

ภาคผนวก ค

ผลการวิเคราะห์ด้วยโปรแกรมทางสถิติ Mplus

ค่าการวิเคราะห์โมเดลสมการโครงสร้างแรก

Path Analysis

DATA:

Path

SUMMARY OF ANALYSIS

Number of groups	1
Number of observations	320
Number of dependent variables	13
Number of independent variables	0
Number of continuous latent variables	3

Observed dependent variables

Continuous

X1	X2	X3	X4	X5	X6
X7	X8	Y1	Y2	Y3	Y4
Y5					

Continuous latent variables

HUMAN SERVICE COMPETIT

Estimator	ML
Information matrix	OBSERVED
Maximum number of iterations	1000
Convergence criterion	0.500D-04
Maximum number of steepest descent iterations	20

Input data file(s)

Input data format FREE

SAMPLE STATISTICS

Means

	X1	X2	X3	X4	X5
1	4.386	4.320	4.089	4.264	4.230

Means

	X6	X7	X8	Y1	Y2
1	4.132	4.190	4.292	4.386	4.388

Means

	Y3	Y4	Y5
1	4.362	4.317	4.282

Covariances

	X1	X2	X3	X4	X5
X1	0.434				
X2	0.350	0.426			
X3	0.310	0.375	0.643		
X4	0.367	0.380	0.421	0.521	
X5	0.340	0.353	0.396	0.424	0.462
X6	0.274	0.303	0.415	0.351	0.371
X7	0.296	0.306	0.388	0.359	0.395
X8	0.289	0.298	0.361	0.345	0.360
Y1	0.276	0.296	0.330	0.341	0.348
Y2	0.259	0.270	0.305	0.314	0.331
Y3	0.279	0.294	0.317	0.338	0.348
Y4	0.269	0.293	0.333	0.336	0.354
Y5	0.335	0.359	0.399	0.399	0.405

Covariances

	X6	X7	X8	Y1	Y2
X7	0.433	0.598			
X8	0.374	0.440	0.460		
Y1	0.337	0.380	0.408	0.518	
Y2	0.326	0.370	0.375	0.458	0.495
Y3	0.354	0.393	0.376	0.411	0.406
Y4	0.357	0.382	0.356	0.371	0.363
Y5	0.406	0.436	0.412	0.415	0.410

Covariances

	Y3	Y4	Y5
Y3	0.445		
Y4	0.390	0.447	
Y5	0.446	0.458	0.619

Correlations

	X1	X2	X3	X4	X5
X1	1.000				
X2	0.815	1.000			
X3	0.588	0.716	1.000		
X4	0.771	0.807	0.727	1.000	
X5	0.761	0.795	0.727	0.864	1.000
X6	0.576	0.642	0.716	0.673	0.756
X7	0.582	0.606	0.625	0.644	0.751
X8	0.646	0.672	0.663	0.705	0.780
Y1	0.583	0.630	0.572	0.656	0.711
Y2	0.559	0.588	0.540	0.618	0.692
Y3	0.634	0.674	0.591	0.701	0.767
Y4	0.611	0.672	0.621	0.696	0.779
Y5	0.646	0.699	0.632	0.702	0.757

Correlations

	X6	X7	X8	Y1	Y2
X6	1.000				
X7	0.776	1.000			
X8	0.763	0.839	1.000		
Y1	0.648	0.683	0.836	1.000	
Y2	0.642	0.680	0.786	0.904	1.000
Y3	0.734	0.763	0.830	0.855	0.864
Y4	0.740	0.739	0.784	0.772	0.771
Y5	0.714	0.717	0.772	0.733	0.739

Correlations

	Y3	Y4	Y5
Y3	1.000		
Y4	0.875	1.000	
Y5	0.849	0.871	1.000

THE MODEL ESTIMATION TERMINATED NORMALLY

MODEL FIT INFORMATION

Number of Free Parameters 42

Loglikelihood

H0 Value -2126.346

H1 Value -1844.429

Information Criteria

Akaike (AIC) 4336.691

Bayesian (BIC) 4494.961

Sample-Size Adjusted BIC 4361.744

$(n^* = (n + 2) / 24)$

Chi-Square Test of Model Fit

Value 563.834

Degrees of Freedom 62

P-Value	0.0000
RMSEA (Root Mean Square Error Of Approximation)	
Estimate	0.159
90 Percent C.I.	0.147 0.171
Probability RMSEA <= .05	0.000
CFI/TLI	
CFI	0.903
TLI	0.878
Chi-Square Test of Model Fit for the Baseline Model	
Value	5253.204
Degrees of Freedom	78
P-Value	0.0000
SRMR (Standardized Root Mean Square Residual)	
Value	0.041

MODEL RESULTS

		Two-Tailed			
		Estimate	S.E.	Est./S.E.	P-Value
HUMAN BY					
X1		1.000	0.000	999.000	999.000
X2		1.054	0.048	21.912	0.000
X3		1.136	0.067	16.936	0.000
X4		1.176	0.054	21.743	0.000
SERVICE BY					
X5		1.000	0.000	999.000	999.000
X6		0.995	0.047	21.321	0.000
X7		1.090	0.050	21.906	0.000
X8		1.012	0.041	24.953	0.000

