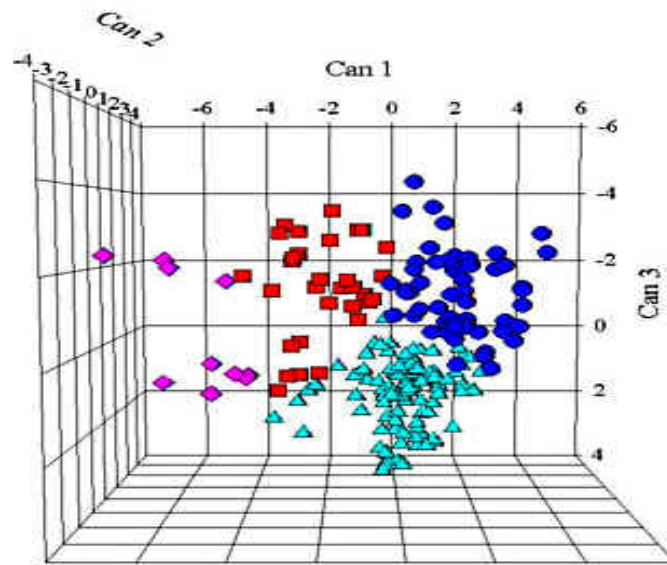


Cluster Analysis



Fran Mentch and Jennie Ford
Cleveland State University
COM 631

I. Model

Variable 1: Scale of Political Discussion Network Standardized

(frequency, diversity, size)

Q24. I generally discuss political candidates and issues with neighbors at election time.

Q25. I generally discuss political candidates and issues with family and friends at election time.

Q80. How many days in the past week did you engage in political discussion with friends and family, never, once, a couple times, almost every day, or several times a day? (4-several times a day; 3-almost every day; 2-a couple times; 1-once; 0-never; 9-missing information/don't know)

Q81. How often do you discuss politics with people whose political views are different from yours--almost never, seldom, sometimes, or frequently? (1-almost never; 2-seldom; 3-sometimes; 4-frequently; 9-missing information/don't know)

Q82. About how many people do you discuss politics with on a regular basis, none, one, two or three, five to ten, or more than that? (4-more than that; 3-five to ten; 2-two or three; 1-one; 0-none; 9-missing information/don't know)

(PolDiscNetwork=ZQ24+ZQ25+ZQ80+ZQ81+ZQ82; $\alpha=.71$)

Variable 2: Scale of Political Involvement/Activity Standardized

Q83. attended meetings of your town or city council

Q84. attended a political meeting or rally.

Q85. worn a button or put a sticker on your car.

Q86. voted in the 2004 presidential election

Q87. participated in a march or rally

Q88. helped circulate or signed a petition

Q89. solicited political funds.

Q90. contributed money to a party or candidate.

(PolActivity1=Q83+Q84+Q85+Q86+Q87+Q88+Q89+Q90; $\alpha=.74$)

Variable 3: Scale of Political Activity 2 Standardized

Q91. Contacted a public official about some issue.

Q92. Emailed, written a letter, or called media about some public issue.

(PolActivity2= PolActivity1+Q91+Q92; $\alpha=.79$)

Variable 4: Scale of Perceived Political Efficacy Standardized

Q31. Public officials don't care much what people like me think.

Q32. Other than voting, people like me have little influence over local government actions.

Q33. People like me don't have any say about what the government does.

(PolEfficacy=ZQ31+ZQ32+ZQ33; $\alpha=.75$)

Variable 5: Scale of Perceived Political Knowledge Standardized

Q79. How knowledgeable would you say you are about politics and current events on a 0 to 10 scale where 10 is very knowledgeable and 0 is not at all knowledgeable?

Variable 6: Scale of Cosmopolitanism Standardized

Q97. I enjoy learning about other peoples and cultures.

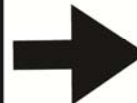
Q98. I think of myself as a citizen of the world.

Variable 7: ZQ4 How would you rate the overall quality of life available in the community where you live

Variable 8: ZQ5 How would you rate the overall quality of life available in the neighborhood where you live

Cluster 1:

Politically Fueled,
living the good life



Cluster 2:

Not getting
politically
involved, where I
live is ok



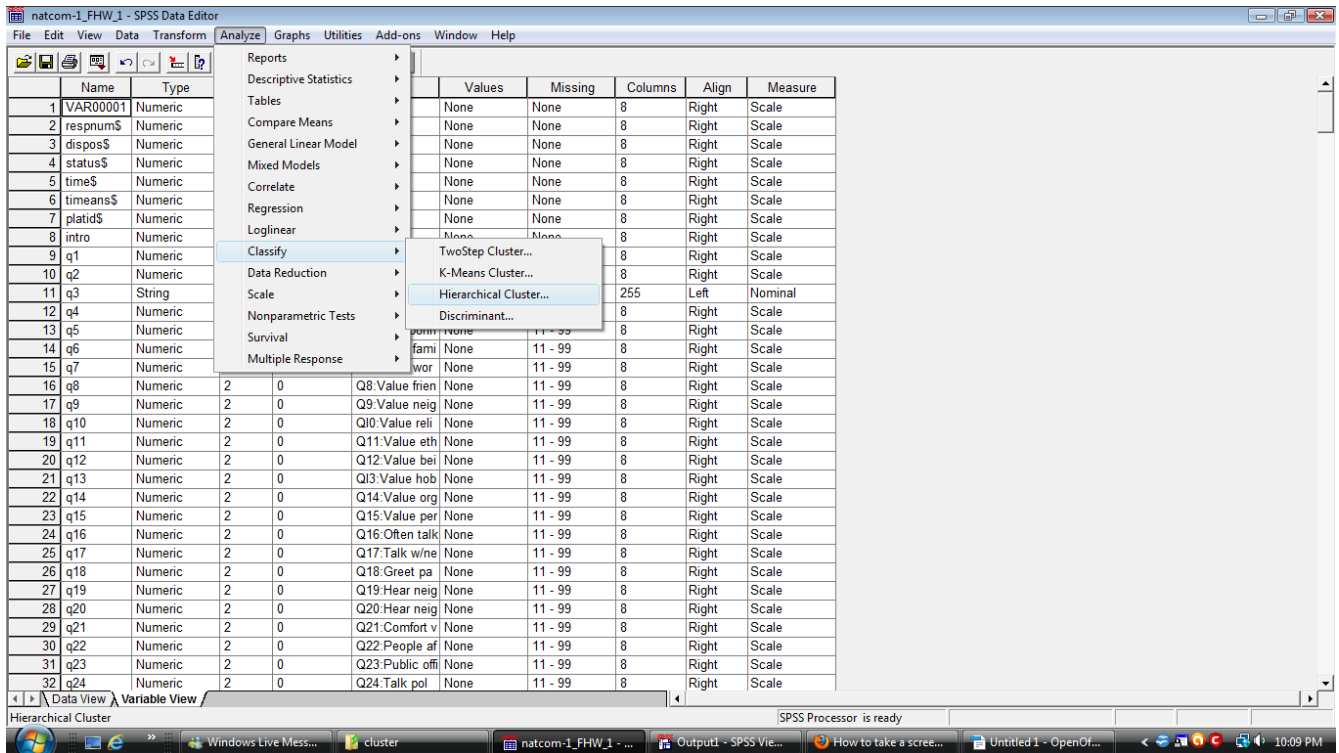
Cluster 3:

Eh, I'm ok with poli-
tics but I'm not
happy where I live
and I can't change
politics

