The PRINCOMP Procedure

Observations	77
Variables	7

Simple Statistics							
	Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
Mean	4.142857143	22.77922078	173.6363636	266.1818182	140.0389610	561.6753247	70.51948052
StD	3.758199057	14.22897653	111.0534377	181.3188328	70.3550098	342.9720888	48.80617152

Covariance Matrix							
	Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
Murder	14.1241	28.7162	251.3026	465.0395	96.4944	-231.7162	90.0695
Rape	28.7162	202.4638	1268.6029	2132.3433	664.7061	753.1642	533.9978
Robbery	251.3026	1268.6029	12332.8660	18581.1328	5626.8433	8246.9067	3564.3756
Assault	465.0395	2132.3433	18581.1328	32876.5191	8064.7955	4310.3230	5980.7727
Burglary	96.4944	664.7061	5626.8433	8064.7955	4949.8274	11051.3681	2247.4927
Larceny	-231.7162	753.1642	8246.9067	4310.3230	11051.3681	117629.8537	1420.8156
LarcenyOfAutomotives	90.0695	533.9978	3564.3756	5980.7727	2247.4927	1420.8156	2382.0424

Total Variance	170387.69651

Eigenvalues of the Covariance Matrix				
	Eigenvalue	Difference	Proportion	Cumulative
1	120003.357	73962.149	0.7043	0.7043
2	46041.208	43710.254	0.2702	0.9745
3	2330.954	1165.315	0.0137	0.9882
4	1165.639	371.108	0.0068	0.9950
5	794.530	749.256	0.0047	0.9997
6	45.274	38.539	0.0003	1.0000
7	6.735		0.0000	1.0000

Eigenvectors							
	Prin1	Prin2	Prin3	Prin4	Prin5	Prin6	Prin7
Murder	-.001289	0.012430	-.000822	0.005965	-.000693	-.029552	0.999467
Rape	0.009329	0.054165	0.042651	0.059882	0.069879	0.992916	0.028423
Robbery	0.095773	0.475040	0.091126	-.772976	0.399023	-.012160	-.001180
Assault	0.080645	0.828698	-.349691	0.356698	-.236205	-.035436	-.013830
Burglary	0.105531	0.199858	0.814690	-.042720	-.532282	-.006795	-.001995

The PRINCOMP Procedure

Eigenvectors							
	Prin1	**Prin2**	**Prin3**	**Prin4**	**Prin5**	**Prin6**	**Prin7**
Larceny	0.986234	-.139153	-.077295	0.038893	0.021878	-.002316	0.002653
LarcenyOfAutomotives	0.020974	0.158752	0.444857	0.517992	0.704486	-.108575	-.007394

