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L I S R E L 8.80

BY

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The following lines were read from file C:\Users\toshiba\Desktop\SIM.spj:

Raw Data from file 'C:\Users\toshiba\Desktop\PRE.psf'
Sample Size = 40
Latent Variables X Y
Relationships
X5-X8=X
X13-X14=X
Y1-Y7=Y
Y=X
Path Diagram
End of Problem

Sample Size = 40

Covariance Matrix

	Y1	Y2	Y3	Y4	Y5	Y6
Y1	0.26					
Y2	0.21	0.55				
Y3	0.13	0.33	0.57			
Y4	0.17	0.15	0.06	0.28		
Y5	0.12	0.13	0.13	0.19	0.32	
Y6	0.19	0.18	0.18	0.18	0.13	0.29
Y7	0.06	0.15	0.32	0.03	0.14	0.07
X5	-0.10	0.07	0.11	-0.12	-0.15	0.13
X6	-0.14	-0.04	-0.01	-0.10	-0.07	-0.02
X7	-0.09	0.13	0.14	-0.06	-0.10	0.11
X8	-0.09	0.10	0.11	-0.06	-0.12	0.11
X13	-0.05	-0.04	-0.06	-0.04	-0.09	-0.01
X14	-0.04	0.03	0.02	-0.03	-0.07	0.01

Covariance Matrix

	Y7	X5	X6	X7	X8	X13
Y7	0.38					
X5	-0.07	1.55				
X6	0.06	0.87	0.97			
X7	-0.01	1.09	0.62	1.12		
X8	-0.05	1.14	0.62	0.97	1.10	
X13	-0.04	0.30	0.16	0.25	0.34	0.50
X14	-0.06	0.27	0.06	0.25	0.28	0.20

Covariance Matrix

	X14
X14	0.30

Number of Iterations = 17

LISREL Estimates (Maximum Likelihood)

Measurement Equations

$$Y1 = 0.41*Y, \text{ Errorvar.} = 0.085, R^2 = 0.67$$

(0.028)
3.09

$$Y2 = 0.46*Y, \text{ Errorvar.} = 0.35, R^2 = 0.37$$

(0.12) (0.086)
3.86 4.03

$$Y3 = 0.38*Y, \text{ Errorvar.} = 0.43, R^2 = 0.25$$

(0.12) (0.10)
3.05 4.21

$$Y4 = 0.39*Y, \text{ Errorvar.} = 0.12, R^2 = 0.56$$

(0.080) (0.034)
4.90 3.58

$$Y5 = 0.34*Y, \text{ Errorvar.} = 0.20, R^2 = 0.36$$

(0.090) (0.050)
3.76 4.06

$$Y6 = 0.44*Y, \text{ Errorvar.} = 0.094, R^2 = 0.68$$

(0.082) (0.031)
5.45 3.03

$$Y7 = 0.21*Y, \text{ Errorvar.} = 0.33, R^2 = 0.12$$

(0.10) (0.077)

2.06

4.33

X5 = 1.14*X, Errorvar.= 0.24 , R² = 0.84
 (0.15) (0.077)
 7.45 3.18

X6 = 0.65*X, Errorvar.= 0.55 , R² = 0.44
 (0.14) (0.13)
 4.61 4.25

X7 = 0.96*X, Errorvar.= 0.20 , R² = 0.82
 (0.13) (0.059)
 7.29 3.38

X8 = 1.00*X, Errorvar.= 0.094 , R² = 0.91
 (0.13) (0.045)
 8.00 2.09

X13 = 0.31*X, Errorvar.= 0.41 , R² = 0.19
 (0.11) (0.093)
 2.78 4.37

X14 = 0.26*X, Errorvar.= 0.23 , R² = 0.22
 (0.085) (0.054)
 3.07 4.36

Structural Equations

Y = - 0.035*X, Errorvar.= 1.00 , R² = 0.0012
 (0.18) (0.34)
 -0.20 2.94

Correlation Matrix of Independent Variables

X

 1.00

Covariance Matrix of Latent Variables

	Y	X
	-----	-----
Y	1.00	
X	-0.03	1.00

Goodness of Fit Statistics

Degrees of Freedom = 64
 Minimum Fit Function Chi-Square = 115.16 (P = 0.00)
 Normal Theory Weighted Least Squares Chi-Square = 95.95 (P = 0.0060)

Estimated Non-centrality Parameter (NCP) = 31.95
90 Percent Confidence Interval for NCP = (9.55 ; 62.32)

Minimum Fit Function Value = 2.95
Population Discrepancy Function Value (F0) = 0.82
90 Percent Confidence Interval for F0 = (0.24 ; 1.60)
Root Mean Square Error of Approximation (RMSEA) = 0.11
90 Percent Confidence Interval for RMSEA = (0.062 ; 0.16)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.027

Expected Cross-Validation Index (ECVI) = 3.84
90 Percent Confidence Interval for ECVI = (3.27 ; 4.62)
ECVI for Saturated Model = 4.67
ECVI for Independence Model = 10.69

Chi-Square for Independence Model with 78 Degrees of Freedom = 391.03
Independence AIC = 417.03
Model AIC = 149.95
Saturated AIC = 182.00
Independence CAIC = 451.99
Model CAIC = 222.55
Saturated CAIC = 426.69

Normed Fit Index (NFI) = 0.71
Non-Normed Fit Index (NNFI) = 0.80
Parsimony Normed Fit Index (PNFI) = 0.58
Comparative Fit Index (CFI) = 0.84
Incremental Fit Index (IFI) = 0.84
Relative Fit Index (RFI) = 0.64

Critical N (CN) = 32.57

Root Mean Square Residual (RMR) = 0.070
Standardized RMR = 0.13
Goodness of Fit Index (GFI) = 0.73
Adjusted Goodness of Fit Index (AGFI) = 0.61
Parsimony Goodness of Fit Index (PGFI) = 0.51

The Modification Indices Suggest to Add an Error Covariance				
	Between	and	Decrease in Chi-Square	New Estimate
Y7		Y3	16.4	0.26

Time used: 0.047 Seconds