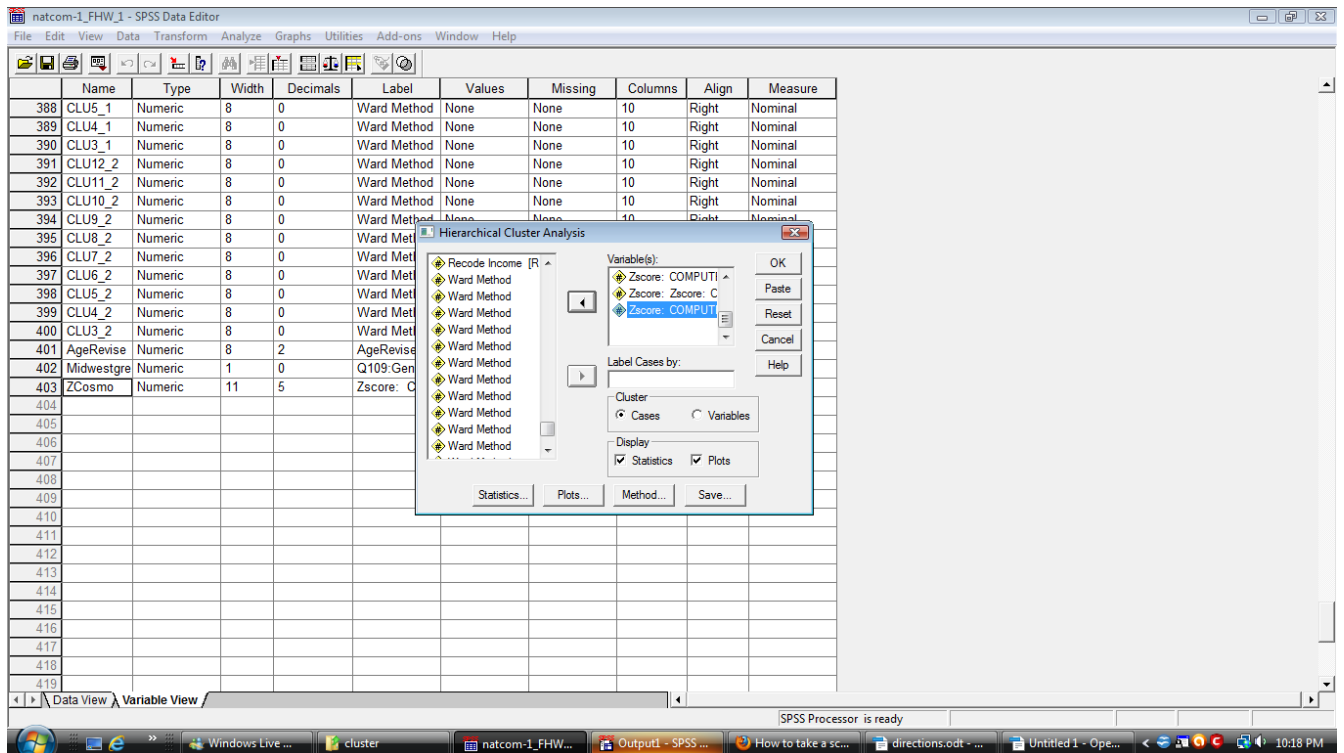
All 8 variables were standardized.

II. Running SPSS

Analyze > Classify > Hierarchical Cluster



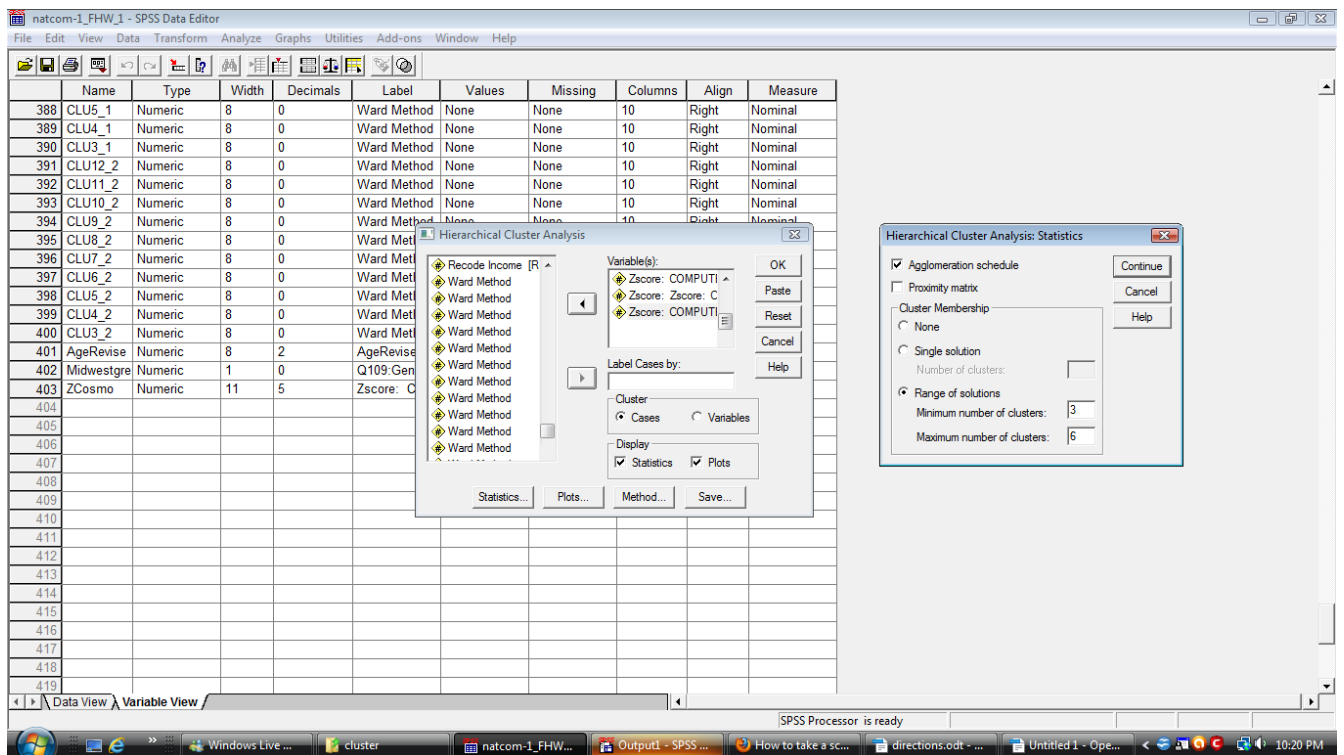
Select the standardized internal variables (ZPerceived Political knowledge, ZPolitical Efficacy, ZPolitical Discussion Network, ZQOL Community, ZQOL Neighborhood, ZCosmopolitanness, ZPolitical Activity 1, ZPolitical Activity 2)



Click “Statistics” box and select “Range of Solutions”, select 3-6 (This number is based on your assumptions, another option may be 4-12)

Also, make sure “Agglomeration Schedule” is checked.

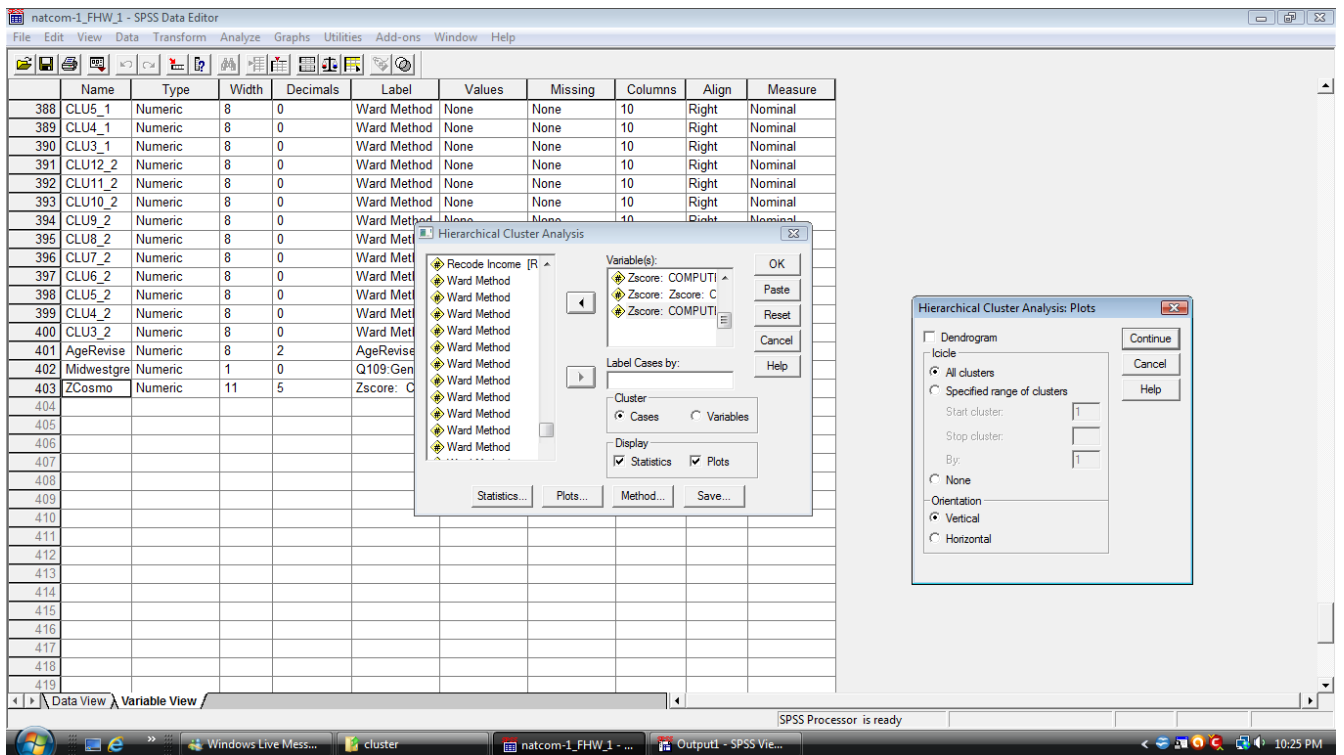
Continue.