COMPETIT BY

Y1	1.000	0.000	999.000	999.000
Y2	0.978	0.039	24.899	0.000
Y3	0.996	0.034	29.671	0.000
Y4	0.947	0.037	25.461	0.000
Y5	1.083	0.046	23.650	0.000

COMPETIT ON

HUMAN	-0.170	0.111	-1.537	0.124
SERVICE	1.115	0.103	10.844	0.000

SERVICE ON

HUMAN	0.980	0.057	17.103	0.000
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Intercepts

X1	4.386	0.037	119.142	0.000
X2	4.320	0.036	118.368	0.000
X3	4.089	0.045	91.200	0.000
X4	4.264	0.040	105.676	0.000
X5	4.230	0.038	111.357	0.000
X6	4.132	0.040	102.336	0.000
X7	4.190	0.043	96.948	0.000
X8	4.292	0.038	113.144	0.000
Y1	4.386	0.040	108.978	0.000
Y2	4.388	0.039	111.540	0.000
Y3	4.363	0.037	116.951	0.000
Y4	4.317	0.037	115.535	0.000
Y5	4.282	0.044	97.322	0.000

Variances

HUMAN	0.312	0.034	9.285	0.000
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Residual Variances

X1	0.122	0.012	10.418	0.000
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X2	0.080	0.009	8.763	0.000
X3	0.241	0.021	11.218	0.000
X4	0.090	0.010	8.633	0.000
X5	0.088	0.010	9.237	0.000
X6	0.152	0.014	11.160	0.000
X7	0.154	0.015	10.227	0.000
X8	0.078	0.009	9.047	0.000
Y1	0.105	0.010	10.678	0.000
Y2	0.100	0.009	10.682	0.000
Y3	0.036	0.004	7.960	0.000
Y4	0.076	0.007	10.383	0.000
Y5	0.135	0.012	10.931	0.000
SERVICE	0.074	0.011	6.732	0.000
COMPETITIV	0.056	0.009	6.204	0.000

STANDARDIZED MODEL RESULTS

STDYX Standardization

					Two-Tailed			
					Estimate	S.E.	Est./S.E.	P-Value
HUMAN BY								
X1	0.848	0.018	46.733	0.000				
X2	0.901	0.014	66.539	0.000				
X3	0.791	0.023	34.203	0.000				
X4	0.909	0.013	72.333	0.000				
SERVICE BY								
X5	0.900	0.013	67.930	0.000				
X6	0.842	0.018	47.239	0.000				
X7	0.862	0.017	51.486	0.000				
X8	0.911	0.012	76.554	0.000				
COMPETIT BY								

Y1	0.893	0.013	70.382	0.000
Y2	0.893	0.013	70.675	0.000
Y3	0.959	0.006	157.781	0.000
Y4	0.911	0.011	84.250	0.000
Y5	0.884	0.013	65.869	0.000
COMPETIT ON				
HUMAN	-0.148	0.096	-1.543	0.123
SERVICE	1.060	0.089	11.891	0.000
SERVICE ON				
HUMAN	0.895	0.018	50.914	0.000
Intercepts				
X1	6.660	0.269	24.747	0.000
X2	6.617	0.267	24.740	0.000
X3	5.098	0.209	24.378	0.000
X4	5.907	0.240	24.603	0.000
X5	6.225	0.252	24.670	0.000
X6	5.721	0.233	24.559	0.000
X7	5.420	0.221	24.479	0.000
X8	6.325	0.256	24.689	0.000
Y1	6.092	0.247	24.643	0.000
Y2	6.235	0.253	24.672	0.000
Y3	6.538	0.264	24.726	0.000
Y4	6.459	0.261	24.713	0.000
Y5	5.440	0.222	24.485	0.000
Variances				
HUMAN	1.000	0.000	999.000	999.000
Residual Variances				
X1	0.281	0.031	9.150	0.000
X2	0.188	0.024	7.686	0.000

X3	0.375	0.037	10.254	0.000
X4	0.173	0.023	7.558	0.000
X5	0.191	0.024	8.010	0.000
X6	0.291	0.030	9.693	0.000
X7	0.257	0.029	8.910	0.000
X8	0.170	0.022	7.821	0.000
Y1	0.203	0.023	8.949	0.000
Y2	0.202	0.023	8.949	0.000
Y3	0.080	0.012	6.896	0.000
Y4	0.170	0.020	8.639	0.000
Y5	0.218	0.024	9.168	0.000
SERVICE	0.198	0.031	6.298	0.000
COMPETITIV	0.135	0.022	6.078	0.000

STDY Standardization

					Two-Tailed			
					Estimate	S.E.	Est./S.E.	P-Value
HUMAN BY								
X1	0.848	0.018	46.733	0.000				
X2	0.901	0.014	66.539	0.000				
X3	0.791	0.023	34.203	0.000				
X4	0.909	0.013	72.333	0.000				
SERVICE BY								
X5	0.900	0.013	67.930	0.000				
X6	0.842	0.018	47.239	0.000				
X7	0.862	0.017	51.486	0.000				
X8	0.911	0.012	76.554	0.000				
COMPETIT BY								
Y1	0.893	0.013	70.382	0.000				
Y2	0.893	0.013	70.675	0.000				

