

# LAMPIRAN 1

## KUESIONER

### I. Identifikasi Responden

1. Responden pernah menggunakan mobil Avanza 1 tahun terakhir
  - a. Ya
  - b. Tidak
2. Jenis Kelamin
  - a. Pria
  - b. Wanita
3. Usia
  - a. kurang dari 17 tahun
  - b. 17 tahun atau lebih
4. Responden pernah menggunakan mobil Avanza lebih dari sekali
  - a. Ya
  - b. Tidak

### II. Alternatif Jawaban

Jawablah pernyataan berikut dengan memberi tanda centang (√) atau tanda silang (X) pada kolom alternatif jawaban yang menjadi pilihan Anda :

STS : Sangat Tidak Setuju

TS : Tidak Setuju

N : Netral

S : Setuju

SS : Sangat Setuju

No	Pertanyaan	STS	TS	N	S	SS
<b>Brand Image (X<sub>1</sub>)</b>						
1.	Mobil Avanza memiliki kualitas yang baik					
2.	Mobil Avanza memiliki karakteristik yang lebih baik dibanding pesaing					
3.	Mobil Avanza merupakan merek yang bagus					
4.	Mobil Avanza menjadi salah satu merek yang terbaik di industrinya					
<b>Customer Perceived Value (X<sub>2</sub>)</b>						
1.	Mobil Avanza layak untuk di beli					
2.	Mobil Avanza mempunyai harga yang pantas					
3.	Mobil Avanza menawarkan nilai yang baik					
4.	Harga Mobil Avanza sesuai dengan produknya					
<b>Brand Trust (X<sub>3</sub>)</b>						
1.	Saya percaya kualitas mobil Avanza					
2.	Saya mengandalkan mobil Avanza					
3.	Mobil Avanza aman untuk di kendarai					
4.	Mobil Avanza selalu menawarkan fitur produk yang sesuai					
5.	Saya berharap mobil Avanza dapat di minati masyarakat					

<b>Customer Satisfaction (Y<sub>1</sub>)</b>					
1.	Harga Mobil Avanza telah sesuai dengan produknya				
2.	Mobil Avanza mempunyai pelayanan yang memadai				
3.	Karyawan yang bekerja pada <i>showroom</i> mobil Avanza memiliki sifat ramah				
4.	Kinerja perusahaan mobil Avanza secara keseluruhan memuaskan				
5.	PT. Toyota Astra Motor memiliki kedekatan dengan pelanggannya				
<b>Customer Loyalty (Y<sub>2</sub>)</b>					
1.	Saya bersedia berbagi informasi tentang mobil Avanza				
2.	Saya menyampaikan hal positif ke orang lain tentang mobil Avanza				
3.	Saya merekomendasikan mobil Avanza kepada orang lain				
4.	Saya akan lebih memilih mobil Avanza apabila model terbaru telah keluar				
5.	Saya akan menggunakan servis garansi yang diberikan oleh PT. Toyota Astra Motor				
6.	Saya akan selalu mengikuti layanan terbaru PT. Toyota Astra Motor				

## LAMPIRAN 2

### FREQUENCY TABLE

#### pernah menggunakan mobil avanza 1 tahun terakhir

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid ya	125	83,3	83,3	83,3
tidak	25	16,7	16,7	100,0
Total	150	100,0	100,0	

#### jenis kelamin

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid pria	97	64,7	64,7	64,7
wanita	53	35,3	35,3	100,0
Total	150	100,0	100,0	

#### usia

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 17 tahun atau lebih	150	100,0	100,0	100,0

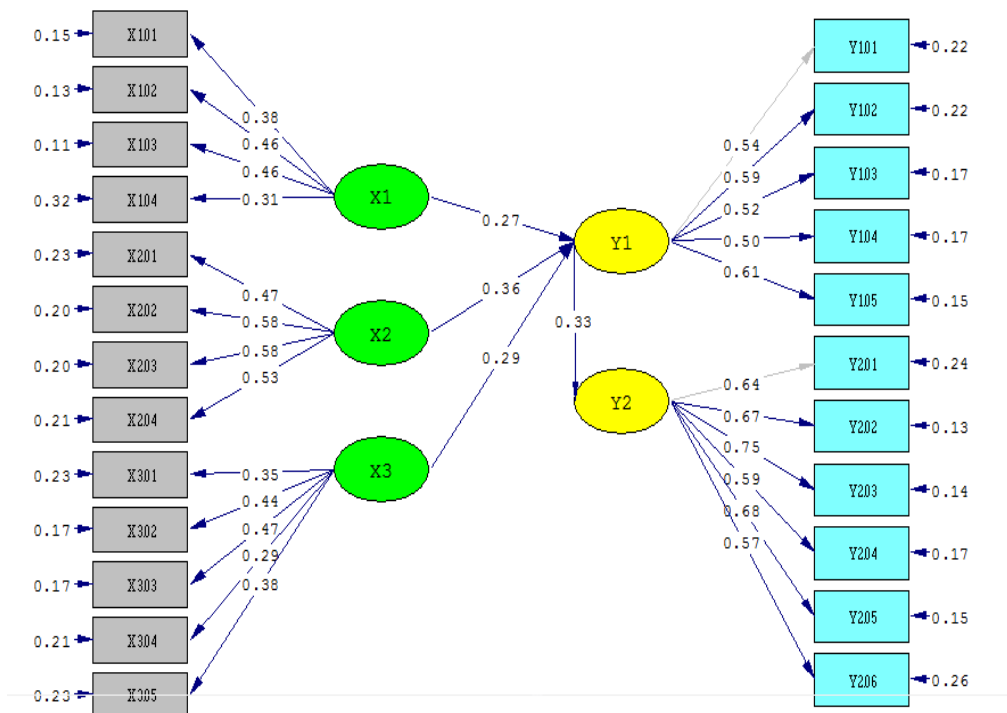
#### pernah menggunakan mobil avanza lebih dari sekali

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid ya	121	80,7	80,7	80,7
tidak	29	19,3	19,3	100,0
Total	150	100,0	100,0	