Select “Plots” tab, and choose either “Dendrogram” or something under “Icicle”.

Neither is required for five stats; however, SPSS will make you select one to continue.

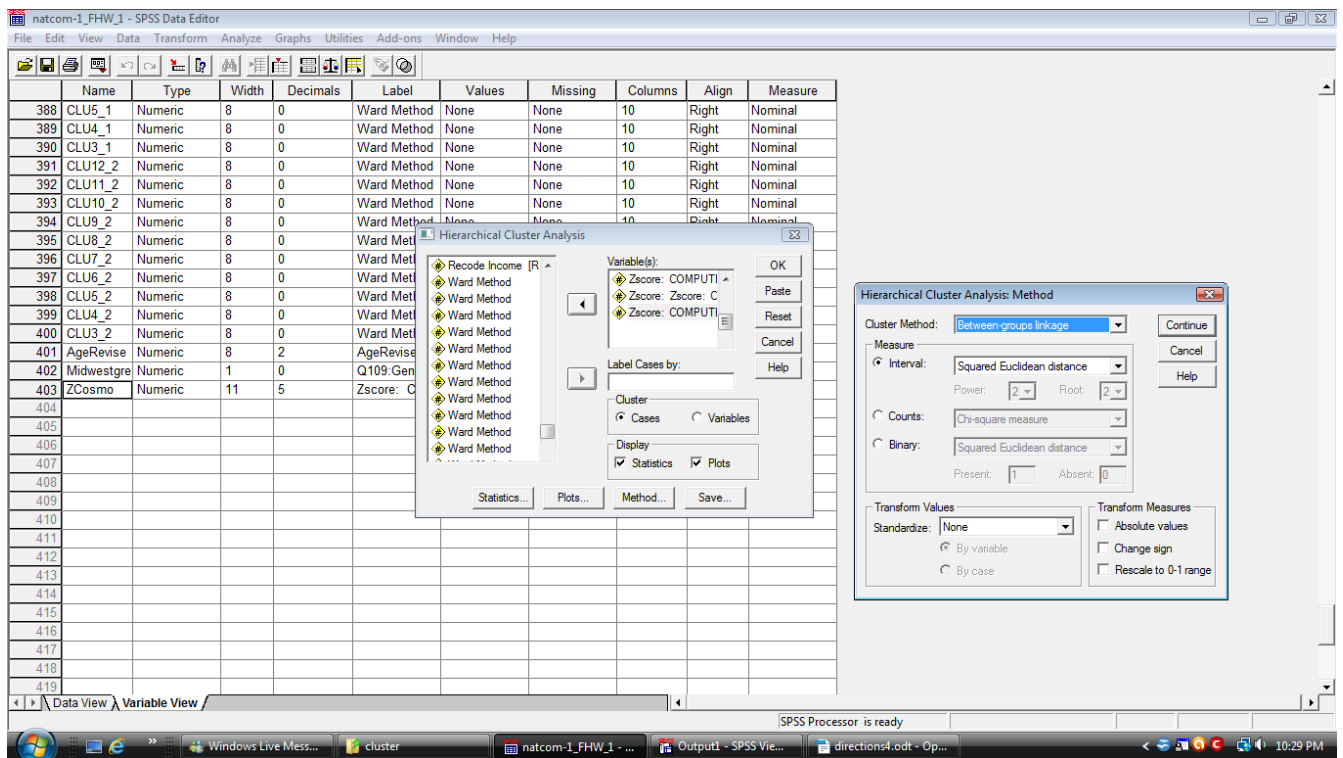
Continue.



Click “Method” tab and select “Ward's Method” from drop down menu.

Select “Squared Euclidean Distance”

Continue.

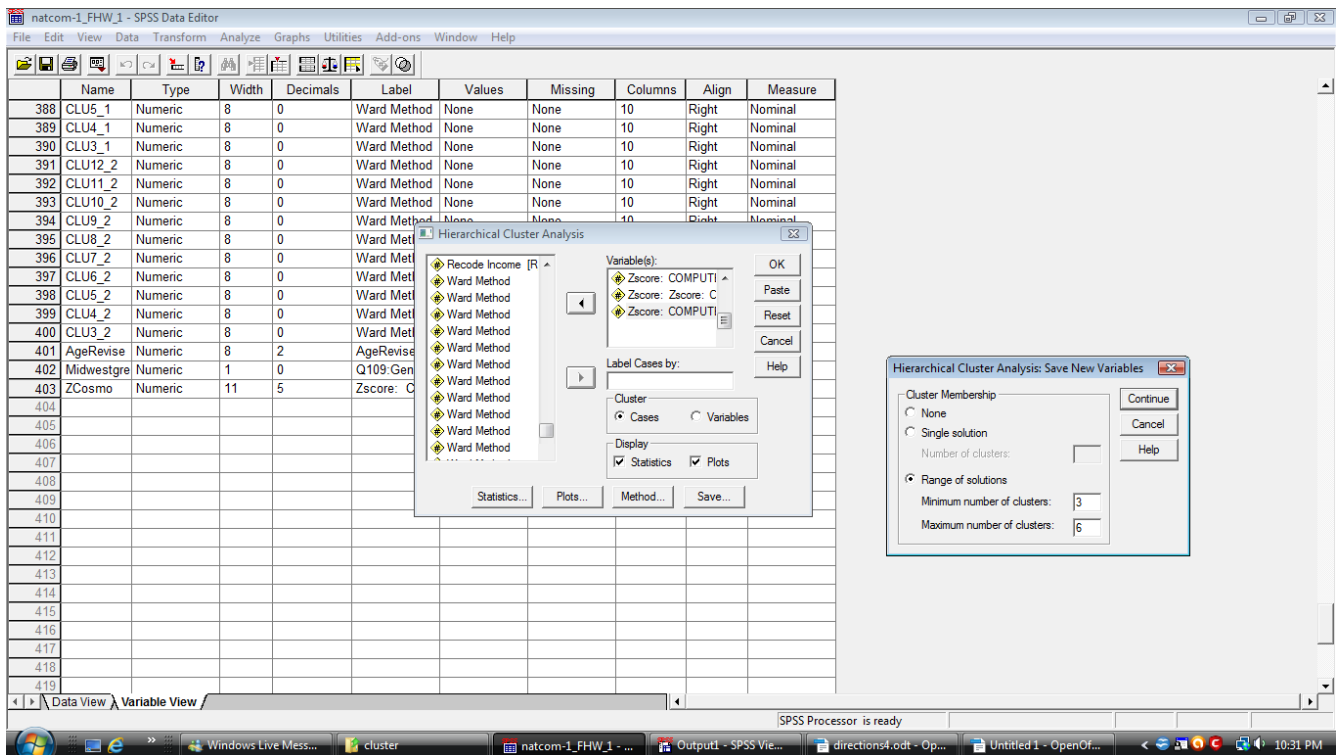


Select "Save" tab, set range of solutions for a minimum of "3" and maximum of "6" clusters.

(4-12)

