2.45	- -	- -	-0.08 (0.03) -2.96	-0.10 (0.03) -3.57	- -
INDI_16	- -	- -	- -	- -	- -	- -

THETA-EPS

	SKI_7	PRE_8	PRE_9	PRE_10	NEE_11	NEE_12
SKI_7	0.49 (0.04) 11.30					
PRE_8	- -	0.54 (0.06) 8.65				
PRE_9	- -	-0.17 (0.04) -4.17	0.31 (0.04) 8.23			
PRE_10	- -	-0.12 (0.04) -2.98	- -	0.35 (0.04) 9.24		
NEE_11	- -	- -	0.12 (0.03) 3.80	0.20 (0.03) 5.84	0.55 (0.05) 12.18	
NEE_12	- -	-0.08 (0.03) -2.92	- -	- -	- -	0.41 (0.05) 8.77
NEE_13	- -	- -	- -	- -	- -	0.08 (0.04) 2.21
INDI_14	- -	- -	- -	- -	- -	0.17 (0.03) 4.96
INDI_15	- -	0.10 (0.03) 3.05	- -	- -	- -	- -

INDI_16	- -	- -	- -	- -	- -	- -

THETA-EPS

	NEE_13	INDI_14	INDI_15	INDI_16
NEE_13	0.46			
	(0.05)			
	9.89			
INDI_14	0.24	0.51		
	(0.03)	(0.05)		
	6.88	10.31		
INDI_15	- -	- -	0.65	
			(0.06)	
			11.65	
INDI_16	- -	- -	0.18	0.48
			(0.04)	(0.05)
			4.36	9.45

Squared Multiple Correlations for Y - Variables

KNO_1	KNO_2	KNO_3	SKI_4	SKI_5	SKI_6
0.27	0.38	0.36	0.44	0.44	0.54

Squared Multiple Correlations for Y - Variables

SKI_7	PRE_8	PRE_9	PRE_10	NEE_11	NEE_12
0.51	0.46	0.69	0.65	0.45	0.59

Squared Multiple Correlations for Y - Variables

NEE_13	INDI_14	INDI_15	INDI_16
0.54	0.49	0.34	0.52

Goodness of Fit Statistics

Degrees of Freedom = 74
Minimum Fit Function Chi-Square = 87.57 (P = 0.13)
Normal Theory Weighted Least Squares Chi-Square = 87.24 (P = 0.14)
Estimated Non-centrality Parameter (NCP) = 13.24
90 Percent Confidence Interval for NCP = (0.0 ; 40.74)

Minimum Fit Function Value = 0.22
Population Discrepancy Function Value (F0) = 0.033
90 Percent Confidence Interval for F0 = (0.0 ; 0.10)
Root Mean Square Error of Approximation (RMSEA) = 0.021
90 Percent Confidence Interval for RMSEA = (0.0 ; 0.037)
P-Value for Test of Close Fit (RMSEA < 0.05) = 1.00

Expected Cross-Validation Index (ECVI) = 0.53
90 Percent Confidence Interval for ECVI = (0.50 ; 0.60)
ECVI for Saturated Model = 0.68
ECVI for Independence Model = 22.22

Chi-Square for Independence Model with 120 Degrees of Freedom = 8832.52
Independence AIC = 8864.52
Model AIC = 211.24
Saturated AIC = 272.00
Independence CAIC = 8944.38
Model CAIC = 520.71
Saturated CAIC = 950.84

Normed Fit Index (NFI) = 0.99
Non-Normed Fit Index (NNFI) = 1.00
Parsimony Normed Fit Index (PNFI) = 0.61
Comparative Fit Index (CFI) = 1.00
Incremental Fit Index (IFI) = 1.00
Relative Fit Index (RFI) = 0.98

Critical N (CN) = 480.37

Root Mean Square Residual (RMR) = 0.028
Standardized RMR = 0.028
Goodness of Fit Index (GFI) = 0.97
Adjusted Goodness of Fit Index (AGFI) = 0.95
Parsimony Goodness of Fit Index (PGFI) = 0.53

TI CFA SALE

Fitted Covariance Matrix

	KNO_1	KNO_2	KNO_3	SKI_4	SKI_5	SKI_6
KNO_1	0.99					
KNO_2	0.61	1.00				
KNO_3	0.31	0.36	0.98			
SKI_4	0.29	0.34	0.67	0.99		
SKI_5	0.28	0.33	0.63	0.72	1.00	
SKI_6	0.32	0.37	0.53	0.49	0.48	1.00
SKI_7	0.31	0.36	0.46	0.48	0.47	0.53
PRE_8	0.28	0.33	0.32	0.36	0.36	0.47
PRE_9	0.35	0.41	0.47	0.49	0.44	0.49
PRE_10	0.34	0.40	0.38	0.43	0.43	0.48
NEE_11	0.30	0.36	0.35	0.39	0.38	0.43
NEE_12	0.24	0.30	0.40	0.45	0.44	0.49
NEE_13	0.27	0.39	0.38	0.43	0.42	0.47
INDI_14	0.29	0.34	0.33	0.37	0.37	0.41
INDI_15	0.31	0.28	0.27	0.23	0.20	0.34
INDI_16	0.30	0.35	0.34	0.38	0.38	0.42

Fitted Covariance Matrix

	SKI_7	PRE_8	PRE_9	PRE_10	NEE_11	NEE_12
SKI_7	1.00					
PRE_8	0.39	1.00				
PRE_9	0.48	0.39	1.00			
PRE_10	0.46	0.43	0.67	1.00		
NEE_11	0.42	0.38	0.59	0.65	1.00	
NEE_12	0.48	0.36	0.54	0.52	0.51	1.00
NEE_13	0.46	0.42	0.51	0.50	0.49	0.65
INDI_14	0.40	0.36	0.44	0.43	0.39	0.61
INDI_15	0.33	0.40	0.37	0.36	0.32	0.37
INDI_16	0.41	0.37	0.46	0.44	0.40	0.46

Fitted Covariance Matrix

	NEE_13	INDI_14	INDI_15	INDI_16
NEE_13	1.00			
INDI_14	0.67	1.00		
INDI_15	0.35	0.41	0.99	
INDI_16	0.44	0.51	0.60	1.00

Fitted Residuals

	KNO_1	KNO_2	KNO_3	SKI_4	SKI_5	SKI_6
KNO_1	0.01					
KNO_2	0.01	0.00				
KNO_3	-0.01	0.03	0.02			

SKI_4	0.03	0.03	0.02	0.01		
SKI_5	0.04	0.08	0.02	0.01	0.00	
SKI_6	-0.04	-0.05	0.03	0.05	0.03	0.00
SKI_7	-0.03	-0.01	-0.02	-0.03	-0.04	-0.01
PRE_8	-0.03	0.01	0.00	-0.01	-0.03	-0.01
PRE_9	-0.02	-0.03	0.01	0.02	0.03	0.02
PRE_10	0.02	-0.03	-0.02	0.00	-0.01	-0.03
NEE_11	0.01	-0.03	-0.04	0.02	0.04	-0.04
NEE_12	0.01	-0.01	-0.03	-0.02	-0.02	-0.03
NEE_13	0.00	-0.04	-0.03	-0.05	-0.02	0.01
INDI_14	0.06	0.02	-0.03	-0.08	-0.06	-0.05
INDI_15	0.03	0.06	0.00	-0.03	-0.02	-0.01
INDI_16	0.06	0.09	0.04	-0.03	-0.01	0.00

Fitted Residuals

	SKI_7	PRE_8	PRE_9	PRE_10	NEE_11	NEE_12
SKI_7	0.00					
PRE_8	-0.01	0.00				
PRE_9	0.04	0.00	0.00			
PRE_10	0.00	-0.01	0.00	0.00		
NEE_11	0.01	-0.01	-0.01	0.00	0.00	
NEE_12	0.05	-0.01	0.00	0.01	0.02	0.00
NEE_13	0.03	0.02	0.00	0.04	0.01	0.00
INDI_14	0.06	-0.01	-0.01	0.06	0.03	0.00
INDI_15	0.01	0.01	-0.06	-0.01	-0.04	-0.01
INDI_16	0.03	0.03	-0.03	-0.01	-0.02	-0.02

Fitted Residuals

	NEE_13	INDI_14	INDI_15	INDI_16
NEE_13	0.00			
INDI_14	-0.01	0.00		
INDI_15	-0.02	0.02	0.01	
INDI_16	-0.02	-0.02	0.01	0.00

Summary Statistics for Fitted Residuals

```
Smallest Fitted Residual =   -0.08
  Median Fitted Residual =    0.00
 Largest Fitted Residual =    0.09
```

Stemleaf Plot

```
- 7|7
- 6|0
- 5|5
- 4|7755
- 3|9986622221100
- 2|999996533220
- 1|99988764433221100
- 0|977776666655432221000000
  0|111112234555566899
  1|011134555566889
  2|01445899
  3|00112345579
  4|006
  5|16777
  6|5
  7|6
  8|8
```

Standardized Residuals

	KNO_1	KNO_2	KNO_3	SKI_4	SKI_5	SKI_6
KNO_1	2.02					
KNO_2	2.04	0.69				
KNO_3	-0.28	1.67	3.42			

SKI_4	1.08	1.03	2.62	1.16		
SKI_5	1.22	2.48	2.08	0.88	0.42	
SKI_6	-1.32	-1.71	2.99	2.79	1.54	-0.20
SKI_7	-0.95	-0.38	-2.44	-1.66	-1.97	-0.39
PRE_8	-0.98	0.49	0.04	-0.43	-0.99	-0.54
PRE_9	-0.77	-1.22	0.60	1.40	1.24	1.12
PRE_10	0.88	-1.22	-0.78	0.18	-0.40	-1.43
NEE_11	0.18	-0.90	-1.38	0.73	1.44	-1.49
NEE_12	1.09	-1.30	-1.31	-0.82	-0.90	-1.57
NEE_13	-0.26	-1.76	-1.15	-1.79	-0.61	0.38
INDI_14	1.79	0.60	-0.87	-2.67	-2.05	-1.81
INDI_15	1.41	1.92	0.11	-1.41	-0.88	-0.21
INDI_16	1.83	2.98	1.35	-1.13	-0.23	0.17

Standardized Residuals

	SKI_7	PRE_8	PRE_9	PRE_10	NEE_11	NEE_12
SKI_7	- -					
PRE_8	-0.52	-0.65				
PRE_9	1.61	-0.22	-0.70			
PRE_10	0.12	-0.55	0.03	-0.17		
NEE_11	0.34	-0.43	-1.18	0.53	0.50	
NEE_12	2.10	-0.57	0.00	0.81	0.97	0.25
NEE_13	1.47	0.65	-0.06	1.82	0.59	0.45
INDI_14	2.10	-0.46	-0.32	2.43	1.14	-0.50
INDI_15	0.19	0.58	-2.09	-0.37	-1.20	-0.47
INDI_16	1.14	1.05	-1.27	-0.55	-0.72	-0.83

Standardized Residuals

	NEE_13	INDI_14	INDI_15	INDI_16
NEE_13	-1.08			
INDI_14	-1.38	-0.97		
INDI_15	-0.84	1.26	1.88	
INDI_16	-0.94	-1.31	1.80	- -

Summary Statistics for Standardized Residuals

Smallest Standardized Residual = -2.67
Median Standardized Residual = -0.12
Largest Standardized Residual = 3.42

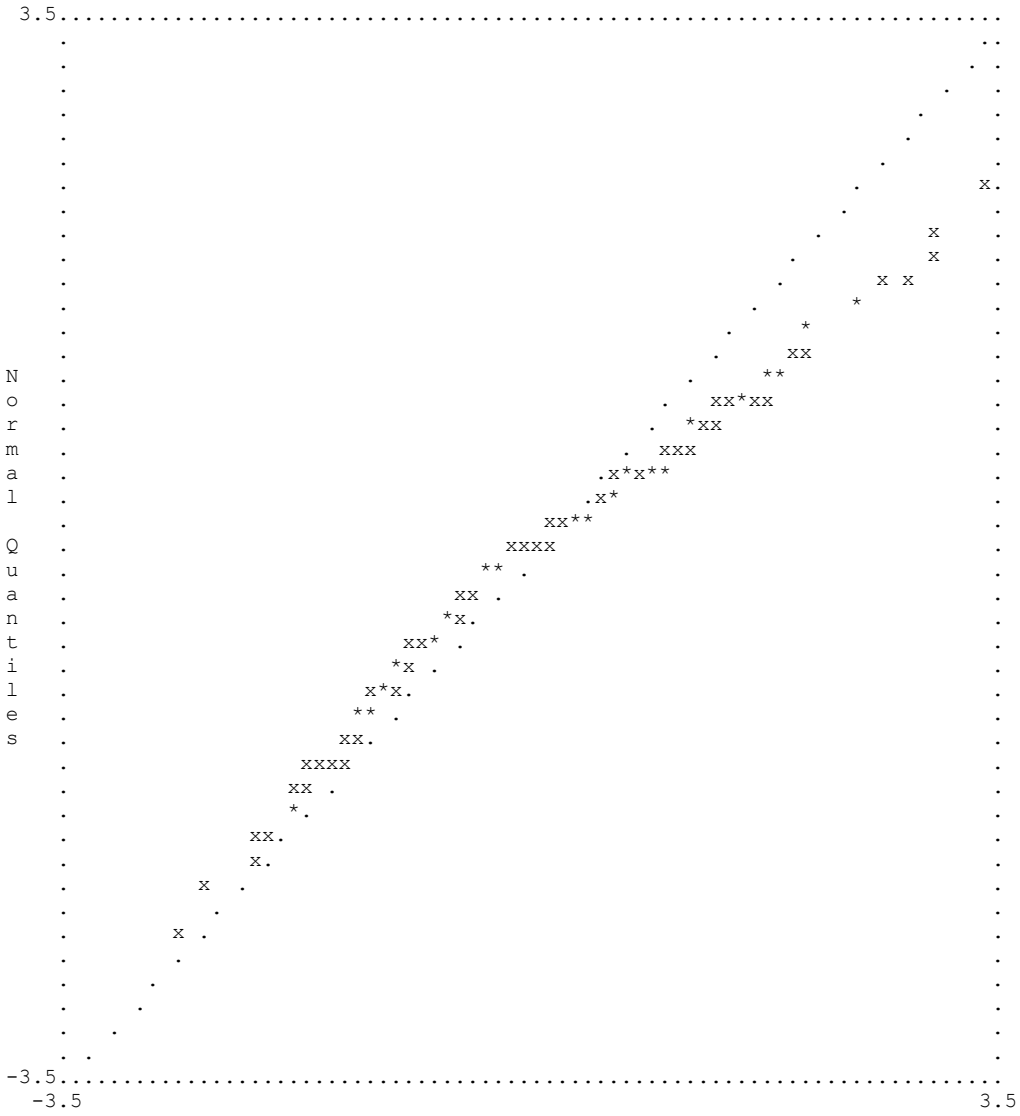
Stemleaf Plot

```
- 2|7
- 2|4100
- 1|8887765
- 1|44443333322221110000
- 0|9999988888776666555555
- 0|444444333222221000000
  0|11222233444
  0|5556666777899
  1|0001111122234444
  1|5567888899
  2|001114
  2|568
  3|004
```

Largest Negative Standardized Residuals
Residual for INDI_14 and SKI_4 -2.67
Largest Positive Standardized Residuals
Residual for KNO_3 and KNO_3 3.42
Residual for SKI_4 and KNO_3 2.62
Residual for SKI_6 and KNO_3 2.99
Residual for SKI_6 and SKI_4 2.79
Residual for INDI_16 and KNO_2 2.98

TI CFA SALE

Qplot of Standardized Residuals



TI CFA SALE

Modification Indices and Expected Change

Modification Indices for LAMBDA-Y

	KNOL	SKIL	PRES	NEE	INDI
KNO_1	- -	0.34	0.05	1.27	2.04
KNO_2	- -	0.40	1.09	2.90	2.18
KNO_3	- -	- -	0.29	3.68	3.40
SKI_4	0.12	- -	0.00	0.22	3.88
SKI_5	2.32	- -	0.61	1.05	0.19
SKI_6	8.81	- -	0.19	2.96	3.63
SKI_7	1.90	- -	1.43	5.58	5.26
PRE_8	0.15	1.27	- -	0.46	0.02
PRE_9	1.14	6.07	- -	0.02	2.31
PRE_10	0.00	1.83	- -	0.25	1.14
NEE_11	1.51	1.14	0.03	- -	0.00
NEE_12	0.47	0.02	0.28	- -	0.04
NEE_13	1.42	0.81	1.42	- -	0.94
INDI_14	1.53	2.58	0.15	0.32	- -

INDI_15	0.10	0.45	1.36	1.06	- -
INDI_16	5.40	0.01	0.08	0.37	- -

Expected Change for LAMBDA-Y

	KNOL	SKIL	PRES	NEE	INDI
KNO_1	- -	0.09	0.03	0.38	0.26
KNO_2	- -	-0.11	-0.15	-0.59	0.25
KNO_3	- -	- -	0.09	-0.83	0.29
SKI_4	-0.09	- -	0.01	-0.09	-0.24
SKI_5	0.40	- -	-0.09	0.20	-0.05
SKI_6	-1.09	- -	-0.07	-0.48	-0.29
SKI_7	0.50	- -	0.17	0.64	0.37
PRE_8	0.17	-0.34	- -	0.44	0.03
PRE_9	-0.55	0.67	- -	-0.08	-0.24
PRE_10	0.02	-0.28	- -	0.25	0.17
NEE_11	-0.44	0.24	-0.06	- -	0.00
NEE_12	-0.28	0.03	-0.08	- -	0.04
NEE_13	-0.38	0.17	0.16	- -	-0.20
INDI_14	0.43	-0.33	0.06	0.45	- -
INDI_15	-0.08	-0.12	-0.16	-0.17	- -
INDI_16	0.60	0.01	0.04	0.12	- -

Standardized Expected Change for LAMBDA-Y

	KNOL	SKIL	PRES	NEE	INDI
KNO_1	- -	0.06	0.02	0.25	0.18
KNO_2	- -	-0.07	-0.10	-0.39	0.18
KNO_3	- -	- -	0.06	-0.56	0.20
SKI_4	-0.05	- -	0.00	-0.06	-0.17
SKI_5	0.21	- -	-0.06	0.13	-0.04
SKI_6	-0.57	- -	-0.05	-0.32	-0.21
SKI_7	0.26	- -	0.11	0.43	0.26
PRE_8	0.09	-0.23	- -	0.30	0.02
PRE_9	-0.29	0.44	- -	-0.05	-0.17
PRE_10	0.01	-0.19	- -	0.17	0.12
NEE_11	-0.23	0.16	-0.04	- -	0.00
NEE_12	-0.15	0.02	-0.06	- -	0.03
NEE_13	-0.20	0.11	0.11	- -	-0.14
INDI_14	0.22	-0.22	0.04	0.30	- -
INDI_15	-0.04	-0.08	-0.11	-0.12	- -
INDI_16	0.31	0.01	0.03	0.08	- -

Completely Standardized Expected Change for LAMBDA-Y

	KNOL	SKIL	PRES	NEE	INDI
KNO_1	- -	0.06	0.02	0.26	0.19
KNO_2	- -	-0.07	-0.10	-0.39	0.18
KNO_3	- -	- -	0.06	-0.56	0.20
SKI_4	-0.05	- -	0.00	-0.06	-0.17
SKI_5	0.21	- -	-0.06	0.13	-0.04
SKI_6	-0.57	- -	-0.05	-0.32	-0.21
SKI_7	0.26	- -	0.11	0.43	0.26
PRE_8	0.09	-0.23	- -	0.30	0.02
PRE_9	-0.29	0.44	- -	-0.05	-0.17
PRE_10	0.01	-0.19	- -	0.17	0.12
NEE_11	-0.23	0.16	-0.04	- -	0.00
NEE_12	-0.15	0.02	-0.06	- -	0.03
NEE_13	-0.20	0.11	0.11	- -	-0.14
INDI_14	0.22	-0.22	0.04	0.30	- -
INDI_15	-0.04	-0.08	-0.11	-0.12	- -
INDI_16	0.31	0.01	0.03	0.08	- -

Modification Indices for BETA

	KNOL	SKIL	PRES	NEE	INDI
KNOL	- -	0.03	0.14	5.52	12.39

SKIL	0.03	- -	0.00	2.83	3.41
PRES	0.14	0.00	- -	0.63	0.11
NEE	5.52	2.83	0.63	- -	0.40
INDI	12.39	3.41	0.11	0.40	- -

Expected Change for BETA

	KNOL	SKIL	PRES	NEE	INDI
KNOL	- -	-0.04	-0.04	-0.73	0.39
SKIL	-0.07	- -	-0.01	0.53	-0.20
PRES	-0.09	-0.01	- -	0.34	-0.04
NEE	-0.58	0.26	0.12	- -	-0.10
INDI	1.05	-0.32	-0.05	-0.33	- -

Standardized Expected Change for BETA

	KNOL	SKIL	PRES	NEE	INDI
KNOL	- -	-0.13	-0.12	-2.11	1.07
SKIL	-0.21	- -	-0.01	1.20	-0.42
PRES	-0.27	-0.02	- -	0.75	-0.08
NEE	-1.68	0.59	0.27	- -	-0.21
INDI	2.88	-0.69	-0.10	-0.70	- -

No Non-Zero Modification Indices for GAMMA

No Non-Zero Modification Indices for PHI

Modification Indices for PSI

	KNOL	SKIL	PRES	NEE	INDI
KNOL	- -				
SKIL	0.03	- -			
PRES	0.14	0.00	- -		
NEE	5.52	2.83	0.63	- -	
INDI	12.39	3.41	0.11	0.40	- -

Expected Change for PSI

	KNOL	SKIL	PRES	NEE	INDI
KNOL	- -				
SKIL	0.00	- -			
PRES	0.00	0.00	- -		
NEE	-0.03	0.02	0.01	- -	
INDI	0.05	-0.02	0.00	-0.01	- -

Standardized Expected Change for PSI

	KNOL	SKIL	PRES	NEE	INDI
KNOL	- -				
SKIL	-0.01	- -			
PRES	-0.01	0.00	- -		
NEE	-0.08	0.04	0.03	- -	
INDI	0.13	-0.05	-0.01	-0.03	- -

Modification Indices for THETA-EPS

	KNO_1	KNO_2	KNO_3	SKI_4	SKI_5	SKI_6
KNO_1	- -					
KNO_2	- -	- -				
KNO_3	1.30	1.30	- -			
SKI_4	1.38	0.34	- -	- -		
SKI_5	0.02	3.77	- -	- -	- -	
SKI_6	0.01	2.92	- -	3.09	0.23	- -
SKI_7	0.68	0.00	- -	0.86	1.40	0.10
PRE_8	2.05	1.18	0.29	0.00	1.12	- -

PRE_9	0.67	0.07	- -	- -	0.23	2.10
PRE_10	2.16	1.90	0.05	0.31	1.48	0.77
NEE_11	0.05	0.00	2.81	0.24	2.75	0.57
NEE_12	- -	- -	0.29	0.53	0.05	1.46
NEE_13	- -	2.92	0.17	0.78	0.21	2.95
INDI_14	1.90	0.01	0.51	1.08	0.88	2.83
INDI_15	- -	1.58	0.00	- -	- -	0.33
INDI_16	0.02	2.52	2.46	1.76	0.00	0.00

Modification Indices for THETA-EPS

	SKI_7	PRE_8	PRE_9	PRE_10	NEE_11	NEE_12
SKI_7	- -					
PRE_8	0.12	- -				
PRE_9	0.98	- -	- -			
PRE_10	0.13	- -	- -	- -		
NEE_11	0.00	0.03	- -	- -	- -	
NEE_12	1.13	- -	0.02	0.14	0.25	- -
NEE_13	0.00	0.73	0.00	0.81	0.25	- -
INDI_14	2.39	0.73	0.33	2.48	0.32	- -
INDI_15	0.21	- -	1.31	0.07	0.04	0.04
INDI_16	0.19	1.32	0.12	0.28	0.11	0.02

Modification Indices for THETA-EPS

	NEE_13	INDI_14	INDI_15	INDI_16
NEE_13	- -			
INDI_14	- -	- -		
INDI_15	0.91	1.03	- -	
INDI_16	0.06	1.03	- -	- -

Expected Change for THETA-EPS

	KNO_1	KNO_2	KNO_3	SKI_4	SKI_5	SKI_6
KNO_1	- -					
KNO_2	- -	- -				
KNO_3	-0.03	0.04	- -			
SKI_4	0.03	-0.01	- -	- -		
SKI_5	0.00	0.05	- -	- -	- -	
SKI_6	0.00	-0.05	- -	0.05	0.01	- -
SKI_7	-0.02	0.00	- -	-0.02	-0.03	-0.01
PRE_8	-0.05	0.03	0.02	0.00	-0.03	- -
PRE_9	-0.02	-0.01	- -	- -	0.01	0.04
PRE_10	0.04	-0.03	0.01	0.01	-0.03	-0.02
NEE_11	0.01	0.00	-0.04	0.01	0.04	-0.02
NEE_12	- -	- -	-0.01	0.02	0.00	-0.03
NEE_13	- -	-0.05	-0.01	-0.02	0.01	0.04
INDI_14	0.04	0.00	0.02	-0.02	-0.02	-0.04
INDI_15	- -	0.04	0.00	- -	- -	0.02
INDI_16	0.00	0.04	0.04	-0.03	0.00	0.00

Expected Change for THETA-EPS

	SKI_7	PRE_8	PRE_9	PRE_10	NEE_11	NEE_12
SKI_7	- -					
PRE_8	-0.01	- -				
PRE_9	0.03	- -	- -			
PRE_10	-0.01	- -	- -	- -		
NEE_11	0.00	-0.01	- -	- -	- -	
NEE_12	0.03	- -	0.00	-0.01	0.02	- -
NEE_13	0.00	0.02	0.00	0.02	-0.01	- -
INDI_14	0.04	-0.03	-0.01	0.04	0.02	- -
INDI_15	-0.01	- -	-0.03	0.01	-0.01	0.01
INDI_16	0.01	0.04	-0.01	-0.01	-0.01	0.00