### LAMPIRAN 3

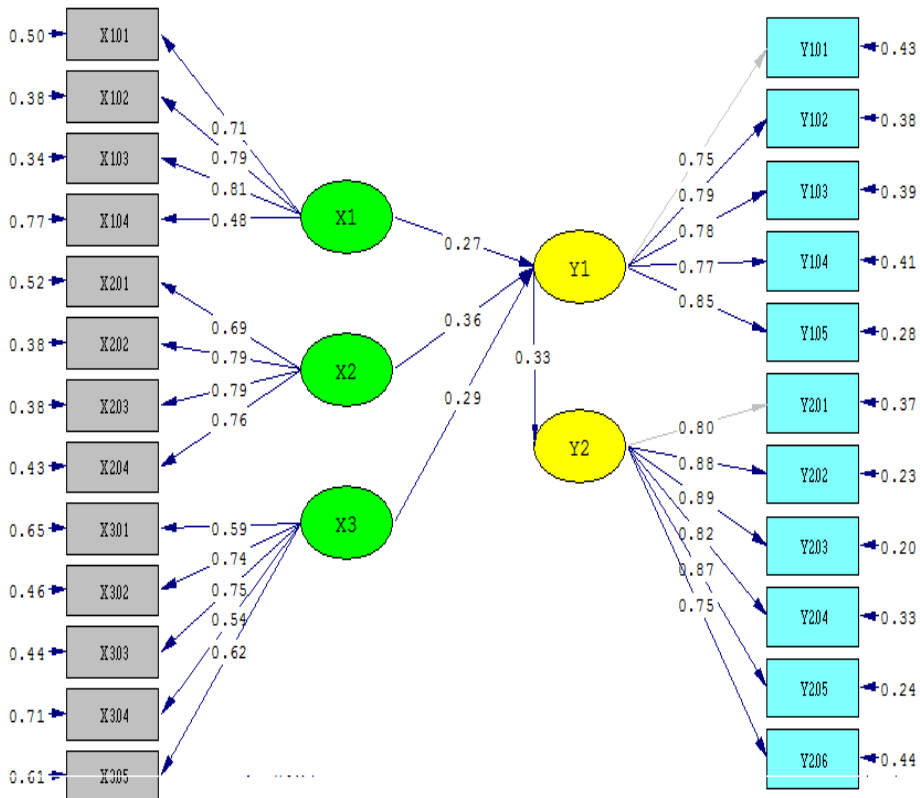
### PATH DIAGRAM

### Estimates



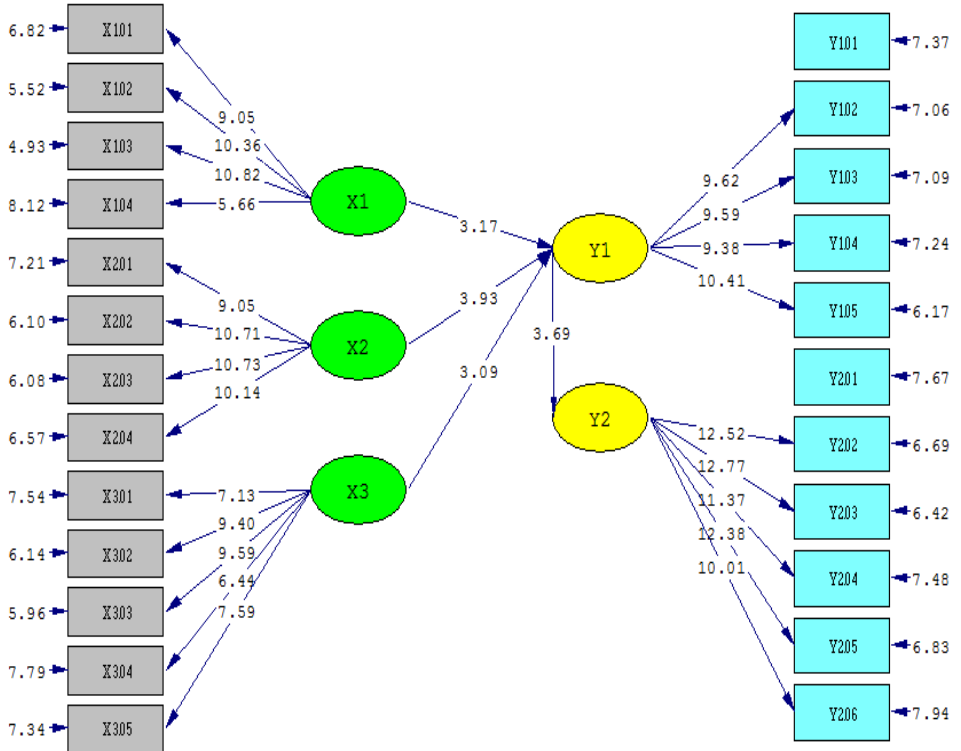
Chi-Square=316.76, df=245, P-value=0.00135, RMSEA=0.044

## Standardized Solution



Chi-Square=316.76, df=245, P-value=0.00135, RMSEA=0.044

## T-value



Chi-Square=316.76, df=245, P-value=0.00135, RMSEA=0.044

**LAMPIRAN 4**  
**UJI RELIABILITAS**

Perhitungan X1

Indikator	$I$	$I^2$	$e = (1 - I^2)$	$(\sum I)^2$	$(\sum I)^2 + \sum e$	CR
x1.01	0,71	0,5041	0,4959			
x1.02	0,79	0,6241	0,3759			
x1.03	0,81	0,6561	0,3439			
x1.04	0,48	0,2304	0,7696			
$\Sigma$	<b>2,79</b>		<b>1,9853</b>	7,7841	9,7694	0,823790

Perhitungan X2

Indikator	$I$	$I^2$	$e = (1 - I^2)$	$(\sum I)^2$	$(\sum I)^2 + \sum e$	CR
x2.01	0,69	0,4761	0,5239			
x2.02	0,79	0,6241	0,3759			
x2.03	0,79	0,6241	0,3759			
x2.04	0,76	0,5776	0,4224			
$\Sigma$	<b>3,03</b>		<b>1,6981</b>	9,1809	10,879	0,837443

Perhitungan X3

Indikator	$I$	$I^2$	$e = (1 - I^2)$	$(\sum I)^2$	$(\sum I)^2 + \sum e$	CR
x3.01	0,59	0,3481	0,6519			
x3.02	0,74	0,5476	0,4524			
x3.03	0,75	0,5625	0,4375			
x3.04	0,54	0,2916	0,7399			
x3.05	0,62	0,3844	0,6156			
$\Sigma$	<b>3,24</b>		<b>2,8973</b>	10,4976	13,3949	0,776623

Perhitungan Y1

Indikator	$I$	$I^2$	$e = (1 - I^2)$	$(\sum I)^2$	$(\sum I)^2 + \sum e$	CR
y1.01	0,75	0,5625	0,4375			
y1.02	0,79	0,6241	0,3759			
y1.03	0,78	0,6084	0,3916			
y1.04	0,77	0,5929	0,4071			
y1.05	0,85	0,7225	0,2775			
$\Sigma$	<b>3,94</b>		<b>1,8896</b>	15,5236	17,4132	0,888919

