APPENDIX G

OUTPUT FILE FOR THE FINAL STRUCTURAL MODEL D

The output list here is only one of the eight output files generated by the model fitting program for the CFA models and structural models discussed in this dissertation. The total number of pages of output for these models was over 600 pages. However, the output for the final structural model should have sufficient information for anyone that is interested in testing and modifying the flow model.

The CALIS Procedure
Covariance Structure Analysis: Pattern and Initial Values

Automatic Variable Selection, the Following Manifest Variables are not Used in the Model

EP SP1 I3 T1

Using the VAR statement for variable selection could save memory and computing time.

LINEQS Model Statement

		Matrix	Rows	Columns	------Matrix Type-------	
Term 1	1	_SEL_	18	51	SELECTION	
	2	_BETA_	51	51	EQSBETA	IMINUSINV
	3	_GAMMA_	51	27	EQSGAMMA	
	4	_PHI_	27	27	SYMMETRIC	

The 24 Endogenous Variables

Manifest	A1	A2	SP2	EU1	EU2	I1	I2	T2	C	SK1	SK2
	FL1	FL2	LP1	LP2	CA1	CA2	CA3				
Latent	F2	F4	F5	F9	F10	F11					

The 27 Exogenous Variables

Manifest											
Latent	F3	F7	F8								
Error	E2	E3	E5	E6	E7	E8	E9	E12	E13	E14	E15
	E16	E17	E18	E19	E20	E21	E22	D2	D4	D5	D9
	D10	D11									

The CALIS Procedure
Covariance Structure Analysis: Pattern and Initial Values

Manifest Variable Equations with Initial Estimates

A1	=	1.0000 F2	+	1.0000 E2
A2	=	.*F2	+	1.0000 E3
		LA2F2		
SP2	=	.*F3	+	1.0000 E5
		LSP2F3		
EU1	=	1.0000 F4	+	1.0000 E6
EU2	=	.*F4	+	1.0000 E7
		LEU2F4		
I1	=	1.0000 F5	+	1.0000 E8
I2	=	.*F5	+	1.0000 E9
		LI2F5		
T2	=	.*F9	+	1.0000 E12
		LT2F9		
C	=	1.0000 F7	+	1.0000 E13
SK1	=	1.0000 F8	+	1.0000 E14
SK2	=	.*F8	+	1.0000 E15
		LSK2F8		
FL1	=	.*F9	+	1.0000 E16
		LFL1F9		
FL2	=	.*F9	+	1.0000 E17
		LFL2F9		
LP1	=	1.0000 F10	+	1.0000 E18
LP2	=	.*F10	+	1.0000 E19
		LLP2F10		
CA1	=	1.0000 F11	+	1.0000 E20
CA2	=	.*F11	+	1.0000 E21
		LCA2F11		
CA3	=	.*F11	+	1.0000 E22
		LCA3F11		

The CALIS Procedure
Covariance Structure Analysis: Pattern and Initial Values

Latent Variable Equations with Initial Estimates

F2	=	.*F3	+	1.0000 D2								
		PF3F2										
F4	=	.*F2	+	1.0000 D4								
		PF2F4										
F5	=	.*F4	+	1.0000 D5								
		PF4F5										
F9	=	.*F2	+	.*F5	+	1.0000 D9						
		PF2F9		PF5F9								
F10	=	.*F9	+	.*F7	+	1.0000 D10						
		PF9F10		PF7F10								
F11	=	.*F2	+	.*F10	+	.*F8	+	1.0000 D11				
		PF2F11		PF10F11		PF8F11						

Variances of Exogenous Variables

Variable	Parameter	Estimate
F3	VARF3	.
F7	VARF7	.
F8	VARF8	.
E2	VARE2	.
E3	VARE3	.
E5	VARE5	.
E6	VARE6	.
E7	VARE7	.
E8	VARE8	.
E9	VARE9	.
E12	VARE12	.
E13	VARE13	.
E14	VARE14	.
E15	VARE15	.

Variances of Exogenous Variables

Variable	Parameter	Estimate
E16	VARE16	.
E17	VARE17	.
E18	VARE18	.
E19	VARE19	.
E20	VARE20	.
E21	VARE21	.
E22	VARE22	.
D2	VARD2	.
D4	VARD4	.
D5	VARD5	.
D9	VARD9	.
D10	VARD10	.
D11	VARD11	.

The CALIS Procedure
Covariance Structure Analysis: Pattern and Initial Values

Covariances Among Exogenous Variables

Var1	Var2	Parameter	Estimate
F3	F7	CF3F7	.
F3	F8	CF3F8	.
F7	F8	CF7F8	.
E12	E16	CE12E16	.

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Observations	258	Model Terms	1
Variables	18	Model Matrices	4
Informations	171	Parameters	52

Variable		Mean	Std Dev
A1	A1	4.29070	0.94436
A2	A2	4.27132	0.95218
SP2	SP2	4.02713	1.02652
EU1	EU1	3.86434	1.12325
EU2	EU2	4.04264	1.02599
I1	I1	4.10465	0.99057
I2	I2	4.07364	0.98154
T2	T2	3.09690	1.09931
C	C	4.38760	0.91940
SK1	SK1	2.81008	1.02059
SK2	SK2	2.52713	1.10237
FL1	FL1	3.94574	0.91940
FL2	FL2	4.12016	0.96892
LP1	LP1	4.13178	0.98928
LP2	LP2	4.09690	1.03363
CA1	CA1	4.07752	0.97528
CA2	CA2	4.17054	0.98332
CA3	CA3	4.01938	1.05289

Covariances

		A1	A2	SP2	EU1	EU2	I1
A1	A1	0.8918197448	0.7379422677	0.455117184	0.724414080	0.664600489	0.5764636684
A2	A2	0.7379422677	0.9066449492	0.412843483	0.768467409	0.696558381	0.5629354810
SP2	SP2	0.4551171840	0.4128434832	1.053735710	0.497858414	0.500784243	0.4407293458
EU1	EU1	0.7244140802	0.7684674087	0.497858414	1.261680693	0.935767502	0.7263143607
EU2	EU2	0.6646004886	0.6965583808	0.500784243	0.935767502	1.052649836	0.7036919736
I1	I1	0.5764636684	0.5629354810	0.440729346	0.726314361	0.703691974	0.9812234187
I2	I2	0.6166410280	0.6414200826	0.480484421	0.807694628	0.829532772	0.8132748168
T2	T2	0.4581033391	0.4366422345	0.250279009	0.581289778	0.517253341	0.3555786807
C	C	0.5561487648	0.5053238018	0.394112147	0.581968449	0.528157331	0.4806804814
SK1	SK1	0.1021174554	0.0634030103	0.024628239	-0.002518626	-0.019108376	0.0549724007
SK2	SK2	0.0095918921	0.0665399813	-0.018248726	0.102916780	0.078605254	0.0691340150
FL1	FL1	0.5411274998	0.4933791814	0.429493560	0.599613911	0.582089102	0.5465568727
FL2	FL2	0.7159080626	0.7377009622	0.432524960	0.798464694	0.699137333	0.6410732060
LP1	LP1	0.5880010859	0.5438723494	0.381624589	0.671643592	0.593581275	0.5698126866
LP2	LP2	0.6254185142	0.5572648026	0.390356830	0.666892891	0.563945948	0.5423491087
CA1	CA1	0.5182336440	0.5041776008	0.297499472	0.520284740	0.510300727	0.5015835671
CA2	CA2	0.6194914487	0.5605525895	0.400024131	0.626338491	0.607486502	0.5346122523
CA3	CA3	0.5702198896	0.5277953730	0.267954635	0.504584804	0.485551835	0.4571079540

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Covariances

		I2	T2	C	SK1	SK2	FL1
A1	A1	0.6166410280	0.458103339	0.5561487648	0.102117455	0.009591892	0.5411274998
A2	A2	0.6414200826	0.436642234	0.5053238018	0.063403010	0.066539981	0.4933791814
SP2	SP2	0.4804844207	0.250279009	0.3941121467	0.024628239	-0.018248726	0.4294935602
EU1	EU1	0.8076946279	0.581289778	0.5819684493	-0.002518626	0.102916780	0.5996139113
EU2	EU2	0.8295327723	0.517253341	0.5281573312	-0.019108376	0.078605254	0.5820891020
I1	I1	0.8132748168	0.355578681	0.4806804814	0.054972401	0.069134015	0.5465568727
I2	I2	0.9634271408	0.432524960	0.5005278557	0.029605164	0.101106989	0.5993424426
T2	T2	0.4325249600	1.208472838	0.3552921304	0.104078062	0.135493017	0.5500256387
C	C	0.5005278557	0.355292130	0.8452930353	-0.112870630	-0.158417036	0.4024371852
SK1	SK1	0.0296051639	0.104078062	-.1128706301	1.041610111	0.520737188	0.0635839894
SK2	SK2	0.1011069888	0.135493017	-.1584170362	0.520737188	1.215214309	0.0870811088
FL1	FL1	0.5993424426	0.550025639	0.4024371852	0.063583989	0.087081109	0.8452930353
FL2	FL2	0.6642686936	0.463019938	0.5369046542	0.042364190	0.033692275	0.5629656441
LP1	LP1	0.5544596266	0.422978313	0.6102011884	-0.021566676	-0.073628329	0.5091243628
LP2	LP2	0.5531475281	0.492519531	0.6354477724	-0.008762405	-0.117425271	0.4838777788
CA1	CA1	0.5312339758	0.474949477	0.5068017977	0.096492022	0.044581184	0.4478026121
CA2	CA2	0.5632672760	0.446445269	0.5134075348	0.133683226	0.131541640	0.5151268362
CA3	CA3	0.4888396224	0.484496124	0.5177510331	0.241049075	0.098693934	0.4368533768

Covariances

		FL2	LP1	LP2	CA1	CA2	CA3
A1	A1	0.7159080626	0.5880010859	0.625418514	0.5182336440	0.6194914487	0.570219890
A2	A2	0.7377009622	0.5438723494	0.557264803	0.5041776008	0.5605525895	0.527795373
SP2	SP2	0.4325249600	0.3816245890	0.390356830	0.2974994721	0.4000241305	0.267954635
EU1	EU1	0.7984646940	0.6716435918	0.666892891	0.5202847404	0.6263384912	0.504584804
EU2	EU2	0.6991373330	0.5935812747	0.563945948	0.5103007269	0.6074865020	0.485551835
I1	I1	0.6410732060	0.5698126866	0.542349109	0.5015835671	0.5346122523	0.457107954
I2	I2	0.6642686936	0.5544596266	0.553147528	0.5312339758	0.5632672760	0.488839622
T2	T2	0.4630199379	0.4229783127	0.492519531	0.4749494767	0.4464452689	0.484496124
C	C	0.5369046542	0.6102011884	0.635447772	0.5068017977	0.5134075348	0.517751033
SK1	SK1	0.0423641903	-.0215666757	-0.008762405	0.0964920218	0.1336832263	0.241049075
SK2	SK2	0.0336922752	-.0736283293	-0.117425271	0.0445811842	0.1315416403	0.098693934
FL1	FL1	0.5629656441	0.5091243628	0.483877779	0.4478026121	0.5151268362	0.436853377
FL2	FL2	0.9388139837	0.5988899949	0.630335113	0.5587427985	0.6136699545	0.577428890
LP1	LP1	0.5988899949	0.9786746297	0.878231231	0.6706783700	0.6272433867	0.623895273
LP2	LP2	0.6303351130	0.8782312310	1.068395017	0.6422646518	0.6059783428	0.624573945
CA1	CA1	0.5587427985	0.6706783700	0.642264652	0.9511658070	0.6482067988	0.803939312
CA2	CA2	0.6136699545	0.6272433867	0.605978343	0.6482067988	0.9669109884	0.704853256
CA3	CA3	0.5774288903	0.6238952734	0.624573945	0.8039393117	0.7048532561	1.108572377

Determinant 0.000000396 Ln -14.741277

NOTE: Some initial estimates computed by instrumental variable method.

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

NOTE: Some initial estimates computed by two-stage LS method.

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Vector of Initial Estimates

	Parameter	Estimate	Type
1	LA2F2	0.97119	Matrix Entry: _BETA_[2:19]
2	LEU2F4	0.93703	Matrix Entry: _BETA_[5:20]
3	LI2F5	1.09647	Matrix Entry: _BETA_[7:21]
4	LT2F9	1.00000	Matrix Entry: _BETA_[8:22]
5	LFL1F9	1.11669	Matrix Entry: _BETA_[12:22]
6	LFL2F9	1.33129	Matrix Entry: _BETA_[13:22]
7	LLP2F10	0.99587	Matrix Entry: _BETA_[15:23]
8	LCA2F11	1.02517	Matrix Entry: _BETA_[17:24]
9	LCA3F11	0.99430	Matrix Entry: _BETA_[18:24]
10	PF2F4	1.06745	Matrix Entry: _BETA_[20:19]
11	PF4F5	0.83494	Matrix Entry: _BETA_[21:20]
12	PF2F9	0.53192	Matrix Entry: _BETA_[22:19]
13	PF5F9	0.20488	Matrix Entry: _BETA_[22:21]
14	PF9F10	0.56260	Matrix Entry: _BETA_[23:22]
15	PF2F11	-0.14299	Matrix Entry: _BETA_[24:19]
16	PF10F11	0.98553	Matrix Entry: _BETA_[24:23]
17	LSP2F3	1.00000	Matrix Entry: _GAMMA_[3:1]
18	LSK2F8	0.51417	Matrix Entry: _GAMMA_[11:3]
19	PF3F2	0.41808	Matrix Entry: _GAMMA_[19:1]
20	PF7F10	0.48669	Matrix Entry: _GAMMA_[23:2]
21	PF8F11	0.18713	Matrix Entry: _GAMMA_[24:3]
22	VARF3	1.05374	Matrix Entry: _PHI_[1:1]
23	CF3F7	0.39411	Matrix Entry: _PHI_[2:1]