Scree Plot and Variance Explained

The PRINCOMP Procedure
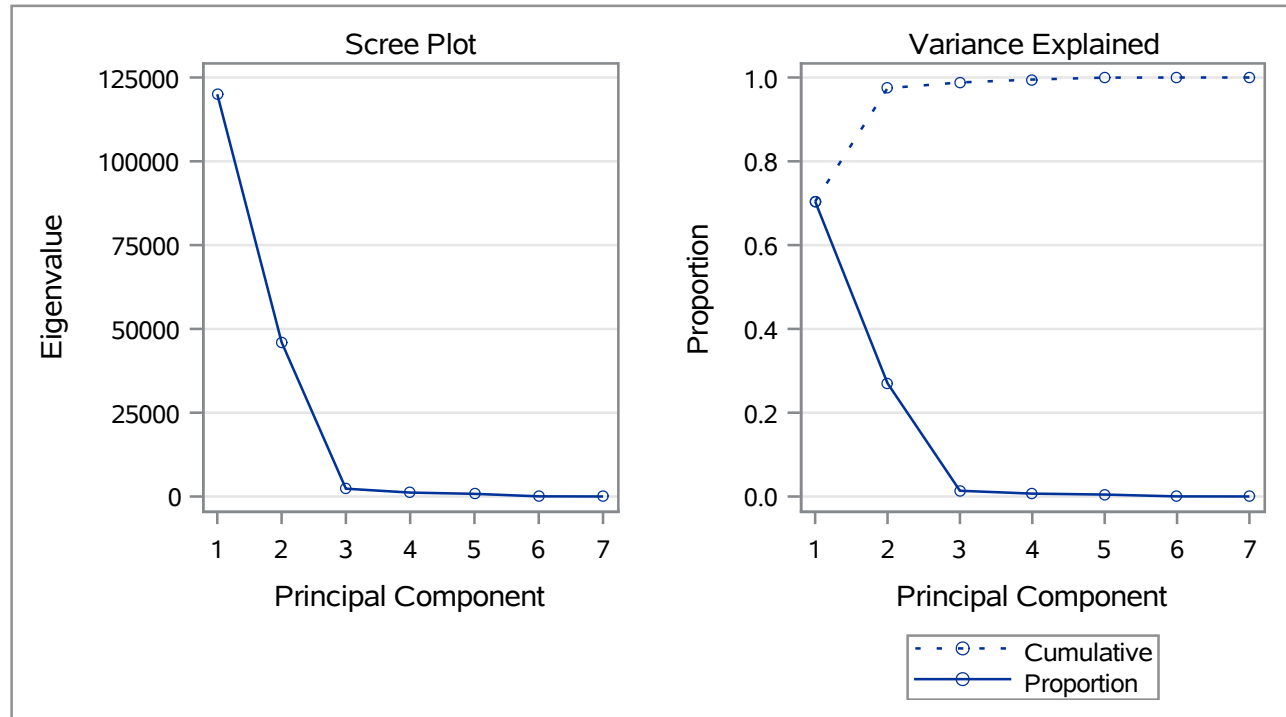
Component Scores
95% Prediction Ellipse
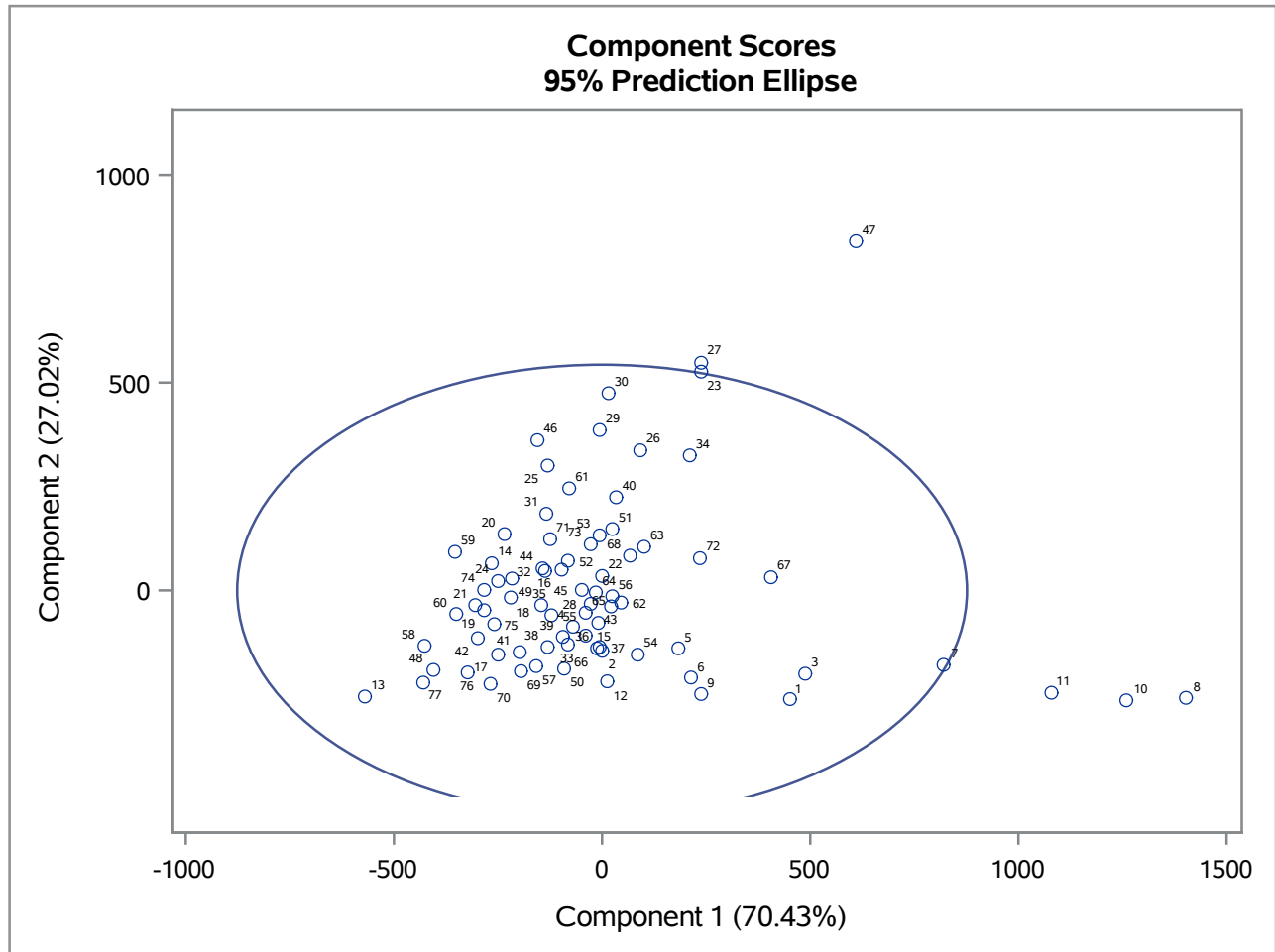
Obs	Prin1	Prin2
1	450.86	-262.365
2	1.42	-144.918
3	488.70	-200.531
4	-68.77	-88.158
5	184.22	-140.490
6	214.06	-210.762
7	821.14	-178.366
8	1403.09	-259.771
9	238.49	-250.307
10	1260.24	-264.434
11	1079.24	-244.639
12	12.20	-220.116
13	-569.30	-254.325
14	-263.93	66.801
15	-38.05	-107.836
16	-98.80	51.022
17	-251.26	-155.171
18	-220.55	-18.538
19	-282.90	-48.618
20	-234.08	134.444
21	-304.94	-35.900
22	-0.33	34.486
23	236.55	526.385
24	-250.74	22.900
25	-130.02	300.774
26	92.73	336.477
27	236.56	549.175
28	-26.44	-30.937
29	-5.83	385.968
30	15.90	474.559
31	-135.12	183.067
32	-135.58	48.329
33	-80.74	-129.295
34	209.11	324.520
35	-147.50	-33.978
36	-8.62	-78.120
37	-7.27	-136.727
38	-130.41	-137.178