Expected Change for THETA-EPS

	NEE_13	INDI_14	INDI_15	INDI_16
NEE_13	- -			
INDI_14	- -	- -		
INDI_15	-0.02	0.03	- -	
INDI_16	-0.01	-0.04	- -	- -

Completely Standardized Expected Change for THETA-EPS

	KNO_1	KNO_2	KNO_3	SKI_4	SKI_5	SKI_6
KNO_1	- -					
KNO_2	- -	- -				
KNO_3	-0.03	0.04	- -			
SKI_4	0.03	-0.01	- -	- -		
SKI_5	0.00	0.05	- -	- -	- -	
SKI_6	0.00	-0.05	- -	0.05	0.01	- -
SKI_7	-0.02	0.00	- -	-0.02	-0.03	-0.01
PRE_8	-0.05	0.03	0.02	0.00	-0.03	- -
PRE_9	-0.02	-0.01	- -	- -	0.01	0.04
PRE_10	0.04	-0.03	0.01	0.01	-0.03	-0.02
NEE_11	0.01	0.00	-0.04	0.01	0.04	-0.02
NEE_12	- -	- -	-0.01	0.02	0.00	-0.03
NEE_13	- -	-0.05	-0.01	-0.02	0.01	0.04
INDI_14	0.04	0.00	0.02	-0.02	-0.02	-0.04
INDI_15	- -	0.04	0.00	- -	- -	0.02
INDI_16	0.00	0.04	0.04	-0.03	0.00	0.00

Completely Standardized Expected Change for THETA-EPS

	SKI_7	PRE_8	PRE_9	PRE_10	NEE_11	NEE_12
SKI_7	- -					
PRE_8	-0.01	- -				
PRE_9	0.03	- -	- -			
PRE_10	-0.01	- -	- -	- -		
NEE_11	0.00	-0.01	- -	- -	- -	
NEE_12	0.03	- -	0.00	-0.01	0.02	- -
NEE_13	0.00	0.02	0.00	0.02	-0.01	- -
INDI_14	0.04	-0.03	-0.01	0.04	0.02	- -
INDI_15	-0.01	- -	-0.03	0.01	-0.01	0.01
INDI_16	0.01	0.04	-0.01	-0.01	-0.01	0.00

Completely Standardized Expected Change for THETA-EPS

	NEE_13	INDI_14	INDI_15	INDI_16
NEE_13	- -			
INDI_14	- -	- -		
INDI_15	-0.02	0.03	- -	
INDI_16	-0.01	-0.04	- -	- -

Maximum Modification Index is 12.39 for Element (5, 1) of BETA

TI CFA SALE

Factor Scores Regressions

ETA

	KNO_1	KNO_2	KNO_3	SKI_4	SKI_5	SKI_6
KNOL	0.06	0.10	0.09	-0.02	0.00	0.02
SKIL	0.03	0.05	-0.18	0.14	0.13	0.19
PRES	0.02	0.03	-0.04	-0.01	0.04	0.00
NEE	0.05	0.06	-0.03	0.03	0.04	0.05
INDI	0.01	0.05	-0.03	0.03	0.05	0.05

ETA

	SKI_7	PRE_8	PRE_9	PRE_10	NEE_11	NEE_12

KNOL	0.04	0.06	0.05	0.05	0.01	0.12
SKIL	0.16	0.03	0.07	0.04	0.01	0.08
PRES	0.03	0.22	0.29	0.24	-0.13	0.10
NEE	0.05	0.08	0.07	0.03	0.08	0.21
INDI	0.05	0.04	0.07	0.05	0.03	0.05

ETA

	NEE_13	INDI_14	INDI_15	INDI_16
KNOL	0.05	-0.01	0.00	0.05
SKIL	0.05	-0.01	0.05	0.02
PRES	0.03	-0.02	-0.02	0.04
NEE	0.14	-0.07	0.02	0.07
INDI	-0.03	0.20	0.08	0.19

TI CFA SALE

Standardized Solution

LAMBDA-Y

	KNOL	SKIL	PRES	NEE	INDI
KNO_1	0.52	- -	- -	- -	- -
KNO_2	0.61	- -	- -	- -	- -
KNO_3	0.59	- -	- -	- -	- -
SKI_4	- -	0.66	- -	- -	- -
SKI_5	- -	0.66	- -	- -	- -
SKI_6	- -	0.74	- -	- -	- -
SKI_7	- -	0.72	- -	- -	- -
PRE_8	- -	- -	0.68	- -	- -
PRE_9	- -	- -	0.83	- -	- -
PRE_10	- -	- -	0.81	- -	- -
NEE_11	- -	- -	- -	0.67	- -
NEE_12	- -	- -	- -	0.77	- -
NEE_13	- -	- -	- -	0.74	- -
INDI_14	- -	- -	- -	- -	0.70
INDI_15	- -	- -	- -	- -	0.58
INDI_16	- -	- -	- -	- -	0.72

GAMMA

	SALE
KNOL	0.91
SKIL	0.91
PRES	0.88
NEE	0.96
INDI	0.86

Correlation Matrix of ETA and KSI

	KNOL	SKIL	PRES	NEE	INDI	SALE
KNOL	1.00					
SKIL	0.83	1.00				
PRES	0.80	0.80	1.00			
NEE	0.87	0.87	0.84	1.00		
INDI	0.79	0.79	0.76	0.83	1.00	
SALE	0.91	0.91	0.88	0.96	0.86	1.00

PSI
Note: This matrix is diagonal.

KNOL	SKIL	PRES	NEE	INDI
0.17	0.17	0.23	0.08	0.25

TI CFA SALE

Completely Standardized Solution

LAMBDA-Y

	KNOL	SKIL	PRES	NEE	INDI
KNO_1	0.52	- -	- -	- -	- -
KNO_2	0.61	- -	- -	- -	- -
KNO_3	0.60	- -	- -	- -	- -
SKI_4	- -	0.67	- -	- -	- -
SKI_5	- -	0.66	- -	- -	- -
SKI_6	- -	0.73	- -	- -	- -
SKI_7	- -	0.72	- -	- -	- -
PRE_8	- -	- -	0.68	- -	- -
PRE_9	- -	- -	0.83	- -	- -
PRE_10	- -	- -	0.81	- -	- -
NEE_11	- -	- -	- -	0.67	- -
NEE_12	- -	- -	- -	0.77	- -
NEE_13	- -	- -	- -	0.73	- -
INDI_14	- -	- -	- -	- -	0.70
INDI_15	- -	- -	- -	- -	0.58
INDI_16	- -	- -	- -	- -	0.72

GAMMA

	SALE
KNOL	0.91
SKIL	0.91
PRES	0.88
NEE	0.96
INDI	0.86

Correlation Matrix of ETA and KSI

	KNOL	SKIL	PRES	NEE	INDI	SALE
KNOL	1.00					
SKIL	0.83	1.00				
PRES	0.80	0.80	1.00			
NEE	0.87	0.87	0.84	1.00		
INDI	0.79	0.79	0.76	0.83	1.00	
SALE	0.91	0.91	0.88	0.96	0.86	1.00

PSI

Note: This matrix is diagonal.

KNOL	SKIL	PRES	NEE	INDI
0.17	0.17	0.23	0.08	0.25

THETA-EPS

	KNO_1	KNO_2	KNO_3	SKI_4	SKI_5	SKI_6
KNO_1	0.73					
KNO_2	0.29	0.62				
KNO_3	- -	- -	0.64			
SKI_4	- -	- -	0.35	0.56		
SKI_5	- -	- -	0.31	0.28	0.56	
SKI_6	- -	- -	0.17	- -	- -	0.46
SKI_7	- -	- -	0.11	- -	- -	- -
PRE_8	- -	- -	- -	- -	- -	0.07
PRE_9	- -	- -	0.08	0.05	- -	- -
PRE_10	- -	- -	- -	- -	- -	- -
NEE_11	- -	- -	- -	- -	- -	- -
NEE_12	-0.11	-0.11	- -	- -	- -	- -
NEE_13	-0.06	- -	- -	- -	- -	- -
INDI_14	- -	- -	- -	- -	- -	- -
INDI_15	0.07	- -	- -	-0.08	-0.10	- -

INDI_16	- -	- -	- -	- -	- -	- -

THETA-EPS

	SKI_7	PRE_8	PRE_9	PRE_10	NEE_11	NEE_12
SKI_7	0.49					
PRE_8	- -	0.54				
PRE_9	- -	-0.17	0.31			
PRE_10	- -	-0.12	- -	0.35		
NEE_11	- -	- -	0.12	0.20	0.55	
NEE_12	- -	-0.08	- -	- -	- -	0.41
NEE_13	- -	- -	- -	- -	- -	0.08
INDI_14	- -	- -	- -	- -	- -	0.17
INDI_15	- -	0.10	- -	- -	- -	- -
INDI_16	- -	- -	- -	- -	- -	- -

THETA-EPS

	NEE_13	INDI_14	INDI_15	INDI_16
NEE_13	0.46			
INDI_14	0.24	0.51		
INDI_15	- -	- -	0.66	
INDI_16	- -	- -	0.18	0.48

TI CFA SALE

Total and Indirect Effects

Total Effects of X on ETA

	SALE
KNOL	0.47
	(0.05)
	9.35
SKIL	0.61
	(0.05)
	12.91
PRES	0.59
	(0.05)
	11.94
NEE	0.64
	(0.05)
	13.13
INDI	0.61
	(0.05)
	12.42

BETA*BETA' is not Pos. Def., Stability Index cannot be Computed

Total Effects of ETA on Y

	KNOL	SKIL	PRES	NEE	INDI
KNO_1	1.00	- -	- -	- -	- -
KNO_2	1.18	- -	- -	- -	- -
	(0.11)				
	10.69				
KNO_3	1.14	- -	- -	- -	- -
	(0.15)				
	7.83				

SKI_4	- -	1.00	- -	- -	- -
SKI_5	- -	0.99 (0.06) 16.01	- -	- -	- -
SKI_6	- -	1.11 (0.09) 12.15	- -	- -	- -
SKI_7	- -	1.08 (0.09) 11.94	- -	- -	- -
PRE_8	- -	- -	1.00	- -	- -
PRE_9	- -	- -	1.23 (0.12) 10.57	- -	- -
PRE_10	- -	- -	1.19 (0.11) 10.73	- -	- -
NEE_11	- -	- -	- -	1.00	- -
NEE_12	- -	- -	- -	1.15 (0.10) 12.13	- -
NEE_13	- -	- -	- -	1.10 (0.09) 11.83	- -
INDI_14	- -	- -	- -	- -	1.00
INDI_15	- -	- -	- -	- -	0.82 (0.09) 9.35
INDI_16	- -	- -	- -	- -	1.03 (0.09) 11.32

Total Effects of X on Y

	SALE
KNO_1	0.47 (0.05) 9.35
KNO_2	0.56 (0.05) 11.30
KNO_3	0.54 (0.05) 10.93
SKI_4	0.61 (0.05) 12.91
SKI_5	0.60

	(0.05)
	12.79
SKI_6	0.67
	(0.05)
	14.41
SKI_7	0.65
	(0.05)
	14.07
PRE_8	0.59
	(0.05)
	11.94
PRE_9	0.73
	(0.05)
	15.92
PRE_10	0.71
	(0.05)
	15.31
NEE_11	0.64
	(0.05)
	13.13
NEE_12	0.74
	(0.05)
	15.96
NEE_13	0.70
	(0.05)
	15.14
INDI_14	0.61
	(0.05)
	12.42
INDI_15	0.50
	(0.05)
	10.34
INDI_16	0.63
	(0.05)
	13.23

TI CFA SALE

Standardized Total and Indirect Effects

Standardized Total Effects of X on ETA

	SALE
KNOL	0.91
SKIL	0.91
PRES	0.88
NEE	0.96
INDI	0.86

Standardized Total Effects of ETA on Y

	KNOL	SKIL	PRES	NEE	INDI
KNO_1	0.52	- -	- -	- -	- -
KNO_2	0.61	- -	- -	- -	- -
KNO_3	0.59	- -	- -	- -	- -
SKI_4	- -	0.66	- -	- -	- -
SKI_5	- -	0.66	- -	- -	- -

SKI_6	- -	0.74	- -	- -	- -
SKI_7	- -	0.72	- -	- -	- -
PRE_8	- -	- -	0.68	- -	- -
PRE_9	- -	- -	0.83	- -	- -
PRE_10	- -	- -	0.81	- -	- -
NEE_11	- -	- -	- -	0.67	- -
NEE_12	- -	- -	- -	0.77	- -
NEE_13	- -	- -	- -	0.74	- -
INDI_14	- -	- -	- -	- -	0.70
INDI_15	- -	- -	- -	- -	0.58
INDI_16	- -	- -	- -	- -	0.72

Completely Standardized Total Effects of ETA on Y

	KNOL	SKIL	PRES	NEE	INDI
KNO_1	0.52	- -	- -	- -	- -
KNO_2	0.61	- -	- -	- -	- -
KNO_3	0.60	- -	- -	- -	- -
SKI_4	- -	0.67	- -	- -	- -
SKI_5	- -	0.66	- -	- -	- -
SKI_6	- -	0.73	- -	- -	- -
SKI_7	- -	0.72	- -	- -	- -
PRE_8	- -	- -	0.68	- -	- -
PRE_9	- -	- -	0.83	- -	- -
PRE_10	- -	- -	0.81	- -	- -
NEE_11	- -	- -	- -	0.67	- -
NEE_12	- -	- -	- -	0.77	- -
NEE_13	- -	- -	- -	0.73	- -
INDI_14	- -	- -	- -	- -	0.70
INDI_15	- -	- -	- -	- -	0.58
INDI_16	- -	- -	- -	- -	0.72

Standardized Total Effects of X on Y

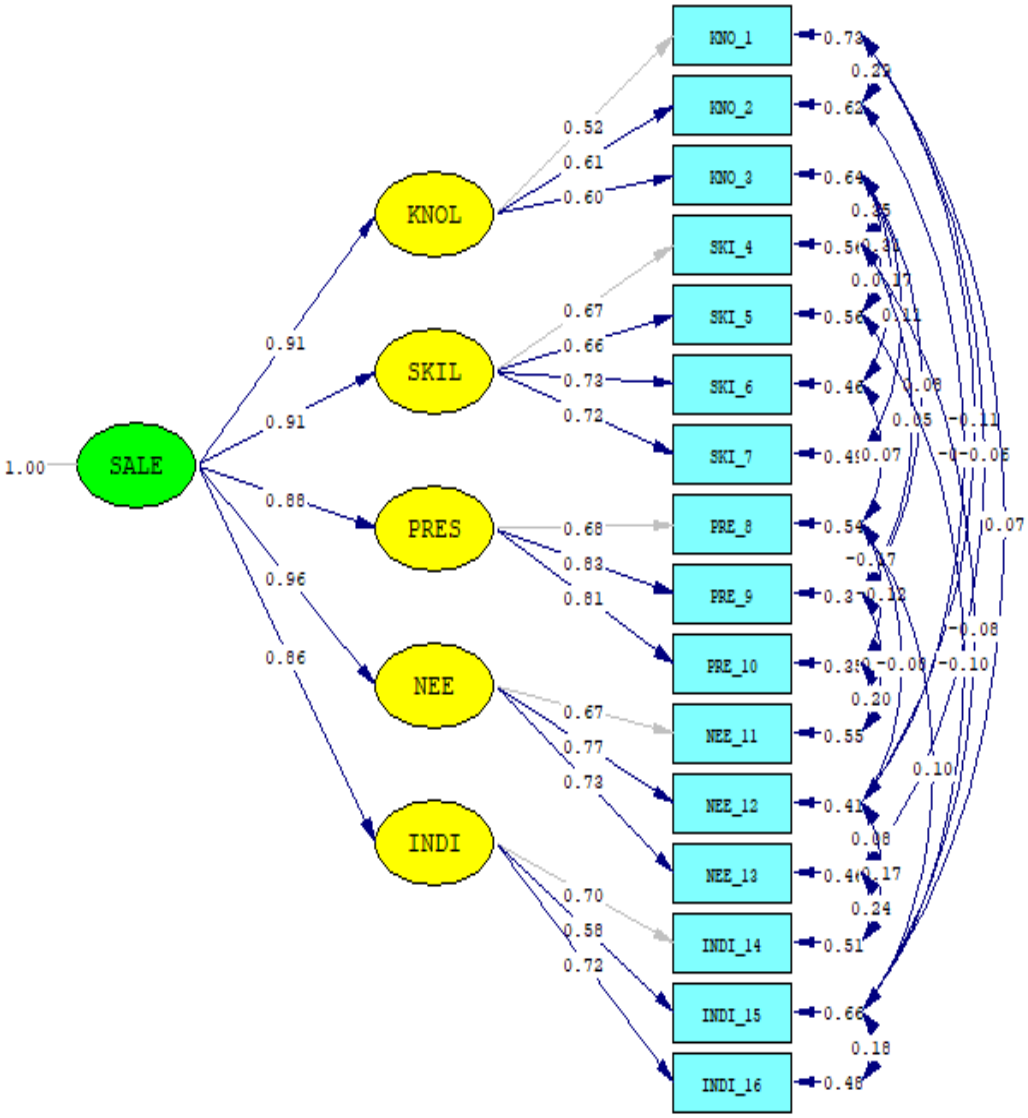
	SALE
KNO_1	0.47
KNO_2	0.56
KNO_3	0.54
SKI_4	0.61
SKI_5	0.60
SKI_6	0.67
SKI_7	0.65
PRE_8	0.59
PRE_9	0.73
PRE_10	0.71
NEE_11	0.64
NEE_12	0.74
NEE_13	0.70
INDI_14	0.61
INDI_15	0.50
INDI_16	0.63

Completely Standardized Total Effects of X on Y

	SALE
KNO_1	0.48
KNO_2	0.56
KNO_3	0.55
SKI_4	0.61
SKI_5	0.60
SKI_6	0.67
SKI_7	0.65
PRE_8	0.59
PRE_9	0.73
PRE_10	0.71
NEE_11	0.64
NEE_12	0.74
NEE_13	0.70

INDI_14	0.61
INDI_15	0.51
INDI_16	0.63

Time used: 0.047 Seconds



Chi-Square=87.24, df=74, P-value=0.13927, RMSEA=0.021

ผลการวิเคราะห์องค์ประกอบเชิงยืนยัน (CFA): ระดับความพึงพอใจของลูกค้า

DATE: 3/ 3/2018
TIME: 16:03

L I S R E L 8.72

BY

Karl G. Jöreskog & Dag Sörbom

This program is published exclusively by
Scientific Software International, Inc.
7383 N. Lincoln Avenue, Suite 100
Lincolnwood, IL 60712, U.S.A.
Phone: (800)247-6113, (847)675-0720, Fax: (847)675-2140

The following lines were read from file D:\YA CFA SAS.LPJ:

```
TI CFA SAS
!DA NI=34 NO=400 MA=CM
SY='D:\YA CFA SAS.dsf' NG=1
MO NY=34 NK=1 NE=4 BE=FU GA=FI PS=SY TE=SY
LE
SERR DELI HANN STAF
LK
SATI
FR LY(2,1) LY(3,1) LY(4,1) LY(5,1) LY(6,1) LY(7,1) LY(9,2) LY(10,2) LY(11,2)
FR LY(12,2) LY(13,2) LY(14,2) LY(15,2) LY(16,2) LY(17,2) LY(18,2) LY(19,2) LY(20,3)
FR LY(21,3) LY(22,3) LY(24,3) LY(25,3) LY(26,3) LY(27,4) LY(28,4) LY(29,4) LY(30,4)
FR LY(31,4) LY(33,4) LY(34,4) GA(1,1) GA(2,1) GA(3,1) GA(4,1) TE(3,2) TE(4,2)
FR TE(4,3) TE(6,1) TE(6,5) TE(7,5) TE(7,6) TE(9,8) TE(10,8) TE(10,9) TE(11,8)
FR TE(12,11) TE(13,11) TE(13,12) TE(14,5) TE(14,8) TE(15,3) TE(15,7) TE(15,8) TE(15,12)
FR TE(15,14) TE(16,4) TE(16,14) TE(16,15) TE(17,11) TE(18,17) TE(19,3) TE(19,5)
TE(19,17)
FR TE(19,18) TE(20,1) TE(20,3) TE(20,7) TE(20,10) TE(20,11) TE(20,13) TE(21,5) TE(21,17)
FR TE(21,18) TE(21,20) TE(22,3) TE(22,5) TE(22,20) TE(22,21) TE(23,9) TE(23,20) TE(24,6)
FR TE(24,8) TE(24,12) TE(24,22) TE(24,23) TE(25,2) TE(25,7) TE(25,13) TE(25,17)
TE(25,19)
FR TE(25,23) TE(25,24) TE(26,14) TE(26,17) TE(27,22) TE(27,25) TE(27,26) TE(28,2)
TE(28,8)
FR TE(28,13) TE(28,22) TE(28,27) TE(29,22) TE(30,13) TE(30,19) TE(30,29) TE(31,2)
TE(31,12)
FR TE(31,29) TE(31,30) TE(32,24) TE(32,27) TE(33,6) TE(33,19) TE(33,26) TE(33,27)
TE(33,31)
FR TE(33,32) TE(34,3) TE(34,26) TE(34,28) TE(34,31) TE(34,32) TE(34,33)
VA 1 LY(1,1)
VA 1 LY(8,2)
VA 1 LY(23,3)
VA 1 LY(32,4)
PD
OU AM RS EF FS SS SC AD=OFF
```

TI CFA SAS

Number of Input Variables	34
Number of Y - Variables	34
Number of X - Variables	0
Number of ETA - Variables	4
Number of KSI - Variables	1
Number of Observations	400

TI CFA SAS

Covariance Matrix

	SER_1	SER_2	SER_3	SER_4	SER_5	SER_6
SER_1	0.48					
SER_2	0.21	0.55				
SER_3	0.21	0.28	0.47			
SER_4	0.24	0.27	0.28	0.51		
SER_5	0.23	0.20	0.24	0.24	0.54	
SER_6	0.19	0.19	0.23	0.25	0.34	0.49
SER_7	0.20	0.19	0.21	0.22	0.31	0.35
DEL_8	0.16	0.16	0.15	0.15	0.20	0.19
DEL_9	0.14	0.16	0.16	0.16	0.20	0.20
DEL_10	0.17	0.18	0.16	0.17	0.21	0.22
DEL_11	0.15	0.18	0.17	0.19	0.21	0.21
DEL_12	0.19	0.18	0.20	0.23	0.23	0.21
DEL_13	0.15	0.17	0.19	0.21	0.22	0.20
DEL_14	0.18	0.20	0.16	0.17	0.18	0.18
DEL_15	0.17	0.18	0.13	0.18	0.20	0.20
DEL_16	0.17	0.19	0.16	0.23	0.18	0.17
DEL_17	0.19	0.18	0.19	0.19	0.24	0.22
DEL_18	0.19	0.22	0.19	0.20	0.25	0.21
DEL_19	0.21	0.21	0.23	0.21	0.27	0.21
HAN_20	0.16	0.19	0.21	0.20	0.23	0.21
HAN_21	0.19	0.18	0.19	0.20	0.25	0.19
HAN_22	0.17	0.17	0.21	0.17	0.24	0.22
HAN_23	0.17	0.17	0.17	0.17	0.23	0.21
HAN_24	0.21	0.20	0.18	0.18	0.22	0.18
HAN_25	0.21	0.14	0.17	0.17	0.22	0.23
HAN_26	0.20	0.22	0.19	0.22	0.20	0.19
STA_27	0.20	0.23	0.19	0.20	0.18	0.18
STA_28	0.17	0.22	0.15	0.16	0.14	0.14
STA_29	0.18	0.18	0.15	0.17	0.16	0.13
STA_30	0.19	0.19	0.16	0.18	0.16	0.17
STA_31	0.19	0.23	0.13	0.18	0.14	0.13
STA_32	0.19	0.23	0.22	0.22	0.18	0.18
STA_33	0.19	0.19	0.18	0.19	0.17	0.15
STA_34	0.19	0.22	0.16	0.21	0.17	0.18

Covariance Matrix

	SER_7	DEL_8	DEL_9	DEL_10	DEL_11	DEL_12
SER_7	0.52					
DEL_8	0.15	0.45				
DEL_9	0.19	0.21	0.41			
DEL_10	0.18	0.25	0.25	0.46		
DEL_11	0.19	0.20	0.20	0.21	0.52	
DEL_12	0.20	0.18	0.21	0.23	0.29	0.51
DEL_13	0.18	0.15	0.18	0.20	0.27	0.29
DEL_14	0.16	0.25	0.21	0.22	0.21	0.21
DEL_15	0.13	0.22	0.18	0.18	0.20	0.22
DEL_16	0.15	0.16	0.19	0.17	0.17	0.20
DEL_17	0.18	0.19	0.20	0.22	0.23	0.21
DEL_18	0.19	0.18	0.22	0.24	0.21	0.23
DEL_19	0.20	0.17	0.19	0.21	0.21	0.24
HAN_20	0.15	0.19	0.19	0.17	0.16	0.21
HAN_21	0.18	0.17	0.17	0.17	0.18	0.20
HAN_22	0.21	0.16	0.19	0.17	0.16	0.20
HAN_23	0.19	0.17	0.21	0.18	0.22	0.21
HAN_24	0.21	0.20	0.18	0.20	0.19	0.23
HAN_25	0.26	0.18	0.19	0.21	0.19	0.20
HAN_26	0.16	0.22	0.19	0.19	0.22	0.24
STA_27	0.17	0.18	0.17	0.17	0.18	0.24
STA_28	0.12	0.21	0.16	0.20	0.14	0.19
STA_29	0.09	0.18	0.16	0.19	0.16	0.16
STA_30	0.14	0.17	0.19	0.20	0.19	0.18
STA_31	0.11	0.15	0.17	0.17	0.14	0.19
STA_32	0.14	0.19	0.18	0.20	0.19	0.19
STA_33	0.14	0.19	0.16	0.18	0.18	0.18