Perhitungan Y2

Indikator	$I$	$I^2$	$e = (1 - I^2)$	$(\sum I)^2$	$(\sum I)^2 + \sum e$	CR
y2.01	0,80	0,64	0,36			
y2.02	0,88	0,7744	0,2256			
y2.03	0,89	0,7921	0,2079			
y2.04	0,82	0,6724	0,3276			
y2.05	0,87	0,7596	0,2431			
y2.06	0,75	0,5625	0,4375			
$\Sigma$	<b>5,01</b>		<b>1,8017</b>	25,1001	26,9018	0,919408



## LAMPIRAN 5

### UJI NORMALITAS

DATE: 12/19/2014

TIME: 11:57

P R E L I S 2.70

BY

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The following lines were read from file D:\JURNAL BRAND  
IMAGE\sem150\data.PR2:

!PRELIS SYNTAX: Can be edited

SY='D:\JURNAL BRAND IMAGE\sem150\data.PSF'

NS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

OU MA=CM XT

Total Sample Size = 150

### Univariate Summary Statistics for Continuous Variables

Variable Mean St. Dev. T-Value Skewness Kurtosis Minimum Freq.  
Maximum Freq.

Variable	Mean	St. Dev.	T-Value	Skewness	Kurtosis	Minimum Freq.	Maximum Freq.
X1.01 2	3.667	0.539	83.272	-0.408	0.244	1.829	1 5.351
X1.02 4	3.607	0.578	76.412	-0.037	-0.049	1.711	1 5.173
X1.03 4	3.680	0.559	80.558	-0.230	0.323	1.816	1 5.220
X1.04 10	3.593	0.646	68.118	0.243	-0.234	1.539	1 5.017
X2.01 11	3.507	0.673	63.812	0.329	-0.025	1.369	1 4.955
X2.02 14	3.520	0.730	59.042	0.134	0.041	1.267	1 4.958
X2.03 13	3.620	0.730	60.758	-0.086	0.112	1.392	1 5.070

X2.04	3.560	0.700	62.308	0.052	0.064	1.566	2	5.067
10								
X3.01	3.833	0.595	78.843	-0.065	0.302	1.932	1	5.025
15								
X3.02	3.687	0.604	74.813	0.064	-0.049	1.764	1	5.018
10								
X3.03	3.680	0.627	71.844	0.127	-0.184	1.699	1	4.995
12								
X3.04	3.753	0.543	84.714	0.026	-0.068	3.011	45	5.058
8								
X3.05	3.640	0.605	73.672	0.130	-0.134	1.710	1	5.008
9								
Y1.01	3.580	0.717	61.175	-0.221	0.129	2.126	13	5.249
7								
Y1.02	3.513	0.757	56.812	-0.107	0.096	1.218	1	5.103
10								
Y1.03	3.720	0.667	68.332	-0.258	0.677	1.611	1	5.181
10								
Y1.04	3.553	0.651	66.889	-0.100	0.244	1.510	1	5.126
6								
Y1.05	3.680	0.717	62.843	-0.073	0.084	1.481	1	5.059
15								
Y2.01	3.420	0.805	52.037	-0.030	0.088	1.409	4	5.106
10								
Y2.02	3.440	0.764	55.149	0.153	0.114	1.483	4	5.045
11								
Y2.03	3.473	0.841	50.580	-0.039	-0.027	1.387	4	5.085
14								

8	Y2.04	3.353	0.725	56.664	0.240	0.396	1.461	4	5.019
7	Y2.05	3.380	0.783	52.872	-0.061	0.146	1.415	4	5.157
12	Y2.06	3.460	0.765	55.374	0.034	0.111	1.325	2	5.006

Test of Univariate Normality for Continuous Variables

Skewness      Kurtosis      Skewness and Kurtosis

Variable Z-Score P-Value    Z-Score P-Value    Chi-Square P-Value

X1.01	-2.044	0.041	0.750	0.454	4.738	0.094
X1.02	-0.194	0.847	0.033	0.974	0.039	0.981
X1.03	-1.175	0.240	0.918	0.359	2.223	0.329
X1.04	1.240	0.215	-0.525	0.600	1.813	0.404
X2.01	1.664	0.096	0.097	0.923	2.779	0.249
X2.02	0.692	0.489	0.272	0.786	0.553	0.759
X2.03	-0.444	0.657	0.448	0.654	0.398	0.820
X2.04	0.270	0.787	0.331	0.741	0.182	0.913
X3.01	-0.335	0.737	0.874	0.382	0.876	0.645
X3.02	0.331	0.741	0.031	0.975	0.110	0.946
X3.03	0.655	0.513	-0.365	0.715	0.562	0.755



108.961 1.703 0.089 613.109 -0.418 0.676 3.074 0.215

### Histograms for Continuous Variables

#### X1.01

Frequency Percentage Lower Class Limit

1	0.7	1.829	
0	0.0	2.181	
0	0.0	2.533	
49	32.7	2.885	.....
0	0.0	3.238	
0	0.0	3.590	
98	65.3	3.942	.....
0	0.0	4.295	
0	0.0	4.647	
2	1.3	4.999	

#### X1.02

Frequency Percentage Lower Class Limit

1	0.7	1.711
0	0.0	2.057
0	0.0	2.403

60	40.0	2.749	
.....			
0	0.0	3.096	
0	0.0	3.442	
85	56.7	3.788	
.....			
0	0.0	4.134	
0	0.0	4.481	
4	2.7	4.827	•

X1.03

Frequency Percentage Lower Class Limit

1	0.7	1.816	
0	0.0	2.157	
0	0.0	2.497	
49	32.7	2.837	.....
0	0.0	3.178	
0	0.0	3.518	
96	64.0	3.858	
.....			
0	0.0	4.199	
0	0.0	4.539	
4	2.7	4.880	•

X1.04

Frequency Percentage Lower Class Limit

1	0.7	1.539	
0	0.0	1.887	
0	0.0	2.234	
0	0.0	2.582	
68	45.3	2.930	
.....			
0	0.0	3.278	
0	0.0	3.626	
71	47.3	3.973	
.....			
0	0.0	4.321	
10	6.7	4.669	.....

X2.01

Frequency Percentage Lower Class Limit

2	1.3	1.369	
0	0.0	1.728	
0	0.0	2.087	
0	0.0	2.445	
80	53.3	2.804	
.....			
0	0.0	3.162	



0	0.0	3.521	
57	38.0	3.879	
.....			
0	0.0	4.238	
11	7.3	4.597	.....