Vector of Initial Estimates

	Parameter	Estimate	Type
24	VARF7	0.84529	Matrix Entry: _PHI_[2:2]
25	CF3F8	0.01206	Matrix Entry: _PHI_[3:1]
26	CF7F8	-0.15369	Matrix Entry: _PHI_[3:2]
27	VARF8	1.18750	Matrix Entry: _PHI_[3:3]
28	VARE2	0.04958	Matrix Entry: _PHI_[4:4]
29	VARE3	0.11224	Matrix Entry: _PHI_[5:5]
30	VARE5	0.01000	Matrix Entry: _PHI_[6:6]
31	VARE6	0.14469	Matrix Entry: _PHI_[7:7]
32	VARE7	0.07190	Matrix Entry: _PHI_[8:8]
33	VARE8	0.17235	Matrix Entry: _PHI_[9:9]
34	VARE9	0.01000	Matrix Entry: _PHI_[10:10]
35	VARE12	0.70946	Matrix Entry: _PHI_[11:11]
36	VARE13	0.01000	Matrix Entry: _PHI_[12:12]
37	VARE14	0.01000	Matrix Entry: _PHI_[13:13]
38	VARE15	0.90128	Matrix Entry: _PHI_[14:14]
39	CE12E16	-0.00721	Matrix Entry: _PHI_[15:11]
40	VARE16	0.22303	Matrix Entry: _PHI_[15:15]
41	VARE17	0.05439	Matrix Entry: _PHI_[16:16]
42	VARE18	0.02395	Matrix Entry: _PHI_[17:17]
43	VARE19	0.12155	Matrix Entry: _PHI_[18:18]
44	VARE20	0.14720	Matrix Entry: _PHI_[19:19]
45	VARE21	0.12196	Matrix Entry: _PHI_[20:20]

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Vector of Initial Estimates

	Parameter	Estimate	Type
46	VARE22	0.31374	Matrix Entry: _PHI_[21:21]
47	VARD2	0.65806	Matrix Entry: _PHI_[22:22]
48	VARD4	0.48116	Matrix Entry: _PHI_[23:23]
49	VARD5	0.32640	Matrix Entry: _PHI_[24:24]
50	VARD9	0.17758	Matrix Entry: _PHI_[25:25]
51	VARD10	0.39899	Matrix Entry: _PHI_[26:26]
52	VARD11	0.45903	Matrix Entry: _PHI_[27:27]

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Dual Quasi-Newton Optimization

Dual Broyden - Fletcher - Goldfarb - Shanno Update (DBFGS)

Parameter Estimates	52
Functions (Observations)	171

Optimization Start

Active Constraints	0	Objective Function	4.6208333606
Max Abs Gradient Element	10.395688761		

Iter	Restarts	Function Calls	Active Constraints	Objective Function	Objective Function Change	Max Abs Gradient Element	Step Size	Slope of Search Direction
1	0	3	0	2.75189	1.8689	2.1789	0.0525	-206.0
2	0	7	0	2.18935	0.5625	4.0981	2.711	-0.306
3	0	8	0	1.90154	0.2878	1.5562	1.000	-0.673
4	0	9	0	1.86095	0.0406	2.3724	1.000	-0.353
5	0	11	0	1.74145	0.1195	0.9250	0.675	-0.351
6	0	13	0	1.66927	0.0722	0.3664	0.806	-0.127
7	0	15	0	1.61424	0.0550	0.7681	1.260	-0.0758
8	0	16	0	1.57650	0.0377	0.7473	2.161	-0.0637
9	0	17	0	1.52211	0.0544	0.3957	1.469	-0.0642
10	0	18	0	1.44964	0.0725	1.1245	2.532	-0.0537
11	0	19	0	1.32562	0.1240	0.4297	1.484	-0.122
12	0	22	0	1.26910	0.0565	0.5178	0.547	-0.159
13	0	23	0	1.18728	0.0818	0.3870	1.234	-0.115
14	0	25	0	1.14105	0.0462	0.2768	1.787	-0.0476
15	0	27	0	1.11123	0.0298	0.2654	1.885	-0.0297
16	0	29	0	1.09818	0.0130	0.2600	0.732	-0.0398
17	0	30	0	1.08282	0.0154	0.1275	1.635	-0.0200

Iter	Restarts	Function Calls	Active Constraints	Objective Function	Objective Function Change	Max Abs Gradient Element	Step Size	Slope of Search Direction
18	0	32	0	1.07746	0.00537	0.1009	2.100	-0.0049
19	0	34	0	1.07464	0.00281	0.0680	2.072	-0.0027
20	0	35	0	1.07332	0.00132	0.1878	5.184	-0.0014
21	0	36	0	1.07174	0.00158	0.0460	1.236	-0.0027
22	0	38	0	1.07129	0.000453	0.0595	3.108	-0.0003
23	0	39	0	1.07094	0.000344	0.1053	4.182	-0.0003
24	0	40	0	1.07050	0.000441	0.0336	1.914	-0.0004
25	0	41	0	1.06979	0.000714	0.0360	3.477	-0.0003
26	0	42	0	1.06930	0.000489	0.0523	3.428	-0.0005
27	0	44	0	1.06824	0.00106	0.0257	2.856	-0.0009
28	0	46	0	1.06523	0.00301	0.0533	5.632	-0.0011
29	0	47	0	1.06241	0.00282	0.0793	3.815	-0.0020
30	0	48	0	1.06056	0.00185	0.0731	2.793	-0.0025
31	0	49	0	1.05915	0.00141	0.0349	1.299	-0.0036
32	0	50	0	1.05824	0.000913	0.0562	2.287	-0.0015
33	0	51	0	1.05693	0.00131	0.0436	1.344	-0.0017
34	0	52	0	1.05552	0.00141	0.0391	3.504	-0.0009
35	0	54	0	1.05489	0.000629	0.0236	1.903	-0.0007
36	0	55	0	1.05455	0.000345	0.0299	4.153	-0.0004
37	0	56	0	1.05404	0.000506	0.0169	0.889	-0.0010
38	0	58	0	1.05376	0.000279	0.0137	2.470	-0.0002
39	0	59	0	1.05357	0.000189	0.0197	4.295	-0.0002
40	0	60	0	1.05350	0.000070	0.0186	2.386	-0.0002
41	0	61	0	1.05338	0.000118	0.00803	0.908	-0.0002
42	0	63	0	1.05331	0.000071	0.00734	1.759	-0.0001
43	0	64	0	1.05325	0.000064	0.00738	3.877	-457E-7
44	0	66	0	1.05322	0.000026	0.00495	1.767	-294E-7
45	0	67	0	1.05319	0.000030	0.00559	4.080	-16E-6
46	0	68	0	1.05319	7.792E-6	0.0150	7.261	-105E-7
47	0	70	0	1.05316	0.000026	0.00457	1.280	-409E-7
48	0	71	0	1.05312	0.000042	0.00533	7.073	-924E-8
49	0	72	0	1.05306	0.000058	0.0152	2.727	-387E-7
50	0	74	0	1.05291	0.000151	0.0121	5.104	-594E-7
51	0	75	0	1.05284	0.000068	0.0348	4.883	-0.0001

Iter	Restarts	Function Calls	Active Constraints	Objective Function	Objective Function Change	Max Abs Gradient Element	Step Size	Slope of Search Direction
52	0	76	0	1.05272	0.000115	0.0137	0.986	-0.0002
53	0	77	0	1.05261	0.000116	0.0271	2.790	-0.0001
54	0	78	0	1.05243	0.000179	0.00820	2.594	-0.0001
55	0	80	0	1.05233	0.000094	0.00991	1.002	-0.0001
56	0	82	0	1.05227	0.000062	0.00758	1.332	-0.0001
57	0	83	0	1.05223	0.000038	0.0108	3.401	-453E-7
58	0	84	0	1.05220	0.000036	0.00567	1.494	-0.0001
59	0	86	0	1.05217	0.000026	0.00446	1.936	-246E-7
60	0	88	0	1.05216	0.000017	0.00362	1.983	-172E-7
61	0	90	0	1.05215	5.913E-6	0.00242	1.937	-609E-8
62	0	91	0	1.05215	3.072E-6	0.00420	4.397	-336E-8
63	0	92	0	1.05214	4.066E-6	0.00151	1.365	-562E-8
64	0	93	0	1.05214	2.64E-6	0.00252	5.309	-191E-8
65	0	95	0	1.05214	1.291E-6	0.000724	1.155	-223E-8
66	0	97	0	1.05214	4.32E-7	0.000697	3.759	-23E-8
67	0	98	0	1.05214	3.072E-7	0.000549	7.384	-146E-9
68	0	99	0	1.05214	2.657E-7	0.000332	1.799	-427E-9
69	0	101	0	1.05214	8.48E-8	0.000215	1.417	-119E-9
70	0	103	0	1.05214	3.452E-8	0.000161	2.625	-26E-9
71	1	107	0	1.05214	1.466E-8	0.000321	0.00198	-148E-7
72	1	109	0	1.05214	3.1E-9	0.000302	0.127	-49E-9
73	1	110	0	1.05214	4.755E-9	0.000098	0.196	-4E-8
74	1	111	0	1.05214	3.675E-9	0.000098	0.646	-18E-9
75	1	113	0	1.05214	1.509E-9	0.000100	0.662	-46E-10

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Optimization Results

Iterations	75	Function Calls	114
Gradient Calls	86	Active Constraints	0
Objective Function	1.0521374527	Max Abs Gradient Element	0.0001004136
Slope of Search Direction	-4.558117E-9		

GCONV convergence criterion satisfied.

NOTE: Moore-Penrose inverse is used in covariance matrix.

NOTE: Covariance matrix for the estimates is not full rank.

NOTE: The variance of some parameter estimates is zero or some parameter estimates are linearly related to other parameter estimates as shown in the following equations:

PF2F9	=	-6.210095	+	1.445407	*	LT2F9	+	1.725574	*	LFL1F9
			+	2.233928	*	LFL2F9	-	0.257581	*	PF5F9
			+	1.133567	*	PF9F10	-	0.055246	*	VARD9
VARF3	=	0.616292	+	0.313441	*	LSP2F3	+	0.443730	*	PF3F2
			-	0.352599	*	CF3F7	-	0.034389	*	CF3F8
				.				.		

Predicted Model Matrix

		A1	A2	SP2	EU1	EU2	I1
A1	A1	0.8918254162	0.7266877335	0.451454445	0.730079311	0.705365775	0.5674418920
A2	A2	0.7266877335	0.9066396829	0.447989262	0.724475515	0.699951671	0.5630864359
SP2	SP2	0.4514544453	0.4479892622	1.053729641	0.450080105	0.434844678	0.3498172087
EU1	EU1	0.7300793105	0.7244755149	0.450080105	1.261665737	0.931859471	0.7496480831
EU2	EU2	0.7053657753	0.6999516708	0.434844678	0.931859471	1.052647659	0.7242721355
I1	I1	0.5674418920	0.5630864359	0.349817209	0.749648083	0.724272135	0.9812217785
I2	I2	0.6355319458	0.6306538578	0.391793441	0.839601925	0.811180997	0.8129099846
T2	T2	0.4638801260	0.4603195685	0.285973336	0.487486020	0.470984384	0.3983631022
C	C	0.5444769749	0.5402977883	0.384605779	0.542819451	0.524444752	0.4218973090
SK1	SK1	0.0531025496	0.0526949557	0.037510397	0.052940892	0.051148818	0.0411474200
SK2	SK2	0.0509543156	0.0505632108	0.035992935	0.050799198	0.049079621	0.0394828241
FL1	FL1	0.5537954428	0.5495447314	0.341404431	0.581976940	0.562276741	0.4755790520
FL2	FL2	0.7169434615	0.7114404914	0.441982103	0.753427222	0.727923349	0.6156845387
LP1	LP1	0.5933993801	0.5888446847	0.386459424	0.611213464	0.590523594	0.4903270276
LP2	LP2	0.5992734515	0.5946736691	0.390284993	0.617263877	0.596369198	0.4951807839
CA1	CA1	0.5587316396	0.5544430399	0.356509211	0.567481810	0.548272278	0.4492003035
CA2	CA2	0.5228856851	0.5188722246	0.333637027	0.531074480	0.513097353	0.4203814350
CA3	CA3	0.5887260957	0.5842072706	0.375647736	0.597946002	0.577705243	0.4733147760

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Predicted Model Matrix

		I2	T2	C	SK1	SK2	FL1
A1	A1	0.6355319458	0.463880126	0.5444769749	0.053102550	0.050954316	0.5537954428
A2	A2	0.6306538578	0.460319568	0.5402977883	0.052694956	0.050563211	0.5495447314
SP2	SP2	0.3917934408	0.285973336	0.3846057787	0.037510397	0.035992935	0.3414044306
EU1	EU1	0.8396019252	0.487486020	0.5428194513	0.052940892	0.050799198	0.5819769403
EU2	EU2	0.8111809968	0.470984384	0.5244447522	0.051148818	0.049079621	0.5622767414
I1	I1	0.8129099846	0.398363102	0.4218973090	0.041147420	0.039482824	0.4755790520
I2	I2	0.9634248063	0.446164587	0.4725227754	0.046084895	0.044220556	0.5326460463
T2	T2	0.4461645871	1.207946686	0.3448983581	0.033637753	0.032276957	0.5493981176
C	C	0.4725227754	0.344898358	0.8452778019	-0.124745107	-0.119698613	0.4117510715
SK1	SK1	0.0460848948	0.033637753	-.1247451066	1.041618661	0.529554452	0.0401578629
SK2	SK2	0.0442205561	0.032276957	-.1196986131	0.529554452	1.215211180	0.0385332990
FL1	FL1	0.5326460463	0.549398118	0.4117510715	0.040157863	0.038533299	0.8445492689
FL2	FL2	0.6895634574	0.482023566	0.5330528489	0.051988361	0.049885201	0.5754556821
LP1	LP1	0.5491637017	0.390033640	0.6201490700	-0.026222862	-0.025162031	0.4656350639
LP2	LP2	0.5545998834	0.393894590	0.6262879371	-0.026482443	-0.025411110	0.4702443940
CA1	CA1	0.5031019862	0.361462677	0.4740123198	0.126195223	0.121090066	0.4315261033
CA2	CA2	0.4708250045	0.338272698	0.4436016130	0.118099050	0.113321419	0.4038411397
CA3	CA3	0.5301100691	0.380867120	0.4994587786	0.132969776	0.127590558	0.4546917696

