5/8/2016 Results: AHS2004.sas

### Factor Analysis Demographic, socio-economic, and environmental variables

#### The FACTOR Procedure

Input Data Type	Raw Data
Number of Records Read	201
Number of Records Used	201
N for Significance Tests	201

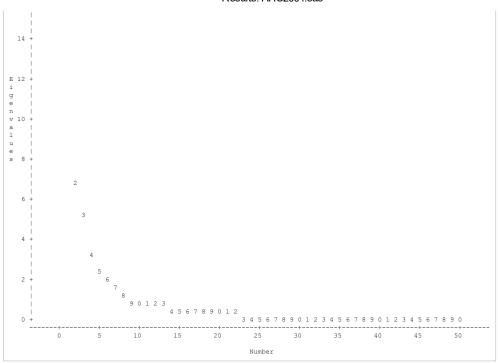
#### Factor Analysis Demographic, socio-economic, and environmental variables

## The FACTOR Procedure Initial Factor Method: Principal Components

Prior Communality Estimates: ONE

Eige	envalues of the	Correlation Ma	trix: Total = 50	Average = 1
	Eigenvalue	Difference	Proportion	Cumulative
1	19.0192289	12.2249901	0.3804	0.3804
2	6.7942388	1.5041213	0.1359	0.5163
3	5.2901176	2.0355669	0.1058	0.6221
4	3.2545506	0.8924588	0.0651	0.6872
5	2.3620918	0.4594657	0.0472	0.7344
6	1.9026262	0.4310535	0.0381	0.7725
7	1.4715727	0.2887334	0.0294	0.8019
8	1.1828392	0.2085059	0.0237	0.8255
9	0.9743333	0.1313969	0.0195	0.8450
10	0.8429365	0.0327261	0.0169	0.8619
11	0.8102103	0.0965617	0.0162	0.8781
12	0.7136486	0.0555200	0.0143	0.8924
13	0.6581287	0.0632018	0.0132	0.9055
14	0.5949268	0.1053256	0.0119	0.9174
15	0.4896012	0.0591162	0.0098	0.9272
16	0.4304850	0.0544475	0.0086	0.9358
17	0.3760375	0.0389295	0.0075	0.9434
18	0.3371080	0.0301967	0.0067	0.9501
19	0.3069114	0.0491439	0.0061	0.9562
20	0.2577675	0.0385684	0.0052	0.9614
21	0.2191991	0.0050842	0.0044	0.9658
22	0.2141149	0.0196028	0.0043	0.9701
23	0.1945121	0.0144914	0.0039	0.9739
24	0.1800208	0.0232527	0.0036	0.9775
25	0.1567680	0.0183521	0.0031	0.9807
26	0.1384159	0.0028557	0.0028	0.9834
27	0.1355602	0.0203664	0.0027	0.9862
28	0.1151938	0.0058464	0.0023	0.9885
29	0.1093473	0.0123279	0.0022	0.9906
30	0.0970195	0.0192901	0.0019	0.9926
31	0.0777293	0.0166228	0.0016	0.9941
32	0.0611065	0.0143565	0.0012	0.9954
33	0.0467500	0.0098249	0.0009	0.9963
34	0.0369250	0.0032271	0.0007	0.9970
35	0.0336979	0.0075634	0.0007	0.9977
36	0.0261345	0.0065042	0.0005	0.9982
37	0.0196303	0.0028131	0.0004	0.9986
38	0.0168172	0.0014028	0.0003	0.9990
39	0.0154145	0.0039595	0.0003	0.9993
40	0.0114549	0.0011014	0.0002	0.9995
41	0.0103535	0.0041761	0.0002	0.9997
42	0.0061774	0.0025720	0.0001	0.9998
43	0.0036054	0.0010127	0.0001	0.9999
44	0.0025926	0.0008116	0.0001	1.0000
45	0.0017810	0.0015091	0.0000	1.0000
46	0.0002719	0.0002325	0.0000	1.0000
47	0.0000394	0.0000341	0.0000	1.0000
48	0.0000053	0.0000044	0.0000	1.0000
49	0.0000010	0.0000010	0.0000	1.0000
50	0.0000000		0.0000	1.0000

8 factors will be retained by the NFACTOR criterion.