Obs	Prin1	Prin2
39	-95.23	-110.810
40	33.88	223.185
41	-199.23	-149.234
42	-297.56	-115.557
43	20.14	-37.958
44	-142.93	52.009
45	-47.46	1.342
46	-155.17	361.705
47	609.01	840.681
48	-406.67	-191.917
49	-214.89	28.772
50	-90.88	-187.237
51	23.35	148.637
52	-83.31	71.069
53	-5.10	133.284
54	86.81	-153.270
55	-120.76	-60.439
56	25.49	-14.610
57	-158.51	-182.805
58	-427.41	-132.834
59	-353.79	93.890
60	-350.60	-57.257
61	-78.08	244.261
62	47.14	-28.596
63	101.07	103.987
64	-15.54	-5.352
65	-39.63	-52.824
66	-10.54	-138.900
67	404.76	32.050
68	67.08	82.513
69	-194.60	-194.911
70	-266.94	-224.282
71	-125.78	123.336
72	233.56	77.487
73	-28.11	111.908
74	-283.65	2.007
75	-260.23	-81.761

Obs	Prin1	Prin2
76	-322.25	-197.662
77	-430.76	-221.336

The PRINCOMP Procedure

Observations	77
Variables	7

Simple Statistics

	Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
Mean	4.142857143	22.77922078	173.6363636	266.1818182	140.0389610	561.6753247	70.51948052
StD	3.758199057	14.22897653	111.0534377	181.3188328	70.3550098	342.9720888	48.80617152

Correlation Matrix

	Murder	Rape	Robbery	Assault	Burglary	Larceny	LarcenyOfAutomotives
Murder	1.0000	0.5370	0.6021	0.6824	0.3649	-.1798	0.4910
Rape	0.5370	1.0000	0.8028	0.8265	0.6640	0.1543	0.7689
Robbery	0.6021	0.8028	1.0000	0.9228	0.7202	0.2165	0.6576
Assault	0.6824	0.8265	0.9228	1.0000	0.6322	0.0693	0.6758
Burglary	0.3649	0.6640	0.7202	0.6322	1.0000	0.4580	0.6545
Larceny	-.1798	0.1543	0.2165	0.0693	0.4580	1.0000	0.0849
LarcenyOfAutomotives	0.4910	0.7689	0.6576	0.6758	0.6545	0.0849	1.0000

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	4.40664476	3.12148176	0.6295	0.6295
2	1.28516300	0.78989844	0.1836	0.8131
3	0.49526456	0.15127287	0.0708	0.8839
4	0.34399169	0.09035705	0.0491	0.9330
5	0.25363464	0.09753931	0.0362	0.9692
6	0.15609533	0.09688932	0.0223	0.9915
7	0.05920601		0.0085	1.0000

Eigenvectors

	Prin1	Prin2	Prin3	Prin4	Prin5	Prin6	Prin7
Murder	0.327802	-.441149	0.535391	0.597898	0.188057	-.119432	-.064642
Rape	0.432034	-.014132	-.245098	-.300796	0.378976	-.712588	-.105785
Robbery	0.443413	0.015305	0.236667	-.388033	-.180520	0.353298	-.662694
Assault	0.442270	-.139576	0.199643	-.389318	-.021397	0.246917	0.729428
Burglary	0.384511	0.356504	-.087223	0.314539	-.728493	-.278983	0.099899
Larceny	0.100979	0.810705	0.327693	0.137186	0.439529	0.099889	0.056515
LarcenyOfAutomotives	0.394499	-.033676	-.665150	0.363519	0.253138	0.452059	-.015167