X2.02

Frequency Percentage Lower Class Limit

1	0.7	1.267	
4	2.7	1.636	..
0	0.0	2.005	
0	0.0	2.374	
75	50.0	2.744	
.....			
0	0.0	3.113	
0	0.0	3.482	
56	37.3	3.851	
.....			
0	0.0	4.220	
14	9.3	4.589	.....

X2.03

Frequency Percentage Lower Class Limit

1	0.7	1.392
---	-----	-------



0	0.0	4.367	
10	6.7	4.717	•••••

X3.01

Frequency Percentage Lower Class Limit

1	0.7	1.932	
0	0.0	2.241	
0	0.0	2.551	
38	25.3	2.860	••••••••••••••••••••
0	0.0	3.169	
0	0.0	3.479	
96	64.0	3.788	•••••••••••••••••••••••••••••••••••••••••••••••••••
0	0.0	4.097	
0	0.0	4.407	
15	10.0	4.716	•••••

X3.02

Frequency Percentage Lower Class Limit

1	0.7	1.764
0	0.0	2.090

0	0.0	2.415	
55	36.7	2.741	
.....			
0	0.0	3.066	
0	0.0	3.391	
84	56.0	3.717	
.....			
0	0.0	4.042	
0	0.0	4.368	
10	6.7	4.693	.....

X3.03

Frequency Percentage Lower Class Limit

1	0.7	1.699	
0	0.0	2.028	
0	0.0	2.358	
58	38.7	2.688	
.....			
0	0.0	3.017	
0	0.0	3.347	
79	52.7	3.677	
.....			
0	0.0	4.006	
0	0.0	4.336	

12	8.0	4.666	.....
----	-----	-------	-------

### X3.04

Frequency	Percentage	Lower Class Limit	
-----------	------------	-------------------	--

45	30.0	3.011	.....
0	0.0	3.215	
0	0.0	3.420	
0	0.0	3.625	
97	64.7	3.829	.....
0	0.0	4.034	
0	0.0	4.239	
0	0.0	4.444	
0	0.0	4.648	
8	5.3	4.853	...

### X3.05

Frequency	Percentage	Lower Class Limit	
-----------	------------	-------------------	--

1	0.7	1.710	
0	0.0	2.040	
0	0.0	2.370	
61	40.7	2.700	.....

0	0.0	3.030	
0	0.0	3.359	
79	52.7	3.689	
.....			
0	0.0	4.019	
0	0.0	4.349	
9	6.0	4.679	.....

Y1.01

Frequency Percentage Lower Class Limit

13	8.7	2.126	.....
0	0.0	2.438	
44	29.3	2.751	.....
0	0.0	3.063	
0	0.0	3.375	
86	57.3	3.688	
.....			
0	0.0	4.000	
0	0.0	4.312	
0	0.0	4.625	
7	4.7	4.937	.....

Y1.02



0	0.0	4.110	
0	0.0	4.467	
10	6.7	4.824	••••

Y1.04

Frequency Percentage Lower Class Limit

1	0.7	1.510	
4	2.7	1.872	•
0	0.0	2.233	
0	0.0	2.595	
62	41.3	2.956	
.....			
0	0.0	3.318	
77	51.3	3.679	
.....			
0	0.0	4.041	
0	0.0	4.402	
6	4.0	4.764	••

Y1.05

Frequency Percentage Lower Class Limit

1	0.7	1.481	
4	2.7	1.839	•



0	0.0	2.196	
0	0.0	2.554	
52	34.7	2.912	
.....			
0	0.0	3.270	
0	0.0	3.627	
78	52.0	3.985	
.....			
0	0.0	4.343	
15	10.0	4.701	.....

Y2.01

Frequency Percentage Lower Class Limit

4	2.7	1.409	..
8	5.3	1.779	....
0	0.0	2.148	
0	0.0	2.518	
69	46.0	2.888	
.....			
0	0.0	3.258	
0	0.0	3.627	
59	39.3	3.997	
.....			
0	0.0	4.367	



0	0.0	2.127	
0	0.0	2.496	
65	43.3	2.866	
.....			
0	0.0	3.236	
0	0.0	3.606	
59	39.3	3.976	
.....			
0	0.0	4.346	
14	9.3	4.716	.....

Y2.04

Frequency Percentage Lower Class Limit

4	2.7	1.461	•
2	1.3	1.817	
0	0.0	2.172	
0	0.0	2.528	
89	59.3	2.884	
.....			
0	0.0	3.240	
0	0.0	3.596	
47	31.3	3.951	.....
0	0.0	4.307	
8	5.3	4.663	•••

Y2.05

Frequency Percentage Lower Class Limit

4	2.7	1.415	••
9	6.0	1.789	••••
0	0.0	2.163	
0	0.0	2.537	
70	46.7	2.911	
.....			
0	0.0	3.286	
60	40.0	3.660	
.....			
0	0.0	4.034	
0	0.0	4.408	
7	4.7	4.783	•••

Y2.06

Frequency Percentage Lower Class Limit

2	1.3	1.325	•
7	4.7	1.693	•••
0	0.0	2.061	
0	0.0	2.429	
73	48.7	2.797	
.....			

0	0.0	3.166		
0	0.0	3.534		
56	37.3	3.902		
.....				
0	0.0	4.270		
12	8.0	4.638	.....	

Covariance Matrix

	X1.01	X1.02	X1.03	X1.04	X2.01	X2.02
	-----	-----	-----	-----	-----	-----
X1.01	0.291					
X1.02	0.144	0.334				
X1.03	0.187	0.196	0.313			
X1.04	0.081	0.178	0.097	0.417		
X2.01	0.016	-0.021	-0.007	-0.026	0.453	
X2.02	0.006	-0.008	0.038	0.004	0.266	0.533
X2.03	0.037	0.051	0.068	0.009	0.250	0.338
X2.04	-0.013	0.019	0.020	0.014	0.265	0.290
X3.01	0.023	0.025	0.025	0.020	0.023	0.077
X3.02	0.021	0.040	0.043	0.020	-0.005	0.070
X3.03	0.032	0.064	0.036	0.038	0.046	0.107
X3.04	0.015	0.042	0.046	0.011	0.015	0.047
X3.05	0.008	0.023	0.019	0.008	0.040	0.049