Y3	0.959	0.006	157.781	0.000
Y4	0.911	0.011	84.250	0.000
Y5	0.884	0.013	65.869	0.000
COMPETITION				
HUMAN	-0.148	0.096	-1.543	0.123
SERVICE	1.060	0.089	11.891	0.000
SERVICE ON				
HUMAN	0.895	0.018	50.914	0.000
Intercepts				
X1	6.660	0.269	24.747	0.000
X2	6.617	0.267	24.740	0.000
X3	5.098	0.209	24.378	0.000
X4	5.907	0.240	24.603	0.000
X5	6.225	0.252	24.670	0.000
X6	5.721	0.233	24.559	0.000
X7	5.420	0.221	24.479	0.000
X8	6.325	0.256	24.689	0.000
Y1	6.092	0.247	24.643	0.000
Y2	6.235	0.253	24.672	0.000
Y3	6.538	0.264	24.726	0.000
Y4	6.459	0.261	24.713	0.000
Y5	5.440	0.222	24.485	0.000
Variances				
HUMAN	1.000	0.000	999.000	999.000
Residual Variances				
X1	0.281	0.031	9.150	0.000
X2	0.188	0.024	7.686	0.000
X3	0.375	0.037	10.254	0.000
X4	0.173	0.023	7.558	0.000

X5	0.191	0.024	8.010	0.000
X6	0.291	0.030	9.693	0.000
X7	0.257	0.029	8.910	0.000
X8	0.170	0.022	7.821	0.000
Y1	0.203	0.023	8.949	0.000
Y2	0.202	0.023	8.949	0.000
Y3	0.080	0.012	6.896	0.000
Y4	0.170	0.020	8.639	0.000
Y5	0.218	0.024	9.168	0.000
SERVICE	0.198	0.031	6.298	0.000
COMPETITIV	0.135	0.022	6.078	0.000

STD Standardization

Two-Tailed

	Estimate	S.E.	Est./S.E.	P-Value
HUMAN BY				
X1	0.558	0.030	18.571	0.000
X2	0.588	0.029	20.520	0.000
X3	0.634	0.038	16.693	0.000
X4	0.656	0.031	20.880	0.000
SERVICE BY				
X5	0.611	0.030	20.517	0.000
X6	0.608	0.033	18.506	0.000
X7	0.666	0.035	19.093	0.000
X8	0.618	0.029	21.020	0.000
COMPETIT BY				
Y1	0.643	0.031	20.421	0.000
Y2	0.629	0.031	20.437	0.000
Y3	0.640	0.028	23.225	0.000
Y4	0.609	0.029	21.152	0.000

Y5	0.696	0.035	20.107	0.000
COMPETITION				
HUMAN	-0.148	0.096	-1.543	0.123
SERVICE	1.060	0.089	11.891	0.000
SERVICE ON				
HUMAN	0.895	0.018	50.914	0.000
Intercepts				
X1	4.386	0.037	119.142	0.000
X2	4.320	0.036	118.368	0.000
X3	4.089	0.045	91.200	0.000
X4	4.264	0.040	105.676	0.000
X5	4.230	0.038	111.357	0.000
X6	4.132	0.040	102.336	0.000
X7	4.190	0.043	96.948	0.000
X8	4.292	0.038	113.144	0.000
Y1	4.386	0.040	108.978	0.000
Y2	4.388	0.039	111.540	0.000
Y3	4.363	0.037	116.951	0.000
Y4	4.317	0.037	115.535	0.000
Y5	4.282	0.044	97.322	0.000
Variances				
HUMAN	1.000	0.000	999.000	999.000
Residual Variances				
X1	0.122	0.012	10.418	0.000
X2	0.080	0.009	8.763	0.000
X3	0.241	0.021	11.218	0.000
X4	0.090	0.010	8.633	0.000
X5	0.088	0.010	9.237	0.000
X6	0.152	0.014	11.160	0.000

X7	0.154	0.015	10.227	0.000
X8	0.078	0.009	9.047	0.000
Y1	0.105	0.010	10.678	0.000
Y2	0.100	0.009	10.682	0.000
Y3	0.036	0.004	7.960	0.000
Y4	0.076	0.007	10.383	0.000
Y5	0.135	0.012	10.931	0.000
SERVICE	0.198	0.031	6.298	0.000
COMPETITIV	0.135	0.022	6.078	0.000

R-SQUARE

Observed	Two-Tailed			
Variable	Estimate	S.E.	Est./S.E.	P-Value
X1	0.719	0.031	23.366	0.000
X2	0.812	0.024	33.269	0.000
X3	0.625	0.037	17.101	0.000
X4	0.827	0.023	36.166	0.000
X5	0.809	0.024	33.965	0.000
X6	0.709	0.030	23.620	0.000
X7	0.743	0.029	25.743	0.000
X8	0.830	0.022	38.277	0.000
Y1	0.797	0.023	35.191	0.000
Y2	0.798	0.023	35.338	0.000
Y3	0.920	0.012	78.891	0.000
Y4	0.830	0.020	42.125	0.000
Y5	0.782	0.024	32.934	0.000

Latent	Two-Tailed			
Variable	Estimate	S.E.	Est./S.E.	P-Value
SERVICE	0.802	0.031	25.457	0.000

COMPETIT 0.865 0.022 38.861 0.000

QUALITY OF NUMERICAL RESULTS

Condition Number for the Information Matrix 0.839E-03

(ratio of smallest to largest eigenvalue)

MODEL MODIFICATION INDICES

NOTE: Modification indices for direct effects of observed dependent variables regressed on covariates may not be included. To include these, request MODINDICES (ALL).