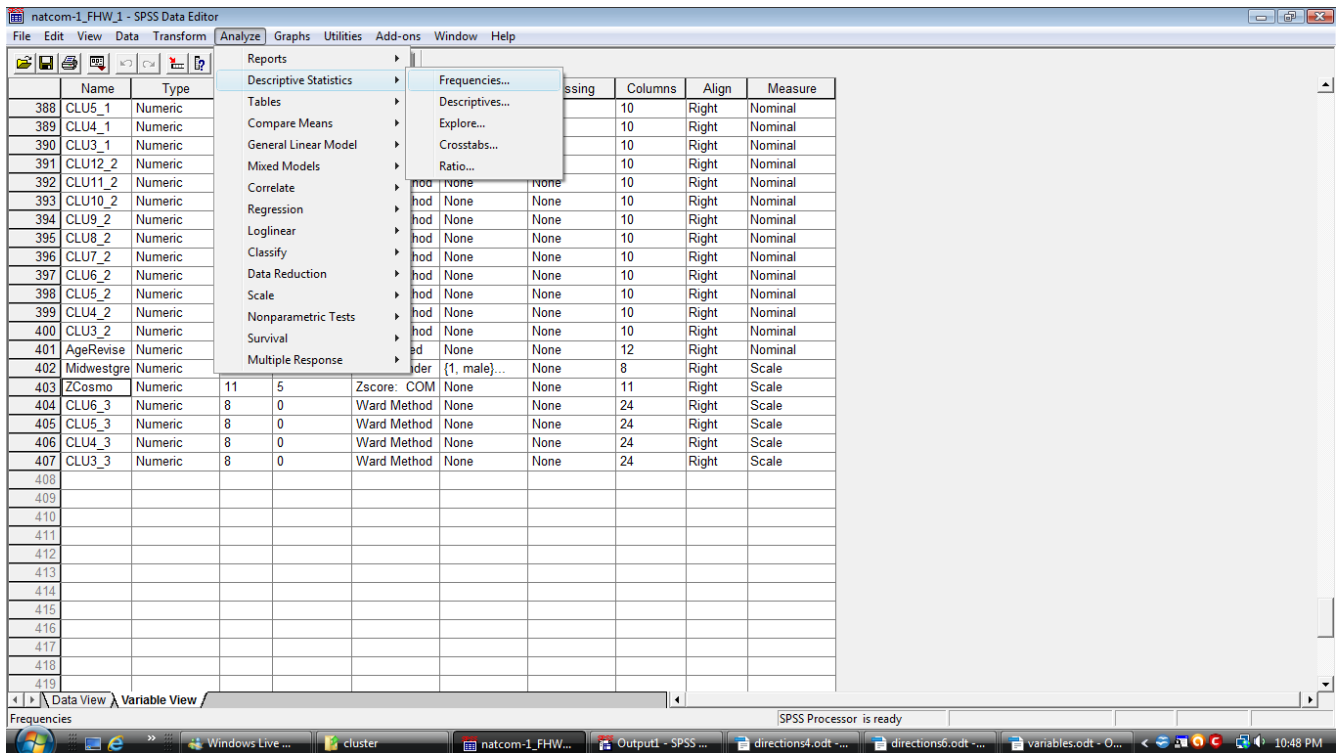
Continue

OK



This marks the end of the use of the actual Cluster procedure in SPSS. It has produced an Agglomerative Schedule and a Cluster Membership table, and has created and saved at the end of the dataset a number of nominal variables (in this case, a 3-cluster variable, a 4-cluster variable, a 5-cluster variable, and a 6-cluster variable). Further Frequencies and ANOVA analyses will help decide which cluster solution to select.

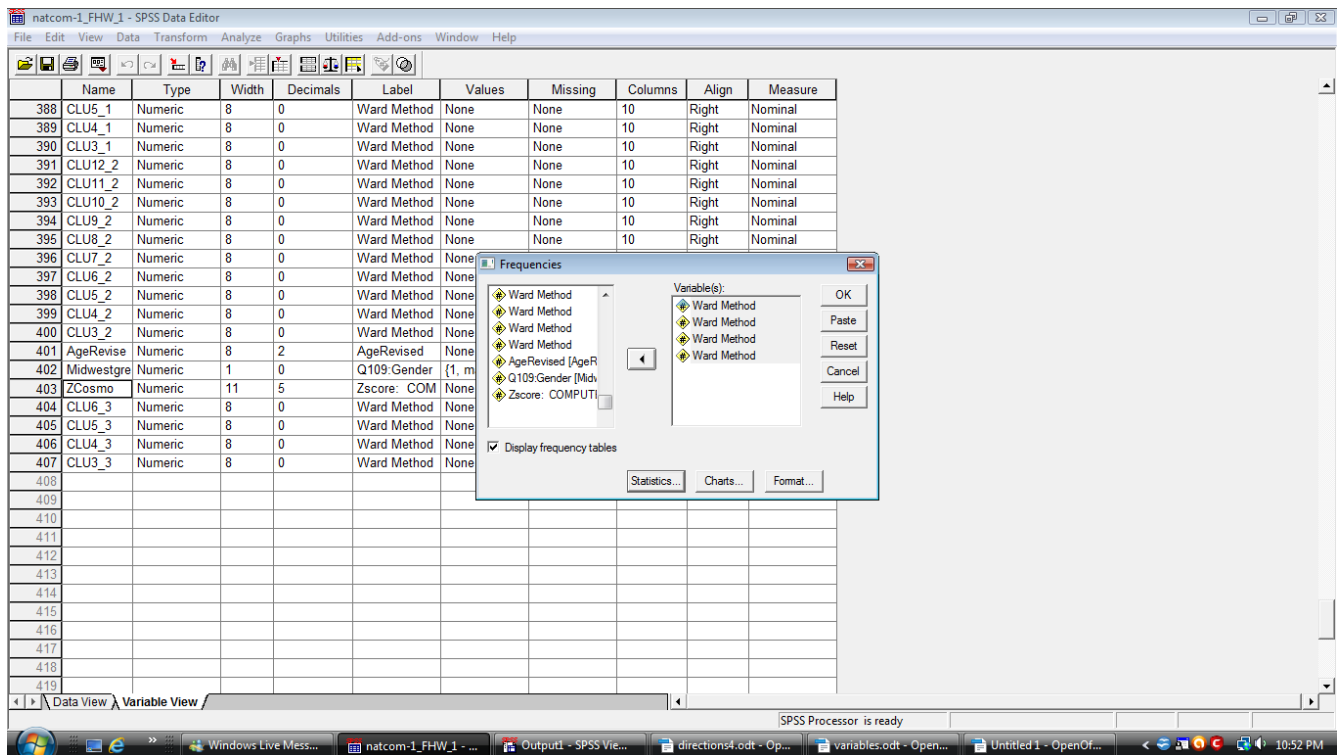
Analyze > Descriptive Statistics > Frequencies



Select the cluster variables “Ward Method” 3-6 which can be found at the bottom of the list, since they have just been created, to run your frequencies on.

(Note: When you are running your own analyses you may want to change the “Label” on the cluster-created nominal variables from all “Ward Method” to something more meaningful.)

OK.



Run Means with ANOVA test to compare means among the clusters.

Analyze > Compare Means > Means

For Dependent List, input all variables, both internal and external.

For “Independent List”, select the Ward Method ?? (whichever nominal cluster-created variable you wish to examine)

The screenshot shows the SPSS Data Editor window with a list of variables. The 'Output1 - SPSS Viewer' window is open, displaying the 'Means' dialog box. The 'Compare Means' menu is open, showing the 'Means...' option. Below the dialog box, a table titled 'Ward Method' is displayed, showing the results of the analysis.

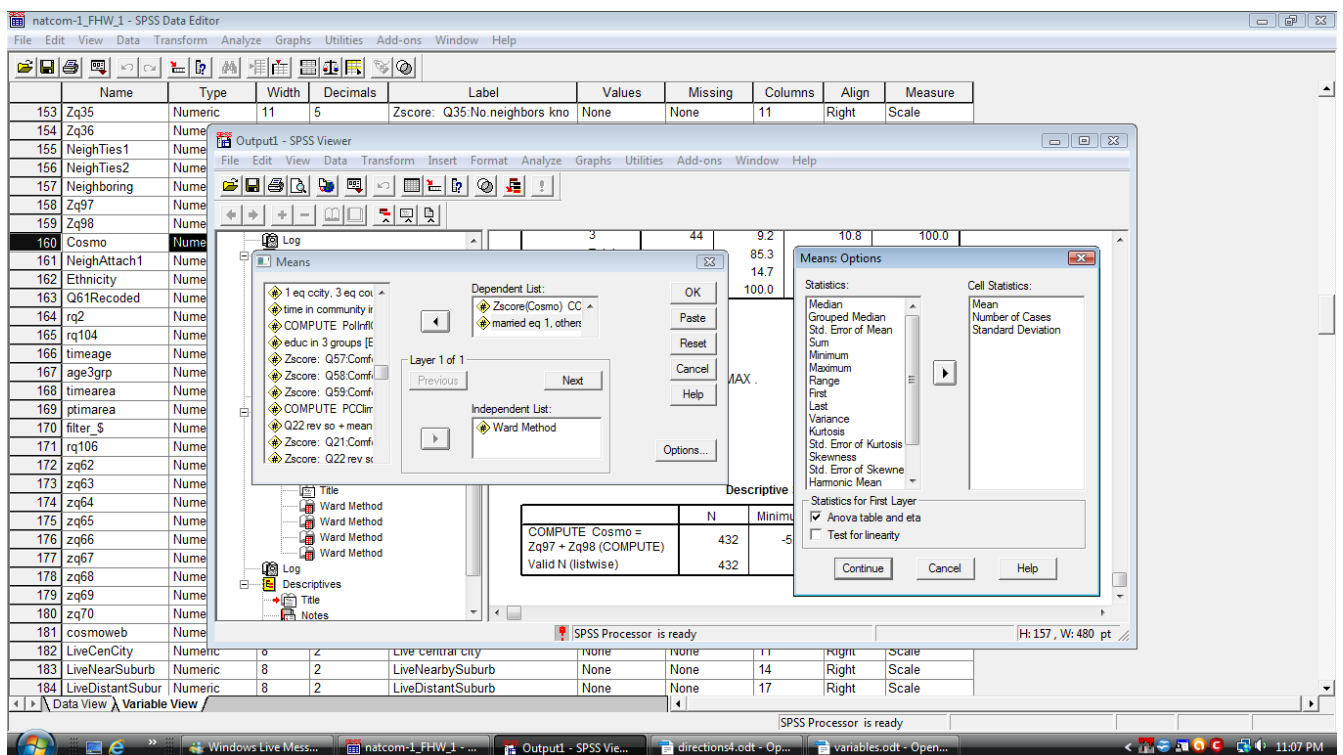
Ward Method	Ward Method	Ward Method
407	407	407
70	70	70

Ward Method					
	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid 1	65	13.6	16.0	16.0	
2	102	21.4	25.1	41.0	

Click "Options" tab and check "ANOVA table and eta"

Continue

OK



III. SPSS Output

```

CLUSTER  Zq5 Zq4 ZScpolknow Zpolact1 ZPolDiscNet ZPolEfficacy
ZPolActivity2 ZCosmo
/METHOD WARD
/MEASURE=SEUCLID
/PRINT SCHEDULE CLUSTER(3,6)
/PLOT DENDROGRAM VICICLE
/SAVE CLUSTER(3,6).
  