Y1.01	0.028	0.103	0.089	0.057	0.056	0.143
Y1.02	0.018	0.139	0.087	0.074	0.093	0.113
Y1.03	0.054	0.135	0.091	0.067	0.131	0.184
Y1.04	0.060	0.074	0.081	0.032	0.081	0.117
Y1.05	0.081	0.128	0.065	0.094	0.119	0.104
Y2.01	0.085	0.063	0.105	-0.007	-0.027	0.028
Y2.02	0.038	0.069	0.083	0.034	-0.053	0.004
Y2.03	0.072	0.087	0.099	-0.019	-0.022	0.029
Y2.04	0.030	0.058	0.058	-0.012	-0.006	0.015
Y2.05	0.062	0.078	0.092	0.021	-0.027	0.043
Y2.06	0.044	0.064	0.065	0.014	-0.004	0.054

Covariance Matrix

	X2.03	X2.04	X3.01	X3.02	X3.03	X3.04
	-----	-----	-----	-----	-----	-----
X2.03	0.532					
X2.04	0.286	0.490				
X3.01	0.094	0.026	0.355			
X3.02	0.087	0.073	0.181	0.364		
X3.03	0.140	0.099	0.145	0.224	0.394	
X3.04	0.094	0.073	0.100	0.117	0.142	0.294
X3.05	0.078	0.097	0.145	0.153	0.183	0.121

Y1.01	0.141	0.135	0.046	0.100	0.063	0.081
Y1.02	0.220	0.122	0.134	0.114	0.069	0.109
Y1.03	0.199	0.155	0.070	0.116	0.137	0.082
Y1.04	0.143	0.087	0.090	0.105	0.123	0.099
Y1.05	0.165	0.136	0.105	0.103	0.107	0.095
Y2.01	-0.023	0.000	0.039	0.042	0.062	0.050
Y2.02	-0.010	0.016	0.034	0.062	0.068	0.056
Y2.03	0.048	-0.025	0.083	0.054	0.053	0.030
Y2.04	-0.021	0.014	0.060	0.090	0.095	0.061
Y2.05	0.047	-0.011	0.031	0.024	0.042	0.043
Y2.06	0.025	0.015	-0.004	0.022	0.039	0.034

Covariance Matrix

	X3.05	Y1.01	Y1.02	Y1.03	Y1.04	Y1.05
	-----	-----	-----	-----	-----	-----
X3.05	0.366					
Y1.01	0.093	0.514				
Y1.02	0.132	0.339	0.574			
Y1.03	0.114	0.300	0.286	0.445		
Y1.04	0.119	0.229	0.283	0.246	0.423	
Y1.05	0.140	0.330	0.359	0.292	0.313	0.514
Y2.01	0.063	0.129	0.096	0.131	0.122	0.095
Y2.02	0.076	0.126	0.083	0.110	0.145	0.102

Y2.03	0.070	0.116	0.090	0.117	0.163	0.128
Y2.04	0.063	0.125	0.065	0.132	0.111	0.110
Y2.05	0.055	0.127	0.091	0.109	0.130	0.116
Y2.06	0.053	0.114	0.073	0.076	0.109	0.095

Covariance Matrix

	Y2.01	Y2.02	Y2.03	Y2.04	Y2.05	Y2.06
	-----	-----	-----	-----	-----	-----
Y2.01	0.648					
Y2.02	0.412	0.584				
Y2.03	0.435	0.497	0.707			
Y2.04	0.380	0.396	0.441	0.525		
Y2.05	0.407	0.444	0.515	0.347	0.613	
Y2.06	0.394	0.346	0.388	0.327	0.423	0.586

Means

X1.01	X1.02	X1.03	X1.04	X2.01	X2.02
-----	-----	-----	-----	-----	-----
3.667	3.607	3.680	3.593	3.507	3.520

Means

X2.03	X2.04	X3.01	X3.02	X3.03	X3.04
-------	-------	-------	-------	-------	-------



-----  
3.620 3.560 3.833 3.687 3.680 3.753

Means

X3.05 Y1.01 Y1.02 Y1.03 Y1.04 Y1.05  
-----  
3.640 3.580 3.513 3.720 3.553 3.680

Means

Y2.01 Y2.02 Y2.03 Y2.04 Y2.05 Y2.06  
-----  
3.420 3.440 3.473 3.353 3.380 3.460

Standard Deviations

X1.01 X1.02 X1.03 X1.04 X2.01 X2.02  
-----  
0.539 0.578 0.559 0.646 0.673 0.730

Standard Deviations

X2.03 X2.04 X3.01 X3.02 X3.03 X3.04  
-----  
0.730 0.700 0.595 0.604 0.627 0.543

Standard Deviations

X3.05   Y1.01   Y1.02   Y1.03   Y1.04   Y1.05

-----

0.605   0.717   0.757   0.667   0.651   0.717

Standard Deviations

Y2.01   Y2.02   Y2.03   Y2.04   Y2.05   Y2.06

-----

0.805   0.764   0.841   0.725   0.783   0.765

The Problem used   54360 Bytes (= 0.1% of available workspace)

## **LAMPIRAN 6**

### **HASIL SEM**

DATE: 12/19/2014

TIME: 13:07

L I S R E L 8.70

BY

Karl G. Jöreskog & Dag Sörbom

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The following lines were read from file D:\sem150\hasil sem.spl:

CUSTOMER LOYALTY AVANZA

OBSERVED VARIABLE X1.01 X1.02 X1.03 X1.04 X2.01 X2.02 X2.03  
X2.04 X3.01 X3.02 X3.03 X3.04 X3.05 Y1.01 Y1.02 Y1.03 Y1.04 Y1.05  
Y2.01 Y2.02 Y2.03 Y2.04 Y2.05 Y2.06

COVARIANCE MATRIX FROM FILE D:\sem150\data.cov

SAMPLE SIZE 150

LATENT VARIABLES X1 X2 X3 Y1 Y2

RELATIONSHIPS:

$X1.01-X1.04 = X1$

$X2.01-X2.04 = X2$

$X3.01-X3.05 = X3$

$Y1.01-Y1.05 = Y1$

$Y2.01-Y2.06 = Y2$

$Y1 = X1 X2 X3$

$Y2 = Y1$

OPTIONS:SS EF

PATH DIAGRAM

END OF PROGRAM

Sample Size = 150

CUSTOMER LOYALTY AVANZA

Covariance Matrix

Y1.01 Y1.02 Y1.03 Y1.04 Y1.05 Y2.01

Y1.01	0.51					
Y1.02	0.34	0.57				
Y1.03	0.30	0.30	0.44			
Y1.04	0.23	0.29	0.26	0.42		
Y1.05	0.33	0.37	0.30	0.32	0.51	
Y2.01	0.13	0.11	0.15	0.14	0.11	0.65
Y2.02	0.13	0.09	0.13	0.16	0.11	0.43
Y2.03	0.13	0.10	0.13	0.17	0.14	0.46
Y2.04	0.13	0.07	0.15	0.13	0.12	0.40
Y2.05	0.13	0.10	0.13	0.14	0.13	0.43
Y2.06	0.12	0.08	0.09	0.11	0.10	0.40
X1.01	0.02	0.02	0.04	0.06	0.07	0.07
X1.02	0.10	0.14	0.12	0.07	0.12	0.06
X1.03	0.08	0.09	0.08	0.08	0.06	0.10
X1.04	0.06	0.08	0.06	0.03	0.09	-0.01
X2.01	0.05	0.10	0.14	0.09	0.13	-0.01
X2.02	0.14	0.12	0.19	0.13	0.11	0.04
X2.03	0.14	0.22	0.20	0.16	0.17	-0.01
X2.04	0.14	0.13	0.16	0.10	0.15	0.02
X3.01	0.04	0.13	0.07	0.09	0.11	0.04

X3.02	0.09	0.11	0.11	0.11	0.10	0.04
X3.03	0.05	0.06	0.13	0.12	0.10	0.06
X3.04	0.07	0.10	0.08	0.10	0.10	0.05
X3.05	0.08	0.13	0.11	0.12	0.14	0.06

Covariance Matrix

	Y2.02	Y2.03	Y2.04	Y2.05	Y2.06	X1.01
	-----	-----	-----	-----	-----	-----
Y2.02	0.58					
Y2.03	0.51	0.71				
Y2.04	0.41	0.46	0.53			
Y2.05	0.46	0.53	0.37	0.61		
Y2.06	0.36	0.40	0.34	0.43	0.59	
X1.01	0.03	0.06	0.02	0.05	0.04	0.29
X1.02	0.06	0.08	0.05	0.07	0.06	0.16
X1.03	0.07	0.09	0.05	0.08	0.06	0.19
X1.04	0.03	-0.02	-0.02	0.01	0.01	0.10
X2.01	-0.04	-0.01	0.01	-0.01	0.00	0.01
X2.02	0.02	0.04	0.03	0.06	0.05	0.00
X2.03	0.01	0.06	-0.01	0.06	0.03	0.03
X2.04	0.03	-0.01	0.03	0.01	0.02	-0.01

X3.01	0.04	0.09	0.07	0.04	0.00	0.02
X3.02	0.06	0.05	0.08	0.02	0.02	0.02
X3.03	0.07	0.05	0.09	0.04	0.03	0.03
X3.04	0.06	0.03	0.06	0.04	0.03	0.02
X3.05	0.08	0.07	0.07	0.06	0.05	0.00

Covariance Matrix

	X1.02	X1.03	X1.04	X2.01	X2.02	X2.03
	-----	-----	-----	-----	-----	-----
X1.02	0.33					
X1.03	0.20	0.31				
X1.04	0.19	0.11	0.42			
X2.01	-0.02	-0.01	-0.03	0.45		
X2.02	-0.01	0.03	0.00	0.27	0.53	
X2.03	0.04	0.06	0.01	0.25	0.34	0.53
X2.04	0.01	0.02	0.01	0.27	0.30	0.29
X3.01	0.02	0.02	0.02	0.03	0.08	0.10
X3.02	0.04	0.04	0.02	0.00	0.07	0.09
X3.03	0.06	0.03	0.04	0.05	0.11	0.14
X3.04	0.04	0.05	0.01	0.02	0.05	0.09
X3.05	0.02	0.01	0.01	0.04	0.05	0.08

Covariance Matrix

	X2.04	X3.01	X3.02	X3.03	X3.04	X3.05
X2.04	0.49					
X3.01	0.03	0.35				
X3.02	0.07	0.18	0.36			
X3.03	0.09	0.14	0.22	0.39		
X3.04	0.07	0.10	0.12	0.14	0.29	
X3.05	0.10	0.14	0.15	0.18	0.12	0.37

CUSTOMER LOYALTY AVANZA

Number of Iterations = 12

LISREL Estimates (Maximum Likelihood)

Measurement Equations

$$Y1.01 = 0.54 * Y1, \text{ Errorvar.} = 0.22, R^2 = 0.57$$

(0.030)

7.37

$$Y1.02 = 0.59 * Y1, \text{ Errorvar.} = 0.22, R^2 = 0.62$$

(0.062) (0.031)

9.62 7.06



$$Y1.03 = 0.52*Y1, \text{ Errorvar.} = 0.17, R^2 = 0.61$$

$$(0.054) \quad (0.024)$$

$$9.59 \quad 7.09$$

$$Y1.04 = 0.50*Y1, \text{ Errorvar.} = 0.17, R^2 = 0.59$$

$$(0.053) \quad (0.024)$$

$$9.38 \quad 7.24$$

$$Y1.05 = 0.61*Y1, \text{ Errorvar.} = 0.15, R^2 = 0.72$$

$$(0.058) \quad (0.024)$$

$$10.41 \quad 6.17$$

$$Y2.01 = 0.64*Y2, \text{ Errorvar.} = 0.24, R^2 = 0.63$$

$$(0.031)$$

$$7.67$$

$$Y2.02 = 0.67*Y2, \text{ Errorvar.} = 0.13, R^2 = 0.77$$

$$(0.054) \quad (0.020)$$

$$12.52 \quad 6.69$$

$$Y2.03 = 0.75*Y2, \text{ Errorvar.} = 0.14, R^2 = 0.80$$

$$(0.059) \quad (0.022)$$

$$12.77$$

$$Y2.04 = 0.59*Y2, \text{ Errorvar.} = 0.17, R^2 = 0.67$$

$$(0.052) \quad (0.023)$$

11.37          7.48

$$Y2.05 = 0.68*Y2, \text{Errorvar.} = 0.15, R^2 = 0.76$$

(0.055)          (0.021)

12.38          6.83

$$Y2.06 = 0.57*Y2, \text{Errorvar.} = 0.26, R^2 = 0.56$$

(0.057)          (0.033)

10.01          7.94

$$X1.01 = 0.38*X1, \text{Errorvar.} = 0.15, R^2 = 0.50$$

(0.042)          (0.021)

9.05          6.82

$$X1.02 = 0.46*X1, \text{Errorvar.} = 0.13, R^2 = 0.62$$

(0.044)          (0.023)

10.36          5.52

$$X1.03 = 0.46*X1, \text{Errorvar.} = 0.11, R^2 = 0.66$$

(0.042)          (0.021)