STA_34	0.14	0.18	0.19	0.18	0.18	0.20

Covariance Matrix

	DEL_13	DEL_14	DEL_15	DEL_16	DEL_17	DEL_18
DEL_13	0.50					
DEL_14	0.17	0.50				
DEL_15	0.15	0.28	0.47			
DEL_16	0.16	0.25	0.29	0.47		
DEL_17	0.20	0.22	0.23	0.20	0.49	
DEL_18	0.22	0.23	0.24	0.25	0.34	0.52
DEL_19	0.21	0.24	0.21	0.23	0.32	0.35
HAN_20	0.17	0.22	0.23	0.23	0.21	0.24
HAN_21	0.21	0.22	0.19	0.22	0.18	0.21
HAN_22	0.21	0.20	0.19	0.19	0.21	0.21
HAN_23	0.19	0.23	0.21	0.20	0.23	0.26
HAN_24	0.20	0.23	0.20	0.22	0.21	0.26
HAN_25	0.22	0.22	0.20	0.20	0.25	0.24
HAN_26	0.21	0.28	0.24	0.23	0.27	0.27
STA_27	0.19	0.25	0.23	0.24	0.19	0.22
STA_28	0.09	0.22	0.21	0.20	0.15	0.19
STA_29	0.12	0.20	0.20	0.21	0.15	0.20
STA_30	0.13	0.21	0.18	0.22	0.15	0.18
STA_31	0.11	0.19	0.18	0.19	0.16	0.19
STA_32	0.17	0.20	0.17	0.18	0.22	0.22
STA_33	0.15	0.18	0.15	0.17	0.19	0.19
STA_34	0.17	0.18	0.17	0.17	0.20	0.21

Covariance Matrix

	DEL_19	HAN_20	HAN_21	HAN_22	HAN_23	HAN_24
DEL_19	0.55					
HAN_20	0.23	0.48				
HAN_21	0.24	0.29	0.47			
HAN_22	0.20	0.27	0.30	0.51		
HAN_23	0.24	0.27	0.23	0.24	0.51	
HAN_24	0.23	0.23	0.23	0.26	0.34	0.54
HAN_25	0.25	0.22	0.24	0.25	0.30	0.34
HAN_26	0.27	0.26	0.25	0.24	0.27	0.26
STA_27	0.22	0.20	0.23	0.23	0.22	0.23
STA_28	0.18	0.17	0.16	0.12	0.18	0.20
STA_29	0.15	0.19	0.18	0.12	0.17	0.20
STA_30	0.19	0.18	0.20	0.15	0.19	0.21
STA_31	0.15	0.18	0.17	0.14	0.16	0.18
STA_32	0.21	0.19	0.20	0.17	0.21	0.17
STA_33	0.16	0.17	0.18	0.16	0.17	0.20
STA_34	0.18	0.17	0.20	0.19	0.16	0.17

Covariance Matrix

	HAN_25	HAN_26	STA_27	STA_28	STA_29	STA_30
HAN_25	0.52					
HAN_26	0.24	0.56				
STA_27	0.25	0.36	0.55			
STA_28	0.18	0.20	0.26	0.54		
STA_29	0.17	0.22	0.20	0.18	0.51	
STA_30	0.20	0.23	0.24	0.21	0.32	0.50
STA_31	0.18	0.20	0.21	0.21	0.36	0.34
STA_32	0.18	0.22	0.21	0.22	0.27	0.26
STA_33	0.17	0.23	0.19	0.21	0.25	0.26
STA_34	0.15	0.25	0.22	0.17	0.25	0.27

Covariance Matrix

	STA_31	STA_32	STA_33	STA_34
STA_31	0.59			
STA_32	0.27	0.53		

STA_33	0.28	0.34	0.51	
STA_34	0.30	0.32	0.35	0.55

TI CFA SAS

Parameter Specifications

LAMBDA-Y

	SERR	DELI	HANN	STAF
SER_1	0	0	0	0
SER_2	1	0	0	0
SER_3	2	0	0	0
SER_4	3	0	0	0
SER_5	4	0	0	0
SER_6	5	0	0	0
SER_7	6	0	0	0
DEL_8	0	0	0	0
DEL_9	0	7	0	0
DEL_10	0	8	0	0
DEL_11	0	9	0	0
DEL_12	0	10	0	0
DEL_13	0	11	0	0
DEL_14	0	12	0	0
DEL_15	0	13	0	0
DEL_16	0	14	0	0
DEL_17	0	15	0	0
DEL_18	0	16	0	0
DEL_19	0	17	0	0
HAN_20	0	0	18	0
HAN_21	0	0	19	0
HAN_22	0	0	20	0
HAN_23	0	0	0	0
HAN_24	0	0	21	0
HAN_25	0	0	22	0
HAN_26	0	0	23	0
STA_27	0	0	0	24
STA_28	0	0	0	25
STA_29	0	0	0	26
STA_30	0	0	0	27
STA_31	0	0	0	28
STA_32	0	0	0	0
STA_33	0	0	0	29
STA_34	0	0	0	30

GAMMA

	SATI
SERR	31
DELI	32
HANN	33
STAF	34

PSI

SERR	DELI	HANN	STAF
35	36	37	38

THETA-EPS

	SER_1	SER_2	SER_3	SER_4	SER_5	SER_6
SER_1	39					
SER_2	0	40				
SER_3	0	41	42			
SER_4	0	43	44	45		
SER_5	0	0	0	0	46	

SER_6	47	0	0	0	48	49
SER_7	0	0	0	0	50	51
DEL_8	0	0	0	0	0	0
DEL_9	0	0	0	0	0	0
DEL_10	0	0	0	0	0	0
DEL_11	0	0	0	0	0	0
DEL_12	0	0	0	0	0	0
DEL_13	0	0	0	0	0	0
DEL_14	0	0	0	0	66	0
DEL_15	0	0	69	0	0	0
DEL_16	0	0	0	75	0	0
DEL_17	0	0	0	0	0	0
DEL_18	0	0	0	0	0	0
DEL_19	0	0	83	0	84	0
HAN_20	88	0	89	0	0	0
HAN_21	0	0	0	0	95	0
HAN_22	0	0	100	0	101	0
HAN_23	0	0	0	0	0	0
HAN_24	0	0	0	0	0	108
HAN_25	0	114	0	0	0	0
HAN_26	0	0	0	0	0	0
STA_27	0	0	0	0	0	0
STA_28	0	129	0	0	0	0
STA_29	0	0	0	0	0	0
STA_30	0	0	0	0	0	0
STA_31	0	141	0	0	0	0
STA_32	0	0	0	0	0	0
STA_33	0	0	0	0	0	149
STA_34	0	0	156	0	0	0

THETA-EPS

	SER_7	DEL_8	DEL_9	DEL_10	DEL_11	DEL_12
SER_7	52					
DEL_8	0	53				
DEL_9	0	54	55			
DEL_10	0	56	57	58		
DEL_11	0	59	0	0	60	
DEL_12	0	0	0	0	61	62
DEL_13	0	0	0	0	63	64
DEL_14	0	67	0	0	0	0
DEL_15	70	71	0	0	0	72
DEL_16	0	0	0	0	0	0
DEL_17	0	0	0	0	79	0
DEL_18	0	0	0	0	0	0
DEL_19	0	0	0	0	0	0
HAN_20	90	0	0	91	92	0
HAN_21	0	0	0	0	0	0
HAN_22	0	0	0	0	0	0
HAN_23	0	0	105	0	0	0
HAN_24	0	109	0	0	0	110
HAN_25	115	0	0	0	0	0
HAN_26	0	0	0	0	0	0
STA_27	0	0	0	0	0	0
STA_28	0	130	0	0	0	0
STA_29	0	0	0	0	0	0
STA_30	0	0	0	0	0	0
STA_31	0	0	0	0	0	142
STA_32	0	0	0	0	0	0
STA_33	0	0	0	0	0	0
STA_34	0	0	0	0	0	0

THETA-EPS

	DEL_13	DEL_14	DEL_15	DEL_16	DEL_17	DEL_18
DEL_13	65					
DEL_14	0	68				
DEL_15	0	73	74			
DEL_16	0	76	77	78		

DEL_17	0	0	0	0	80	
DEL_18	0	0	0	0	81	82
DEL_19	0	0	0	0	85	86
HAN_20	93	0	0	0	0	0
HAN_21	0	0	0	0	96	97
HAN_22	0	0	0	0	0	0
HAN_23	0	0	0	0	0	0
HAN_24	0	0	0	0	0	0
HAN_25	116	0	0	0	117	0
HAN_26	0	122	0	0	123	0
STA_27	0	0	0	0	0	0
STA_28	131	0	0	0	0	0
STA_29	0	0	0	0	0	0
STA_30	137	0	0	0	0	0
STA_31	0	0	0	0	0	0
STA_32	0	0	0	0	0	0
STA_33	0	0	0	0	0	0
STA_34	0	0	0	0	0	0

THETA-EPS

	DEL_19	HAN_20	HAN_21	HAN_22	HAN_23	HAN_24
DEL_19	87					
HAN_20	0	94				
HAN_21	0	98	99			
HAN_22	0	102	103	104		
HAN_23	0	106	0	0	107	
HAN_24	0	0	0	111	112	113
HAN_25	118	0	0	0	119	120
HAN_26	0	0	0	0	0	0
STA_27	0	0	0	125	0	0
STA_28	0	0	0	132	0	0
STA_29	0	0	0	135	0	0
STA_30	138	0	0	0	0	0
STA_31	0	0	0	0	0	0
STA_32	0	0	0	0	0	146
STA_33	150	0	0	0	0	0
STA_34	0	0	0	0	0	0

THETA-EPS

	HAN_25	HAN_26	STA_27	STA_28	STA_29	STA_30
HAN_25	121					
HAN_26	0	124				
STA_27	126	127	128			
STA_28	0	0	133	134		
STA_29	0	0	0	0	136	
STA_30	0	0	0	0	139	140
STA_31	0	0	0	0	143	144
STA_32	0	0	147	0	0	0
STA_33	0	151	152	0	0	0
STA_34	0	157	0	158	0	0

THETA-EPS

	STA_31	STA_32	STA_33	STA_34
STA_31	145			
STA_32	0	148		
STA_33	153	154	155	
STA_34	159	160	161	162

TI CFA SAS

Number of Iterations = 32

LISREL Estimates (Maximum Likelihood)

LAMBDA-Y

	SERR	DELI	HANN	STAF
SER_1	1.00	- -	- -	- -
SER_2	0.99 (0.09) 10.54	- -	- -	- -
SER_3	0.99 (0.09) 11.23	- -	- -	- -
SER_4	1.07 (0.09) 11.53	- -	- -	- -
SER_5	1.10 (0.09) 11.64	- -	- -	- -
SER_6	1.08 (0.10) 11.24	- -	- -	- -
SER_7	0.96 (0.09) 10.49	- -	- -	- -
DEL_8	- -	1.00	- -	- -
DEL_9	- -	1.06 (0.09) 11.66	- -	- -
DEL_10	- -	1.12 (0.09) 12.11	- -	- -
DEL_11	- -	1.09 (0.10) 10.44	- -	- -
DEL_12	- -	1.18 (0.11) 10.55	- -	- -
DEL_13	- -	1.05 (0.11) 9.81	- -	- -
DEL_14	- -	1.19 (0.10) 11.97	- -	- -
DEL_15	- -	1.11 (0.10) 11.33	- -	- -
DEL_16	- -	1.13 (0.11) 10.54	- -	- -
DEL_17	- -	1.18 (0.11) 10.77	- -	- -
DEL_18	- -	1.29 (0.12)	- -	- -

		11.22		
DEL_19	- -	1.24 (0.12) 10.70	- -	- -
HAN_20	- -	- -	0.99 (0.08) 13.17	- -
HAN_21	- -	- -	0.96 (0.08) 12.39	- -
HAN_22	- -	- -	0.92 (0.08) 11.49	- -
HAN_23	- -	- -	1.00	- -
HAN_24	- -	- -	1.01 (0.07) 14.99	- -
HAN_25	- -	- -	0.99 (0.07) 13.90	- -
HAN_26	- -	- -	1.05 (0.08) 12.53	- -
STA_27	- -	- -	- -	0.95 (0.09) 11.19
STA_28	- -	- -	- -	0.82 (0.08) 10.39
STA_29	- -	- -	- -	0.88 (0.08) 11.29
STA_30	- -	- -	- -	0.95 (0.08) 12.32
STA_31	- -	- -	- -	0.88 (0.08) 10.59
STA_32	- -	- -	- -	1.00
STA_33	- -	- -	- -	0.92 (0.06) 14.91
STA_34	- -	- -	- -	0.94 (0.07) 13.46

GAMMA

	SATI
SERR	0.41 (0.03) 12.83

DELI	0.39
	(0.03)
	12.36
HANN	0.47
	(0.03)
	14.28
STAF	0.45
	(0.03)
	13.74

Covariance Matrix of ETA and KSI

	SERR	DELI	HANN	STAF	SATI
SERR	0.21				
DELI	0.16	0.16			
HANN	0.19	0.18	0.24		
STAF	0.18	0.18	0.21	0.27	
SATI	0.41	0.39	0.47	0.45	1.00

PHI

SATI
1.00

PSI
Note: This matrix is diagonal.

SERR	DELI	HANN	STAF
0.05	0.00	0.02	0.06
(0.01)	(0.00)	(0.01)	(0.01)
4.52	0.87	2.81	4.85

Squared Multiple Correlations for Structural Equations

SERR	DELI	HANN	STAF
0.79	0.97	0.91	0.77

Squared Multiple Correlations for Reduced Form

SERR	DELI	HANN	STAF
0.79	0.97	0.91	0.77

THETA-EPS

	SER_1	SER_2	SER_3	SER_4	SER_5	SER_6
SER_1	0.27					
	(0.02)					
	12.19					
SER_2	- -	0.34				
		(0.03)				
		12.70				
SER_3	- -	0.07	0.26			
		(0.02)	(0.02)			
		4.39	12.28			
SER_4	- -	0.04	0.07	0.28		
		(0.02)	(0.02)	(0.02)		
		2.51	4.13	11.98		

SER_5	- -	- -	- -	- -	0.28 (0.02) 11.90	
SER_6	-0.03 (0.01) -2.54	- -	- -	- -	0.09 (0.02) 4.92	0.25 (0.02) 11.28
SER_7	- -	- -	- -	- -	0.09 (0.02) 4.70	0.14 (0.02) 7.19
DEL_8	- -	- -	- -	- -	- -	- -
DEL_9	- -	- -	- -	- -	- -	- -
DEL_10	- -	- -	- -	- -	- -	- -
DEL_11	- -	- -	- -	- -	- -	- -
DEL_12	- -	- -	- -	- -	- -	- -
DEL_13	- -	- -	- -	- -	- -	- -
DEL_14	- -	- -	- -	- -	-0.03 (0.01) -2.12	- -
DEL_15	- -	- -	-0.03 (0.01) -2.91	- -	- -	- -
DEL_16	- -	- -	- -	0.05 (0.01) 4.04	- -	- -
DEL_17	- -	- -	- -	- -	- -	- -
DEL_18	- -	- -	- -	- -	- -	- -
DEL_19	- -	- -	0.04 (0.01) 2.97	- -	0.04 (0.01) 2.98	- -
HAN_20	-0.03 (0.01) -2.61	- -	0.03 (0.01) 2.62	- -	- -	- -
HAN_21	- -	- -	- -	- -	0.04 (0.01) 3.25	- -
HAN_22	- -	- -	0.04 (0.01) 3.24	- -	0.03 (0.01) 2.38	- -
HAN_23	- -	- -	- -	- -	- -	- -
HAN_24	- -	- -	- -	- -	- -	-0.04 (0.01) -3.92
HAN_25	- -	-0.05 (0.01) -3.58	- -	- -	- -	- -
HAN_26	- -	- -	- -	- -	- -	- -
STA_27	- -	- -	- -	- -	- -	- -

STA_28	- -	0.05 (0.02) 3.16	- -	- -	- -	- -
STA_29	- -	- -	- -	- -	- -	- -
STA_30	- -	- -	- -	- -	- -	- -
STA_31	- -	0.06 (0.01) 3.78	- -	- -	- -	- -
STA_32	- -	- -	- -	- -	- -	- -
STA_33	- -	- -	- -	- -	- -	-0.02 (0.01) -2.26
STA_34	- -	- -	-0.03 (0.01) -2.60	- -	- -	- -

THETA-EPS

	SER_7	DEL_8	DEL_9	DEL_10	DEL_11	DEL_12
SER_7	0.33 (0.03) 12.72					
DEL_8	- -	0.29 (0.02) 13.44				
DEL_9	- -	0.05 (0.01) 3.43	0.24 (0.02) 13.06			
DEL_10	- -	0.06 (0.01) 4.50	0.07 (0.01) 4.59	0.27 (0.02) 13.01		
DEL_11	- -	0.03 (0.01) 2.26	- -	- -	0.33 (0.03) 13.37	
DEL_12	- -	- -	- -	- -	0.10 (0.02) 5.68	0.30 (0.02) 13.18
DEL_13	- -	- -	- -	- -	0.09 (0.02) 5.10	0.11 (0.02) 6.20
DEL_14	- -	0.06 (0.01) 3.97	- -	- -	- -	- -
DEL_15	-0.04 (0.01) -3.07	0.04 (0.01) 3.35	- -	- -	- -	0.03 (0.01) 2.19
DEL_16	- -	- -	- -	- -	- -	- -
DEL_17	- -	- -	- -	- -	0.03 (0.01) 2.45	- -
DEL_18	- -	- -	- -	- -	- -	- -

DEL_19	- -	- -	- -	- -	- -	- -
HAN_20	-0.03 (0.01) -2.54	- -	- -	-0.03 (0.01) -2.19	-0.04 (0.01) -2.74	- -
HAN_21	- -	- -	- -	- -	- -	- -
HAN_22	- -	- -	- -	- -	- -	- -
HAN_23	- -	- -	0.03 (0.01) 2.26	- -	- -	- -
HAN_24	- -	0.02 (0.01) 2.07	- -	- -	- -	0.02 (0.01) 2.03
HAN_25	0.06 (0.01) 4.72	- -	- -	- -	- -	- -
HAN_26	- -	- -	- -	- -	- -	- -
STA_27	- -	- -	- -	- -	- -	- -
STA_28	- -	0.04 (0.01) 2.84	- -	- -	- -	- -
STA_29	- -	- -	- -	- -	- -	- -
STA_30	- -	- -	- -	- -	- -	- -
STA_31	- -	- -	- -	- -	- -	0.04 (0.01) 2.97
STA_32	- -	- -	- -	- -	- -	- -
STA_33	- -	- -	- -	- -	- -	- -
STA_34	- -	- -	- -	- -	- -	- -

THETA-EPS

	DEL_13	DEL_14	DEL_15	DEL_16	DEL_17	DEL_18
DEL_13	0.33 (0.02) 13.45					
DEL_14	- -	0.28 (0.02) 13.01				
DEL_15	- -	0.07 (0.02) 4.36	0.28 (0.02) 13.29			
DEL_16	- -	0.04 (0.01) 2.83	0.09 (0.02) 6.14	0.28 (0.02) 13.14		
DEL_17	- -	- -	- -	- -	0.27 (0.02) 13.08	
DEL_18	- -	- -	- -	- -	0.10 (0.02)	0.26 (0.02)

					6.38	12.65
DEL_19	- -	- -	- -	- -	0.09	0.10
					(0.02)	(0.02)
					5.57	6.08
HAN_20	-0.04	- -	- -	- -	- -	- -
	(0.01)					
	-2.89					
HAN_21	- -	- -	- -	- -	-0.04	-0.04
					(0.01)	(0.01)
					-3.36	-3.02
HAN_22	- -	- -	- -	- -	- -	- -
HAN_23	- -	- -	- -	- -	- -	- -
HAN_24	- -	- -	- -	- -	- -	- -
HAN_25	0.03	- -	- -	- -	0.04	- -
	(0.01)				(0.01)	
	2.61				3.41	
HAN_26	- -	0.04	- -	- -	0.03	- -
		(0.01)			(0.01)	
		2.75			2.25	
STA_27	- -	- -	- -	- -	- -	- -
STA_28	-0.05	- -	- -	- -	- -	- -
	(0.02)					
	-3.59					
STA_29	- -	- -	- -	- -	- -	- -
STA_30	-0.03	- -	- -	- -	- -	- -
	(0.01)					
	-2.56					
STA_31	- -	- -	- -	- -	- -	- -
STA_32	- -	- -	- -	- -	- -	- -
STA_33	- -	- -	- -	- -	- -	- -
STA_34	- -	- -	- -	- -	- -	- -

THETA-EPS

	DEL_19	HAN_20	HAN_21	HAN_22	HAN_23	HAN_24
DEL_19	0.31					
	(0.02)					
	13.17					
HAN_20	- -	0.25				
		(0.02)				
		12.20				
HAN_21	- -	0.05	0.24			
		(0.01)	(0.02)			
		3.72	12.29			
HAN_22	- -	0.05	0.08	0.30		
		(0.02)	(0.02)	(0.02)		
		3.30	4.97	12.80		
HAN_23	- -	0.03	- -	- -	0.27	
		(0.01)			(0.02)	

		2.18			12.41	
HAN_24	- -	- -	- -	0.03	0.10	0.30
				(0.01)	(0.02)	(0.02)
				2.31	5.92	12.78
HAN_25	0.03	- -	- -	- -	0.06	0.11
	(0.01)				(0.02)	(0.02)
	2.20				3.99	6.40
HAN_26	- -	- -	- -	- -	- -	- -
STA_27	- -	- -	- -	0.03	- -	- -
				(0.01)		
				2.24		
STA_28	- -	- -	- -	-0.03	- -	- -
				(0.02)		
				-2.08		
STA_29	- -	- -	- -	-0.04	- -	- -
				(0.01)		
				-2.85		
STA_30	0.03	- -	- -	- -	- -	- -
	(0.01)					
	2.42					
STA_31	- -	- -	- -	- -	- -	- -
STA_32	- -	- -	- -	- -	- -	-0.04
						(0.01)
						-3.16
STA_33	-0.03	- -	- -	- -	- -	- -
	(0.01)					
	-2.45					
STA_34	- -	- -	- -	- -	- -	- -

THETA-EPS

	HAN_25	HAN_26	STA_27	STA_28	STA_29	STA_30
HAN_25	0.28					
	(0.02)					
	12.86					
HAN_26	- -	0.29				
		(0.02)				
		12.66				
STA_27	0.03	0.13	0.31			
	(0.01)	(0.02)	(0.03)			
	2.68	7.47	12.03			
STA_28	- -	- -	0.04	0.35		
			(0.02)	(0.03)		
			2.38	12.83		
STA_29	- -	- -	- -	- -	0.31	
					(0.02)	
					12.65	
STA_30	- -	- -	- -	- -	0.09	0.26
					(0.02)	(0.02)
					5.45	12.05
STA_31	- -	- -	- -	- -	0.15	0.11
					(0.02)	(0.02)

					7.46	5.90
STA_32	- -	- -	-0.04	- -	- -	- -
			(0.01)			
			-2.65			
STA_33	- -	0.03	-0.04	- -	- -	- -
		(0.01)	(0.01)			
		2.48	-2.58			
STA_34	- -	0.05	- -	-0.04	- -	- -
		(0.01)		(0.02)		
		3.34		-2.36		

THETA-EPS

	STA_31	STA_32	STA_33	STA_34
STA_31	0.38			
	(0.03)			
	13.08			
STA_32	- -	0.26		
		(0.02)		
		11.23		
STA_33	0.03	0.10	0.28	
	(0.01)	(0.02)	(0.02)	
	2.43	5.31	11.88	
STA_34	0.04	0.06	0.12	0.31
	(0.01)	(0.02)	(0.02)	(0.03)
	2.86	3.47	5.92	12.00

Squared Multiple Correlations for Y - Variables

SER_1	SER_2	SER_3	SER_4	SER_5	SER_6
0.44	0.38	0.44	0.47	0.48	0.50

Squared Multiple Correlations for Y - Variables

SER_7	DEL_8	DEL_9	DEL_10	DEL_11	DEL_12
0.38	0.35	0.42	0.43	0.36	0.42

Squared Multiple Correlations for Y - Variables

DEL_13	DEL_14	DEL_15	DEL_16	DEL_17	DEL_18
0.35	0.45	0.41	0.42	0.45	0.50

Squared Multiple Correlations for Y - Variables

DEL_19	HAN_20	HAN_21	HAN_22	HAN_23	HAN_24
0.44	0.49	0.48	0.41	0.47	0.45

Squared Multiple Correlations for Y - Variables

HAN_25	HAN_26	STA_27	STA_28	STA_29	STA_30
0.46	0.48	0.44	0.34	0.40	0.49

Squared Multiple Correlations for Y - Variables

STA_31	STA_32	STA_33	STA_34
0.35	0.50	0.44	0.43

Goodness of Fit Statistics

Degrees of Freedom = 433
Minimum Fit Function Chi-Square = 493.53 (P = 0.023)
Normal Theory Weighted Least Squares Chi-Square = 481.74 (P = 0.053)
Estimated Non-centrality Parameter (NCP) = 48.74
90 Percent Confidence Interval for NCP = (0.0 ; 106.51)

Minimum Fit Function Value = 1.24
Population Discrepancy Function Value (F0) = 0.12
90 Percent Confidence Interval for F0 = (0.0 ; 0.27)
Root Mean Square Error of Approximation (RMSEA) = 0.017
90 Percent Confidence Interval for RMSEA = (0.0 ; 0.025)
P-Value for Test of Close Fit (RMSEA < 0.05) = 1.00

Expected Cross-Validation Index (ECVI) = 2.02
90 Percent Confidence Interval for ECVI = (1.90 ; 2.16)
ECVI for Saturated Model = 2.98
ECVI for Independence Model = 91.79

Chi-Square for Independence Model with 561 Degrees of Freedom = 36554.65
Independence AIC = 36622.65
Model AIC = 805.74
Saturated AIC = 1190.00
Independence CAIC = 36792.36
Model CAIC = 1614.35
Saturated CAIC = 4159.92

Normed Fit Index (NFI) = 0.99
Non-Normed Fit Index (NNFI) = 1.00
Parsimony Normed Fit Index (PNFI) = 0.76
Comparative Fit Index (CFI) = 1.00
Incremental Fit Index (IFI) = 1.00
Relative Fit Index (RFI) = 0.98

Critical N (CN) = 408.78

Root Mean Square Residual (RMR) = 0.018
Standardized RMR = 0.035
Goodness of Fit Index (GFI) = 0.93
Adjusted Goodness of Fit Index (AGFI) = 0.91
Parsimony Goodness of Fit Index (PGFI) = 0.68

