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LISREL 8.80 (STUDENT EDITION)

BY

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The following lines were read from file

!path ICT for DMP

DA NI=13 NO=260 MA=KM

LA

DS1 DS2 DS3 DS4 DS5 DS6 DS7 HW SW DT CN WP PP

KM

1

.618 1

.545 .623 1

.520 .684 .577 1

.475 .647 .523 .692 1

.412 .536 .542 .615 .510 1

.556 .452 .429 .507 .436 .447 1

.465 .453 .437 .546 .508 .497 .780 1

.441 .433 .448 .508 .514 .486 .740 .812 1

.417 .480 .473 .548 .553 .442 .635 .708 .747 1

.472 .472 .454 .507 .454 .475 .672 .768 .766 .765 1

.429 .433 .432 .464 .486 .506 .659 .783 .745 .722 .796 1

.467 .470 .465 .498 .506 .480 .666 .750 .746 .728 .773 .820 1

SD

.63295 .67234 .70720 .64791 .68938 .69742 .71761 .64814 .73818

.63195 .62825 .69885 .69196

MO NX=6 NY=7 NK=1 NE=1 TD=SY TE=SY

FR LY(1,1) LY(2,1) LY(3,1) LY(4,1) LY(5,1) LY(6,1) LY(7,1)

FR LX(1,1) LX(2,1) LX(3,1) LX(4,1) LX(5,1) LX(6,1)

FR GA(1,1)

FR TE(1,2) TE(1,7) TE(2,7) TE(3,7) TE(4,6) TE(4,7) TE(5,4) TE(5,7)

FR TD(1,2) TD(1,3) TD(1,4) TD(1,6) TD(3,4) TD(4,5) TD(4,6) TD(5,6)

LE

DMP

LK

ICT

PD

OU RS EF SS SE TV MI AD=OFF

!path ICT for DMP

Number of Input Variables 13
 Number of Y - Variables 7
 Number of X - Variables 6
 Number of ETA - Variables 1
 Number of KSI - Variables 1
 Number of Observations 260

!path ICT for DMP

Covariance Matrix

	DS1	DS2	DS3	DS4	DS5	
DS6	-----	-----	-----	-----	-----	--

DS1	1.00					
DS2	0.62	1.00				
DS3	0.54	0.62	1.00			
DS4	0.52	0.68	0.58	1.00		
DS5	0.47	0.65	0.52	0.69	1.00	
DS6	0.41	0.54	0.54	0.61	0.51	
1.00						
DS7	0.56	0.45	0.43	0.51	0.44	
0.45						
HW	0.46	0.45	0.44	0.55	0.51	
0.50						
SW	0.44	0.43	0.45	0.51	0.51	
0.49						
DT	0.42	0.48	0.47	0.55	0.55	
0.44						
CN	0.47	0.47	0.45	0.51	0.45	
0.47						
WP	0.43	0.43	0.43	0.46	0.49	
0.51						
PP	0.47	0.47	0.46	0.50	0.51	
0.48						

Covariance Matrix

	DS7	HW	SW	DT	CN	
WP	-----	-----	-----	-----	-----	--

DS7	1.00					
HW	0.78	1.00				
SW	0.74	0.81	1.00			
DT	0.64	0.71	0.75	1.00		
CN	0.67	0.77	0.77	0.77	1.00	
WP	0.66	0.78	0.74	0.72	0.80	
1.00						
PP	0.67	0.75	0.75	0.73	0.77	
0.82						

Covariance Matrix

	PP
PP	-----
PP	1.00

!path ICT for DMP

Parameter Specifications

LAMBDA-Y

	DMP

DS1	0
DS2	1
DS3	2
DS4	3
DS5	4
DS6	5
DS7	6

LAMBDA-X

	ICT

HW	7
SW	8
DT	9
CN	10
WP	11
PP	12

GAMMA

	ICT

DMP	13

PSI

	DMP

	14

THETA-EPS

	DS1	DS2	DS3	DS4	DS5	
DS6	-----	-----	-----	-----	-----	---
	DS1					
	DS2	17				
	DS3	0	18			
	DS4	0	0	19		
	DS5	0	0	20	21	
	DS6	0	0	22	0	
23	DS7	24	25	26	27	28