Predicted Model Matrix

		FL2	LP1	LP2	CA1	CA2	CA3
A1	A1	0.7169434615	0.5933993801	0.599273452	0.5587316396	0.5228856851	0.588726096
A2	A2	0.7114404914	0.5888446847	0.594673669	0.5544430399	0.5188722246	0.584207271
SP2	SP2	0.4419821026	0.3864594240	0.390284993	0.3565092107	0.3336370265	0.375647736
EU1	EU1	0.7534272221	0.6112134637	0.617263877	0.5674818095	0.5310744796	0.597946002
EU2	EU2	0.7279233488	0.5905235944	0.596369198	0.5482722778	0.5130973535	0.577705243
I1	I1	0.6156845387	0.4903270276	0.495180784	0.4492003035	0.4203814350	0.473314776
I2	I2	0.6895634574	0.5491637017	0.554599883	0.5031019862	0.4708250045	0.530110069
T2	T2	0.4820235663	0.3900336396	0.393894590	0.3614626768	0.3382726984	0.380867120
C	C	0.5330528489	0.6201490700	0.626287937	0.4740123198	0.4436016130	0.499458779
SK1	SK1	0.0519883606	-.0262228621	-0.026482443	0.1261952233	0.1180990499	0.132969776
SK2	SK2	0.0498852006	-.0251620309	-0.025411110	0.1210900661	0.1133214189	0.127590558
FL1	FL1	0.5754556821	0.4656350639	0.470244394	0.4315261033	0.4038411397	0.454691770
FL2	FL2	0.9375511272	0.6028110539	0.608778292	0.5586536007	0.5228126529	0.588643867
LP1	LP1	0.6028110539	0.9765815427	0.873917405	0.6420735654	0.6008807312	0.676542076
LP2	LP2	0.6087782917	0.8739174050	1.066265115	0.6484294635	0.6068288606	0.683239178
CA1	CA1	0.5586536007	0.6420735654	0.648429464	0.9539970164	0.6846548159	0.770864776
CA2	CA2	0.5228126529	0.6008807312	0.606828861	0.6846548159	0.9693954437	0.721409221
CA3	CA3	0.5886438674	0.6765420758	0.683239178	0.7708647762	0.7214092206	1.111725949

Determinant 0.000001135 Ln -13.689119

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Fit Function	1.0521
Goodness of Fit Index (GFI)	0.8954
GFI Adjusted for Degrees of Freedom (AGFI)	0.8497
Root Mean Square Residual (RMR)	0.0463
Parsimonious GFI (Mulaik, 1989)	0.6964
Chi-Square	270.3993
Chi-Square DF	119
Pr > Chi-Square	<.0001
Independence Model Chi-Square	3828.9
Independence Model Chi-Square DF	153
RMSEA Estimate	0.0704
RMSEA 90% Lower Confidence Limit	0.0593
RMSEA 90% Upper Confidence Limit	0.0815
ECVI Estimate	1.4891
ECVI 90% Lower Confidence Limit	1.3142
ECVI 90% Upper Confidence Limit	1.6966
Probability of Close Fit	0.0017
Bentler's Comparative Fit Index	0.9588
Normal Theory Reweighted LS Chi-Square	270.1346
Akaike's Information Criterion	32.3993
Bozdogan's (1987) CAIC	-509.4029
Schwarz's Bayesian Criterion	-390.4029
McDonald's (1989) Centrality	0.7457
Bentler & Bonett's (1980) Non-normed Index	0.9470
Bentler & Bonett's (1980) NFI	0.9294
James, Mulaik, & Brett (1982) Parsimonious NFI	0.7229
Z-Test of Wilson & Hilferty (1931)	7.3251
Bollen (1986) Normed Index Rho1	0.9092
Bollen (1988) Non-normed Index Delta2	0.9592
Hoelter's (1983) Critical N	140

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Raw Residual Matrix

		A1	A2	SP2	EU1	EU2	I1
A1	A1	-.0000056714	0.0112545342	0.0036627387	-.0056652304	-.0407652866	0.0090217765
A2	A2	0.0112545342	0.0000052663	-.0351457790	0.0439918938	-.0033932900	-.0001509549
SP2	SP2	0.0036627387	-.0351457790	0.0000060689	0.0477783086	0.0659395650	0.0909121370
EU1	EU1	-.0056652304	0.0439918938	0.0477783086	0.0000149553	0.0039080311	-.0233337224
EU2	EU2	-.0407652866	-.0033932900	0.0659395650	0.0039080311	0.0000021769	-.0205801619
I1	I1	0.0090217765	-.0001509549	0.0909121370	-.0233337224	-.0205801619	0.0000016402
I2	I2	-.0188909178	0.0107662249	0.0886909799	-.0319072972	0.0183517755	0.0003648321
T2	T2	-.0057767870	-.0236773340	-.0356943266	0.0938037575	0.0462689563	-.0427844215
C	C	0.0116717899	-.0349739865	0.0095063680	0.0391489980	0.0037125790	0.0587831724
SK1	SK1	0.0490149059	0.0107080546	-.0128821581	-.0554595179	-.0702571939	0.0138249807
SK2	SK2	-.0413624235	0.0159767705	-.0542416604	0.0521175818	0.0295256337	0.0296511909
FL1	FL1	-.0126679430	-.0561655500	0.0880891296	0.0176369710	0.0198123607	0.0709778207
FL2	FL2	-.0010353989	0.0262604708	-.0094571426	0.0450374719	-.0287860158	0.0253886673
LP1	LP1	-.0053982942	-.0449723353	-.0048348350	0.0604301281	0.0030576803	0.0794856590
LP2	LP2	0.0261450627	-.0374088666	0.0000718375	0.0496290135	-.0324232508	0.0471683248
CA1	CA1	-.0404979956	-.0502654391	-.0590097385	-.0471970691	-.0379715508	0.0523832636
CA2	CA2	0.0966057636	0.0416803649	0.0663871040	0.0952640116	0.0943891485	0.1142308173
CA3	CA3	-.0185062061	-.0564118976	-.1076931018	-.0933611982	-.0921534072	-.0162068219

Raw Residual Matrix

		I2	T2	C	SK1	SK2	FL1
A1	A1	-.0188909178	-.0057767870	0.0116717899	0.0490149059	-.0413624235	-.0126679430
A2	A2	0.0107662249	-.0236773340	-.0349739865	0.0107080546	0.0159767705	-.0561655500
SP2	SP2	0.0886909799	-.0356943266	0.0095063680	-.0128821581	-.0542416604	0.0880891296
EU1	EU1	-.0319072972	0.0938037575	0.0391489980	-.0554595179	0.0521175818	0.0176369710
EU2	EU2	0.0183517755	0.0462689563	0.0037125790	-.0702571939	0.0295256337	0.0198123607
I1	I1	0.0003648321	-.0427844215	0.0587831724	0.0138249807	0.0296511909	0.0709778207
I2	I2	0.0000023345	-.0136396271	0.0280050803	-.0164797309	0.0568864327	0.0666963963
T2	T2	-.0136396271	0.0005261523	0.0103937723	0.0704403090	0.1032160604	0.0006275211
C	C	0.0280050803	0.0103937723	0.0000152334	0.0118744765	-.0387184231	-.0093138864
SK1	SK1	-.0164797309	0.0704403090	0.0118744765	-.0000085499	-.0088172636	0.0234261265
SK2	SK2	0.0568864327	0.1032160604	-.0387184231	-.0088172636	0.0000031298	0.0485478098
FL1	FL1	0.0666963963	0.0006275211	-.0093138864	0.0234261265	0.0485478098	0.0007437664
FL2	FL2	-.0252947637	-.0190036284	0.0038518053	-.0096241704	-.0161929254	-.0124900380
LP1	LP1	0.0052959248	0.0329446731	-.0099478816	0.0046561864	-.0484662984	0.0434892989
LP2	LP2	-.0014523552	0.0986249409	0.0091598354	0.0177200381	-.0920141604	0.0136333848
CA1	CA1	0.0281319896	0.1134867999	0.0327894780	-.0297032014	-.0765088819	0.0162765089
CA2	CA2	0.0924422714	0.1081725705	0.0698059218	0.0155841764	0.0182202214	0.1112856965
CA3	CA3	-.0412704467	0.1036290040	0.0182922545	0.1080792993	-.0288966241	-.0178383928

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Raw Residual Matrix

		FL2	LP1	LP2	CA1	CA2	CA3
A1	A1	-.0010353989	-.0053982942	0.0261450627	-.0404979956	0.0966057636	-.0185062061
A2	A2	0.0262604708	-.0449723353	-.0374088666	-.0502654391	0.0416803649	-.0564118976
SP2	SP2	-.0094571426	-.0048348350	0.0000718375	-.0590097385	0.0663871040	-.1076931018
EU1	EU1	0.0450374719	0.0604301281	0.0496290135	-.0471970691	0.0952640116	-.0933611982
EU2	EU2	-.0287860158	0.0030576803	-.0324232508	-.0379715508	0.0943891485	-.0921534072
I1	I1	0.0253886673	0.0794856590	0.0471683248	0.0523832636	0.1142308173	-.0162068219
I2	I2	-.0252947637	0.0052959248	-.0014523552	0.0281319896	0.0924422714	-.0412704467
T2	T2	-.0190036284	0.0329446731	0.0986249409	0.1134867999	0.1081725705	0.1036290040
C	C	0.0038518053	-.0099478816	0.0091598354	0.0327894780	0.0698059218	0.0182922545
SK1	SK1	-.0096241704	0.0046561864	0.0177200381	-.0297032014	0.0155841764	0.1080792993
SK2	SK2	-.0161929254	-.0484662984	-.0920141604	-.0765088819	0.0182202214	-.0288966241
FL1	FL1	-.0124900380	0.0434892989	0.0136333848	0.0162765089	0.1112856965	-.0178383928
FL2	FL2	0.0012628564	-.0039210590	0.0215568213	0.0000891978	0.0908573016	-.0112149771
LP1	LP1	-.0039210590	0.0020930871	0.0043138260	0.0286048046	0.0263626555	-.0526468024
LP2	LP2	0.0215568213	0.0043138260	0.0021299022	-.0061648117	-.0008505178	-.0586652333
CA1	CA1	0.0000891978	0.0286048046	-.0061648117	-.0028312094	-.0364480172	0.0330745354
CA2	CA2	0.0908573016	0.0263626555	-.0008505178	-.0364480172	-.0024844553	-.0165559645
CA3	CA3	-.0112149771	-.0526468024	-.0586652333	0.0330745354	-.0165559645	-.0031535722

Average Absolute Residual	0.033894
Average Off-diagonal Absolute Residual	0.037781

Rank Order of the 10 Largest Raw Residuals

Row	Column	Residual
CA2	I1	0.11423
CA1	T2	0.11349
CA2	FL1	0.11129
CA2	T2	0.10817
CA3	SK1	0.10808
CA3	SP2	-0.10769
CA3	T2	0.10363
SK2	T2	0.10322
LP2	T2	0.09862
CA2	A1	0.09661

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Normalized Residual Matrix

		A1	A2	SP2	EU1	EU2	I1
A1	A1	-0.000072088	0.156058332	0.054909079	-0.070528639	-0.545295153	0.132190141
A2	A2	0.156058332	0.000065845	-0.524024869	0.545939794	-0.045264545	-0.002203016
SP2	SP2	0.054909079	-0.524024869	0.000065288	0.618819752	0.927738952	1.355346794
EU1	EU1	-0.070528639	0.545939794	0.618819752	0.000134370	0.042273067	-0.278818016
EU2	EU2	-0.545295153	-0.045264545	0.927738952	0.042273067	0.000023443	-0.264367560
I1	I1	0.132190141	-0.002203016	1.355346794	-0.278818016	-0.264367560	0.000018949
I2	I2	-0.269463191	0.153081418	1.315213007	-0.369109236	0.227512647	0.004614937
T2	T2	-0.081459918	-0.332009506	-0.491649287	1.132986716	0.606977742	-0.591642793
C	C	0.182577935	-0.545017648	0.149538735	0.537948178	0.055145805	0.938897337
SK1	SK1	0.814033478	0.176387520	-0.196996279	-0.774735586	-1.074345488	0.219045184
SK2	SK2	-0.636190446	0.243730013	-0.768049981	0.674198226	0.418109347	0.435026316
FL1	FL1	-0.197262411	-0.871388238	1.407620336	0.238600036	0.289320363	1.107874748
FL2	FL2	-0.014285152	0.361503264	-0.139374689	0.545702504	-0.374702282	0.357108109
LP1	LP1	-0.078252584	-0.649502727	-0.071400483	0.764517952	0.041776948	1.163875884
LP2	LP2	0.366194778	-0.521910156	0.001019561	0.605544374	-0.427540660	0.665393867
CA1	CA1	-0.602024269	-0.744233994	-0.888994738	-0.612565560	-0.532903688	0.787252447
CA2	CA2	1.451809852	0.623597390	0.999941845	1.244840594	1.335539491	1.724297292
CA3	CA3	-0.256475292	-0.778563059	-1.506930567	-1.128122262	-1.204631390	-0.226580184

Normalized Residual Matrix

		I2	T2	C	SK1	SK2	FL1
A1	A1	-0.269463191	-0.081459918	0.182577935	0.814033478	-0.636190446	-0.197262411
A2	A2	0.153081418	-0.332009506	-0.545017648	0.176387520	0.243730013	-0.871388238
SP2	SP2	1.315213007	-0.491649287	0.149538735	-0.196996279	-0.768049981	1.407620336
EU1	EU1	-0.369109236	1.132986716	0.537948178	-0.774735586	0.674198226	0.238600036
EU2	EU2	0.227512647	0.606977742	0.055145805	-1.074345488	0.418109347	0.289320363
I1	I1	0.004614937	-0.591642793	0.938897337	0.219045184	0.435026316	1.107874748
I2	I2	0.000027468	-0.187304595	0.440737660	-0.263447639	0.842127958	1.020685833
T2	T2	-0.187304595	0.004937593	0.156058097	1.006269630	1.365243195	0.008749389
C	C	0.440737660	0.156058097	0.000204291	0.201104853	-0.608205955	-0.158859960
SK1	SK1	-0.263447639	1.006269630	0.201104853	-0.000093047	-0.113675142	0.400039124
SK2	SK2	0.842127958	1.365243195	-0.608205955	-0.113675142	0.000029195	0.767686491
FL1	FL1	1.020685833	0.008749389	-0.158859960	0.400039124	0.767686491	0.009983048
FL2	FL2	-0.345345023	-0.260770992	0.059510875	-0.155911394	-0.242937600	-0.188950780
LP1	LP1	0.076167557	0.457651360	-0.144974746	0.073984637	-0.713034368	0.683126515
LP2	LP2	-0.020152254	1.316128912	0.129111971	0.269467977	-1.295551149	0.206368252
CA1	CA1	0.416546210	1.606175629	0.517672202	-0.473903033	-1.132008787	0.261993907
CA2	CA2	1.378575112	1.529549292	1.110123228	0.246925908	0.267663719	1.800514546
CA3	CA3	-0.568989654	1.361919581	0.268912299	1.597957985	-0.396175790	-0.267175073

