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L I S R E L 8.72

BY

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The following lines were read from file C:\Users\organizer\Desktop\LISREL
rina\Path.SPJ:

Raw Data from file 'C:\Users\organizer\Desktop\LISREL rina\Preliis Rina.psf'

Latent Variables KT KO SK PP KK

Relationships

KT1=KT

KT2=KT

KT3=KT

KT4=KT

KO1=KO

KO2=KO

KO3=KO

KO4=KO

SK1=SK

SK2=SK

SK3=SK

PP1=PP

PP2=PP

KK1=KK

KK2=KK

KK3=KK

PP=KT

PP=KO

PP=SK

KK=PP

Path Diagram

End of Problem

Sample Size = 200

Covariance Matrix

	PP1	PP2	KK1	KK2	KK3	KT1
PP1	0.87					
PP2	0.37	0.53				
KK1	0.37	0.53	0.53			
KK2	0.37	0.53	0.53	0.53		
KK3	0.66	0.45	0.45	0.45	0.93	
KT1	0.11	0.08	0.08	0.08	0.04	0.91
KT2	0.06	0.12	0.12	0.12	-0.01	0.43
KT3	0.02	0.02	0.02	0.02	0.06	0.63
KT4	0.06	0.12	0.12	0.12	-0.01	0.43
KO1	0.04	0.04	0.04	0.04	0.01	0.12
KO2	-0.17	-0.02	-0.02	-0.02	-0.14	0.63
KO3	-0.12	-0.07	-0.07	-0.07	-0.12	0.25
KO4	-0.17	-0.07	-0.07	-0.07	-0.17	0.44
SK1	-0.12	-0.07	-0.07	-0.07	-0.12	0.25
SK2	-0.14	-0.07	-0.07	-0.07	-0.13	0.23
SK3	-0.09	-0.02	-0.02	-0.02	-0.02	-0.01

Covariance Matrix

	KT2	KT3	KT4	KO1	KO2	KO3
KT2	0.59					
KT3	0.43	0.90				
KT4	0.59	0.43	0.59			
KO1	0.19	0.04	0.19	1.16		
KO2	0.32	0.45	0.32	0.05	0.90	
KO3	0.40	0.32	0.40	0.23	0.43	0.66
KO4	0.33	0.66	0.33	0.13	0.60	0.50
SK1	0.40	0.32	0.40	0.23	0.43	0.66
SK2	0.40	0.30	0.40	0.20	0.45	0.64
SK3	0.13	0.01	0.13	0.95	0.21	0.28

Covariance Matrix

	KO4	SK1	SK2	SK3
KO4	0.92			
SK1	0.50	0.66		
SK2	0.48	0.64	0.68	
SK3	0.11	0.28	0.30	1.14

Number of Iterations = 37

LISREL Estimates (Maximum Likelihood)

