ภาคผนวก ข

ผลการวิเคราะห์โมเดลประหยัด

DATE: 4/18/2003

TIME: 14:47

L I S R E L 8.50

BY

Karl G. J"reskog & Dag S"rbom

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The following lines were read from file C:\test5.spl:

CAUSAL MODEL OF ADAPTATION OF INFECTED HIV
DA NI=26 NO=400 MA=KM
LA
'Y1"Y2"Y3"Y4"Y5"Y6"Y7"Y8"Y9"Y10"Y11"Y12"Y13"Y14"Y15"Y16"Y17"Y18"Y19"X1"X2"X3"X4"X5"X6"
X7'
KM
1.000
.040 1.000
.018 .335 1.000
-.003 .552 .461 1.000
.064 .263 .184 .278 1.000
.011 .281 .356 .334 .507 1.000

.020 .298 .272 .373 .274 .339 1.000

.004 .310 .342 .348 .521 .581 .339 1.000

.029 .273 .301 .360 .551 .420 .313 .511 1.000

.101 .303 .255 .342 .501 .404 .268 .392 .604 1.000

-.062 .324 .352 .414 .294 .293 .221 .380 .285 .247 1.000

.025 .070 .155 .089 .167 .161 .075 .092 .142 .072 .023 1.000

.015 .202 .199 .195 .281 .310 .228 .308 .245 .274 .114 .378 1.000

.007 .220 .196 .219 .353 .393 .216 .410 .330 .292 .178 .332 .714 1.000

-.007 .146 .220 .179 .248 .240 .147 .296 .240 .197 .126 .458 .661 .616 1.000

-.050 .363 .263 .394 .235 .234 .213 .281 .413 .310 .286 .053 .124 .151 .126 1.000

.016 .149 .508 .286 .134 .265 .282 .201 .214 .067 .235 .286 .224 .181 .271 .295 1.000

-.018 .366 .409 .433 .191 .289 .319 .344 .383 .258 .328 .139 .147 .200 .242 .499 .517 1.000

-.088 .218 .440 .323 .124 .267 .285 .261 .286 .105 .295 .269 .178 .159 .297 .260 .655 .531 1.000

-.017 -.046 -.088 .047 -.084 -.131 -.028 -.010 .015 .047 -.006 -.020 .021 -.025 .017 .031 -.025 -.012 -.055 1.000

-.010 -.034 .000 -.080 .052 .072 .047 .020 -.026 -.079 .011 .039 -.030 .027 .050 -.010 .145 .049 .073 -.298
1.000

.073 .000 -.025 .008 -.051 -.076 -.027 .023 .096 .094 -.042 .088 .000 -.047 .072 .009 -.060 -.036 -.086 .417
.000 1.000

.057 .084 .069 .066 -.024 .104 .063 -.018 .062 .002 .092 -.024 -.057 .021 -.082 .112 .039 .095 .100 -.157 -.071 -
.252 1.000

.018 .090 .117 -.014 .060 .120 .043 .103 .147 .082 .032 -.019 -.019 .040 .049 .111 .102 .171 .150 -.178 .028 -
.162 .388 1.000

-.012 -.106 -.053 -.139 -.001 -.060 .006 -.066 -.035 -.029 -.044 -.060 -.003 -.088 -.055 -.073 .019 -.108 -.020 -
.077 .194

-.062 -.014 .014 1.000

-.038 .107 .249 .160 .067 .047 .133 .180 .172 .115 .208 .173 .155 .104 .198 .215 .264 .315 .259 .130 -.074 .091
.040 .091

-.161 1.000

SD

.30 .67 .85 .70 .87 .75 .67 .74 .79 .69 .61 1.04 .87 .82 .94 .61 1.00 .73 .95 .50 8.41 .44 1.02 1.26 1.11 39.81

MO NX=7 NY=19 NE=6 C

LY=FU,FI GA=FU,FR BE=FU,FI PS=DI,FR TE=FU,FI TD=DI,FR

FR LY(1,1) LY(2,2) LY(3,2) LY(4,2) LY(5,3) LY(6,3) LY(7,3) LY(8,3) LY(9,3) LY(10,3) LY(11,4)
LY(12,5) C

LY(13,5) LY(14,5) LY(15,5) LY(16,6) LY(17,6) LY(18,6) LY(19,6)

FR BE(2,3) BE(4,3) BE(6,2) BE(6,4)

FR TE(2,2) TE(3,3) TE(4,4) TE(5,5) TE(6,6) TE(7,7) TE(8,8) TE(9,9) TE(10,10) C

TE(12,12) TE(13,13) TE(14,14) TE(16,16) TE(17,17) TE(18,18) TE(19,19) TE(5,9) TE(19,15) C

TE(19,16) TE(17,4) TE(10,9) TE(19,17) TE(17,3) TE(5,10) TE(12,15) TE(3,19) TE(4,11) TE(6,9) TE(9,16) C

TE(10,16) TE(3,11) TE(4,7) TE(2,11) TE(3,5) TE(8,12) TE(5,18) TE(12,19) TE(13,18) TE(5,19) TE(12,17) C

TE(1,19) TE(2,4) TE(8,11) TE(2,16) TE(4,16) TE(2,7) TE(15,17) TE(13,17) TE(2,17) TE(10,13) TE(10,19) C

TE(6,14) TE(10,17) TE(19,17) TE(5,17) TE(14,8) TE(1,10) TE(4,5) TE(8,17) TE(11,12) TE(1,11) TE(6,18)
TE(10,18) C

TE(14,18) TE(10,12) TE(9,10) TE(18,16) TE(11,19) TE(7,17) TE(4,2) TE(7,18) TE(16,18) TE(7,19) TE(7,3)
TE(8,10) C

TE(2,10) TE(4,10) TE(9,17) TE(9,14) TE(5,14) TE(10,14) TE(11,14) TE(1,16) TE(11,16) TE(16,9) TE(8,18)
TE(4,9) C

TE(1,5) TE(7,16) TE(7,13) TE(6,15) TE(13,14) TE(7,14) TE(2,18) TE(2,13) TE(2,14) TE(4,14) TE(5,7)
TE(7,11) TE(9,19) C

TE(9,18) TE(14,17) TE(14,16) TE(15,18) TE(6,13) TE(8,13) TE(5,13) TE(8,15) TE(5,15) TE(5,12) TE(6,12)
TE(9,13) TE(9,15) C