0

THETA-EPS

	DS7

DS7	29

THETA-DELTA

	HW	SW	DT	CN	WP	
PP	-----	-----	-----	-----	-----	---

HW	30					
SW	31	32				
DT	33	0	34			
CN	35	0	36	37		
WP	0	0	0	38	39	
PP	40	0	0	41	42	

43

!path ICT for DMP

Number of Iterations = 17

LISREL Estimates (Maximum Likelihood)

LAMBDA-Y

	DMP

DS1	0.67
DS2	0.81
	(0.07)
	12.19
DS3	0.73
	(0.07)
	10.15
DS4	0.79
	(0.07)
	10.73
DS5	0.76
	(0.07)
	10.35
DS6	0.55
	(0.07)
	8.33
DS7	0.93
	(0.08)
	11.29

LAMBDA-X

	ICT

HW	0.94
	(0.05)
	19.22
SW	0.89
	(0.05)
	17.89
DT	0.85
	(0.05)

CN 16.74
 0.86
 (0.05)
 16.70
 WP 0.84
 (0.05)
 16.40
 PP 0.85
 (0.05)
 16.55

GAMMA

 ICT

 DMP 0.78
 (0.08)
 9.83

Covariance Matrix of ETA and KSI

	DMP	ICT
	-----	-----
DMP	1.00	
ICT	0.78	1.00

PHI

 ICT

 1.00

PSI

 DMP

 0.40
 (0.07)
 5.37

Squared Multiple Correlations for Structural Equations

 DMP

 0.60

THETA-EPS

	DS1	DS2	DS3	DS4	DS5
	-----	-----	-----	-----	-----
DS6					

DS1	0.55 (0.06) 9.83				
DS2	0.07 (0.04) 2.07	0.35 (0.04) 8.26			

	DS3	- -	- -	0.46 (0.05) 9.62		
	DS4	- -	- -	- -	0.36 (0.04) 8.45	
	DS5	- -	- -	- -	0.08 (0.03) 2.33	0.42 (0.05) 8.94
0.69	DS6	- -	- -	- -	0.11 (0.04) 3.16	- -
(0.06)						
11.51	DS7	-0.07	-0.25	-0.26	-0.21	-0.27
- -		(0.05)	(0.04)	(0.04)	(0.04)	(0.04)
		-1.43	-5.66	-6.18	-5.21	-6.44

THETA-EPS

	DS7
DS7	0.11 (0.06) 1.78

Squared Multiple Correlations for Y - Variables

	DS1	DS2	DS3	DS4	DS5
DS6	-----	-----	-----	-----	-----
-----	0.45	0.65	0.54	0.64	0.58
0.31					

Squared Multiple Correlations for Y - Variables

DS7

0.89

THETA-DELTA

	HW	SW	DT	CN	WP
PP	-----	-----	-----	-----	-----
-----	0.12 (0.03) 3.94				
	-0.03 (0.02) -1.11	0.21 (0.03) 7.83			
	-0.09 (0.02) -4.29	- -	0.27 (0.03) 8.74		

	CN	-0.04 (0.02)	- -	0.03 (0.02)	0.27 (0.03)	
		-1.77		1.47	8.00	
	WP	- -	- -	- -	0.08 (0.02)	0.30 (0.03)
					3.29	9.72
0.28	PP	-0.04 (0.02)	- -	- -	0.05 (0.02)	0.11 (0.03)
(0.03)						
		-2.36			1.97	4.42
8.77						

