## **Principal Components**

## AnalysisPrincipal Components

Analysis The PRINCOMP

PCA procedure with no rotation options

#### **Procedure The PRINCOMP Procedure**

	Simple Statistics									
	x6	х7	x8	х9	x10	x11	x12			
Mean	7.810000000	3.672000000	5.365000000	5.442000000	4.010000000	5.805000000	5.123000000			
StD	1.396279327	0.700516404	1.530456788	1.208403237	1.126942767	1.315285044	1.072319774			

	Simple Statistics								
	x13	x14	x15	x16	x17	x18			
Mean	6.974000000	6.043000000	5.150000000	4.278000000	4.610000000	3.886000000			
StD	1.545055326	0.819738194	1.493047862	0.928839832	1.206003501	0.734437186			

					Correl	ation M	atrix							
		x6	х7	<b>x8</b>	<b>x9</b>	x10	x11	x12	x13	x14	x15	x16	x17	x18
x6	X6 - Product Quality	1.0000	1372	0.0956	0.1064	0535	0.4775	1518	4013	0.0883	0.0270	0.1043	4931	0.0277
<b>x7</b>	X7 - E-Commerce Activities	1372	1.0000	0.0009	0.1402	0.4299	0527	0.7915	0.2295	0.0519	0274	0.1561	0.2707	0.1916
<b>x8</b>	X8 - Technical Support	0.0956	0.0009	1.0000	0.0967	0629	0.1926	0.0170	2708	0.7972	0736	0.0801	1861	0.0254
<b>x9</b>	X9 - Complaint Resolution	0.1064	0.1402	0.0967	1.0000	0.1969	0.5614	0.2298	1280	0.1404	0.0594	0.7569	0.3945	0.8651
x10	X10 - Advertising	0535	0.4299	0629	0.1969	1.0000	0116	0.5422	0.1342	0.0108	0.0842	0.1842	0.3336	0.2759
x11	X11 - Product Line	0.4775	0527	0.1926	0.5614	0116	1.0000	0613	4949	0.2731	0.0462	0.4244	3780	0.6019
x12	X12 - Salesforce Image	1518	0.7915	0.0170	0.2298	0.5422	0613	1.0000	0.2646	0.1075	0.0316	0.1951	0.3522	0.2716
x13	X13 - Competitive Pricing	4013	0.2295	2708	1280	0.1342	4949	0.2646	1.0000	2450	0.0232	1146	0.4711	0729
x14	X14 - Warranty & Claims	0.0883	0.0519	0.7972	0.1404	0.0108	0.2731	0.1075	2450	1.0000	0.0352	0.1971	1703	0.1094
x15	X15 - New Products	0.0270	0274	0736	0.0594	0.0842	0.0462	0.0316	0.0232	0.0352	1.0000	0.0685	0.0941	0.1057
x16	X16 - Order & Billing	0.1043	0.1561	0.0801	0.7569	0.1842	0.4244	0.1951	1146	0.1971	0.0685	1.0000	0.4070	0.7510
x17	X17 - Price Flexibility	4931	0.2707	1861	0.3945	0.3336	3780	0.3522	0.4711	1703	0.0941	0.4070	1.0000	0.4967
x18	X18 - Delivery Speed	0.0277	0.1916	0.0254	0.8651	0.2759	0.6019	0.2716	0729	0.1094	0.1057	0.7510	0.4967	1.0000

	Eigenval	ues of the C	orrelation N	<b>Matrix</b>
	Eigenvalue	Difference	Proportion	Cumulative
1	3.56707480	0.56943025	0.2744	0.2744
2	2.99764455	1.25956706	0.2306	0.5050
3	1.73807749	0.45085244	0.1337	0.6387
4	1.28722505	0.28198745	0.0990	0.7377
5	1.00523760	0.38662334	0.0773	0.8150
6	0.61861426	0.06718656	0.0476	0.8626
7	0.55142770	0.10443379	0.0424	0.9050
8	0.44699392	0.16625812	0.0344	0.9394
9	0.28073579	0.08002691	0.0216	0.9610
10	0.20070888	0.03451354	0.0154	0.9764
11	0.16619534	0.03513646	0.0128	0.9892
12	0.13105888	0.12205313	0.0101	0.9993
13	0.00900575		0.0007	1.0000

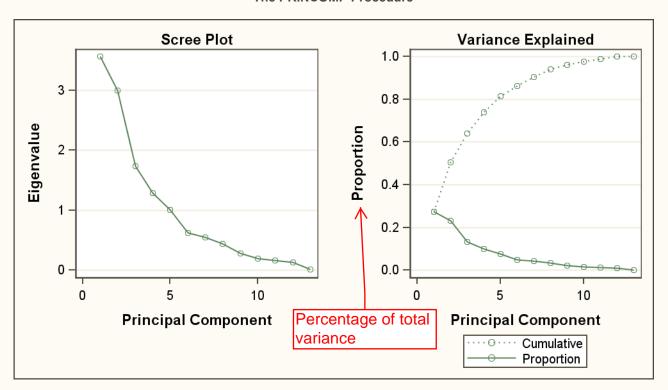
All variance (100%) extracted with 13 factors

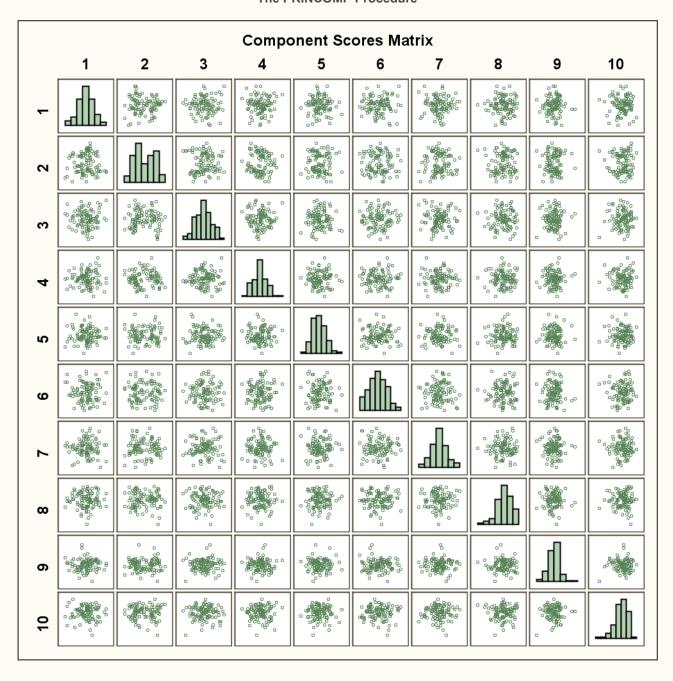
The PRINCOMP Procedure

Unrotated factor loadings

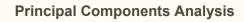
			Eigenve	ectors				,
		PRIN1	PRIN2	PRIN3	PRIN4	PRIN5	PRIN6	PRIN7
x6	X6 - Product Quality	0.008446	0.362093	046789	0.470255	0.050073	0.053218	0.665897
<b>x7</b>	X7 - E-Commerce Activities	0.244269	258875	0.359007	0.342228	097699	0.376719	207885
<b>x8</b>	X8 - Technical Support	0.069090	0.274059	0.525036	364880	0.014241	052463	0.128571
<b>x9</b>	X9 - Complaint Resolution	0.457137	0.123074	200458	102402	085960	0.056968	0.018868
x10	X10 - Advertising	0.255225	209683	0.182980	0.326436	0.125542	780693	0.137993
x11	X11 - Product Line	0.252450	0.421962	103700	0.217520	032055	0.163392	144097
x12	X12 - Salesforce Image	0.290987	272813	0.358673	0.295593	013096	0.195906	090505
x13	X13 - Competitive Pricing	008246	432241	014075	153777	0.023285	0.358024	0.627503
x14	X14 - Warranty & Claims	0.128458	0.267964	0.522777	322833	0.130058	0.001573	0.107127
x15	X15 - New Products	0.065686	012015	095045	0.015273	0.970118	0.145935	104671
x16	X16 - Order & Billing	0.430501	0.101718	168350	148939	056610	0.028760	0.137670
x17	X17 - Price Flexibility	0.278547	375150	149854	345748	0.013587	154763	0.094101
x18	X18 - Delivery Speed	0.478712	0.072835	216497	083898	037678	0.020893	066947

			Eigenve	ctors		
	PRIN8	PRIN9	PRIN10	PRIN11	PRIN12	PRIN13
x6	332255	0.224624	007874	0.189165	004950	0.003255
х7	180962	043336	0.568040	0.125663	242747	024897
<b>x8</b>	021438	0.362263	0.317860	378153	0.340652	0.007707
<b>x9</b>	0.044897	0.309076	143601	421513	646669	014147
x10	0.247025	126152	0.132664	087893	064371	012735
x11	0.514515	077804	0.095834	0.079386	0.183830	0.575848
x12	061311	0.124506	663204	145869	0.308661	0.049861
x13	0.483105	130051	0.074305	102645	0.009554	017853
x14	0.073585	295546	264417	0.461179	360901	013022
x15	045241	0.028927	0.056037	081985	0.003969	011435
x16	400150	668399	0.055765	264091	0.225869	0.008058
x17	281631	0.301071	0.053263	0.379418	0.067534	0.534199
x18	0.211163	0.202325	0.066811	0.385748	0.296113	615473