Minimum M.I. value for printing the modification index 10.000

M.I. E.P.C. Std E.P.C. StdYX E.P.C.

BY Statements

HUMAN	BY X5	124.196	1.135	0.634	0.933
HUMAN	BY X7	30.888	-0.695	-0.388	-0.502
HUMAN	BY X8	27.361	-0.521	-0.291	-0.429
HUMAN	BY Y2	11.600	-0.223	-0.124	-0.177
HUMAN	BY Y5	18.346	0.322	0.180	0.229
SERVICE	BY X3	11.212	0.462	0.282	0.352
SERVICE	BY Y2	10.433	-0.351	-0.214	-0.305
SERVICE	BY Y5	10.473	0.403	0.247	0.313
COMPETIT	BY X5	11.853	-0.380	-0.244	-0.359
COMPETIT	BY X8	26.357	0.556	0.357	0.527

WITH Statements

X2	WITH X1	33.306	0.047	0.047	0.473
X3	WITH X1	29.726	-0.063	-0.063	-0.365
X5	WITH X4	43.055	0.043	0.043	0.485
X6	WITH X3	33.613	0.069	0.069	0.361
X7	WITH X6	14.830	0.038	0.038	0.252
X8	WITH X5	31.889	-0.038	-0.038	-0.457

X8	WITH X7	36.707	0.049	0.049	0.445
Y1	WITH X6	10.909	-0.026	-0.026	-0.208
Y1	WITH X8	44.214	0.040	0.040	0.446
Y2	WITH Y1	124.696	0.076	0.076	0.742
Y4	WITH Y1	24.307	-0.030	-0.030	-0.338
Y4	WITH Y2	25.779	-0.030	-0.030	-0.348
Y5	WITH Y1	32.643	-0.045	-0.045	-0.376
Y5	WITH Y2	25.804	-0.039	-0.039	-0.334
Y5	WITH Y4	53.911	0.050	0.050	0.497

ค่าการวิเคราะห์โมเดลสมการโครงสร้างหลังปรับแก้

Mplus VERSION 7

Competitive ON Human;

Competitive ON Service;

Service ON Human;

OUTPUT: SAMPSTAT MODINDICES STANDARDIZED;

Path

SUMMARY OF ANALYSIS

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X7	X8	Y1	Y2	Y3	Y4

Y5

Continuous latent variables

HUMAN SERVICE COMPETIT

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 Information matrix OBSERVED
 Maximum number of iterations 1000
 Convergence criterion 0.500D-04
 Maximum number of steepest descent iterations 20

Input data file(s)

Input data format FREE

SAMPLE STATISTICS

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X7	0.296	0.306	0.388	0.359	0.395
X8	0.289	0.298	0.361	0.345	0.360
Y1	0.276	0.296	0.330	0.341	0.348
Y2	0.259	0.270	0.305	0.314	0.331
Y3	0.279	0.294	0.317	0.338	0.348
Y4	0.269	0.293	0.333	0.336	0.354
Y5	0.335	0.359	0.399	0.399	0.405

Covariances

	X6	X7	X8	Y1	Y2
X6	0.522				
X7	0.433	0.598			
X8	0.374	0.440	0.460		
Y1	0.337	0.380	0.408	0.518	
Y2	0.326	0.370	0.375	0.458	0.495
Y3	0.354	0.393	0.376	0.411	0.406
Y4	0.357	0.382	0.356	0.371	0.363
Y5	0.406	0.436	0.412	0.415	0.410

Covariances

	Y3	Y4	Y5
Y3	0.445		
Y4	0.390	0.447	
Y5	0.446	0.458	0.619

Correlations

X1	X2	X3	X4	X5
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X1	1.000				
X2	0.792	1.000			
X3	0.588	0.715	1.000		
X4	0.771	0.792	0.727	1.000	
X5	0.761	0.795	0.727	0.764	1.000
X6	0.576	0.642	0.716	0.673	0.756
X7	0.582	0.606	0.625	0.644	0.752
X8	0.646	0.672	0.663	0.705	0.780
Y1	0.583	0.630	0.572	0.656	0.711
Y2	0.559	0.588	0.540	0.618	0.691
Y3	0.634	0.674	0.591	0.701	0.767
Y4	0.611	0.672	0.621	0.696	0.779
Y5	0.646	0.699	0.632	0.702	0.757

Correlations

	X6	X7	X8	Y1	Y2
X6	1.000				
X7	0.776	1.000			
X8	0.764	0.791	1.000		
Y1	0.648	0.683	0.792	1.000	
Y2	0.642	0.680	0.785	0.790	1.000
Y3	0.734	0.762	0.729	0.775	0.796
Y4	0.741	0.739	0.785	0.772	0.771
Y5	0.714	0.717	0.772	0.733	0.739

Correlations

	Y3	Y4	Y5
Y3	1.000		
Y4	0.791	1.000	
Y5	0.795	0.781	1.000

MODEL FIT INFORMATION

Number of Free Parameters	59
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Loglikelihood

H0 Value	-1877.642
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H1 Value	-1844.429
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Information Criteria

Akaike (AIC)	3873.284
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Bayesian (BIC)	4095.615
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Sample-Size Adjusted BIC	3908.478
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$$(n^* = (n + 2) / 24)$$

