

LAMPIRAN 42: OUTPUT UJI SEM

L I S R E L 8.80

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
Copyright by Scientific Software International, Inc., 1981-2006
Use of this program is subject to the terms specified in the
Universal Copyright Convention.
Website: www.ssicentral.com

The following lines were read from file
C:\Users\HP\Documents\UJI.SEM.pr2:

RAW DATA FROM FILE SEM1.PSF
LATENT VARIABLE: PV KP K PU

RELATIONSHIP

PV1 = PV

PV2 = PV

PV3 = PV

PV4 = PV

PV5 = PV

KP6 = KP

KP7 = KP

KP8 = KP

K9 = K

K10 = K

K11 = K

K12 = K

K13 = K

PU14 = PU

PU15 = PU

PU = K KP

K = KP

KP = PV

SET ERROR COVARIANCE OF PV5 AND PV3 FREE

SET ERROR COVARIANCE OF KP7 AND KP6 FREE

SET ERROR COVARIANCE OF PV2 AND K11 FREE

SET ERROR COVARIANCE OF K13 AND K10 FREE

SET ERROR COVARIANCE OF PU14 AND KP6 FREE

SET ERROR COVARIANCE OF PV2 AND PV1 FREE

SET ERROR COVARIANCE OF PU14 AND K10 FREE

SET ERROR VARIANCE OF KP TO ZERO

OPTIONS SC

PATH DIAGRAM

END OF PROBLEMS

Sample Size = 145

Covariance Matrix

	KP6	KP7	KP8	K9	K10
K11	0.50				
0.65	0.41	0.51			
0.54	0.35	0.34	0.67		
0.47	0.34	0.36	0.41	0.67	
0.41	0.36	0.38	0.39	0.46	0.61
0.42	0.36	0.38	0.43	0.41	0.48
0.55					
0.59	0.37	0.37	0.42	0.47	0.52
0.55	0.39	0.35	0.45	0.45	0.42
0.58	0.41	0.35	0.45	0.38	0.39
0.39	0.35	0.34	0.43	0.40	0.45
	0.49	0.46	0.50	0.43	0.50
	0.45	0.42	0.48	0.37	0.49
	0.47	0.49	0.46	0.54	0.58
	0.55	0.55	0.59	0.53	0.59
	0.40	0.40	0.51	0.30	0.34

Covariance Matrix

	K12	K13	PU14	PU15	PV1
PV2	0.74				
1.00	0.53	0.75			
0.66	0.47	0.50	0.62		
0.67	0.47	0.51	0.51	0.67	
0.50	0.57	0.56	0.52	0.50	1.00
	0.52	0.47	0.47	0.49	0.75
	0.54	0.50	0.44	0.46	0.67
	0.62	0.65	0.57	0.54	0.72
	0.47	0.55	0.50	0.44	0.58

Covariance Matrix

	PV3	PV4	PV5
PV3	1.00		
PV4	0.79	1.00	
PV5	0.35	0.63	1.00

Number of Iterations = 15

LISREL Estimates (Maximum Likelihood)

