

LAMPIRAN 3  
 STRUCTURAL EQUATION  
 MODEL ONE CONGINERIC

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L I S R E L 8.80

DA NI=5 NO=200 MA=CM

LA

BY

PI PV PQ BN SI

PM='DATA.PMM'

Karl G. Jöreskog &  
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SE

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VA 1 LX 1 1

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VA 0 TD 1 1

VA 1 LX 2 2

VA 0 TD 2 2		PI	PV	PQ
VA 1 LY 1 1	BN	SI		
VA 0 TE 1 1		-----	-----	-----
VA 1 LY 2 2		-----		
VA 0 TE 2 2	PI	1.00		
VA 1 LY 3 3	PV	0.23	0.30	
VA 0 TE 3 3	PQ	0.24	0.23	0.39
PD	BN	0.29	0.23	0.33
OU MIEF	0.53	SI	0.04	0.09
		0.10	0.22	0.12

DA NI=5 NO=200 MA=CM

Number of Input  
 Variables 5  
 Number of Y -  
 Variables 3  
 Number of X -  
 Variables 2  
 Number of ETA -  
 Variables 3  
 Number of KSI -  
 Variables 2  
 Number of  
 Observations 200

DA NI=5 NO=200 MA=CM

Parameter Specifications

BETA

	PI	PV	PQ
	-----	-----	-----
PI	0	1	0
PV	0	0	2
PQ	0	0	0

DA NI=5 NO=200 MA=CM

GAMMA

Covariance Matrix

	BN	SI
	-----	-----

PI	0	3
PV	0	0
PQ	4	0

PHI

BN SI

BN	5	
SI	6	7

PSI

PI PV PQ

8	9	10
---	---	----

DA NI=5 NO=200 MA=CM

Number of Iterations = 7

LISREL Estimates (Robust  
Maximum Likelihood)

LAMBDA-Y

PI PV PQ

PI	1.00	--	--
PV	--	1.00	--
PQ	--	--	1.00

LAMBDA-X

BN SI

BN	1.00	--
SI	--	1.00

BETA

PI PV PQ

PI	--	0.82	--
		(0.17)	
		4.70	
PV	--	--	0.58
		(0.07)	
		8.19	
PQ	--	--	--

GAMMA

BN SI

<p>-----</p> <p>PI    - -    -0.12</p> <p style="padding-left: 100px;">(0.20)</p> <p style="padding-left: 100px;">-0.63</p> <p>PV    - -    - -</p> <p>PQ    0.63    - -</p> <p style="padding-left: 100px;">(0.06)</p> <p style="padding-left: 100px;">10.29</p>	<p style="text-align: right;">14.11</p> <p>SI    0.10    0.22</p> <p style="padding-left: 100px;">(0.03)    (0.02)</p> <p style="padding-left: 100px;">3.84    14.11</p> <p>PSI</p> <p>Note: This matrix is diagonal.</p>
---	---

Covariance Matrix of ETA and KSI

	PI	PV	PQ
BN	SI		

	-----	-----	-----	-----
PI	1.01			
PV	0.24	0.30		
PQ	0.18	0.23	0.39	
BN	0.15	0.19	0.33	
0.53				
SI	0.00	0.04	0.06	
0.10	0.22			

PHI

	-----	-----
	BN	SI
BN	0.53	
(0.04)		

PI	PV	PQ
-----	-----	-----
0.81	0.17	0.18
(0.11)	(0.04)	(0.04)
7.62	4.70	4.28

Squared Multiple Correlations for Structural Equations

PI	PV	PQ
-----	-----	-----
0.19	0.45	0.54

Squared Multiple Correlations for Reduced Form

PI	PV	PQ
-----	-----	-----
0.04	0.24	0.54

Reduced Form

	BN	SI
PI	0.30 (0.09)	-0.12 (0.20)
PV	0.37 (0.06)	--
PQ	0.63 (0.06)	--

Squared Multiple Correlations for Y - Variables

	PI	PV	PQ
	1.00	1.00	1.00

Squared Multiple Correlations for X - Variables

	BN	SI
	1.00	1.00

Goodness of Fit Statistics

Degrees of Freedom = 5

Minimum Fit Function Chi-Square = 38.70 (P = 0.00)

Normal Theory Weighted Least Squares Chi-Square = 35.31 (P = 0.00)

Satorra-Bentler Scaled Chi-Square = 9.11 (P = 0.10)

Chi-Square Corrected for Non-Normality = 13.41 (P = 0.020)