Chi-Square Test of Model Fit

Value	66.427
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Degrees of Freedom	45
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P-Value	0.072
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RMSEA (Root Mean Square Error Of Approximation)

Estimate	0.039
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90 Percent C.I.	0.016 0.057
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Probability RMSEA \leq .05	0.829
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CFI/TLI

CFI	0.996
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TLI	0.993
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Chi-Square Test of Model Fit for the Baseline Model

Value	5253.204
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Degrees of Freedom	78
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P-Value	0.0000
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SRMR (Standardized Root Mean Square Residual)

Value	0.018
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MODEL RESULTS

		Two-Tailed			
		Estimate	S.E.	Est./S.E.	P-Value
HUMAN BY					
X1		1.000	0.000	999.000	999.000
X2		1.042	0.044	23.584	0.000
X3		1.160	0.076	15.334	0.000
X4		1.185	0.059	20.202	0.000
SERVICE BY					
X5		1.000	0.000	999.000	999.000
X6		1.030	0.051	20.343	0.000
X7		1.139	0.052	21.949	0.000
X8		1.077	0.046	23.205	0.000
COMPETIT BY					
Y1		1.000	0.000	999.000	999.000
Y2		0.969	0.030	32.837	0.000
Y3		1.042	0.038	27.728	0.000
Y4		1.015	0.046	22.135	0.000
Y5		1.165	0.056	20.952	0.000
COMPETIT ON					
HUMAN		0.174	0.053	3.262	0.001
SERVICE		0.807	0.064	12.540	0.000
SERVICE ON					
HUMAN		0.902	0.055	16.367	0.000
Y1	WITH				
X8		0.047	0.007	6.787	0.000
Y2	WITH				
Y1		0.100	0.012	8.618	0.000
X8		0.025	0.006	4.093	0.000
X5	WITH				

X4	0.095	0.012	8.180	0.000
X1	0.066	0.010	6.663	0.000
X2	0.065	0.010	6.566	0.000
X3	0.066	0.012	5.321	0.000
X2	WITH			
X1	0.032	0.010	3.150	0.002
X6	WITH			
X3	0.057	0.012	4.576	0.000
Y5	WITH			
Y4	0.023	0.008	2.808	0.005
X8	WITH			
X5	-0.024	0.006	-4.243	0.000
X6	-0.025	0.007	-3.477	0.001
Y3	WITH			
X3	-0.018	0.006	-2.712	0.007
Y2	0.033	0.007	4.510	0.000
Y1	0.026	0.007	3.798	0.000
X3	WITH			
X1	-0.044	0.010	-4.195	0.000
X7	WITH			
X6	0.011	0.010	1.037	0.300
Intercepts				
X1	4.386	0.037	119.424	0.000
X2	4.320	0.036	118.631	0.000
X3	4.089	0.044	92.490	0.000
X4	4.264	0.040	105.994	0.000
X5	4.230	0.038	111.615	0.000
X6	4.132	0.040	103.063	0.000
X7	4.190	0.043	96.948	0.000

X8	4.292	0.038	113.173	0.000
Y1	4.386	0.040	109.048	0.000
Y2	4.388	0.039	111.635	0.000
Y3	4.363	0.037	116.841	0.000
Y4	4.317	0.037	115.535	0.000
Y5	4.282	0.044	97.322	0.000
Variances				
HUMAN	0.303	0.034	8.946	0.000
Residual Variances				
X1	0.128	0.014	9.139	0.000
X2	0.095	0.011	8.904	0.000
X3	0.218	0.021	10.585	0.000
X4	0.092	0.011	8.104	0.000
X5	0.104	0.011	9.126	0.000
X6	0.138	0.014	9.497	0.000
X7	0.137	0.013	10.598	0.000
X8	0.048	0.008	5.720	0.000
Y1	0.149	0.013	11.185	0.000
Y2	0.149	0.014	10.952	0.000
Y3	0.046	0.007	6.921	0.000
Y4	0.067	0.008	8.483	0.000
Y5	0.119	0.013	9.262	0.000
SERVICE	0.108	0.011	10.220	0.000
COMPETITIV	0.051	0.008	6.556	0.000

STANDARDIZED MODEL RESULTS

STDYX Standardization

Two-Tailed

	Estimate	S.E.	Est./S.E.	P-Value
HUMAN BY				

X1	0.838	0.021	39.307	0.000
X2	0.881	0.016	54.680	0.000
X3	0.807	0.023	35.604	0.000
X4	0.907	0.014	66.713	0.000
SERVICE BY				
X5	0.879	0.016	55.198	0.000
X6	0.856	0.019	45.840	0.000
X7	0.878	0.014	60.623	0.000
X8	0.947	0.010	91.775	0.000
COMPETIT BY				
Y1	0.843	0.018	47.036	0.000
Y2	0.836	0.019	44.328	0.000
Y3	0.947	0.009	107.473	0.000
Y4	0.921	0.011	83.314	0.000
Y5	0.898	0.013	67.242	0.000
COMPETIT ON				
HUMAN	0.158	0.047	3.345	0.001
SERVICE	0.793	0.043	18.363	0.000
SERVICE ON				
HUMAN	0.833	0.021	40.320	0.000
Y1	WITH			
X8	0.555	0.062	8.932	0.000
Y2	WITH			
Y1	0.672	0.033	20.253	0.000
X8	0.300	0.067	4.475	0.000
X5	WITH			
X4	0.967	0.086	11.242	0.000
X1	0.574	0.074	7.738	0.000
X2	0.655	0.086	7.594	0.000