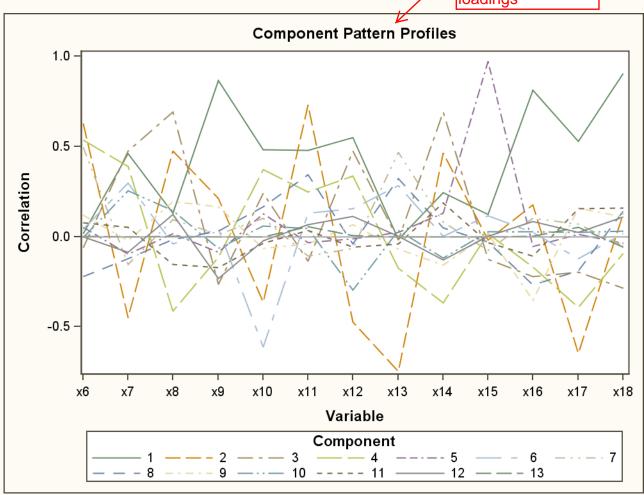




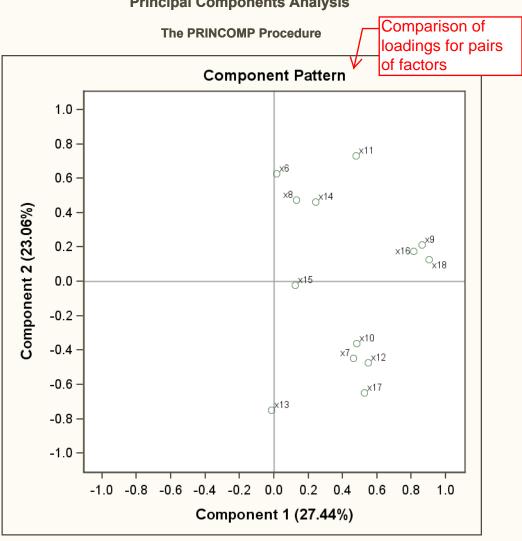


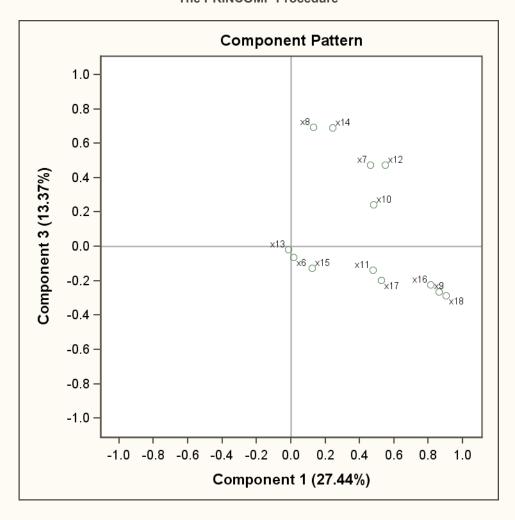
The PRINCOMP Procedure

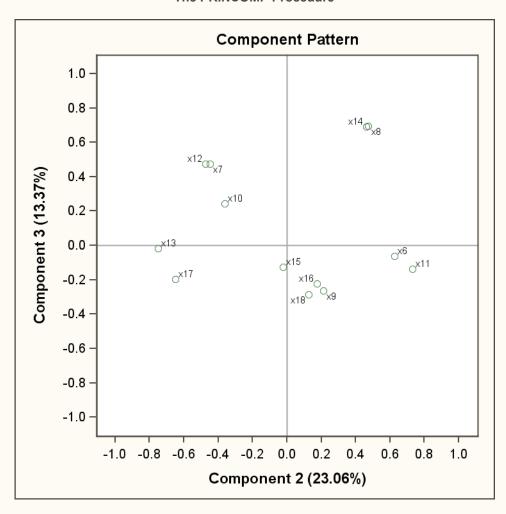
Plot of unrotated loadings

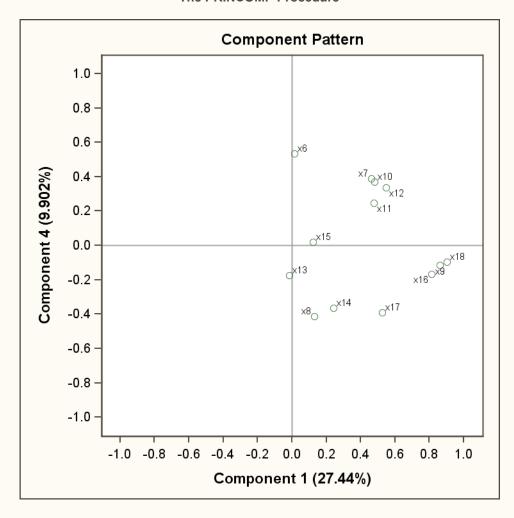


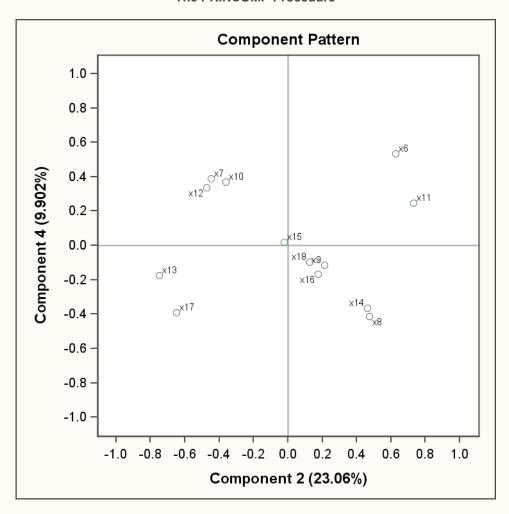


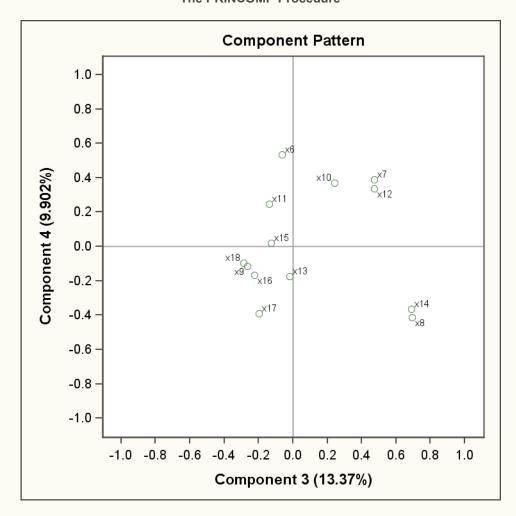


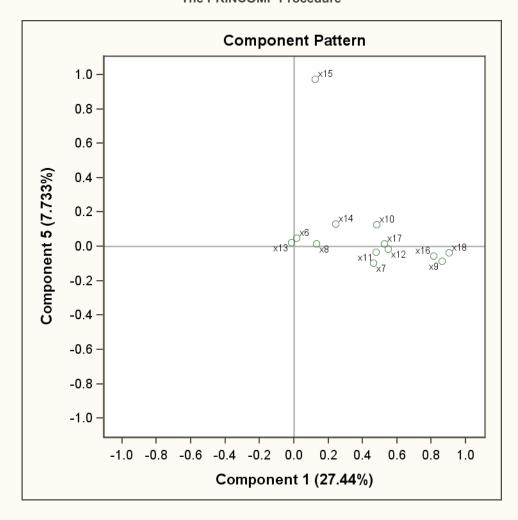


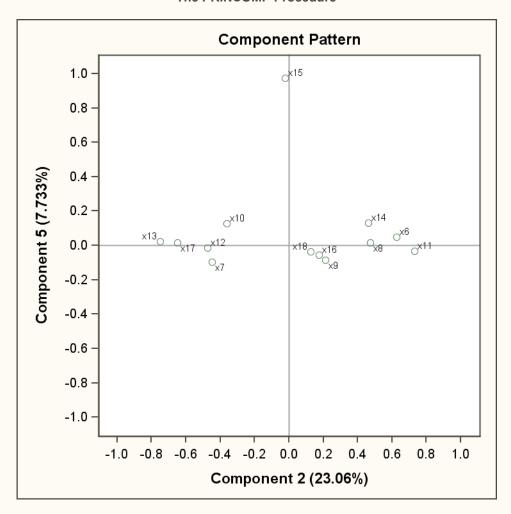


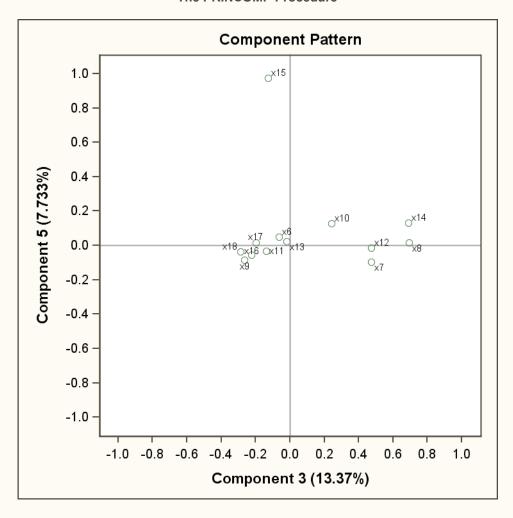


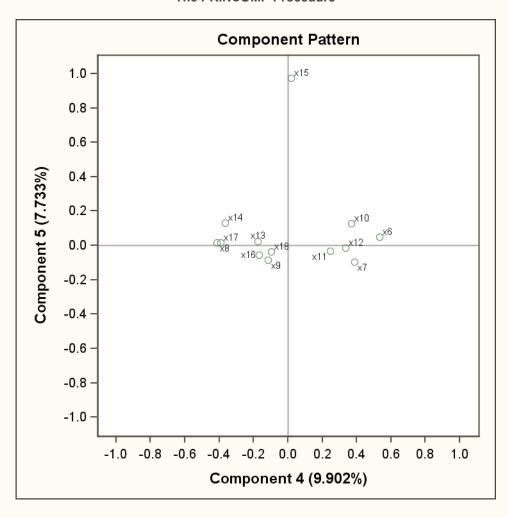






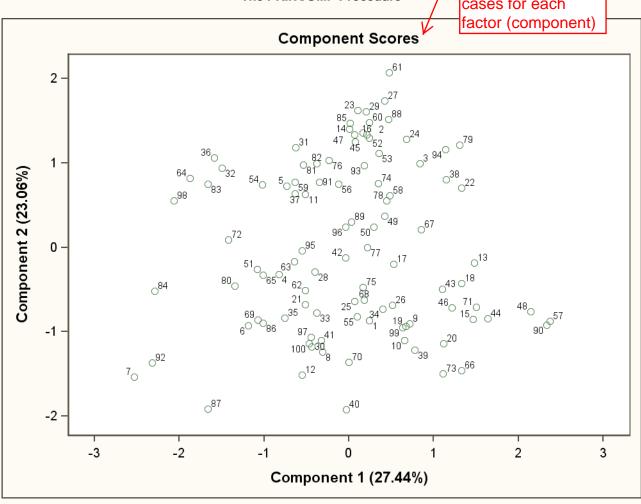


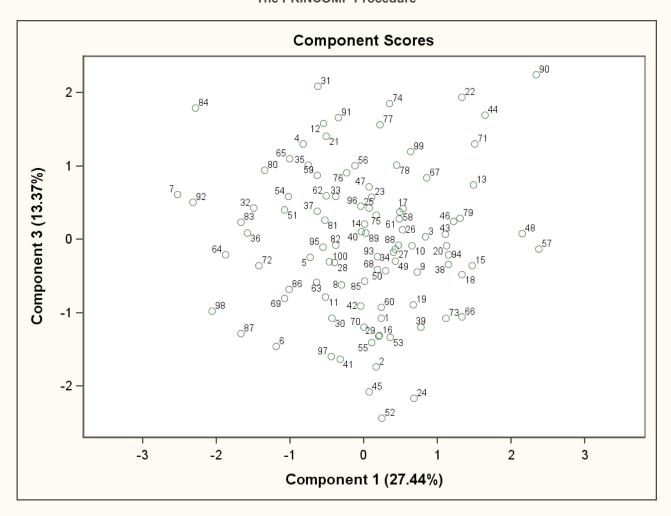


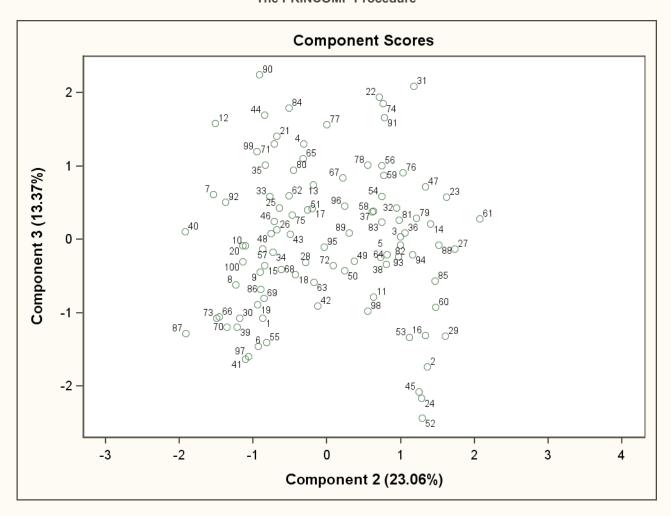


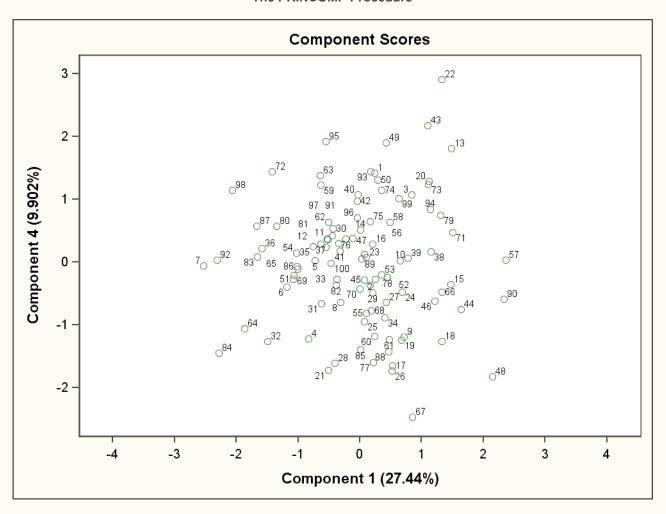
The PRINCOMP Procedure

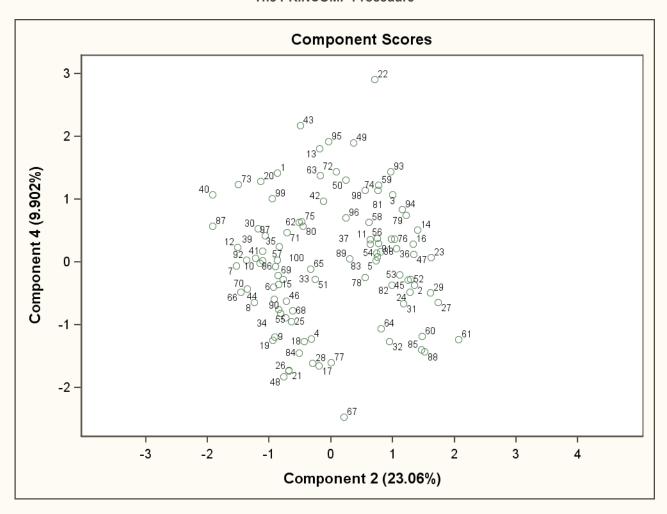
Values of individual cases for each

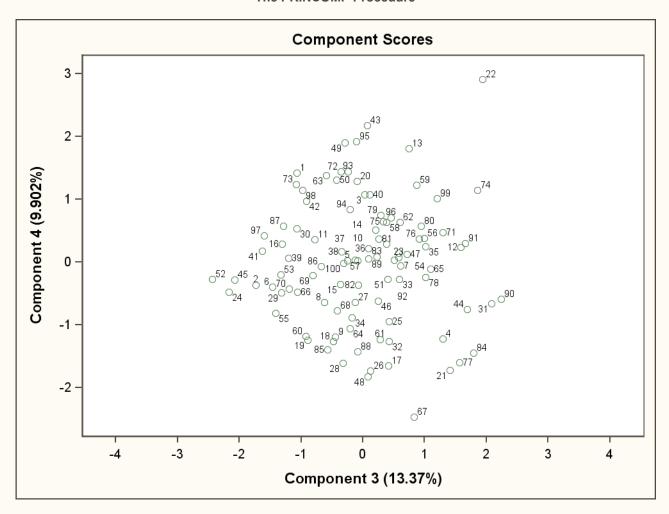


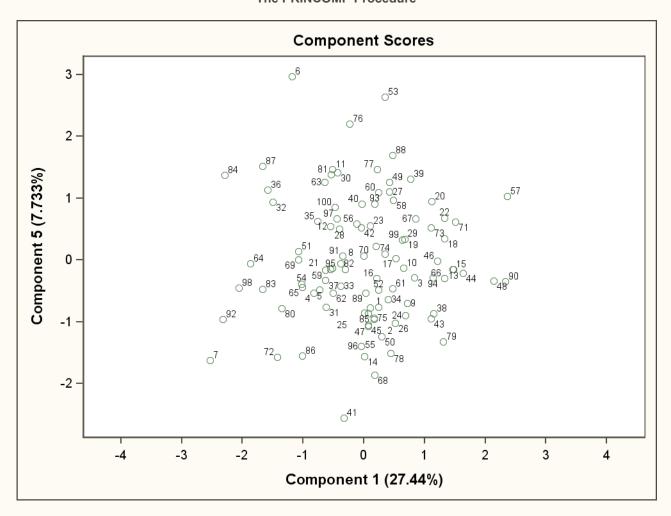


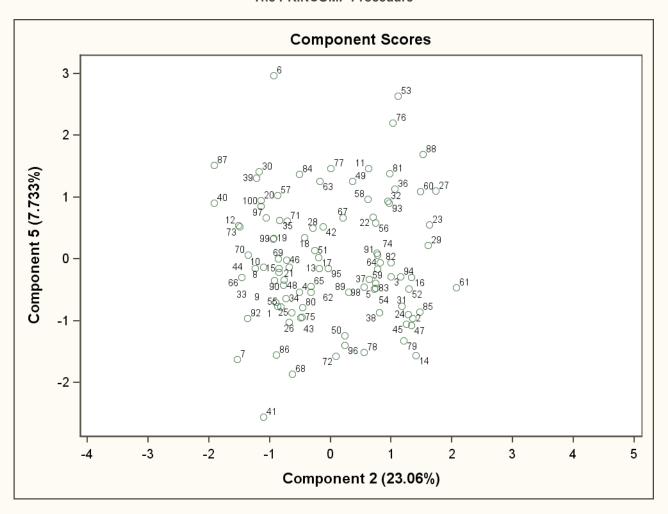


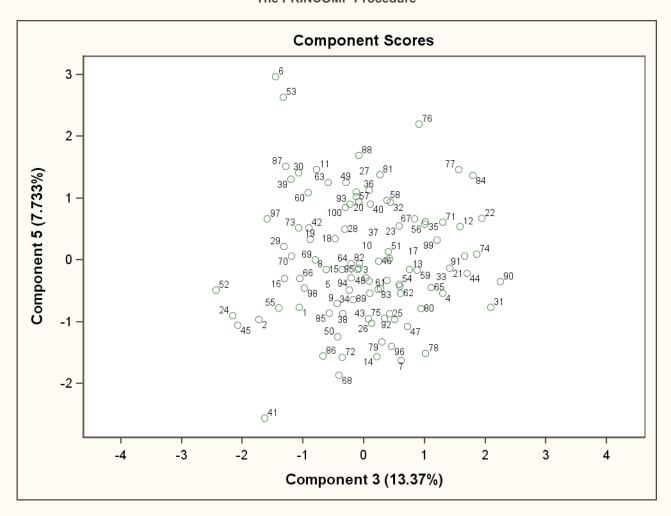


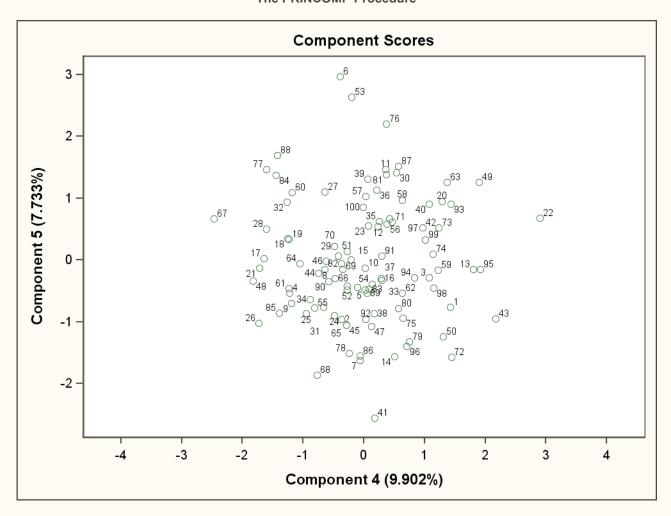


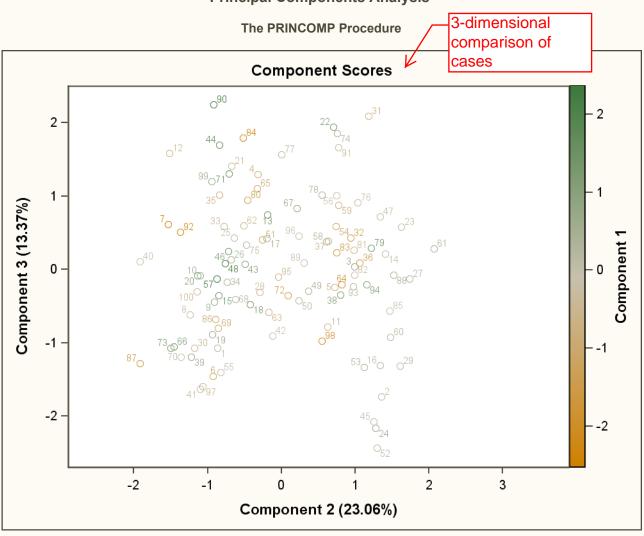












#### **The FACTOR Procedure**

Input Data Type	Raw Data
<b>Number of Records Read</b>	100
Number of Records Used	100
N for Significance Tests	100

11100	Means and Standard Deviations from 100								
	Observatio	ns							
Variable	Mean	Std Dev							
x6	7.8100000	1.3962793							
x7	3.6720000	0.7005164							
x8	5.3650000	1.5304568							
x9	5.4420000	1.2084032							
x10	4.0100000	1.1269428							
x11	5.8050000	1.3152850							
x12	5.1230000	1.0723198							
x13	6.9740000	1.5450553							
x14	6.0430000	0.8197382							
x15	5.1500000	1.4930479							
x16	4.2780000	0.9288398							
x17	4.6100000	1.2060035							
x18	3.8860000	0.7344372							

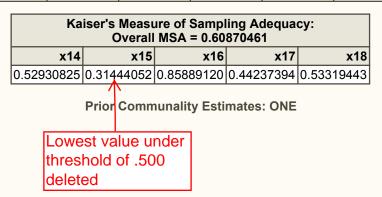
Descriptive statistics of variables to be analyzed

#### **The FACTOR Procedure** PCA **Initial Factor Method: Principal Components**

	Par	tial Corre	lations Co	ontrolling	all other	Variables	<b>3</b>		
		x6	х7	<b>x8</b>	х9	x10	x11	x12	x13
x6	X6 - Product Quality	1.00000	-0.03771	0.04869	0.08213	0.12226	0.02317	0.00626	-0.05437
<b>x7</b>	X7 - E-Commerce Activities	-0.03771	1.00000	0.05971	-0.11740	-0.00164	0.15678	0.72879	0.01774
<b>x8</b>	X8 - Technical Support	0.04869	0.05971	1.00000	0.15045	-0.04877	-0.06686	-0.07717	-0.12510
<b>x9</b>	X9 - Complaint Resolution	0.08213	-0.11740	0.15045	1.00000	-0.09162	0.15186	0.15429	-0.04897
x10	X10 - Advertising	0.12226	-0.00164	-0.04877	-0.09162	1.00000	0.10140	0.33311	-0.09010
x11	X11 - Product Line	0.02317	0.15678	-0.06686	0.15186	0.10140	1.00000	-0.27304	0.08759
x12	X12 - Salesforce Image	0.00626	0.72879	-0.07717	0.15429	0.33311	-0.27304	1.00000	0.13802
x13	X13 - Competitive Pricing	-0.05437	0.01774	-0.12510	-0.04897	-0.09010	0.08759	0.13802	1.00000
x14	X14 - Warranty & Claims	-0.12393	-0.09100	0.79187	-0.12279	0.01994	0.10312	0.17167	0.01926
x15	X15 - New Products	0.07585	-0.09110	-0.14330	-0.06054	0.02572	0.11766	0.05399	-0.01503
x16	X16 - Order & Billing	0.18884	0.10465	-0.16045	0.31201	-0.04369	-0.04379	-0.10021	-0.10615
x17	X17 - Price Flexibility	-0.13458	0.13394	-0.03124	0.14307	0.15061	-0.95288	-0.24120	0.21164
x18	X18 - Delivery Speed	-0.01305	-0.13622	0.02777	0.08071	-0.06399	0.94102	0.25413	-0.12649