The PRINCOMP Procedure

The PRINCOMP Procedure
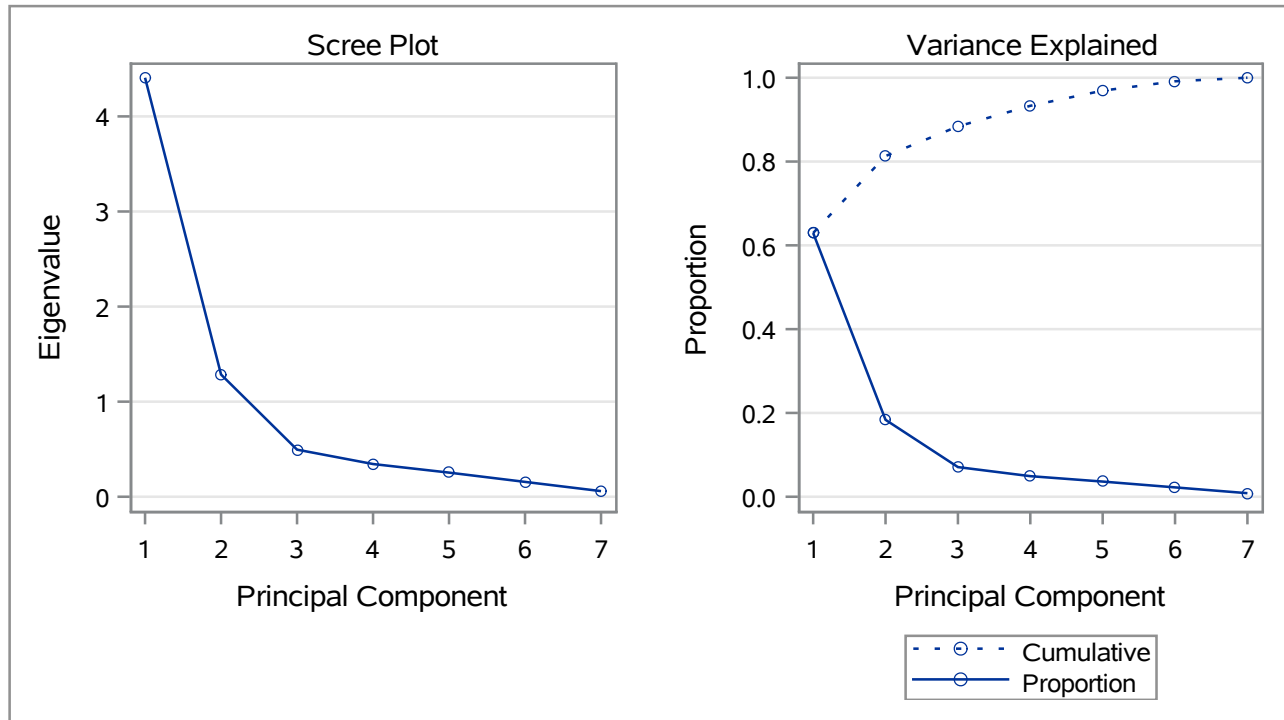
Component Scores
95% Prediction Ellipse
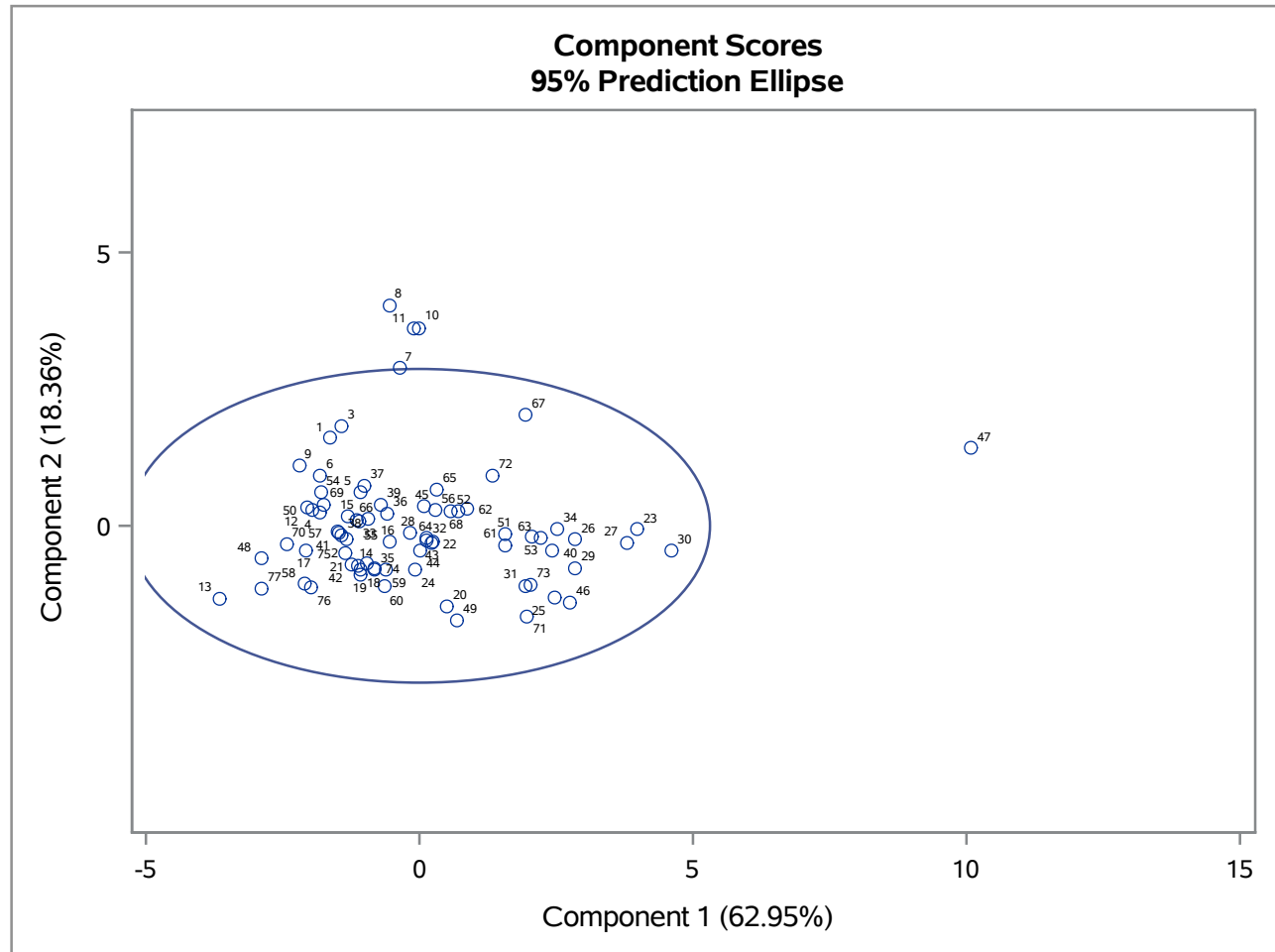
Obs	Prin1	Prin2
1	-1.6262	1.62278
2	-1.3334	-0.24631
3	-1.4181	1.81098
4	-1.8242	0.23324
5	-1.0858	0.62111
6	-1.8174	0.92768
7	-0.3694	2.88753
8	-0.5509	4.01783
9	-2.1975	1.09278
10	-0.0093	3.61975
11	-0.0981	3.60500
12	-2.0429	0.33840
13	-3.6533	-1.32775
14	-0.9499	-0.69637
15	-1.2984	0.16695
16	-0.5513	-0.28080
17	-2.0825	-0.46137
18	-1.0815	-0.79568
19	-1.0669	-0.88482
20	0.4929	-1.47735
21	-1.1298	-0.73908
22	0.2196	-0.31953
23	3.9717	-0.06916
24	-0.0697	-0.79595
25	2.4680	-1.31553
26	2.8346	-0.25479
27	3.7853	-0.30745
28	-0.1827	-0.13816
29	2.8375	-0.76997
30	4.6112	-0.44574
31	1.9440	-1.10953
32	0.1374	-0.26677
33	-1.1430	0.10954
34	2.5088	-0.06104
35	-0.8237	-0.78980
36	-0.5890	0.21861
37	-1.0003	0.73239
38	-1.4153	-0.18329