X3	0.436	0.072	6.024	0.000
X2	WITH			
X1	0.290	0.073	3.986	0.000
X6	WITH			
X3	0.327	0.063	5.180	0.000
Y5	WITH			
Y4	0.252	0.073	3.435	0.001
X8	WITH			
X5	-0.335	0.098	-3.433	0.001
X6	-0.314	0.106	-2.952	0.003
Y3	WITH			
X3	-0.175	0.064	-2.721	0.007
Y2	0.403	0.061	6.560	0.000
Y1	0.311	0.063	4.945	0.000
X3	WITH			
X1	-0.262	0.066	-3.989	0.000
X7	WITH			
X6	0.078	0.072	1.078	0.281

Intercepts

X1	6.676	0.269	24.802	0.000
X2	6.632	0.268	24.782	0.000
X3	5.170	0.209	24.690	0.000
X4	5.925	0.240	24.654	0.000
X5	6.239	0.253	24.707	0.000
X6	5.761	0.233	24.707	0.000
X7	5.420	0.221	24.479	0.000
X8	6.327	0.256	24.724	0.000
Y1	6.096	0.247	24.685	0.000

Y2	6.241	0.253	24.696	0.000
Y3	6.532	0.264	24.731	0.000
Y4	6.459	0.261	24.713	0.000
Y5	5.440	0.222	24.485	0.000
Variances				
HUMAN	1.000	0.000	999.000	999.000
Residual Variances				
X1	0.297	0.036	8.317	0.000
X2	0.224	0.028	7.899	0.000
X3	0.348	0.037	9.502	0.000
X4	0.178	0.025	7.206	0.000
X5	0.227	0.028	8.091	0.000
X6	0.268	0.032	8.374	0.000
X7	0.229	0.025	9.022	0.000
X8	0.104	0.020	5.306	0.000
Y1	0.289	0.030	9.550	0.000
Y2	0.300	0.032	9.517	0.000
Y3	0.104	0.017	6.216	0.000
Y4	0.151	0.020	7.400	0.000
Y5	0.193	0.024	8.033	0.000
SERVICE	0.305	0.034	8.859	0.000
COMPETITIV	0.137	0.021	6.647	0.000
STDY Standardization				
Two-Tailed				
	Estimate	S.E.	Est./S.E.	P-Value
HUMAN	BY			
X1	0.838	0.021	39.307	0.000
X2	0.881	0.016	54.680	0.000

X3	0.807	0.023	35.604	0.000
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X4	0.907	0.014	66.713	0.000
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SERVICE BY

X5	0.879	0.016	55.198	0.000
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X6	0.856	0.019	45.840	0.000
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X7	0.878	0.014	60.623	0.000
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X8	0.947	0.010	91.775	0.000
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COMPETIT BY

Y1	0.843	0.018	47.036	0.000
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Y2	0.836	0.019	44.328	0.000
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Y3	0.947	0.009	107.473	0.000
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Y4	0.921	0.011	83.314	0.000
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Y5	0.898	0.013	67.242	0.000
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COMPETIT ON

HUMAN	0.158	0.047	3.345	0.001
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SERVICE	0.793	0.043	18.363	0.000
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SERVICE ON

HUMAN	0.833	0.021	40.320	0.000
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Y1 WITH

X8	0.555	0.062	8.932	0.000
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Y2 WITH

Y1	0.672	0.033	20.253	0.000
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X8	0.300	0.067	4.475	0.000
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X5 WITH

X4	0.967	0.086	11.242	0.000
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X1	0.574	0.074	7.738	0.000
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X2	0.655	0.086	7.594	0.000
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X3	0.436	0.072	6.024	0.000
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X2	WITH				
X1		0.290	0.073	3.986	0.000
X6	WITH				
X3		0.327	0.063	5.180	0.000
Y5	WITH				
Y4		0.252	0.073	3.435	0.001
X8	WITH				
X5		-0.335	0.098	-3.433	0.001
X6		-0.314	0.106	-2.952	0.003
Y3	WITH				
X3		-0.175	0.064	-2.721	0.007
Y2		0.403	0.061	6.560	0.000
Y1		0.311	0.063	4.945	0.000
X3	WITH				
X1		-0.262	0.066	-3.989	0.000
X7	WITH				
X6		0.078	0.072	1.078	0.281
Intercepts					
X1		6.676	0.269	24.802	0.000
X2		6.632	0.268	24.782	0.000
X3		5.170	0.209	24.690	0.000
X4		5.925	0.240	24.654	0.000
X5		6.239	0.253	24.707	0.000
X6		5.761	0.233	24.707	0.000
X7		5.420	0.221	24.479	0.000
X8		6.327	0.256	24.724	0.000
Y1		6.096	0.247	24.685	0.000
Y2		6.241	0.253	24.696	0.000
Y3		6.532	0.264	24.731	0.000

