

Notes for Model (Unconstrained)

Computation of degrees of freedom (Unconstrained)

Number of distinct sample moments:	504
Number of distinct parameters to be estimated:	146
Degrees of freedom (504 - 146):	358

Result (Unconstrained)

Minimum was achieved
Chi-square = 438.094
Degrees of freedom = 358
Probability level = .002



Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Unconstrained	146	438.094	358	.002	1.224
METRIC	130	450.836	374	.004	1.205
SCALAR	109	521.832	395	.000	1.321
SCALAR PARTIAL	120	457.364	384	.006	1.191
FACTOR COVARIANCE	99	535.575	405	.000	1.322
FACTOR VARIANCE	94	536.218	410	.000	1.308
ERROR VARIANCE	73	587.698	431	.000	1.364
Saturated model	504	.000	0		
Independence model	84	4688.625	420	.000	11.163

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Unconstrained	.907	.890	.982	.978	.981
METRIC	.904	.892	.982	.980	.982
SCALAR	.889	.882	.970	.968	.970
SCALAR PARTIAL	.902	.893	.983	.981	.983
FACTOR COVARIANCE	.886	.882	.970	.968	.969
FACTOR VARIANCE	.886	.883	.971	.970	.970
ERROR VARIANCE	.875	.878	.963	.964	.963
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Unconstrained	.852	.773	.836
METRIC	.890	.805	.874
SCALAR	.940	.836	.913
SCALAR PARTIAL	.914	.825	.899
FACTOR COVARIANCE	.964	.854	.935
FACTOR VARIANCE	.976	.865	.947
ERROR VARIANCE	1.026	.898	.989
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Unconstrained	80.094	31.207	137.173

METRIC	76.836	27.478	134.407
SCALAR	126.832	71.606	190.157
SCALAR PARTIAL	73.364	23.860	131.097
FACTOR COVARIANCE	130.575	74.555	194.692
FACTOR VARIANCE	126.218	70.372	190.173
ERROR VARIANCE	156.698	97.233	224.226
Saturated model	.000	.000	.000
Independence model	4268.625	4052.027	4492.514

FMIN

Model	FMIN	F0	LO 90	HI 90
Unconstrained	1.101	.201	.078	.345
METRIC	1.133	.193	.069	.338
SCALAR	1.311	.319	.180	.478
SCALAR PARTIAL	1.149	.184	.060	.329
FACTOR COVARIANCE	1.346	.328	.187	.489
FACTOR VARIANCE	1.347	.317	.177	.478
ERROR VARIANCE	1.477	.394	.244	.563
Saturated model	.000	.000	.000	.000
Independence model	11.780	10.725	10.181	11.288

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Unconstrained	.024	.015	.031	1.000
METRIC	.023	.014	.030	1.000
SCALAR	.028	.021	.035	1.000
SCALAR PARTIAL	.022	.012	.029	1.000
FACTOR COVARIANCE	.028	.022	.035	1.000
FACTOR VARIANCE	.028	.021	.034	1.000
ERROR VARIANCE	.030	.024	.036	1.000
Independence model	.160	.156	.164	.000

AIC

Model	AIC	BCC	BIC	CAIC
Unconstrained	730.094	766.486		
METRIC	710.836	743.240		
SCALAR	739.832	767.002		
SCALAR PARTIAL	697.364	727.275		
FACTOR COVARIANCE	733.575	758.251		
FACTOR VARIANCE	724.218	747.648		
ERROR VARIANCE	733.698	751.894		
Saturated model	1008.000	1133.626		
Independence model	4856.625	4877.563		

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Unconstrained	1.834	1.712	1.978	1.926
METRIC	1.786	1.662	1.931	1.867
SCALAR	1.859	1.720	2.018	1.927
SCALAR PARTIAL	1.752	1.628	1.897	1.827
FACTOR COVARIANCE	1.843	1.702	2.004	1.905
FACTOR VARIANCE	1.820	1.679	1.980	1.879
ERROR VARIANCE	1.843	1.694	2.013	1.889
Saturated model	2.533	2.533	2.533	2.848
Independence model	12.203	11.658	12.765	12.255

HOELTER

Model	HOELTER .05	HOELTER .01
Unconstrained	368	386
METRIC	372	390
SCALAR	339	355
SCALAR PARTIAL	376	394
FACTOR COVARIANCE	338	354
FACTOR VARIANCE	342	357
ERROR VARIANCE	327	342
Independence model	41	43

Nested Model Comparisons

Assuming model Unconstrained to be correct:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
METRIC	16	12.742	.691	.003	.003	-.002	-.002
SCALAR	37	83.738	.000	.018	.019	.009	.010
SCALAR PARTIAL	26	19.270	.825	.004	.004	-.003	-.003
FACTOR COVARIANCE	47	97.481	.000	.021	.023	.009	.010
FACTOR VARIANCE	52	98.124	.000	.021	.023	.008	.008
ERROR VARIANCE	73	149.604	.000	.032	.035	.013	.014

Assuming model METRIC to be correct:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
SCALAR	21	70.996	.000	.015	.016	.010	.011
SCALAR PARTIAL	10	6.527	.769	.001	.002	-.001	-.001
FACTOR COVARIANCE	31	84.738	.000	.018	.020	.010	.012
FACTOR VARIANCE	36	85.382	.000	.018	.020	.009	.010
ERROR VARIANCE	57	136.861	.000	.029	.032	.014	.016

Assuming model SCALAR to be correct:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
FACTOR COVARIANCE	10	13.743	.185	.003	.003	.000	.000
FACTOR VARIANCE	15	14.386	.496	.003	.003	-.001	-.001
ERROR VARIANCE	36	65.865	.002	.014	.015	.004	.004

Assuming model SCALAR PARTIAL to be correct:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
SCALAR	11	64.468	.000	.014	.015	.012	.013
FACTOR COVARIANCE	21	78.211	.000	.017	.018	.012	.013
FACTOR VARIANCE	26	78.854	.000	.017	.018	.010	.011
ERROR VARIANCE	47	130.334	.000	.028	.030	.015	.017

Assuming model FACTOR COVARIANCE to be correct:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
FACTOR VARIANCE	5	.643	.986	.000	.000	-.001	-.001
ERROR VARIANCE	26	52.123	.002	.011	.012	.004	.004

Assuming model FACTOR VARIANCE to be correct:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
ERROR VARIANCE	21	51.480	.000	.011	.012	.005	.005