TE(9,12) TE(7,15) TE(11,15) TE(10,15) TE(12,18) TE(5,13) TE(3,15) TE(3,12) TE(11,11) TE(13,19)
TE(14,19) TE(3,14) TE(3,13) C

TE(4,13) TE(4,15) TE(11,13) TE(2,15) TE(13,16) TE(15,16) TE(2,8) TE(8,16) TE(7,12)

FI GA(1,2) GA(1,6) GA(2,6) GA(3,6) GA(3,7) GA(4,1) GA(4,3) GA(4,6) GA(4,7) GA(5,2) GA(5,3) GA(5,6)
GA(5,7) GA(2,3) C

GA(3,2) GA(6,5) GA(1,4) GA(1,1) GA(2,4) GA(6,1) GA(2,5) GA(6,6) GA(3,1) GA(6,4) GA(5,5) GA(5,1)
GA(1,5) GA(5,4) GA(1,3) C

GA(3,4) GA(5,5) GA(3,3) GA(1,7) GA(6,3) GA(4,5) GA(4,2)

FR TH(3,1) TH(5,4) TH(3,4) TH(1,4) TH(7,11) TH(7,8) TH(6,13) TH(3,9) TH(7,3) TH(2,17) TH(7,9)
TH(3,10) C

TH(6,18) TH(2,10) TH(5,15) TH(4,6) TH(3,14) TH(4,14) TH(3,12) TH(1,6) TH(7,7) TH(1,5) TH(3,8)
TH(7,14) TH(3,15) C

TH(2,13) TH(7,10) TH(4,7) TH(2,9) TH(5,14) TH(7,12) TH(1,14) TH(2,8) TH(4,9) TH(5,9) TH(4,16)
TH(7,15) TH(7,13) C

TH(5,11) TH(6,4) TH(6,17) TH(6,2) TH(3,3) TH(6,5)

LE

'OPEN"HARD"SOCI"INHE"STIG"ADAP'

PATH DIAGRAM

OU SE TV EF RS MI SS FS ND=3 ADD=OFF

CAUSAL MODEL OF ADAPTATION OF INFECTED HIV

Number of Input Variables 26

Number of Y - Variables 19

Number of X - Variables 7

Number of ETA - Variables 6

Number of KSI - Variables 7

Number of Observations 400

CAUSAL MODEL OF ADAPTATION OF INFECTED HIV

Number of Iterations = 43

LISREL Estimates (Maximum Likelihood)

LAMBDA-Y

	OPEN	HARD	SOCI	INHE	STIG	ADAP
Y1	1.000	--	--	--	--	--
Y2	--	0.502	--	--	--	--
Y3	--	0.671	--	--	--	--
		(0.089)				
		7.562				
Y4	--	0.683	--	--	--	--
		(0.073)				
		9.342				

Y5	--	--	0.677	--	--	--
Y6	--	--	0.760	--	--	--
			(0.063)			
			11.995			
Y7	--	--	0.452	--	--	--
			(0.058)			
			7.743			
Y8	--	--	0.764	--	--	--
			(0.063)			
			12.053			
Y9	--	--	0.680	--	--	--
			(0.056)			
			12.156			
Y10	--	--	0.567	--	--	--
			(0.055)			
			10.365			
Y11	--	--	--	0.629	--	--
Y12	--	--	--	--	0.544	--
Y13	--	--	--	--	0.659	--
					(0.086)	
					7.629	
Y14	--	--	--	--	0.611	--
					(0.082)	
					7.439	

Y15	--	--	--	--	0.995	--
					(0.117)	
					8.521	
Y16	--	--	--	--	--	0.508
Y17	--	--	--	--	--	0.596
					(0.084)	
					7.081	
Y18	--	--	--	--	--	0.829
					(0.094)	
					8.830	
Y19	--	--	--	--	--	0.617
					(0.087)	
					7.075	

BETA

	OPEN	HARD	SOCI	INHE	STIG	ADAP
OPEN	--	--	--	--	--	--
HARD	--	--	0.666	--	--	--
			(0.098)			
			6.773			
SOCI	--	--	--	--	--	--
INHE	--	--	0.634	--	--	--
			(0.091)			
			6.972			

STIG	--	--	--	--	--	--
ADAP	--	0.510	--	0.389	--	--
		(0.128)		(0.167)		
		3.992		2.330		

GAMMA

	X1	X2	X3	X4	X5	X6
OPEN	--	--	--	--	--	--
HARD	-0.152	-0.127	--	--	--	--
	(0.059)	(0.054)				
	-2.591	-2.361				
SOCI	--	--	--	--	0.149	--
					(0.050)	
					2.997	
INHE	--	--	--	0.140	--	--
				(0.062)		
				2.273		
STIG	--	--	--	--	--	--
ADAP	--	0.102	--	--	--	--
		(0.047)				
		2.197				