	Partial Correlation	ns Contro	olling all c	ther Vari	ables	
		x14	x15	x16	x17	x18
x6	X6 - Product Quality	-0.12393	0.07585	0.18884	-0.13458	-0.01305
<b>x7</b>	X7 - E-Commerce Activities	-0.09100	-0.09110	0.10465	0.13394	-0.13622
<b>x8</b>	X8 - Technical Support	0.79187	-0.14330	-0.16045	-0.03124	0.02777
<b>x9</b>	X9 - Complaint Resolution	-0.12279	-0.06054	0.31201	0.14307	0.08071
x10	X10 - Advertising	0.01994	0.02572	-0.04369	0.15061	-0.06399
x11	X11 - Product Line	0.10312	0.11766	-0.04379	-0.95288	0.94102
x12	X12 - Salesforce Image	0.17167	0.05399	-0.10021	-0.24120	0.25413
x13	X13 - Competitive Pricing	0.01926	-0.01503	-0.10615	0.21164	-0.12649
x14	X14 - Warranty & Claims	1.00000	0.13825	0.25015	0.02886	-0.07009
x15	X15 - New Products	0.13825	1.00000	-0.03113	0.13688	-0.08997
x16	X16 - Order & Billing	0.25015	-0.03113	1.00000	0.03732	0.10856
x17	X17 - Price Flexibility	0.02886	0.13688	0.03732	1.00000	0.92227
x18	X18 - Delivery Speed	-0.07009	-0.08997	0.10856	0.92227	1.00000

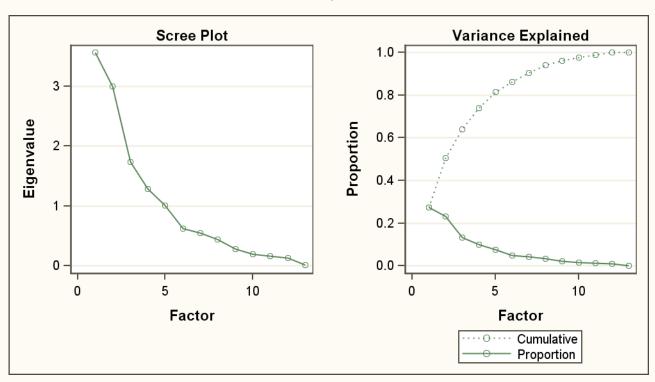
Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.60870461								
х6	х7	x8	х9	x10	x11	x12	x13	
0.87333494	0.62017070	0.52701809	0.88951120	0.80663277	0.44784686	0.58627959	0.87917735	



The FACTOR Procedure **Initial Factor Method: Principal Components** 

		ues of the C otal = 13 Av		latrix:
	Eigenvalue	Difference	Proportion	Cumulative
1	3.56707480	0.56943025	0.2744	0.2744
2	2.99764455	1.25956706	0.2306	0.5050
3	1.73807749	0.45085244	0.1337	0.6387
4	1.28722505	0.28198745	0.0990	0.7377
5	1.00523760	0.38662334	0.0773	0.8150
6	0.61861426	0.06718656	0.0476	0.8626
7	0.55142770	0.10443379	0.0424	0.9050
8	0.44699392	0.16625812	0.0344	0.9394
9	0.28073579	0.08002691	0.0216	0.9610
10	0.20070888	0.03451354	0.0154	0.9764
11	0.16619534	0.03513646	0.0128	0.9892
12	0.13105888	0.12205313	0.0101	0.9993
13	0.00900575		0.0007	1.0000

5 factors will be retained by the MINEIGEN criterion.



#### The FACTOR Procedure **Initial Factor Method: Principal Components**

	Factor Pattern						
		Factor1	Factor2	Factor3	Factor4	Factor5	
x18	X18 - Delivery Speed	0.90413	0.12610	-0.28542	-0.09519	-0.03778	
x9	X9 - Complaint Resolution	0.86338	0.21309	-0.26428	-0.11618	-0.08618	
x16	X16 - Order & Billing	0.81307	0.17611	-0.22195	-0.16898	-0.05676	
x12	X12 - Salesforce Image	0.54958	-0.47234	0.47286	0.33537	-0.01313	
x10	X10 - Advertising	0.48204	-0.36304	0.24123	0.37036	0.12587	
x11	X11 - Product Line	0.47680	0.73057	-0.13671	0.24679	-0.03214	
x6	X6 - Product Quality	0.01595	0.62692	-0.06169	0.53353	0.05020	
x17	X17 - Price Flexibility	0.52608	-0.64952	-0.19756	-0.39227	0.01362	
x13	X13 - Competitive Pricing	-0.01557	-0.74837	-0.01856	-0.17447	0.02335	
<b>x8</b>	X8 - Technical Support	0.13049	0.47450	0.69219	-0.41398	0.01428	
x14	X14 - Warranty & Claims	0.24261	0.46395	0.68921	-0.36627	0.13040	
х7	X7 - E-Commerce Activities	0.46134	-0.44821	0.47330	0.38828	-0.09795	
x15	X15 - New Products	0.12406	-0.02080	-0.12530	0.01733	0.97266	

Variance Explained by Each Factor							
Factor1	Factor2	Factor3	Factor4	Factor5			
3.5670748	2.9976445	1.7380775	1.2872251	1.0052376			

Final Communality Estimates: Total = 10.595259							
x6	х7	x8	х9	x10	x11	x12	x13
0.68426202	0.79809704	0.89288069	0.88160161	0.57536119	0.84169896	0.86138453	0.59162909

x14	x15	x16	x17	x18
0.90027621	0.97788351	0.77314161	0.89173717	0.92530586

#### **The FACTOR Procedure Rotation Method: Varimax**

	Orthogonal Transformation Matrix								
	1	2	3	4	5				
1	0.86773	-0.01364	0.47263	0.13504	0.07237				
2	0.19517	0.77190	-0.44909	0.40507	-0.01765				
3	-0.38958	0.00093	0.51687	0.75411	-0.11130				
4	-0.21692	0.63557	0.55473	-0.49098	0.01414				
5	-0.10057	0.00579	0.00762	0.08907	0.99089				

	Rota	ated Fact	or Patterr	า		
		Factor1	Factor2	Factor3	Factor4	Factor5
x18	X18 - Delivery Speed	0.94480	0.02403	0.17007	0.00131	0.05620
<b>x9</b>	X9 - Complaint Resolution	0.92760	0.07812	0.11066	0.05298	0.00110
x16	X16 - Order & Billing	0.86874	0.01692	0.09630	0.09168	0.02181
x6	X6 - Product Quality	0.03944	0.82303	-0.00954	-0.04790	0.05424
x11	X11 - Product Line	0.55928	0.71396	-0.03675	0.13319	0.00847
x13	X13 - Competitive Pricing	-0.11685	-0.68822	0.22253	-0.23150	0.03482
x17	X17 - Price Flexibility	0.49042	-0.75796	0.22072	-0.14723	0.07948
x12	X12 - Salesforce Image	0.12905	-0.15858	0.90222	0.07364	-0.01279
<b>x7</b>	X7 - E-Commerce Activities	0.05408	-0.10561	0.87861	0.03830	-0.10295
x10	X10 - Advertising	0.16044	-0.05046	0.72196	-0.07068	0.14441
<b>x8</b>	X8 - Technical Support	0.02454	0.10210	-0.02319	0.93634	-0.06768
x14	X14 - Warranty & Claims	0.09891	0.12342	0.06035	0.93188	0.05669
x15	X15 - New Products	0.05083	-0.00123	0.02024	-0.00804	0.98733

Variance Explained by Each Factor							
Factor1	Factor2	Factor3	Factor4	Factor5			
3.1345951	2.3067596	2.2618825	1.8636097	1.0284127			

Final Communality Estimates: Total = 10.595259							
x6	х7	x8	x9	x10	x11	x12	x13
0.68426202	0.79809704	0.89288069	0.88160161	0.57536119	0.84169896	0.86138453	0.59162909

x14	x15	x16	x17	x18
0.90027621	0.97788351	0.77314161	0.89173717	0.92530586

# The FACTOR Procedure Rotation Method: Varimax

#### **Scoring Coefficients Estimated by Regression**

Squared	Squared Multiple Correlations of the Variables with Each Factor						
Factor1	Factor2	Factor3	Factor4	Factor5			
1.0000000	1.0000000	1.0000000	1.0000000	1.0000000			

	Standardi	zed Scor	ing Coeff	icients		
		Factor1	Factor2	Factor3	Factor4	Factor5
x18	X18 - Delivery Speed	0.31195	-0.01835	-0.02528	-0.03961	-0.00240
<b>x9</b>	X9 - Complaint Resolution	0.31134	-0.00643	-0.04684	-0.01650	-0.05304
x16	X16 - Order & Billing	0.29316	-0.04164	-0.05791	0.01771	-0.02813
x6	X6 - Product Quality	-0.03641	0.42506	0.12016	-0.14050	0.05593
x11	X11 - Product Line	0.15582	0.30790	0.01918	-0.03952	-0.01484
x13	X13 - Competitive Pricing	-0.02129	-0.27867	0.02952	-0.04115	0.02638
x17	X17 - Price Flexibility	0.19471	-0.36298	-0.06069	-0.00274	0.03627
x12	X12 - Salesforce Image	-0.05825	0.04204	0.42863	0.03306	-0.02561
<b>x7</b>	X7 - E-Commerce Activities	-0.07868	0.07423	0.43561	0.00547	-0.11060
x10	X10 - Advertising	-0.03545	0.08839	0.35056	-0.05626	0.12461
<b>x8</b>	X8 - Technical Support	-0.02418	-0.08226	-0.02625	0.52855	-0.03495
x14	X14 - Warranty & Claims	-0.01658	-0.06119	0.01074	0.52217	0.08257
x15	X15 - New Products	-0.04332	0.00826	-0.00287	0.02709	0.96963

#### **The FACTOR Procedure**

Input Data Type	Raw Data
<b>Number of Records Read</b>	100
Number of Records Used	100
N for Significance Tests	100

Mea	ns and Sta	ndard
Dev	riations fro	m 100
	Observatio	ns
Variable	Mean	Std Dev
x6	7.8100000	1.3962793
x7	3.6720000	0.7005164
x8	5.3650000	1.5304568
x9	5.4420000	1.2084032
x10	4.0100000	1.1269428
x11	5.8050000	1.3152850
x12	5.1230000	1.0723198
x13	6.9740000	1.5450553
x14	6.0430000	0.8197382
x16	4.2780000	0.9288398
x17	4.6100000	1.2060035
x18	3.8860000	0.7344372

#### The FACTOR Procedure **Initial Factor Method: Principal Components**

	Partial Correlations Controlling all other Variables							
		х6	х7	<b>x8</b>	х9	x10	x11	
x6	X6 - Product Quality	1.00000	-0.04494	0.03832	0.07790	0.12461	0.03241	
<b>x7</b>	X7 - E-Commerce Activities	-0.04494	1.00000	0.07383	-0.11256	-0.00400	0.14770	
<b>x8</b>	X8 - Technical Support	0.03832	0.07383	1.00000	0.16108	-0.05302	-0.08518	
<b>x9</b>	X9 - Complaint Resolution	0.07790	-0.11256	0.16108	1.00000	-0.09338	0.14601	
x10	X10 - Advertising	0.12461	-0.00400	-0.05302	-0.09338	1.00000	0.10520	
x11	X11 - Product Line	0.03241	0.14770	-0.08518	0.14601	0.10520	1.00000	
x12	X12 - Salesforce Image	0.01040	0.72795	-0.08592	0.15152	0.33510	-0.26895	
x13	X13 - Competitive Pricing	-0.05568	0.01919	-0.12424	-0.04815	-0.09053	0.08644	
x14	X14 - Warranty & Claims	-0.11488	-0.10503	0.78767	-0.13268	0.02373	0.12139	
x16	X16 - Order & Billing	0.18711	0.10799	-0.15770	0.31462	-0.04452	-0.04781	
x17	X17 - Price Flexibility	-0.12574	0.12314	-0.05187	0.13631	0.15565	-0.95229	
x18	X18 - Delivery Speed	-0.02001	-0.12909	0.04125	0.08667	-0.06660	0.94076	

	Partial Correlations Controlling all other Variables							
		x12	x13	x14	x16	x17	x18	
x6	X6 - Product Quality	0.01040	-0.05568	-0.11488	0.18711	-0.12574	-0.02001	
<b>x7</b>	X7 - E-Commerce Activities	0.72795	0.01919	-0.10503	0.10799	0.12314	-0.12909	
<b>x8</b>	X8 - Technical Support	-0.08592	-0.12424	0.78767	-0.15770	-0.05187	0.04125	
<b>x9</b>	X9 - Complaint Resolution	0.15152	-0.04815	-0.13268	0.31462	0.13631	0.08667	
x10	X10 - Advertising	0.33510	-0.09053	0.02373	-0.04452	0.15565	-0.06660	
x11	X11 - Product Line	-0.26895	0.08644	0.12139	-0.04781	-0.95229	0.94076	
x12	X12 - Salesforce Image	1.00000	0.13742	0.18114	-0.10209	-0.23637	0.25065	
x13	X13 - Competitive Pricing	0.13742	1.00000	0.01735	-0.10575	0.21160	-0.12566	
x14	X14 - Warranty & Claims	0.18114	0.01735	1.00000	0.24835	0.04871	-0.08367	
x16	X16 - Order & Billing	-0.10209	-0.10575	0.24835	1.00000	0.03339	0.11187	
x17	X17 - Price Flexibility	-0.23637	0.21160	0.04871	0.03339	1.00000	0.92234	
x18	X18 - Delivery Speed	0.25065	-0.12566	-0.08367	0.11187	0.92234	1.00000	

Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.61212249							
x6	х7	x8	х9	x10	x11	x12	x13
0.88433098	0.62447848	0.53109650	0.88982362	0.80096627	0.44926360	0.58736933	0.87993546

Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.61212249						
x14	x16	x17	<del>&lt; x18</del>			
0.53286926	0.85848306	0.44406502	0.53282157			

X17 has lowest MSA value under .500, will be deleted

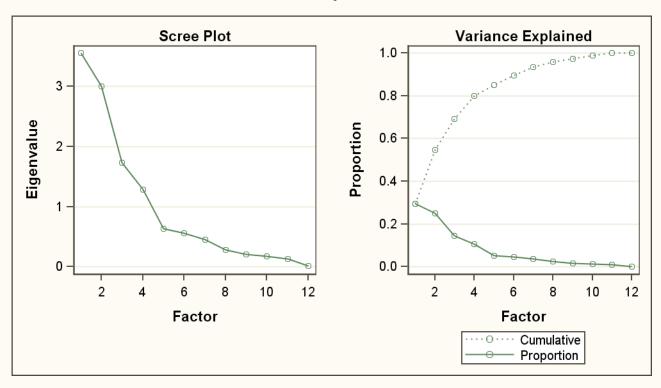
**Prior Communality Estimates: ONE** 

	Eigenvalues of the Correlation Matrix: Total = 12 Average = 1							
	Eigenvalue	Difference	Proportion	Cumulative				
1	3.55598484	0.55863475	0.2963	0.2963				
2	2.99735009	1.26605798	0.2498	0.5461				
3	1.73129211	0.44413617	0.1443	0.6904				
4	1.28715594	0.65937752	0.1073	0.7976				
5	0.62777842	0.07177880	0.0523	0.8500				

The FACTOR Procedure **Initial Factor Method: Principal Components** 

	Eigenvalues of the Correlation Matrix: Total = 12 Average = 1							
	Eigenvalue	Difference	Proportion	Cumulative				
6	0.55599962	0.10792096	0.0463	0.8963				
7	0.44807866	0.16671190	0.0373	0.9336				
8	0.28136676	0.07781008	0.0234	0.9571				
9	0.20355668	0.03231743	0.0170	0.9740				
10	0.17123924	0.04016912	0.0143	0.9883				
11	0.13107012	0.12194259	0.0109	0.9992				
12	0.00912753		0.0008	1.0000				

4 factors will be retained by the MINEIGEN criterion.