	Factor Pattern				T = -				
		Factor1	Factor2	Factor3	Factor4	Factor5	Factor6	Factor7	Factor
AGE45_54	Population, Ages 45-54 by ZIP Code	0.90610							
HSHD_2004	Households by ZIP Code	0.90378							
POP_2004	Population by ZIP Code	0.89781							
EDU_Coll	Population, adults who completed some college by ZIP Code	0.89585							
AGE55	Population, Ages 55 or above by ZIP Code	0.89557							
AGE15_44	Population, Ages 25-44 by ZIP Code	0.89093							
AGE15_24	Population, Ages 15-24 by ZIP Code	0.87921							
Owner_Dwl	Owner-Occupied Dwellings by ZIP Code	0.87195							
EDU_HS	Population, adults who completed high school by ZIP Code	0.87072							
EDU9_12	Population, adults who completed grades 9-12, no diploma by ZIP Code	0.86331							
HOUS1970_1979	Housing units, Built 1970 to 1979 by ZIP Code	0.81778							
EDU_Bach	Population, adults with bachelor's degree by ZIP Code	0.79798	-0.40074						
Renter_Dwl	Renter-Occupied Dwellings by ZIP Code	0.79264							
EDU_Prof	Population, adults with graduate or professional degree by ZIP Code	0.77619	-0.40451						
HOUS1980_1989	Housing units, Built 1980 to 1989 by ZIP Code	0.74982							
JAN_Atemp	January Ave Temp (deg. F) by ZIP Code	0.64397	0.44700	-0.46841					
HSHD_Food150	Households That Spend \$150 Or More In Food Stores Per Week by ZIP Code	0.64381		0.56386					
HSHD_Coup	Households That Use Cents-Off Coupons by ZIP Code	0.64321	0.43645	0.60493					
JAN_Htemp	January Ave High Temp (deg. F) by ZIP Code	0.64113	0.47326	-0.48443					
HSHD_Food101_124	Households That Spend \$101 to \$124 In Food Stores Per Week by ZIP Code	0.64106		0.54772					
JAN_Ltemp	January Ave Low Temp (deg. F) by ZIP Code	0.63763	0.41095	-0.44419					
POP_White	Population, White (Non-Hispanic) by ZIP Code	0.63484							
ANL_Ltemp	Annual Ave Low Temp (deg. F) by ZIP Code	0.63305	0.49996	-0.49273					
HSHD_Food125_149	Households That Spend \$125 to \$149 In Food Stores Per Week by ZIP Code	0.62928		0.56564					
ANL_Htemp	Annual Ave High Temp (deg. F) by ZIP Code	0.61369	0.55909	-0.51285					
HSHD_Food_81_100	Households That Spend \$81 to \$100 In Food Stores Per Week by ZIP Code	0.60222	0.44343	0.51660					
ANL_Atemp	Annual Ave Temp (deg. F) by ZIP Code	0.59526	0.48903	-0.46772					
Med_Cash_Rent	Median Cash Rent (2000) by ZIP Code	0.59044				0.49693			
HOUS1990_2000	Housing units, Built 1990 to March 2000 by ZIP Code	0.53204						-0.49555	
HSHD_Food61_70	Households That Spend \$61 to \$70 In Food Stores Per Week by ZIP Code	0.52745	0.42685	0.52194					
VEHI_HSHD	Ave Vehicles per Household by ZIP Code	0.45167							
ANL_Snow	Annual Snowfall (Inches) by ZIP Code	-0.67843							
JUL_Atemp	July Ave Temp (deg. F) by ZIP Code		0.55648	-0.50381					
JUL_Htemp	July Ave High Temp (deg. F) by ZIP Code		0.51545	-0.42452			0.40281		
HSHD_Food51_60	Households That Spend \$51 to \$60 In Food Stores Per Week by ZIP Code	0.42478	0.48460	0.47759					
HSHD_Food_71_80	Households That Spend \$71 to \$80 In Food Stores Per Week by ZIP Code	0.54133	0.48803	0.56231					
HSHD_Food31_40	Households That Spend \$31 to \$40 In Food Stores Per Week by ZIP Code		0.45995	0.49423					
HSHD_Food30	Households That Spend \$30 Or Less In Food Stores Per Week by ZIP Code	0.47473		0.49240					
JUL_Ltemp	July Ave Low Temp (deg. F) by ZIP Code		0.50054	-0.51318	0.41922				
WIND	Wind Index by ZIP Code				0.75033				
HAIL	Hail Index by ZIP Code				0.72655				
WEAT_Risk	Weather Risk by ZIP Code				0.67433				
TORNADO	Tornado Index by ZIP Code	0.45436	·		0.61428				
POP_Black	Population, Black (Non-Hispanic) by ZIP Code		·		0.55576				
AHI2004	Average Household Income by ZIP Code				2.230.0	0.75793			
	Population, Asian/Pacific Islander by ZIP Code					0.43810			

POP_Native	Population, Native American/Inuit/Aleut by ZIP Code								
ANL_Rain	Annual Rainfall (Inches) by ZIP Code						-0.61642		0.51398
HURRICANE	Hurricane Index by ZIP Code		0.40361		0.48466			-0.57833	
AHS2004	Average Household Size by ZIP Code								-0.56483
Values less than 0.4	/alues less than 0.4 are not printed.								