GAMMA

	X7

OPEN - -

HARD 0.191
(0.066)
2.907

SOCI - -

INHE - -

STIG - -

ADAP 0.287
(0.055)
5.215

OPEN	HARD	SOCI	INHE	STIG	ADAP
- -	0.513	0.022	0.432	- -	0.722

Squared Multiple Correlations for Y - Variables

Y1	Y2	Y3	Y4	Y5	Y6
1.000	0.254	0.449	0.470	0.459	0.571

Squared Multiple Correlations for Y - Variables

Y7	Y8	Y9	Y10	Y11	Y12
0.204	0.585	0.459	0.322	0.395	0.295

Squared Multiple Correlations for Y - Variables

Y13	Y14	Y15	Y16	Y17	Y18
0.436	0.376	1.000	0.259	0.365	0.697

Squared Multiple Correlations for Y - Variables

Y19
0.387

Squared Multiple Correlations for X - Variables

X1	X2	X3	X4	X5	X6
1.000	1.000	1.000	1.000	1.000	1.000

Squared Multiple Correlations for X - Variables

X7
1.000

Goodness of Fit Statistics

Degrees of Freedom = 120

Minimum Fit Function Chi-Square = 53.530 (P = 1.00)

Normal Theory Weighted Least Squares Chi-Square = 52.979 (P = 1.00)