TI CFA SAS

Fitted Covariance Matrix

	SER_1	SER_2	SER_3	SER_4	SER_5	SER_6
SER_1	0.48					
SER_2	0.21	0.55				
SER_3	0.21	0.28	0.47			
SER_4	0.23	0.27	0.29	0.52		
SER_5	0.23	0.23	0.23	0.25	0.54	
SER_6	0.20	0.22	0.22	0.24	0.34	0.49
SER_7	0.20	0.20	0.20	0.22	0.31	0.36
DEL_8	0.16	0.16	0.16	0.17	0.18	0.17
DEL_9	0.17	0.17	0.17	0.18	0.19	0.18
DEL_10	0.18	0.18	0.18	0.19	0.20	0.19
DEL_11	0.17	0.17	0.17	0.19	0.19	0.19
DEL_12	0.19	0.19	0.19	0.20	0.21	0.20
DEL_13	0.17	0.17	0.17	0.18	0.18	0.18
DEL_14	0.19	0.19	0.19	0.20	0.18	0.20
DEL_15	0.18	0.17	0.14	0.19	0.19	0.19
DEL_16	0.18	0.18	0.18	0.25	0.20	0.19
DEL_17	0.19	0.19	0.19	0.20	0.21	0.20
DEL_18	0.21	0.20	0.20	0.22	0.23	0.22
DEL_19	0.20	0.20	0.23	0.21	0.26	0.21

HAN_20	0.15	0.19	0.22	0.20	0.21	0.20
HAN_21	0.18	0.18	0.18	0.20	0.24	0.20
HAN_22	0.18	0.17	0.21	0.19	0.23	0.19
HAN_23	0.19	0.19	0.19	0.20	0.21	0.21
HAN_24	0.19	0.19	0.19	0.21	0.21	0.17
HAN_25	0.19	0.14	0.19	0.20	0.21	0.20
HAN_26	0.20	0.20	0.20	0.21	0.22	0.22
STA_27	0.18	0.17	0.17	0.19	0.19	0.19
STA_28	0.15	0.20	0.15	0.16	0.17	0.16
STA_29	0.16	0.16	0.16	0.17	0.18	0.17
STA_30	0.18	0.17	0.17	0.19	0.19	0.19
STA_31	0.16	0.22	0.16	0.17	0.18	0.17
STA_32	0.18	0.18	0.18	0.20	0.20	0.20
STA_33	0.17	0.17	0.17	0.18	0.19	0.16
STA_34	0.17	0.17	0.14	0.19	0.19	0.19

Fitted Covariance Matrix

	SER_7	DEL_8	DEL_9	DEL_10	DEL_11	DEL_12
SER_7	0.52					
DEL_8	0.15	0.44				
DEL_9	0.16	0.21	0.41			
DEL_10	0.17	0.24	0.25	0.46		
DEL_11	0.17	0.20	0.18	0.19	0.52	
DEL_12	0.18	0.18	0.20	0.21	0.30	0.52
DEL_13	0.16	0.17	0.17	0.19	0.27	0.30
DEL_14	0.18	0.24	0.20	0.21	0.20	0.22
DEL_15	0.13	0.22	0.18	0.19	0.19	0.23
DEL_16	0.17	0.18	0.19	0.20	0.19	0.21
DEL_17	0.18	0.19	0.20	0.21	0.23	0.22
DEL_18	0.20	0.20	0.21	0.23	0.22	0.24
DEL_19	0.19	0.19	0.21	0.22	0.21	0.23
HAN_20	0.15	0.18	0.19	0.18	0.16	0.21
HAN_21	0.18	0.18	0.19	0.20	0.19	0.21
HAN_22	0.17	0.17	0.18	0.19	0.18	0.20
HAN_23	0.18	0.18	0.22	0.21	0.20	0.22
HAN_24	0.19	0.21	0.19	0.21	0.20	0.24
HAN_25	0.24	0.18	0.19	0.20	0.20	0.21
HAN_26	0.19	0.19	0.20	0.22	0.21	0.23
STA_27	0.17	0.17	0.18	0.19	0.18	0.20
STA_28	0.15	0.19	0.15	0.16	0.16	0.17
STA_29	0.16	0.16	0.16	0.17	0.17	0.18
STA_30	0.17	0.17	0.18	0.19	0.18	0.20
STA_31	0.16	0.16	0.16	0.17	0.17	0.22
STA_32	0.18	0.18	0.19	0.20	0.19	0.21
STA_33	0.16	0.16	0.17	0.18	0.18	0.19
STA_34	0.17	0.17	0.18	0.19	0.18	0.20

Fitted Covariance Matrix

	DEL_13	DEL_14	DEL_15	DEL_16	DEL_17	DEL_18
DEL_13	0.50					
DEL_14	0.20	0.50				
DEL_15	0.18	0.27	0.47			
DEL_16	0.19	0.25	0.29	0.48		
DEL_17	0.20	0.22	0.21	0.21	0.49	
DEL_18	0.21	0.24	0.22	0.23	0.34	0.53
DEL_19	0.20	0.23	0.22	0.22	0.32	0.35
HAN_20	0.15	0.22	0.20	0.20	0.22	0.23
HAN_21	0.19	0.21	0.20	0.20	0.17	0.19
HAN_22	0.18	0.20	0.19	0.19	0.20	0.22
HAN_23	0.19	0.22	0.20	0.21	0.22	0.24
HAN_24	0.19	0.22	0.20	0.21	0.22	0.24
HAN_25	0.22	0.22	0.20	0.20	0.25	0.23
HAN_26	0.20	0.27	0.21	0.22	0.26	0.25
STA_27	0.18	0.20	0.19	0.19	0.20	0.22
STA_28	0.10	0.17	0.16	0.16	0.17	0.19
STA_29	0.16	0.19	0.17	0.18	0.18	0.20
STA_30	0.15	0.20	0.19	0.19	0.20	0.22

STA_31	0.16	0.19	0.17	0.18	0.18	0.20
STA_32	0.19	0.21	0.20	0.20	0.21	0.23
STA_33	0.17	0.19	0.18	0.18	0.19	0.21
STA_34	0.18	0.20	0.18	0.19	0.20	0.22

Fitted Covariance Matrix

	DEL_19	HAN_20	HAN_21	HAN_22	HAN_23	HAN_24
DEL_19	0.55					
HAN_20	0.22	0.48				
HAN_21	0.22	0.28	0.47			
HAN_22	0.21	0.27	0.29	0.51		
HAN_23	0.23	0.27	0.23	0.22	0.51	
HAN_24	0.23	0.24	0.24	0.25	0.34	0.55
HAN_25	0.25	0.24	0.23	0.22	0.30	0.35
HAN_26	0.24	0.25	0.25	0.24	0.25	0.26
STA_27	0.21	0.20	0.20	0.22	0.20	0.20
STA_28	0.18	0.17	0.17	0.13	0.17	0.17
STA_29	0.19	0.18	0.18	0.14	0.19	0.19
STA_30	0.24	0.20	0.20	0.19	0.20	0.20
STA_31	0.19	0.18	0.18	0.17	0.19	0.19
STA_32	0.22	0.21	0.21	0.20	0.21	0.18
STA_33	0.17	0.19	0.19	0.18	0.19	0.20
STA_34	0.21	0.20	0.19	0.18	0.20	0.20

Fitted Covariance Matrix

	HAN_25	HAN_26	STA_27	STA_28	STA_29	STA_30
HAN_25	0.52					
HAN_26	0.25	0.56				
STA_27	0.23	0.34	0.55			
STA_28	0.17	0.18	0.25	0.52		
STA_29	0.18	0.20	0.22	0.19	0.51	
STA_30	0.20	0.21	0.24	0.21	0.32	0.50
STA_31	0.18	0.20	0.22	0.19	0.35	0.33
STA_32	0.21	0.22	0.21	0.22	0.23	0.25
STA_33	0.19	0.24	0.19	0.20	0.21	0.23
STA_34	0.20	0.26	0.24	0.17	0.22	0.24

Fitted Covariance Matrix

	STA_31	STA_32	STA_33	STA_34
STA_31	0.58			
STA_32	0.23	0.53		
STA_33	0.25	0.34	0.50	
STA_34	0.26	0.31	0.35	0.54

Fitted Residuals

	SER_1	SER_2	SER_3	SER_4	SER_5	SER_6
SER_1	0.00					
SER_2	0.00	0.00				
SER_3	0.00	0.00	0.00			
SER_4	0.01	0.01	0.00	0.00		
SER_5	0.00	-0.03	0.01	-0.01	0.00	
SER_6	-0.01	-0.03	0.01	0.01	0.00	0.00
SER_7	0.00	-0.01	0.01	0.00	0.00	0.00
DEL_8	0.01	0.00	0.00	-0.02	0.02	0.02
DEL_9	-0.02	-0.01	-0.01	-0.02	0.01	0.02
DEL_10	-0.01	0.01	-0.01	-0.02	0.02	0.02
DEL_11	-0.02	0.01	-0.01	0.00	0.02	0.02
DEL_12	0.00	0.00	0.02	0.03	0.02	0.01
DEL_13	-0.02	0.00	0.03	0.03	0.04	0.02
DEL_14	-0.01	0.02	-0.03	-0.03	-0.01	-0.02
DEL_15	-0.01	0.01	-0.01	-0.01	0.00	0.01
DEL_16	-0.01	0.02	-0.01	-0.01	-0.02	-0.02
DEL_17	0.00	0.00	0.00	-0.01	0.03	0.01

DEL_18	-0.02	0.02	-0.02	-0.02	0.02	-0.01
DEL_19	0.01	0.02	0.00	-0.01	0.02	-0.01
HAN_20	0.00	0.01	0.00	0.00	0.02	0.01
HAN_21	0.01	0.00	0.00	0.00	0.00	0.00
HAN_22	-0.01	0.00	-0.01	-0.01	0.02	0.03
HAN_23	-0.02	-0.01	-0.02	-0.03	0.02	0.01
HAN_24	0.02	0.01	-0.01	-0.02	0.01	0.02
HAN_25	0.02	0.00	-0.02	-0.03	0.02	0.03
HAN_26	-0.01	0.02	-0.01	0.00	-0.02	-0.02
STA_27	0.03	0.06	0.02	0.02	-0.01	-0.01
STA_28	0.02	0.02	0.00	0.00	-0.03	-0.02
STA_29	0.02	0.02	-0.01	0.00	-0.02	-0.04
STA_30	0.01	0.02	-0.01	-0.01	-0.04	-0.02
STA_31	0.03	0.01	-0.03	0.01	-0.04	-0.04
STA_32	0.01	0.05	0.03	0.02	-0.02	-0.01
STA_33	0.02	0.02	0.01	0.01	-0.02	-0.01
STA_34	0.02	0.05	0.02	0.03	-0.03	-0.01

Fitted Residuals

	SER_7	DEL_8	DEL_9	DEL_10	DEL_11	DEL_12
SER_7	0.00					
DEL_8	0.00	0.01				
DEL_9	0.02	0.00	0.00			
DEL_10	0.01	0.00	0.00	0.00		
DEL_11	0.02	0.00	0.02	0.02	0.00	
DEL_12	0.02	-0.01	0.02	0.03	-0.01	0.00
DEL_13	0.02	-0.02	0.01	0.01	0.00	-0.01
DEL_14	-0.02	0.01	0.01	0.01	0.00	-0.01
DEL_15	0.00	0.00	-0.01	-0.02	0.01	-0.01
DEL_16	-0.02	-0.01	0.00	-0.03	-0.03	-0.01
DEL_17	0.00	0.01	0.00	0.02	0.00	-0.01
DEL_18	0.00	-0.02	0.00	0.01	-0.01	-0.01
DEL_19	0.00	-0.02	-0.01	-0.01	-0.01	0.01
HAN_20	0.00	0.01	0.00	-0.01	0.00	0.00
HAN_21	0.01	0.00	-0.01	-0.02	-0.01	-0.01
HAN_22	0.04	-0.01	0.01	-0.02	-0.03	0.00
HAN_23	0.00	-0.01	-0.01	-0.02	0.02	-0.01
HAN_24	0.02	-0.01	-0.01	-0.01	-0.01	-0.01
HAN_25	0.02	0.00	0.00	0.00	-0.01	-0.01
HAN_26	-0.03	0.02	-0.01	-0.02	0.01	0.01
STA_27	0.00	0.01	0.00	-0.02	-0.01	0.04
STA_28	-0.03	0.03	0.01	0.03	-0.01	0.02
STA_29	-0.06	0.03	0.00	0.02	-0.01	-0.02
STA_30	-0.03	0.00	0.01	0.01	0.00	-0.02
STA_31	-0.04	-0.01	0.01	0.00	-0.03	-0.03
STA_32	-0.04	0.01	0.00	0.00	-0.01	-0.02
STA_33	-0.02	0.03	-0.01	0.00	0.01	-0.01
STA_34	-0.03	0.01	0.01	-0.01	0.00	0.00

Fitted Residuals

	DEL_13	DEL_14	DEL_15	DEL_16	DEL_17	DEL_18
DEL_13	0.00					
DEL_14	-0.03	0.00				
DEL_15	-0.04	0.00	0.00			
DEL_16	-0.03	-0.01	0.00	0.00		
DEL_17	0.01	0.00	0.02	-0.01	0.00	
DEL_18	0.00	-0.02	0.02	0.02	0.00	0.00
DEL_19	0.01	0.00	0.00	0.01	0.00	0.00
HAN_20	0.01	0.00	0.03	0.02	0.00	0.01
HAN_21	0.03	0.01	0.00	0.02	0.01	0.01
HAN_22	0.03	-0.01	0.00	0.00	0.01	-0.01
HAN_23	0.00	0.01	0.00	-0.01	0.02	0.03
HAN_24	0.00	0.01	-0.01	0.01	-0.01	0.02
HAN_25	0.00	0.00	0.00	-0.01	-0.01	0.00
HAN_26	0.00	0.02	0.02	0.01	0.01	0.02
STA_27	0.01	0.05	0.04	0.05	-0.01	0.00
STA_28	0.00	0.05	0.05	0.03	-0.02	0.00

STA_29	-0.04	0.01	0.03	0.03	-0.04	0.00
STA_30	-0.02	0.01	0.00	0.03	-0.05	-0.04
STA_31	-0.05	0.00	0.01	0.01	-0.03	-0.01
STA_32	-0.02	-0.01	-0.03	-0.02	0.01	-0.01
STA_33	-0.02	-0.01	-0.03	-0.01	0.00	-0.02
STA_34	0.00	-0.02	-0.02	-0.02	0.00	-0.01

Fitted Residuals

	DEL_19	HAN_20	HAN_21	HAN_22	HAN_23	HAN_24
DEL_19	0.00					
HAN_20	0.01	0.00				
HAN_21	0.02	0.00	0.00			
HAN_22	-0.01	0.00	0.00	0.00		
HAN_23	0.02	0.00	0.00	0.01	0.00	
HAN_24	0.00	-0.01	-0.01	0.00	-0.01	0.00
HAN_25	0.00	-0.02	0.01	0.03	0.00	0.00
HAN_26	0.03	0.01	0.00	0.00	0.01	0.00
STA_27	0.02	0.00	0.03	0.02	0.02	0.03
STA_28	0.00	-0.01	-0.01	-0.01	0.01	0.03
STA_29	-0.04	0.01	0.00	-0.02	-0.01	0.02
STA_30	-0.04	-0.02	0.00	-0.04	-0.02	0.00
STA_31	-0.05	-0.01	-0.01	-0.03	-0.03	0.00
STA_32	-0.01	-0.02	0.00	-0.03	0.00	0.00
STA_33	-0.02	-0.02	-0.01	-0.02	-0.03	0.00
STA_34	-0.02	-0.03	0.01	0.00	-0.04	-0.03

Fitted Residuals

	HAN_25	HAN_26	STA_27	STA_28	STA_29	STA_30
HAN_25	0.00					
HAN_26	-0.01	0.01				
STA_27	0.01	0.02	0.01			
STA_28	0.01	0.02	0.01	0.01		
STA_29	-0.02	0.02	-0.02	-0.01	0.00	
STA_30	0.00	0.02	0.00	0.01	0.00	0.00
STA_31	0.00	0.01	-0.01	0.02	0.01	0.01
STA_32	-0.03	0.00	-0.01	0.00	0.03	0.01
STA_33	-0.02	-0.01	-0.01	0.01	0.03	0.02
STA_34	-0.04	-0.01	-0.02	0.01	0.03	0.03

Fitted Residuals

	STA_31	STA_32	STA_33	STA_34
STA_31	0.01			
STA_32	0.04	0.00		
STA_33	0.03	0.00	0.01	
STA_34	0.03	0.00	0.00	0.00

Summary Statistics for Fitted Residuals

```
Smallest Fitted Residual =   -0.06
  Median Fitted Residual =    0.00
 Largest Fitted Residual =    0.06
```

Stemleaf Plot

```
- 6|3
- 5|1
- 4|765443332100
- 3|8876643222211111
- 2|998888777776666665555544443332222222222211111000
- 1|99999999888888888887777776666555555554444444433333333333322222222111111+19
- 0|99999988888888888777777777777776666666666666666655555555544444444444444+77
  0|11111111111111111111222222222222333333333333333444444444444555555555555+48
  1|00000000111111112222222222233333333444444555556666666667777788888889999999+05
  2|0000000011111112222233333334444444555666666677777889999
  3|00112223334444558999
```

4|0579
5|0227

Standardized Residuals

	SER_1	SER_2	SER_3	SER_4	SER_5	SER_6
SER_1	-0.76					
SER_2	0.14	-0.09				
SER_3	0.14	-0.38	-0.51			
SER_4	0.85	1.08	-0.93	-1.03		
SER_5	-0.26	-1.94	0.82	-0.64	0.86	
SER_6	-1.19	-2.78	0.83	0.52	0.30	-0.42
SER_7	0.08	-0.98	0.60	0.29	0.15	-0.58
DEL_8	0.36	0.28	-0.20	-1.22	1.58	1.32
DEL_9	-1.79	-0.47	-0.65	-1.26	1.00	1.36
DEL_10	-0.44	0.37	-0.92	-1.20	1.19	1.74
DEL_11	-1.41	0.40	-0.41	0.30	1.34	1.58
DEL_12	-0.01	-0.03	1.09	1.72	1.32	0.84
DEL_13	-1.20	0.02	1.74	1.65	2.46	1.49
DEL_14	-0.68	0.93	-2.21	-2.35	-0.60	-1.51
DEL_15	-0.75	0.55	-0.83	-0.51	0.29	0.46
DEL_16	-1.00	0.96	-1.03	-1.66	-1.20	-1.51
DEL_17	0.22	-0.29	-0.05	-0.91	2.02	0.86
DEL_18	-1.20	1.14	-1.33	-1.58	1.71	-0.97
DEL_19	0.63	1.14	-0.07	-0.36	1.52	-0.38
HAN_20	0.46	0.37	-0.33	-0.32	1.21	0.53
HAN_21	0.59	0.02	0.27	0.10	0.29	-0.27
HAN_22	-0.42	-0.11	-0.62	-0.93	1.68	1.97
HAN_23	-1.11	-0.86	-1.26	-2.08	1.26	0.59
HAN_24	1.30	0.43	-0.46	-1.42	0.70	1.39
HAN_25	1.43	0.31	-1.28	-1.74	1.01	1.76
HAN_26	-0.37	1.12	-0.53	0.22	-1.10	-1.47
STA_27	1.65	3.09	1.11	0.96	-0.74	-0.51
STA_28	1.31	2.05	-0.21	0.07	-1.48	-1.25
STA_29	1.00	1.29	-0.79	-0.22	-1.31	-2.53
STA_30	0.63	1.14	-0.93	-0.39	-2.37	-1.03
STA_31	1.73	0.75	-1.74	0.30	-2.12	-2.51
STA_32	0.33	2.85	2.10	1.27	-1.39	-0.98
STA_33	1.31	1.02	0.87	0.46	-1.10	-0.92
STA_34	1.15	2.76	1.71	1.70	-1.52	-0.66

Standardized Residuals

	SER_7	DEL_8	DEL_9	DEL_10	DEL_11	DEL_12
SER_7	0.02					
DEL_8	-0.13	2.23				
DEL_9	1.64	0.49	-1.96			
DEL_10	0.59	1.04	-1.44	-0.52		
DEL_11	1.17	0.19	1.58	1.39	-0.70	
DEL_12	1.42	-0.71	1.32	2.11	-1.28	-1.49
DEL_13	1.29	-1.27	0.78	0.98	-0.47	-1.86
DEL_14	-1.15	1.68	1.03	0.74	0.14	-0.88
DEL_15	-0.32	-0.10	-0.63	-1.51	0.83	-1.56
DEL_16	-1.31	-1.11	0.06	-2.06	-1.83	-0.80
DEL_17	-0.15	0.63	-0.02	1.27	-0.16	-0.75
DEL_18	-0.32	-1.61	0.30	1.12	-0.56	-1.04
DEL_19	0.29	-1.50	-0.88	-0.75	-0.35	0.86
HAN_20	-0.01	0.55	-0.15	-1.46	-0.48	-0.26
HAN_21	0.36	-0.21	-1.23	-2.00	-0.58	-0.72
HAN_22	2.34	-0.81	0.74	-1.67	-1.64	0.00
HAN_23	0.14	-0.73	-1.94	-1.88	1.28	-0.69
HAN_24	1.31	-0.79	-0.81	-0.80	-0.78	-1.29
HAN_25	1.37	0.02	-0.09	0.34	-0.60	-0.91
HAN_26	-1.93	1.70	-0.79	-1.69	0.75	0.76
STA_27	-0.19	0.39	-0.30	-1.16	-0.35	2.33
STA_28	-1.49	2.85	0.54	2.17	-0.83	1.22
STA_29	-3.48	1.74	-0.18	1.32	-0.37	-1.51
STA_30	-1.83	0.09	0.84	0.71	0.13	-1.19
STA_31	-2.15	-0.48	0.50	-0.06	-1.48	-2.51

STA_32	-2.32	0.80	-0.33	0.10	-0.44	-1.07
STA_33	-1.14	1.72	-0.96	-0.27	0.39	-0.53
STA_34	-1.77	0.51	0.65	-0.66	-0.05	0.02

Standardized Residuals

	DEL_13	DEL_14	DEL_15	DEL_16	DEL_17	DEL_18
DEL_13	-1.15					
DEL_14	-2.12	-0.25				
DEL_15	-2.60	0.82	0.57			
DEL_16	-1.88	-1.41	-0.06	-1.04		
DEL_17	0.59	-0.15	1.82	-0.77	-0.31	
DEL_18	0.27	-1.26	1.55	1.54	-0.42	-1.29
DEL_19	0.49	0.29	-0.33	0.63	-0.27	-0.41
HAN_20	1.51	0.03	2.16	1.83	-0.36	0.41
HAN_21	1.86	0.40	-0.37	1.65	1.21	1.65
HAN_22	2.17	-0.40	-0.11	-0.04	0.43	-0.77
HAN_23	-0.05	1.02	0.25	-0.48	1.26	1.98
HAN_24	0.13	0.77	-0.57	0.87	-0.97	1.50
HAN_25	-0.13	0.06	-0.15	-0.64	-0.67	0.25
HAN_26	0.17	2.38	1.60	0.57	1.57	1.21
STA_27	0.76	3.12	2.48	2.92	-0.43	0.02
STA_28	-0.36	3.17	2.86	1.98	-1.04	0.20
STA_29	-2.56	0.77	1.68	2.14	-2.33	-0.15
STA_30	-1.92	0.93	-0.31	1.76	-3.29	-2.68
STA_31	-2.73	0.15	0.32	0.75	-1.66	-0.57
STA_32	-1.22	-0.50	-1.94	-1.54	0.40	-1.00
STA_33	-1.05	-0.73	-1.83	-0.88	0.05	-1.53
STA_34	-0.19	-1.47	-1.25	-1.14	0.00	-0.70

Standardized Residuals

	DEL_19	HAN_20	HAN_21	HAN_22	HAN_23	HAN_24
DEL_19	0.02					
HAN_20	0.70	-0.09				
HAN_21	1.55	0.54	0.14			
HAN_22	-0.76	0.15	0.93	0.57		
HAN_23	1.23	-0.22	0.12	1.03	-1.12	
HAN_24	0.24	-0.60	-0.66	0.58	-1.29	-0.80
HAN_25	0.09	-1.44	1.25	2.51	0.13	-0.21
HAN_26	2.26	0.58	0.17	0.02	0.94	0.09
STA_27	0.91	0.21	2.31	1.70	1.23	1.73
STA_28	0.05	-0.42	-0.74	-1.33	0.61	1.52
STA_29	-2.65	0.44	-0.01	-1.37	-0.76	1.05
STA_30	-4.24	-1.40	0.14	-2.50	-1.06	0.25
STA_31	-2.58	-0.44	-0.35	-1.75	-1.53	-0.17
STA_32	-0.67	-1.38	-0.19	-1.68	-0.30	-0.18
STA_33	-1.61	-1.70	-0.67	-1.38	-1.73	-0.01
STA_34	-1.36	-1.90	0.62	0.13	-2.64	-1.88