Estimated Non-centrality Parameter (NCP) = 4.11

90 Percent Confidence Interval for NCP = (0.0 ; 16.71)

Minimum Fit Function Value = 0.19

Population Discrepancy Function Value (F0) = 0.021

90 Percent Confidence Interval for F0 = (0.0 ; 0.084)

Root Mean Square Error of Approximation (RMSEA) = 0.064

90 Percent Confidence Interval for RMSEA = (0.0 ; 0.13)

P-Value for Test of Close Fit (RMSEA < 0.05) = 0.30

Expected Cross-Validation Index (ECVI) = 0.15

90 Percent Confidence  
Interval for ECVI = (0.13 ; 0.21)

ECVI for Saturated  
Model = 0.15

ECVI for  
Independence Model = 2.26

Chi-Square for Independence  
Model with 10 Degrees of Freedom  
= 438.78

Independence AIC  
= 448.78

Model AIC =  
29.11

Saturated AIC =  
30.00

Independence  
CAIC = 470.28

Model CAIC =  
72.09

Saturated CAIC =  
94.47

Normed Fit Index  
(NFI) = 0.98

Non-Normed Fit  
Index (NNFI) = 0.98

Parsimony Normed Fit  
Index (PNFI) = 0.49

Comparative Fit  
Index (CFI) = 0.99

Incremental Fit Index  
(IFI) = 0.99

Relative Fit Index  
(RFI) = 0.96

Critical N (CN) =  
330.54

Root Mean Square  
Residual (RMR) = 0.048

Standardized RMR  
= 0.097

Goodness of Fit Index  
(GFI) = 0.93

Adjusted Goodness of Fit  
Index (AGFI) = 0.80

Parsimony Goodness of  
Fit Index (PGFI) = 0.31

DA NI=5 NO=200 MA=CM

Modification Indices and Expected  
Change

No Non-Zero Modification Indices  
for LAMBDA-Y

Modification Indices for  
LAMBDA-X

BN SI

-----

BN - - 31.35

SI -- --

Expected Change for  
LAMBDA-X

BN SI

-----

BN -- -0.76

SI -- --

Modification Indices for BETA

PI PV PQ

-----

PI -- -- --

PV 11.47 -- --

PQ 1.60 4.99 --

Expected Change for BETA

PI PV PQ

-----

PI -- -- --

PV -0.21 -- --

PQ -0.05 -0.21 --

Modification Indices for  
GAMMA

BN SI

-----

PI 22.07 --

PV -- 1.00

PQ -- 22.08

Expected Change for GAMMA

BN SI

-----

PI 0.76 --

PV -- 0.06

PQ -- 0.33

No Non-Zero Modification Indices  
for PHI

No Non-Zero Modification Indices  
for PSI

Modification Indices for  
THETA-EPS

PI PV PQ

-----

PI --

PV -- --

PQ 0.67 -- --

Expected Change for THETA-  
EPS

	PI	PV	PQ
PI	--		
PV	--	--	
PQ	0.02	--	--

Modification Indices for  
THETA-DELTA-EPS

	PI	PV	PQ
BN	3.59	2.13	--
SI	--	0.51	12.72

Expected Change for THETA-  
DELTA-EPS

	PI	PV	PQ
BN	0.06	0.02	--
SI	--	0.01	0.04

Modification Indices for  
THETA-DELTA

BN	SI
----	----

BN	--
SI	106.28 0.04

Expected Change for THETA-  
DELTA

BN	SI
----	----

BN	--
SI	-0.54 -0.01

Maximum Modification Index is  
106.28 for Element ( 2, 1) of  
THETA-DELTA

DA NI=5 NO=200 MA=CM

Total and Indirect Effects

Total Effects of KSI on ETA

BN	SI
PI	0.30 -0.12 (0.09) (0.20)
	3.36 -0.63
PV	0.37 -- (0.06)



6.21  
 PQ 0.63 --  
 (0.06)  
 10.29

Largest Eigenvalue of B\*B'  
 (Stability Index) is 0.673

Indirect Effects of ETA on  
 ETA

Indirect Effects of KSI on ETA

	BN	SI
	-----	-----
PI	0.30	--
	(0.09)	
	3.36	
PV	0.37	--
	(0.06)	
	6.21	
PQ	--	--

	PI	PV	PQ
	-----	-----	-----
PI	--	--	0.48
			(0.13)
			3.76
PV	--	--	--
PQ	--	--	--

Total Effects of ETA on Y

Total Effects of ETA on ETA

	PI	PV	PQ
	-----	-----	-----
PI	--	0.82	0.48
		(0.17)	(0.13)
		4.70	3.76
PV	--	--	0.58
			(0.07)
			8.19
PQ	--	--	--

	PI	PV	PQ
	-----	-----	-----
PI	1.00	0.82	0.48
		(0.17)	(0.13)
		4.70	3.76
PV	--	1.00	0.58
			(0.07)
			8.19
PQ	--	--	1.00

Indirect Effects of ETA on Y

	PI	PV	PQ
	-----	-----	-----
PI	--	0.82	0.48
		(0.17)	(0.13)
		4.70	3.76
PV	--	--	0.58
		(0.07)	
		8.19	
PQ	--	--	--

## Total Effects of KSI on Y

	BN	SI
	-----	-----
PI	0.30	-0.12
	(0.09)	(0.20)
	3.36	-0.63
PV	0.37	--
	(0.06)	
	6.21	
PQ	0.63	--
	(0.06)	
	10.29	

Time used: 0.016

Seconds