Squared Multiple Correlations for X - Variables

	HW	SW	DT	CN	WP
PP	-----	-----	-----	-----	-----

0.72	0.88	0.79	0.73	0.73	0.70

Goodness of Fit Statistics

Degrees of Freedom = 48
 Minimum Fit Function Chi-Square = 125.80 (P = 0.00)
 Normal Theory Weighted Least Squares Chi-Square = 114.45 (P = 0.00)

Estimated Non-centrality Parameter (NCP) = 66.45
 90 Percent Confidence Interval for NCP = (38.94 ; 101.66)

Minimum Fit Function Value = 0.49
 Population Discrepancy Function Value (F0) = 0.26
 90 Percent Confidence Interval for F0 = (0.15 ; 0.39)
 Root Mean Square Error of Approximation (RMSEA) = 0.073
 90 Percent Confidence Interval for RMSEA = (0.056 ;

0.090)

P-Value for Test of Close Fit (RMSEA < 0.05) = 0.015

Expected Cross-Validation Index (ECVI) = 0.77
 90 Percent Confidence Interval for ECVI = (0.67 ; 0.91)
 ECVI for Saturated Model = 0.70
 ECVI for Independence Model = 26.16

Chi-Square for Independence Model with 78 Degrees of Freedom = 6749.93

Independence AIC = 6775.93
 Model AIC = 200.45
 Saturated AIC = 182.00
 Independence CAIC = 6835.22
 Model CAIC = 396.56
 Saturated CAIC = 597.02

Normed Fit Index (NFI) = 0.98
 Non-Normed Fit Index (NNFI) = 0.98
 Parsimony Normed Fit Index (PNFI) = 0.60

Comparative Fit Index (CFI) = 0.99
 Incremental Fit Index (IFI) = 0.99
 Relative Fit Index (RFI) = 0.97

Critical N (CN) = 152.70

Root Mean Square Residual (RMR) = 0.052
 Standardized RMR = 0.052
 Goodness of Fit Index (GFI) = 0.94
 Adjusted Goodness of Fit Index (AGFI) = 0.88
 Parsimony Goodness of Fit Index (PGFI) = 0.49

!path ICT for DMP

Fitted Covariance Matrix

	DS1	DS2	DS3	DS4	DS5	
DS6	-----	-----	-----	-----	-----	---

DS1	1.00					
DS2	0.62	1.00				
DS3	0.49	0.59	1.00			
DS4	0.53	0.64	0.58	0.98		
DS5	0.51	0.62	0.56	0.68	1.00	
DS6	0.37	0.45	0.41	0.55	0.42	
1.00						
DS7	0.56	0.50	0.42	0.53	0.44	
0.51						
HW	0.49	0.59	0.54	0.58	0.56	
0.40						
SW	0.46	0.56	0.51	0.54	0.53	
0.38						
DT	0.44	0.54	0.49	0.52	0.51	
0.37						
CN	0.45	0.54	0.49	0.53	0.51	
0.37						
WP	0.44	0.53	0.48	0.51	0.50	
0.36						
PP	0.44	0.53	0.48	0.52	0.50	
0.36						