Estimated Non-centrality Parameter (NCP) = 0.0

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

Minimum Fit Function Value = 0.134

Population Discrepancy Function Value (F0) = 0.0

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

Root Mean Square Error of Approximation (RMSEA) = 0.0

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

P-Value for Test of Close Fit (RMSEA < 0.05) = 1.000

Expected Cross-Validation Index (ECVI) = 1.459

90 Percent Confidence Interval for ECVI = (1.459 ; 1.459)

ECVI for Saturated Model = 1.759

ECVI for Independence Model = 9.003

Chi-Square for Independence Model with 325 Degrees of Freedom = 3540.269

Independence AIC = 3592.269

Model AIC = 514.979

Saturated AIC = 702.000

Independence CAIC = 3722.047

Model CAIC = 1668.007

Saturated CAIC = 2454.004

Normed Fit Index (NFI) = 0.985

Non-Normed Fit Index (NNFI) = 1.056

Parsimony Normed Fit Index (PNFI) = 0.364

Comparative Fit Index (CFI) = 1.000

Incremental Fit Index (IFI) = 1.019

Relative Fit Index (RFI) = 0.959

Critical N (CN) = 1185.787

Root Mean Square Residual (RMR) = 0.0253

Standardized RMR = 0.0254

Goodness of Fit Index (GFI) = 0.990

Adjusted Goodness of Fit Index (AGFI) = 0.970

Parsimony Goodness of Fit Index (PGFI) = 0.338

Summary Statistics for Fitted Residuals

Smallest Fitted Residual = -0.088

Median Fitted Residual = 0.006

Largest Fitted Residual = 0.089

Stemleaf Plot

- 8|82

- 7|0

- 6|8443220

- 5|87510

- 4|541

- 3|9877653311

- 2|7775544332211000

- 1|99999888776665444322111111100

- 0|998888777776666655555444443333333222211111111100000

0|11111111112222222233333334444444444444455555555556666666667777777788888888+12

1|000001111111112222222333333444444455666666666777777788888889999999

2|000111112233333344445555666777899999

3|00011112233333445566778 9

4|002345779

5|003679

6|2279

7|0

8|9

Summary Statistics for Standardized Residuals

Smallest Standardized Residual = -1.764

Median Standardized Residual = 0.310

Largest Standardized Residual = 1.847

Stemleaf Plot

-16|6532

-14|854

-12|974432540

-10|7654306432

- 8|5516

- 6|97664055444310

- 4|66554332110998877211000

- 2|88877665443222109855421 0

- 0|999876655442211100988877664322 0

0|1445888899900123445555566889999

2|00112224455666678890011122233344556666777899999

4|00112234445566667889012222445566678889

6|12567888999001223445567788 9

8|00134446777991112344577789

10|00112233344667999992223 4488

12|002467012244799

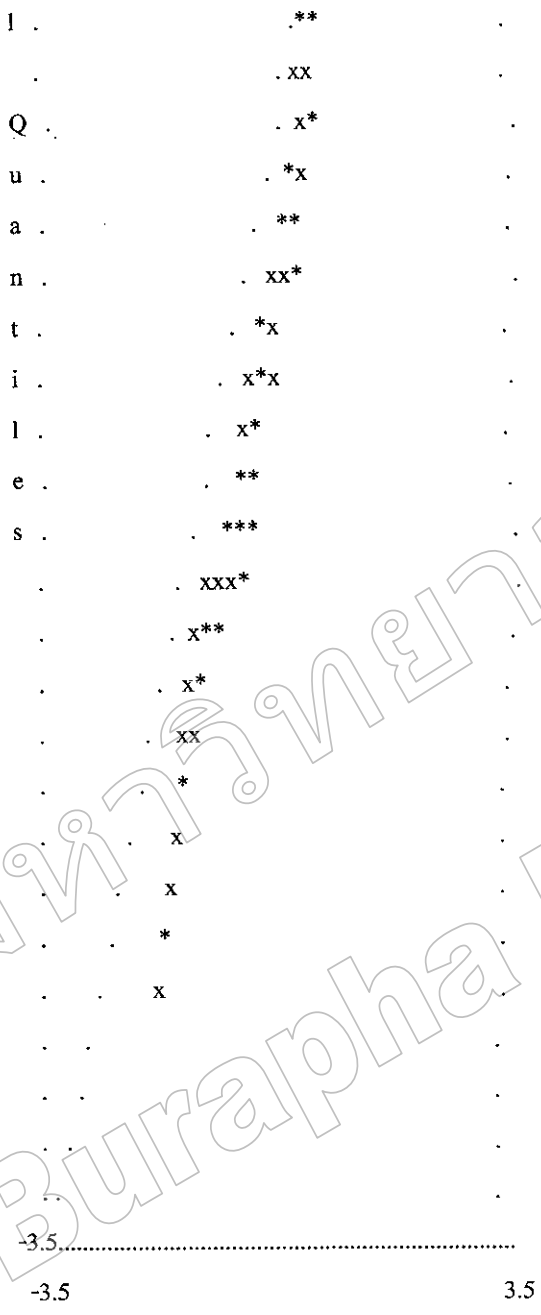
14|00191144779

16|55689

18|015

CAUSAL MODEL OF ADAPTATION OF INFECTED HIV

Qplot of Standardized Residuals



CAUSAL MODEL OF ADAPTATION OF INFECTED HIV

Modification Indices and Expected Change

Modification Indices for LAMBDA-Y

	OPEN	HARD	SOCI	INHE	STIG	ADAP
Y1	--	0.063	0.203	0.283	0.002	0.026
Y2	0.776	--	0.578	0.577	0.136	0.009
Y3	0.098	--	0.505	2.037	--	0.398
Y4	0.370	--	1.296	0.151	1.230	0.103
Y5	--	0.137	--	0.030	--	0.888
Y6	0.077	0.012	--	0.579	--	0.113
Y7	0.055	0.043	--	0.388	--	0.315
Y8	0.000	0.124	--	0.925	--	0.410
Y9	0.559	0.001	--	0.002	--	0.001
Y10	--	0.039	--	0.114	--	0.013
Y11	--	0.026	0.137	--	--	0.122
Y12	0.355	3.650	3.266	2.861	--	3.601
Y13	0.144	0.014	0.084	0.074	--	0.063
Y14	0.078	0.306	0.615	0.000	--	0.322
Y15	0.142	0.978	1.609	1.759	--	1.269
Y16	--	0.529	0.348	0.109	0.266	--
Y17	0.260	0.244	0.122	0.351	--	--
Y18	0.536	0.003	0.574	0.213	--	--
Y19	--	0.145	0.550	0.004	--	--

Expected Change for LAMBDA-Y

	OPEN	HARD	SOCI	INHE	STIG	ADAP
Y1	--	0.013	0.022	0.035	-0.002	-0.008
Y2	0.035	--	0.065	0.090	0.027	-0.010
Y3	0.012	--	0.083	0.340	--	0.095
Y4	-0.022	--	-0.113	-0.058	0.080	0.036
Y5	--	0.040	--	0.015	--	0.081
Y6	-0.010	-0.009	--	-0.077	--	-0.024
Y7	0.010	-0.058	--	-0.453	--	-0.254
Y8	0.000	-0.031	--	-0.183	--	-0.060

Y9	0.030	-0.003	--	0.004	--	-0.005
Y10	--	-0.019	--	0.031	--	0.017
Y11	--	0.044	0.151	--	--	0.220
Y12	0.026	0.127	0.172	0.198	--	0.147
Y13	0.012	0.028	0.085	0.052	--	0.056
Y14	-0.009	0.197	-7.008	-0.094	--	0.379
Y15	-0.013	-0.197	-0.723	-0.261	--	-0.281
Y16	--	0.078	0.048	0.046	0.042	--
Y17	0.019	-0.084	-0.023	-0.046	--	--
Y18	-0.027	0.007	0.096	0.048	--	--
Y19	--	-0.042	-0.049	-0.007	--	--

Standardized Expected Change for LAMBDA-Y

	OPEN	HARD	SOCI	INHE	STIG	ADAP
Y1	--	0.013	0.022	0.035	-0.002	-0.008
Y2	0.035	--	0.065	0.090	0.027	-0.010
Y3	0.012	--	0.083	0.340	--	0.095
Y4	-0.022	--	-0.113	-0.058	0.080	0.036
Y5	--	0.040	--	0.015	--	0.081
Y6	-0.010	-0.009	--	-0.077	--	-0.024
Y7	0.010	-0.058	--	-0.453	--	-0.254
Y8	0.000	-0.031	--	-0.183	--	-0.060
Y9	0.030	-0.003	--	0.004	--	-0.005
Y10	--	-0.019	--	0.031	--	0.017
Y11	--	0.044	0.151	--	--	0.220
Y12	0.026	0.127	0.172	0.198	--	0.147
Y13	0.012	0.028	0.085	0.052	--	0.056
Y14	-0.009	0.197	-7.008	-0.094	--	0.379
Y15	-0.013	-0.197	-0.723	-0.261	--	-0.281
Y16	--	0.078	0.048	0.046	0.042	--
Y17	0.019	-0.084	-0.023	-0.046	--	--
Y18	-0.027	0.007	0.096	0.048	--	--
Y19	--	-0.042	-0.049	-0.007	--	--

Modification Indices for BETA

	OPEN	HARD	SOCI	INHE	STIG	ADAP
OPEN	--	0.063	0.203	0.283	0.002	0.026
HARD	0.003	--	--	2.896	3.471	2.352
SOCI	0.145	0.559	--	0.955	3.799	0.048
INHE	0.133	0.026	--	--	0.266	0.122
STIG	0.002	1.856	2.165	0.142	--	1.821
ADAP	0.133	--	0.137	--	0.266	--

Expected Change for BETA

	OPEN	HARD	SOCI	INHE	STIG	ADAP
OPEN	--	0.013	0.022	0.035	-0.002	-0.008
HARD	0.003	--	--	0.528	0.237	0.543
SOCI	0.018	-0.165	--	-0.364	0.361	0.031
INHE	-0.042	0.071	--	--	0.214	0.349
STIG	-0.002	0.154	0.248	0.067	--	0.180
ADAP	-0.016	--	-0.093	--	0.083	--

Standardized Expected Change for BETA

	OPEN	HARD	SOCI	INHE	STIG	ADAP
OPEN	--	0.013	0.022	0.035	-0.002	-0.008
HARD	0.003	--	--	0.528	0.237	0.543
SOCI	0.018	-0.165	--	-0.364	0.361	0.031
INHE	-0.042	0.071	--	--	0.214	0.349
STIG	-0.002	0.154	0.248	0.067	--	0.180
ADAP	-0.016	--	-0.093	--	0.083	--