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Normalized Residual Matrix

		FL2	LP1	LP2	CA1	CA2	CA3
A1	A1	-0.014285152	-0.078252584	0.366194778	-0.602024269	1.451809852	-0.256475292
A2	A2	0.361503264	-0.649502727	-0.521910156	-0.744233994	0.623597390	-0.778563059
SP2	SP2	-0.139374689	-0.071400483	0.001019561	-0.888994738	0.999941845	-1.506930567
EU1	EU1	0.545702504	0.764517952	0.605544374	-0.612565560	1.244840594	-1.128122262
EU2	EU2	-0.374702282	0.041776948	-0.427540660	-0.532903688	1.335539491	-1.204631390
I1	I1	0.357108109	1.163875884	0.665393867	0.787252447	1.724297292	-0.226580184
I2	I2	-0.345345023	0.076167557	-0.020152254	0.416546210	1.378575112	-0.568989654
T2	T2	-0.260770992	0.457651360	1.316128912	1.606175629	1.529549292	1.361919581
C	C	0.059510875	-0.144974746	0.129111971	0.517672202	1.110123228	0.268912299
SK1	SK1	-0.155911394	0.073984637	0.269467977	-0.473903033	0.246925908	1.597957985
SK2	SK2	-0.242937600	-0.713034368	-1.295551149	-1.132008787	0.267663719	-0.396175790
FL1	FL1	-0.188950780	0.683126515	0.206368252	0.261993907	1.800514546	-0.267175073
FL2	FL2	0.015269000	-0.055582579	0.295219599	0.001301830	1.339623005	-0.152561469
LP1	LP1	-0.055582579	0.024295752	0.051473938	0.395566725	0.369566952	-0.679358918
LP2	LP2	0.295219599	0.051473938	0.022643629	-0.082424457	-0.011515837	-0.731669062
CA1	CA1	0.001301830	0.395566725	-0.082424457	-0.033641592	-0.494969899	0.412178650
CA2	CA2	1.339623005	0.369566952	-0.011515837	-0.494969899	-0.029052384	-0.209949354
CA3	CA3	-0.152561469	-0.679358918	-0.731669062	0.412178650	-0.209949354	-0.032155599

Average Normalized Residual	0.483791
Average Off-diagonal Normalized Residual	0.539579

Rank Order of the 10 Largest Normalized Residuals

Row	Column	Residual
CA2	FL1	1.80051
CA2	I1	1.72430
CA1	T2	1.60618
CA3	SK1	1.59796
CA2	T2	1.52955
CA3	SP2	-1.50693
CA2	A1	1.45181
FL1	SP2	1.40762
CA2	I2	1.37858
SK2	T2	1.36524

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Distribution of Normalized Residuals

Each * Represents 2 Residuals

Range		Freq	Percent	
-1.75000	-1.50000	1	0.58	
-1.50000	-1.25000	1	0.58	
-1.25000	-1.00000	4	2.34	**
-1.00000	-0.75000	5	2.92	**
-0.75000	-0.50000	16	9.36	********
-0.50000	-0.25000	16	9.36	********
-0.25000	0	29	16.96	**********
0	0.25000	40	23.39	**********
0.25000	0.50000	18	10.53	*********
0.50000	0.75000	11	6.43	*****
0.75000	1.00000	8	4.68	****
1.00000	1.25000	7	4.09	***
1.25000	1.50000	10	5.85	*****
1.50000	1.75000	4	2.34	**
1.75000	2.00000	1	0.58	

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Manifest Variable Equations with Estimates

A1	=	1.0000 F2	+	1.0000 E2
A2	=	0.9923*F2	+	1.0000 E3
Std Err		0.0456 LA2F2		
t Value		21.7553		
SP2	=	0.5847*F3	+	1.0000 E5
Std Err		0.0637 LSP2F3		
t Value		9.1754		
EU1	=	1.0000 F4	+	1.0000 E6
EU2	=	0.9661*F4	+	1.0000 E7
Std Err		0.0451 LEU2F4		
t Value		21.4325		
I1	=	1.0000 F5	+	1.0000 E8
I2	=	1.1200*F5	+	1.0000 E9
Std Err		0.0514 LI2F5		
t Value		21.7752		
T2	=	0.8736*F9	+	1.0000 E12
Std Err		0.0818 LT2F9		
t Value		10.6762		
C	=	1.0000 F7	+	1.0000 E13
SK1	=	1.0000 F8	+	1.0000 E14
SK2	=	0.9595*F8	+	1.0000 E15
Std Err		0.2106 LSK2F8		
t Value		4.5555		
FL1	=	1.0430*F9	+	1.0000 E16
Std Err		0.0578 LFL1F9		
t Value		18.0466		
FL2	=	1.3502*F9	+	1.0000 E17
Std Err		0.0609 LFL2F9		
t Value		22.1622		
LP1	=	1.0000 F10	+	1.0000 E18
LP2	=	1.0099*F10	+	1.0000 E19
Std Err		0.0429 LLP2F10		
t Value		23.5599		
CA1	=	1.0000 F11	+	1.0000 E20

CA2	=	0.9358*F11	+	1.0000 E21		
Std Err		0.0576 LCA2F11				
t Value		16.2432				
CA3	=	1.0537*F11	+	1.0000 E22		
Std Err		0.0598 LCA3F11				
t Value		17.6188				

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Latent Variable Equations with Estimates

F2	=	0.8278*F3	+	1.0000 D2				
Std Err		0.0542 PF3F2						
t Value		15.2816						
F4	=	0.9970*F2	+	1.0000 D4				
Std Err		0.0621 PF2F4						
t Value		16.0438						
F5	=	0.7772*F4	+	1.0000 D5				
Std Err		0.0507 PF4F5						
t Value		15.3452						
F9	=	0.6044*F2	+	0.1557*F5	+	1.0000 D9		
Std Err		0.0525 PF2F9		0.0474 PF5F9				
t Value		11.5207		3.2847				
F10	=	0.6852*F9	+	0.4217*F7	+	1.0000 D10		
Std Err		0.1783 PF9F10		0.1893 PF7F10				
t Value		3.8421		2.2279				
F11	=	0.3151*F2	+	0.5327*F10	+	0.2237*F8	+	1.0000 D11
Std Err		0.0730 PF2F11		0.0692 PF10F11		0.0675 PF8F11		
t Value		4.3177		7.6958		3.3128		

Variances of Exogenous Variables

Variable	Parameter	Estimate	Standard Error	t Value
F3	VARF3	0.93274	0.02694	34.63
F7	VARF7	0.82919	0.20188	4.11
F8	VARF8	0.55188	0.14124	3.91
E2	VARE2	0.15952	0.02057	7.76
E3	VARE3	0.18553	0.02229	8.32
E5	VARE5	0.73483	0.07157	10.27
E6	VARE6	0.29716	0.03422	8.68
E7	VARE7	0.15233	0.02331	6.53
E8	VARE8	0.25541	0.02866	8.91
E9	VARE9	0.05297	0.02261	2.34
E12	VARE12	0.89607	0.08109	11.05
E13	VARE13	0.01608	0.18761	0.09
E14	VARE14	0.48974	0.12344	3.97
E15	VARE15	0.70708	0.12376	5.71
E16	VARE16	0.40004	0.03851	10.39
E17	VARE17	0.19257	0.02826	6.81
E18	VARE18	0.11123	0.02324	4.79
E19	VARE19	0.18370	0.02697	6.81
E20	VARE20	0.22241	0.02955	7.53
E21	VARE21	0.32867	0.03608	9.11
E22	VARE22	0.29948	0.03654	8.20

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Variances of Exogenous Variables

Variable	Parameter	Estimate	Standard Error	t Value
D2	VARD2	0.09320	0.06270	1.49
D4	VARD4	0.23665	0.03735	6.34
D5	VARD5	0.14316	0.02447	5.85
D9	VARD9	0.01670	0.01296	1.29
D10	VARD10	0.29796	0.04838	6.16
D11	VARD11	0.18528	0.03087	6.00

Covariances Among Exogenous Variables

Var1	Var2	Parameter	Estimate	Standard Error	t Value
F3	F7	CF3F7	0.65776	0.05434	12.11
F3	F8	CF3F8	0.06415	0.06136	1.05
F7	F8	CF7F8	-0.12475	0.05442	-2.29
E12	E16	CE12E16	0.17706	0.04155	4.26

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Manifest Variable Equations with Standardized Estimates

A1	=	0.9062 F2	+	0.4229 E2	
A2	=	0.8918*F2	+	0.4524 E3	
		LA2F2			
SP2	=	0.5501*F3	+	0.8351 E5	
		LSP2F3			
EU1	=	0.8743 F4	+	0.4853 E6	
EU2	=	0.9248*F4	+	0.3804 E7	
		LEU2F4			
I1	=	0.8601 F5	+	0.5102 E8	
I2	=	0.9721*F5	+	0.2345 E9	
		LI2F5			
T2	=	0.5081*F9	+	0.8613 E12	
		LT2F9			
C	=	0.9904 F7	+	0.1379 E13	
SK1	=	0.7279 F8	+	0.6857 E14	
SK2	=	0.6466*F8	+	0.7628 E15	
		LSK2F8			
FL1	=	0.7255*F9	+	0.6882 E16	
		LFL1F9			
FL2	=	0.8914*F9	+	0.4532 E17	
		LFL2F9			
LP1	=	0.9413 F10	+	0.3375 E18	
LP2	=	0.9098*F10	+	0.4151 E19	
		LLP2F10			
CA1	=	0.8757 F11	+	0.4828 E20	
CA2	=	0.8130*F11	+	0.5823 E21	
		LCA2F11			
CA3	=	0.8548*F11	+	0.5190 E22	
		LCA3F11			

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Latent Variable Equations with Standardized Estimates

F2	=	0.9342*F3		+	0.3567 D2							
		PF3F2										
F4	=	0.8687*F2		+	0.4953 D4							
		PF2F4										
F5	=	0.8960*F4		+	0.4441 D5							
		PF4F5										
F9	=	0.8092*F2		+	0.2075*F5		+	0.2021 D9				
		PF2F9			PF5F9							
F10	=	0.4708*F9		+	0.4128*F7		+	0.5868 D10				
		PF9F10			PF7F10							
F11	=	0.3153*F2		+	0.5793*F10		+	0.1942*F8		+	0.5033 D11	
		PF2F11			PF10F11			PF8F11				

Squared Multiple Correlations

	Variable	Error Variance	Total Variance	R-Square
1	A1	0.15952	0.89183	0.8211
2	A2	0.18553	0.90664	0.7954
3	SP2	0.73483	1.05373	0.3026
4	EU1	0.29716	1.26167	0.7645
5	EU2	0.15233	1.05265	0.8553
6	I1	0.25541	0.98122	0.7397
7	I2	0.05297	0.96342	0.9450
8	T2	0.89607	1.20795	0.2582
9	C	0.01608	0.84528	0.9810
10	SK1	0.48974	1.04162	0.5298
11	SK2	0.70708	1.21521	0.4181
12	FL1	0.40004	0.84455	0.5263
13	FL2	0.19257	0.93755	0.7946
14	LP1	0.11123	0.97658	0.8861
15	LP2	0.18370	1.06627	0.8277
16	CA1	0.22241	0.95400	0.7669
17	CA2	0.32867	0.96940	0.6610
18	CA3	0.29948	1.11173	0.7306
19	F2	0.09320	0.73231	0.8727
20	F4	0.23665	0.96451	0.7546
21	F5	0.14316	0.72582	0.8028
22	F9	0.01670	0.40862	0.9591
23	F10	0.29796	0.86535	0.6557
24	F11	0.18528	0.73159	0.7467

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Correlations Among Exogenous Variables

Var1	Var2	Parameter	Estimate
F3	F7	CF3F7	0.74793
F3	F8	CF3F8	0.08941
F7	F8	CF7F8	-0.18441
E12	E16	CE12E16	0.29574

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _PHI_[27:27]
Symmetric Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	F3	F7	F8	E2	E3	E5	E6
F3	1198.9053	146.5478	1.0929	1.3968	4.3665	.	0.2134
	.	.	.	0.2373	0.0367	.	0.6441
	.	.	.	-0.0388	0.0708	.	0.0178
	[VARF3]	[CF3F7]	[CF3F8]			Sing	
F7	146.5478	16.8709	5.2536	1.3975	5.3040	0.6543	0.0993
	.	.	.	0.2371	0.0213	0.4186	0.7526
	.	.	.	0.0249	-0.0500	0.4329	0.0079
	[CF3F7]	[VARF7]	[CF7F8]				
F8	1.0929	5.2536	15.2679	0.5920	0.0587	0.6522	0.1726
	.	.	.	0.4416	0.8085	0.4193	0.6778
	.	.	.	0.0208	-0.0068	-0.0422	-0.0140
	[CF3F8]	[CF7F8]	[VARF8]				

	F3	F7	F8	E2	E3	E5	E6
E2	1.3968	1.3975	0.5920	60.1547	4.5955	0.0111	0.5054
	0.2373	0.2371	0.4416	.	0.0321	0.9159	0.4771
	-0.0388	0.0249	0.0208	.	0.0470	0.0029	-0.0130
				[VARE2]			
E3	4.3665	5.3040	0.0587	4.5955	69.2626	2.4993	1.4692
	0.0367	0.0213	0.8085	0.0321	.	0.1139	0.2255
	0.0708	-0.0500	-0.0068	0.0470	.	-0.0446	0.0232
					[VARE3]		
E5	.	0.6543	0.6522	0.0111	2.4993	105.4110	0.5792

	F3	F7	F8	E2	E3	E5	E6
	.	0.4186	0.4193	0.9159	0.1139	.	0.4466
	.	0.4329	-0.0422	0.0029	-0.0446	.	-0.0257
	Sing					[VARE5]	
E6	0.2134	0.0993	0.1726	0.5054	1.4692	0.5792	75.3879
	0.6441	0.7526	0.6778	0.4771	0.2255	0.4466	.
	0.0178	0.0079	-0.0140	-0.0130	0.0232	-0.0257	.
							[VARE6]
E7	0.0093	0.3445	1.5128	1.4345	0.0568	1.9034	0.4536
	0.9232	0.5572	0.2187	0.2310	0.8117	0.1677	0.5006
	-0.0030	-0.0119	-0.0335	-0.0180	0.0037	0.0377	0.0205