Fitted Covariance Matrix

	DS7	HW	SW	DT	CN	
WP	-----	-----	-----	-----	-----	---

DS7	0.97					
HW	0.68	1.00				
SW	0.64	0.81	1.00			
DT	0.61	0.71	0.76	1.00		
CN	0.62	0.77	0.76	0.76	1.00	

	WP	0.60	0.79	0.74	0.71	0.80
1.00	PP	0.61	0.75	0.75	0.72	0.77
0.82						

Fitted Covariance Matrix

	PP
PP	1.00

Fitted Residuals

		DS1	DS2	DS3	DS4	DS5
DS6		-----	-----	-----	-----	-----

	DS1	0.00				
	DS2	0.00	0.00			
	DS3	0.05	0.03	0.00		
	DS4	-0.01	0.05	0.00	0.02	
	DS5	-0.04	0.03	-0.04	0.01	0.00
	DS6	0.04	0.09	0.14	0.07	0.09
0.00	DS7	0.00	-0.05	0.01	-0.02	0.00
-0.07	HW	-0.03	-0.14	-0.10	-0.03	-0.05
0.09	SW	-0.02	-0.13	-0.06	-0.04	-0.01
0.10	DT	-0.03	-0.06	-0.01	0.02	0.05
0.07	CN	0.02	-0.07	-0.03	-0.02	-0.05
0.11	WP	-0.01	-0.09	-0.04	-0.05	-0.01
0.15	PP	0.03	-0.06	-0.02	-0.02	0.00
0.12						

Fitted Residuals

		DS7	HW	SW	DT	CN
WP		-----	-----	-----	-----	-----

	DS7	0.03				
	HW	0.10	0.00			
	SW	0.10	0.00	0.00		
	DT	0.02	0.00	-0.01	0.00	
	CN	0.05	0.00	0.01	0.00	0.00
	WP	0.06	0.00	0.00	0.01	0.00
0.00	PP	0.06	0.00	-0.01	0.01	0.00
0.00						

	HW	5.82	-0.52			
	SW	4.82	1.37	- -		
	DT	0.88	0.33	-1.18	- -	
	CN	2.52	-0.66	0.70	0.72	0.45
	WP	2.45	-0.39	0.20	0.63	0.40
- -						
-0.10	PP	2.47	-0.27	-0.63	0.51	0.34

Standardized Residuals

PP

PP -0.10

Summary Statistics for Standardized Residuals

Smallest Standardized Residual = -6.23
 Median Standardized Residual = 0.00
 Largest Standardized Residual = 5.82

Stemleaf Plot

```

- 6 | 2
- 4 | 95
- 2 | 83953000
- 0 | 988865442198877766555444321110000000000
  0 | 112334456777889914679
  2 | 0145566688990389
  4 | 8338

```

Largest Negative Standardized Residuals

Residual for DS7 and DS2 -4.50
 Residual for DS7 and DS6 -2.92
 Residual for HW and DS2 -6.23
 Residual for HW and DS3 -3.77
 Residual for SW and DS2 -4.87
 Residual for WP and DS2 -3.29

Largest Positive Standardized Residuals

Residual for DS4 and DS2 3.26
 Residual for DS4 and DS4 5.27
 Residual for DS5 and DS4 2.65
 Residual for DS6 and DS2 2.90
 Residual for DS6 and DS3 3.92
 Residual for DS6 and DS4 5.27
 Residual for DS6 and DS5 2.65
 Residual for DS7 and DS7 2.63
 Residual for HW and DS6 2.81
 Residual for HW and DS7 5.82
 Residual for SW and DS6 2.89
 Residual for SW and DS7 4.82
 Residual for CN and DS6 2.84
 Residual for WP and DS6 3.79
 Residual for PP and DS6 3.04

!path ICT for DMP

Modification Indices and Expected Change

No Non-Zero Modification Indices for LAMBDA-Y

No Non-Zero Modification Indices for LAMBDA-X

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

	DS1	DS2	DS3	DS4	DS5	
DS6	-----	-----	-----	-----	-----	--

DS1	- -					
DS2	- -	- -				
DS3	3.18	1.55	- -			
DS4	0.46	3.25	0.81	- -		
DS5	2.42	2.44	2.22	- -	- -	
DS6	0.35	0.05	3.11	- -	0.01	
- -						
DS7	- -	- -	- -	- -	- -	
36.36						

Modification Indices for THETA-EPS

	DS7
DS7	-----
DS7	- -

Expected Change for THETA-EPS

	DS1	DS2	DS3	DS4	DS5	
DS6	-----	-----	-----	-----	-----	--

DS1	- -					
DS2	- -	- -				
DS3	0.07	0.04	- -			
DS4	-0.02	0.05	-0.03	- -		
DS5	-0.05	0.05	-0.05	- -	- -	
DS6	0.02	-0.01	0.07	- -	0.00	
- -						
DS7	- -	- -	- -	- -	- -	
-0.30						