```

Cluster

Notes		
Output Created		21-APR-2013 15:59:42
Comments		
	Data	E:\FranHW
	Active Dataset	atcom2-2.sav
Input	File Label	DataSet1
	Filter	CP05
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	477
	Definition of Missing	User-defined missing values are treated as missing.
Missing Value Handling	Cases Used	Statistics are based on cases with no missing values for any variable used.

Syntax				CLUSTER Zq5 Zq4 ZScpolknow Zpolact1 ZPolDiscNet ZPolEfficacy ZPolActivity2 ZCosmo /METHOD WARD /MEASURE=SEUCLID /PRINT SCHEDULE CLUSTER(3,6) /PLOT DENDROGRAM VICICLE /SAVE CLUSTER(3,6).
Resources	Processor Time			00:00:02.65
	Elapsed Time			00:00:01.99
Variables Created or Modified	Cluster Membership	CLU6_2		Ward Method
		CLU5_2		Ward Method
		CLU4_2		Ward Method
		CLU3_2		Ward Method

[DataSet1] E:\FranHW\natcom2-2.sav

Case Processing Summary^{a,b}

Cases					
Valid		Missing		Total	
N	Percent	N	Percent	N	Percent
397	83.2	80	16.8	477	100.0

a. Squared Euclidean Distance used

b. Ward Linkage

Ward Linkage

Agglomeration Schedule

NOTE: Pages have been deleted from this agglomeration schedule output.

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	72	312	.074	0	0	171
2	225	366	.156	0	0	33
3	222	325	.254	0	0	210
4	254	376	.355	0	0	168
5	28	87	.488	0	0	185
6	48	52	.621	0	0	88
7	63	309	.760	0	0	128
8	83	384	.905	0	0	95
9	123	259	1.054	0	0	122
10	11	251	1.219	0	0	220
11	311	345	1.388	0	0	110
12	264	308	1.569	0	0	32
13	15	354	1.782	0	0	109
14	58	322	1.995	0	0	236
15	193	212	2.212	0	0	233
16	20	410	2.430	0	0	81
17	261	355	2.651	0	0	201
18	127	287	2.890	0	0	142
19	262	288	3.140	0	0	148
20	382	449	3.405	0	0	226
21	280	379	3.679	0	0	72
22	404	425	3.954	0	0	278
23	361	455	4.234	0	0	339
24	84	211	4.521	0	0	225
25	272	450	4.813	0	0	160
26	64	188	5.108	0	0	187
27	92	368	5.405	0	0	189
28	197	473	5.703	0	0	49
29	190	267	6.013	0	0	148
30	205	293	6.326	0	0	152
31	55	252	6.648	0	0	155

Agglomeration Schedule

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
32	22	264	6.971	0	12	242
33	225	353	7.297	2	0	41
34	44	320	7.623	0	0	174
35	227	291	7.949	0	0	127
36	279	386	8.282	0	0	107
37	95	117	8.617	0	0	53
38	57	400	8.953	0	0	197
39	107	464	9.290	0	0	196
40	207	319	9.640	0	0	214
41	23	225	9.990	0	33	139
42	296	356	10.341	0	0	191
43	286	438	10.692	0	0	137
44	164	377	11.044	0	0	163
45	45	380	11.405	0	0	223
46	314	443	11.768	0	0	273
47	76	347	12.151	0	0	117
48	192	393	12.537	0	0	250
49	197	297	12.936	28	0	228
50	103	469	13.338	0	0	159
51	101	253	13.740	0	0	183
52	112	476	14.144	0	0	172
53	95	451	14.549	37	0	265
54	315	435	14.960	0	0	237
55	13	426	15.374	0	0	251
56	96	420	15.788	0	0	128
57	133	414	16.206	0	0	120
58	131	153	16.626	0	0	194
59	396	453	17.047	0	0	222
60	292	446	17.471	0	0	104
61	346	406	17.909	0	0	238
62	182	284	18.347	0	0	142

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
63	40	427	18.793	0	0	157
64	234	441	19.245	0	0	93
65	33	213	19.699	0	0	173
66	301	374	20.153	0	0	234
67	185	202	20.613	0	0	147
68	66	248	21.075	0	0	294
69	14	194	21.536	0	0	176
70	199	229	22.003	0	0	135
71	180	423	22.480	0	0	251
72	208	280	22.957	0	21	124
73	269	373	23.434	0	0	190
74	99	218	23.914	0	0	107
75	61	148	24.394	0	0	250
76	81	168	24.878	0	0	264
77	46	100	25.364	0	0	207
78	411	463	25.857	0	0	224
79	277	444	26.355	0	0	151
80	150	191	26.855	0	0	219
81	1	20	27.363	0	16	195
82	114	176	27.872	0	0	276
83	170	310	28.385	0	0	213
84	224	250	28.898	0	0	164
85	85	333	29.412	0	0	136
86	119	419	29.927	0	0	319
87	54	173	30.457	0	0	194
88	48	388	30.988	6	0	238
89	97	147	31.529	0	0	293
90	36	132	32.090	0	0	161
91	60	306	32.660	0	0	115
92	122	383	33.232	0	0	230
93	234	447	33.806	64	0	216

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
349	14	326	610.313	293	239	365
350	5	158	618.554	312	295	376
351	13	190	626.797	296	273	371
352	18	22	635.434	319	242	369
353	79	203	644.295	315	237	363
354	43	200	653.246	336	291	364
355	32	37	662.724	289	301	383
356	258	461	672.925	320	0	364
357	114	121	684.007	276	260	368
358	15	30	695.417	327	269	387
359	47	85	706.861	341	308	368
360	6	46	718.410	330	322	380
361	228	422	730.787	306	0	375
362	12	44	743.172	303	311	372
363	7	45	755.832	280	347	366
364	3	79	769.566	314	352	374
365	43	258	783.381	353	355	386
366	14	25	797.757	348	316	373
367	4	7	812.854	323	362	384
368	23	107	829.345	318	331	381
369	47	114	846.071	358	356	383
370	18	118	862.872	351	325	379
371	33	35	880.290	277	329	390
372	13	27	898.155	350	340	385
	9	12	916.783	337	361	380

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
373	14	28	938.708	365	333	385
374	3	73	961.497	363	335	384
375	101	228	984.486	338	360	382
376	5	8	1008.349	349	344	379
377	167	361	1034.320	342	339	392
378	1	48	1062.092	332	345	381
379	5	18	1096.524	376	369	394
380	6	9	1132.121	359	372	389
381	1	23	1168.003	378	367	387
382	101	175	1204.768	375	343	386
383	32	47	1241.869	354	368	391
384	3	4	1279.232	374	366	388
385	13	14	1320.021	371	373	389
386	43	101	1363.025	364	382	391
387	1	15	1407.838	381	357	390
388	3	31	1457.509	384	346	393
389	6	13	1515.383	380	385	393
390	1	33	1580.520	387	370	394
391	32	43	1662.554	383	386	392
392	32	167	1781.751	391	377	395
393	3	6	1935.210	388	389	395
394	1	5	2103.751	390	379	396
395	3	32	2395.462	393	392	396
396	1	3	2945.333	394	395	0

NOTE: Pages have been deleted from the Cluster Membership output.