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _PHI_[27:27]
Symmetric Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	E7	E8	E9	E12	E13	E14	E15
F3	0.0093	0.5314	0.0225	0.8332	1.7940	0.0314	0.5998
	0.9232	0.4660	0.8809	0.3614	0.1804	0.8594	0.4387
	-0.0030	-0.0248	-0.0041	-0.0538	1.2203	0.0122	0.0510
F7	0.3445	1.7253	0.0000	0.6967	.	0.1289	2.8449
	0.5572	0.1890	0.9953	0.4039	.	0.7195	0.0917
	-0.0119	0.0289	-0.0001	0.0311	.	0.0232	-0.1042
					Sing		
F8	1.5128	0.4783	0.4204	3.0404	1.7946	0.0447	2.5392
	0.2187	0.4892	0.5167	0.0812	0.1804	0.8326	0.1111
	-0.0335	0.0205	0.0153	0.0870	0.2314	0.0469	-0.3369
E2	1.4345	0.7274	0.7528	0.1790	0.6249	8.1378	5.3352
	0.2310	0.3937	0.3856	0.6723	0.4292	0.0043	0.0209
	-0.0180	0.0135	-0.0112	-0.0114	0.0149	0.0748	-0.0658
E3	0.0568	3.9333	1.3386	0.1382	1.6568	0.6159	0.9700
	0.8117	0.0473	0.2473	0.7100	0.1980	0.4326	0.3247
	0.0037	-0.0328	0.0156	-0.0105	-0.0250	-0.0215	0.0293
E5	1.9034	0.0596	1.3849	3.2186	0.4040	0.0346	0.2382
	0.1677	0.8071	0.2393	0.0728	0.5250	0.8525	0.6255

	E7	E8	E9	E12	E13	E14	E15
	0.0377	0.0072	0.0279	-0.0898	0.0538	0.0093	-0.0263
E6	0.4536	0.1362	8.6309	4.5785	0.0488	0.3426	1.7651
	0.5006	0.7121	0.0033	0.0324	0.8252	0.5583	0.1840
	0.0205	0.0079	-0.0550	0.0741	-0.0050	-0.0196	0.0487
E7	42.6994	7.2052	16.3810	1.3040	0.0599	4.1936	0.7052
	.	0.0073	0.0001	0.2535	0.8066	0.0406	0.4010
	.	-0.0495	0.0683	0.0319	-0.0045	-0.0555	0.0248
	[VARE7]						

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _PHI_[27:27]
Symmetric Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	E16	E17	E18	E19	E20	E21	E22
F3	0.0170	0.2931	0.2209	0.1125	3.6621	9.0244	7.4551
	0.8964	0.5882	0.6384	0.7373	0.0557	0.0027	0.0063
	0.0053	0.0182	0.0127	0.0094	-0.0601	0.1036	-0.0951
F7	0.1018	0.1281	1.1535	0.0019	1.4402	0.5102	2.8366
	0.7496	0.7204	0.2828	0.9655	0.2301	0.4750	0.0921
	-0.0082	-0.0077	-0.0244	-0.0010	0.0285	-0.0189	0.0446
F8	0.1133	0.4890	0.0425	0.5889	2.9507	0.0513	8.9862
	0.7364	0.4844	0.8367	0.4428	0.0858	0.8208	0.0027

	E16	E17	E18	E19	E20	E21	E22
	0.0115	-0.0197	-0.0059	-0.0227	-0.0588	-0.0084	0.1128
E2	0.0773	0.2101	1.5125	3.6898	5.7435	2.8674	0.7220
	0.7810	0.6467	0.2188	0.0547	0.0166	0.0904	0.3955
	0.0053	-0.0080	-0.0169	0.0290	-0.0398	0.0315	0.0158
E3	8.8860	6.7174	0.1636	0.3583	0.0481	0.6361	0.0007
	0.0029	0.0095	0.6858	0.5494	0.8265	0.4251	0.9783
	-0.0594	0.0464	-0.0058	-0.0094	-0.0038	-0.0155	-0.0005
E5	8.7049	1.6268	0.0608	0.0011	0.5262	3.1245	5.4405
	0.0032	0.2022	0.8053	0.9738	0.4682	0.0771	0.0197
	0.1014	-0.0359	0.0064	0.0009	-0.0224	0.0614	-0.0808
E6	2.7837	7.3724	1.3170	1.2655	3.1217	0.0922	1.9703
	0.0952	0.0066	0.2511	0.2606	0.0773	0.7614	0.1604
	-0.0396	0.0525	0.0202	0.0219	-0.0377	0.0073	-0.0336
E7	0.0229	3.1632	1.7105	4.5044	0.0466	3.0463	1.1129
	0.8798	0.0753	0.1909	0.0338	0.8290	0.0809	0.2915
	0.0029	-0.0280	0.0186	-0.0334	-0.0037	0.0339	-0.0204

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _PHI_[27:27]
Symmetric Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	D2	D4	D5	D9	D10	D11
F3	.	0.2112	0.6294	0.0452	1.8004	6.1535
	.	0.6459	0.4276	0.8317	0.1797	0.0131
	.	-0.0187	-0.0241	0.0049	-0.5146	-0.0993
	Sing					
F7	0.6581	0.5600	1.2508	0.0555	.	5.6603
	0.4172	0.4543	0.2634	0.8137	.	0.0174
	-0.6129	0.0194	0.0220	-0.0035	.	0.0613
					Sing	
F8	0.6520	0.2475	1.9504	0.0108	1.7951	5.7929
	0.4194	0.6189	0.1625	0.9171	0.1803	0.0161
	0.0598	-0.0169	0.0367	-0.0020	-0.0976	0.2064
E2	1.4138	8.8539	0.1165	0.0206	0.4149	0.0349
	0.2344	0.0029	0.7328	0.8860	0.5195	0.8517
	-0.0306	-0.0663	-0.0051	-0.0019	0.0125	-0.0032
E3	9.0654	1.5541	0.2041	0.2318	3.5679	0.8749
	0.0026	0.2125	0.6514	0.6302	0.0589	0.3496
	0.0794	0.0281	-0.0070	-0.0063	-0.0378	-0.0167
E5	.	6.4506	2.6533	0.0574	0.2648	2.0792
	.	0.0111	0.1033	0.8106	0.6069	0.1493
	.	0.0868	0.0429	-0.0045	-0.0186	-0.0444
	Sing					

	D2	D4	D5	D9	D10	D11
E6	0.8234	5.8492	9.1314	7.1455	1.5415	7.9417
	0.3642	0.0156	0.0025	0.0075	0.2144	0.0048
	0.0271	-0.0761	-0.0722	0.0346	0.0292	-0.0599
E7	0.9144	9.1318	5.8497	2.0131	0.4934	0.0591
	0.3389	0.0025	0.0156	0.1559	0.4824	0.8079
	-0.0232	0.0898	0.0572	-0.0151	-0.0134	0.0042

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _PHI_[27:27]
Symmetric Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	F3	F7	F8	E2	E3	E5	E6
E8	0.5314	1.7253	0.4783	0.7274	3.9333	0.0596	0.1362
	0.4660	0.1890	0.4892	0.3937	0.0473	0.8071	0.7121
	-0.0248	0.0289	0.0205	0.0135	-0.0328	0.0072	0.0079
E9	0.0225	0.0000	0.4204	0.7528	1.3386	1.3849	8.6309
	0.8809	0.9953	0.5167	0.3856	0.2473	0.2393	0.0033
	-0.0041	-0.0001	0.0153	-0.0112	0.0156	0.0279	-0.0550
E12	0.8332	0.6967	3.0404	0.1790	0.1382	3.2186	4.5785
	0.3614	0.4039	0.0812	0.6723	0.7100	0.0728	0.0324
	-0.0538	0.0311	0.0870	-0.0114	-0.0105	-0.0898	0.0741

	F3	F7	F8	E2	E3	E5	E6
E13	1.7940	.	1.7946	0.6249	1.6568	0.4040	0.0488
	0.1804	.	0.1804	0.4292	0.1980	0.5250	0.8252
	1.2203	.	0.2314	0.0149	-0.0250	0.0538	-0.0050
		Sing					
E14	0.0314	0.1289	0.0447	8.1378	0.6159	0.0346	0.3426
	0.8594	0.7195	0.8326	0.0043	0.4326	0.8525	0.5583
	0.0122	0.0232	0.0469	0.0748	-0.0215	0.0093	-0.0196
E15	0.5998	2.8449	2.5392	5.3352	0.9700	0.2382	1.7651
	0.4387	0.0917	0.1111	0.0209	0.3247	0.6255	0.1840
	0.0510	-0.1042	-0.3369	-0.0658	0.0293	-0.0263	0.0487
E16	0.0170	0.1018	0.1133	0.0773	8.8860	8.7049	2.7837
	0.8964	0.7496	0.7364	0.7810	0.0029	0.0032	0.0952
	0.0053	-0.0082	0.0115	0.0053	-0.0594	0.1014	-0.0396
E17	0.2931	0.1281	0.4890	0.2101	6.7174	1.6268	7.3724
	0.5882	0.7204	0.4844	0.6467	0.0095	0.2022	0.0066
	0.0182	-0.0077	-0.0197	-0.0080	0.0464	-0.0359	0.0525

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _PHI_[27:27]
Symmetric Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	E7	E8	E9	E12	E13	E14	E15
E8	7.2052	79.4265	0.7182	3.2046	0.1777	2.1510	0.6123
	0.0073	.	0.3967	0.0734	0.6734	0.1425	0.4339
	-0.0495	.	0.1041	-0.0545	0.0084	0.0433	-0.0252
		[VARE8]					
E9	16.3810	0.7182	5.4902	1.1260	0.4427	0.6313	1.1278
	0.0001	0.3967	.	0.2886	0.5058	0.4269	0.2882
	0.0683	0.1041	.	-0.0260	0.0108	-0.0187	0.0274
			[VARE9]				
E12	1.3040	3.2046	1.1260	122.1181	0.0429	0.0811	0.6890
	0.2535	0.0734	0.2886	.	0.8359	0.7758	0.4065
	0.0319	-0.0545	-0.0260	.	0.0070	0.0142	0.0451
				[VARE12]			
E13	0.0599	0.1777	0.4427	0.0429	0.0073	0.0938	0.4500
	0.8066	0.6734	0.5058	0.8359	.	0.7594	0.5023
	-0.0045	0.0084	0.0108	0.0070	.	-0.0167	-0.0354
					[VARE13]		
E14	4.1936	2.1510	0.6313	0.0811	0.0938	15.7397	5.7946
	0.0406	0.1425	0.4269	0.7758	0.7594	.	0.0161
	-0.0555	0.0433	-0.0187	0.0142	-0.0167	.	-0.8855
						[VARE14]	
E15	0.7052	0.6123	1.1278	0.6890	0.4500	5.7946	32.6426
	0.4010	0.4339	0.2882	0.4065	0.5023	0.0161	.

	E7	E8	E9	E12	E13	E14	E15
	0.0248	-0.0252	0.0274	0.0451	-0.0354	-0.8855	.
							[VARE15]
E16	0.0229	0.7413	5.5610	18.1613	0.5800	0.0520	0.4546
	0.8798	0.3892	0.0184	.	0.4463	0.8197	0.5002
	0.0029	0.0180	0.0404	.	-0.0178	-0.0078	0.0251
				[CE12E16]			
E17	3.1632	4.1400	9.8846	0.4517	0.2493	0.3499	0.2536
	0.0753	0.0419	0.0017	0.5015	0.6176	0.5542	0.6145
	-0.0280	0.0352	-0.0489	-0.0200	-0.0099	-0.0164	-0.0152

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _PHI_[27:27]
Symmetric Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	E16	E17	E18	E19	E20	E21	E22
E8	0.7413	4.1400	4.6978	0.4846	0.0569	0.0253	0.4433
	0.3892	0.0419	0.0302	0.4863	0.8115	0.8737	0.5055
	0.0180	0.0352	0.0336	-0.0119	0.0045	0.0034	-0.0140
E9	5.5610	9.8846	4.3410	0.0556	2.9411	0.3028	0.0394
	0.0184	0.0017	0.0372	0.8137	0.0864	0.5821	0.8426
	0.0404	-0.0489	-0.0260	0.0032	0.0257	-0.0093	0.0033
E12	18.1613	0.4517	4.2860	5.6588	2.4854	1.4498	2.4947
	.	0.5015	0.0384	0.0174	0.1149	0.2286	0.1142
	.	-0.0200	-0.0541	0.0687	0.0499	-0.0429	0.0561
	[CE12E16]						

	E16	E17	E18	E19	E20	E21	E22
E13	0.5800	0.2493	2.1544	0.0313	0.0832	0.0812	3.9367
	0.4463	0.6176	0.1422	0.8595	0.7729	0.7757	0.0472
	-0.0178	-0.0099	-0.0312	0.0039	0.0060	0.0067	0.0465
E14	0.0520	0.3499	0.9679	1.7222	1.9345	0.4145	9.9014
	0.8197	0.5542	0.3252	0.1894	0.1643	0.5197	0.0017
	-0.0078	-0.0164	-0.0263	0.0377	-0.0455	-0.0230	0.1137
E15	0.4546	0.2536	0.3416	2.6293	0.3274	3.5887	1.5900
	0.5002	0.6145	0.5589	0.1049	0.5672	0.0582	0.2073
	0.0251	-0.0152	0.0167	-0.0504	-0.0202	0.0733	-0.0493
E16	107.8845	0.8557	6.8818	3.5563	0.0696	3.0556	1.8401
	.	0.3550	0.0087	0.0593	0.7920	0.0805	0.1749
	.	-0.0245	0.0471	-0.0374	-0.0057	0.0426	-0.0330
	[VARE16]						
E17	0.8557	46.4278	1.6858	1.5438	0.0236	0.0092	0.6330
	0.3550	.	0.1942	0.2140	0.8780	0.9236	0.4263
	-0.0245	.	-0.0194	0.0202	0.0027	0.0019	0.0157
		[VARE17]					

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _PHI_[27:27]
Symmetric Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	D2	D4	D5	D9	D10	D11
E8	0.7026	4.9454	7.3252	6.2265	3.5952	0.0642
	0.4019	0.0262	0.0068	0.0126	0.0579	0.8000
	-0.0222	-0.0540	0.1790	0.0292	0.0393	-0.0047
E9	0.7831	1.1835	6.2361	7.3221	2.8151	2.0583
	0.3762	0.2766	0.0125	0.0068	0.0934	0.1514
	-0.0188	0.0228	-0.2102	-0.0312	-0.0286	0.0214
E12	0.0899	0.3722	8.6477	0.0076	1.8231	4.1912
	0.7643	0.5418	0.0033	0.9304	0.1769	0.0406
	0.0136	0.0214	-0.0801	-0.0019	0.0472	0.0644
E13	0.2113	0.2752	1.0883	0.7670	.	5.9544
	0.6457	0.5998	0.2968	0.3811	.	0.0147
	-0.0599	0.0125	0.0189	-0.0123	.	0.0520
					Sing	
E14	0.0005	7.6727	0.0681	0.0551	1.1535	2.5383
	0.9822	0.0056	0.7941	0.8144	0.2828	0.1111
	0.0011	-0.0928	0.0068	-0.0044	0.0434	0.0785
E15	0.9628	8.3099	0.3171	0.0801	1.9444	0.0447
	0.3265	0.0039	0.5733	0.7772	0.1632	0.8326
	0.0467	0.1052	0.0161	-0.0057	-0.0562	-0.0101