10.82          4.93

$$X1.04 = 0.31*X1, \text{Errorvar.} = 0.32, R^2 = 0.23$$

(0.054)          (0.040)

5.66          8.12

$$X2.01 = 0.47 * X2, \text{ Errorvar.} = 0.23, R^2 = 0.48$$

$$(0.052) \quad (0.032)$$

$$9.05 \quad 7.21$$

$$X2.02 = 0.58 * X2, \text{ Errorvar.} = 0.20, R^2 = 0.62$$

$$(0.054) \quad (0.033)$$

$$10.71 \quad 6.10$$

$$X2.03 = 0.58 * X2, \text{ Errorvar.} = 0.20, R^2 = 0.62$$

$$(0.054) \quad (0.033)$$

$$10.73 \quad 6.08$$

$$X2.04 = 0.53 * X2, \text{ Errorvar.} = 0.21, R^2 = 0.57$$

$$(0.052) \quad (0.032)$$

$$10.14 \quad 6.57$$

$$X3.01 = 0.35 * X3, \text{ Errorvar.} = 0.23, R^2 = 0.35$$

$$(0.049) \quad (0.031)$$

$$7.13 \quad 7.54$$

$$X3.02 = 0.44 * X3, \text{ Errorvar.} = 0.17, R^2 = 0.54$$

$$(0.047) \quad (0.027)$$

$$9.40 \quad 6.14$$

$$X3.03 = 0.47 * X3, \text{ Errorvar.} = 0.17, R^2 = 0.56$$

$$(0.049) \quad (0.029)$$

9.59            5.96

$$X3.04 = 0.29 * X3, \text{ Errorvar.} = 0.21, R^2 = 0.29$$

(0.046)            (0.027)

6.44            7.79

$$X3.05 = 0.38 * X3, \text{ Errorvar.} = 0.23, R^2 = 0.39$$

(0.049)            (0.031)

7.59            7.34

### Structural Equations

$$Y1 = 0.27 * X1 + 0.36 * X2 + 0.29 * X3, \text{ Errorvar.} = 0.61, R^2 = 0.39$$

(0.084) (0.091) (0.092)            (0.13)

3.17    3.93    3.09            4.86

$$Y2 = 0.33 * Y1, \text{ Errorvar.} = 0.89, R^2 = 0.11$$

(0.091)            (0.16)

3.69            5.70

### Reduced Form Equations

$$Y1 = 0.27 * X1 + 0.36 * X2 + 0.29 * X3, \text{ Errorvar.} = 0.61, R^2 = 0.39$$

(0.084) (0.091) (0.092)

3.17    3.93    3.09

$$Y2 = 0.089 * X1 + 0.12 * X2 + 0.095 * X3, \text{ Errorvar.} = 0.96, R^2 = 0.043$$

(0.036) (0.042) (0.039)

2.49 2.82 2.45

### Correlation Matrix of Independent Variables

	X1	X2	X3
X1	1.00		
X2	0.06	1.00	
	(0.10)		
	0.66		
X3	0.17	0.33	1.00
	(0.10)	(0.09)	
	1.74	3.68	

### Covariance Matrix of Latent Variables

	Y1	Y2	X1	X2	X3
Y1	1.00				
Y2	0.33	1.00			
X1	0.34	0.11	1.00		

X2	0.47	0.16	0.06	1.00	
X3	0.45	0.15	0.17	0.33	1.00

### Goodness of Fit Statistics

Degrees of Freedom = 245

Minimum Fit Function Chi-Square = 337.65 (P = 0.00)

Normal Theory Weighted Least Squares Chi-Square = 316.76 (P = 0.0014)

Estimated Non-centrality Parameter (NCP) = 71.76

90 Percent Confidence Interval for NCP = (29.93 ; 121.70)

Minimum Fit Function Value = 2.27

Population Discrepancy Function Value (F0) = 0.48

90 Percent Confidence Interval for F0 = (0.20 ; 0.82)

Root Mean Square Error of Approximation (RMSEA) = 0.044

90 Percent Confidence Interval for RMSEA = (0.029 ; 0.058)

P-Value for Test of Close Fit (RMSEA < 0.05) = 0.74

Expected Cross-Validation Index (ECVI) = 2.86

90 Percent Confidence Interval for ECVI = (2.58 ; 3.20)

ECVI for Saturated Model = 4.03

ECVI for Independence Model = 24.02

Chi-Square for Independence Model with 276 Degrees of Freedom = 3531.25

Independence AIC = 3579.25

Model AIC = 426.76

Saturated AIC = 600.00

Independence CAIC = 3675.51

Model CAIC = 647.34

Saturated CAIC = 1803.19

Normed Fit Index (NFI) = 0.90

Non-Normed Fit Index (NNFI) = 0.97

Parsimony Normed Fit Index (PNFI) = 0.80

Comparative Fit Index (CFI) = 0.97

Incremental Fit Index (IFI) = 0.97

Relative Fit Index (RFI) = 0.89

Critical N (CN) = 133.13

Root Mean Square Residual (RMR) = 0.027

Standardized RMR = 0.057

Goodness of Fit Index (GFI) = 0.85

Adjusted Goodness of Fit Index (AGFI) = 0.82

Parsimony Goodness of Fit Index (PGFI) = 0.69

The Modification Indices Suggest to Add an Error Covariance

Between	and	Decrease in Chi-Square	New Estimate
Y2.05	Y2.04	14.7	-0.06
Y2.06	Y2.05	8.5	0.06
X1.02	X1.01	10.4	-0.08
X1.03	Y1.05	12.1	-0.05
X1.03	X1.01	26.1	0.13
X1.04	X1.02	15.5	0.09
X1.04	X1.03	8.3	-0.06
X2.03	Y1.02	8.1	0.06
X3.03	Y1.02	9.8	-0.06

CUSTOMER LOYALTY AVANZA



## Standardized Solution

### LAMBDA-Y

	Y1	Y2
	-----	-----
Y1.01	0.54	--
Y1.02	0.59	--
Y1.03	0.52	--
Y1.04	0.50	--
Y1.05	0.61	--
Y2.01	--	0.64
Y2.02	--	0.67
Y2.03	--	0.75
Y2.04	--	0.59
Y2.05	--	0.68
Y2.06	--	0.57

### LAMBDA-X

	X1	X2	X3
	-----	-----	-----
X1.01	0.38	--	--
X1.02	0.46	--	--
X1.03	0.46	--	--

X1.04	0.31	--	--
X2.01	--	0.47	--
X2.02	--	0.58	--
X2.03	--	0.58	--
X2.04	--	0.53	--
X3.01	--	--	0.35
X3.02	--	--	0.44
X3.03	--	--	0.47
X3.04	--	--	0.29
X3.05	--	--	0.38

### BETA

	Y1	Y2
	-----	-----
Y1	--	--
Y2	0.33	--

### GAMMA

	X1	X2	X3
	-----	-----	-----
Y1	0.27	0.36	0.29

Y2    --    --    --

Correlation Matrix of ETA and KSI

	Y1	Y2	X1	X2	X3
Y1	1.00				
Y2	0.33	1.00			
X1	0.34	0.11	1.00		
X2	0.47	0.16	0.06	1.00	
X3	0.45	0.15	0.17	0.33	1.00

PSI

Note: This matrix is diagonal.