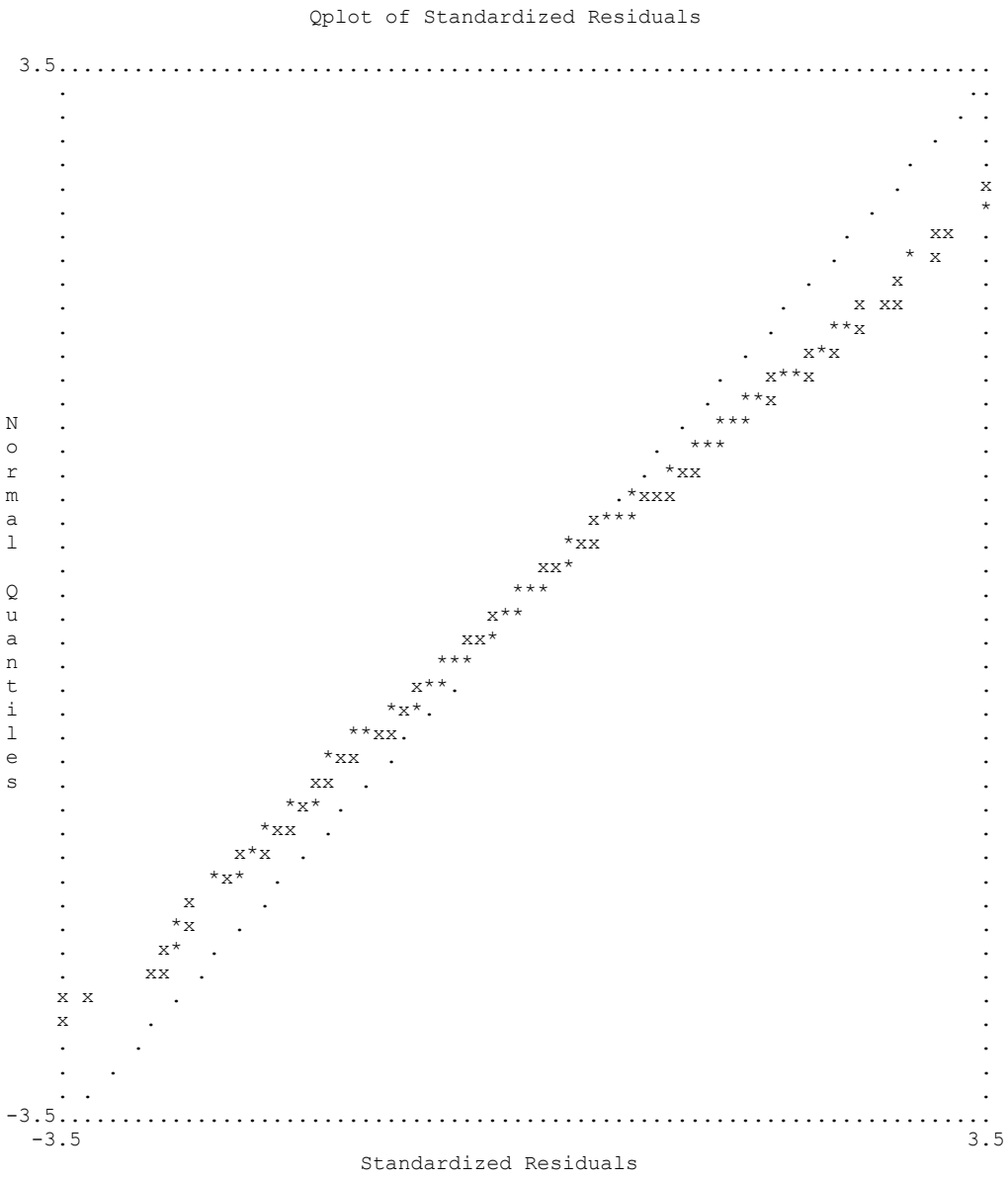
Standardized Residuals

	HAN_25	HAN_26	STA_27	STA_28	STA_29	STA_30
HAN_25	0.06					
HAN_26	-0.63	1.97				
STA_27	1.21	2.54	1.25			
STA_28	0.48	1.07	1.53	3.72		
STA_29	-0.99	1.35	-1.83	-0.52	1.87	
STA_30	0.05	1.32	-0.10	0.39	1.33	0.10
STA_31	0.02	0.43	-0.56	1.29	1.90	1.65
STA_32	-1.76	-0.15	-1.22	-0.05	2.83	0.98
STA_33	-1.58	-0.97	-1.47	0.59	2.78	2.12
STA_34	-2.70	-1.42	-1.50	0.69	2.32	2.69

Standardized Residuals

	STA_31	STA_32	STA_33	STA_34

```
  STA_31       2.07
  STA_32       2.95      -0.58
  STA_33       3.49       0.31       1.38
  STA_34       3.96       1.01       1.07       0.33

Summary Statistics for Standardized Residuals

Smallest Standardized Residual =   -4.24
  Median Standardized Residual =   -0.02
 Largest Standardized Residual =    3.96

Stemleaf Plot

- 4|2
- 3|5
- 3|3
- 2|8777766665555
- 2|433321111100
- 1|99999999998888888877777777766666655555555555555555
- 1|44444444444433333333333332222222222222211111111111000000000000000
- 0|99999999999888888888888888887777777777777777766666666666666655555555+04
- 0|44444444444444444444443333333333333333322222222222222221111111111111111+22
  0|11111111111111111111111111112222222222223333333333333333333444444444444444
  0|55555555555556666666666666666667777777888888888888899999999999
  1|00000000000001111111111112222222223333333333333333333334444444
  1|55555556666666666777777777777777778888999
  2|000000111112222333334
  2|555578888999
  3|0112
  3|57
  4|0
Largest Negative Standardized Residuals
Residual for    SER_6 and    SER_2  -2.78
Residual for   DEL_15 and   DEL_13  -2.60
Residual for   STA_29 and    SER_7  -3.48
Residual for   STA_29 and   DEL_19  -2.65
Residual for   STA_30 and   DEL_17  -3.29
Residual for   STA_30 and   DEL_18  -2.68
Residual for   STA_30 and   DEL_19  -4.24
Residual for   STA_31 and   DEL_13  -2.73
Residual for   STA_31 and   DEL_19  -2.58
Residual for   STA_34 and   HAN_23  -2.64
Residual for   STA_34 and   HAN_25  -2.70
Largest Positive Standardized Residuals
Residual for   STA_27 and    SER_2   3.09
Residual for   STA_27 and   DEL_14   3.12
Residual for   STA_27 and   DEL_16   2.92
Residual for   STA_28 and    DEL_8   2.85
Residual for   STA_28 and   DEL_14   3.17
Residual for   STA_28 and   DEL_15   2.86
Residual for   STA_28 and   STA_28   3.72
Residual for   STA_32 and    SER_2   2.85
Residual for   STA_32 and   STA_29   2.83
Residual for   STA_32 and   STA_31   2.95
Residual for   STA_33 and   STA_29   2.78
Residual for   STA_33 and   STA_31   3.49
Residual for   STA_34 and    SER_2   2.76
Residual for   STA_34 and   STA_30   2.69
Residual for   STA_34 and   STA_31   3.96

TI CFA SAS
```



TI CFA SAS

Modification Indices and Expected Change

Modification Indices for LAMBDA-Y

	SERR	DELI	HANN	STAF
SER_1	- -	0.58	0.06	1.99
SER_2	- -	5.86	3.73	11.72
SER_3	- -	1.16	2.23	0.14
SER_4	- -	2.37	2.29	0.24
SER_5	- -	3.20	1.57	0.85
SER_6	- -	0.02	0.05	0.14
SER_7	- -	0.45	0.45	4.88
DEL_8	1.34	- -	1.47	1.41
DEL_9	0.55	- -	0.71	0.01
DEL_10	0.13	- -	4.12	0.01
DEL_11	0.00	- -	0.17	0.55
DEL_12	0.65	- -	1.90	0.51
DEL_13	1.52	- -	1.70	1.97

DEL_14	4.05	- -	0.11	0.68
DEL_15	0.34	- -	0.06	0.89
DEL_16	2.38	- -	0.81	3.19
DEL_17	1.07	- -	0.31	0.90
DEL_18	2.32	- -	1.26	0.21
DEL_19	0.80	- -	1.63	2.11
HAN_20	0.70	0.23	- -	3.17
HAN_21	0.08	0.52	- -	2.93
HAN_22	0.02	1.84	- -	2.98
HAN_23	1.80	0.47	- -	1.67
HAN_24	1.40	0.64	- -	1.52
HAN_25	0.21	0.18	- -	0.11
HAN_26	2.63	0.47	- -	1.94
STA_27	6.34	9.70	10.56	- -
STA_28	0.05	2.16	0.65	- -
STA_29	0.01	0.51	1.08	- -
STA_30	0.69	0.94	0.53	- -
STA_31	0.77	1.85	0.81	- -
STA_32	0.05	0.70	0.58	- -
STA_33	0.00	0.51	0.44	- -
STA_34	0.12	0.47	1.53	- -

Expected Change for LAMBDA-Y

	SERR	DELI	HANN	STAF
SER_1	- -	-0.21	-0.05	0.19
SER_2	- -	0.62	0.35	0.45
SER_3	- -	-0.24	-0.24	0.04
SER_4	- -	-0.39	-0.26	-0.06
SER_5	- -	0.43	0.21	-0.11
SER_6	- -	-0.03	0.03	0.04
SER_7	- -	-0.15	-0.11	-0.24
DEL_8	0.21	- -	0.38	0.18
DEL_9	-0.13	- -	-0.25	0.02
DEL_10	0.07	- -	-0.63	-0.01
DEL_11	0.00	- -	-0.14	-0.12
DEL_12	0.14	- -	-0.42	0.11
DEL_13	0.23	- -	0.44	-0.23
DEL_14	-0.38	- -	0.12	0.13
DEL_15	0.10	- -	0.08	-0.13
DEL_16	-0.29	- -	0.28	0.26
DEL_17	0.18	- -	-0.19	-0.14
DEL_18	-0.26	- -	0.34	-0.06
DEL_19	0.17	- -	0.42	-0.22
HAN_20	0.15	0.20	- -	-0.23
HAN_21	0.04	0.29	- -	0.21
HAN_22	-0.02	-0.61	- -	-0.27
HAN_23	-0.21	-0.30	- -	-0.17
HAN_24	0.19	0.33	- -	0.16
HAN_25	-0.07	-0.18	- -	0.05
HAN_26	-0.29	0.38	- -	0.24
STA_27	0.38	0.87	0.67	- -
STA_28	0.04	0.38	0.15	- -
STA_29	-0.01	0.14	0.14	- -
STA_30	-0.10	-0.20	-0.10	- -
STA_31	-0.12	-0.30	-0.13	- -
STA_32	0.03	-0.20	-0.13	- -
STA_33	0.00	-0.16	-0.11	- -
STA_34	0.05	-0.17	-0.22	- -

Standardized Expected Change for LAMBDA-Y

	SERR	DELI	HANN	STAF
SER_1	- -	-0.08	-0.02	0.10
SER_2	- -	0.25	0.17	0.23
SER_3	- -	-0.10	-0.12	0.02
SER_4	- -	-0.15	-0.13	-0.03
SER_5	- -	0.17	0.11	-0.05
SER_6	- -	-0.01	0.02	0.02

SER_7	- -	-0.06	-0.05	-0.12
DEL_8	0.09	- -	0.19	0.09
DEL_9	-0.06	- -	-0.12	0.01
DEL_10	0.03	- -	-0.31	-0.01
DEL_11	0.00	- -	-0.07	-0.06
DEL_12	0.07	- -	-0.21	0.05
DEL_13	0.11	- -	0.21	-0.12
DEL_14	-0.18	- -	0.06	0.07
DEL_15	0.05	- -	0.04	-0.07
DEL_16	-0.13	- -	0.14	0.13
DEL_17	0.08	- -	-0.10	-0.07
DEL_18	-0.12	- -	0.17	-0.03
DEL_19	0.08	- -	0.21	-0.12
HAN_20	0.07	0.08	- -	-0.12
HAN_21	0.02	0.12	- -	0.11
HAN_22	-0.01	-0.24	- -	-0.14
HAN_23	-0.10	-0.12	- -	-0.09
HAN_24	0.09	0.13	- -	0.08
HAN_25	-0.03	-0.07	- -	0.02
HAN_26	-0.13	0.15	- -	0.13
STA_27	0.18	0.35	0.33	- -
STA_28	0.02	0.15	0.07	- -
STA_29	0.00	0.06	0.07	- -
STA_30	-0.05	-0.08	-0.05	- -
STA_31	-0.05	-0.12	-0.07	- -
STA_32	0.01	-0.08	-0.06	- -
STA_33	0.00	-0.06	-0.05	- -
STA_34	0.02	-0.07	-0.11	- -

Completely Standardized Expected Change for LAMBDA-Y

	SERR	DELI	HANN	STAF
SER_1	- -	-0.12	-0.03	0.14
SER_2	- -	0.33	0.23	0.31
SER_3	- -	-0.14	-0.17	0.03
SER_4	- -	-0.21	-0.18	-0.04
SER_5	- -	0.23	0.14	-0.07
SER_6	- -	-0.02	0.02	0.03
SER_7	- -	-0.08	-0.07	-0.17
DEL_8	0.14	- -	0.28	0.14
DEL_9	-0.09	- -	-0.19	0.01
DEL_10	0.04	- -	-0.46	-0.01
DEL_11	0.00	- -	-0.09	-0.08
DEL_12	0.09	- -	-0.29	0.08
DEL_13	0.15	- -	0.30	-0.16
DEL_14	-0.25	- -	0.08	0.09
DEL_15	0.07	- -	0.05	-0.10
DEL_16	-0.19	- -	0.20	0.19
DEL_17	0.11	- -	-0.14	-0.10
DEL_18	-0.16	- -	0.23	-0.05
DEL_19	0.10	- -	0.28	-0.16
HAN_20	0.10	0.12	- -	-0.17
HAN_21	0.03	0.17	- -	0.16
HAN_22	-0.02	-0.34	- -	-0.20
HAN_23	-0.14	-0.17	- -	-0.12
HAN_24	0.12	0.18	- -	0.11
HAN_25	-0.05	-0.10	- -	0.03
HAN_26	-0.18	0.20	- -	0.17
STA_27	0.24	0.47	0.45	- -
STA_28	0.02	0.21	0.10	- -
STA_29	-0.01	0.08	0.10	- -
STA_30	-0.07	-0.11	-0.07	- -
STA_31	-0.07	-0.15	-0.09	- -
STA_32	0.02	-0.11	-0.09	- -
STA_33	0.00	-0.09	-0.07	- -
STA_34	0.03	-0.09	-0.14	- -

Modification Indices for BETA

	SERR	DELI	HANN	STAF

SERR	- -	0.00	1.27	1.53
DELI	0.00	- -	1.53	1.27
HANN	1.27	1.53	- -	0.00
STAF	1.53	1.27	0.00	- -

Expected Change for BETA

	SERR	DELI	HANN	STAF
SERR	- -	-0.05	-0.32	0.14
DELI	0.00	- -	0.37	-0.11
HANN	-0.16	2.11	- -	0.00
STAF	0.18	-1.74	-0.01	- -

Standardized Expected Change for BETA

	SERR	DELI	HANN	STAF
SERR	- -	-0.25	-1.44	0.59
DELI	-0.02	- -	1.88	-0.56
HANN	-0.72	10.79	- -	-0.02
STAF	0.78	-8.50	-0.04	- -

No Non-Zero Modification Indices for GAMMA

No Non-Zero Modification Indices for PHI

Modification Indices for PSI

	SERR	DELI	HANN	STAF
SERR	- -			
DELI	0.00	- -		
HANN	1.27	1.53	- -	
STAF	1.53	1.27	0.00	- -

Expected Change for PSI

	SERR	DELI	HANN	STAF
SERR	- -			
DELI	0.00	- -		
HANN	-0.01	0.01	- -	
STAF	0.01	-0.01	0.00	- -

Standardized Expected Change for PSI

	SERR	DELI	HANN	STAF
SERR	- -			
DELI	0.00	- -		
HANN	-0.03	0.04	- -	
STAF	0.04	-0.03	0.00	- -

Modification Indices for THETA-EPS

	SER_1	SER_2	SER_3	SER_4	SER_5	SER_6
SER_1	- -					
SER_2	0.13	- -				
SER_3	0.00	- -	- -			
SER_4	1.47	- -	- -	- -		
SER_5	0.13	0.76	0.04	0.60	- -	
SER_6	- -	3.25	0.77	0.49	- -	- -
SER_7	0.00	0.26	0.00	0.42	- -	- -
DEL_8	0.58	0.06	0.41	0.50	0.98	1.00
DEL_9	2.45	0.64	0.05	0.25	0.03	0.15
DEL_10	0.00	0.24	0.84	0.06	0.62	1.65
DEL_11	1.86	0.81	1.02	0.06	0.06	0.09
DEL_12	0.14	1.73	0.36	1.35	0.03	0.31

DEL_13	1.82	0.66	1.60	1.32	0.88	0.10
DEL_14	0.00	1.32	2.56	1.92	- -	0.94
DEL_15	0.12	0.14	- -	0.13	0.21	0.38
DEL_16	0.21	0.79	0.40	- -	1.22	0.42
DEL_17	0.31	2.88	2.30	0.02	0.87	0.53
DEL_18	2.09	1.29	0.85	1.34	2.15	2.33
DEL_19	0.94	0.56	- -	0.04	- -	1.02
HAN_20	- -	0.01	- -	0.12	0.40	0.04
HAN_21	0.50	0.02	0.31	0.01	- -	1.39
HAN_22	0.54	0.00	- -	0.60	- -	0.87
HAN_23	1.82	0.58	0.10	0.34	1.78	0.00
HAN_24	1.34	0.22	0.19	0.29	0.23	- -
HAN_25	1.46	- -	2.77	0.79	0.51	2.63
HAN_26	0.72	0.06	1.16	1.32	0.27	0.26
STA_27	0.56	2.53	0.68	0.35	0.58	0.39
STA_28	0.10	- -	0.20	0.04	0.25	0.00
STA_29	0.02	0.59	0.03	0.64	1.31	0.40
STA_30	0.07	0.07	0.04	0.29	1.93	2.76
STA_31	2.50	- -	2.73	1.12	0.03	0.78
STA_32	0.30	1.85	2.47	0.47	0.26	0.03
STA_33	1.42	1.96	0.47	0.36	0.02	- -
STA_34	0.01	2.05	- -	1.89	1.32	0.62

Modification Indices for THETA-EPS

	SER_7	DEL_8	DEL_9	DEL_10	DEL_11	DEL_12
SER_7	- -					
DEL_8	1.83	- -				
DEL_9	2.97	- -	- -			
DEL_10	0.90	- -	- -	- -		
DEL_11	0.50	- -	0.65	0.06	- -	
DEL_12	1.28	0.57	0.17	3.28	- -	- -
DEL_13	0.08	0.76	0.22	0.18	- -	- -
DEL_14	0.08	- -	0.67	1.52	0.14	0.03
DEL_15	- -	- -	0.31	1.62	3.51	- -
DEL_16	0.03	0.37	0.83	1.55	2.59	0.06
DEL_17	0.55	1.00	0.35	0.27	- -	0.52
DEL_18	0.29	3.09	0.19	1.63	0.01	2.83
DEL_19	0.49	0.41	0.77	0.88	0.20	3.21
HAN_20	- -	0.10	0.04	- -	- -	0.01
HAN_21	0.04	0.10	1.84	1.58	0.17	1.16
HAN_22	0.92	0.15	2.44	0.25	2.60	0.15
HAN_23	0.11	1.05	- -	1.90	3.20	0.27
HAN_24	0.39	- -	0.52	0.05	0.57	- -
HAN_25	- -	0.13	0.00	1.61	0.10	1.44
HAN_26	1.16	2.24	0.31	1.13	0.44	0.01
STA_27	0.81	0.49	0.61	2.71	1.45	3.15
STA_28	0.29	- -	0.04	3.06	1.84	1.06
STA_29	2.85	3.05	1.52	1.33	0.45	0.64
STA_30	0.53	0.37	1.62	0.47	2.19	0.72
STA_31	0.04	1.72	1.12	0.55	0.74	- -
STA_32	1.89	0.07	0.09	0.00	0.18	0.22
STA_33	0.58	2.59	2.36	0.00	0.67	0.01
STA_34	0.61	0.03	3.22	0.53	0.49	0.31

Modification Indices for THETA-EPS

	DEL_13	DEL_14	DEL_15	DEL_16	DEL_17	DEL_18
DEL_13	- -					
DEL_14	0.48	- -				
DEL_15	1.97	- -	- -			
DEL_16	0.18	- -	- -	- -		
DEL_17	0.33	0.05	1.70	1.42	- -	
DEL_18	0.56	1.78	1.29	2.55	- -	- -
DEL_19	0.38	1.04	1.81	0.49	- -	- -
HAN_20	- -	0.35	2.17	0.30	0.73	0.14
HAN_21	2.06	0.01	1.37	3.13	- -	- -
HAN_22	1.06	0.00	0.23	0.19	0.72	0.51
HAN_23	0.23	1.00	0.21	1.02	1.05	0.66

HAN_24	0.23	0.12	1.79	2.04	2.79	1.61
HAN_25	- -	0.02	0.04	0.22	- -	0.17
HAN_26	0.18	- -	0.20	0.53	- -	0.25
STA_27	0.00	2.50	0.00	2.73	0.06	0.46
STA_28	- -	1.24	1.68	0.02	1.06	0.17
STA_29	2.00	0.30	0.72	1.54	2.25	2.07
STA_30	- -	0.28	1.86	2.26	2.89	1.79
STA_31	0.99	0.03	0.21	0.46	0.17	0.75
STA_32	0.24	0.12	0.91	0.77	1.04	0.00
STA_33	0.19	0.00	1.42	0.49	0.49	2.14
STA_34	0.93	2.53	0.04	0.98	0.52	0.17

Modification Indices for THETA-EPS

	DEL_19	HAN_20	HAN_21	HAN_22	HAN_23	HAN_24
DEL_19	- -					
HAN_20	0.28	- -				
HAN_21	1.45	- -	- -			
HAN_22	2.25	- -	- -	- -		
HAN_23	0.11	- -	0.14	0.06	- -	
HAN_24	0.01	0.03	1.06	- -	- -	- -
HAN_25	- -	1.33	0.15	3.09	- -	- -
HAN_26	1.87	0.55	1.03	0.01	0.61	0.34
STA_27	0.43	1.33	3.66	- -	0.24	0.14
STA_28	0.00	0.03	1.71	- -	0.04	0.09
STA_29	2.15	0.75	0.69	- -	0.27	1.01
STA_30	- -	0.71	0.48	1.53	0.55	0.07
STA_31	0.99	0.41	0.00	0.32	0.29	0.26
STA_32	0.08	0.63	0.45	1.31	2.07	- -
STA_33	- -	0.01	0.13	0.36	0.38	1.88
STA_34	0.91	2.41	1.46	3.48	1.54	1.57

Modification Indices for THETA-EPS

	HAN_25	HAN_26	STA_27	STA_28	STA_29	STA_30
HAN_25	- -					
HAN_26	0.10	- -				
STA_27	- -	- -	- -			
STA_28	0.18	0.02	- -	- -		
STA_29	0.09	2.27	2.54	2.51	- -	
STA_30	1.19	0.36	0.01	0.00	- -	- -
STA_31	1.92	0.04	0.29	1.18	- -	- -
STA_32	0.35	0.06	- -	0.63	1.39	0.60
STA_33	0.09	- -	- -	0.00	0.03	0.26
STA_34	0.63	- -	2.36	- -	0.16	2.11

Modification Indices for THETA-EPS

	STA_31	STA_32	STA_33	STA_34
STA_31	- -			
STA_32	1.79	- -		
STA_33	- -	- -	- -	
STA_34	- -	- -	- -	- -

Expected Change for THETA-EPS

	SER_1	SER_2	SER_3	SER_4	SER_5	SER_6
SER_1	- -					
SER_2	-0.01	- -				
SER_3	0.00	- -	- -			
SER_4	0.02	- -	- -	- -		
SER_5	-0.01	-0.01	0.00	-0.01	- -	
SER_6	- -	-0.02	0.01	0.01	- -	- -
SER_7	0.00	0.01	0.00	0.01	- -	- -
DEL_8	0.01	0.00	0.01	-0.01	0.01	0.01
DEL_9	-0.02	-0.01	0.00	-0.01	0.00	0.00
DEL_10	0.00	0.01	-0.01	0.00	0.01	0.01

DEL_11	-0.02	0.01	-0.01	0.00	0.00	0.00
DEL_12	0.01	-0.02	0.01	0.01	0.00	-0.01
DEL_13	-0.02	-0.01	0.02	0.02	0.01	0.00
DEL_14	0.00	0.02	-0.02	-0.02	- -	-0.01
DEL_15	0.00	-0.01	- -	0.01	0.01	0.01
DEL_16	-0.01	0.01	-0.01	- -	-0.01	-0.01
DEL_17	0.01	-0.02	0.02	0.00	0.01	0.01
DEL_18	-0.02	0.01	-0.01	-0.01	0.02	-0.02
DEL_19	0.01	0.01	- -	0.00	- -	-0.01
HAN_20	- -	0.00	- -	0.00	0.01	0.00
HAN_21	0.01	0.00	0.01	0.00	- -	-0.01
HAN_22	-0.01	0.00	- -	-0.01	- -	0.01
HAN_23	-0.02	-0.01	0.00	-0.01	0.02	0.00
HAN_24	0.02	0.01	0.00	-0.01	-0.01	- -
HAN_25	0.02	- -	-0.02	-0.01	-0.01	0.02
HAN_26	-0.01	0.00	-0.01	0.01	-0.01	-0.01
STA_27	0.01	0.02	0.01	-0.01	-0.01	-0.01
STA_28	0.00	- -	-0.01	0.00	-0.01	0.00
STA_29	0.00	0.01	0.00	-0.01	0.01	-0.01
STA_30	0.00	0.00	0.00	-0.01	-0.02	0.02
STA_31	0.02	- -	-0.02	0.01	0.00	-0.01
STA_32	-0.01	0.02	0.02	0.01	-0.01	0.00
STA_33	0.01	-0.02	0.01	-0.01	0.00	- -
STA_34	0.00	0.02	- -	0.02	-0.01	0.01

Expected Change for THETA-EPS

	SER_7	DEL_8	DEL_9	DEL_10	DEL_11	DEL_12
SER_7	- -					
DEL_8	-0.02	- -				
DEL_9	0.02	- -	- -			
DEL_10	-0.01	- -	- -	- -		
DEL_11	0.01	- -	0.01	0.00	- -	
DEL_12	0.01	-0.01	0.00	0.02	- -	- -
DEL_13	0.00	-0.01	0.01	0.01	- -	- -
DEL_14	0.00	- -	0.01	0.02	0.01	0.00
DEL_15	- -	- -	-0.01	-0.02	0.03	- -
DEL_16	0.00	-0.01	0.01	-0.02	-0.02	0.00
DEL_17	-0.01	0.01	-0.01	0.01	- -	-0.01
DEL_18	0.01	-0.02	0.00	0.01	0.00	-0.02
DEL_19	0.01	-0.01	-0.01	-0.01	-0.01	0.02
HAN_20	- -	0.00	0.00	- -	- -	0.00
HAN_21	0.00	0.00	-0.01	-0.01	-0.01	-0.01
HAN_22	0.01	0.00	0.02	-0.01	-0.02	0.00
HAN_23	0.00	-0.01	- -	-0.02	0.02	-0.01
HAN_24	0.01	- -	-0.01	0.00	-0.01	- -
HAN_25	- -	0.00	0.00	0.01	0.00	-0.02
HAN_26	-0.01	0.02	-0.01	-0.01	0.01	0.00
STA_27	0.01	-0.01	-0.01	-0.02	-0.02	0.02
STA_28	-0.01	- -	0.00	0.03	-0.02	0.02
STA_29	-0.02	0.02	-0.01	0.01	0.01	-0.01
STA_30	-0.01	-0.01	0.01	0.01	0.02	-0.01
STA_31	0.00	-0.02	0.01	-0.01	-0.01	- -
STA_32	-0.02	0.00	0.00	0.00	-0.01	-0.01
STA_33	0.01	0.02	-0.02	0.00	0.01	0.00
STA_34	-0.01	0.00	0.02	-0.01	-0.01	0.01