Modification Indices for GAMMA

	X1	X2	X3	X4	X5	X6
OPEN	0.230	0.028	1.104	1.863	0.250	0.127
HARD	--	--	0.106	2.013	1.182	0.022
SOCI	0.033	1.977	1.460	0.530	--	0.256
INHE	0.426	0.013	0.110	--	1.287	0.120
STIG	0.061	0.143	0.341	1.882	0.416	1.046
ADAP	0.893	--	0.398	0.137	1.583	0.080

Modification Indices for GAMMA

	X7
OPEN	0.982
HARD	--
SOCI	0.377
INHE	0.138
STIG	0.827
ADAP	--

Expected Change for GAMMA

	X1	X2	X3	X4	X5	X6
OPEN	-0.023	-0.008	-0.108	0.066	0.024	-0.017
HARD	--	--	-0.025	0.075	0.063	-0.009
SOCI	0.010	0.072	-0.063	-0.040	--	-0.024
INHE	0.042	-0.008	-0.022	--	0.142	-0.023
STIG	0.011	0.018	0.036	-0.064	-0.040	-0.047
ADAP	0.047	--	-0.029	0.021	0.060	0.016

Expected Change for GAMMA

	X7

OPEN	-0.047
HARD	--
SOCI	0.036
INHE	0.122
STIG	0.169
ADAP	--

Standardized Expected Change for GAMMA

	X1	X2	X3	X4	X5	X6
OPEN	-0.023	-0.008	-0.108	0.066	0.024	-0.017
HARD	--	--	-0.025	0.075	0.063	-0.009
SOCI	0.009	0.072	-0.063	-0.040	--	-0.024
INHE	0.042	-0.008	-0.022	--	0.143	-0.023
STIG	0.011	0.018	0.036	-0.064	-0.040	-0.047
ADAP	0.047	--	-0.029	0.021	0.060	0.016

Standardized Expected Change for GAMMA

	X7
OPEN	-0.047
HARD	--
SOCI	0.036
INHE	0.122
STIG	0.169
ADAP	--

No Non-Zero Modification Indices for PHI

Modification Indices for PSI

	OPEN	HARD	SOCI	INHE	STIG	ADAP

OPEN	--					
HARD	0.003	--				
SOCI	0.145	1.182	--			
INHE	0.133	1.342	1.287	--		
STIG	0.002	3.471	3.799	0.266	--	
ADAP	0.133	1.342	0.888	--	0.266	--

Expected Change for PSI

	OPEN	HARD	SOCI	INHE	STIG	ADAP
OPEN	--					
HARD	0.003	--				
SOCI	0.018	-0.414	--			
INHE	-0.042	0.436	-0.934	--		
STIG	-0.002	0.237	0.361	0.214	--	
ADAP	-0.016	0.170	-0.161	--	0.083	--

Standardized Expected Change for PSI

	OPEN	HARD	SOCI	INHE	STIG	ADAP
OPEN	--					
HARD	0.003	--				
SOCI	0.018	-0.414	--			
INHE	-0.042	0.436	-0.934	--		
STIG	-0.002	0.237	0.361	0.214	--	
ADAP	-0.016	0.170	-0.161	--	0.083	--

Modification Indices for THETA-EPS

	Y1	Y2	Y3	Y4	Y5	Y6
Y1	--					

Y2	0.776	--				
Y3	0.098	0.085	--			
Y4	0.370	--	0.039	--		
Y5	--	0.007	--	--	--	
Y6	0.077	0.149	0.534	0.607	0.035	--
Y7	0.055	--	--	--	--	0.007
Y8	0.000	--	0.000	0.012	0.088	0.854
Y9	0.559	0.302	0.176	--	--	--
Y10	--	--	0.007	--	--	0.397
Y11	--	--	--	--	0.077	0.401
Y12	0.355	0.136	--	1.230	--	--
Y13	0.144	--	--	--	--	--
Y14	0.078	--	--	--	--	--
Y15	0.142	--	--	--	--	--
Y16	--	--	0.296	--	0.180	0.008
Y17	0.260	--	--	--	--	0.015
Y18	0.536	--	0.161	0.274	--	--
Y19	--	0.328	--	0.301	--	0.156

Modification Indices for THETA-EPS

	Y7	Y8	Y9	Y10	Y11	Y12
Y7	--					
Y8	0.008	--				
Y9	0.007	0.005	--			
Y10	0.084	--	--	--		
Y11	--	--	0.001	0.187	--	
Y12	--	--	--	--	--	--
Y13	--	--	--	--	--	0.611
Y14	--	--	--	--	--	0.611
Y15	--	--	--	--	--	--
Y16	--	--	--	--	--	0.266
Y17	--	--	--	--	0.015	--

Y18	--	--	--	--	0.015	--
Y19	--	0.210	--	--	--	--

Modification Indices for THETA-EPS

	Y13	Y14	Y15	Y16	Y17	Y18
Y13	--					
Y14	--	--				
Y15	0.611	0.611	--			
Y16	--	--	--	--		
Y17	--	--	--	0.585	--	
Y18	--	--	--	--	0.178	--
Y19	--	--	--	--	--	0.002

Modification Indices for THETA-EPS

	Y19
Y19	--

Expected Change for THETA-EPS

	Y1	Y2	Y3	Y4	Y5	Y6
Y1	--					
Y2	0.035	--				
Y3	0.012	-0.012	--			
Y4	-0.022	--	-0.011	--		
Y5	--	-0.003	--	--	--	
Y6	-0.010	0.013	0.024	-0.025	0.008	--
Y7	0.010	--	--	--	--	-0.003
Y8	0.000	--	-0.001	-0.004	-0.012	0.045
Y9	0.030	0.019	-0.014	--	--	--

Y10	--	--	0.003	--	--	-0.030
Y11	--	--	--	--	0.009	-0.025
Y12	0.026	0.015	--	0.044	--	--
Y13	0.012	--	--	--	--	--
Y14	-0.009	--	--	--	--	--
Y15	-0.013	--	--	--	--	--
Y16	--	--	0.019	--	0.017	-0.003
Y17	0.019	--	--	--	--	-0.004
Y18	-0.027	--	-0.017	0.024	--	--
Y19	--	-0.020	--	0.019	--	-0.012