Expected Change for THETA-EPS

DS7

DS7 - -

Modification Indices for THETA-DELTA-EPS

		DS1	DS2	DS3	DS4	DS5	
DS6		-----	-----	-----	-----	-----	---
	HW	0.07	4.08	3.22	1.95	0.26	
0.05	SW	0.19	2.50	0.08	1.42	1.32	
0.40	DT	2.30	0.00	0.00	1.74	3.61	
0.62	CN	2.81	0.41	0.03	0.38	9.05	
0.14	WP	0.04	0.16	0.00	4.57	1.51	
6.23	PP	0.86	0.03	0.22	0.15	0.04	
0.02							

Modification Indices for THETA-DELTA-EPS

DS7

HW 6.94
SW 5.13
DT 0.77
CN 0.93
WP 0.66
PP 0.10

Expected Change for THETA-DELTA-EPS

		DS1	DS2	DS3	DS4	DS5	
DS6		-----	-----	-----	-----	-----	---
	HW	-0.01	-0.04	-0.04	0.03	-0.01	
-0.01	SW	-0.01	-0.03	0.01	-0.02	0.02	
0.02	DT	-0.04	0.00	0.00	0.03	0.05	
-0.02	CN	0.04	0.01	0.00	0.01	-0.06	
0.01	WP	0.00	-0.01	0.00	-0.04	0.02	
0.06	PP	0.02	0.00	0.01	-0.01	0.00	
0.00							

Expected Change for THETA-DELTA-EPS

	DS7
HW	0.06
SW	0.05
DT	-0.02
CN	-0.02
WP	-0.02
PP	-0.01

Modification Indices for THETA-DELTA

	HW	SW	DT	CN	WP
PP					
HW	- -				
SW	- -	- -			
DT	- -	1.50	- -		
CN	- -	0.65	- -	- -	
WP	0.01	0.08	0.27	- -	- -
PP	- -	0.56	0.05	- -	- -

Expected Change for THETA-DELTA

	HW	SW	DT	CN	WP
PP					
HW	- -				
SW	- -	- -			
DT	- -	-0.03	- -		
CN	- -	0.02	- -	- -	
WP	0.00	0.01	0.01	- -	- -
PP	- -	-0.02	0.00	- -	- -

Maximum Modification Index is 36.36 for Element (7, 6) of THETA-EPS

!path ICT for DMP

Standardized Solution

LAMBDA-Y

	DMP
DS1	0.67
DS2	0.81
DS3	0.73
DS4	0.79
DS5	0.76
DS6	0.55
DS7	0.93

LAMBDA-X

	ICT
HW	0.94
SW	0.89
DT	0.85
CN	0.86
WP	0.84
PP	0.85

GAMMA

	ICT
DMP	0.78

Correlation Matrix of ETA and KSI

	DMP	ICT
DMP	1.00	
ICT	0.78	1.00

PSI

DMP
0.40

Regression Matrix ETA on KSI (Standardized)

	ICT
DMP	0.78

!path ICT for DMP

Total and Indirect Effects

Total Effects of KSI on Y

	ICT
DS1	0.52 (0.05) 9.83
DS2	0.63 (0.05) 11.80
DS3	0.57 (0.05) 10.77
DS4	0.61 (0.05) 11.52
DS5	0.59

	(0.05)
	11.15
DS6	0.43
	(0.05)
	8.30
DS7	0.72
	(0.05)
	14.15

!path ICT for DMP

Standardized Total and Indirect Effects

Standardized Total Effects of KSI on Y

	ICT

DS1	0.52
DS2	0.63
DS3	0.57
DS4	0.61
DS5	0.59
DS6	0.43
DS7	0.72

Time used: 0.031 Seconds