	Factor Pattern								
		Factor1	Factor2	Factor3	Factor4				
x18	X18 - Delivery Speed	0.90361	0.12344	-0.29078	-0.09416				
<b>x</b> 9	X9 - Complaint Resolution	0.86468	0.21023	-0.27263	-0.11456				
x16	X16 - Order & Billing	0.81380	0.17350	-0.22858	-0.16777				
x12	X12 - Salesforce Image	0.55019	-0.47461	0.46994	0.33501				
x10	X10 - Advertising	0.47996	-0.36442	0.24446	0.36893				
x11	X11 - Product Line	0.47864	0.72916	-0.13861	0.24735				
x6	X6 - Product Quality	0.01640	0.62720	-0.05753	0.53298				
x17	X17 - Price Flexibility	0.52266	-0.65090	-0.20013	-0.39197				
x13	X13 - Competitive Pricing	-0.01850	-0.74820	-0.01825	-0.17467				
x14	X14 - Warranty & Claims	0.24460	0.46296	0.69481	-0.36868				
<b>x8</b>	X8 - Technical Support	0.13608	0.47314	0.69032	-0.41487				
х7	X7 - E-Commerce Activities	0.46395	-0.45059	0.46620	0.38889				

# The FACTOR Procedure Initial Factor Method: Principal Components

Variance Explained by Each Factor						
Factor1	Factor2	Factor3	Factor4			
3.5559848	2.9973501	1.7312921	1.2871559			

Final Communality Estimates: Total = 9.571783							
x6	х7	x8	х9	x10	x11	x12	x13
0.68102788	0.78684979	0.89104455	0.87932342	0.55902838	0.84116435	0.86102860	0.59099410

x14	x16	x17	x18
0.89285064	0.77277319	0.89053676	0.92516131

(	Orthogonal Transformation Matrix								
	1	2	3	4					
1	0.86853	-0.01011	0.47558	0.13918					
2	0.19141	0.77124	-0.45183	0.40548					
3	-0.40245	0.00195	0.51316	0.75809					
4	-0.21691	0.63647	0.55349	-0.49144					

	Rotated Factor Pattern								
		Factor1	Factor2	Factor3	Factor4				
x18	X18 - Delivery Speed	0.94589	0.02557	0.17263	0.00165				
<b>x9</b>	X9 - Complaint Resolution	0.92581	0.07995	0.11293	0.05521				
x16	X16 - Order & Billing	0.86841	0.01836	0.09847	0.09278				
x6	X6 - Product Quality	0.04184	0.82267	-0.01011	-0.04895				
x11	X11 - Product Line	0.55741	0.71467	-0.03605	0.13564				
x13	X13 - Competitive Pricing	-0.11405	-0.68806	0.22321	-0.23395				
x17	X17 - Price Flexibility	0.49492	-0.75715	0.22302	-0.15027				
x12	X12 - Salesforce Image	0.12522	-0.15746	0.90267	0.07575				
<b>x7</b>	X7 - E-Commerce Activities	0.04473	-0.10378	0.87871	0.04417				
x10	X10 - Advertising	0.16870	-0.05062	0.72255	-0.07695				
<b>x8</b>	X8 - Technical Support	0.02092	0.10082	-0.02444	0.93800				
x14	X14 - Warranty & Claims	0.10140	0.12128	0.05964	0.92968				

Variance Explained by Each Factor						
Factor1	Factor2	Factor3	Factor4			
3.1332390	2.3046236	2.2663953	1.8675251			

Final Communality Estimates: Total = 9.571783							
x6	х7	x8	х9	x10	x11	x12	x13
0.68102788	0.78684979	0.89104455	0.87932342	0.55902838	0.84116435	0.86102860	0.59099410

x14	x16	x17	x18
0.89285064	0.77277319	0.89053676	0.92516131

#### **The FACTOR Procedure**

Input Data Type	Raw Data
<b>Number of Records Read</b>	100
<b>Number of Records Used</b>	100
N for Significance Tests	100

Means and Standard Deviations from 100 Observations						
Variable Mean Std						
x6	7.8100000	1.3962793				
x7	3.6720000	0.7005164				
x8	5.3650000	1.5304568				
x9	5.4420000	1.2084032				
x10	4.0100000	1.1269428				
x11	5.8050000	1.3152850				
x12	5.1230000	1.0723198				
x13	6.9740000	1.5450553				
x14	6.0430000	0.8197382				
x16	4.2780000	0.9288398				
x18	3.8860000	0.7344372				

X15 and X17 have been deleted due to MSA values under .500

**The FACTOR Procedure Initial Factor Method: Principal Components**  Represents "unique" correlation among variables after controlling for all other

	Partial Correlations Controlling all other Variables Variables								
		x6	х7	8x	х9	x10	x11	x12	x13
x6	X6 - Product Quality	1.00000	-0.06137	0.04526	0.06183	0.10719	0.50256	0.04163	-0.08486
<b>x7</b>	X7 - E-Commerce Activities	-0.06137	1.00000	0.06806	-0.09742	0.01547	0.10050	0.72474	0.04665
<b>x8</b>	X8 - Technical Support	0.04526	0.06806	1.00000	0.15567	-0.06194	-0.11741	-0.07591	-0.13853
<b>x9</b>	X9 - Complaint Resolution	0.06183	-0.09742	0.15567	1.00000	-0.07374	0.05360	0.12394	-0.01994
x10	X10 - Advertising	0.10719	0.01547	-0.06194	-0.07374	1.00000	-0.14272	0.31080	-0.05965
x11	X11 - Product Line	0.50256	0.10050	-0.11741	0.05360	-0.14272	1.00000	-0.14787	-0.38577
x12	X12 - Salesforce Image	0.04163	0.72474	-0.07591	0.12394	0.31080	-0.14787	1.00000	0.09204
x13	X13 - Competitive Pricing	-0.08486	0.04665	-0.13853	-0.01994	-0.05965	-0.38577	0.09204	1.00000
x14	X14 - Warranty & Claims	-0.12211	-0.09991	0.78714	-0.12738	0.03174	0.24605	0.17478	0.02833
x16	X16 - Order & Billing	0.18448	0.11302	-0.15973	0.32236	-0.03983	-0.26099	-0.11326	-0.10102
x18	X18 - Delivery Speed	-0.35477	-0.04045	-0.01707	0.55488	0.20164	0.52936	0.08692	0.18405

	Partial Correlations Contro	olling all c	ther Vari	ables
		x14	x16	x18
x6	X6 - Product Quality	-0.12211	0.18448	-0.35477
<b>x7</b>	X7 - E-Commerce Activities	-0.09991	0.11302	-0.04045
<b>x8</b>	X8 - Technical Support	0.78714	-0.15973	-0.01707
x9	X9 - Complaint Resolution	-0.12738	0.32236	0.55488
x10	X10 - Advertising	0.03174	-0.03983	0.20164
x11	X11 - Product Line	0.24605	-0.26099	0.52936
x12	X12 - Salesforce Image	0.17478	-0.11326	0.08692
x13	X13 - Competitive Pricing	0.02833	-0.10102	0.18405
x14	X14 - Warranty & Claims	1.00000	0.25041	-0.10039
x16	X16 - Order & Billing	0.25041	1.00000	0.36944
x18	X18 - Delivery Speed	-0.10039	0.36944	1.00000

Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.65314222								
х6	х7	x8	х9	x10	x11	/	x12	x13
0.50870653	0.62555473	0.51900806	0.78655521	0.77936148	0.62232766	0.6218	4217	0.75282649

Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.65314222 x14 x16 x18 0.51076125 0.76001478 0.66557683

Overall MSA and individual variable values all over .500

**Prior Communality Estimates: ONE** 

Eigenvalues of the Correlation Matrix: Total = 11 Average = 1									
	Eigenvalue	Difference	Proportion	Cumulative					
1	3.42697133	0.87607462	0.3115	0.3115					
2	2.55089671	0.85992024	0.2319	0.5434					
3	1.69097648	0.60442042	0.1537	0.6972					
4	1.08655606	0.47713196	0.0988	0.7959					
5	0.60942409	0.05754032	0.0554	0.8513					
6	0.55188378	0.15036563	0.0502	0.9015					
7	0.40151815	0.15456660	0.0365	0.9380					

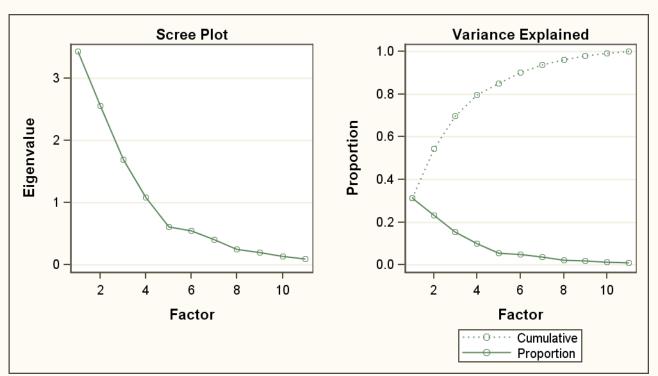
Four factors with eigenvalues greater than 1.0 account for 79.59% of variance

The FACTOR Procedure **Initial Factor Method: Principal Components** 

Eigenvalues of the Correlation Matrix: Total = 11 Average = 1									
	Eigenvalue	Difference	Proportion	Cumulative					
8	0.24695154	0.04339828	0.0225	0.9605					
9	0.20355327	0.07071169	0.0185	0.9790					
10	0.13284158	0.03441456	0.0121	0.9911					
11	0.09842702		0.0089	1.0000					

11 components explain 100% of variance in 11 variables

4 factors will be retained by the MINEIGEN criterion.



	Fact	Unrotated loadings				
		Factor1	Factor2	Factor3	Factor4	
x18	X18 - Delivery Speed	0.87579	0.11667	-0.30250	-0.20569	
<b>x9</b>	X9 - Complaint Resolution	0.87133	0.03105	-0.27354	-0.21506	
x16	X16 - Order & Billing	0.80938	0.04216	-0.21967	-0.24689	
x11	X11 - Product Line	0.71598	-0.45484	-0.15121	0.21150	
x12	X12 - Salesforce Image	0.37703	0.75177	0.31384	0.23159	
<b>x7</b>	X7 - E-Commerce Activities	0.30721	0.71314	0.30591	0.28392	
x13	X13 - Competitive Pricing	-0.28081	0.66035	-0.06898	-0.34768	
x10	X10 - Advertising	0.34013	0.58083	0.11456	0.33137	
<b>x8</b>	X8 - Technical Support	0.29192	-0.36889	0.79447	-0.20159	
x14	X14 - Warranty & Claims	0.39418	-0.30613	0.77836	-0.19316	
<b>x6</b>	X6 - Product Quality	0.24767	-0.50070	-0.08098	0.67039	

Variance Explained by Each Factor					
Factor1	Factor2	Factor3	Factor4		
3.4269713	2.5508967	1.6909765	1.0865561		

Eigenvalues of each factor

The FACTOR Procedure **Initial Factor Method: Principal Components** 

Equals sum of eigenvalues

Final Communality Estimates: Total = 8.755401							
x6	х7	x8	х9	x10	x11	x12	x13
0.76802937	0.77714736	0.89311235	0.88126008	0.57597858	0.78710502	0.85944643	0.64055781

x14 x16 x18 0.89224653 0.76608666 0.91443037

Communality of each variable equals sum of squared loadings across the retained factors

**The FACTOR Procedure** Rotation Method: Varimax

Varimax (orthogonal) rotation

	Orthogonal Transformation Matrix						
		1	2	3	4		
1		0.85746	0.32216	0.27066	0.29617		
2		0.01139	0.75813	-0.31201	-0.57250		
3		-0.37572	0.32140	0.86750	-0.05464		
4		-0.35139	0.46706	-0.27720	0.76259		

	Rotated Factor Pattern						Rotated loadings
		Factor1	Factor2	Factor3	Factor4	•	
x18	X18 - Delivery Speed	0.93821	0.17731	-0.00476	0.05226		
<b>x9</b>	X9 - Complaint Resolution	0.92583	0.11589	0.04847	0.09123		
x16	X16 - Order & Billing	0.86378	0.10680	0.08379	0.03930		
x12	X12 - Salesforce Image	0.13256	0.90045	0.07555	-0.15926		
<b>x7</b>	X7 - E-Commerce Activities	0.05684	0.87056	0.04732	-0.11748		
x10	X10 - Advertising	0.13878	0.74151	-0.08164	0.01465		
<b>x8</b>	X8 - Technical Support	0.01845	-0.02444	0.93919	0.10051		
x14	X14 - Warranty & Claims	0.10994	0.05485	0.93097	0.10218	_	X11 exhibits dual
<b>x6</b>	X6 - Product Quality	0.00152	-0.01272	-0.03282	0.87566		loading
x11	X11 - Product Line	0.59124	-0.06398	0.14591	0.64200		
x13	X13 - Competitive Pricing	-0.08517	0.22561	-0.24550	-0.72259	$\leftarrow$	X13 has reversed
							sign from other

Eigenvalues of factors changes slightly due to rotation, but total remains the same

_	→ Variance Explained by Each Factor					
	•			Factor4		
	2.8928210	2.2335531	1.8554249	1.7736015		

sign from other variables loading on factor

Final Communality Estimates: Total = 8.755401							
x6	х7	x8	х9	x10	x11	x12	x13
0.76802937	0.77714736	0.89311235	0.88126008	0.57597858	0.78710502	0.85944643	0.64055781

x14	x16	x18
0.89224653	0.76608666	0.91443037

#### **The FACTOR Procedure Rotation Method: Varimax**

#### **Scoring Coefficients Estimated by Regression**

Squared Multiple Correlations of the Variables with Each Factor				
Factor1	Factor2	Factor3	Factor4	
1.0000000	1.0000000	1.0000000	1.0000000	

	Standardized Scoring Coefficients					
		Factor1	Factor2	Factor3	Factor4	
x18	X18 - Delivery Speed	0.35338	-0.02891	-0.04781	-0.08509	
<b>x9</b>	X9 - Complaint Resolution	0.34848	-0.05330	-0.02044	-0.07377	
x16	X16 - Order & Billing	0.33135	-0.05926	0.00906	-0.10569	
x12	X12 - Salesforce Image	-0.04693	0.41807	0.03975	0.01626	
х7	X7 - E-Commerce Activities	-0.07974	0.42102	0.02154	0.05588	
x10	X10 - Advertising	-0.04492	0.36881	-0.06994	0.12790	
<b>x8</b>	X8 - Technical Support	-0.03993	-0.01784	0.52718	-0.05914	
x14	X14 - Warranty & Claims	-0.01322	0.01099	0.51716	-0.05794	
x6	X6 - Product Quality	-0.13908	0.14725	-0.13176	0.60690	
x11	X11 - Product Line	0.14231	-0.00570	-0.01935	0.31728	
x13	X13 - Competitive Pricing	0.06045	0.00730	-0.04964	-0.41426	

Values used to compute factor scores

#### **The FACTOR Procedure**

Input Data Type	Raw Data
Number of Records Read	100
Number of Records Used	100
N for Significance Tests	100

Means and Standard Deviations from 100 Observations					
Variable	Mean	Std Dev			
x6	7.8100000	1.3962793			
x7	3.6720000	0.7005164			
x8	5.3650000	1.5304568			
x9	5.4420000	1.2084032			
x10	4.0100000	1.1269428			
x12	5.1230000	1.0723198			
x13	6.9740000	1.5450553			
x14	6.0430000	0.8197382			
x16	4.2780000	0.9288398			
x18	3.8860000	0.7344372			

Three variables deleted -- X15 and X17 due to low MSA and X11 due to dual loading

				Coi	relations						
		x6	x7	<b>x8</b>	х9	x10	x12	x13	x14	x16	x18
x6	X6 - Product Quality	1.00000	-0.13716	0.09560	0.10637	-0.05347	-0.15181	-0.40128	0.08831	0.10430	0.02772
<b>x7</b>	X7 - E-Commerce Activities	-0.13716	1.00000	0.00087	0.14018	0.42989	0.79154	0.22946	0.05190	0.15615	0.19164
<b>x8</b>	X8 - Technical Support	0.09560	0.00087	1.00000	0.09666	-0.06287	0.01699	-0.27079	0.79717	0.08010	0.02544
<b>x9</b>	X9 - Complaint Resolution	0.10637	0.14018	0.09666	1.00000	0.19692	0.22975	-0.12795	0.14041	0.75687	0.86509
x10	X10 - Advertising	-0.05347	0.42989	-0.06287	0.19692	1.00000	0.54220	0.13422	0.01079	0.18424	0.27586
x12	X12 - Salesforce Image	-0.15181	0.79154	0.01699	0.22975	0.54220	1.00000	0.26460	0.10746	0.19513	0.27155
x13	X13 - Competitive Pricing	-0.40128	0.22946	-0.27079	-0.12795	0.13422	0.26460	1.00000	-0.24499	-0.11457	-0.07287
x14	X14 - Warranty & Claims	0.08831	0.05190	0.79717	0.14041	0.01079	0.10746	-0.24499	1.00000	0.19707	0.10939
x16	X16 - Order & Billing	0.10430	0.15615	0.08010	0.75687	0.18424	0.19513	-0.11457	0.19707	1.00000	0.75100
x18	X18 - Delivery Speed	0.02772	0.19164	0.02544	0.86509	0.27586	0.27155	-0.07287	0.10939	0.75100	1.00000

**The FACTOR Procedure** Initial Factor Method: Principal Components

"Unique" correlation patterns are basis for factors

		Par	tial Corre	lations Co	ontrolling	all other	Variables	3			
		х6	x7	<b>x8</b>	х9	x10	x12	x13	x14	x16	x18
x6	X6 - Product Quality	1.00000	-0.01263	-0.01601	0.10282	0.04144	-0.03823	<del>-0.34946</del>	0.00184	0.06388	-0.12097
<b>x7</b>	X7 - E-Commerce Activities	-0.01263	1.00000	0.05694	-0.09263	0.00114	0.72142	0.00858	-0.07796	0.09036	0.01511
<b>x8</b>	X8 - Technical Support	-0.01601	0.05694	1.00000	0.15063	-0.04596	-0.05961	-0.10177	0.78774	-0.13465	-0.09404
<b>x9</b>	X9 - Complaint Resolution	0.10282	-0.09263	0.15063	1.00000	-0.08235	0.11747	-0.04409	-0.11798	0.31991	0.68847
x10	X10 - Advertising	0.04144	0.00114	-0.04596	-0.08235	1.00000	0.33906	-0.00503	-0.00352	-0.00270	0.15016
x12	X12 - Salesforce Image	-0.03823	0.72142	-0.05961	0.11747	0.33906	1.00000	0.16339	0.14437	-0.07820	0.01030
x13	X13 - Competitive Pricing	-0.34946	0.00858	-0.10177	-0.04409	-0.00503	0.16339	1.00000	-0.07447	-0.00038	-0.02576
x14	X14 - Warranty & Claims	0.00184	-0.07796	0.78774	-0.11798	-0.00352	0.14437	-0.07447	1.00000	0.19900	0.03632
x16	X16 - Order & Billing	0.06388	0.09036	-0.13465	0.31991	-0.00270	-0.07820	-0.00038	0.19900	1.00000	0.28240
x18	X18 - Delivery Speed	-0.12097	0.01511	-0.09404	0.68847	0.15016	0.01030	-0.02576	0.03632	0.28240	1.00000

	Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.66867580										
х6	х7	x8	х9	x10	x12	x13	x14	x16	x18		
0.61311473	0.63853737	0.51710524	0.69464923	0.81495796	0.62698301	0.73727989	0.52683913	0.83456872	0.71596573		

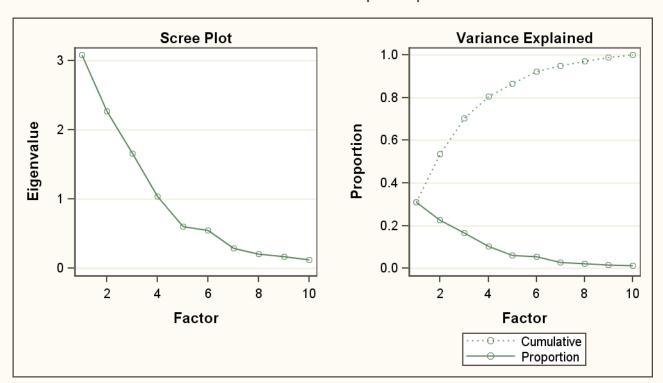
## **Prior Communality Estimates: ONE**

		ues of the C otal = 10 Av		latrix:
	Eigenvalue	Difference	Proportion	Cumulative
1	3.08604246	0.81301060	0.3086	0.3086
2	2.27303186	0.61374812	0.2273	0.5359
3	1.65928375	0.62048347	0.1659	0.7018
4	1.03880027	0.43470062	0.1039	0.8057
5	0.60409965	0.05547355	0.0604	0.8661
6	0.54862610	0.25603062	0.0549	0.9210
7	0.29259548	0.08640747	0.0293	0.9502
8	0.20618801	0.03504655	0.0206	0.9709
9	0.17114146	0.05095052	0.0171	0.9880
10	0.12019094		0.0120	1.0000

Four retained factors account for 80% of variance

4 factors will be retained by the MINEIGEN criterion.