Cluster Membership

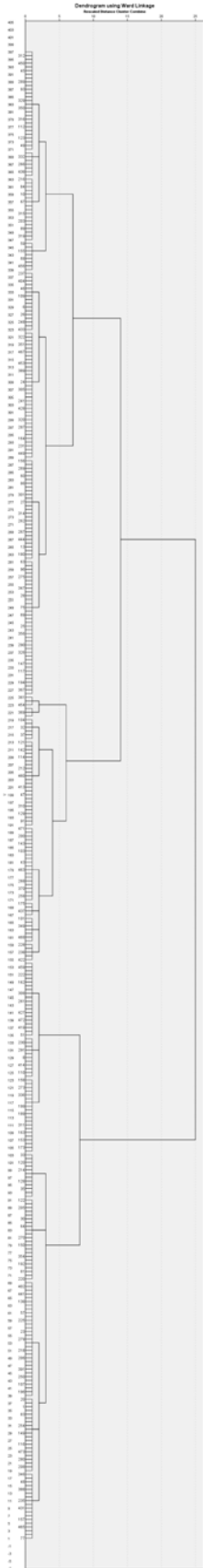
Case	6 Clusters	5 Clusters	4 Clusters	3 Clusters
1	1	1	1	1
3	2	2	2	2
4	2	2	2	2
5	3	3	3	1
6	4	4	2	2
7	2	2	2	2
8	3	3	3	1
9	4	4	2	2
10	2	2	2	2

11	2	2	2	2
12	4	4	2	2
13	4	4	2	2
14	4	4	2	2
15	1	1	1	1
16	1	1	1	1
18	3	3	3	1
20	1	1	1	1
22	3	3	3	1
23	1	1	1	1
24	4	4	2	2
25	4	4	2	2
26	4	4	2	2
27	4	4	2	2
28	4	4	2	2
29	4	4	2	2
30	1	1	1	1
31	2	2	2	2
32	5	5	4	3
33	1	1	1	1
34	4	4	2	2
35	1	1	1	1
36	4	4	2	2

Case	6 Clusters	5 Clusters	4 Clusters	3 Clusters
37	5	5	4	3
40	3	3	3	1
42	2	2	2	2
43	5	5	4	3
44	4	4	2	2
45	2	2	2	2
46	4	4	2	2
47	5	5	4	3
48	1	1	1	1
49	2	2	2	2
50	4	4	2	2
51	3	3	3	1
52	1	1	1	1
53	1	1	1	1
54	3	3	3	1
55	1	1	1	1
57	1	1	1	1
58	4	4	2	2
59	2	2	2	2
60	4	4	2	2
61	1	1	1	1
62	4	4	2	2

NOTE: The icicle charts and dendrograms display more properly in the SPSS output.





FREQUENCIES VARIABLES=CLU6_2 CLU5_2 CLU4_2 CLU3_2
 /ORDER=ANALYSIS.

Frequencies

		Notes
Output Created		21-APR-2013 16:03:00
Comments		
Input	Data	E:\FranHW natcom2-2.sav
	Active Dataset	DataSet1
	File Label	CP05
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	477
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=CLU6_2 CLU5_2 CLU4_2 CLU3_2 /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02

[DataSet1] E:\FranHW\natcom2-2.sav

		Statistics			
		Ward Method CL6	Ward Method CL5	Ward Method CL4	Ward Method CL3
N	Valid	397	397	397	397
	Missing	80	80	80	80

Frequency Table

Ward Method CL6

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	103	21.6	25.9	25.9
	2	59	12.4	14.9	40.8
	3	51	10.7	12.8	53.7
Valid	4	113	23.7	28.5	82.1
	5	65	13.6	16.4	98.5
	6	6	1.3	1.5	100.0
	Total	397	83.2	100.0	
Missing	System	80	16.8		
Total		477	100.0		

Ward Method CL5

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	103	21.6	25.9	25.9
	2	59	12.4	14.9	40.8
	3	51	10.7	12.8	53.7
Valid	4	113	23.7	28.5	82.1
	5	71	14.9	17.9	100.0
	Total	397	83.2	100.0	
Missing	System	80	16.8		
Total		477	100.0		

Ward Method CL4

	Frequency	Percent	Valid Percent	Cumulative Percent
1	103	21.6	25.9	25.9
2	172	36.1	43.3	69.3
Valid 3	51	10.7	12.8	82.1
4	71	14.9	17.9	100.0
Total	397	83.2	100.0	
Missing System	80	16.8		
Total	477	100.0		

Ward Method CL3

	Frequency	Percent	Valid Percent	Cumulative Percent
1	154	32.3	38.8	38.8
Valid 2	172	36.1	43.3	82.1
3	71	14.9	17.9	100.0
Total	397	83.2	100.0	
Missing System	80	16.8		
Total	477	100.0		

```

RECODE Midwestgreat (1=0) (2=1) INTO MidwestGL1.
VARIABLE LABELS MidwestGL1 'MidwestGL1'.
EXECUTE.
DATASET ACTIVATE DataSet1.
SAVE OUTFILE='E:\FranHW\natcom2-2.sav'
/COMPRESSED.
RECODE age3grp (1 thru 2=0) (3 thru 4=1) INTO age2grpfinal.
VARIABLE LABELS age2grpfinal 'age2grpfinal'.
EXECUTE.
MEANS TABLES=MidwestGL1 femaleness whiteness incomerecode educatrecode
marriedness ZScpolknow Zpolact1 ZPolDiscNet ZPolEfficacy ZPolActivity2
ZCosmo Zq4 Zq5 age2grpfinal BY CLU3_2
/STATISTICS ANOVA.

```

Means

Notes	
Output Created	21-APR-2013 18:31:18
Comments	
	E:\FranHW
	atcom2-2.sav
	DataSet1
	CP05
Input	<none>
	<none>
	<none>
	N of Rows in Working Data
	File 477
	For each dependent variable in a table, user-defined missing values for the dependent and all grouping variables are treated as missing.
Missing Value Handling	Definition of Missing
	Cases used for each table have no missing values in any independent variable, and not all dependent variables have missing values.
	Cases Used
	MEANS
	TABLES=MidwestGL1
	femaleness whiteness
	incomerecode educatrecode
	marriedness ZScpolknow
Syntax	Zpolact1 ZPolDiscNet
	ZPolEfficacy ZPolActivity2
	ZCosmo Zq4 Zq5
	age2grpfinal BY CLU3_2
	/STATISTICS ANOVA.
Resources	Processor Time 00:00:00.03
	Elapsed Time 00:00:00.08

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
MidwestGL1 * Ward Method CL3	395	82.8%	82	17.2%	477	100.0%
Gender * Ward Method CL3	395	82.8%	82	17.2%	477	100.0%
Ethnicity * Ward Method CL3	391	82.0%	86	18.0%	477	100.0%
Income * Ward Method CL3	330	69.2%	147	30.8%	477	100.0%
Education * Ward Method CL3	392	82.2%	85	17.8%	477	100.0%
Married * Ward Method CL3	393	82.4%	84	17.6%	477	100.0%
Zscore(q79) Q79:Perceived pol. knowledge * Ward Method CL3	397	83.2%	80	16.8%	477	100.0%
Zscore(PolActivity1) COMPUTE PolActivity1 = q83 + q84 + q85 + q86 + q87 + q88 + q89 + q90 (COMPUTE) * Ward Method CL3	397	83.2%	80	16.8%	477	100.0%
Zscore: COMPUTE PolDiscNet = Zq24 + Zq25 + Zq80 + Zq81 + Zq82 (COMPUTE) * Ward Method CL3	397	83.2%	80	16.8%	477	100.0%
Zscore: COMPUTE PolEfficacy = Zq31 + Zq32 + Zq33 (COMPUTE) * Ward Method CL3	397	83.2%	80	16.8%	477	100.0%
Zscore: COMPUTE PolActivity2 = PolActivity1 + q91 + q92 (COMPUTE) * Ward Method CL3	397	83.2%	80	16.8%	477	100.0%

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Zscore: COMPUTE Cosmo = Zq97 + Zq98 (COMPUTE) * Ward Method CL3	397	83.2%	80	16.8%	477	100.0%
Zscore: Q4:Community QOL * Ward Method CL3	397	83.2%	80	16.8%	477	100.0%
Zscore: Q5:Neighborhood QOL * Ward Method CL3	397	83.2%	80	16.8%	477	100.0%
age2grpfinal * Ward Method CL3	394	82.6%	83	17.4%	477	100.0%

Report

Ward Method CL3	MidwestGL1	Gender	Ethnicity	Income	Education	Married
1 Mean	.47	.47	.82	1.88	2.18	.68
1 N	154	154	152	128	152	152
1 Std. Deviation	.501	.501	.383	.838	.603	.469
2 Mean	.60	.60	.76	1.43	1.67	.53
2 N	172	172	169	140	169	171
2 Std. Deviation	.492	.492	.426	.613	.634	.500
3 Mean	.51	.51	.63	1.32	1.62	.50
3 N	69	69	70	62	71	70
3 Std. Deviation	.504	.504	.487	.621	.663	.504
Total Mean	.53	.53	.76	1.58	1.86	.58
Total N	395	395	391	330	392	393
Total Std. Deviation	.499	.499	.426	.748	.677	.494