Expected Change for THETA-EPS

	DEL_13	DEL_14	DEL_15	DEL_16	DEL_17	DEL_18
DEL_13	- -					
DEL_14	-0.01	- -				
DEL_15	-0.02	- -	- -			
DEL_16	-0.01	- -	- -	- -		
DEL_17	0.01	0.00	0.01	-0.01	- -	
DEL_18	0.01	-0.02	0.01	0.02	- -	- -
DEL_19	-0.01	0.01	-0.02	0.01	- -	- -
HAN_20	- -	-0.01	0.02	0.01	-0.01	0.00
HAN_21	0.02	0.00	-0.01	0.02	- -	- -

HAN_22	0.01	0.00	0.01	-0.01	0.01	-0.01
HAN_23	-0.01	0.01	0.01	-0.01	0.01	0.01
HAN_24	0.01	0.00	-0.02	0.02	-0.02	0.01
HAN_25	- -	0.00	0.00	-0.01	- -	-0.01
HAN_26	-0.01	- -	0.01	-0.01	- -	0.01
STA_27	0.00	0.02	0.00	0.02	0.00	-0.01
STA_28	- -	0.02	0.02	0.00	-0.01	0.01
STA_29	-0.02	-0.01	0.01	0.01	-0.02	0.02
STA_30	- -	0.01	-0.02	0.02	-0.02	-0.02
STA_31	-0.01	0.00	0.01	-0.01	0.00	0.01
STA_32	-0.01	0.00	-0.01	-0.01	0.01	0.00
STA_33	-0.01	0.00	-0.01	0.01	0.01	-0.02
STA_34	0.01	-0.02	0.00	-0.01	0.01	0.00

Expected Change for THETA-EPS

	DEL_19	HAN_20	HAN_21	HAN_22	HAN_23	HAN_24
DEL_19	- -					
HAN_20	0.01	- -				
HAN_21	0.02	- -	- -			
HAN_22	-0.02	- -	- -	- -		
HAN_23	0.00	- -	0.00	0.00	- -	
HAN_24	0.00	0.00	-0.01	- -	- -	- -
HAN_25	- -	-0.01	0.00	0.02	- -	- -
HAN_26	0.02	0.01	-0.01	0.00	0.01	-0.01
STA_27	0.01	-0.01	0.02	- -	0.01	0.01
STA_28	0.00	0.00	-0.02	- -	0.00	0.00
STA_29	-0.02	0.01	-0.01	- -	-0.01	0.01
STA_30	- -	-0.01	0.01	-0.02	-0.01	0.00
STA_31	-0.01	0.01	0.00	-0.01	-0.01	-0.01
STA_32	0.00	-0.01	0.01	-0.01	0.02	- -
STA_33	- -	0.00	0.00	-0.01	-0.01	0.02
STA_34	-0.01	-0.02	0.01	0.02	-0.02	-0.02

Expected Change for THETA-EPS

	HAN_25	HAN_26	STA_27	STA_28	STA_29	STA_30
HAN_25	- -					
HAN_26	0.00	- -				
STA_27	- -	- -	- -			
STA_28	0.01	0.00	- -	- -		
STA_29	0.00	0.02	-0.02	-0.02	- -	
STA_30	0.01	0.01	0.00	0.00	- -	- -
STA_31	0.02	0.00	-0.01	0.02	- -	- -
STA_32	-0.01	0.00	- -	-0.01	0.01	-0.01
STA_33	0.00	- -	- -	0.00	0.00	0.01
STA_34	-0.01	- -	-0.03	- -	0.01	0.02

Expected Change for THETA-EPS

	STA_31	STA_32	STA_33	STA_34
STA_31	- -			
STA_32	0.02	- -		
STA_33	- -	- -	- -	
STA_34	- -	- -	- -	- -

Completely Standardized Expected Change for THETA-EPS

	SER_1	SER_2	SER_3	SER_4	SER_5	SER_6
SER_1	- -					
SER_2	-0.01	- -				
SER_3	0.00	- -	- -			
SER_4	0.04	- -	- -	- -		
SER_5	-0.01	-0.02	0.01	-0.02	- -	
SER_6	- -	-0.04	0.02	0.02	- -	- -
SER_7	0.00	0.01	0.00	0.02	- -	- -
DEL_8	0.02	-0.01	0.02	-0.02	0.02	0.02

DEL_9	-0.05	-0.02	0.01	-0.01	0.00	-0.01
DEL_10	0.00	0.01	-0.02	-0.01	0.02	0.03
DEL_11	-0.04	0.02	-0.03	0.01	0.01	0.01
DEL_12	0.01	-0.03	0.01	0.03	0.00	-0.01
DEL_13	-0.04	-0.02	0.03	0.03	0.02	0.01
DEL_14	0.00	0.03	-0.04	-0.04	- -	-0.02
DEL_15	-0.01	-0.01	- -	0.01	0.01	0.01
DEL_16	-0.01	0.02	-0.02	- -	-0.03	-0.01
DEL_17	0.01	-0.04	0.04	0.00	0.02	0.01
DEL_18	-0.04	0.03	-0.02	-0.03	0.03	-0.03
DEL_19	0.03	0.02	- -	0.01	- -	-0.02
HAN_20	- -	0.00	- -	0.01	0.02	0.01
HAN_21	0.02	0.00	0.01	0.00	- -	-0.03
HAN_22	-0.02	0.00	- -	-0.02	- -	0.02
HAN_23	-0.04	-0.02	-0.01	-0.01	0.03	0.00
HAN_24	0.03	0.01	0.01	-0.01	-0.01	- -
HAN_25	0.03	- -	-0.04	-0.02	-0.02	0.04
HAN_26	-0.02	0.01	-0.03	0.03	-0.01	-0.01
STA_27	0.02	0.04	0.02	-0.01	-0.02	-0.01
STA_28	0.01	- -	-0.01	0.01	-0.01	0.00
STA_29	0.00	0.02	0.00	-0.02	0.03	-0.01
STA_30	-0.01	0.01	0.00	-0.01	-0.03	0.03
STA_31	0.04	- -	-0.04	0.03	0.00	-0.02
STA_32	-0.01	0.03	0.04	0.02	-0.01	0.00
STA_33	0.03	-0.03	0.02	-0.01	0.00	- -
STA_34	0.00	0.04	- -	0.03	-0.03	0.02

Completely Standardized Expected Change for THETA-EPS

	SER_7	DEL_8	DEL_9	DEL_10	DEL_11	DEL_12
SER_7	- -					
DEL_8	-0.03	- -				
DEL_9	0.04	- -	- -			
DEL_10	-0.02	- -	- -	- -		
DEL_11	0.02	- -	0.02	0.01	- -	
DEL_12	0.03	-0.02	0.01	0.05	- -	- -
DEL_13	-0.01	-0.02	0.01	0.01	- -	- -
DEL_14	0.01	- -	0.02	0.03	0.01	0.00
DEL_15	- -	- -	-0.01	-0.03	0.05	- -
DEL_16	0.00	-0.02	0.02	-0.03	-0.04	-0.01
DEL_17	-0.02	0.02	-0.01	0.01	- -	-0.02
DEL_18	0.01	-0.04	0.01	0.03	0.00	-0.04
DEL_19	0.02	-0.02	-0.02	-0.02	-0.01	0.04
HAN_20	- -	0.01	0.01	- -	- -	0.00
HAN_21	0.00	0.01	-0.03	-0.03	-0.01	-0.02
HAN_22	0.02	-0.01	0.04	-0.01	-0.04	0.01
HAN_23	-0.01	-0.03	- -	-0.04	0.05	-0.01
HAN_24	0.02	- -	-0.02	-0.01	-0.02	- -
HAN_25	- -	0.01	0.00	0.03	-0.01	-0.03
HAN_26	-0.02	0.04	-0.01	-0.03	0.02	0.00
STA_27	0.02	-0.02	-0.02	-0.04	-0.03	0.04
STA_28	-0.01	- -	0.01	0.05	-0.04	0.03
STA_29	-0.04	0.04	-0.03	0.03	0.02	-0.02
STA_30	-0.02	-0.01	0.03	0.02	0.04	-0.02
STA_31	0.00	-0.03	0.03	-0.02	-0.02	- -
STA_32	-0.03	0.01	-0.01	0.00	-0.01	-0.01
STA_33	0.02	0.04	-0.04	0.00	0.02	0.00
STA_34	-0.02	0.00	0.04	-0.02	-0.02	0.01

Completely Standardized Expected Change for THETA-EPS

	DEL_13	DEL_14	DEL_15	DEL_16	DEL_17	DEL_18
DEL_13	- -					
DEL_14	-0.02	- -				
DEL_15	-0.04	- -	- -			
DEL_16	-0.01	- -	- -	- -		
DEL_17	0.01	-0.01	0.03	-0.03	- -	
DEL_18	0.02	-0.03	0.03	0.04	- -	- -
DEL_19	-0.02	0.02	-0.03	0.02	- -	- -

HAN_20	- -	-0.01	0.04	0.01	-0.02	0.01
HAN_21	0.04	0.00	-0.03	0.04	- -	- -
HAN_22	0.03	0.00	0.01	-0.01	0.02	-0.02
HAN_23	-0.01	0.02	0.01	-0.02	0.02	0.02
HAN_24	0.01	0.01	-0.03	0.03	-0.04	0.03
HAN_25	- -	0.00	0.00	-0.01	- -	-0.01
HAN_26	-0.01	- -	0.01	-0.02	- -	0.01
STA_27	0.00	0.04	0.00	0.04	-0.01	-0.02
STA_28	- -	0.03	0.04	0.00	-0.03	0.01
STA_29	-0.04	-0.01	0.02	0.03	-0.03	0.03
STA_30	- -	0.01	-0.03	0.04	-0.04	-0.03
STA_31	-0.03	0.00	0.01	-0.02	0.01	0.02
STA_32	-0.01	0.01	-0.02	-0.02	0.02	0.00
STA_33	-0.01	0.00	-0.03	0.02	0.02	-0.03
STA_34	0.02	-0.04	0.00	-0.02	0.02	0.01

Completely Standardized Expected Change for THETA-EPS

	DEL_19	HAN_20	HAN_21	HAN_22	HAN_23	HAN_24
DEL_19	- -					
HAN_20	0.01	- -				
HAN_21	0.03	- -	- -			
HAN_22	-0.04	- -	- -	- -		
HAN_23	0.01	- -	0.01	0.01	- -	
HAN_24	0.00	0.00	-0.02	- -	- -	- -
HAN_25	- -	-0.03	0.01	0.05	- -	- -
HAN_26	0.03	0.02	-0.02	0.00	0.02	-0.01
STA_27	0.02	-0.03	0.05	- -	0.01	0.01
STA_28	0.00	-0.01	-0.04	- -	0.01	0.01
STA_29	-0.03	0.02	-0.02	- -	-0.01	0.02
STA_30	- -	-0.02	0.02	-0.03	-0.02	0.01
STA_31	-0.02	0.01	0.00	-0.01	-0.01	-0.01
STA_32	0.01	-0.02	0.02	-0.03	0.03	- -
STA_33	- -	0.00	-0.01	-0.01	-0.01	0.03
STA_34	-0.02	-0.04	0.03	0.05	-0.03	-0.03

Completely Standardized Expected Change for THETA-EPS

	HAN_25	HAN_26	STA_27	STA_28	STA_29	STA_30
HAN_25	- -					
HAN_26	-0.01	- -				
STA_27	- -	- -	- -			
STA_28	0.01	0.00	- -	- -		
STA_29	-0.01	0.03	-0.04	-0.04	- -	
STA_30	0.02	0.01	0.00	0.00	- -	- -
STA_31	0.03	0.00	-0.01	0.03	- -	- -
STA_32	-0.01	-0.01	- -	-0.02	0.03	-0.02
STA_33	-0.01	- -	- -	0.00	0.00	0.01
STA_34	-0.02	- -	-0.05	- -	0.01	0.04

Completely Standardized Expected Change for THETA-EPS

	STA_31	STA_32	STA_33	STA_34
STA_31	- -			
STA_32	0.04	- -		
STA_33	- -	- -	- -	
STA_34	- -	- -	- -	- -

Maximum Modification Index is 11.72 for Element (2, 4) of LAMBDA-Y

TI CFA SAS

Factor Scores Regressions

ETA

	SER_1	SER_2	SER_3	SER_4	SER_5	SER_6

SERR	0.12	0.06	0.07	0.08	0.07	0.10
DELI	0.03	0.01	0.01	0.01	0.01	0.03
HANN	0.04	0.02	0.00	0.02	-0.01	0.04
STAF	0.02	-0.01	0.02	0.01	0.00	0.03

ETA

	SER_7	DEL_8	DEL_9	DEL_10	DEL_11	DEL_12
SERR	0.03	0.00	0.02	0.03	0.02	0.01
DELI	0.01	0.01	0.04	0.05	0.03	0.03
HANN	0.00	0.00	0.03	0.04	0.03	0.01
STAF	0.01	-0.01	0.02	0.03	0.01	0.00

ETA

	DEL_13	DEL_14	DEL_15	DEL_16	DEL_17	DEL_18
SERR	0.02	0.03	0.03	0.00	0.02	0.03
DELI	0.04	0.04	0.03	0.04	0.03	0.05
HANN	0.03	0.02	0.03	0.03	0.01	0.05
STAF	0.05	0.03	0.02	0.01	0.03	0.02

ETA

	DEL_19	HAN_20	HAN_21	HAN_22	HAN_23	HAN_24
SERR	-0.01	0.04	0.01	-0.01	0.00	0.03
DELI	0.03	0.05	0.04	0.01	0.02	0.03
HANN	0.01	0.09	0.08	0.05	0.05	0.05
STAF	0.01	0.04	0.03	0.00	0.01	0.05

ETA

	HAN_25	HAN_26	STA_27	STA_28	STA_29	STA_30
SERR	0.01	0.01	0.01	0.00	0.01	0.02
DELI	0.01	0.02	0.01	0.02	0.02	0.02
HANN	0.06	0.10	-0.03	0.03	0.02	0.03
STAF	-0.02	-0.06	0.14	0.08	0.06	0.10

ETA

	STA_31	STA_32	STA_33	STA_34
SERR	-0.01	0.01	0.01	0.01
DELI	0.00	0.02	0.01	0.01
HANN	0.00	0.03	0.00	0.01
STAF	0.01	0.11	0.07	0.07

TI CFA SAS

Standardized Solution

LAMBDA-Y

	SERR	DELI	HANN	STAF
SER_1	0.46	- -	- -	- -
SER_2	0.45	- -	- -	- -
SER_3	0.45	- -	- -	- -
SER_4	0.49	- -	- -	- -
SER_5	0.51	- -	- -	- -
SER_6	0.49	- -	- -	- -
SER_7	0.44	- -	- -	- -
DEL_8	- -	0.40	- -	- -
DEL_9	- -	0.42	- -	- -
DEL_10	- -	0.44	- -	- -
DEL_11	- -	0.43	- -	- -
DEL_12	- -	0.47	- -	- -
DEL_13	- -	0.42	- -	- -

DEL_14	- -	0.47	- -	- -
DEL_15	- -	0.44	- -	- -
DEL_16	- -	0.45	- -	- -
DEL_17	- -	0.47	- -	- -
DEL_18	- -	0.51	- -	- -
DEL_19	- -	0.49	- -	- -
HAN_20	- -	- -	0.49	- -
HAN_21	- -	- -	0.47	- -
HAN_22	- -	- -	0.45	- -
HAN_23	- -	- -	0.49	- -
HAN_24	- -	- -	0.50	- -
HAN_25	- -	- -	0.49	- -
HAN_26	- -	- -	0.52	- -
STA_27	- -	- -	- -	0.49
STA_28	- -	- -	- -	0.42
STA_29	- -	- -	- -	0.45
STA_30	- -	- -	- -	0.49
STA_31	- -	- -	- -	0.45
STA_32	- -	- -	- -	0.52
STA_33	- -	- -	- -	0.47
STA_34	- -	- -	- -	0.49

GAMMA

	SATI
SERR	0.89
DELI	0.99
HANN	0.95
STAF	0.88

Correlation Matrix of ETA and KSI

	SERR	DELI	HANN	STAF	SATI
SERR	1.00				
DELI	0.88	1.00			
HANN	0.84	0.94	1.00		
STAF	0.78	0.87	0.84	1.00	
SATI	0.89	0.99	0.95	0.88	1.00

PSI
Note: This matrix is diagonal.

SERR	DELI	HANN	STAF
0.21	0.03	0.09	0.23

TI CFA SAS

Completely Standardized Solution

LAMBDA-Y

	SERR	DELI	HANN	STAF
SER_1	0.66	- -	- -	- -
SER_2	0.61	- -	- -	- -
SER_3	0.66	- -	- -	- -
SER_4	0.68	- -	- -	- -
SER_5	0.69	- -	- -	- -
SER_6	0.70	- -	- -	- -
SER_7	0.61	- -	- -	- -
DEL_8	- -	0.60	- -	- -
DEL_9	- -	0.65	- -	- -
DEL_10	- -	0.65	- -	- -
DEL_11	- -	0.60	- -	- -
DEL_12	- -	0.65	- -	- -
DEL_13	- -	0.59	- -	- -
DEL_14	- -	0.67	- -	- -
DEL_15	- -	0.64	- -	- -

DEL_16	- -	0.65	- -	- -
DEL_17	- -	0.67	- -	- -
DEL_18	- -	0.71	- -	- -
DEL_19	- -	0.66	- -	- -
HAN_20	- -	- -	0.70	- -
HAN_21	- -	- -	0.69	- -
HAN_22	- -	- -	0.64	- -
HAN_23	- -	- -	0.69	- -
HAN_24	- -	- -	0.67	- -
HAN_25	- -	- -	0.68	- -
HAN_26	- -	- -	0.69	- -
STA_27	- -	- -	- -	0.66
STA_28	- -	- -	- -	0.58
STA_29	- -	- -	- -	0.63
STA_30	- -	- -	- -	0.70
STA_31	- -	- -	- -	0.59
STA_32	- -	- -	- -	0.71
STA_33	- -	- -	- -	0.67
STA_34	- -	- -	- -	0.66

GAMMA

	SATI
SERR	0.89
DELI	0.99
HANN	0.95
STAF	0.88

Correlation Matrix of ETA and KSI

	SERR	DELI	HANN	STAF	SATI
SERR	1.00				
DELI	0.88	1.00			
HANN	0.84	0.94	1.00		
STAF	0.78	0.87	0.84	1.00	
SATI	0.89	0.99	0.95	0.88	1.00

PSI
Note: This matrix is diagonal.

SERR	DELI	HANN	STAF
0.21	0.03	0.09	0.23

THETA-EPS

	SER_1	SER_2	SER_3	SER_4	SER_5	SER_6
SER_1	0.56					
SER_2	- -	0.62				
SER_3	- -	0.15	0.56			
SER_4	- -	0.08	0.13	0.53		
SER_5	- -	- -	- -	- -	0.52	
SER_6	-0.06	- -	- -	- -	0.17	0.50
SER_7	- -	- -	- -	- -	0.16	0.27
DEL_8	- -	- -	- -	- -	- -	- -
DEL_9	- -	- -	- -	- -	- -	- -
DEL_10	- -	- -	- -	- -	- -	- -
DEL_11	- -	- -	- -	- -	- -	- -
DEL_12	- -	- -	- -	- -	- -	- -
DEL_13	- -	- -	- -	- -	- -	- -
DEL_14	- -	- -	- -	- -	-0.05	- -
DEL_15	- -	- -	-0.07	- -	- -	- -
DEL_16	- -	- -	- -	0.11	- -	- -
DEL_17	- -	- -	- -	- -	- -	- -
DEL_18	- -	- -	- -	- -	- -	- -
DEL_19	- -	- -	0.07	- -	0.07	- -
HAN_20	-0.07	- -	0.07	- -	- -	- -
HAN_21	- -	- -	- -	- -	0.08	- -

HAN_22	- -	- -	0.08	- -	0.06	- -
HAN_23	- -	- -	- -	- -	- -	- -
HAN_24	- -	- -	- -	- -	- -	-0.08
HAN_25	- -	-0.09	- -	- -	- -	- -
HAN_26	- -	- -	- -	- -	- -	- -
STA_27	- -	- -	- -	- -	- -	- -
STA_28	- -	0.10	- -	- -	- -	- -
STA_29	- -	- -	- -	- -	- -	- -
STA_30	- -	- -	- -	- -	- -	- -
STA_31	- -	0.10	- -	- -	- -	- -
STA_32	- -	- -	- -	- -	- -	- -
STA_33	- -	- -	- -	- -	- -	-0.04
STA_34	- -	- -	-0.06	- -	- -	- -

THETA-EPS

	SER_7	DEL_8	DEL_9	DEL_10	DEL_11	DEL_12
SER_7	0.62					
DEL_8	- -	0.65				
DEL_9	- -	0.11	0.58			
DEL_10	- -	0.14	0.15	0.57		
DEL_11	- -	0.06	- -	- -	0.64	
DEL_12	- -	- -	- -	- -	0.19	0.58
DEL_13	- -	- -	- -	- -	0.18	0.21
DEL_14	- -	0.12	- -	- -	- -	- -
DEL_15	-0.07	0.09	- -	- -	- -	0.05
DEL_16	- -	- -	- -	- -	- -	- -
DEL_17	- -	- -	- -	- -	0.06	- -
DEL_18	- -	- -	- -	- -	- -	- -
DEL_19	- -	- -	- -	- -	- -	- -
HAN_20	-0.06	- -	- -	-0.05	-0.07	- -
HAN_21	- -	- -	- -	- -	- -	- -
HAN_22	- -	- -	- -	- -	- -	- -
HAN_23	- -	- -	0.06	- -	- -	- -
HAN_24	- -	0.05	- -	- -	- -	0.05
HAN_25	0.11	- -	- -	- -	- -	- -
HAN_26	- -	- -	- -	- -	- -	- -
STA_27	- -	- -	- -	- -	- -	- -
STA_28	- -	0.08	- -	- -	- -	- -
STA_29	- -	- -	- -	- -	- -	- -
STA_30	- -	- -	- -	- -	- -	- -
STA_31	- -	- -	- -	- -	- -	0.07
STA_32	- -	- -	- -	- -	- -	- -
STA_33	- -	- -	- -	- -	- -	- -
STA_34	- -	- -	- -	- -	- -	- -

THETA-EPS

	DEL_13	DEL_14	DEL_15	DEL_16	DEL_17	DEL_18
DEL_13	0.65					
DEL_14	- -	0.55				
DEL_15	- -	0.14	0.59			
DEL_16	- -	0.08	0.20	0.58		
DEL_17	- -	- -	- -	- -	0.55	
DEL_18	- -	- -	- -	- -	0.20	0.50
DEL_19	- -	- -	- -	- -	0.17	0.19
HAN_20	-0.08	- -	- -	- -	- -	- -
HAN_21	- -	- -	- -	- -	-0.08	-0.07
HAN_22	- -	- -	- -	- -	- -	- -
HAN_23	- -	- -	- -	- -	- -	- -
HAN_24	- -	- -	- -	- -	- -	- -
HAN_25	0.06	- -	- -	- -	0.08	- -
HAN_26	- -	0.07	- -	- -	0.05	- -
STA_27	- -	- -	- -	- -	- -	- -
STA_28	-0.11	- -	- -	- -	- -	- -
STA_29	- -	- -	- -	- -	- -	- -
STA_30	-0.06	- -	- -	- -	- -	- -
STA_31	- -	- -	- -	- -	- -	- -
STA_32	- -	- -	- -	- -	- -	- -

STA_33	- -	- -	- -	- -	- -	- -
STA_34	- -	- -	- -	- -	- -	- -

THETA-EPS

	DEL_19	HAN_20	HAN_21	HAN_22	HAN_23	HAN_24
DEL_19	0.56					
HAN_20	- -	0.51				
HAN_21	- -	0.11	0.52			
HAN_22	- -	0.10	0.16	0.59		
HAN_23	- -	0.05	- -	- -	0.53	
HAN_24	- -	- -	- -	0.05	0.19	0.55
HAN_25	0.05	- -	- -	- -	0.12	0.20
HAN_26	- -	- -	- -	- -	- -	- -
STA_27	- -	- -	- -	0.06	- -	- -
STA_28	- -	- -	- -	-0.06	- -	- -
STA_29	- -	- -	- -	-0.07	- -	- -
STA_30	0.06	- -	- -	- -	- -	- -
STA_31	- -	- -	- -	- -	- -	- -
STA_32	- -	- -	- -	- -	- -	-0.07
STA_33	-0.05	- -	- -	- -	- -	- -
STA_34	- -	- -	- -	- -	- -	- -

THETA-EPS

	HAN_25	HAN_26	STA_27	STA_28	STA_29	STA_30
HAN_25	0.54					
HAN_26	- -	0.52				
STA_27	0.06	0.23	0.56			
STA_28	- -	- -	0.08	0.66		
STA_29	- -	- -	- -	- -	0.60	
STA_30	- -	- -	- -	- -	0.19	0.51
STA_31	- -	- -	- -	- -	0.28	0.20
STA_32	- -	- -	-0.07	- -	- -	- -
STA_33	- -	0.06	-0.07	- -	- -	- -
STA_34	- -	0.09	- -	-0.07	- -	- -