# The FACTOR Procedure Initial Factor Method: Principal Components



	Fact	or Patter	n		$\leftarrow$
		Factor1	Factor2	Factor3	Factor4
x18	X18 - Delivery Speed	0.84182	0.16419	-0.36958	-0.14787
<b>x9</b>	X9 - Complaint Resolution	0.81902	0.26668	-0.36187	-0.12922
x16	X16 - Order & Billing	0.78298	0.27032	-0.31886	-0.13508
x12	X12 - Salesforce Image	0.63077	-0.53626	0.37668	0.17956
х7	X7 - E-Commerce Activities	0.54419	-0.54073	0.37992	0.21637
x10	X10 - Advertising	0.52871	-0.41273	0.16139	0.33001
x13	X13 - Competitive Pricing	-0.01071	-0.69457	0.00937	-0.42224
<b>x8</b>	X8 - Technical Support	0.18226	0.57868	0.70048	-0.18699
x14	X14 - Warranty & Claims	0.29374	0.54443	0.68831	-0.18526
x6	X6 - Product Quality	0.01971	0.48772	-0.11516	0.73923

Eigenvalues of
each factor

Unrotated loadings

Varian	<u> </u>	E			
Factor1	Factor2	Factor3	Factor4		е
3.0860425	2.2730319	1.6592837	1.0388003		

	Final Communality Estimates: Total = 8.057158										
X	6	х7	x8	x9	x10	x12	x13	x14	x16	x18	
0.7979811	0	0.77967853	0.89373001	0.88955210	0.58483848	0.85956702	0.66091567	0.89078408	0.80604375	0.89406760	

**The FACTOR Procedure Rotation Method: Varimax** 

	Orthogona	al Transfo	rmation l	Matrix
	1	2	3	4
1	0.80234	0.56470	0.19309	0.00897
2	0.27468	-0.58327	0.53926	0.54180
3	-0.47415	0.41044	0.77393	-0.08807
4	-0.23662	0.41527	-0.27009	0.83583

	Rotated	Factor Pa	ttern		<b>←</b>
		Factor1	Factor2	Factor3	Factor4
х9	X9 - Complaint Resolution	0.93253	0.10477	0.05679	0.07569
x18	X18 - Delivery Speed	0.93075	0.16651	0.00500	0.00547
x16	X16 - Order & Billing	0.88561	0.09751	0.08666	0.06866
x12	X12 - Salesforce Image	0.13770	0.89815	0.07563	-0.16798
<b>x7</b>	X7 - E-Commerce Activities	0.05676	0.86848	0.04907	-0.14070
x10	X10 - Advertising	0.15623	0.74258	-0.08470	0.04275
<b>x8</b>	X8 - Technical Support	0.01730	-0.02475	0.93988	0.09719
x14	X14 - Warranty & Claims	0.10270	0.05391	0.93305	0.08215
x6	X6 - Product Quality	0.02947	-0.01363	-0.02197	0.89244
x13	X13 - Competitive Pricing	-0.10391	0.22758	-0.25533	-0.73016

Rotated loadings

Reverse sign from other variables on factor

Variance Explained by Each Factor									
Factor1	Factor2	Factor3	Factor4						
2.5893189	2.2160590	1.8456968	1.4060836						

	Final Communality Estimates: Total = 8.057158										
	х6	х7	x8	х9	x10	x12	x13	x14	x16	x18	
0.7	79798110	0.77967853	0.89373001	0.88955210	0.58483848	0.85956702	0.66091567	0.89078408	0.80604375	0.89406760	

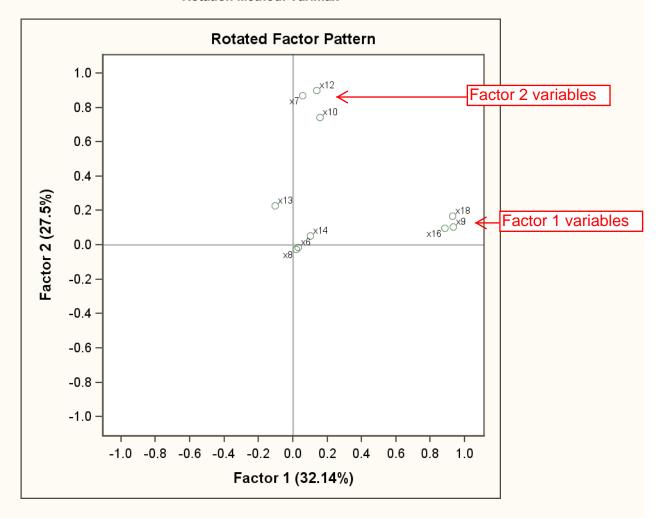
Sum of squared loadings across factors

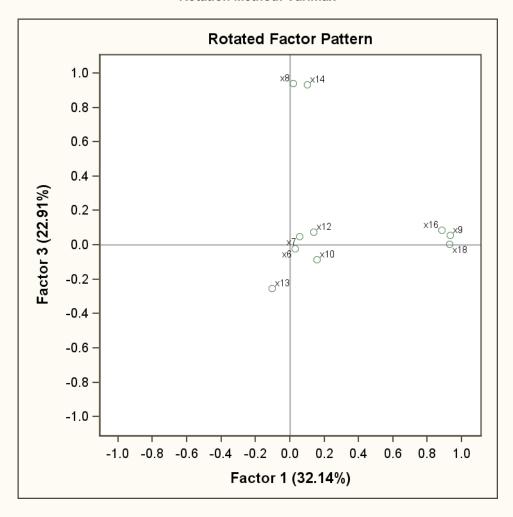
# The FACTOR Procedure Rotation Method: Varimax

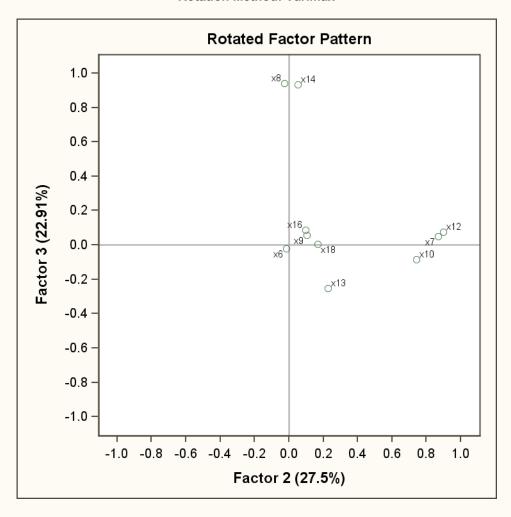
## **Scoring Coefficients Estimated by Regression**

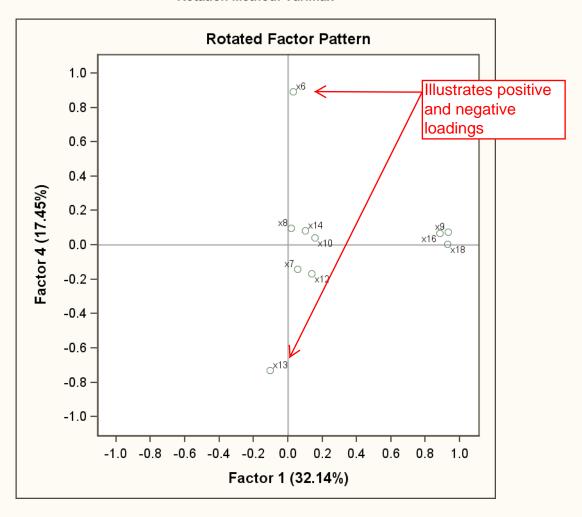
	Squared Multiple Correlations of the Variables with Each Factor								
Factor1	Factor2	Factor3	Factor4						
1.0000000	1.0000000	1.0000000	1.0000000						

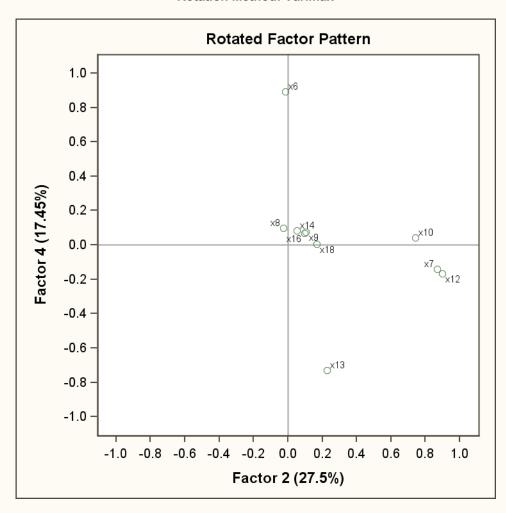
	Standardized :	Scoring C	oefficien	ts	
		Factor1	Factor2	Factor3	Factor4
<b>x9</b>	X9 - Complaint Resolution	0.37800	-0.05973	-0.02068	-0.01882
x18	X18 - Delivery Speed	0.37800	-0.03862	-0.04231	-0.05778
x16	X16 - Order & Billing	0.35812	-0.05896	-0.00048	-0.02505
x12	X12 - Salesforce Image	-0.04935	0.41798	0.04125	-0.00151
<b>x7</b>	X7 - E-Commerce Activities	-0.08171	0.41880	0.02671	0.02662
x10	X10 - Advertising	-0.03371	0.37450	-0.07536	0.16012
<b>x8</b>	X8 - Technical Support	-0.04026	-0.01662	0.52403	-0.04916
x14	X14 - Warranty & Claims	-0.01233	0.01025	0.51675	-0.05497
x6	X6 - Product Quality	-0.07141	0.14548	-0.12897	0.71722
x13	X13 - Competitive Pricing	0.00678	0.00979	-0.05130	-0.50582

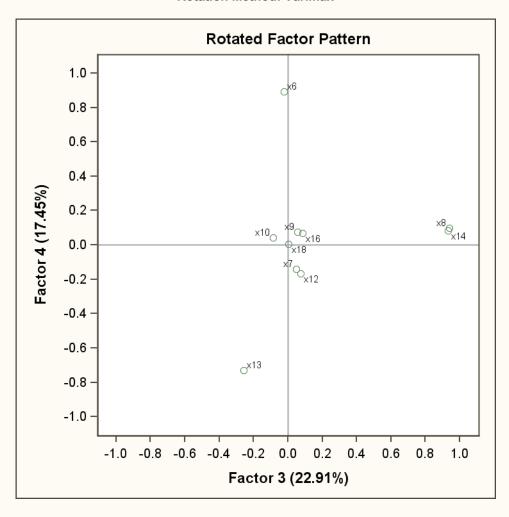












# **Correlation Analysis**

#### **The CORR Procedure**

8 Variables: Factor1 Factor2 Factor3 Factor4 SumScale1 SumScale2 SumScale3 SumScale4

					Simple Sta	atistics	
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
Factor1	100	0	1.00000	0	-2.57501	2.13808	
Factor2	100	0	1.00000	0	-1.93746	2.83173	
Factor3	100	0	1.00000	0	-2.16096	2.25513	
Factor4	100	0	1.00000	0	-1.91733	2.24689	
SumScale1	100	4.53533	0.88954	453.53333	2.23333	6.40000	SumScale1 Postsale Customer Service
SumScale2	100	4.26833	0.82253	426.83333	2.66667	6.43333	SumScale2 Marketing
SumScale3	100	5.70400	1.11965	570.40000	2.80000	8.10000	SumScale3 Technical Support
SumScale4	100	5.41800	1.23168	541.80000	3.25000	8.10000	SumScale4 Product Value

Note that factor scores are								
orthogonal with varimax		Correlat		•				
rotation		Prob >  r						
Totation	Factor1	Factor2	Factor3	Factor4	SumScale1	SumScale2	SumScale3	SumScale4
Factor1	1.00000	0.00000	0.00000	0.00000	0.98667	0.14730	0.04942	0.08187
		1.0000	1.0000	1.0000	<.0001	0.1436	0.6254	0.4180
Factor2	0.00000	1.00000	0.00000	0.00000	0.12721	0.97599	0.00282	-0.15047
	1.0000		1.0000	1.0000	0.2072	<.0001	0.9778	0.1351
Factor3	0.00000	0.00000	1.00000	0.00000	0.05726	0.00812	0.98392	0.14769
	1.0000	1.0000		1.0000	0.5715	0.9361	<.0001	0.1425
Factor4	0.00000	0.00000	0.00000	1.00000	0.05968	-0.09342	0.09649	0.96381
	1.0000	1.0000	1.0000		0.5553	0.3553	0.3396	<.0001
SumScale1	0.98667	0.12721	0.05726	0.05968	1.00000	0.26030	0.11316	0.12613
SumScale1 Postsale Customer Service	<.0001	0.2072	0.5715	0.5553		0.0089	0.2623	0.2111
SumScale2	0.14730	0.97599	0.00812	-0.09342	0.26030	1.00000	0.00988	-0.22473
SumScale2 Marketing	0.1436	<.0001	0.9361	0.3553	0.0089		0.9223	0.0246
SumScale3	0.04942	0.00282	0.98392	0.09649	0.11316	0.00988	1.00000	0.22769
SumScale3 Technical Support	0.6254	0.9778	<.0001	0.3396	0.2623	0.9223		0.0227
SumScale4	0.08187	-0.15047	0.14769	0.96381	0.12613	-0.22473	0.22769	1.00000
SumScale4 Product Value	0.4180	0.1351	0.1425	<.0001	0.2111	0.0246	<b>1</b> 0227	

Factor scores and summated scales are highly correlated

Summated scales have some degree of correlation

## The FACTOR Procedure

Input Data Type Raw Data Number of Records Read 100 Number of Records Used 100 N for Significance Tests 100

Force five factors to assess structure if scree test followed

Dev	ins and Sta viations froi Observatio	m 100			
Variable					
x6	7.8100000	1.3962793			
x7	3.6720000	0.7005164			
x8	5.3650000	1.5304568			
x9	<b>x9</b> 5.4420000 1.2084032				
x10	4.0100000	1.1269428			
x12	5.1230000	1.0723198			
x13	6.9740000	1.5450553			
x14	6.0430000	0.8197382			
<b>x16</b> 4.2780000 0.9288398					
x18	3.8860000	0.7344372			

#### The FACTOR Procedure **Initial Factor Method: Principal Components**

		Par	tial Corre	lations Co	ontrolling	all other	Variables	6			
		х6	х7	<b>x8</b>	х9	x10	x12	x13	x14	x16	x18
x6	X6 - Product Quality	1.00000	-0.01263	-0.01601	0.10282	0.04144	-0.03823	-0.34946	0.00184	0.06388	-0.12097
<b>x7</b>	X7 - E-Commerce Activities	-0.01263	1.00000	0.05694	-0.09263	0.00114	0.72142	0.00858	-0.07796	0.09036	0.01511
<b>x8</b>	X8 - Technical Support	-0.01601	0.05694	1.00000	0.15063	-0.04596	-0.05961	-0.10177	0.78774	-0.13465	-0.09404
<b>x9</b>	X9 - Complaint Resolution	0.10282	-0.09263	0.15063	1.00000	-0.08235	0.11747	-0.04409	-0.11798	0.31991	0.68847
x10	X10 - Advertising	0.04144	0.00114	-0.04596	-0.08235	1.00000	0.33906	-0.00503	-0.00352	-0.00270	0.15016
x12	X12 - Salesforce Image	-0.03823	0.72142	-0.05961	0.11747	0.33906	1.00000	0.16339	0.14437	-0.07820	0.01030
x13	X13 - Competitive Pricing	-0.34946	0.00858	-0.10177	-0.04409	-0.00503	0.16339	1.00000	-0.07447	-0.00038	-0.02576
x14	X14 - Warranty & Claims	0.00184	-0.07796	0.78774	-0.11798	-0.00352	0.14437	-0.07447	1.00000	0.19900	0.03632
x16	X16 - Order & Billing	0.06388	0.09036	-0.13465	0.31991	-0.00270	-0.07820	-0.00038	0.19900	1.00000	0.28240
x18	X18 - Delivery Speed	-0.12097	0.01511	-0.09404	0.68847	0.15016	0.01030	-0.02576	0.03632	0.28240	1.00000