Y4	6.459	0.261	24.713	0.000
Y5	5.440	0.222	24.485	0.000
Variances				
HUMAN	1.000	0.000	999.000	999.000
Residual Variances				
X1	0.297	0.036	8.317	0.000
X2	0.224	0.028	7.899	0.000
X3	0.348	0.037	9.502	0.000
X4	0.178	0.025	7.206	0.000
X5	0.227	0.028	8.091	0.000
X6	0.268	0.032	8.374	0.000
X7	0.229	0.025	9.022	0.000
X8	0.104	0.020	5.306	0.000
Y1	0.289	0.030	9.550	0.000
Y2	0.300	0.032	9.517	0.000
Y3	0.104	0.017	6.216	0.000
Y4	0.151	0.020	7.400	0.000
Y5	0.193	0.024	8.033	0.000
SERVICE	0.305	0.034	8.859	0.000
COMPETITIV	0.137	0.021	6.647	0.000

STD Standardization

		Two-Tailed			
		Estimate	S.E.	Est./S.E.	P-Value
HUMAN	BY				
X1		0.551	0.031	17.891	0.000
X2		0.574	0.029	19.657	0.000
X3		0.639	0.037	17.118	0.000
X4		0.653	0.032	20.696	0.000

SERVICE BY

X5	0.596	0.030	19.678	0.000
X6	0.614	0.033	18.654	0.000
X7	0.679	0.034	19.798	0.000
X8	0.642	0.029	22.362	0.000

COMPETIT BY

Y1	0.607	0.033	18.434	0.000
Y2	0.588	0.032	18.173	0.000
Y3	0.632	0.028	22.510	0.000
Y4	0.616	0.029	21.428	0.000
Y5	0.707	0.035	20.471	0.000

COMPETIT ON

HUMAN	0.158	0.047	3.345	0.001
SERVICE	0.793	0.043	18.363	0.000

SERVICE ON

HUMAN	0.833	0.021	40.320	0.000
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Y1 WITH

X8	0.047	0.007	6.787	0.000
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Y2 WITH

Y1	0.100	0.012	8.618	0.000
X8	0.025	0.006	4.093	0.000

X5 WITH

X4	0.095	0.012	8.180	0.000
X1	0.066	0.010	6.663	0.000
X2	0.065	0.010	6.566	0.000
X3	0.066	0.012	5.321	0.000

X2 WITH

X1	0.032	0.010	3.150	0.002
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X6	WITH				
X3		0.057	0.012	4.576	0.000
Y5	WITH				
Y4		0.023	0.008	2.808	0.005
X8	WITH				
X5		-0.024	0.006	-4.243	0.000
X6		-0.025	0.007	-3.477	0.001
Y3	WITH				
X3		-0.018	0.006	-2.712	0.007
Y2		0.033	0.007	4.510	0.000
Y1		0.026	0.007	3.798	0.000
X3	WITH				
X1		-0.044	0.010	-4.195	0.000
X7	WITH				
X6		0.011	0.010	1.037	0.300
Intercepts					
X1		4.386	0.037	119.424	0.000
X2		4.320	0.036	118.631	0.000
X3		4.089	0.044	92.490	0.000
X4		4.264	0.040	105.994	0.000
X5		4.230	0.038	111.615	0.000
X6		4.132	0.040	103.063	0.000
X7		4.190	0.043	96.948	0.000
X8		4.292	0.038	113.173	0.000
Y1		4.386	0.040	109.048	0.000
Y2		4.388	0.039	111.635	0.000
Y3		4.363	0.037	116.841	0.000
Y4		4.317	0.037	115.535	0.000
Y5		4.282	0.044	97.322	0.000

Variances

HUMAN	1.000	0.000	999.000	999.000
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Residual Variances

X1	0.128	0.014	9.139	0.000
X2	0.095	0.011	8.904	0.000
X3	0.218	0.021	10.585	0.000
X4	0.092	0.011	8.104	0.000
X5	0.104	0.011	9.126	0.000
X6	0.138	0.014	9.497	0.000
X7	0.137	0.013	10.598	0.000
X8	0.048	0.008	5.720	0.000
Y1	0.149	0.013	11.185	0.000
Y2	0.149	0.014	10.952	0.000
Y3	0.046	0.007	6.921	0.000
Y4	0.067	0.008	8.483	0.000
Y5	0.119	0.013	9.262	0.000
SERVICE	0.305	0.034	8.859	0.000
COMPETITIV	0.137	0.021	6.647	0.000

R-SQUARE

Variable	Observed	Two-Tailed		
	Estimate	S.E.	Est./S.E.	P-Value
X1	0.703	0.036	19.653	0.000
X2	0.776	0.028	27.340	0.000
X3	0.652	0.037	17.802	0.000
X4	0.822	0.025	33.357	0.000
X5	0.773	0.028	27.599	0.000
X6	0.732	0.032	22.920	0.000
X7	0.771	0.025	30.311	0.000

X8	0.896	0.020	45.887	0.000
Y1	0.711	0.030	23.518	0.000
Y2	0.700	0.032	22.164	0.000
Y3	0.896	0.017	53.737	0.000
Y4	0.849	0.020	41.657	0.000
Y5	0.807	0.024	33.621	0.000

Latent Two-Tailed

Variable	Estimate	S.E.	Est./S.E.	P-Value
SERVICE	0.695	0.034	20.160	0.000
COMPETIT	0.863	0.021	41.790	0.000