Expected Change for THETA-EPS

	Y7	Y8	Y9	Y10	Y11	Y12
Y7	--					
Y8	-0.003	--				
Y9	0.003	-0.003	--			
Y10	0.011	--	--	--		
Y11	--	--	0.001	0.015	--	
Y12	--	--	--	--	--	--
Y13	--	--	--	--	--	0.027
Y14	--	--	--	--	--	-0.025
Y15	--	--	--	--	--	--
Y16	--	--	--	--	--	0.023
Y17	--	--	--	--	0.005	--
Y18	--	--	--	--	-0.007	--
Y19	--	-0.017	--	--	--	--

Expected Change for THETA-EPS

	Y13	Y14	Y15	Y16	Y17	Y18
Y13	--					

Y14	--	--				
Y15	-0.050	0.046	--			
Y16	--	--	--	--		
Y17	--	--	--	-0.031	--	
Y18	--	--	--	--	0.017	--
Y19	--	--	--	--	--	0.002

Expected Change for THETA-EPS

	Y19
Y19	--

Modification Indices for THETA-DELTA-EPS

	Y1	Y2	Y3	Y4	Y5	Y6
X1	0.025	0.242	0.202	--	--	--
X2	0.006	0.083	1.322	1.962	0.409	0.967
X3	--	0.980	--	--	0.943	0.805
X4	1.606	1.212	0.335	0.000	0.241	--
X5	0.000	0.098	0.002	--	0.642	0.041
X6	0.268	--	0.103	--	--	0.333
X7	0.963	0.005	--	0.026	0.992	0.034

Modification Indices for THETA-DELTA-EPS

	Y7	Y8	Y9	Y10	Y11	Y12
X1	0.391	0.001	0.004	1.386	0.027	0.196
X2	0.077	--	--	--	0.001	0.086
X3	0.016	--	--	--	0.012	--
X4	--	0.771	--	0.034	0.101	0.084
X5	0.694	0.017	--	0.117	--	0.117

X6	0.357	0.410	0.059	0.107	0.236	0.741
X7	--	--	--	--	--	--

Modification Indices for THETA-DELTA-EPS

	Y13	Y14	Y15	Y16	Y17	Y18
X1	0.050	--	0.032	0.264	0.288	0.657
X2	--	0.054	0.208	0.123	--	0.163
X3	0.000	--	--	0.058	0.309	0.022
X4	0.021	--	1.554	--	1.183	0.020
X5	0.065	--	--	0.380	0.113	0.424
X6	--	0.660	0.003	0.466	--	--
X7	--	--	--	0.023	0.518	1.004

Modification Indices for THETA-DELTA-EPS

	Y19
X1	0.007
X2	0.127
X3	0.451
X4	1.016
X5	0.526
X6	0.577
X7	0.014

Expected Change for THETA-DELTA-EPS

	Y1	Y2	Y3	Y4	Y5	Y6
X1	-0.007	-0.019	-0.021	--	--	--
X2	-0.003	0.011	0.052	-0.059	0.026	0.038
X3	--	0.037	--	--	-0.038	-0.034

X4	0.056	0.040	0.020	0.000	-0.017	--
X5	0.001	-0.012	-0.002	--	-0.028	0.008
X6	-0.024	--	-0.013	--	--	-0.021
X7	-0.043	-0.003	--	-0.009	0.041	0.008

Expected Change for THETA-DELTA-EPS

	Y7	Y8	Y9	Y10	Y11	Y12
X1	-0.024	-0.001	-0.002	0.043	0.006	-0.018
X2	0.012	--	--	--	0.001	0.012
X3	0.005	--	--	--	-0.004	--
X4	--	-0.031	--	-0.007	-0.024	0.011
X5	-0.036	0.004	--	0.013	--	-0.014
X6	0.026	-0.023	0.008	0.012	-0.021	-0.036
X7	--	--	--	--	--	--

Expected Change for THETA-DELTA-EPS

	Y13	Y14	Y15	Y16	Y17	Y18
X1	0.007	--	0.006	0.018	0.016	0.025
X2	--	-0.008	0.016	-0.014	--	0.017
X3	0.000	--	--	0.009	-0.017	-0.005
X4	0.005	--	-0.043	--	-0.033	-0.005
X5	0.011	--	--	0.025	-0.010	0.021
X6	--	-0.029	0.002	-0.029	--	--
X7	--	--	--	-0.006	0.025	-0.045

Expected Change for THETA-DELTA-EPS

	Y19
X1	-0.002

X2	0.014
X3	-0.021
X4	0.032
X5	0.023
X6	0.030
X7	0.004

Modification Indices for THETA-DELTA

	X1	X2	X3	X4	X5	X6
X1	0.691					
X2	0.854	0.312				
X3	0.003	1.509	--			
X4	0.086	0.655	0.430	0.661		
X5	0.221	2.905	3.472	0.093	0.145	
X6	0.039	0.119	--	0.133	0.558	--
X7	2.824	1.745	0.547	0.133	2.187	0.004

Modification Indices for THETA-DELTA

	X7
X7	1.796

Expected Change for THETA-DELTA

	X1	X2	X3	X4	X5	X6
X1	0.681					
X2	-0.335	-0.623				
X3	0.023	0.578	--			
X4	0.070	0.216	0.275	1.051		
X5	-0.109	-0.394	0.589	0.090	-0.281	
X6	-0.077	-0.145	--	0.168	0.237	--