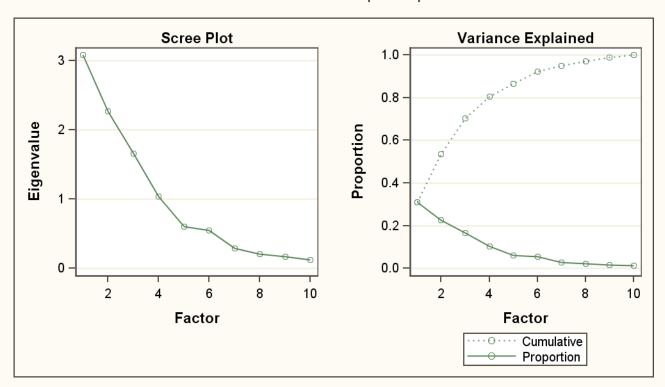
Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.66867580									
x6 x7 x8 x9 x10 x12 x13 x14 x16 x18									
0.61311473   0.63853737   0.51710524   0.69464923   0.81495796   0.62698301   0.73727989   0.52683913   0.83456872   0.71596573									

## **Prior Communality Estimates: ONE**

		ues of the C otal = 10 Av			
	Eigenvalue	Difference	Proportion	Cumulative	
1	3.08604246	0.81301060	0.3086	0.3086	
2	2.27303186	0.61374812	0.2273	0.5359	
3	1.65928375	0.62048347	0.1659	0.7018	
4	1.03880027	0.43470062	0.1039	0.8057	
5	0.60409965	0.05547355	0.0604	0.8661	Fifth factor adds
6	0.54862610	0.25603062	0.0549	0.9210	6% variance
7	0.29259548	0.08640747	0.0293	0.9502	accounted for
8	0.20618801	0.03504655	0.0206	0.9709	
9	0.17114146	0.05095052	0.0171	0.9880	
10	0.12019094		0.0120	1.0000	

5 factors will be retained by the NFACTOR criterion.

# The FACTOR Procedure Initial Factor Method: Principal Components



		Factor Pa	attern			
		Factor1	Factor2	Factor3	Factor4	Factor5
x18	X18 - Delivery Speed	0.84182	0.16419	-0.36958	-0.14787	-0.03328
x9	X9 - Complaint Resolution	0.81902	0.26668	-0.36187	-0.12922	0.03990
x16	X16 - Order & Billing	0.78298	0.27032	-0.31886	-0.13508	0.07350
x12	X12 - Salesforce Image	0.63077	-0.53626	0.37668	0.17956	0.15252
х7	X7 - E-Commerce Activities	0.54419	-0.54073	0.37992	0.21637	0.31256
x13	X13 - Competitive Pricing	-0.01071	-0.69457	0.00937	-0.42224	0.18994
<b>x8</b>	X8 - Technical Support	0.18226	0.57868	0.70048	-0.18699	-0.01182
x14	X14 - Warranty & Claims	0.29374	0.54443	0.68831	-0.18526	-0.02332
x6	X6 - Product Quality	0.01971	0.48772	-0.11516	0.73923	0.25720
x10	X10 - Advertising	0.52871	-0.41273	0.16139	0.33001	-0.61003

Variance Explained by Each Factor									
Factor1	Factor1 Factor2 Factor3 Factor4 Factor5								
3.0860425	2.2730319	1.6592837	1.0388003	0.6040997					

	Final Communality Estimates: Total = 8.661258									
	x6 x7 x8 x9 x10 x12 x13 x14 x16 x18									
0.	.86413377	0.87736993	0.89386971	0.89114375	0.95697077	0.88283039	0.69699125	0.89132782	0.81144532	0.89517529

#### **The FACTOR Procedure Rotation Method: Varimax**

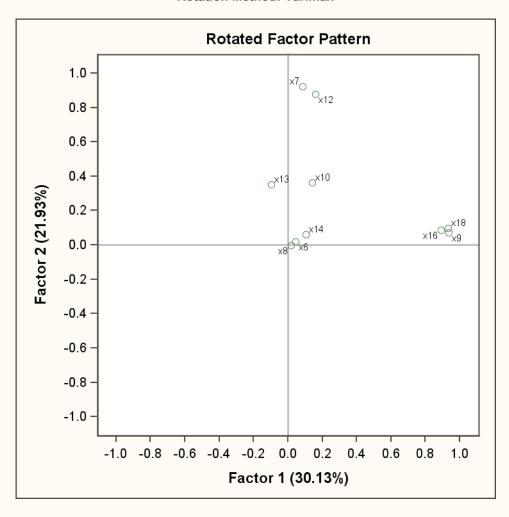
	Ortho	ogonal Tr	Orthogonal Transformation Matrix												
	1	2	3	4	5										
1	0.81177	0.47568	0.19165	0.01172	0.27908										
2	0.26676	-0.55608	0.55424	0.50938	-0.23014										
3	-0.46609	0.41604	0.76680	-0.08031	0.12342										
4	-0.22519	0.28404	-0.25249	0.84229	0.30889										
5	0.04372	0.45907	-0.06593	0.15650	-0.87092										

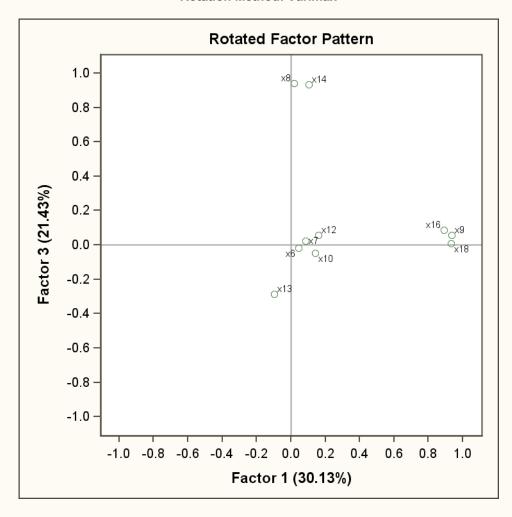
	Rota	ated Fact	or Patterr	1		
		Factor1	Factor2	Factor3	Factor4	Factor5
<b>x</b> 9	X9 - Complaint Resolution	0 <mark>.93550</mark>	0.07235	0.05728	0.07190	0.04787
x18	X18 - Delivery Speed	0. <mark>93127</mark>	0.09809	0.00847	-0.00657	0.13484
x16	X16 - Order & Billing	0 <mark>.88996</mark>	0.08484	0.08463	0.07021	0.01121
<b>x7</b>	X7 - E-Commerce Activities	0.08538	0.92255	0.02068	-0.06840	0.11783
x12	X12 - Salesforce Image	0.15965	0 <mark>.87598</mark>	0.05711	-0.12090	0.26857
<b>x8</b>	X8 - Technical Support	0.01742	-0.00220	0. <mark>94078</mark>	0.08131	-0.04333
x14	X14 - Warranty & Claims	0.10357	0.06003	0. <mark>93416</mark>	0.06580	0.00472
x6	X6 - Product Quality	0.04456	0.01829	-0.01782	0 <mark>.92081</mark>	-0.11662
x13	X13 - Competitive Pricing	-0.09496	0.35230	-0.28574	-0 <mark>.68060</mark>	-0.13782
x10	X10 - Advertising	0.14289	0.36184	-0.04677	-0.03450	0.89568

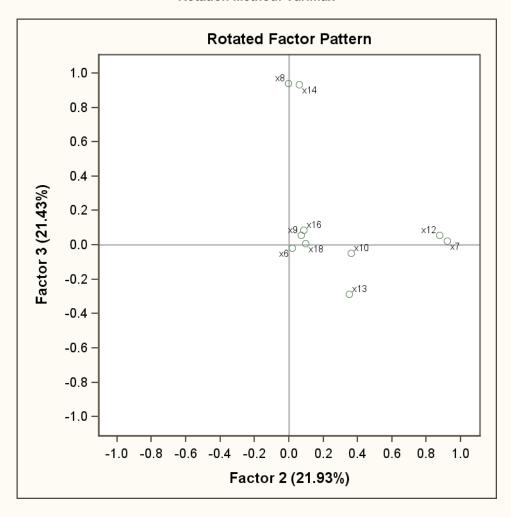
V	Variance Explained by Each Factor										
Factor1 Factor2 Factor3 Factor4 Fact											
2.6096803	1.8994693	1.8560789	1.3526775	0.9433520							

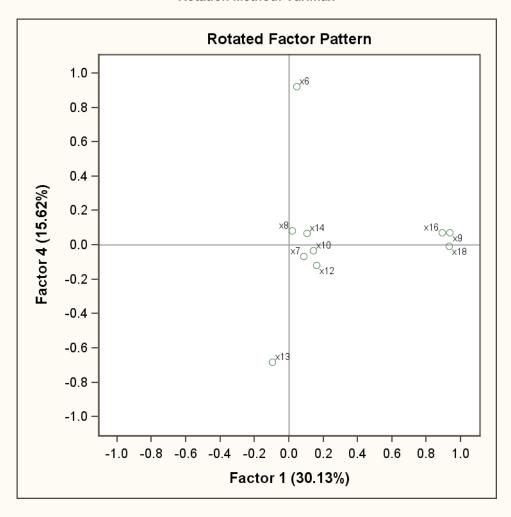
Fifth factor splits X10 from X7 and X12

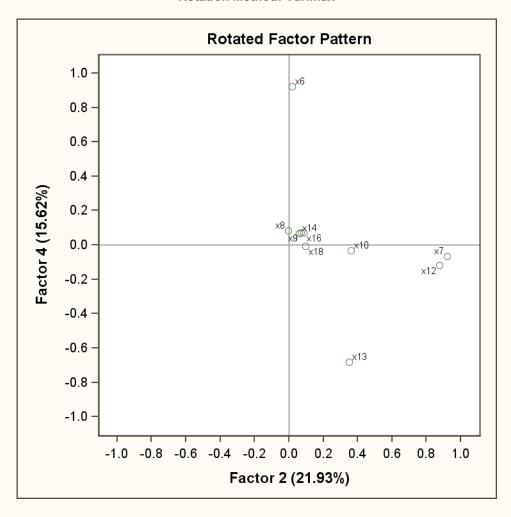
	Final Communality Estimates: Total = 8.661258											
х6	х7	x8	х9	x10	x12	x13	x14	x16	x18			
0.86413377	0.87736993	0.89386971	0.89114375	0.95697077	0.88283039	0.69699125	0.89132782	0.81144532	0.89517529			

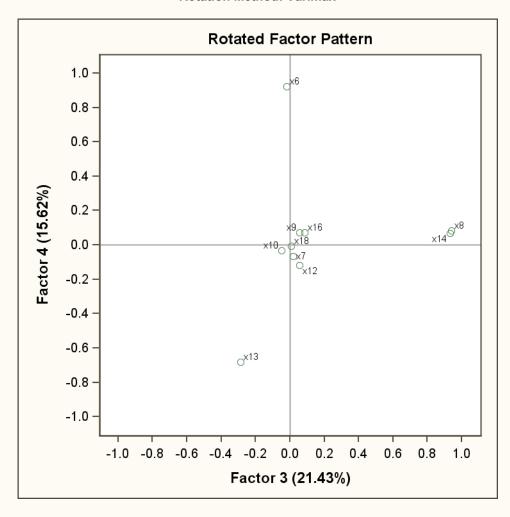


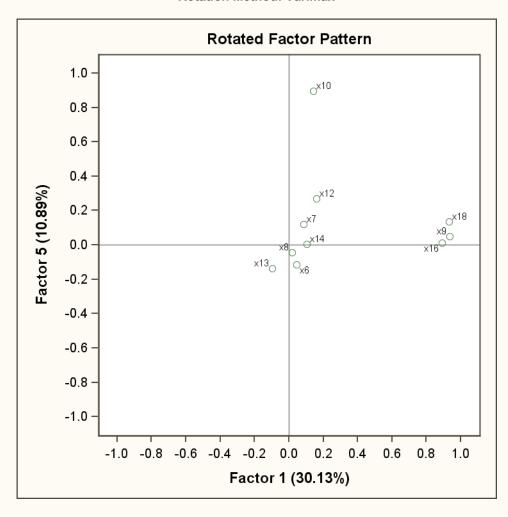


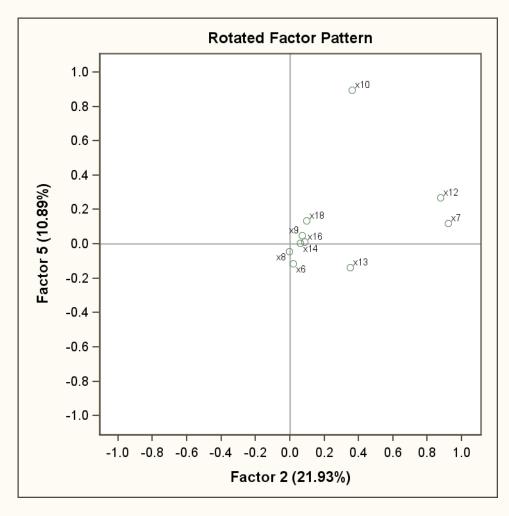


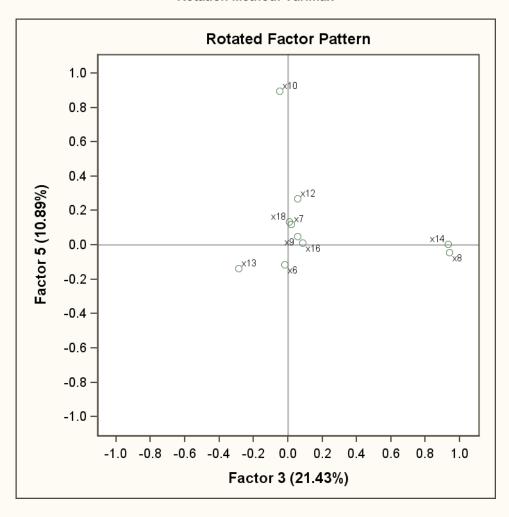


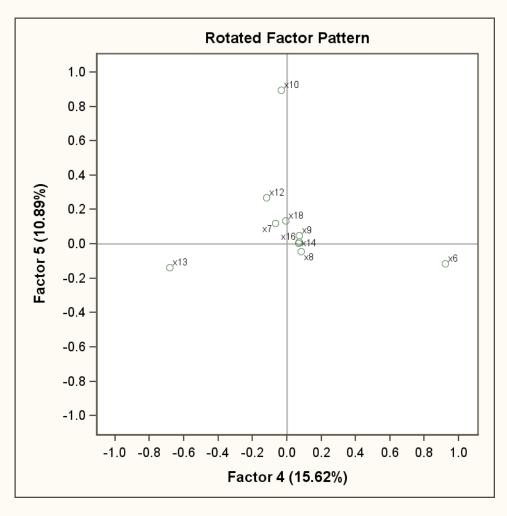












## The FACTOR Procedure

Input Data Type Raw Data Number of Records Read 100 Number of Records Used 100 N for Significance Tests 100

Apply oblique rotation versus orthogonal rotation, still PCA

Dev	Means and Standard Deviations from 100 Observations									
Variable	Mean	Std Dev								
x6	7.8100000	1.3962793								
x7	3.6720000	0.7005164								
x8	5.3650000	1.5304568								
x9	5.4420000	1.2084032								
x10	4.0100000	1.1269428								
x12	5.1230000	1.0723198								
x13	6.9740000	1.5450553								
x14	6.0430000	0.8197382								
x16	4.2780000	0.9288398								
x18	3.8860000	0.7344372								

				Coi	relations						
		x6	<b>x7</b>	<b>x8</b>	<b>x9</b>	x10	x12	x13	x14	x16	x18
x6	X6 - Product Quality	1.00000	-0.13716	0.09560	0.10637	-0.05347	-0.15181	-0.40128	0.08831	0.10430	0.02772
<b>x7</b>	X7 - E-Commerce Activities	-0.13716	1.00000	0.00087	0.14018	0.42989	0.79154	0.22946	0.05190	0.15615	0.19164
<b>x8</b>	X8 - Technical Support	0.09560	0.00087	1.00000	0.09666	-0.06287	0.01699	-0.27079	0.79717	0.08010	0.02544
<b>x9</b>	X9 - Complaint Resolution	0.10637	0.14018	0.09666	1.00000	0.19692	0.22975	-0.12795	0.14041	0.75687	0.86509
x10	X10 - Advertising	-0.05347	0.42989	-0.06287	0.19692	1.00000	0.54220	0.13422	0.01079	0.18424	0.27586
x12	X12 - Salesforce Image	-0.15181	0.79154	0.01699	0.22975	0.54220	1.00000	0.26460	0.10746	0.19513	0.27155
x13	X13 - Competitive Pricing	-0.40128	0.22946	-0.27079	-0.12795	0.13422	0.26460	1.00000	-0.24499	-0.11457	-0.07287
x14	X14 - Warranty & Claims	0.08831	0.05190	0.79717	0.14041	0.01079	0.10746	-0.24499	1.00000	0.19707	0.10939
x16	X16 - Order & Billing	0.10430	0.15615	0.08010	0.75687	0.18424	0.19513	-0.11457	0.19707	1.00000	0.75100
x18	X18 - Delivery Speed	0.02772	0.19164	0.02544	0.86509	0.27586	0.27155	-0.07287	0.10939	0.75100	1.00000