	D2	D4	D5	D9	D10	D11
E16	3.1342	4.7741	13.8215	0.0784	1.3488	0.0072
	0.0767	0.0289	0.0002	0.7795	0.2455	0.9325
	-0.0552	0.0547	0.0716	-0.0055	0.0282	-0.0018
E17	1.7834	2.1589	4.9898	4.0027	0.2069	0.9797
	0.1817	0.1417	0.0255	0.0454	0.6492	0.3223
	0.0347	-0.0371	-0.0434	-0.0943	0.0103	0.0176

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _PHI_[27:27]
Symmetric Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	F3	F7	F8	E2	E3	E5	E6
E18	0.2209	1.1535	0.0425	1.5125	0.1636	0.0608	1.3170
	0.6384	0.2828	0.8367	0.2188	0.6858	0.8053	0.2511
	0.0127	-0.0244	-0.0059	-0.0169	-0.0058	0.0064	0.0202
E19	0.1125	0.0019	0.5889	3.6898	0.3583	0.0011	1.2655
	0.7373	0.9655	0.4428	0.0547	0.5494	0.9738	0.2606
	0.0094	-0.0010	-0.0227	0.0290	-0.0094	0.0009	0.0219
E20	3.6621	1.4402	2.9507	5.7435	0.0481	0.5262	3.1217
	0.0557	0.2301	0.0858	0.0166	0.8265	0.4682	0.0773
	-0.0601	0.0285	-0.0588	-0.0398	-0.0038	-0.0224	-0.0377

	F3	F7	F8	E2	E3	E5	E6
E21	9.0244	0.5102	0.0513	2.8674	0.6361	3.1245	0.0922
	0.0027	0.4750	0.8208	0.0904	0.4251	0.0771	0.7614
	0.1036	-0.0189	-0.0084	0.0315	-0.0155	0.0614	0.0073
E22	7.4551	2.8366	8.9862	0.7220	0.0007	5.4405	1.9703
	0.0063	0.0921	0.0027	0.3955	0.9783	0.0197	0.1604
	-0.0951	0.0446	0.1128	0.0158	-0.0005	-0.0808	-0.0336
D2	.	0.6581	0.6520	1.4138	9.0654	.	0.8234
	.	0.4172	0.4194	0.2344	0.0026	.	0.3642
	.	-0.6129	0.0598	-0.0306	0.0794	.	0.0271
	Sing					Sing	
D4	0.2112	0.5600	0.2475	8.8539	1.5541	6.4506	5.8492
	0.6459	0.4543	0.6189	0.0029	0.2125	0.0111	0.0156
	-0.0187	0.0194	-0.0169	-0.0663	0.0281	0.0868	-0.0761
D5	0.6294	1.2508	1.9504	0.1165	0.2041	2.6533	9.1314
	0.4276	0.2634	0.1625	0.7328	0.6514	0.1033	0.0025
	-0.0241	0.0220	0.0367	-0.0051	-0.0070	0.0429	-0.0722

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _PHI_[27:27]
Symmetric Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	E7	E8	E9	E12	E13	E14	E15
E18	1.7105	4.6978	4.3410	4.2860	2.1544	0.9679	0.3416
	0.1909	0.0302	0.0372	0.0384	0.1422	0.3252	0.5589
	0.0186	0.0336	-0.0260	-0.0541	-0.0312	-0.0263	0.0167
E19	4.5044	0.4846	0.0556	5.6588	0.0313	1.7222	2.6293
	0.0338	0.4863	0.8137	0.0174	0.8595	0.1894	0.1049
	-0.0334	-0.0119	0.0032	0.0687	0.0039	0.0377	-0.0504
E20	0.0466	0.0569	2.9411	2.4854	0.0832	1.9345	0.3274
	0.8290	0.8115	0.0864	0.1149	0.7729	0.1643	0.5672
	-0.0037	0.0045	0.0257	0.0499	0.0060	-0.0455	-0.0202
E21	3.0463	0.0253	0.3028	1.4498	0.0812	0.4145	3.5887
	0.0809	0.8737	0.5821	0.2286	0.7757	0.5197	0.0582
	0.0339	0.0034	-0.0093	-0.0429	0.0067	-0.0230	0.0733
E22	1.1129	0.4433	0.0394	2.4947	3.9367	9.9014	1.5900
	0.2915	0.5055	0.8426	0.1142	0.0472	0.0017	0.2073
	-0.0204	-0.0140	0.0033	0.0561	0.0465	0.1137	-0.0493
D2	0.9144	0.7026	0.7831	0.0899	0.2113	0.0005	0.9628
	0.3389	0.4019	0.3762	0.7643	0.6457	0.9822	0.3265
	-0.0232	-0.0222	-0.0188	0.0136	-0.0599	0.0011	0.0467

	E7	E8	E9	E12	E13	E14	E15
D4	9.1318	4.9454	1.1835	0.3722	0.2752	7.6727	8.3099
	0.0025	0.0262	0.2766	0.5418	0.5998	0.0056	0.0039
	0.0898	-0.0540	0.0228	0.0214	0.0125	-0.0928	0.1052
D5	5.8497	7.3252	6.2361	8.6477	1.0883	0.0681	0.3171
	0.0156	0.0068	0.0125	0.0033	0.2968	0.7941	0.5733
	0.0572	0.1790	-0.2102	-0.0801	0.0189	0.0068	0.0161

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _PHI_[27:27]
Symmetric Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	E16	E17	E18	E19	E20	E21	E22
E18	6.8818	1.6858	22.9060	6.9970	4.1789	0.2963	3.3714
	0.0087	0.1942	.	0.0082	0.0409	0.5862	0.0663
	0.0471	-0.0194	.	0.2525	0.0349	0.0102	-0.0348
			[VARE18]				
E19	3.5563	1.5438	6.9970	46.3874	0.8871	0.6063	0.0372
	0.0593	0.2140	0.0082	.	0.3463	0.4362	0.8471
	-0.0374	0.0202	0.2525	.	-0.0175	-0.0160	-0.0040
				[VARE19]			
E20	0.0696	0.0236	4.1789	0.8871	56.6411	12.1740	21.7351
	0.7920	0.8780	0.0409	0.3463	.	0.0005	0.0000
	-0.0057	0.0027	0.0349	-0.0175	.	-0.1025	0.1562
					[VARE20]		

	E16	E17	E18	E19	E20	E21	E22
E21	3.0556	0.0092	0.2963	0.6063	12.1740	82.9755	1.2465
	0.0805	0.9236	0.5862	0.4362	0.0005	.	0.2642
	0.0426	0.0019	0.0102	-0.0160	-0.1025	.	-0.0347
						[VARE21]	
E22	1.8401	0.6330	3.3714	0.0372	21.7351	1.2465	67.1601
	0.1749	0.4263	0.0663	0.8471	0.0000	0.2642	.
	-0.0330	0.0157	-0.0348	-0.0040	0.1562	-0.0347	.
							[VARE22]
D2	3.1342	1.7834	0.0882	0.0899	1.9659	3.5354	1.6573
	0.0767	0.1817	0.7665	0.7643	0.1609	0.0601	0.1980
	-0.0552	0.0347	0.0062	0.0066	-0.0345	0.0510	-0.0352
D4	4.7741	2.1589	4.3584	2.5649	0.3276	3.2681	8.9552
	0.0289	0.1417	0.0368	0.1093	0.5671	0.0706	0.0028
	0.0547	-0.0371	0.0372	-0.0312	0.0122	0.0432	-0.0713
D5	13.8215	4.9898	0.4319	0.0341	6.7962	0.3329	0.1161
	0.0002	0.0255	0.5111	0.8536	0.0091	0.5640	0.7333
	0.0716	-0.0434	-0.0092	-0.0028	0.0434	-0.0108	-0.0064

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _PHI_[27:27]
Symmetric Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	D2	D4	D5	D9	D10	D11
E18	0.0882	4.3584	0.4319	0.0002	4.5216	0.9408
	0.7665	0.0368	0.5111	0.9900	0.0335	0.3321
	0.0062	0.0372	-0.0092	0.0001	0.0874	0.0211
E19	0.0899	2.5649	0.0341	0.4494	0.9403	4.5216
	0.7643	0.1093	0.8536	0.5026	0.3322	0.0335
	0.0066	-0.0312	-0.0028	0.0075	-0.0400	-0.0470
E20	1.9659	0.3276	6.7962	1.4806	4.7954	1.2464
	0.1609	0.5671	0.0091	0.2237	0.0285	0.2642
	-0.0345	0.0122	0.0434	0.0145	0.0550	0.0352
E21	3.5354	3.2681	0.3329	0.0247	6.3643	21.7359
	0.0601	0.0706	0.5640	0.8750	0.0116	0.0000
	0.0510	0.0432	-0.0108	-0.0021	-0.0686	-0.1387
E22	1.6573	8.9552	0.1161	0.0001	1.9220	12.1746
	0.1980	0.0028	0.7333	0.9914	0.1656	0.0005
	-0.0352	-0.0713	-0.0064	0.0001	-0.0383	0.1154

	D2	D4	D5	D9	D10	D11
D2	2.2093	4.3312	3.1542	0.1273	0.1059	1.5311
	.	0.0374	0.0757	0.7212	0.7449	0.2159
	.	-0.0654	-0.0419	0.0064	0.0182	-0.0367
	[VARD2]					
D4	4.3312	40.1561	0.4538	0.7171	0.1623	0.5477
	0.0374	.	0.5005	0.3971	0.6871	0.4593
	-0.0654	.	-0.0165	0.0186	0.0102	-0.0158
		[VARD4]				
D5	3.1542	0.4538	34.2203	0.7169	0.0009	3.2346
	0.0757	0.5005	.	0.3972	0.9756	0.0721
	-0.0419	-0.0165	.	-0.0145	-0.0006	0.0298
			[VARD5]			

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _PHI_[27:27]
Symmetric Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	F3	F7	F8	E2	E3	E5	E6
D9	0.0452	0.0555	0.0108	0.0206	0.2318	0.0574	7.1455
	0.8317	0.8137	0.9171	0.8860	0.6302	0.8106	0.0075
	0.0049	-0.0035	-0.0020	-0.0019	-0.0063	-0.0045	0.0346
D10	1.8004	.	1.7951	0.4149	3.5679	0.2648	1.5415
	0.1797	.	0.1803	0.5195	0.0589	0.6069	0.2144
	-0.5146	.	-0.0976	0.0125	-0.0378	-0.0186	0.0292
		Sing					
D11	6.1535	5.6603	5.7929	0.0349	0.8749	2.0792	7.9417
	0.0131	0.0174	0.0161	0.8517	0.3496	0.1493	0.0048
	-0.0993	0.0613	0.2064	-0.0032	-0.0167	-0.0444	-0.0599

Lagrange Multiplier and Wald Test Indices _PHI_[27:27]
Symmetric Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	E7	E8	E9	E12	E13	E14	E15
D9	2.0131	6.2265	7.3221	0.0076	0.7670	0.0551	0.0801
	0.1559	0.0126	0.0068	0.9304	0.3811	0.8144	0.7772
	-0.0151	0.0292	-0.0312	-0.0019	-0.0123	-0.0044	-0.0057
D10	0.4934	3.5952	2.8151	1.8231	.	1.1535	1.9444
	0.4824	0.0579	0.0934	0.1769	.	0.2828	0.1632
	-0.0134	0.0393	-0.0286	0.0472	.	0.0434	-0.0562
					Sing		
D11	0.0591	0.0642	2.0583	4.1912	5.9544	2.5383	0.0447
	0.8079	0.8000	0.1514	0.0406	0.0147	0.1111	0.8326
	0.0042	-0.0047	0.0214	0.0644	0.0520	0.0785	-0.0101

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _PHI_[27:27]
Symmetric Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	E16	E17	E18	E19	E20	E21	E22
D9	0.0784	4.0027	0.0002	0.4494	1.4806	0.0247	0.0001
	0.7795	0.0454	0.9900	0.5026	0.2237	0.8750	0.9914
	-0.0055	-0.0943	0.0001	0.0075	0.0145	-0.0021	0.0001
D10	1.3488	0.2069	4.5216	0.9403	4.7954	6.3643	1.9220
	0.2455	0.6492	0.0335	0.3322	0.0285	0.0116	0.1656
	0.0282	0.0103	0.0874	-0.0400	0.0550	-0.0686	-0.0383
D11	0.0072	0.9797	0.9408	4.5216	1.2464	21.7359	12.1746
	0.9325	0.3223	0.3321	0.0335	0.2642	0.0000	0.0005
	-0.0018	0.0176	0.0211	-0.0470	0.0352	-0.1387	0.1154

Lagrange Multiplier and Wald Test Indices _PHI_[27:27]
Symmetric Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	D2	D4	D5	D9	D10	D11
D9	0.1273	0.7171	0.7169	1.6594	3.2366	1.2328
	0.7212	0.3971	0.3972	.	0.0720	0.2669
	0.0064	0.0186	-0.0145	.	0.0292	0.0134
				[VARD9]		
D10	0.1059	0.1623	0.0009	3.2366	37.9223	6.9901
	0.7449	0.6871	0.9756	0.0720	.	0.0082
	0.0182	0.0102	-0.0006	0.0292	.	-0.1332
					[VARD10]	
D11	1.5311	0.5477	3.2346	1.2328	6.9901	36.0344
	0.2159	0.4593	0.0721	0.2669	0.0082	.
	-0.0367	-0.0158	0.0298	0.0134	-0.1332	.
						[VARD11]

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Rank Order of the 10 Largest Lagrange Multipliers in _PHI_

Row	Column	Chi-Square	Pr > ChiSq
D11	E21	21.73594	<.0001
E22	E20	21.73514	<.0001
E9	E7	16.38102	<.0001
D5	E16	13.82149	0.0002
D11	E22	12.17458	0.0005
E21	E20	12.17397	0.0005
E22	E14	9.90143	0.0017
E17	E9	9.88456	0.0017
D4	E7	9.13182	0.0025
D5	E6	9.13145	0.0025