X7	-0.220	-0.543	0.080	-0.046	-0.167	-0.009

Expected Change for THETA-DELTA

	X7
X7	0.742

Maximum Modification Index is 3.80 for Element (3, 5) of BETA

CAUSAL MODEL OF ADAPTATION OF INFECTED HIV

Standardized Solution

LAMBDA-Y

	OPEN	HARD	SOCI	INHE	STIG	ADAP
Y1	1.000	--	--	--	--	--
Y2	--	0.502	--	--	--	--
Y3	--	0.671	--	--	--	--
Y4	--	0.683	--	--	--	--
Y5	--	--	0.677	--	--	--
Y6	--	--	0.760	--	--	--
Y7	--	--	0.452	--	--	--
Y8	--	--	0.764	--	--	--
Y9	--	--	0.680	--	--	--
Y10	--	--	0.567	--	--	--
Y11	--	--	--	0.629	--	--
Y12	--	--	--	--	0.544	--
Y13	--	--	--	--	0.659	--
Y14	--	--	--	--	0.611	--
Y15	--	--	--	--	0.995	--
Y16	--	--	--	--	--	0.508
Y17	--	--	--	--	--	0.596

Y18	--	--	--	--	--	0.829
Y19	--	--	--	--	--	0.617

BETA

	OPEN	HARD	SOCI	INHE	STIG	ADAP
OPEN	--	--	--	--	--	--
HARD	--	--	0.666	--	--	--
SOCI	--	--	--	--	--	--
INHE	--	--	0.634	--	--	--
STIG	--	--	--	--	--	--
ADAP	--	0.510	--	0.389	--	--

GAMMA

	X1	X2	X3	X4	X5	X6
OPEN	--	--	--	--	--	--
HARD	-0.151	-0.127	--	--	--	--
SOCI	--	--	--	--	0.149	--
INHE	--	--	--	0.140	--	--
STIG	--	--	--	--	--	--
ADAP	--	0.102	--	--	--	--

GAMMA

	X7
OPEN	--
HARD	0.190
SOCI	--
INHE	--
STIG	--

ADAP 0.286

Correlation Matrix of ETA and KSI

	OPEN	HARD	SOCI	INHE	STIG	ADAP
OPEN	1.000					
HARD	--	1.000				
SOCI	--	0.672	1.000			
INHE	--	0.438	0.642	1.000		
STIG	--	--	--	--	1.000	
ADAP	--	0.725	0.597	0.617	--	1.000
X1	--	-0.108	-0.027	-0.039	--	-0.061
X2	--	-0.099	0.003	-0.007	--	0.023
X3	--	-0.062	-0.024	-0.050	--	-0.026
X4	--	0.083	0.059	0.177	--	0.122
X5	--	0.143	0.149	0.149	--	0.164
X6	--	-0.039	0.003	0.002	--	-0.044
X7	--	0.192	0.016	0.018	--	0.382

Correlation Matrix of ETA and KSI

	X1	X2	X3	X4	X5	X6
X1	1.000					
X2	-0.282	1.000				
X3	0.410	0.001	1.000			
X4	-0.157	-0.067	-0.247	1.000		
X5	-0.178	0.022	-0.163	0.392	1.000	
X6	-0.082	0.192	-0.054	0.003	0.019	1.000
X7	0.133	-0.090	0.086	0.061	0.105	-0.154

Correlation Matrix of ETA and KSI

	X7
X7	1.000

CAUSAL MODEL OF ADAPTATION OF INFECTED HIV

Total and Indirect Effects

Total Effects of X on ETA

	X1	X2	X3	X4	X5	X6
OPEN	--	--	--	--	--	--
HARD	-0.152	-0.127	--	--	0.099	--
	(0.059)	(0.054)			(0.035)	
	-2.591	-2.361			2.859	
SOCI	--	--	--	--	0.149	--
					(0.050)	
					2.997	
INHE	--	--	--	0.140	0.094	--
				(0.062)	(0.033)	
				2.273	2.898	
STIG	--	--	--	--	--	--
ADAP	-0.078	0.037	--	0.054	0.087	--
	(0.033)	(0.048)		(0.030)	(0.031)	
	-2.332	0.777		1.824	2.827	

Total Effects of X on ETA

	X7

OPEN --

HARD 0.191
(0.066)
2.907

SOCI --

INHE --

STIG --

ADAP 0.384
(0.062)
6.172

Indirect Effects of X on ETA

	X1	X2	X3	X4	X5	X6
OPEN	--	--	--	--	--	--
HARD	--	--	--	--	0.099	--
					(0.035)	
					2.859	
SOCI	--	--	--	--	--	--
INHE	--	--	--	--	0.094	--
					(0.033)	
					2.898	
STIG	--	--	--	--	--	--
ADAP	-0.078	-0.065	--	0.054	0.087	--
	(0.033)	(0.031)		(0.030)	(0.031)	

-2.332 -2.115 1.824 2.827

Indirect Effects of X on ETA

X7

OPEN --

HARD --

SOCI --

INHE --

STIG --

ADAP 0.097

(0.038)

2.574

Total Effects of ETA on ETA

	OPEN	HARD	SOCI	INHE	STIG	ADAP
OPEN	--	--	--	--	--	--
HARD	--	--	0.666	--	--	--
			(0.098)			
			6.773			
SOCI	--	--	--	--	--	--
INHE	--	--	0.634	--	--	--
			(0.091)			
			6.972			

STIG	--	--	--	--	--	--
ADAP	--	0.510	0.586	0.389	--	--
		(0.128)	(0.092)	(0.167)		
		3.992	6.338	2.330		

Largest Eigenvalue of B*B' (Stability Index) is 0.845

Indirect Effects of ETA on ETA

	OPEN	HARD	SOCI	INHE	STIG	ADAP
OPEN	--	--	--	--	--	--
HARD	--	--	--	--	--	--
SOCI	--	--	--	--	--	--
INHE	--	--	--	--	--	--
STIG	--	--	--	--	--	--
ADAP	--	--	0.586	--	--	--
			(0.092)			
			6.338			