#### **The FACTOR Procedure Initial Factor Method: Principal Components**

		Par	tial Corre	lations Co	ontrolling	all other	Variables	5			
		х6	х7	<b>x8</b>	х9	x10	x12	x13	x14	x16	x18
x6	X6 - Product Quality	1.00000	-0.01263	-0.01601	0.10282	0.04144	-0.03823	-0.34946	0.00184	0.06388	-0.12097
<b>x7</b>	X7 - E-Commerce Activities	-0.01263	1.00000	0.05694	-0.09263	0.00114	0.72142	0.00858	-0.07796	0.09036	0.01511
<b>x8</b>	X8 - Technical Support	-0.01601	0.05694	1.00000	0.15063	-0.04596	-0.05961	-0.10177	0.78774	-0.13465	-0.09404
<b>x9</b>	X9 - Complaint Resolution	0.10282	-0.09263	0.15063	1.00000	-0.08235	0.11747	-0.04409	-0.11798	0.31991	0.68847
x10	X10 - Advertising	0.04144	0.00114	-0.04596	-0.08235	1.00000	0.33906	-0.00503	-0.00352	-0.00270	0.15016
x12	X12 - Salesforce Image	-0.03823	0.72142	-0.05961	0.11747	0.33906	1.00000	0.16339	0.14437	-0.07820	0.01030
x13	X13 - Competitive Pricing	-0.34946	0.00858	-0.10177	-0.04409	-0.00503	0.16339	1.00000	-0.07447	-0.00038	-0.02576
x14	X14 - Warranty & Claims	0.00184	-0.07796	0.78774	-0.11798	-0.00352	0.14437	-0.07447	1.00000	0.19900	0.03632
x16	X16 - Order & Billing	0.06388	0.09036	-0.13465	0.31991	-0.00270	-0.07820	-0.00038	0.19900	1.00000	0.28240
x18	X18 - Delivery Speed	-0.12097	0.01511	-0.09404	0.68847	0.15016	0.01030	-0.02576	0.03632	0.28240	1.00000

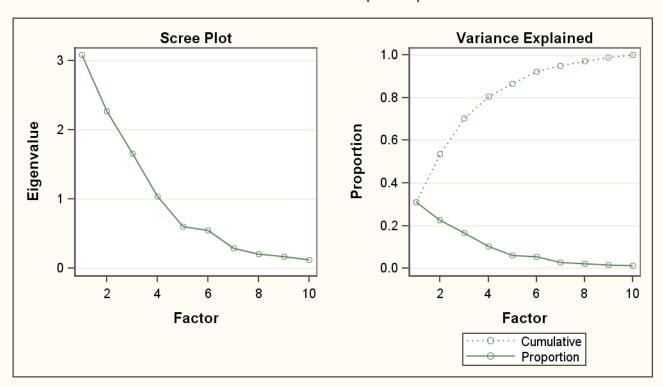
	Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.66867580											
x6 x7 x8 x9 x10 x12 x13 x14 x16 x								x18				
0.6	61311473	0.63853737	0.51710524	0.69464923	0.81495796	0.62698301	0.73727989	0.52683913	0.83456872	0.71596573		

## **Prior Communality Estimates: ONE**

		ues of the C otal = 10 Av		latrix:
	Eigenvalue	Difference	Proportion	Cumulative
1	3.08604246	0.81301060	0.3086	0.3086
2	2.27303186	0.61374812	0.2273	0.5359
3	1.65928375	0.62048347	0.1659	0.7018
4	1.03880027	0.43470062	0.1039	0.8057
5	0.60409965	0.05547355	0.0604	0.8661
6	0.54862610	0.25603062	0.0549	0.9210
7	0.29259548	0.08640747	0.0293	0.9502
8	0.20618801	0.03504655	0.0206	0.9709
9	0.17114146	0.05095052	0.0171	0.9880
10	0.12019094		0.0120	1.0000

<sup>4</sup> factors will be retained by the MINEIGEN criterion.

# The FACTOR Procedure Initial Factor Method: Principal Components



	Fact	or Patter	n		
		Factor1	Factor2	Factor3	Factor4
x18	X18 - Delivery Speed	0.84182	0.16419	-0.36958	-0.14787
x9	X9 - Complaint Resolution	0.81902	0.26668	-0.36187	-0.12922
x16	X16 - Order & Billing	0.78298	0.27032	-0.31886	-0.13508
x12	X12 - Salesforce Image	0.63077	-0.53626	0.37668	0.17956
х7	X7 - E-Commerce Activities	0.54419	-0.54073	0.37992	0.21637
x10	X10 - Advertising	0.52871	-0.41273	0.16139	0.33001
x13	X13 - Competitive Pricing	-0.01071	-0.69457	0.00937	-0.42224
<b>x8</b>	X8 - Technical Support	0.18226	0.57868	0.70048	-0.18699
x14	X14 - Warranty & Claims	0.29374	0.54443	0.68831	-0.18526
x6	X6 - Product Quality	0.01971	0.48772	-0.11516	0.73923

Variance Explained by Each Factor									
Factor1	Factor2	Factor3	Factor4						
3.0860425	2.2730319	1.6592837	1.0388003						

	Final Communality Estimates: Total = 8.057158												
	x6	х7	x8	x9	x10	x12	x13	x14	x16	x18			
0.79	9798110	0.77967853	0.89373001	0.88955210	0.58483848	0.85956702	0.66091567	0.89078408	0.80604375	0.89406760			

#### **The FACTOR Procedure Prerotation Method: Varimax**

(	Orthogonal Transformation Matrix							
	1	2	3	4				
1	0.80234	0.56470	0.19309	0.00897				
2	0.27468	-0.58327	0.53926	0.54180				
3	-0.47415	0.41044	0.77393	-0.08807				
4	-0.23662	0.41527	-0.27009	0.83583				

	Rotated Factor Pattern									
		Factor1	Factor2	Factor3	Factor4					
<b>x9</b>	X9 - Complaint Resolution	0.93253	0.10477	0.05679	0.07569					
x18	X18 - Delivery Speed	0.93075	0.16651	0.00500	0.00547					
x16	X16 - Order & Billing	0.88561	0.09751	0.08666	0.06866					
x12	X12 - Salesforce Image	0.13770	0.89815	0.07563	-0.16798					
<b>x7</b>	X7 - E-Commerce Activities	0.05676	0.86848	0.04907	-0.14070					
x10	X10 - Advertising	0.15623	0.74258	-0.08470	0.04275					
<b>x8</b>	X8 - Technical Support	0.01730	-0.02475	0.93988	0.09719					
x14	X14 - Warranty & Claims	0.10270	0.05391	0.93305	0.08215					
x6	X6 - Product Quality	0.02947	-0.01363	-0.02197	0.89244					
x13	X13 - Competitive Pricing	-0.10391	0.22758	-0.25533	-0.73016					

Variance Explained by Each Factor						
Factor1	Factor2	Factor3	Factor4			
2.5893189	2.2160590	1.8456968	1.4060836			

Final Communality Estimates: Total = 8.057158									
х6	х7	x8	х9	x10	x12	x13	x14	x16	x18
0.79798110	0.77967853	0.89373001	0.88955210	0.58483848	0.85956702	0.66091567	0.89078408	0.80604375	0.89406760

#### **The FACTOR Procedure Prerotation Method: Varimax**

#### **Scoring Coefficients Estimated by Regression**

Squared Multiple Correlations of the Variables with Each Factor					
Factor1	Factor2	Factor3	Factor4		
1.0000000	1.0000000	1.0000000	1.0000000		

	Standardized Scoring Coefficients									
		Factor1	Factor2	Factor3	Factor4					
<b>x9</b>	X9 - Complaint Resolution	0.37800	-0.05973	-0.02068	-0.01882					
x18	X18 - Delivery Speed	0.37800	-0.03862	-0.04231	-0.05778					
x16	X16 - Order & Billing	0.35812	-0.05896	-0.00048	-0.02505					
x12	X12 - Salesforce Image	-0.04935	0.41798	0.04125	-0.00151					
<b>x7</b>	X7 - E-Commerce Activities	-0.08171	0.41880	0.02671	0.02662					
x10	X10 - Advertising	-0.03371	0.37450	-0.07536	0.16012					
<b>x8</b>	X8 - Technical Support	-0.04026	-0.01662	0.52403	-0.04916					
x14	X14 - Warranty & Claims	-0.01233	0.01025	0.51675	-0.05497					
x6	X6 - Product Quality	-0.07141	0.14548	-0.12897	0.71722					
x13	X13 - Competitive Pricing	0.00678	0.00979	-0.05130	-0.50582					

#### **The FACTOR Procedure** Rotation Method: Promax (power = 3) <

Oblique rotation --PROMAX

	Target Matrix for Procrustean Transformation								
		Factor1	Factor2	Factor3	Factor4				
<b>x9</b>	X9 - Complaint Resolution	1.00000	0.00144	0.00022	0.00052				
x18	X18 - Delivery Speed	0.98673	0.00574	0.00000	0.00000				
x16	X16 - Order & Billing	0.99301	0.00135	0.00092	0.00045				
x12	X12 - Salesforce Image	0.00339	0.95548	0.00055	-0.00597				
<b>x7</b>	X7 - E-Commerce Activities	0.00027	1.00000	0.00017	-0.00406				
x10	X10 - Advertising	0.00882	0.96223	-0.00138	0.00018				
<b>x8</b>	X8 - Technical Support	0.00001	-0.00002	1.00000	0.00109				
x14	X14 - Warranty & Claims	0.00133	0.00020	0.98322	0.00066				
x6	X6 - Product Quality	0.00004	-0.00000	-0.00002	1.00000				
x13	X13 - Competitive Pricing	-0.00216	0.02305	-0.03153	-0.72659				

	Procrustean Transformation Matrix								
	1	2	3	4					
1	1.10607614	-0.1579411	-0.0521765	-0.0754182					
2	-0.1515614	1.17837318	-0.0071289	0.13416926					
3	-0.0626233	-0.0077546	1.03385608	-0.0911618					
4	-0.0982514	0.16719231	-0.0875182	1.08456026					

N	Normalized Oblique Transformation Matrix								
	1	2	3	4					
1	0.74022	0.47979	0.15045	0.00711					
2	0.28639	-0.57382	0.49174	0.42360					
3	-0.58781	0.47899	0.81606	-0.07252					
4	-0.36582	0.59543	-0.33738	0.96838					

	Inter-Factor Correlations								
	Factor1	Factor2	Factor3	Factor4					
Factor1	1.00000	0.24039	0.12451	0.11971					
Factor2	0.24039	1.00000	0.00440	-0.22891					
Factor3	0.12451	0.00440	1.00000	0.17660					
Factor4	0.11971	-0.22891	0.17660	1.00000					

Pattern matrix

	Rotated Factor Pattern (Standardized Regression Coefficients)								
		Factor1	Factor2	Factor3	Factor4				
x9	X9 - Complaint Resolution	0.94261	-0.01034	0.00264	0.01990				
x18	X18 - Delivery Speed	0.94149	0.04461	-0.04432	-0.04085				
x16	X16 - Order & Billing	0.89383	-0.01261	0.03608	0.01239				
x12	X12 - Salesforce Image	0.02622	0.89769	0.07801	-0.07611				
x7	X7 - E-Commerce Activities	-0.05451	0.88219	0.05301	-0.04320				
x10	X10 - Advertising	0.05757	0.76431	-0.10304	0.13680				
x8	X8 - Technical Support	-0.04272	-0.02043	0.94670	0.01455				
x14	X14 - Warranty & Claims	0.03652	0.04792	0.93612	0.00339				

#### The FACTOR Procedure Rotation Method: Promax (power = 3)

Rotated Factor Pattern (Standardized Regression Coefficients)							
		Factor1	Factor2	Factor3	Factor4		
x6	X6 - Product Quality	-0.04846	0.11459	-0.10058	0.93094		
x13	X13 - Competitive Pricing	-0.05789	0.14650	-0.19306	-0.70386		

Reference Axis Correlations									
	Factor1	Factor2	Factor3	Factor4					
Factor1	1.00000	-0.27398	-0.09671	-0.16583					
Factor2	2 -0.27398 1	1.00000	-0.01829	0.26675					
Factor3	-0.09671	-0.01829	1.00000	-0.16304					
Factor4	-0.16583	0.26675	-0.16304	1.00000					

Correlations between oblique factors

	Reference Structure	(Semipar	tial Corre	lations)	
		Factor1	Factor2	Factor3	Factor4
<b>x9</b>	X9 - Complaint Resolution	0.89497	-0.00967	0.00259	0.01878
x18	X18 - Delivery Speed	0.89391	0.04172	-0.04338	-0.03856
x16	X16 - Order & Billing	0.84866	-0.01179	0.03531	0.01170
x12	X12 - Salesforce Image	0.02490	0.83950	0.07634	-0.07183
<b>x7</b>	X7 - E-Commerce Activities	-0.05176	0.82500	0.05188	-0.04078
x10	X10 - Advertising	0.05466	0.71476	-0.10083	0.12912
<b>x8</b>	X8 - Technical Support	-0.04056	-0.01910	0.92644	0.01374
x14	X14 - Warranty & Claims	0.03467	0.04482	0.91608	0.00320
<b>x6</b>	X6 - Product Quality	-0.04601	0.10716	-0.09843	0.87868
x13	X13 - Competitive Pricing	-0.05496	0.13700	-0.18893	-0.66434

Variance Explained by Each Factor Eliminating Other Factors							
Factor1	Factor2	Factor3	Factor4				
2.3345424	1.9308692	1.7646999	1.2390950				

Structure matrix

				<u> </u>	
	Factor Struct	ure (Corr	elations)		
		Factor1	Factor2	Factor3	Factor4
x9	X9 - Complaint Resolution	0.94283	0.21171	0.12348	0.13557
x18	X18 - Delivery Speed	0.94180	0.28009	0.06589	0.05381
x16	X16 - Order & Billing	0.89678	0.19958	0.14951	0.12865
x12	X12 - Salesforce Image	0.24262	0.92176	0.07178	-0.26468
х7	X7 - E-Commerce Activities	0.15899	0.87921	0.04248	-0.24231
x10	X10 - Advertising	0.24485	0.74638	-0.06835	-0.04946
x8	X8 - Technical Support	0.07199	-0.02986	0.94386	0.18130
x14	X14 - Warranty & Claims	0.16501	0.06005	0.94147	0.16211
x6	X6 - Product Quality	0.07800	-0.11061	0.05829	0.88115
x13	X13 - Competitive Pricing	-0.13097	0.29285	-0.32392	-0.77842

Variance Explained by Each Factor Ignoring Other Factors							
	Factor1	Factor2	Factor3	Factor4			
	2.7798703	2.4453260	1.9391451	1.6105476			

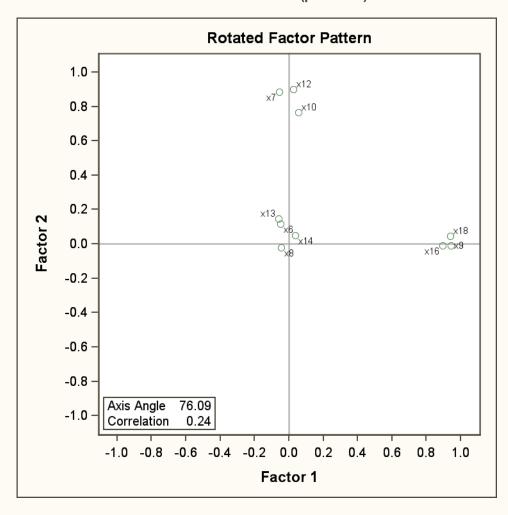
Final Communality Estimates: Total = 8.057158									
х6	x7	x8	х9	x10	x12	x13	x14	x16	x18
0.79798110	0.77967853	0.89373001	0.88955210	0.58483848	0.85956702	0.66091567	0.89078408	0.80604375	0.89406760

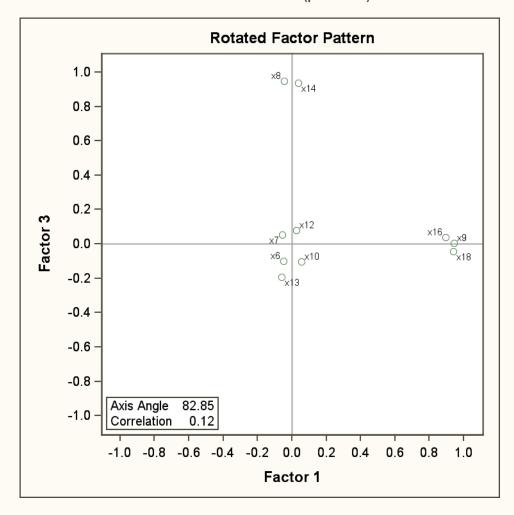
# The FACTOR Procedure Rotation Method: Promax (power = 3)