Measurement Equations

$$\text{KP6} = 0.58 \cdot \text{KP}, \text{ Errorvar.} = 0.16, R^2 = 0.67$$

(0.020)
7.92

$$\text{KP7} = 0.58 \cdot \text{KP}, \text{ Errorvar.} = 0.17, R^2 = 0.66$$

(0.037) (0.022)
15.74 7.78

$$\text{KP8} = 0.63 \cdot \text{KP}, \text{ Errorvar.} = 0.27, R^2 = 0.59$$

(0.058) (0.034)
10.79 7.98

$$\text{K9} = 0.63 \cdot \text{K}, \text{ Errorvar.} = 0.27, R^2 = 0.59$$

(0.034)
8.05

$$\text{K10} = 0.70 \cdot \text{K}, \text{ Errorvar.} = 0.12, R^2 = 0.80$$

(0.058) (0.019)
12.06 6.27

$$\text{K11} = 0.67 \cdot \text{K}, \text{ Errorvar.} = 0.20, R^2 = 0.69$$

(0.060) (0.026)
11.13 7.79

$$\text{K12} = 0.74 \cdot \text{K}, \text{ Errorvar.} = 0.20, R^2 = 0.74$$

(0.064) (0.026)
11.53 7.62

$$\text{K13} = 0.73 \cdot \text{K}, \text{ Errorvar.} = 0.22, R^2 = 0.71$$

(0.066) (0.031)
11.17 7.05

$$\text{PU14} = 0.71 \cdot \text{PU}, \text{ Errorvar.} = 0.12, R^2 = 0.81$$

(0.024)
4.82

$$\text{PU15} = 0.71 \cdot \text{PU}, \text{ Errorvar.} = 0.16, R^2 = 0.76$$

(0.049) (0.026)
14.52 6.14

PV1 = 0.80*PV, Errorvar.= 0.36 , R² = 0.64
 (0.069) (0.045)
 11.56 7.83

PV2 = 0.74*PV, Errorvar.= 0.43 , R² = 0.56
 (0.070) (0.052)
 10.52 8.16

PV3 = 0.83*PV, Errorvar.= 0.31 , R² = 0.69
 (0.068) (0.041)
 12.17 7.50

PV4 = 0.93*PV, Errorvar.= 0.13 , R² = 0.87
 (0.063) (0.021)
 14.77 6.06

PV5 = 0.69*PV, Errorvar.= 0.52 , R² = 0.48
 (0.074) (0.065)
 9.29 8.06

Error Covariance for KP7 and KP6 = 0.074
 (0.016)
 4.55

Error Covariance for K13 and K10 = -0.08
 (0.017)
 -4.71

Error Covariance for PU14 and KP6 = 0.049
 (0.014)
 3.55

Error Covariance for PU14 and K10 = -0.04
 (0.014)
 -3.18

Error Covariance for PV2 and K11 = 0.11
 (0.026)
 4.26

Error Covariance for PV2 and PV1 = 0.12
 (0.035)
 3.57

Error Covariance for PV5 and PV3 = -0.22
 (0.040)
 -5.60

Structural Equations

```

KP = 1.00*PV,, R2 = 1.00
(0.084)
11.95
K = 0.92*KP, Errorvar.= 0.16 , R2 = 0.84
(0.092) (0.037)
10.01 4.34
PU = 0.14*KP + 0.78*K, Errorvar.= 0.17 , R2 = 0.83
(0.16) (0.17) (0.046)
0.85 4.50 3.75

```

Reduced Form Equations

```

KP = 1.00*PV, Errorvar.= 0.0, R2 = 1.00
(0.084)
11.95
K = 0.92*PV, Errorvar.= 0.16, R2 = 0.84
(0.091)
10.05
PU = 0.85*PV, Errorvar.= 0.27, R2 = 0.73
(0.078)
10.93

```

Correlation Matrix of Independent Variables

PV

1.00

Covariance Matrix of Latent Variables

	KP	K	PU	PV
KP	1.00			
K	0.92	1.00		
PU	0.85	0.91	1.00	
PV	1.00	0.92	0.85	1.00

W_A_R_N_I_N_G: Matrix above is not positive definite

Goodness of Fit Statistics

Degrees of Freedom = 80
 Minimum Fit Function Chi-Square = 153.38 (P = 0.00)
 Normal Theory Weighted Least Squares Chi-Square = 135.40 (P = 0.00011)

Estimated Non-centrality Parameter (NCP) = 55.40
 90 Percent Confidence Interval for NCP = (27.15 ; 91.54)

Minimum Fit Function Value = 1.07
 Population Discrepancy Function Value (F0) = 0.38
 90 Percent Confidence Interval for F0 = (0.19 ; 0.64)
 Root Mean Square Error of Approximation (RMSEA) = 0.069
 90 Percent Confidence Interval for RMSEA = (0.049 ; 0.089)
 P-Value for Test of Close Fit (RMSEA < 0.05) = 0.062

Expected Cross-Validation Index (ECVI) = 1.50
 90 Percent Confidence Interval for ECVI = (1.30 ; 1.75)

ECVI for Saturated Model = 1.67
 ECVI for Independence Model = 43.90

Chi-Square for Independence Model with 105 Degrees of Freedom = 6291.43

Independence AIC = 6321.43
 Model AIC = 215.40
 Saturated AIC = 240.00
 Independence CAIC = 6381.08
 Model CAIC = 374.47
 Saturated CAIC = 717.21

Normed Fit Index (NFI) = 0.98
 Non-Normed Fit Index (NNFI) = 0.98
 Parsimony Normed Fit Index (PNFI) = 0.74
 Comparative Fit Index (CFI) = 0.99
 Incremental Fit Index (IFI) = 0.99
 Relative Fit Index (RFI) = 0.97

Critical N (CN) = 106.46

Root Mean Square Residual (RMR) = 0.030
 Standardized RMR = 0.039
 Goodness of Fit Index (GFI) = 0.89
 Adjusted Goodness of Fit Index (AGFI) = 0.83
 Parsimony Goodness of Fit Index (PGFI) = 0.59