Total Effects of ETA on Y

	OPEN	HARD	SOCI	INHE	STIG	ADAP
Y1	1.000	--	--	--	--	--
Y2	--	0.502	0.334	--	--	--
			(0.049)			
			6.773			

Y3	--	0.671	0.447	--	--	--
		(0.089)	(0.057)			
		7.562	7.780			
Y4	--	0.683	0.455	--	--	--
		(0.073)	(0.056)			
		9.342	8.100			
Y5	--	--	0.677	--	--	--
Y6	--	--	0.760	--	--	--
			(0.063)			
			11.995			
Y7	--	--	0.452	--	--	--
			(0.058)			
			7.743			
Y8	--	--	0.764	--	--	--
			(0.063)			
			12.053			
Y9	--	--	0.680	--	--	--
			(0.056)			
			12.156			
Y10	--	--	0.567	--	--	--
			(0.055)			
			10.365			
Y11	--	--	0.399	0.629	--	--
			(0.057)			
			6.972			
Y12	--	--	--	--	0.544	--
Y13	--	--	--	--	0.659	--
					(0.086)	
					7.629	

Y14	--	--	--	--	0.611	--
					(0.082)	
					7.439	
Y15	--	--	--	--	0.995	--
					(0.117)	
					8.521	
Y16	--	0.259	0.298	0.198	--	0.508
		(0.065)	(0.047)	(0.085)		
		3.992	6.338	2.330		
Y17	--	0.304	0.349	0.232	--	0.596
		(0.079)	(0.051)	(0.097)		(0.084)
		3.833	6.818	2.377		7.081
Y18	--	0.423	0.486	0.322	--	0.829
		(0.097)	(0.067)	(0.140)		(0.094)
		4.372	7.278	2.300		8.830
Y19	--	0.315	0.362	0.240	--	0.617
		(0.080)	(0.052)	(0.101)		(0.087)
		3.921	6.909	2.378		7.075

Indirect Effects of ETA on Y

	OPEN	HARD	SOCI	INHE	STIG	ADAP
Y1	--	--	--	--	--	--
Y2	--	--	0.334	--	--	--
			(0.049)			
			6.773			

Y3	--	--	0.447	--	--	--
			(0.057)			
			7.780			
Y4	--	--	0.455	--	--	--
			(0.056)			
			8.100			
Y5	--	--	--	--	--	--
Y6	--	--	--	--	--	--
Y7	--	--	--	--	--	--
Y8	--	--	--	--	--	--
Y9	--	--	--	--	--	--
Y10	--	--	--	--	--	--
Y11	--	--	0.399	--	--	--
			(0.057)			
			6.972			
Y12	--	--	--	--	--	--
Y13	--	--	--	--	--	--
Y14	--	--	--	--	--	--
Y15	--	--	--	--	--	--
Y16	--	0.259	0.298	0.198	--	--
		(0.065)	(0.047)	(0.085)		
		3.992	6.338	2.330		

Y17	--	0.304	0.349	0.232	--	--
		(0.079)	(0.051)	(0.097)		
		3.833	6.818	2.377		
Y18	--	0.423	0.486	0.322	--	--
		(0.097)	(0.067)	(0.140)		
		4.372	7.278	2.300		
Y19	--	0.315	0.362	0.240	--	--
		(0.080)	(0.052)	(0.101)		
		3.921	6.909	2.378		

Total Effects of X on Y

	X1	X2	X3	X4	X5	X6
Y1	--	--	--	--	--	--
Y2	-0.077	-0.064	--	--	0.050	--
	(0.030)	(0.027)			(0.017)	
	-2.591	-2.361			2.859	
Y3	-0.102	-0.085	--	--	0.067	--
	(0.038)	(0.036)			(0.023)	
	-2.670	-2.404			2.931	
Y4	-0.104	-0.087	--	--	0.068	--
	(0.039)	(0.036)			(0.023)	
	-2.669	-2.410			3.008	
Y5	--	--	--	--	0.101	--
					(0.034)	
					2.997	

Y6	--	--	--	--	0.113	--
					(0.038)	
					3.016	
Y7	--	--	--	--	0.067	--
					(0.023)	
					2.900	
Y8	--	--	--	--	0.114	--
					(0.038)	
					3.020	
Y9	--	--	--	--	0.101	--
					(0.034)	
					2.957	
Y10	--	--	--	--	0.085	--
					(0.029)	
					2.954	
Y11	--	--	--	0.088	0.059	--
				(0.039)	(0.021)	
				2.273	2.898	
Y12	--	--	--	--	--	--
Y13	--	--	--	--	--	--
Y14	--	--	--	--	--	--
Y15	--	--	--	--	--	--
Y16	-0.040	0.019	--	0.028	0.044	--
	(0.017)	(0.025)		(0.015)	(0.016)	
	-2.332	0.777		1.824	2.827	
Y17	-0.046	0.022	--	0.032	0.052	--

	(0.020)	(0.029)		(0.017)	(0.018)	
	-2.351	0.777		1.851	2.893	
Y18	-0.065	0.031	--	0.045	0.072	--
	(0.027)	(0.040)		(0.025)	(0.025)	
	-2.423	0.779		1.827	2.929	
Y19	-0.048	0.023	--	0.034	0.054	--
	(0.020)	(0.030)		(0.018)	(0.019)	
	-2.355	0.780		1.851	2.897	

Total Effects of X on Y

	X7

Y1	--
Y2	0.096
	(0.033)
	2.907
Y3	0.128
	(0.043)
	2.962
Y4	0.130
	(0.044)
	2.985
Y5	--
Y6	--
Y7	--
Y8	--
Y9	--

Y10 --

Y11 --

Y12 --

Y13 --

Y14 --

Y15 --

Y16 0.195
(0.032)
6.172

Y17 0.229
(0.035)
6.560

Y18 0.318
(0.042)
7.568

Y19 0.237
(0.035)
6.679

Time used: 2.690 Seconds