	Variance Explained by Each Factor									
Factor1	Factor1 Factor2 Factor3 Factor4 Factor5 Factor6 Factor7									
19.019229	6.794239	5.290118	3.254551	2.362092	1.902626	1.471573	1.182839			

HSHD_2004	POP_2004	AHS2004	AHI2004	AGE15_24	AGE15_44	AGE45_54	AGE55	POP_White	POP_Black	POP_Native	POP_Asia	Owner_Dwl	Med_Cash_Rent	Renter_Dwl	
0.99063014	0.99199754	0.49181205	0.74538081	0.96646602	0.98767482	0.98854012	0.95465550	0.70234885	0.54112660	0.33235075	0.37213032	0.92905670	0.77202733	0.89551824	0.9

#### Factor Analysis Demographic, socio-economic, and environmental variables

# The FACTOR Procedure Rotation Method: Varimax

	Orthogonal Transformation Matrix											
	1	2	3	4	5	6	7	8				
1	0.78180	0.42601	0.40729	0.18130	0.02800	0.07523	-0.03534	0.02919				
2	-0.56080	0.50664	0.57206	-0.18461	0.02707	0.20929	-0.14177	0.05345				
3	-0.05427	0.74172	-0.63872	-0.00225	0.03792	-0.07942	0.14079	-0.10661				
4	0.08816	-0.08348	-0.17555	-0.17481	0.78418	0.51908	-0.17994	0.08438				
5	-0.23580	-0.01022	0.03933	0.88288	0.13978	0.22991	0.29488	0.06256				
6	-0.04976	0.05777	-0.14702	0.29239	-0.01374	-0.25815	-0.78257	0.45589				
7	-0.07370	0.01521	0.20666	0.07857	0.58091	-0.70379	0.02321	-0.33489				
8	0.00826	0.03215	0.04703	-0.17701	0.15788	-0.24490	0.47597	0.80864				