Report

Ward Method CL3	Zscore(q79) Q79:Perceived pol. knowledge	Zscore(PolActivity1) COMPUTE PolActivity1 = q83 + q84 + q85 + q86 + q87 + q88 + q89 + q90 (COMPUTE)	Zscore: COMPUTE PolDiscNet = Zq24 + Zq25 + Zq80 + Zq81 + Zq82 (COMPUTE)	Zscore: COMPUTE PolEfficacy = Zq31 + Zq32 + Zq33 (COMPUTE)

1	Mean	.6540057	.5534744	.6876086	-.6867245
	N	154	154	154	154
	Std. Deviation	.55525947	.91550075	.69147141	.76554936
2	Mean	-.5282721	-.5698196	-.6724879	.3815252
	N	172	172	172	172
	Std. Deviation	.97809859	.61247327	.80543481	.78985161
3	Mean	.0654380	.1351640	.2174096	.5176179
	N	71	71	71	71
	Std. Deviation	.86335560	.99636558	.83316356	1.03660303
Total	Mean	.0365244	-.0080032	.0142567	-.0085198
	N	397	397	397	397
	Std. Deviation	.97517749	.96159648	.98799644	.99013174

Report

Ward Method CL3		Zscore: COMPUTE PolActivity2 = PolActivity1 + q91 + q92 (COMPUTE)	Zscore: COMPUTE Cosmo = Zq97 + Zq98 (COMPUTE)	Zscore: Q4:Community QOL	Zscore: Q5:Neighborhood QOL
1	Mean	.5659477	.3022887	.3016817	.3891111
	N	154	154	154	154
	Std. Deviation	.89922709	.89050038	.63713526	.54617014
2	Mean	-.5753555	-.0603848	.2364692	.2458731
	N	172	172	172	172
	Std. Deviation	.62013990	.91743073	.67909107	.70720204
3	Mean	.1396602	-.2142416	-.9972617	-1.1989991
	N	71	71	71	71
	Std. Deviation	1.01370763	1.09415064	1.26753145	1.06655874
Total	Mean	-.0047590	.0527837	.0411237	.0430336
	N	397	397	397	397
	Std. Deviation	.96537391	.96125519	.93609802	.93452390

Report

Ward Method CL3		age2grpfinal
1	Mean	.54
	N	153
	Std. Deviation	.500
2	Mean	.48
	N	170
	Std. Deviation	.501
3	Mean	.37
	N	71
	Std. Deviation	.485
Total	Mean	.48
	N	394
	Std. Deviation	.500

ANOVA Table

			Sum of Squares	df	Mean Square
MidwestGL1 * Ward Method CL3	Between Groups	(Combined)	1.326	2	.663
	Within Groups		96.962	392	.247
	Total		98.289	394	
Gender * Ward Method CL3	Between Groups	(Combined)	1.326	2	.663
	Within Groups		96.962	392	.247
	Total		98.289	394	
Ethnicity * Ward Method CL3	Between Groups	(Combined)	1.800	2	.900
	Within Groups		69.079	388	.178
	Total		70.880	390	
Income * Ward Method CL3	Between Groups	(Combined)	19.048	2	9.524
	Within Groups		165.076	327	.505
	Total		184.124	329	
Education * Ward Method CL3	Between Groups	(Combined)	26.265	2	13.132
	Within Groups		153.018	389	.393
	Total		179.283	391	
Married * Ward Method CL3	Between Groups	(Combined)	2.285	2	1.143

	Within Groups		93.277	390	.239
	Total		95.562	392	
Zscore(q79) Q79:Perceived	Between Groups	(Combined)	113.644	2	56.822
pol. knowledge * Ward	Within Groups		262.940	394	.667
Method CL3	Total		376.585	396	
Zscore(PolActivity1)	Between Groups	(Combined)	104.295	2	52.147
COMPUTE PolActivity1 =	Within Groups		261.874	394	.665
q83 + q84 + q85 + q86 + q87					
+ q88 + q89 + q90					
(COMPUTE) * Ward Method	Total		366.168	396	
CL3					
Zscore: COMPUTE	Between Groups	(Combined)	153.873	2	76.936
PolDiscNet = Zq24 + Zq25 +	Within Groups		232.678	394	.591
Zq80 + Zq81 + Zq82					
(COMPUTE) * Ward Method	Total		386.550	396	
CL3					
Zscore: COMPUTE	Between Groups	(Combined)	116.656	2	58.328
PolEfficacy = Zq31 + Zq32 +					
Zq33 (COMPUTE) * Ward	Within Groups		271.567	394	.689
Method CL3					

ANOVA Table

			F	Sig.
	Between Groups	(Combined)	2.681	.070
MidwestGL1 * Ward Method CL3	Within Groups			
	Total			
	Between Groups	(Combined)	2.681	.070
Gender * Ward Method CL3	Within Groups			
	Total			
	Between Groups	(Combined)	5.056	.007
Ethnicity * Ward Method CL3	Within Groups			
	Total			
	Between Groups	(Combined)	18.866	.000
Income * Ward Method CL3	Within Groups			
	Total			
	Between Groups	(Combined)	33.385	.000
Education * Ward Method CL3	Within Groups			
	Total			
	Between Groups	(Combined)	4.778	.009
Married * Ward Method CL3	Within Groups			

	Total			
Zscore(q79) Q79:Perceived pol. knowledge * Ward Method CL3	Between Groups	(Combined)	85.144	.000
	Within Groups			
	Total			
Zscore(PolActivity1) COMPUTE PolActivity1 = q83 + q84 + q85 + q86 + q87 + q88 + q89 + q90 (COMPUTE) * Ward Method CL3	Between Groups	(Combined)	78.458	.000
	Within Groups			
	Total			
Zscore: COMPUTE PolDiscNet = Zq24 + Zq25 + Zq80 + Zq81 + Zq82 (COMPUTE) * Ward Method CL3	Between Groups	(Combined)	130.279	.000
	Within Groups			
	Total			
Zscore: COMPUTE PolEfficacy = Zq31 + Zq32 + Zq33 (COMPUTE) * Ward Method CL3	Between Groups	(Combined)	84.624	.000
	Within Groups			

ANOVA Table

			Sum of Squares	df	Mean Square
Zscore: COMPUTE PolEfficacy = Zq31 + Zq32 + Zq33 (COMPUTE) * Ward Method CL3	Total		388.223	396	
Zscore: COMPUTE PolActivity2 = PolActivity1 + q91 + q92 (COMPUTE) * Ward Method CL3	Between Groups	(Combined)	107.639	2	53.820
	Within Groups		261.412	394	.663
	Total		369.051	396	
Zscore: COMPUTE Cosmo = Zq97 + Zq98 (COMPUTE) * Ward Method CL3	Between Groups	(Combined)	16.852	2	8.426
	Within Groups		349.056	394	.886
	Total		365.909	396	
Zscore: Q4:Community QOL * Ward Method CL3	Between Groups	(Combined)	93.574	2	46.787
	Within Groups		253.433	394	.643
	Total		347.007	396	
Zscore: Q5:Neighborhood QOL * Ward Method CL3	Between Groups	(Combined)	135.049	2	67.525
	Within Groups		210.792	394	.535
	Total		345.841	396	
age2grpfinal * Ward Method CL3	Between Groups	(Combined)	1.401	2	.700
	Within Groups		96.937	391	.248
	Total		98.338	393	

ANOVA Table

			F	Sig.
Zscore: COMPUTE PolEfficacy = Zq31 + Zq32 + Zq33 (COMPUTE) * Ward Method CL3	Total			
Zscore: COMPUTE PolActivity2 = PolActivity1 + q91 + q92 (COMPUTE) * Ward Method CL3	Between Groups Within Groups Total	(Combined)	81.117	.000
Zscore: COMPUTE Cosmo = Zq97 + Zq98 (COMPUTE) * Ward Method CL3	Between Groups Within Groups Total	(Combined)	9.511	.000
Zscore: Q4:Community QOL * Ward Method CL3	Between Groups Within Groups Total	(Combined)	72.738	.000
Zscore: Q5:Neighborhood QOL * Ward Method CL3	Between Groups Within Groups Total	(Combined)	126.213	.000
age2grpfinal * Ward Method CL3	Between Groups Within Groups Total	(Combined)	2.825	.061

Measures of Association

	Eta	Eta Squared
MidwestGL1 * Ward Method CL3	.116	.013
Gender * Ward Method CL3	.116	.013
Ethnicity * Ward Method CL3	.159	.025
Income * Ward Method CL3	.322	.103
Education * Ward Method CL3	.383	.146
Married * Ward Method CL3	.155	.024
Zscore(q79) Q79:Perceived pol. knowledge * Ward Method CL3	.549	.302
Zscore(PolActivity1) COMPUTE PolActivity1 = q83 + q84 + q85 + q86 + q87 + q88 + q89 + q90 (COMPUTE) * Ward Method CL3	.534	.285
Zscore: COMPUTE PolDiscNet = Zq24 + Zq25 + Zq80 + Zq81 + Zq82 (COMPUTE) * Ward Method CL3	.631	.398
Zscore: COMPUTE PolEfficacy = Zq31 + Zq32 + Zq33 (COMPUTE) * Ward Method CL3	.548	.300
Zscore: COMPUTE PolActivity2 = PolActivity1 + q91 + q92 (COMPUTE) * Ward Method CL3	.540	.292
Zscore: COMPUTE Cosmo = Zq97 + Zq98 (COMPUTE) * Ward Method CL3	.215	.046

Measures of Association

	Eta	Eta Squared
Zscore: Q4:Community QOL * Ward Method CL3	.519	.270
Zscore: Q5:Neighborhood QOL * Ward Method CL3	.625	.390
age2grpfinal * Ward Method CL3	.119	.014

NOTE: The output below is an addendum. This analysis was done on the original variables for income and age.