The Modification Indices Suggest to Add the

Path to	from	Decrease in Chi-Square	New Estimate
KP8	PU	8.6	0.31
K13	PU	8.6	0.48

Standardized Solution

LAMBDA-Y

	KP	K	PU
KP6	0.58	- -	- -
KP7	0.58	- -	- -
KP8	0.63	- -	- -
K9	- -	0.63	- -
K10	- -	0.70	- -
K11	- -	0.67	- -
K12	- -	0.74	- -
K13	- -	0.73	- -
PU14	- -	- -	0.71
PU15	- -	- -	0.71

LAMBDA-X

	PV
PV1	0.80
PV2	0.74
PV3	0.83
PV4	0.93
PV5	0.69

BETA

	KP	K	PU
KP	- -	- -	- -
K	0.92	- -	- -
PU	0.14	0.78	- -

GAMMA

	PV
KP	1.00
K	- -
PU	- -

Correlation Matrix of ETA and KSI

	KP	K	PU	PV
KP	1.00			
K	0.92	1.00		
PU	0.85	0.91	1.00	
PV	1.00	0.92	0.85	1.00

PSI

Note: This matrix is diagonal.

	KP	K	PU
	-----	-----	-----
	- -	0.16	0.17

Regression Matrix ETA on KSI (Standardized)

	PV

KP	1.00
K	0.92
PU	0.85

Completely Standardized Solution

LAMBDA-Y

	KP	K	PU
	-----	-----	-----
KP6	0.82	- -	- -
KP7	0.81	- -	- -
KP8	0.77	- -	- -
K9	- -	0.77	- -
K10	- -	0.90	- -
K11	- -	0.83	- -
K12	- -	0.86	- -
K13	- -	0.84	- -
PU14	- -	- -	0.90
PU15	- -	- -	0.87

LAMBDA-X

	PV

PV1	0.80
PV2	0.75
PV3	0.83
PV4	0.93
PV5	0.69

BETA

	KP	K	PU
	-----	-----	-----
KP	- -	- -	- -
K	0.92	- -	- -
PU	0.14	0.78	- -

GAMMA

	PV			
-----	-----	-----	-----	-----
KP	1.00			
K	--			
PU	--			

Correlation Matrix of ETA and KSI

	KP	K	PU	PV
-----	-----	-----	-----	-----
KP	1.00			
K	0.92	1.00		
PU	0.85	0.91	1.00	
PV	1.00	0.92	0.85	1.00

PSI

Note: This matrix is diagonal.

	KP	K	PU			
-----	-----	-----	-----	-----	-----	-----
	--	0.16	0.17			

THETA-EPS

	KP6	KP7	KP8	K9	K10
-----	-----	-----	-----	-----	-----
K11					
-----	-----	-----	-----	-----	-----
KP6	0.33				
KP7	0.15	0.34			
KP8	--	--	0.41		
K9	--	--	--	0.41	
K10	--	--	--	--	0.20
K11	--	--	--	--	--
0.31					
K12	--	--	--	--	--
--					
K13	--	--	--	--	-0.12
--					
PU14	0.09	--	--	--	-0.07
--					
PU15	--	--	--	--	--
--					

THETA-EPS

	K12	K13	PU14	PU15
-----	-----	-----	-----	-----
K12	0.26			
K13	--	0.29		
PU14	--	--	0.19	
PU15	--	--	--	0.24

THETA-DELTA-EPS

	KP6	KP7	KP8	K9	K10
K11	-----	-----	-----	-----	-----
PV1	-----	-----	-----	-----	-----
PV2	-----	-----	-----	-----	-----
0.14	-----	-----	-----	-----	-----
PV3	-----	-----	-----	-----	-----
PV4	-----	-----	-----	-----	-----
PV5	-----	-----	-----	-----	-----

THETA-DELTA-EPS

	K12	K13	PU14	PU15
PV1	-----	-----	-----	-----
PV2	-----	-----	-----	-----
PV3	-----	-----	-----	-----
PV4	-----	-----	-----	-----
PV5	-----	-----	-----	-----

THETA-DELTA

	PV1	PV2	PV3	PV4	PV5
PV1	0.36				
PV2	0.13	0.44			
PV3	- -	- -	0.31		
PV4	- -	- -	- -	0.13	
PV5	- -	- -	-0.22	- -	0.52

Regression Matrix ETA on KSI (Standardized)

	PV
KP	1.00
K	0.92
PU	0.85

Time used: 0.047 Seconds