Y1	Y2
0.61	0.89

Regression Matrix ETA on KSI (Standardized)

	X1	X2	X3
Y1	0.27	0.36	0.29

Y2	0.09	0.12	0.10
----	------	------	------

## CUSTOMER LOYALTY AVANZA

### Total and Indirect Effects

#### Total Effects of KSI on ETA

	X1	X2	X3
	-----	-----	-----
Y1	0.27	0.36	0.29
	(0.08)	(0.09)	(0.09)
	3.17	3.93	3.09
Y2	0.09	0.12	0.10
	(0.04)	(0.04)	(0.04)
	2.49	2.82	2.45

#### Indirect Effects of KSI on ETA

	X1	X2	X3
	-----	-----	-----
Y1	--	--	--
Y2	0.09	0.12	0.10
	(0.04)	(0.04)	(0.04)
	2.49	2.82	2.45

Total Effects of ETA on ETA

	Y1	Y2
	-----	-----
Y1	--	--
Y2	0.33	--
	(0.09)	
	3.69	

Largest Eigenvalue of  $B^*B'$  (Stability Index) is 0.112

Total Effects of ETA on Y

	Y1	Y2
	-----	-----
Y1.01	0.54	--
Y1.02	0.59	--

(0.06)

9.62

Y1.03 0.52 --

(0.05)

9.59

Y1.04 0.50 --

(0.05)

9.38

Y1.05 0.61 --

(0.06)

10.41

Y2.01 0.21 0.64

(0.06)

3.69

Y2.02 0.22 0.67

(0.06) (0.05)

3.75 12.52

Y2.03 0.25 0.75

(0.07) (0.06)

3.75 12.77

Y2.04    0.20    0.59

(0.05)    (0.05)

3.71    11.37

Y2.05    0.23    0.68

(0.06)    (0.06)

3.74    12.38

Y2.06    0.19    0.57

(0.05)    (0.06)

3.66    10.01

Indirect Effects of ETA on Y

Y1      Y2

-----

Y1.01    --    --

Y1.02    --    --

Y1.03    --    --

Y1.04    --    --

Y1.05    --    --

Y2.01    0.21    --

(0.06)

3.69

Y2.02    0.22    --

(0.06)

3.75

Y2.03    0.25    --

(0.07)

3.75

Y2.04    0.20    --

(0.05)

3.71

Y2.05    0.23    --

(0.06)

3.74

Y2.06    0.19    --

(0.05)

3.66

Total Effects of KSI on Y

X1      X2      X3

-----



Y1.01 0.14 0.19 0.15

(0.05) (0.05) (0.05)

3.17 3.93 3.09

Y1.02 0.16 0.21 0.17

(0.05) (0.05) (0.05)

3.18 3.97 3.11

Y1.03 0.14 0.19 0.15

(0.04) (0.05) (0.05)

3.18 3.96 3.11

Y1.04 0.13 0.18 0.14

(0.04) (0.05) (0.05)

3.17 3.95 3.10

Y1.05 0.16 0.22 0.17

(0.05) (0.05) (0.06)

3.21 4.02 3.13

Y2.01 0.06 0.08 0.06

(0.02) (0.03) (0.02)

2.49 2.82 2.45

Y2.02 0.06 0.08 0.06

(0.02) (0.03) (0.03)

	2.51	2.84	2.47
Y2.03	0.07	0.09	0.07
	(0.03)	(0.03)	(0.03)
	2.51	2.84	2.47
Y2.04	0.05	0.07	0.06
	(0.02)	(0.03)	(0.02)
	2.50	2.82	2.46
Y2.05	0.06	0.08	0.07
	(0.02)	(0.03)	(0.03)
	2.51	2.84	2.47
Y2.06	0.05	0.07	0.05
	(0.02)	(0.02)	(0.02)
	2.48	2.80	2.44

## CUSTOMER LOYALTY AVANZA

### Standardized Total and Indirect Effects

#### Standardized Total Effects of KSI on ETA

	X1	X2	X3
	-----	-----	-----
Y1	0.27	0.36	0.29
Y2	0.09	0.12	0.10

Standardized Indirect Effects of KSI on ETA

	X1	X2	X3
Y1	--	--	--
Y2	0.09	0.12	0.10

Standardized Total Effects of ETA on ETA

	Y1	Y2
Y1	--	--
Y2	0.33	--

Standardized Total Effects of ETA on Y

	Y1	Y2
Y1.01	0.54	--
Y1.02	0.59	--
Y1.03	0.52	--
Y1.04	0.50	--
Y1.05	0.61	--

Y2.01	0.21	0.64
Y2.02	0.22	0.67
Y2.03	0.25	0.75
Y2.04	0.20	0.59
Y2.05	0.23	0.68
Y2.06	0.19	0.57

Standardized Indirect Effects of ETA on Y

	Y1	Y2
	-----	-----
Y1.01	--	--
Y1.02	--	--
Y1.03	--	--
Y1.04	--	--
Y1.05	--	--
Y2.01	0.21	--
Y2.02	0.22	--
Y2.03	0.25	--
Y2.04	0.20	--
Y2.05	0.23	--

Y2.06 0.19 - -

Standardized Total Effects of KSI on Y

	X1	X2	X3
	-----	-----	-----
Y1.01	0.14	0.19	0.15
Y1.02	0.16	0.21	0.17
Y1.03	0.14	0.19	0.15
Y1.04	0.13	0.18	0.14
Y1.05	0.16	0.22	0.17
Y2.01	0.06	0.08	0.06
Y2.02	0.06	0.08	0.06
Y2.03	0.07	0.09	0.07
Y2.04	0.05	0.07	0.06
Y2.05	0.06	0.08	0.07
Y2.06	0.05	0.07	0.05

Time used: 0.125 Seconds