THETA-EPS

	STA_31	STA_32	STA_33	STA_34
STA_31	0.65			
STA_32	- -	0.50		
STA_33	0.06	0.19	0.56	
STA_34	0.08	0.12	0.22	0.57

TI CFA SAS

Total and Indirect Effects

Total Effects of X on ETA

	SATI
SERR	0.41
	(0.03)
	12.83
DELI	0.39
	(0.03)
	12.36
HANN	0.47
	(0.03)
	14.28
STAF	0.45
	(0.03)
	13.74

BETA*BETA' is not Pos. Def., Stability Index cannot be Computed

Total Effects of ETA on Y

	SERR	DELI	HANN	STAF
SER_1	1.00	- -	- -	- -
SER_2	0.99 (0.09) 10.54	- -	- -	- -
SER_3	0.99 (0.09) 11.23	- -	- -	- -
SER_4	1.07 (0.09) 11.53	- -	- -	- -
SER_5	1.10 (0.09) 11.64	- -	- -	- -
SER_6	1.08 (0.10) 11.24	- -	- -	- -
SER_7	0.96 (0.09) 10.49	- -	- -	- -
DEL_8	- -	1.00	- -	- -
DEL_9	- -	1.06 (0.09) 11.66	- -	- -
DEL_10	- -	1.12 (0.09) 12.11	- -	- -
DEL_11	- -	1.09 (0.10) 10.44	- -	- -
DEL_12	- -	1.18 (0.11) 10.55	- -	- -
DEL_13	- -	1.05 (0.11) 9.81	- -	- -
DEL_14	- -	1.19 (0.10) 11.97	- -	- -
DEL_15	- -	1.11 (0.10) 11.33	- -	- -
DEL_16	- -	1.13 (0.11) 10.54	- -	- -
DEL_17	- -	1.18 (0.11) 10.77	- -	- -

DEL_18	- -	1.29 (0.12) 11.22	- -	- -
DEL_19	- -	1.24 (0.12) 10.70	- -	- -
HAN_20	- -	- -	0.99 (0.08) 13.17	- -
HAN_21	- -	- -	0.96 (0.08) 12.39	- -
HAN_22	- -	- -	0.92 (0.08) 11.49	- -
HAN_23	- -	- -	1.00	- -
HAN_24	- -	- -	1.01 (0.07) 14.99	- -
HAN_25	- -	- -	0.99 (0.07) 13.90	- -
HAN_26	- -	- -	1.05 (0.08) 12.53	- -
STA_27	- -	- -	- -	0.95 (0.09) 11.19
STA_28	- -	- -	- -	0.82 (0.08) 10.39
STA_29	- -	- -	- -	0.88 (0.08) 11.29
STA_30	- -	- -	- -	0.95 (0.08) 12.32
STA_31	- -	- -	- -	0.88 (0.08) 10.59
STA_32	- -	- -	- -	1.00
STA_33	- -	- -	- -	0.92 (0.06) 14.91
STA_34	- -	- -	- -	0.94 (0.07) 13.46

Total Effects of X on Y

	SATI
SER_1	0.41

		(0.03)
		12.83
SER_2		0.40
		(0.03)
		11.79
SER_3		0.40
		(0.03)
		12.77
SER_4		0.44
		(0.03)
		13.22
SER_5		0.45
		(0.03)
		13.37
SER_6		0.44
		(0.03)
		13.64
SER_7		0.39
		(0.03)
		11.72
DEL_8		0.39
		(0.03)
		12.36
DEL_9		0.41
		(0.03)
		13.86
DEL_10		0.44
		(0.03)
		13.86
DEL_11		0.43
		(0.03)
		12.46
DEL_12		0.46
		(0.03)
		13.78
DEL_13		0.41
		(0.03)
		12.23
DEL_14		0.47
		(0.03)
		14.27
DEL_15		0.43
		(0.03)
		13.54
DEL_16		0.44
		(0.03)
		13.75
DEL_17		0.46
		(0.03)
		14.28
DEL_18		0.51
		(0.03)
		15.39

```
DEL_19       0.49
            (0.03)
             14.11

HAN_20       0.46
            (0.03)
             14.58

HAN_21       0.45
            (0.03)
             14.45

HAN_22       0.43
            (0.03)
             13.08

HAN_23       0.47
            (0.03)
             14.28

HAN_24       0.47
            (0.03)
             13.88

HAN_25       0.46
            (0.03)
             14.06

HAN_26       0.49
            (0.03)
             14.51

STA_27       0.43
            (0.03)
             12.70

STA_28       0.37
            (0.03)
             11.07

STA_29       0.40
            (0.03)
             12.12

STA_30       0.43
            (0.03)
             13.43

STA_31       0.40
            (0.04)
             11.25

STA_32       0.45
            (0.03)
             13.74

STA_33       0.42
            (0.03)
             12.76

STA_34       0.43
            (0.03)
             12.57

TI CFA SAS
```

Standardized Total and Indirect Effects

Standardized Total Effects of X on ETA

	SATI
SERR	0.89
DELI	0.99
HANN	0.95
STAF	0.88

Standardized Total Effects of ETA on Y

	SERR	DELI	HANN	STAF
SER_1	0.46	- -	- -	- -
SER_2	0.45	- -	- -	- -
SER_3	0.45	- -	- -	- -
SER_4	0.49	- -	- -	- -
SER_5	0.51	- -	- -	- -
SER_6	0.49	- -	- -	- -
SER_7	0.44	- -	- -	- -
DEL_8	- -	0.40	- -	- -
DEL_9	- -	0.42	- -	- -
DEL_10	- -	0.44	- -	- -
DEL_11	- -	0.43	- -	- -
DEL_12	- -	0.47	- -	- -
DEL_13	- -	0.42	- -	- -
DEL_14	- -	0.47	- -	- -
DEL_15	- -	0.44	- -	- -
DEL_16	- -	0.45	- -	- -
DEL_17	- -	0.47	- -	- -
DEL_18	- -	0.51	- -	- -
DEL_19	- -	0.49	- -	- -
HAN_20	- -	- -	0.49	- -
HAN_21	- -	- -	0.47	- -
HAN_22	- -	- -	0.45	- -
HAN_23	- -	- -	0.49	- -
HAN_24	- -	- -	0.50	- -
HAN_25	- -	- -	0.49	- -
HAN_26	- -	- -	0.52	- -
STA_27	- -	- -	- -	0.49
STA_28	- -	- -	- -	0.42
STA_29	- -	- -	- -	0.45
STA_30	- -	- -	- -	0.49
STA_31	- -	- -	- -	0.45
STA_32	- -	- -	- -	0.52
STA_33	- -	- -	- -	0.47
STA_34	- -	- -	- -	0.49

Completely Standardized Total Effects of ETA on Y

	SERR	DELI	HANN	STAF
SER_1	0.66	- -	- -	- -
SER_2	0.61	- -	- -	- -
SER_3	0.66	- -	- -	- -
SER_4	0.68	- -	- -	- -
SER_5	0.69	- -	- -	- -
SER_6	0.70	- -	- -	- -
SER_7	0.61	- -	- -	- -
DEL_8	- -	0.60	- -	- -
DEL_9	- -	0.65	- -	- -
DEL_10	- -	0.65	- -	- -
DEL_11	- -	0.60	- -	- -
DEL_12	- -	0.65	- -	- -
DEL_13	- -	0.59	- -	- -
DEL_14	- -	0.67	- -	- -
DEL_15	- -	0.64	- -	- -
DEL_16	- -	0.65	- -	- -
DEL_17	- -	0.67	- -	- -

DEL_18	- -	0.71	- -	- -
DEL_19	- -	0.66	- -	- -
HAN_20	- -	- -	0.70	- -
HAN_21	- -	- -	0.69	- -
HAN_22	- -	- -	0.64	- -
HAN_23	- -	- -	0.69	- -
HAN_24	- -	- -	0.67	- -
HAN_25	- -	- -	0.68	- -
HAN_26	- -	- -	0.69	- -
STA_27	- -	- -	- -	0.66
STA_28	- -	- -	- -	0.58
STA_29	- -	- -	- -	0.63
STA_30	- -	- -	- -	0.70
STA_31	- -	- -	- -	0.59
STA_32	- -	- -	- -	0.71
STA_33	- -	- -	- -	0.67
STA_34	- -	- -	- -	0.66

Standardized Total Effects of X on Y

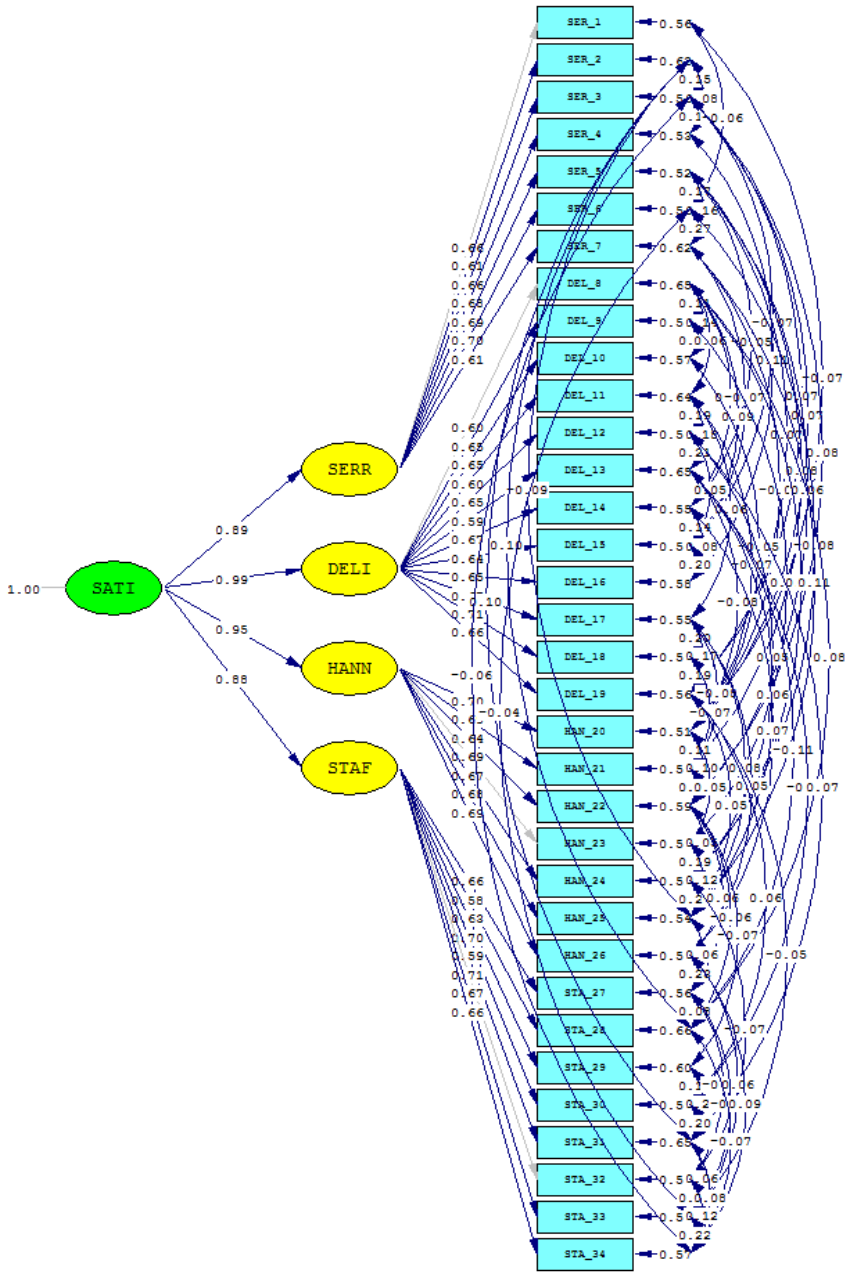
	SATI
SER_1	0.41
SER_2	0.40
SER_3	0.40
SER_4	0.44
SER_5	0.45
SER_6	0.44
SER_7	0.39
DEL_8	0.39
DEL_9	0.41
DEL_10	0.44
DEL_11	0.43
DEL_12	0.46
DEL_13	0.41
DEL_14	0.47
DEL_15	0.43
DEL_16	0.44
DEL_17	0.46
DEL_18	0.51
DEL_19	0.49
HAN_20	0.46
HAN_21	0.45
HAN_22	0.43
HAN_23	0.47
HAN_24	0.47
HAN_25	0.46
HAN_26	0.49
STA_27	0.43
STA_28	0.37
STA_29	0.40
STA_30	0.43
STA_31	0.40
STA_32	0.45
STA_33	0.42
STA_34	0.43

Completely Standardized Total Effects of X on Y

	SATI
SER_1	0.59
SER_2	0.54
SER_3	0.59
SER_4	0.61
SER_5	0.61
SER_6	0.62
SER_7	0.54
DEL_8	0.59
DEL_9	0.64
DEL_10	0.64

DEL_11	0.59
DEL_12	0.64
DEL_13	0.58
DEL_14	0.66
DEL_15	0.63
DEL_16	0.64
DEL_17	0.66
DEL_18	0.70
DEL_19	0.65
HAN_20	0.67
HAN_21	0.66
HAN_22	0.61
HAN_23	0.65
HAN_24	0.64
HAN_25	0.64
HAN_26	0.66
STA_27	0.58
STA_28	0.51
STA_29	0.56
STA_30	0.61
STA_31	0.52
STA_32	0.62
STA_33	0.59
STA_34	0.58

Time used: 0.281 Seconds



Chi-Square=481.74, df=433, P-value=0.05259, RMSEA=0.017

ผลการวิเคราะห์สมการโครงสร้าง (SEM)

DATE: 3/ 4/2018
TIME: 0:11

L I S R E L 8.72

BY

Karl G. Jöreskog & Dag Sörbom

This program is published exclusively by
Scientific Software International, Inc.
7383 N. Lincoln Avenue, Suite 100
Lincolnwood, IL 60712, U.S.A.
Phone: (800)247-6113, (847)675-0720, Fax: (847)675-2140

The following lines were read from file E:\YA SEM.LPJ:

```
TI SEM
!DA NI=13 NO=400 MA=CM
SY='E:\YA SEM.dsf' NG=1
SE
5 6 7 8 9 10 11 12 13 1 2 3 4 /
MO NX=4 NY=9 NK=1 NE=2 BE=FU GA=FI PS=SY TE=SY TD=SY
LE
SALE SATIS
LK
MARKET
FI TE 5 5
FR LY(2,1) LY(3,1) LY(4,1) LY(5,1) LY(7,2) LY(8,2) LY(9,2) LX(2,1) LX(3,1)
FR LX(4,1) BE(2,1) GA(1,1) GA(2,1) TE 4 1 TE 3 1 TE 5 1 TE 8 7 TD 3 1 TE 5 2
FR TE 5 3 TE 9 4 TE 9 2 TE 5 4 TE 9 6 TE 7 4 TD 4 2 TH 3 4 TH 1 7 TH 3 9 TH 3 2 TH 4 2
FR TH 4 1 TE 8 3 TH 1 1
VA 1 LY(1,1)
VA 1 LY(6,2)
VA 1 LX(1,1)
PD
OU AM RS EF FS SS SC AD=OFF
```

TI SEM

```
Number of Input Variables 13
Number of Y - Variables    9
Number of X - Variables    4
Number of ETA - Variables  2
Number of KSI - Variables  1
Number of Observations   400
```

TI SEM

Covariance Matrix

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
KNOW_1	0.33					
SKIL_2	0.24	0.39				
PERS_3	0.20	0.27	0.41			
NEED_4	0.19	0.28	0.32	0.47		
INDI_5	0.18	0.18	0.22	0.25	0.33	
SERV_6	0.16	0.15	0.18	0.18	0.20	0.28
DELI_7	0.17	0.16	0.18	0.19	0.18	0.19
HAND_8	0.18	0.16	0.18	0.19	0.19	0.20
STAF_9	0.17	0.19	0.20	0.23	0.20	0.17

PROD_1	0.15	0.12	0.12	0.11	0.13	0.13
PRIC_2	0.15	0.13	0.16	0.15	0.16	0.16
PLAC_3	0.18	0.20	0.21	0.25	0.20	0.17
PROM_4	0.18	0.17	0.18	0.17	0.17	0.16

Covariance Matrix

	DELI_7	HAND_8	STAF_9	PROD_1	PRIC_2	PLAC_3
DELI_7	0.24					
HAND_8	0.21	0.30				
STAF_9	0.18	0.19	0.29			
PROD_1	0.15	0.14	0.13	0.27		
PRIC_2	0.15	0.16	0.16	0.15	0.26	
PLAC_3	0.16	0.16	0.20	0.12	0.18	0.36
PROM_4	0.16	0.16	0.16	0.15	0.16	0.20

Covariance Matrix

	PROM_4
PROM_4	0.25

TI SEM

Parameter Specifications

LAMBDA-Y

	SALE	SATIS
KNOW_1	0	0
SKIL_2	1	0
PERS_3	2	0
NEED_4	3	0
INDI_5	4	0
SERV_6	0	0
DELI_7	0	5
HAND_8	0	6
STAF_9	0	7

LAMBDA-X

	MARKET
PROD_1	0
PRIC_2	8
PLAC_3	9
PROM_4	10

BETA

	SALE	SATIS
SALE	0	0
SATIS	11	0

GAMMA

	MARKET
SALE	12
SATIS	13

PHI

MARKET
14

PSI

	SALE	SATIS
	15	16

THETA-EPS

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
KNOW_1	17					
SKIL_2	0	18				
PERS_3	19	0	20			
NEED_4	21	0	0	22		
INDI_5	23	24	25	26	0	
SERV_6	0	0	0	0	0	27
DELI_7	0	0	0	28	0	0
HAND_8	0	0	30	0	0	0
STAF_9	0	33	0	34	0	35

THETA-EPS

	DELI_7	HAND_8	STAF_9
DELI_7	29		
HAND_8	31	32	
STAF_9	0	0	36

THETA-DELTA-EPS

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
PROD_1	37	0	0	0	0	0
PRIC_2	0	0	0	0	0	0
PLAC_3	0	41	0	42	0	0
PROM_4	46	47	0	0	0	0

THETA-DELTA-EPS

	DELI_7	HAND_8	STAF_9
PROD_1	38	0	0
PRIC_2	0	0	0
PLAC_3	0	0	43
PROM_4	0	0	0

THETA-DELTA

	PROD_1	PRIC_2	PLAC_3	PROM_4
PROD_1	39			
PRIC_2	0	40		
PLAC_3	44	0	45	
PROM_4	0	48	0	49

TI SEM

Number of Iterations = 30

LISREL Estimates (Maximum Likelihood)

LAMBDA-Y

	SALE	SATIS
KNOW_1	1.00	- -
SKIL_2	0.93	- -
	(0.06)	

	16.03	
PERS_3	1.12	- -
	(0.07)	
	16.51	
NEED_4	1.11	- -
	(0.08)	
	14.80	
INDI_5	1.15	- -
	(0.06)	
	18.26	
SERV_6	- -	1.00
DELI_7	- -	0.96
		(0.05)
		20.50
HAND_8	- -	1.00
		(0.05)
		18.52
STAF_9	- -	0.99
		(0.06)
		17.48

LAMBDA-X

	MARKET
PROD_1	1.00
PRIC_2	1.20
	(0.09)
	13.62
PLAC_3	1.32
	(0.11)
	12.10
PROM_4	1.24
	(0.09)
	14.18

BETA

	SALE	SATIS
SALE	- -	- -
SATIS	0.27	- -
	(0.04)	
	7.11	

GAMMA

	MARKET
SALE	1.04
	(0.08)
	12.75
SATIS	0.82
	(0.08)
	10.68

Covariance Matrix of ETA and KSI

	SALE	SATIS	MARKET
SALE	0.25		
SATIS	0.17	0.19	
MARKET	0.12	0.13	0.12

PHI

MARKET
0.12
(0.02)
7.19

PSI
Note: This matrix is diagonal.

SALE	SATIS
0.13	0.04
(0.01)	(0.01)
9.23	7.26

Squared Multiple Correlations for Structural Equations

SALE	SATIS
0.50	0.79

Squared Multiple Correlations for Reduced Form

SALE	SATIS
0.50	0.74

Reduced Form

	MARKET
SALE	1.04
	(0.08)
	12.75
SATIS	1.10
	(0.08)
	13.03

THETA-EPS

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
KNOW_1	0.07					
	(0.01)					
	5.42					
SKIL_2	- -	0.16				
		(0.01)				
		13.25				
PERS_3	-0.08	- -	0.10			
	(0.01)		(0.01)			
	-7.19		7.93			
NEED_4	-0.10	- -	- -	0.14		
	(0.01)			(0.01)		

	-9.15			10.04		
INDI_5	-0.11	-0.09	-0.10	-0.08	- -	
	(0.01)	(0.01)	(0.01)	(0.01)		
	-10.16	-9.04	-9.98	-7.60		
SERV_6	- -	- -	- -	- -	- -	0.09
						(0.01)
						10.58
DELI_7	- -	- -	- -	0.02	- -	- -
				(0.01)		
				3.79		
HAND_8	- -	- -	-0.02	- -	- -	- -
			(0.01)			
			-2.35			
STAF_9	- -	0.03	- -	0.04	- -	-0.02
		(0.01)		(0.01)		(0.01)
		4.21		4.99		-3.17

THETA-EPS

	DELI_7	HAND_8	STAF_9
DELI_7	0.06		
	(0.01)		
	10.37		
HAND_8	0.02	0.10	
	(0.01)	(0.01)	
	3.61	11.33	
STAF_9	- -	- -	0.10
			(0.01)
			11.07

Squared Multiple Correlations for Y - Variables

KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
0.78	0.57	0.76	0.68	1.00	0.69

Squared Multiple Correlations for Y - Variables

DELI_7	HAND_8	STAF_9
0.74	0.65	0.65

THETA-DELTA-EPS

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
PROD_1	0.02	- -	- -	- -	- -	- -
	(0.01)					
	2.76					
PRIC_2	- -	- -	- -	- -	- -	- -
PLAC_3	- -	0.04	- -	0.06	- -	- -
		(0.01)		(0.01)		
		4.10		6.51		
PROM_4	0.02	0.02	- -	- -	- -	- -
	(0.01)	(0.01)				
	3.10	3.36				

THETA-DELTA-EPS

	DELI_7	HAND_8	STAF_9
PROD_1	0.02	- -	- -
	(0.01)		
	3.76		
PRIC_2	- -	- -	- -
PLAC_3	- -	- -	0.03
			(0.01)
			4.29
PROM_4	- -	- -	- -

THETA-DELTA

	PROD_1	PRIC_2	PLAC_3	PROM_4
PROD_1	0.15			
	(0.01)			
	12.84			
PRIC_2	- -	0.09		
		(0.01)		
		9.81		
PLAC_3	-0.04	- -	0.16	
	(0.01)		(0.01)	
	-4.35		12.01	
PROM_4	- -	-0.02	- -	0.07
		(0.01)		(0.01)
		-3.43		8.65

Squared Multiple Correlations for X - Variables

PROD_1	PRIC_2	PLAC_3	PROM_4
0.44	0.66	0.56	0.73

Goodness of Fit Statistics

Degrees of Freedom = 42
Minimum Fit Function Chi-Square = 50.33 (P = 0.18)
Normal Theory Weighted Least Squares Chi-Square = 50.35 (P = 0.18)
Estimated Non-centrality Parameter (NCP) = 8.35
90 Percent Confidence Interval for NCP = (0.0 ; 30.36)

Minimum Fit Function Value = 0.13
Population Discrepancy Function Value (F0) = 0.021
90 Percent Confidence Interval for F0 = (0.0 ; 0.076)
Root Mean Square Error of Approximation (RMSEA) = 0.022
90 Percent Confidence Interval for RMSEA = (0.0 ; 0.043)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.99

Expected Cross-Validation Index (ECVI) = 0.37
90 Percent Confidence Interval for ECVI = (0.35 ; 0.43)
ECVI for Saturated Model = 0.46
ECVI for Independence Model = 24.98

Chi-Square for Independence Model with 78 Degrees of Freedom = 9941.97
Independence AIC = 9967.97
Model AIC = 148.35
Saturated AIC = 182.00
Independence CAIC = 10032.86
Model CAIC = 392.93

Saturated CAIC = 636.22

Normed Fit Index (NFI) = 0.99
Non-Normed Fit Index (NNFI) = 1.00
Parsimony Normed Fit Index (PNFI) = 0.54
Comparative Fit Index (CFI) = 1.00
Incremental Fit Index (IFI) = 1.00
Relative Fit Index (RFI) = 0.99

Critical N (CN) = 525.86

Root Mean Square Residual (RMR) = 0.0079
Standardized RMR = 0.023
Goodness of Fit Index (GFI) = 0.98
Adjusted Goodness of Fit Index (AGFI) = 0.96
Parsimony Goodness of Fit Index (PGFI) = 0.45

TI SEM

Fitted Covariance Matrix

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
KNOW_1	0.33					
SKIL_2	0.23	0.38				
PERS_3	0.20	0.26	0.41			
NEED_4	0.18	0.26	0.32	0.46		
INDI_5	0.18	0.18	0.22	0.25	0.34	
SERV_6	0.17	0.16	0.19	0.19	0.20	0.28
DELI_7	0.16	0.15	0.18	0.20	0.19	0.19
HAND_8	0.17	0.16	0.17	0.19	0.20	0.19
STAF_9	0.17	0.19	0.19	0.23	0.19	0.17
PROD_1	0.14	0.11	0.14	0.14	0.14	0.13
PRIC_2	0.15	0.14	0.17	0.16	0.17	0.16
PLAC_3	0.16	0.19	0.18	0.24	0.19	0.17
PROM_4	0.17	0.17	0.17	0.17	0.18	0.16

Fitted Covariance Matrix

	DELI_7	HAND_8	STAF_9	PROD_1	PRIC_2	PLAC_3
DELI_7	0.24					
HAND_8	0.21	0.30				
STAF_9	0.18	0.19	0.29			
PROD_1	0.15	0.13	0.13	0.27		
PRIC_2	0.15	0.16	0.16	0.14	0.26	
PLAC_3	0.17	0.17	0.20	0.12	0.19	0.37
PROM_4	0.16	0.16	0.16	0.15	0.16	0.19

Fitted Covariance Matrix

	PROM_4
PROM_4	0.25

Fitted Residuals

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
KNOW_1	0.00					
SKIL_2	0.00	0.01				
PERS_3	0.00	0.01	0.00			
NEED_4	0.00	0.01	0.01	0.01		
INDI_5	0.00	0.01	0.00	0.00	0.00	
SERV_6	-0.01	-0.01	-0.01	-0.01	0.00	0.00
DELI_7	0.01	0.01	0.00	-0.01	-0.01	0.00
HAND_8	0.01	0.01	0.00	0.00	0.00	0.00
STAF_9	0.00	0.01	0.01	0.00	0.00	0.00
PROD_1	0.01	0.00	-0.02	-0.03	-0.01	0.00
PRIC_2	0.01	0.00	0.00	-0.02	-0.01	0.00