Descriptive

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Median household income(Number)	342	19934.00	153632.00	44067.6725	17271.28279
AgeUnder5	342	2	14	6.68	1.551
5-9	342	1.10	12.90	7.2304	1.46562
10-14	342	1.00	11.50	7.3898	1.33013
15-19	342	2.70	16.50	7.0556	1.50470
20-24	342	.70	28.10	6.2310	2.96034
25-34	342	3.50	35.60	13.4471	3.64185
35-44	342	10.00	23.90	15.9863	2.06519
45-54	342	3.3	27.1	13.728	2.3944
55-59	342	.30	9.80	4.9567	1.20227
60-64	342	.10	9.60	4.0427	1.11326
65-74	342	.20	17.90	6.9377	2.46199
75-84	342	.10	18.00	4.7371	2.37157
85 and above	342	.00	6.10	1.6143	1.00762
Valid N (listwise)	342				

Statistics

Median household income(Number)

N	Valid	342
	Missing	135
Mean		44067.6725
Median		40318.0000
Mode		29886.00 ^a
Std. Deviation		17271.28279
Variance		298297209.271
Range		133698.00
Minimum		19934.00
Maximum		153632.00

a. Multiple modes exist. The smallest value is shown

Statistics

age recoded to midpt

N	Valid	433
	Missing	44
Mean		49.0600
Median		45.0000
Mode		45.00
Std. Deviation		15.56189
Variance		242.172
Range		52.00
Minimum		19.00
Maximum		71.00

age recoded to midpt

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	19.00	14	2.9	3.2
	25.00	49	10.3	14.5
	35.00	62	13.0	28.9
	45.00	100	21.0	52.0

	55.00	84	17.6	19.4	71.4
	65.00	57	11.9	13.2	84.5
	71.00	67	14.0	15.5	100.0
	Total	433	90.8	100.0	
Missing	System	44	9.2		
Total		477	100.0		

IV. Tabling Results

Table 1. Agglomeration Coefficient Analysis

Clusters	Agglomeration Last Step	Coeff. This step	Change
2	2945.333	2395.462	549.871
3	2395.462	2103.751	291.711
4	2103.751	1935.21	168.541
5	1935.210	1781.751	153.459
6	1781.751	1662.554	119.197

Table 2. Cluster Profiling

Cluster Analysis Table				Total	F	Sig.
Cluster Name	Politically Fueled	Unengaged	Stuck			
Variable N	154	172	71	397		
INTERNAL VARIABLES	GRAND MEAN					
Perceived Political Knowledge	0.654	-0.528	0.065	0.037	85.144	p ≤ .001
Political Efficacy	-0.687	0.382	0.517	-0.009	84.624	p ≤ .001
Political Discussion Network	-0.688	0.672	0.217	0.014	130.279	p ≤ .001
Quality of Life Community	0.302	0.236	-0.998	0.041	72.738	p ≤ .001
Quality of Life Neighborhood	0.389	0.246	-1.200	0.043	126.213	p ≤ .001
Cosmopolitaness	0.302	-0.060	-0.214	0.053	9.511	p ≤ .001
Political Activity 1	0.553	-0.570	0.135	-0.008	78.458	p ≤ .001
Political Activity 2	0.566	-0.575	0.140	-0.005	81.117	p ≤ .001
EXTERNAL VARIABLES						
Marriedness	0.680	0.530	0.500	0.580	4.778	0.009
Age	0.540	0.480	0.370	0.480	2.825	0.061
Gender	0.470	0.600	0.510	0.530	2.681	0.070
Education	2.180	1.670	1.620	1.860	33.385	0.000
Ethnicity	0.820	0.760	0.630	0.760	5.056	0.007
Income	1.880	1.430	1.320	1.580	18.866	0.000
Zip Code	0.470	0.600	0.510	0.530	2.681	0.070

Table 3. Optional Summary of Internal Variables.

Cluster	PA1	PA2	POL KNOW	POL DIS	POL EFF	QOL 4	QOL 5	COSMO
1	H	H	H	H	L	H	H	H
2	L	L	L	L	M	M	M	M
3	M	M	M	M	H	L	L	L

V. Write-up

The National Community Survey data set by Jeffres was chosen for cluster analysis using 397 cases from which eight (8) internal or independent variables were selected based on association with political activity and related political perceptions. As the individual variables were made up of disparate measures, all scores were standardized. The internal variables included:

1. Perceived Political Knowledge (single measure variable)
2. Political Efficacy (3-item scale)
3. Political Discussion Network (5-item scale)
4. Quality of Life Community (single measure variable)
5. Quality of Life Neighborhood (single measure variable)
6. Cosmopolitanness (2-item scale)
7. Political Activity 1 (8-item scale)
8. Political Activity 2 (3-item scale)

A hierarchical agglomerative cluster analysis was performed to discover the natural grouping of the participants. A three cluster solution was chosen using Ward's Method (with squared Euclidian distances). The choice of three clusters was supported by examination of changes in the agglomeration coefficients from the agglomeration table. Dendrogram and icicle plots were run to give a visual representation of the data clusters.

ANOVA analysis was conducted to examine the differences among the three clusters with regard to all eight internal variables. As expected, all either were significantly different among the three clusters. The three clusters have been named: "Politically Fueled", "Unengaged" and "Stuck," based on the levels of the internal variables for the three cluster groupings (see Table 3).

To further profile the three clusters, a complementary ANOVA analysis was conducted to test the significance of the differences among the three clusters against seven (7) demographic/external variables that included:

1. Marriedness recoded to 0=not married; 1=married.
2. Age recoded as 0=50 and under; 1= over 50.
3. Gender recoded as 0= male; 1=female.
4. Education recoded as 1=grade school; 2= college; 3=advanced degree.
5. Ethnicity recoded as 0=not white 1=white.
6. Income recoded as 1=50000 and below; 2=51000 to 100000; 3=101000 and above.
7. Zip Code recoded as 0=not Midwest/Great Lakes; 1=Midwest/Great Lakes.

Age and Income were recoded for purposes of data reduction and in order to obtain significant differences between the clusters. As 52% of the sample was 50 years old or older, age 50 seemed to be a natural break in the data. An annual household income of \$50,000 or less was reported by 73.4% of the individuals in our sample. According to the US Census, the median household income in 2006 was \$48,451; this gives some support to

the division of the data at the \$50,000 annual income point. Excerpts from frequency tables for both of these variables are attached to the end of the SPSS output.

All external variables were significantly different among the three clusters with the exception of Age, Gender, and Zip Code; these variables were all near significant.

By examining the external profiling variables, we determined that the "Politically Fueled" cluster was slightly more married, older, whiter, more educated, more male, less likely to live in the Midwest-Great Lakes area, with a slightly higher income than the mean. These individuals scored high on political activity, political knowledge, and quality of life in their community and neighborhood and rated high on the "cosmopolitan" scale. They scored low in political efficacy. We found these individuals to be highly politically informed, engaged, empowered and satisfied with their place in the world.

The "Unengaged" cluster consists of individuals that are slightly less married, average in age and whiteness, more female, less educated and have a lower than average income and are more likely to live in the Midwest-Great Lakes area. These individuals scored low in political activity, political knowledge, and political discussion. They are moderate in their sense of political empowerment, and quality of life and place in the world.

The "Stuck" cluster consists of individuals who are less married, younger than the average, more likely male, significantly less educated, less white, have the smallest income of all the clusters and are less likely to live in the Midwest-Great Lakes region. These individuals have a moderate score in political activity, political knowledge, and political discussion. They feel less empowered than the other two groups and score lowest on their perceived quality of life and place in the world. These individuals are not satisfied with their situation, but do not feel empowered to change it.