Measurement Equations

PP1 = 0.51*PP, Errorvar.= 0.61 , R² = 0.30
(0.061)
9.97

PP2 = 0.73*PP, Errorvar.= 0.00064, R² = 1.00
(0.079) (0.0019)
9.25 0.34

KK1 = 0.73*KK, Errorvar.= 0.00053, R² = 1.00
(0.00) (0.00)
6.31

KK2 = 0.73*KK, Errorvar.= 0.00053, R² = 1.00
(0.0023) (0.00)
315.24 6.31

KK3 = 0.62*KK, Errorvar.= 0.55 , R² = 0.41
(0.053) (0.055)
11.77 9.97

KT1 = 0.56*KT, Errorvar.= 0.60 , R² = 0.34
(0.062) (0.060)
9.06 9.97

KT2 = 0.77*KT, Errorvar.= 0.00059, R² = 1.00
(0.038) (0.0013)
19.93 0.45

KT3 = 0.56*KT, Errorvar.= 0.59 , R² = 0.34
(0.061) (0.059)
9.10 9.97

KT4 = 0.77*KT, Errorvar.= 0.00059, R² = 1.00
(0.038) (0.0013)
19.93 0.45

KO1 = 0.28*KO, Errorvar.= 1.08 , R² = 0.066
(0.075) (0.11)
3.69 9.97

KO2 = 0.53*KO, Errorvar.= 0.62 , R² = 0.32
(0.062) (0.062)
8.62 9.97

KO3 = 0.81*KO, Errorvar.= 0.00085, R² = 1.00
(0.041) (0.0019)
19.92 0.45

$$KO4 = 0.62 * KO, \text{ Errorvar.} = 0.54, R^2 = 0.41$$

(0.061)	(0.054)
10.18	9.97

$$SK1 = 0.81 * SK, \text{ Errorvar.} = 0.00071, R^2 = 1.00$$

(0.041)	(0.00063)
19.93	1.12

$$SK2 = 0.79 * SK, \text{ Errorvar.} = 0.055, R^2 = 0.92$$

(0.043)	(0.0055)
18.39	9.92

$$SK3 = 0.35 * SK, \text{ Errorvar.} = 1.02, R^2 = 0.11$$

(0.074)	(0.10)
4.70	9.97

Structural Equations

$$PP = 0.49 * KT - 0.32 * KO - 0.10 * SK, \text{ Errorvar.} = 0.85, R^2 = 0.15$$

(0.10)	(8.82)	(8.82)	(0.20)
4.73	-0.037	-0.012	4.20

$$KK = 1.00 * PP, \text{ Errorvar.} = -0.00020, R^2 = 1.00$$

(0.11)	(0.0035)
9.25	-0.056

Reduced Form Equations

$$PP = 0.49 * KT - 0.32 * KO - 0.10 * SK, \text{ Errorvar.} = 0.85, R^2 = 0.15$$

(0.10)	(8.82)	(8.82)
4.73	-0.037	-0.012

$$KK = 0.49 * KT - 0.32 * KO - 0.10 * SK, \text{ Errorvar.} = 0.85, R^2 = 0.15$$

(0.089)	(8.82)	(8.82)
5.51	-0.037	-0.012

Correlation Matrix of Independent Variables

	KT	KO	SK
KT	1.00		
KO	0.64 (0.04) 15.48	1.00	
SK	0.64 (0.04) 15.49	1.00 (0.00) 668.26	1.00

Covariance Matrix of Latent Variables

	PP	KK	KT	KO	SK
PP	1.00				
KK	1.00	1.00			
KT	0.22	0.22	1.00		
KO	-0.11	-0.11	0.64	1.00	
SK	-0.11	-0.11	0.64	1.00	1.00

Goodness of Fit Statistics

Degrees of Freedom = 97

Minimum Fit Function Chi-Square = 1036.44 (P = 0.0)

Normal Theory Weighted Least Squares Chi-Square = 652.98 (P = 0.0)

Estimated Non-centrality Parameter (NCP) = 555.98

90 Percent Confidence Interval for NCP = (478.80 ; 640.64)

Minimum Fit Function Value = 5.21

Population Discrepancy Function Value (F0) = 2.79

90 Percent Confidence Interval for F0 = (2.41 ; 3.22)

Root Mean Square Error of Approximation (RMSEA) = 0.17

90 Percent Confidence Interval for RMSEA = (0.16 ; 0.18)

P-Value for Test of Close Fit (RMSEA < 0.05) = 0.00

Expected Cross-Validation Index (ECVI) = 3.67

90 Percent Confidence Interval for ECVI = (3.29 ; 4.10)

ECVI for Saturated Model = 1.37

ECVI for Independence Model = 21.90

Chi-Square for Independence Model with 120 Degrees of Freedom = 4325.82

Independence AIC = 4357.82

Model AIC = 730.98

Saturated AIC = 272.00

Independence CAIC = 4426.59

Model CAIC = 898.61

Saturated CAIC = 856.57

Normed Fit Index (NFI) = 0.76

Non-Normed Fit Index (NNFI) = 0.72

Parsimony Normed Fit Index (PNFI) = 0.61

Comparative Fit Index (CFI) = 0.78

Incremental Fit Index (IFI) = 0.78

Relative Fit Index (RFI) = 0.70

Critical N (CN) = 26.40

Root Mean Square Residual (RMR) = 0.11

Standardized RMR = 0.12

Goodness of Fit Index (GFI) = 0.71

Adjusted Goodness of Fit Index (AGFI) = 0.59

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

KK3	PP1	71.4	0.35
KT3	KK3	9.0	0.12
KT3	KT1	58.9	0.32
KO2	KT1	95.6	0.42
KO2	KT3	22.6	0.20
KO4	KT1	34.3	0.24
KO4	KT3	101.9	0.40
KO4	KO2	45.3	0.28
SK1	KO3	9.6	0.03
SK3	KO1	131.1	0.85

Time used: 0.062 Seconds