PLAC_3	0.01	0.02	0.03	0.01	0.01	-0.01
PROM_4	0.01	0.01	0.01	0.00	-0.01	0.00

Fitted Residuals

	DELI_7	HAND_8	STAF_9	PROD_1	PRIC_2	PLAC_3
DELI_7	0.00					
HAND_8	0.00	0.00				
STAF_9	0.00	0.00	0.00			
PROD_1	0.00	0.01	0.00	0.00		
PRIC_2	0.00	0.01	0.00	0.01	0.00	
PLAC_3	-0.01	-0.01	0.00	0.00	-0.01	0.00
PROM_4	0.00	-0.01	0.00	0.00	0.00	0.00

Fitted Residuals

	PROM_4
PROM_4	0.00

Summary Statistics for Fitted Residuals

Smallest Fitted Residual = -0.03
Median Fitted Residual = 0.00
Largest Fitted Residual = 0.03

Stemleaf Plot

```
- 2|8
- 1|865330
- 0|9887766665433333322222111111100000000
  0|11111111112222333333445556666667777789 9
  1|01112449
  2|9
```

Standardized Residuals

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
KNOW_1	0.87					
SKIL_2	0.22	1.84				
PERS_3	-0.08	1.12	-0.31			
NEED_4	0.38	1.94	1.95	2.09		
INDI_5	-0.06	1.61	-0.22	0.12	-0.86	
SERV_6	-0.82	-0.69	-1.56	-0.84	0.84	- -
DELI_7	1.77	0.79	-0.41	-1.39	-1.62	0.41
HAND_8	0.76	0.68	0.58	0.06	-0.25	0.39
STAF_9	0.43	1.03	1.02	0.52	0.54	-0.54
PROD_1	1.06	0.13	-1.76	-2.51	-1.73	-0.20
PRIC_2	0.73	-0.28	-0.52	-1.69	-1.03	0.83
PLAC_3	1.45	2.32	2.65	1.40	1.48	-0.82
PROM_4	1.54	1.20	1.36	-0.32	-1.30	-0.12

Standardized Residuals

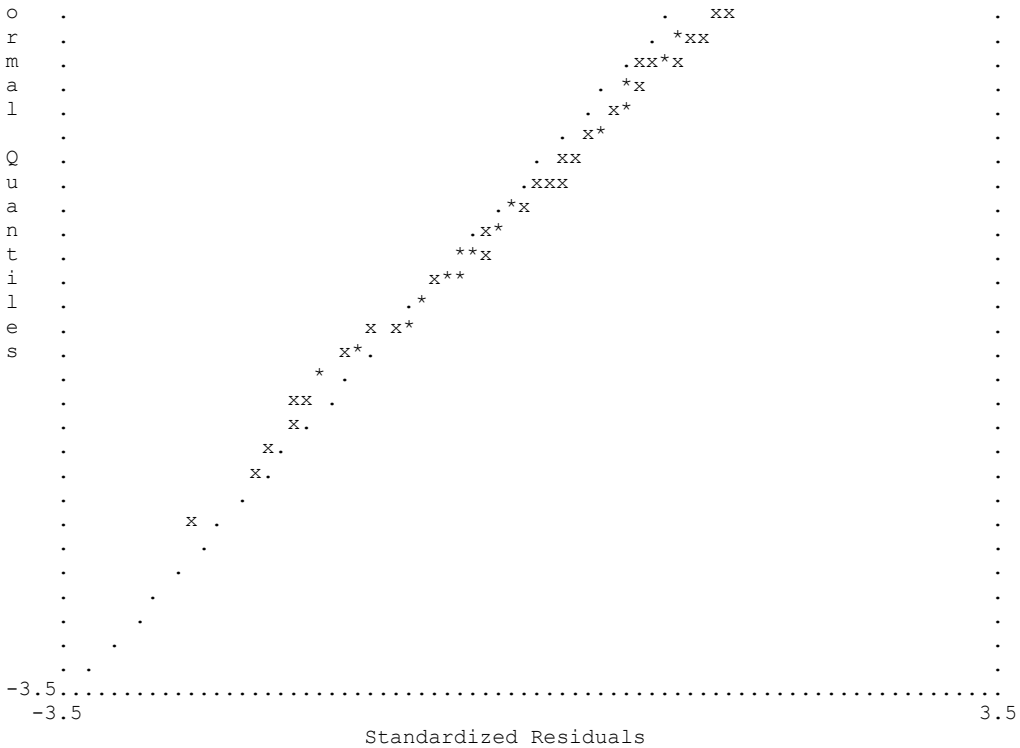
	DELI_7	HAND_8	STAF_9	PROD_1	PRIC_2	PLAC_3
DELI_7	-0.41					
HAND_8	0.73	0.28				
STAF_9	-0.86	-0.49	-0.13			
PROD_1	0.34	0.85	0.27	1.45		
PRIC_2	0.13	1.12	0.27	1.43	- -	
PLAC_3	-1.34	-1.97	-0.54	-0.62	-2.09	-0.88
PROM_4	0.74	-1.19	-0.66	0.00	0.38	0.75

Standardized Residuals

	PROM_4
PROM_4	1.32

```
Summary Statistics for Standardized Residuals

Smallest Standardized Residual =   -2.51
  Median Standardized Residual =    0.22
 Largest Standardized Residual =    2.65

Stemleaf Plot

- 2|510
- 1|8776643320
- 0|99988877655554433332211111000
  0|11112333344444556777788888899
  1|001112344444556889
  2|0136
Largest Positive Standardized Residuals
Residual for   PLAC_3 and   PERS_3   2.65
```

```
TI SEM

                    Qplot of Standardized Residuals

 3.5.....................................................................
    .                                                                  ..
    .                                                                . .
    .                                                              .   .
    .                                                            .     .
    .                                                          .       .
    .                                                        .         .
    .                                                      .           .
    .                                                    .  x          .
    .                                                  .               .
    .                                                .   x             .
    .                                              . x                 .
    .                                            .  x                  .
    .                                          .   xx                  .
    .                                        . x x                     .
N   .                                      .  *x                       .
```



TI SEM

Modification Indices and Expected Change

Modification Indices for LAMBDA-Y

	SALE	SATIS
KNOW_1	- -	0.27
SKIL_2	- -	0.49
PERS_3	- -	0.05
NEED_4	- -	0.31
INDI_5	- -	0.02
SERV_6	0.52	- -
DELI_7	0.18	- -
HAND_8	0.53	- -
STAF_9	0.18	- -

Expected Change for LAMBDA-Y

	SALE	SATIS
KNOW_1	- -	0.06
SKIL_2	- -	0.07
PERS_3	- -	-0.02
NEED_4	- -	-0.06
INDI_5	- -	-0.01
SERV_6	-0.04	- -
DELI_7	-0.02	- -
HAND_8	0.03	- -
STAF_9	0.02	- -

Standardized Expected Change for LAMBDA-Y

	SALE	SATIS
KNOW_1	- -	0.03
SKIL_2	- -	0.03
PERS_3	- -	-0.01

NEED_4	- -	-0.03
INDI_5	- -	-0.01
SERV_6	-0.02	- -
DELI_7	-0.01	- -
HAND_8	0.02	- -
STAF_9	0.01	- -

Completely Standardized Expected Change for LAMBDA-Y

	SALE	SATIS
KNOW_1	- -	0.05
SKIL_2	- -	0.05
PERS_3	- -	-0.01
NEED_4	- -	-0.04
INDI_5	- -	-0.01
SERV_6	-0.04	- -
DELI_7	-0.02	- -
HAND_8	0.03	- -
STAF_9	0.02	- -

No Non-Zero Modification Indices for LAMBDA-X

No Non-Zero Modification Indices for BETA

No Non-Zero Modification Indices for GAMMA

No Non-Zero Modification Indices for PHI

No Non-Zero Modification Indices for PSI

Modification Indices for THETA-EPS

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
KNOW_1	- -					
SKIL_2	0.49	- -				
PERS_3	- -	0.32	- -			
NEED_4	- -	0.24	0.22	- -		
INDI_5	- -	- -	- -	- -	0.08	
SERV_6	1.64	0.00	3.00	0.05	3.20	- -
DELI_7	1.88	0.00	0.07	- -	2.31	0.25
HAND_8	0.02	0.20	- -	0.89	0.00	0.00
STAF_9	0.27	- -	0.16	- -	0.29	- -

Modification Indices for THETA-EPS

	DELI_7	HAND_8	STAF_9
DELI_7	- -		
HAND_8	- -	- -	
STAF_9	0.20	0.00	- -

Expected Change for THETA-EPS

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
KNOW_1	- -					
SKIL_2	-0.01	- -				
PERS_3	- -	-0.01	- -			
NEED_4	- -	0.01	0.01	- -		
INDI_5	- -	- -	- -	- -	0.01	
SERV_6	-0.01	0.00	-0.01	0.00	0.01	- -
DELI_7	0.01	0.00	0.00	- -	-0.01	0.00
HAND_8	0.00	0.00	- -	0.01	0.00	0.00
STAF_9	0.00	- -	0.00	- -	0.00	- -

Expected Change for THETA-EPS

	DELI_7	HAND_8	STAF_9

DELI_7	- -		
HAND_8	- -	- -	
STAF_9	0.00	0.00	- -

Completely Standardized Expected Change for THETA-EPS

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
KNOW_1	- -					
SKIL_2	-0.03	- -				
PERS_3	- -	-0.02	- -			
NEED_4	- -	0.01	0.02	- -		
INDI_5	- -	- -	- -	- -	0.02	
SERV_6	-0.03	0.00	-0.04	0.00	0.04	- -
DELI_7	0.02	0.00	-0.01	- -	-0.03	0.01
HAND_8	0.00	0.01	- -	0.02	0.00	0.00
STAF_9	-0.01	- -	0.01	- -	0.01	- -

Completely Standardized Expected Change for THETA-EPS

	DELI_7	HAND_8	STAF_9
DELI_7	- -		
HAND_8	- -	- -	
STAF_9	-0.01	0.00	- -

Modification Indices for THETA-DELTA-EPS

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
PROD_1	- -	1.26	1.04	2.23	0.01	0.10
PRIC_2	0.00	0.29	0.05	0.30	0.90	0.87
PLAC_3	0.92	- -	3.15	- -	3.49	0.71
PROM_4	- -	- -	2.26	0.23	1.89	0.07

Modification Indices for THETA-DELTA-EPS

	DELI_7	HAND_8	STAF_9
PROD_1	- -	0.43	0.50
PRIC_2	0.21	1.69	0.43
PLAC_3	0.58	2.24	- -
PROM_4	2.08	1.30	0.80

Expected Change for THETA-DELTA-EPS

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
PROD_1	- -	0.01	-0.01	-0.01	0.00	0.00
PRIC_2	0.00	0.00	0.00	0.00	-0.01	0.01
PLAC_3	0.01	- -	0.02	- -	0.02	-0.01
PROM_4	- -	- -	0.01	0.00	-0.01	0.00

Expected Change for THETA-DELTA-EPS

	DELI_7	HAND_8	STAF_9
PROD_1	- -	0.00	0.00
PRIC_2	0.00	0.01	0.00
PLAC_3	0.00	-0.01	- -
PROM_4	0.01	-0.01	-0.01

Completely Standardized Expected Change for THETA-DELTA-EPS

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
PROD_1	- -	0.03	-0.02	-0.04	0.00	-0.01
PRIC_2	0.00	-0.01	0.00	-0.01	-0.02	0.02
PLAC_3	0.03	- -	0.04	- -	0.04	-0.02
PROM_4	- -	- -	0.03	-0.01	-0.03	0.01

Completely Standardized Expected Change for THETA-DELTA-EPS

	DELI_7	HAND_8	STAF_9
PROD_1	- -	0.02	0.02
PRIC_2	-0.01	0.03	0.01
PLAC_3	-0.01	-0.03	- -
PROM_4	0.02	-0.02	-0.02

Modification Indices for THETA-DELTA

	PROD_1	PRIC_2	PLAC_3	PROM_4
PROD_1	- -			
PRIC_2	1.44	- -		
PLAC_3	- -	2.52	- -	
PROM_4	0.31	- -	1.01	- -

Expected Change for THETA-DELTA

	PROD_1	PRIC_2	PLAC_3	PROM_4
PROD_1	- -			
PRIC_2	0.01	- -		
PLAC_3	- -	-0.01	- -	
PROM_4	0.00	- -	0.01	- -

Completely Standardized Expected Change for THETA-DELTA

	PROD_1	PRIC_2	PLAC_3	PROM_4
PROD_1	- -			
PRIC_2	0.04	- -		
PLAC_3	- -	-0.05	- -	
PROM_4	-0.02	- -	0.03	- -

Maximum Modification Index is 3.49 for Element (3, 5) of THETA DELTA-EPSILON

TI SEM

Factor Scores Regressions

ETA

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
SALE	0.52	-0.01	0.23	0.16	0.70	-0.11
SATIS	0.05	-0.03	0.08	-0.05	0.09	0.20

ETA

	DELI_7	HAND_8	STAF_9	PROD_1	PRIC_2	PLAC_3
SALE	-0.13	0.00	-0.13	-0.06	-0.04	-0.04
SATIS	0.20	0.10	0.20	-0.01	0.06	0.01

ETA

	PROM_4
SALE	-0.17
SATIS	0.07

KSI

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
MARKET	0.00	-0.04	0.05	-0.03	0.05	0.04

KSI

	DELI_7	HAND_8	STAF_9	PROD_1	PRIC_2	PLAC_3
MARKET	0.02	0.03	0.02	0.08	0.19	0.11

KSI

	PROM_4
MARKET	0.24

TI SEM

Standardized Solution

LAMBDA-Y

	SALE	SATIS
KNOW_1	0.50	- -
SKIL_2	0.47	- -
PERS_3	0.56	- -
NEED_4	0.56	- -
INDI_5	0.58	- -
SERV_6	- -	0.44
DELI_7	- -	0.42
HAND_8	- -	0.44
STAF_9	- -	0.44

LAMBDA-X

	MARKET
PROD_1	0.34
PRIC_2	0.42
PLAC_3	0.45
PROM_4	0.43

BETA

	SALE	SATIS
SALE	- -	- -
SATIS	0.31	- -

GAMMA

	MARKET
SALE	0.71
SATIS	0.64

Correlation Matrix of ETA and KSI

	SALE	SATIS	MARKET
SALE	1.00		
SATIS	0.76	1.00	
MARKET	0.71	0.86	1.00

PSI
Note: This matrix is diagonal.

SALE	SATIS
0.50	0.21

Regression Matrix ETA on KSI (Standardized)

	MARKET
SALE	0.71

SATIS	0.86

TI SEM

Completely Standardized Solution

LAMBDA-Y

	SALE	SATIS
KNOW_1	0.88	- -
SKIL_2	0.76	- -
PERS_3	0.87	- -
NEED_4	0.83	- -
INDI_5	1.00	- -
SERV_6	- -	0.83
DELI_7	- -	0.86
HAND_8	- -	0.81
STAF_9	- -	0.81

LAMBDA-X

	MARKET
PROD_1	0.66
PRIC_2	0.81
PLAC_3	0.75
PROM_4	0.86

BETA

	SALE	SATIS
SALE	- -	- -
SATIS	0.31	- -

GAMMA

	MARKET
SALE	0.71
SATIS	0.64

Correlation Matrix of ETA and KSI

	SALE	SATIS	MARKET
SALE	1.00		
SATIS	0.76	1.00	
MARKET	0.71	0.86	1.00

PSI
Note: This matrix is diagonal.

SALE	SATIS
0.50	0.21

THETA-EPS

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
KNOW_1	0.22					
SKIL_2	- -	0.43				
PERS_3	-0.22	- -	0.24			
NEED_4	-0.26	- -	- -	0.32		
INDI_5	-0.35	-0.26	-0.28	-0.19	- -	
SERV_6	- -	- -	- -	- -	- -	0.31
DELI_7	- -	- -	- -	0.06	- -	- -
HAND_8	- -	- -	-0.04	- -	- -	- -
STAF_9	- -	0.09	- -	0.11	- -	-0.07

THETA-EPS

	DELI_7	HAND_8	STAF_9
DELI_7	0.26		
HAND_8	0.08	0.35	
STAF_9	- -	- -	0.35

THETA-DELTA-EPS

	KNOW_1	SKIL_2	PERS_3	NEED_4	INDI_5	SERV_6
PROD_1	0.07	- -	- -	- -	- -	- -
PRIC_2	- -	- -	- -	- -	- -	- -
PLAC_3	- -	0.10	- -	0.15	- -	- -
PROM_4	0.07	0.08	- -	- -	- -	- -

THETA-DELTA-EPS

	DELI_7	HAND_8	STAF_9
PROD_1	0.08	- -	- -
PRIC_2	- -	- -	- -
PLAC_3	- -	- -	0.10
PROM_4	- -	- -	- -

THETA-DELTA

	PROD_1	PRIC_2	PLAC_3	PROM_4
PROD_1	0.56			
PRIC_2	- -	0.34		
PLAC_3	-0.11	- -	0.44	
PROM_4	- -	-0.08	- -	0.27

Regression Matrix ETA on KSI (Standardized)

	MARKET
SALE	0.71
SATIS	0.86

TI SEM

Total and Indirect Effects

Total Effects of KSI on ETA

	MARKET
SALE	1.04
	(0.08)
	12.75
SATIS	1.10
	(0.08)
	13.03

Indirect Effects of KSI on ETA

	MARKET
SALE	- -
SATIS	0.28
	(0.04)
	6.91

Total Effects of ETA on ETA

	SALE	SATIS
SALE	- -	- -
SATIS	0.27	- -
	(0.04)	
	7.11	

Largest Eigenvalue of B*B' (Stability Index) is 0.073

Total Effects of ETA on Y

	SALE	SATIS
KNOW_1	1.00	- -
SKIL_2	0.93	- -
	(0.06)	
	16.03	
PERS_3	1.12	- -
	(0.07)	
	16.51	
NEED_4	1.11	- -
	(0.08)	
	14.80	
INDI_5	1.15	- -
	(0.06)	
	18.26	
SERV_6	0.27	1.00
	(0.04)	
	7.11	
DELI_7	0.26	0.96
	(0.04)	(0.05)
	7.17	20.50
HAND_8	0.27	1.00
	(0.04)	(0.05)
	7.07	18.52
STAF_9	0.27	0.99
	(0.04)	(0.06)
	7.07	17.48

Indirect Effects of ETA on Y

	SALE	SATIS
KNOW_1	- -	- -
SKIL_2	- -	- -
PERS_3	- -	- -
NEED_4	- -	- -
INDI_5	- -	- -
SERV_6	0.27	- -
	(0.04)	
	7.11	
DELI_7	0.26	- -

	(0.04)	
	7.17	
HAND_8	0.27	- -
	(0.04)	
	7.07	
STAF_9	0.27	- -
	(0.04)	
	7.07	

Total Effects of KSI on Y

	MARKET
KNOW_1	1.04
	(0.08)
	12.75
SKIL_2	0.96
	(0.09)
	11.19
PERS_3	1.16
	(0.09)
	12.26
NEED_4	1.15
	(0.10)
	11.76
INDI_5	1.19
	(0.09)
	13.27
SERV_6	1.10
	(0.08)
	13.03
DELI_7	1.06
	(0.07)
	14.28
HAND_8	1.10
	(0.09)
	12.79
STAF_9	1.09
	(0.09)
	12.76

TI SEM

Standardized Total and Indirect Effects

Standardized Total Effects of KSI on ETA

	MARKET
SALE	0.71
SATIS	0.86

Standardized Indirect Effects of KSI on ETA

	MARKET
SALE	- -
SATIS	0.22

Standardized Total Effects of ETA on ETA

	SALE	SATIS
SALE	- -	- -
SATIS	0.31	- -

Standardized Total Effects of ETA on Y

	SALE	SATIS
KNOW_1	0.50	- -
SKIL_2	0.47	- -
PERS_3	0.56	- -
NEED_4	0.56	- -
INDI_5	0.58	- -
SERV_6	0.14	0.44
DELI_7	0.13	0.42
HAND_8	0.14	0.44
STAF_9	0.13	0.44

Completely Standardized Total Effects of ETA on Y

	SALE	SATIS
KNOW_1	0.88	- -
SKIL_2	0.76	- -
PERS_3	0.87	- -
NEED_4	0.83	- -
INDI_5	1.00	- -
SERV_6	0.26	0.83
DELI_7	0.27	0.86
HAND_8	0.25	0.81
STAF_9	0.25	0.81

Standardized Indirect Effects of ETA on Y

	SALE	SATIS
KNOW_1	- -	- -
SKIL_2	- -	- -
PERS_3	- -	- -
NEED_4	- -	- -
INDI_5	- -	- -
SERV_6	0.14	- -
DELI_7	0.13	- -
HAND_8	0.14	- -
STAF_9	0.13	- -

Completely Standardized Indirect Effects of ETA on Y

	SALE	SATIS
KNOW_1	- -	- -
SKIL_2	- -	- -
PERS_3	- -	- -
NEED_4	- -	- -
INDI_5	- -	- -
SERV_6	0.26	- -
DELI_7	0.27	- -
HAND_8	0.25	- -
STAF_9	0.25	- -

Standardized Total Effects of KSI on Y

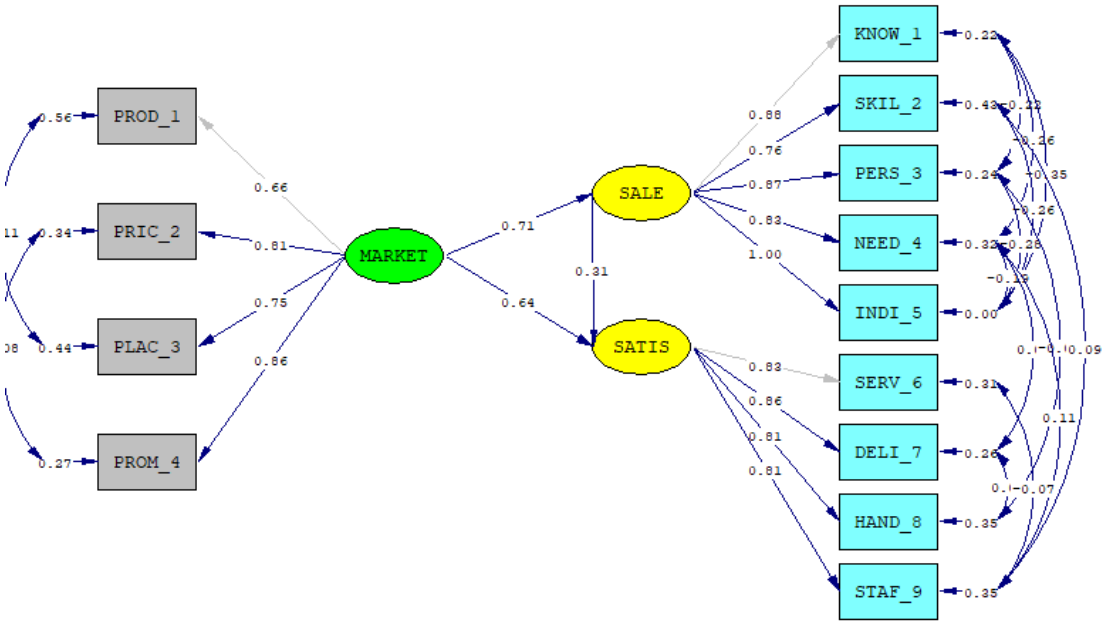
	MARKET
KNOW_1	0.36
SKIL_2	0.33
PERS_3	0.40
NEED_4	0.40

INDI_5	0.41
SERV_6	0.38
DELI_7	0.36
HAND_8	0.38
STAF_9	0.37

Completely Standardized Total Effects of KSI on Y

	MARKET
KNOW_1	0.63
SKIL_2	0.54
PERS_3	0.62
NEED_4	0.59
INDI_5	0.71
SERV_6	0.72
DELI_7	0.74
HAND_8	0.69
STAF_9	0.69

Time used: 0.016 Seconds



Chi-Square=50.35, df=42, P-value=0.17658, RMSEA=0.022

ประวัติผู้วิจัย

ชื่อ – สกุล	วิริยา บุญมาเลิศ	
วัน/เดือน/ปีเกิด	9พฤษภาคม 2522	
สถานที่เกิด	กรุงเทพมหานคร	
วุฒิการศึกษา	ปริญญาโท	บริหารธุรกิจมหาบัณฑิต สาขาวิชาการจัดการ มหาวิทยาลัยเทคโนโลยีมหานคร
	ปริญญาตรี	บริหารธุรกิจบัณฑิต สาขาวิชาการจัดการ สถาบันเทคโนโลยีราชมงคล
ประวัติการทำงาน	2558 – ปัจจุบัน	รองคณบดีฝ่ายวิชาการ วิทยาลัยโลจิสติกส์และซัพพลายเชน มหาวิทยาลัยราชภัฏสวนสุนันทา
	2557 – 2558	ผู้ช่วยคณบดีฝ่ายวิชาการ วิทยาลัยนวัตกรรมและการจัดการ มหาวิทยาลัยราชภัฏสวนสุนันทา
	2556 – 2557	หัวหน้าสาขาวิชาการจัดการธุรกิจค้าปลีก วิทยาลัยนวัตกรรมและการจัดการ มหาวิทยาลัยราชภัฏสวนสุนันทา
	2555 – 2556	อาจารย์ประจำสาขาวิชาการจัดการธุรกิจค้าปลีก วิทยาลัยนวัตกรรมและการจัดการ มหาวิทยาลัยราชภัฏสวนสุนันทา
	2553 – 2554	อาจารย์ประจำสาขาการตลาด วิทยาลัยเทคโนโลยีศรีวิกรม์บริหารธุรกิจ
	2550 – 2552	หัวหน้าสาขาวิชาการตลาด วิทยาลัยเทคโนโลยีสยามบริหารธุรกิจ
	2549 – 2550	อาจารย์ประจำสาขาวิชาการตลาด วิทยาลัยเทคโนโลยีสยามบริหารธุรกิจ
สถานที่อยู่ปัจจุบัน	81 ซอยพัฒนาการ 20 แยก 1/3 เขตสวนหลวง ถนนพัฒนาการ จังหวัดกรุงเทพฯ 10250	