QUALITY OF NUMERICAL RESULTS

Condition Number for the Information Matrix 0.616E-03
 (ratio of smallest to largest eigenvalue)

TOTAL, TOTAL INDIRECT, SPECIFIC INDIRECT, AND DIRECT EFFECTS

Two-Tailed

	Estimate	S.E.	Est./S.E.	P-Value
Effects from HUMAN to COMPETIT				
Total	0.902	0.063	14.233	0.000
Total indirect	0.728	0.063	11.561	0.000
Specific indirect				
COMPETIT				
SERVICE				
HUMAN	0.728	0.063	11.561	0.000
Direct				
COMPETIT				
HUMAN	0.174	0.053	3.262	0.001
Effects from SERVICE to COMPETIT				
Total	0.807	0.064	12.540	0.000

Total indirect	0.000	0.000	999.000	0.000
Direct				
COMPETIT				
SERVICE	0.807	0.064	12.540	0.000
Effects from HUMAN to SERVICE				
Total	0.902	0.055	16.367	0.000
Total indirect	0.000	0.000	999.000	0.000
Direct				
SERVICE				
HUMAN	0.902	0.055	16.367	0.000
Effects from HUMAN to COMPETIT				
Sum of indirect	0.728	0.063	11.561	0.000
Specific indirect				
COMPETIT				
SERVICE				
HUMAN	0.728	0.063	11.561	0.000
STANDARDIZED TOTAL, TOTAL INDIRECT, SPECIFIC INDIRECT, AND DIRECT EFFECTS				
STDYX Standardization				
Two-Tailed				
Estimate	S.E.	Est./S.E.	P-Value	
Effects from HUMAN to COMPETIT				
Total	0.819	0.023	35.135	0.000
Total indirect	0.661	0.039	16.995	0.000
Specific indirect				
COMPETIT				
SERVICE				
HUMAN	0.661	0.039	16.995	0.000

Direct

COMPETIT

HUMAN	0.158	0.047	3.345	0.001
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Effects from SERVICE to COMPETIT

Total	0.793	0.043	18.363	0.000
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Total indirect	0.000	0.000	0.000	1.000
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Direct

COMPETIT

SERVICE	0.793	0.043	18.363	0.000
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Effects from HUMAN to SERVICE

Total	0.833	0.021	40.320	0.000
-------	-------	-------	--------	-------

Total indirect	0.000	0.000	0.000	1.000
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Direct

SERVICE

HUMAN	0.833	0.021	40.320	0.000
-------	-------	-------	--------	-------

Effects from HUMAN to COMPETIT

Sum of indirect	0.661	0.039	16.995	0.000
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Specific indirect

COMPETIT

SERVICE

HUMAN	0.661	0.039	16.995	0.000
-------	-------	-------	--------	-------

STDY Standardization

Two-Tailed

	Estimate	S.E.	Est./S.E.	P-Value
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Effects from HUMAN to COMPETIT

Total	0.819	0.023	35.135	0.000
-------	-------	-------	--------	-------

Total indirect	0.661	0.039	16.995	0.000
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Specific indirect

COMPETIT

SERVICE				
HUMAN	0.661	0.039	16.995	0.000
Direct				
COMPETIT				
HUMAN	0.158	0.047	3.345	0.001
Effects from SERVICE to COMPETIT				
Total	0.793	0.043	18.363	0.000
Total indirect	0.000	0.000	0.000	1.000
Direct				
COMPETIT				
SERVICE	0.793	0.043	18.363	0.000
Effects from HUMAN to SERVICE				
Total	0.833	0.021	40.320	0.000
Total indirect	0.000	0.000	0.000	1.000
Direct				
SERVICE				
HUMAN	0.833	0.021	40.320	0.000
Effects from HUMAN to COMPETIT				
Sum of indirect	0.661	0.039	16.995	0.000
Specific indirect				
COMPETIT				
SERVICE				
HUMAN	0.661	0.039	16.995	0.000
STD Standardization				
Two-Tailed				
	Estimate	S.E.	Est./S.E.	P-Value
Effects from HUMAN to COMPETIT				
Total	0.819	0.023	35.135	0.000

Total indirect	0.661	0.039	16.995	0.000
Specific indirect				
COMPETIT				
SERVICE				
HUMAN	0.661	0.039	16.995	0.000
Direct				
COMPETIT				
HUMAN	0.158	0.047	3.345	0.001
Effects from SERVICE to COMPETIT				
Total	0.793	0.043	18.363	0.000
Total indirect	0.000	0.000	0.000	1.000
Direct				
COMPETIT				
SERVICE	0.793	0.043	18.363	0.000
Effects from HUMAN to SERVICE				
Total	0.833	0.021	40.320	0.000
Total indirect	0.000	0.000	0.000	1.000
Direct				
SERVICE				
HUMAN	0.833	0.021	40.320	0.000
Effects from HUMAN to COMPETIT				
Sum of indirect	0.661	0.039	16.995	0.000
Specific indirect				
COMPETIT				
SERVICE				
HUMAN	0.661	0.039	16.995	0.000

MODEL MODIFICATION INDICES

NOTE: Modification indices for direct effects of observed dependent variables

regressed on covariates may not be included. To include these, request
MODINDICES (ALL).

Minimum M.I. value for printing the modification index 10.000

M.I. E.P.C. Std E.P.C. StdYX E.P.C.

No modification indices above the minimum value