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _GAMMA_[24:3]
General Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	F3	F7	F8
A1	1.4090	0.9883	0.1034
	0.2352	0.3201	0.7478
	0.2719	0.0512	0.0161
A2	9.0637	6.0518	0.4181
	0.0026	0.0139	0.5179
	-0.7056	-0.1305	0.0336
SP2	84.1887	0.6530	0.6522
	.	0.4190	0.4193
	.	0.2054	-0.0749
	[LSP2F3]		
EU1	4.0791	1.2500	0.2283
	0.0434	0.2636	0.6328
	0.2190	0.0631	-0.0300
EU2	6.0575	0.8984	1.1952
	0.0138	0.3432	0.2743
	-0.2449	-0.0443	-0.0555
I1	3.1188	2.4257	0.0507
	0.0774	0.1194	0.8218

	F3	F7	F8
	0.1506	0.0748	0.0124
I2	0.0678	0.0813	0.4274
	0.7945	0.7755	0.5133
	-0.0190	-0.0111	0.0289
T2	0.5254	0.1298	2.0823
	0.4686	0.7187	0.1490
	0.2056	0.0320	0.1345

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _GAMMA_[24:3]
General Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	F3	F7	F8
C	1.8003	.	1.7941
	0.1797	.	0.1804
	0.9601	.	0.4103
		Sing	
SK1	0.2291	0.2721	.
	0.6322	0.6019	.
	0.0375	0.0440	.
			Sing
SK2	0.3153	1.2815	20.7523
	0.5745	0.2576	.
	-0.0422	-0.0918	.
			[LSK2F8]

	F3	F7	F8
FL1	0.8649	0.3364	0.2103
	0.3524	0.5619	0.6465
	-0.1901	-0.0357	0.0293
FL2	0.2393	0.0001	0.3081
	0.6247	0.9940	0.5788
	0.0976	-0.0004	-0.0291
LP1	2.1608	3.5210	0.0265
	0.1416	0.0606	0.8707
	-0.1406	-0.1310	0.0087
LP2	0.6582	0.4722	0.5365
	0.4172	0.4920	0.4639
	0.0789	0.0491	-0.0404
CA1	5.1272	0.1988	6.0088
	0.0236	0.6557	0.0142
	-0.1916	0.0245	-0.1586

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _GAMMA_[24:3]
General Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	F3	F7	F8
CA2	29.6929	4.5093	0.1489
	0.0000	0.0337	0.6996
	0.4706	0.1264	0.0267
CA3	5.7076	0.2837	4.8242
	0.0169	0.5943	0.0281
	-0.2180	-0.0323	0.1555
F2	233.5262	0.6535	0.6522
	.	0.4189	0.4193
	.	-0.2907	0.1060
	[PF3F2]		
F4	4.3340	1.3503	0.6135
	0.0374	0.2452	0.4335
	0.5812	0.0739	-0.0495
F5	1.8904	1.0456	1.0158
	0.1692	0.3065	0.3135
	0.1155	0.0450	0.0493
F9	0.1265	0.0550	0.0002
	0.7221	0.8146	0.9881
	-0.0565	-0.0085	-0.0005

	F3	F7	F8
F10	1.7953	4.9636	1.7955
	0.1803	.	0.1803
	-0.4049	.	-0.1730
		[PF7F10]	
F11	1.5314	4.9864	10.9750
	0.2159	0.0255	.
	0.3257	0.1546	.
			[PF8F11]

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Rank Order of the 10 Largest Lagrange Multipliers in _GAMMA_

Row	Column	Chi-Square	Pr > ChiSq
CA2	F3	29.69290	<.0001
A2	F3	9.06373	0.0026
EU2	F3	6.05749	0.0138
A2	F7	6.05182	0.0139
CA1	F8	6.00883	0.0142
CA3	F3	5.70756	0.0169
CA1	F3	5.12715	0.0236
F11	F7	4.98637	0.0255
CA3	F8	4.82422	0.0281
CA2	F7	4.50930	0.0337

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _BETA_[24:24]
General Matrix
Identity-Minus-Inverse Model Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	A1	A2	SP2	EU1	EU2	I1	I2	T2
A1	.	4.5919	0.0437	4.0564	6.3724	0.3935	3.7718	0.2447
	.	0.0321	0.8345	0.0440	0.0116	0.5305	0.0521	0.6208
	.	0.2535	0.0074	-0.0940	-0.1494	-0.0280	-0.1086	-0.0159
	Sing							
A2	4.5961	.	3.2084	2.3640	0.8227	1.2891	0.4124	1.6170
	0.0320	.	0.0733	0.1242	0.3644	0.2562	0.5207	0.2035
	0.2948	.	-0.0659	0.0740	0.0550	-0.0524	0.0367	-0.0426
		Sing						
SP2	0.0112	2.4986	.	0.7552	5.7672	3.6389	6.4055	0.6730
	0.9157	0.1139	.	0.3848	0.0163	0.0564	0.0114	0.4120
	0.0180	-0.2404	.	0.0693	0.2335	0.1477	0.2299	-0.0479
			Sing					
EU1	0.8594	4.7991	0.0579	.	0.4546	0.9626	10.6885	4.4473
	0.3539	0.0285	0.8098	.	0.5002	0.3265	0.0011	0.0350
	0.0713	0.1606	-0.0102	.	0.1345	-0.0702	-0.3741	0.0837
				Sing				
EU2	6.2549	1.8379	0.6167	0.4531	.	2.0557	10.6016	0.6650
	0.0124	0.1752	0.4323	0.5009	.	0.1516	0.0011	0.4148
	-0.1699	-0.0869	0.0272	0.0690	.	-0.0913	0.3641	0.0263
					Sing			

	A1	A2	SP2	EU1	EU2	I1	I2	T2
I1	1.9307	0.2277	0.4476	0.0282	10.0564	.	0.7145	1.4836
	0.1647	0.6332	0.5035	0.8667	0.0015	.	0.3979	0.2232
	0.0847	-0.0280	0.0246	-0.0116	-0.3414	.	1.9645	-0.0426
						Sing		
I2	0.8152	0.2030	1.0374	6.4066	18.6971	0.7166	.	0.3758
	0.3666	0.6523	0.3084	0.0114	0.0000	0.3973	.	0.5398
	-0.0465	0.0222	0.0302	-0.1557	0.4470	0.4074	.	-0.0174
							Sing	
T2	0.0012	0.0013	2.5583	4.5692	1.8143	4.6695	2.1576	.
	0.9726	0.9713	0.1097	0.0326	0.1780	0.0307	0.1419	.
	0.0049	0.0048	-0.1029	0.1813	0.1414	-0.1855	-0.1579	.
								Sing

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _BETA_[24:24]
General Matrix
Identity-Minus-Inverse Model Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	C	SK1	SK2	FL1	FL2	LP1	LP2	CA1
A1	0.9821	3.1284	1.9483	0.0074	0.9011	0.0543	2.6808	1.1840
	0.3217	0.0769	0.1628	0.9316	0.3425	0.8157	0.1016	0.2766
	0.0492	0.0524	-0.0381	-0.0043	-0.0808	0.0109	0.0696	-0.0479
A2	5.8745	0.0024	1.0089	10.5114	5.9931	5.9340	5.8609	2.5627
	0.0154	0.9606	0.3152	0.0012	0.0144	0.0149	0.0155	0.1094
	-0.1238	-0.0015	0.0286	-0.1700	0.2118	-0.1173	-0.1068	-0.0732

	C	SK1	SK2	FL1	FL2	LP1	LP2	CA1
SP2	0.6913	0.1436	0.5625	7.6451	0.3025	0.0015	0.0013	1.6841
	0.4057	0.7047	0.4532	0.0057	0.5823	0.9694	0.9716	0.1944
	0.2094	-0.0208	-0.0381	0.2431	-0.0710	0.0035	-0.0029	-0.1040
EU1	1.1530	0.3657	0.4039	0.0832	10.1634	4.2486	4.4087	1.2264
	0.2829	0.5454	0.5251	0.7731	0.0014	0.0393	0.0358	0.2681
	0.0587	-0.0227	0.0220	-0.0166	0.2376	0.1081	0.1026	-0.0561
EU2	0.8577	3.1376	0.0003	0.0509	6.8164	0.6931	4.7965	1.3901
	0.3544	0.0765	0.9868	0.8215	0.0090	0.4051	0.0285	0.2384
	-0.0418	-0.0536	-0.0005	-0.0106	-0.1647	-0.0359	-0.0878	-0.0491
I1	2.3256	0.8753	0.1630	0.9106	6.9130	8.7723	3.2472	1.9571
	0.1273	0.3495	0.6864	0.3400	0.0086	0.0031	0.0715	0.1618
	0.0710	0.0308	-0.0123	0.0487	0.1770	0.1355	0.0768	0.0613
I2	0.0631	0.0020	1.1152	2.7557	9.1160	4.5232	1.5113	0.7376
	0.8017	0.9645	0.2909	0.0969	0.0025	0.0334	0.2189	0.3904
	-0.0095	-0.0012	0.0257	0.0707	-0.1832	-0.0801	-0.0430	0.0305
T2	0.1266	1.0314	1.7387	.	0.4512	0.1371	4.8645	7.5295
	0.7220	0.3098	0.1873	.	0.5018	0.7112	0.0274	0.0061
	0.0305	0.0564	0.0678	.	-0.1036	0.0311	0.1708	0.2183
				Sing				

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Lagrange Multiplier and Wald Test Indices _BETA_[24:24]
General Matrix
Identity-Minus-Inverse Model Matrix
Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	CA2	CA3	F2	F4	F5	F9	F10	F11
A1	2.2391	0.7300	.	8.8580	4.2079	5.1193	0.7719	0.2556
	0.1346	0.3929	.	0.0029	0.0402	0.0237	0.3796	0.6132
	0.0608	0.0340	.	-0.2803	-0.1511	-1.1305	0.0516	0.0346
			Sing					
A2	3.3928	2.0122	473.2932	1.5544	0.2010	0.0253	8.2800	5.1657
	0.0655	0.1560	.	0.2125	0.6539	0.8735	0.0040	0.0230
	-0.0778	-0.0585	.	0.1187	0.0336	0.0797	-0.1744	-0.1603
			[LA2F2]					
SP2	0.2303	5.2963	.	6.4517	6.9389	5.0276	0.0056	1.8577
	0.6313	0.0214	.	0.0111	0.0084	0.0249	0.9404	0.1729
	0.0357	-0.1669	.	0.3666	0.3080	1.5242	-0.0088	-0.1693
			Sing					
EU1	0.0020	0.9596	5.8517	.	9.1284	6.4717	4.0849	0.0612
	0.9648	0.3273	0.0156	.	0.0025	0.0110	0.0433	0.8045
	0.0021	-0.0453	0.3206	.	-0.5046	0.5550	0.1274	-0.0177
				Sing				
EU2	0.0502	2.6889	9.1343	459.3542	5.8477	8.7138	2.3818	2.3280
	0.8227	0.1010	0.0025	.	0.0156	0.0032	0.1228	0.1271
	0.0088	-0.0622	-0.3783	.	0.3992	-0.5991	-0.0807	-0.0912
				[LEU2F4]				

I1	1.5346	0.7188	2.1646	7.3273	.	4.1011	7.2019	3.1725
	0.2154	0.3965	0.1412	0.0068	.	0.0429	0.0073	0.0749
	0.0517	0.0339	0.1525	-0.9719	.	0.3379	0.1463	0.1091
					Sing			
I2	0.1593	0.0053	0.3758	6.2302	474.1609	1.3647	2.9179	0.0037
	0.6898	0.9419	0.5399	0.0126	.	0.2427	0.0876	0.9513
	-0.0134	0.0024	-0.0549	1.1409	.	-0.1695	-0.0770	-0.0031
					[LI2F5]			
T2	0.6485	7.5281	2.0047	1.3991	2.0702	113.9815	1.8922	7.7993
	0.4207	0.0061	0.1568	0.2369	0.1502	.	0.1689	0.0052
	0.0600	0.1981	0.7333	0.2047	-0.2039	.	0.1431	0.3330
						[LT2F9]		

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Lagrange Multiplier and Wald Test Indices _BETA_[24:24]
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Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	A1	A2	SP2	EU1	EU2	I1	I2	T2
C	0.8293	1.2937	0.5203	0.0380	0.0795	1.0045	1.2091	0.0025
	0.3625	0.2554	0.4707	0.8455	0.7779	0.3162	0.2715	0.9602
	0.1046	-0.1166	0.0786	0.0106	0.0189	0.0540	0.0711	0.0020
SK1	2.6342	0.0003	0.1373	1.2279	2.5774	0.0311	0.6787	0.0730
	0.1046	0.9858	0.7110	0.2678	0.1084	0.8600	0.4100	0.7870
	0.1173	-0.0012	0.0217	-0.0624	-0.1010	0.0109	-0.0531	0.0143

	A1	A2	SP2	EU1	EU2	I1	I2	T2
SK2	1.4920	0.0179	0.4583	2.1081	1.3547	0.2538	1.3931	0.8455
	0.2219	0.8936	0.4984	0.1465	0.2445	0.6144	0.2379	0.3578
	-0.0867	0.0094	-0.0416	0.0836	0.0741	0.0323	0.0777	0.0517
FL1	0.5005	12.4833	7.1704	0.2988	0.8398	8.1998	14.3297	.
	0.4793	0.0004	0.0074	0.5846	0.3595	0.0042	0.0002	.
	-0.0742	-0.3398	0.1186	-0.0323	0.0675	0.1738	0.2964	.
								Sing
FL2	0.0737	9.4414	1.3556	3.0146	2.3273	0.2248	11.2057	0.9929
	0.7861	0.0021	0.2443	0.0825	0.1271	0.6354	0.0008	0.3190
	0.0277	0.2808	-0.0426	0.0868	-0.0973	0.0275	-0.3183	-0.0375
LP1	1.9650	0.7501	0.0041	1.7407	1.6668	2.6081	0.0090	2.2322
	0.1610	0.3864	0.9492	0.1871	0.1967	0.1063	0.9243	0.1352
	-0.0765	-0.0454	-0.0021	0.0487	0.0559	0.0626	-0.0042	-0.0444
LP2	2.6866	0.0037	0.0416	0.0550	2.1212	0.7632	0.2600	3.9169
	0.1012	0.9518	0.8384	0.8145	0.1453	0.3823	0.6101	0.0478
	0.0943	0.0034	0.0073	0.0093	-0.0675	-0.0366	-0.0240	0.0645
CA1	9.6592	3.0943	1.5997	3.7326	1.1824	0.1713	0.3964	1.1501
	0.0019	0.0786	0.2059	0.0534	0.2769	0.6789	0.5290	0.2835
	-0.1914	-0.1046	-0.0486	-0.0819	-0.0532	0.0184	0.0308	0.0380