Obs	Prin1	Prin2
39	-0.6967	0.37795
40	2.4307	-0.46417
41	-1.4827	-0.13064
42	-1.2328	-0.71257
43	0.2456	-0.29093
44	0.0137	-0.44313
45	0.0740	0.35018
46	2.7548	-1.40548
47	10.0768	1.41620
48	-2.8917	-0.60297
49	0.6898	-1.72217
50	-1.9673	0.29922
51	1.5654	-0.15892
52	0.5712	0.26115
53	2.0521	-0.19470
54	-1.8056	0.61738
55	-1.1103	0.08734
56	0.2902	0.29101
57	-1.5031	-0.11555
58	-2.0865	-1.06767
59	-0.6163	-0.79943
60	-0.6467	-1.11260
61	1.5673	-0.35324
62	0.8645	0.32026
63	2.2150	-0.22114
64	0.1226	-0.21033
65	0.3146	0.66234
66	-0.9450	0.12277
67	1.9309	2.02076
68	0.6982	0.26076
69	-1.7523	0.38385
70	-2.4324	-0.34083
71	1.9532	-1.66692
72	1.3338	0.92570
73	2.0306	-1.08831
74	-0.8147	-0.78139
75	-1.3490	-0.49919

Obs	Prin1	Prin2
76	-1.9750	-1.12876
77	-2.8870	-1.15417