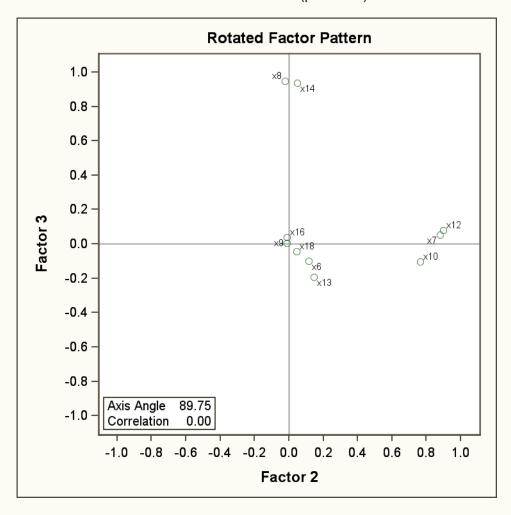
**Scoring Coefficients Estimated by Regression** 

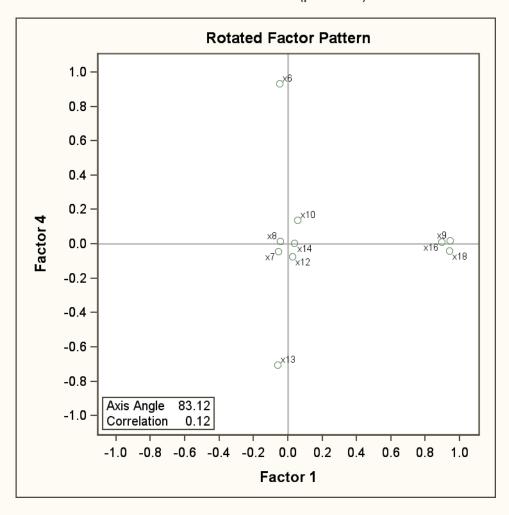
Square Va	d Multiple ( riables with	Correlation n Each Fac	s of the tor
Factor1	Factor2	Factor3	Factor4
1.0000000	1.0000000	1.0000000	1.0000000

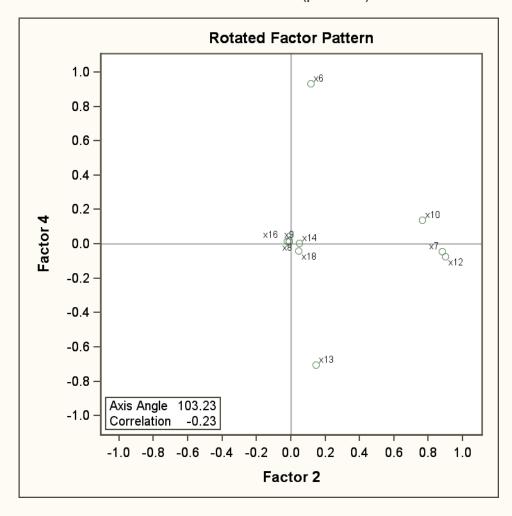
	Standardized :	Scoring C	oefficien	ts	
		Factor1	Factor2	Factor3	Factor4
x9	X9 - Complaint Resolution	0.36413	-0.00949	0.00199	0.01562
x18	X18 - Delivery Speed	0.36329	0.01564	-0.02287	-0.02734
x16	X16 - Order & Billing	0.34532	-0.01044	0.02024	0.00964
x12	X12 - Salesforce Image	0.00552	0.40613	0.03883	-0.05561
<b>x7</b>	X7 - E-Commerce Activities	-0.02555	0.39966	0.02477	-0.03168
x10	X10 - Advertising	0.01846	0.34656	-0.06202	0.10033
<b>x8</b>	X8 - Technical Support	-0.01556	-0.01401	0.51396	-0.00408
x14	X14 - Warranty & Claims	0.01467	0.01661	0.50809	-0.01181
x6	X6 - Product Quality	-0.01805	0.05300	-0.06951	0.67123
x13	X13 - Competitive Pricing	-0.02428	0.06744	-0.09489	-0.50344

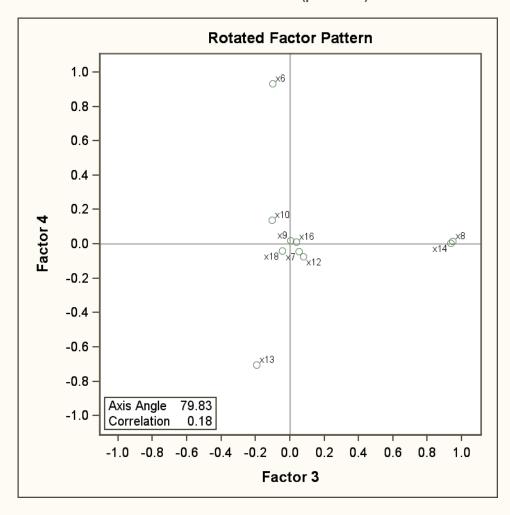












#### The FACTOR Procedure ←

Input Data Type Raw Data Number of Records Read 100 Number of Records Used 100 N for Significance Tests 100

Common factor analysis -- 3 variables already deleted

Means and Standard Deviations from 100 Observations								
Variable	Mean	Std Dev						
x6	7.8100000	1.3962793						
x7	3.6720000	0.7005164						
x8	5.3650000	1.5304568						
x9	5.4420000	1.2084032						
x10	4.0100000	1.1269428						
x12	5.1230000	1.0723198						
x13	6.9740000	1.5450553						
x14	6.0430000	0.8197382						
x16	4.2780000	0.9288398						
x18	3.8860000	0.7344372						

PAF technique

# The FACTOR Procedure Initial Factor Method: Iterated Principal Factor Analysis

		Par	tial Corre	lations Co	ontrolling	all other	Variables	\$			
		x6	x7	x8	x9	x10	x12	x13	x14	x16	x18
x6	X6 - Product Quality	1.00000	-0.01263	-0.01601	0.10282	0.04144	-0.03823	-0.34946	0.00184	0.06388	-0.12097
<b>x7</b>	X7 - E-Commerce Activities	-0.01263	1.00000	0.05694	-0.09263	0.00114	0.72142	0.00858	-0.07796	0.09036	0.01511
<b>x8</b>	X8 - Technical Support	-0.01601	0.05694	1.00000	0.15063	-0.04596	-0.05961	-0.10177	0.78774	-0.13465	-0.09404
<b>x9</b>	X9 - Complaint Resolution	0.10282	-0.09263	0.15063	1.00000	-0.08235	0.11747	-0.04409	-0.11798	0.31991	0.68847
x10	X10 - Advertising	0.04144	0.00114	-0.04596	-0.08235	1.00000	0.33906	-0.00503	-0.00352	-0.00270	0.15016
x12	X12 - Salesforce Image	-0.03823	0.72142	-0.05961	0.11747	0.33906	1.00000	0.16339	0.14437	-0.07820	0.01030
x13	X13 - Competitive Pricing	-0.34946	0.00858	-0.10177	-0.04409	-0.00503	0.16339	1.00000	-0.07447	-0.00038	-0.02576
x14	X14 - Warranty & Claims	0.00184	-0.07796	0.78774	-0.11798	-0.00352	0.14437	-0.07447	1.00000	0.19900	0.03632
x16	X16 - Order & Billing	0.06388	0.09036	-0.13465	0.31991	-0.00270	-0.07820	-0.00038	0.19900	1.00000	0.28240
x18	X18 - Delivery Speed	-0.12097	0.01511	-0.09404	0.68847	0.15016	0.01030	-0.02576	0.03632	0.28240	1.00000

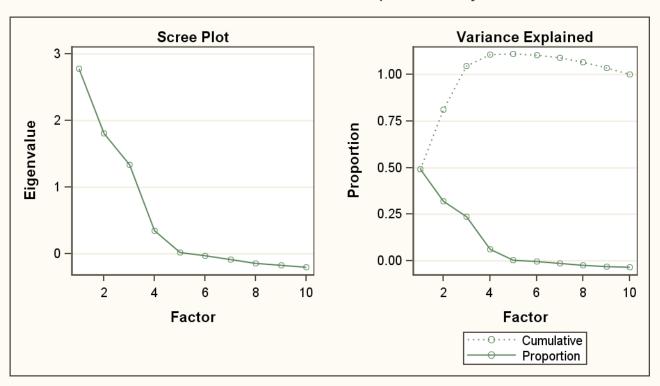
	Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.66867580									
	х6	х7	x8	х9	x10	x12	x13	x14	x16	x18
0	.61311473	0.63853737	0.51710524	0.69464923	0.81495796	0.62698301	0.73727989	0.52683913	0.83456872	0.71596573

	Prior Communality Estimates: SMC									
Γ	х6	х7	x8	х9	x10	x12	x13	x14	x16	x18
[	0.18210072	0.63354504	0.65937246	0.78799451	0.32349990	0.70275360	0.28144327	0.66718853	0.63034995	0.78678366

	Preliminary Eigenvalues: Total = 5.65503164 Average = 0.56550316									
	Eigenvalue	Difference	Proportion	Cumulative						
1	2.77749487	0.96742522	0.4912	0.4912						
2	1.81006965	0.47588339	0.3201	0.8112						
3	1.33418626	0.98862459	0.2359	1.0472						
4	0.34556168	0.32609382	0.0611	1.1083						
5	0.01946786	0.04952457	0.0034	1.1117						
6	03005671	0.05332206	-0.0053	1.1064						
7	08337878	0.05899341	-0.0147	1.0917						
8	14237218	0.03034832	-0.0252	1.0665						
9	17272050	0.03050001	-0.0305	1.0359						
10	20322051		-0.0359	1.0000						

3 factors will be retained by the PROPORTION criterion.

The FACTOR Procedure Initial Factor Method: Iterated Principal Factor Analysis



Iteration	Change					Commu	ınalities				
1	0.0799	0.11403	0.66025	0.72099	0.83178	0.32248	0.78265	0.27093	0.72793	0.66110	0.82961
2	0.0478	0.10194	0.66756	0.75318	0.84952	0.31784	0.83045	0.25966	0.75880	0.66790	0.84623
3	0.0306	0.09882	0.66628	0.77014	0.85730	0.31419	0.86104	0.25303	0.77426	0.66803	0.85297
4	0.0208	0.09757	0.66189	0.77924	0.86104	0.31191	0.88186	0.24955	0.78181	0.66681	0.85585
5	0.0148	0.09694	0.65684	0.78428	0.86300	0.31053	0.89671	0.24771	0.78532	0.66568	0.85714
6	0.0110	0.09658	0.65215	0.78719	0.86410	0.30967	0.90767	0.24671	0.78676	0.66488	0.85773
7	0.0083	0.09636	0.64816	0.78900	0.86473	0.30911	0.91594	0.24613	0.78716	0.66438	0.85801
8	0.0063	0.09622	0.64491	0.79021	0.86512	0.30872	0.92228	0.24578	0.78706	0.66408	0.85813
9	0.0049	0.09611	0.64231	0.79111	0.86535	0.30843	0.92718	0.24554	0.78672	0.66391	0.85817
10	0.0038	0.09604	0.64027	0.79183	0.86549	0.30821	0.93100	0.24538	0.78628	0.66381	0.85819
11	0.0030	0.09598	0.63866	0.79244	0.86557	0.30804	0.93399	0.24526	0.78580	0.66376	0.85819
12	0.0023	0.09594	0.63741	0.79297	0.86562	0.30790	0.93633	0.24517	0.78533	0.66374	0.85818
13	0.0018	0.09590	0.63643	0.79346	0.86565	0.30780	0.93817	0.24510	0.78487	0.66373	0.85817
14	0.0014	0.09588	0.63566	0.79390	0.86566	0.30771	0.93962	0.24505	0.78444	0.66373	0.85816
15	0.0011	0.09586	0.63506	0.79431	0.86567	0.30764	0.94075	0.24500	0.78404	0.66373	0.85815
16	0.0009	0.09584	0.63459	0.79469	0.86568	0.30759	0.94165	0.24497	0.78367	0.66373	0.85815

Convergence criterion satisfied.

#### The FACTOR Procedure **Initial Factor Method: Iterated Principal Factor Analysis**

	Eigenvalues of the Reduced Correlation Matrix: Total = 6.19023108 Average = 0.61902311								
	Eigenvalue	Difference	Proportion	Cumulative					
1	2.85514583	0.96522069	0.4612	0.4612					
2	1.88992513	0.44443524	0.3053	0.7665					
3	1.44548989	1.13516174	0.2335	1.0001					
4	0.31032816	0.27022926	0.0501	1.0502					
5	0.04009890	0.01284653	0.0065	1.0567					
6	0.02725237	0.03617392	0.0044	1.0611					
7	00892156	0.03955135	-0.0014	1.0596					
8	04847290	0.01425855	-0.0078	1.0518					
9	06273145	0.19515184	-0.0101	1.0417					
10	25788329		-0.0417	1.0000					

	Factor Pattern									
		Factor1	Factor2	Factor3						
x18	X18 - Delivery Speed	0.84280	0.13219	-0.36106						
x9	X9 - Complaint Resolution	0.82577	0.23408	-0.35914						
x16	X16 - Order & Billing	0.73453	0.21859	-0.27642						
x12	X12 - Salesforce Image	0.62641	-0.59272	0.44492						
x10	X10 - Advertising	0.41858	-0.33789	0.13496						
x6	X6 - Product Quality	0.01989	0.29958	-0.07548						
x13	X13 - Competitive Pricing	-0.01845	-0.49360	0.03142						
х7	X7 - E-Commerce Activities	0.48471	-0.51498	0.36667						
<b>x8</b>	X8 - Technical Support	0.18661	0.61447	0.61830						
x14	X14 - Warranty & Claims	0.29207	0.57290	0.60840						

Variance Explained by Each Factor					
Factor1	Factor2	Factor3			
2.8551458	1.8899251	1.4454899			

	Final Communality Estimates: Total = 6.190561									
x6	x7	x8	х9	x10	x12	x13	x14	x16	x18	
0.09583868	0.63459425	0.79469312	0.86567532	0.30759169	0.94164875	0.24497137	0.78366828	0.66373334	0.85814605	

#### **The FACTOR Procedure Rotation Method: Varimax**

Orthogonal Transformation Matrix							
	1	2	3				
1	0.84343	0.48571	0.22957				
2	0.24001	-0.72297	0.64785				
3	-0.48064	0.49132	0.72636				

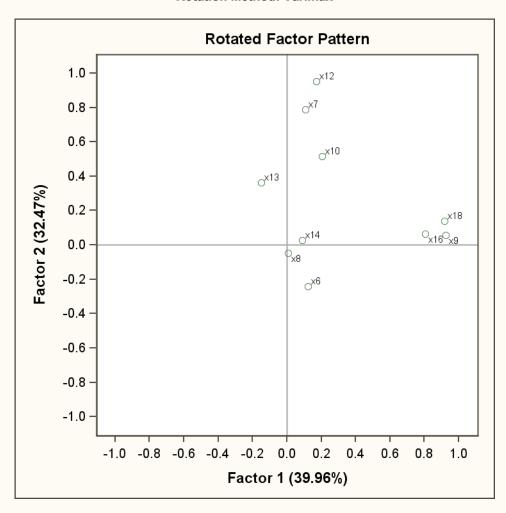
Rotated loadings

	Rotated Factor Pattern								
		Factor1	Factor2	Factor3					
х9	X9 - Complaint Resolution	0.92528	0.05541	0.08036					
x18	X18 - Delivery Speed	0.91611	0.13639	0.01686					
x16	X16 - Order & Billing	0.80486	0.06292	0.10946					
x12	X12 - Salesforce Image	0.17223	0.95137	0.08298					
х7	X7 - E-Commerce Activities	0.10898	0.78790	0.04398					
x10	X10 - Advertising	0.20708	0.51390	-0.02479					
x13	X13 - Competitive Pricing	-0.14913	0.36334	-0.30119					
x6	X6 - Product Quality	0.12496	-0.24401	0.14382					
х8	X8 - Technical Support	0.00769	-0.04983	0.89003					
x14	X14 - Warranty & Claims	0.09143	0.02659	0.88012					

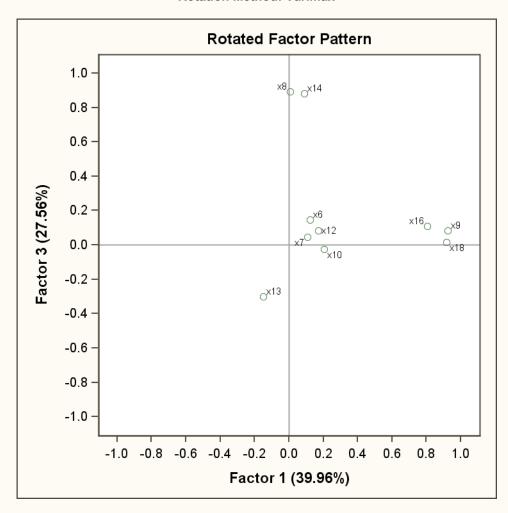
Variance Explained by Each Factor						
Factor1	Factor2	Factor3				
2.4738928	2.0103562	1.7063119				

Final Communality Estimates: Total = 6.190561									
<b>x</b> 6	x7	x8	<b>x9</b>	x10	x12	x13	x14	x16	x18
0.09583868	0.63459425	0.79469312	0.86567532	0.30759169	0.94164875	0.24497137	0.78366828	0.66373334	0.85814605

The FACTOR Procedure **Rotation Method: Varimax** 



The FACTOR Procedure **Rotation Method: Varimax** 



The FACTOR Procedure **Rotation Method: Varimax** 