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Lagrange Multiplier and Wald Test Indices _BETA_[24:24]
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Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	C	SK1	SK2	FL1	FL2	LP1	LP2	CA1
C	.	0.0254	0.1153	0.3738	0.0524	1.4268	0.1008	2.6077
	.	0.8734	0.7342	0.5409	0.8190	0.2323	0.7509	0.1063
	.	0.0157	-0.0240	-0.0369	-0.0212	-0.2203	0.0373	0.0993
	Sing							
SK1	0.2569	.	5.7998	0.0003	0.0249	0.2528	1.6486	0.0978
	0.6123	.	0.0160	0.9861	0.8746	0.6151	0.1992	0.7545
	0.0422	.	-1.2524	-0.0012	-0.0109	0.0344	0.0827	0.0231
		Sing						
SK2	1.2831	5.7913	.	0.4191	0.0770	0.9277	2.8268	1.1422
	0.2573	0.0161	.	0.5174	0.7814	0.3355	0.0927	0.2852
	-0.0906	-1.8082	.	0.0450	-0.0190	-0.0646	-0.1072	-0.0781
			Sing					
FL1	0.3485	0.0221	0.4813	.	0.8566	2.3700	0.1441	0.0019
	0.5550	0.8819	0.4879	.	0.3547	0.1237	0.7043	0.9651
	-0.0351	0.0057	0.0244	.	-0.1274	0.0893	-0.0203	0.0024
				Sing				
FL2	0.0008	0.4292	0.3982	2.1309	.	0.0390	0.9054	0.4860
	0.9781	0.5124	0.5280	0.1444	.	0.8435	0.3413	0.4857
	-0.0014	-0.0204	-0.0181	-0.1187	.	-0.0104	0.0452	0.0320
					Sing			

	C	SK1	SK2	FL1	FL2	LP1	LP2	CA1
LP1	3.4711	0.2177	0.2415	2.6155	1.7110	.	7.0083	3.2939
	0.0624	0.6408	0.6231	0.1058	0.1909	.	0.0081	0.0695
	-0.1240	-0.0146	0.0139	0.0684	-0.0691	.	1.3748	0.1031
						Sing		
LP2	0.4414	0.0873	2.2062	0.7579	1.2936	6.9942	.	3.1084
	0.5065	0.7677	0.1375	0.3840	0.2554	0.0082	.	0.0779
	0.0453	0.0096	-0.0444	-0.0399	0.0629	2.2704	.	-0.1054
							Sing	
CA1	0.1953	4.8946	2.7101	0.2695	0.9595	5.5733	0.4489	.
	0.6586	0.0269	0.0997	0.6037	0.3273	0.0182	0.5028	.
	0.0234	-0.0834	-0.0567	-0.0254	-0.0560	0.1681	0.0419	.
								Sing

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Lagrange Multiplier and Wald Test Indices _BETA_[24:24]
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Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	CA2	CA3	F2	F4	F5	F9	F10	F11
C	2.0096	7.4786	1.3384	0.4346	1.2260	0.8426	0.8467	7.0098
	0.1563	0.0062	0.2473	0.5097	0.2682	0.3587	0.3575	0.0081
	0.0782	0.1501	1.0941	0.0674	0.0926	0.4799	0.7004	0.3021
SK1	0.2312	7.4163	0.1901	1.0522	0.5741	0.0234	0.7594	1.5429
	0.6306	0.0065	0.6628	0.3050	0.4486	0.8783	0.3835	0.2142
	0.0336	0.1831	0.0372	-0.0726	-0.0584	0.0174	0.0664	0.1127

	CA2	CA3	F2	F4	F5	F9	F10	F11
SK2	0.1650	2.0334	0.1223	1.0247	1.2062	0.0047	1.5130	0.9308
	0.6846	0.1539	0.7265	0.3114	0.2721	0.9456	0.2187	0.3347
	0.0286	-0.0956	-0.0287	0.0709	0.0858	-0.0075	-0.0910	-0.0844
FL1	1.8836	0.4176	12.3271	2.1089	14.3912	325.6782	0.5479	0.0830
	0.1699	0.5182	0.0004	0.1464	0.0001	.	0.4592	0.7733
	0.0702	-0.0321	-1.3609	0.1814	0.3925	.	0.0533	0.0237
						[LFL1F9]		
FL2	0.3547	1.1683	11.5047	0.7010	7.9468	491.1637	0.1499	0.8879
	0.5515	0.2797	0.0007	0.4025	0.0048	.	0.6986	0.3460
	0.0253	0.0448	1.6859	-0.1007	-0.3631	.	0.0254	0.0669
						[LFL2F9]		
LP1	0.4923	1.3453	1.0453	0.8594	0.1085	0.4894	.	0.3486
	0.4829	0.2461	0.3066	0.3539	0.7418	0.4842	.	0.5549
	0.0338	-0.0576	-0.0917	0.0525	0.0182	-0.0824	.	0.0650
							Sing	
LP2	2.3158	1.3349	0.5561	0.4457	0.3751	0.2650	555.0681	4.1642
	0.1281	0.2479	0.4559	0.5044	0.5402	0.6067	.	0.0413
	-0.0784	-0.0607	0.0679	-0.0396	-0.0358	0.0614	.	-0.2287
							[LLP2F10]	
CA1	12.1725	21.7380	6.0763	1.6349	0.1351	2.7131	3.6407	.
	0.0005	0.0000	0.0137	0.2010	0.7132	0.0995	0.0564	.
	-0.3117	0.5216	-0.2213	-0.0778	0.0222	-0.1946	0.1834	.
								Sing

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Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	A1	A2	SP2	EU1	EU2	I1	I2	T2
CA2	22.6240	10.1862	10.1234	13.7476	21.5601	7.7576	10.2235	0.6697
	0.0000	0.0014	0.0015	0.0002	0.0000	0.0053	0.0014	0.4131
	0.3090	0.2012	0.1363	0.1715	0.2463	0.1363	0.1708	0.0323
CA3	1.5924	2.8877	7.7405	11.7803	11.2861	7.1010	7.5827	0.1566
	0.2070	0.0893	0.0054	0.0006	0.0008	0.0077	0.0059	0.6923
	-0.0849	-0.1106	-0.1194	-0.1611	-0.1817	-0.1316	-0.1493	0.0157
F2	1.4140	9.0649	.	0.2265	3.4779	4.7255	5.3718	0.1352
	0.2344	0.0026	.	0.6341	0.0622	0.0297	0.0205	0.7131
	-0.1919	0.4282	.	-0.0341	-0.1645	-0.1522	-0.1925	-0.0195
			Sing					
F4	8.8523	1.5547	6.8904	5.8487	9.1328	4.6185	0.0394	1.6762
	0.0029	0.2124	0.0087	0.0156	0.0025	0.0316	0.8427	0.1954
	-0.4159	0.1515	0.1168	-0.2561	0.5895	-0.1689	-0.0237	0.0540
F5	0.0299	0.0036	3.3110	9.1314	5.8498	7.3221	6.2561	3.6110
	0.8628	0.9522	0.0688	0.0025	0.0156	0.0068	0.0124	0.0574
	0.0104	0.0034	0.0602	-0.2431	0.3752	0.7010	-3.9675	-0.0603

	A1	A2	SP2	EU1	EU2	I1	I2	T2
F9	0.0204	0.2314	0.0685	5.8261	0.2633	6.2278	7.3148	0.0285
	0.8863	0.6305	0.7935	0.0158	0.6079	0.0126	0.0068	0.8660
	-0.0117	-0.0340	-0.0065	0.0827	-0.0228	0.1144	-0.5893	-0.0046
F10	0.0526	3.9185	0.3687	0.9068	0.1321	2.0578	0.1508	3.1765
	0.8186	0.0478	0.5437	0.3410	0.7162	0.1514	0.6978	0.0747
	0.0241	-0.1900	-0.0283	0.0556	-0.0264	0.0871	-0.0307	0.0737
F11	0.0349	0.8748	1.6014	5.6738	0.1234	0.0767	0.7646	4.8851
	0.8517	0.3496	0.2057	0.0172	0.7254	0.7819	0.3819	0.0271
	-0.0202	-0.0899	-0.0505	-0.1192	-0.0214	0.0135	0.0498	0.0812

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Lagrange Multiplier and Wald Test Indices _BETA_[24:24]
General Matrix
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Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	C	SK1	SK2	FL1	FL2	LP1	LP2	CA1
CA2	4.2592	0.0176	2.2198	13.5674	13.4547	2.2716	0.4786	12.1741
	0.0390	0.8945	0.1362	0.0002	0.0002	0.1318	0.4890	0.0005
	0.1187	-0.0054	0.0556	0.1984	0.2238	0.1099	0.0450	-0.4607
CA3	0.1888	9.2837	0.0693	4.3482	2.1044	12.0382	6.1131	21.7313
	0.6639	0.0023	0.7924	0.0370	0.1469	0.0005	0.0134	0.0000
	-0.0254	0.1260	0.0100	-0.1135	-0.0910	-0.2669	-0.1680	0.7023

	C	SK1	SK2	FL1	FL2	LP1	LP2	CA1
F2	0.6750	0.1820	1.2764	3.9875	0.4382	0.0003	0.0100	2.2669
	0.4113	0.6696	0.2586	0.0458	0.5080	0.9859	0.9204	0.1322
	-0.2929	0.0285	0.0623	-0.1600	0.0792	0.0021	0.0093	-0.1145
F4	1.3025	3.9496	2.3256	6.2699	1.7169	2.3117	0.0186	0.0353
	0.2537	0.0469	0.1273	0.0123	0.1901	0.1284	0.8917	0.8509
	0.0699	-0.0747	0.0529	0.1649	-0.1539	0.0907	-0.0074	0.0103
F5	1.0601	0.5525	0.8279	8.6163	1.6249	0.0702	0.1365	7.2179
	0.3032	0.4573	0.3629	0.0033	0.2024	0.7911	0.7118	0.0072
	0.0439	0.0217	0.0246	0.1405	-0.0905	0.0113	0.0146	0.1066
F9	0.0683	0.0193	0.0400	0.1573	3.9968	1.2223	1.8730	3.0498
	0.7938	0.8894	0.8416	0.6916	0.0456	0.2689	0.1711	0.0807
	-0.0091	-0.0029	-0.0039	-0.0244	-0.4897	0.0402	0.0451	0.0546
F10	.	0.0256	2.8167	2.7992	0.2069	4.5258	0.9391	0.3593
	.	0.8728	0.0933	0.0943	0.6492	0.0334	0.3325	0.5489
	.	0.0098	-0.0818	0.1078	0.0537	0.7858	-0.2175	0.0565
	Sing							
F11	5.0351	2.5390	0.0446	0.5179	1.4127	0.9402	4.5223	1.2462
	0.0248	0.1111	0.8327	0.4718	0.2346	0.3322	0.0335	0.2643
	0.1477	0.1603	-0.0142	0.0397	0.0958	0.1895	-0.2560	0.1582

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General Matrix
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Univariate Tests for Constant Constraints
Lagrange Multiplier or Wald Index / Probability / Approx Change of Value

	CA2	CA3	F2	F4	F5	F9	F10	F11
CA2	.	1.2466	28.8453	24.4068	12.9896	28.0327	2.8369	263.8419
	.	0.2642	0.0000	0.0000	0.0003	0.0000	0.0921	.
	.	-0.1159	0.4915	0.3194	0.2363	0.6395	0.1627	.
	Sing							[LCA2F11]
CA3	1.2471	.	6.3494	13.7964	9.3973	8.5078	12.5166	310.4207
	0.2641	.	0.0117	0.0002	0.0022	0.0035	0.0004	.
	-0.1056	.	-0.2436	-0.2477	-0.2047	-0.3718	-0.3646	.
		Sing						[LCA3F11]
F2	1.1457	2.1105	.	4.3315	6.0653	4.3073	0.0648	0.9911
	0.2845	0.1463	.	0.0374	0.0138	0.0379	0.7991	0.3195
	0.0711	-0.0977	.	-0.2765	-0.2643	-1.3296	-0.0452	-0.1391
			Sing					
F4	1.3116	3.9976	257.4045	.	0.4536	0.0006	0.8586	0.0458
	0.2521	0.0456	.	.	0.5006	0.9802	0.3541	0.8306
	0.0584	-0.0992	.	.	-0.1151	0.0185	0.0689	-0.0179
			[PF2F4]	Sing				
F5	0.6022	1.1132	0.4538	235.4739	.	0.2603	0.3412	3.4375
	0.4377	0.2914	0.5005	.	.	0.6099	0.5592	0.0637
	0.0292	0.0382	0.0694	.	.	0.0834	0.0297	0.1045
				[PF4F5]	Sing			

	CA2	CA3	F2	F4	F5	F9	F10	F11
F9	0.6136	0.9836	132.7261	0.7180	10.7892	.	1.8758	2.6223
	0.4334	0.3213	.	0.3968	.	.	0.1708	0.1054
	0.0226	0.0280	.	0.0785	.	.	0.0620	0.0792
			[PF2F9]		[PF5F9]	Sing		
F10	10.3490	5.3193	1.5854	0.0062	0.0008	14.7616	.	8.3637
	0.0013	0.0211	0.2080	0.9373	0.9771	.	.	0.0038
	-0.2425	-0.1850	-0.5069	0.0097	0.0030	.	.	-0.6420
						[PF9F10]	Sing	
F11	21.7363	12.1742	18.6424	0.5476	0.4501	1.5880	59.2251	.
	0.0000	0.0005	.	0.4593	0.5023	0.2076	.	.
	-0.4221	0.3852	.	-0.0668	0.0491	0.5355	.	.
			[PF2F11]				[PF10F11]	Sing

The CALIS Procedure
Covariance Structure Analysis: Maximum Likelihood Estimation

Rank Order of the 10 Largest Lagrange Multipliers in _BETA_

Row	Column	Chi-Square	Pr > ChiSq
CA2	F2	28.84535	<.0001
CA2	F9	28.03271	<.0001
CA2	F4	24.40676	<.0001
CA2	A1	22.62400	<.0001
CA1	CA3	21.73798	<.0001
F11	CA2	21.73628	<.0001
CA3	CA1	21.73130	<.0001
CA2	EU2	21.56009	<.0001
I2	EU2	18.69713	<.0001
FL1	F5	14.39116	0.0001

Stepwise Multivariate Wald Test

	Cumulative Statistics			Univariate Increment	
Parameter	Chi-Square	DF	Pr > ChiSq	Chi-Square	Pr > ChiSq
VARE13	0.00735	1	0.9317	0.00735	0.9317
CF3F8	1.09648	2	0.5780	1.08913	0.2967
VARD9	2.75061	3	0.4317	1.65412	0.1984
VARD2	4.88103	4	0.2997	2.13042	0.1444