		1							
DOD 0004	Development TR Oct.	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6	Factor7	Factor
POP_2004	Population by ZIP Code	0.96533							
HSHD_2004	Households by ZIP Code	0.96408							
AGE15_44	Population, Ages 25-44 by ZIP Code	0.96318							
AGE45_54	Population, Ages 45-54 by ZIP Code	0.95995							
AGE15_24	Population, Ages 15-24 by ZIP Code	0.94975							
EDU9_12	Population, adults who completed grades 9-12, no diploma by ZIP Code	0.94935							
AGE55	Population, Ages 55 or above by ZIP Code	0.93199							
EDU_HS	Population, adults who completed high school by ZIP Code	0.92426							
EDU_Coll Population, adults who completed some college by ZIP Code									
Owner_Dwl	Owner-Occupied Dwellings by ZIP Code	0.89596							
Renter_Dwl Renter-Occupied Dwellings by ZIP Code									
HOUS1970_1979	Housing units, Built 1970 to 1979 by ZIP Code	0.84485							
EDU_Bach	Population, adults with bachelor's degree by ZIP Code	0.76929			0.53715				
EDU_Prof	Population, adults with graduate or professional degree by ZIP Code	0.76240			0.52293				
HOUS1980_1989	Housing units, Built 1980 to 1989 by ZIP Code	0.75330							
HSHD_Coup	Households That Use Cents-Off Coupons by ZIP Code		0.95282						
HSHD_Food_71_80	Households That Spend \$71 to \$80 In Food Stores Per Week by ZIP Code		0.90987						
HSHD_Food101_124	Households That Spend \$101 to \$124 In Food Stores Per Week by ZIP Code		0.88639						
HSHD_Food150	Households That Spend \$150 Or More In Food Stores Per Week by ZIP Code		0.88382						
HSHD_Food125_149	Households That Spend \$125 to \$149 In Food Stores Per Week by ZIP Code		0.87922						
HSHD_Food_81_100	Households That Spend \$81 to \$100 In Food Stores Per Week by ZIP Code		0.87186						
HSHD_Food61_70	Households That Spend \$61 to \$70 In Food Stores Per Week by ZIP Code		0.83299						
HSHD_Food51_60	Households That Spend \$51 to \$60 In Food Stores Per Week by ZIP Code		0.77696						
HSHD_Food31_40	Households That Spend \$31 to \$40 In Food Stores Per Week by ZIP Code		0.76123						
HSHD_Food30	Households That Spend \$30 Or Less In Food Stores Per Week by ZIP Code		0.73304						
JAN_Htemp	January Ave High Temp (deg. F) by ZIP Code			0.93471					
ANL_Htemp	Annual Ave High Temp (deg. F) by ZIP Code			0.92861					
JAN_Atemp	January Ave Temp (deg. F) by ZIP Code			0.92716					
ANL_Ltemp	Annual Ave Low Temp (deg. F) by ZIP Code			0.91568					
JAN_Ltemp	January Ave Low Temp (deg. F) by ZIP Code			0.90475					
								•	
ANL_Atemp	Annual Ave Temp (deg. F) by ZIP Code			0.85752					
JUL_Atemp	July Ave Temp (deg. F) by ZIP Code			0.66420				-0.56091	
JUL_Htemp	July Ave High Temp (deg. F) by ZIP Code			0.63592				-0.60346	
VEHI_HSHD	Ave Vehicles per Household by ZIP Code			0.57894					
JUL_Ltemp	July Ave Low Temp (deg. F) by ZIP Code			0.56499			0.41591		
ANL_Snow	Annual Snowfall (Inches) by ZIP Code			-0.75692					
AHI2004	Average Household Income by ZIP Code				0.83801				
Med_Cash_Rent	Median Cash Rent (2000) by ZIP Code	0.46405			0.66114				
POP_White	Population, White (Non-Hispanic) by ZIP Code	0.56346			0.57104				
POP_Asia	Population, Asian/Pacific Islander by ZIP Code				0.55300				
WIND	Wind Index by ZIP Code					0.83581			
HAIL	Hail Index by ZIP Code					0.78964			
POP_Black	Population, Black (Non-Hispanic) by ZIP Code					0.68168			
TORNADO	Tornado Index by ZIP Code					0.52706	0.40746		
HURRICANE	Hurricane Index by ZIP Code						0.92233		

WEAT_Risk	Weather Risk by ZIP Code						0.88963		
ANL_Rain	Annual Rainfall (Inches) by ZIP Code							0.85401	
HOUS1990_2000	Housing units, Built 1990 to March 2000 by ZIP Code	0.52672							0.55239
POP_Native	Population, Native American/Inuit/Aleut by ZIP Code								
AHS2004	Average Household Size by ZIP Code								-0.58676
Values less than 0.4	Values less than 0.4 are not printed.								

Γ	Variance Explained by Each Factor									
Γ	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6	Factor7	Factor8		
Γ	13.946554	8.136885	7.747185	3.006227	2.601433	2.366996	2.009893	1.462093		

HS	HD_2004	POP_2004	AHS2004	AHI2004	AGE15_24	AGE15_44	AGE45_54	AGE55	POP_White	POP_Black	POP_Native	POP_Asia	Owner_Dwl	Med_Cash_Rent	Renter_Dwl	
0.9	9063014	0.99199754	0.49181205	0.74538081	0.96646602	0.98767482	0.98854012	0.95465550	0.70234885	0.54112660	0.33235075	0.37213032	0.92905670	0.77202733	0.89551824	0.9

#### Factor Analysis Demographic, socio-economic, and environmental variables

## The FACTOR Procedure Rotation Method: Varimax

#### Scoring Coefficients Estimated by Regression

	Squared Multiple Correlations of the Variables with Each Factor									
Factor1	Factor1 Factor2 Factor3 Factor4 Factor5 Factor6 Factor7 F									
1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000			

Standardized Scotting								
								Factor
Population by ZIP Code					0.00144			-0.0431
Households by ZIP Code					0.10023			-0.2501
Population, Ages 25-44 by ZIP Code								-0.0578
Population, Ages 45-54 by ZIP Code	0.08340	-0.01286	-0.01242	-0.03269	0.00122	-0.00895	-0.00299	-0.0194
Population, Ages 15-24 by ZIP Code	0.09183	-0.01830	-0.00704	-0.07786	0.00885	0.00903	0.00004	-0.0585
Population, adults who completed grades 9-12, no diploma by ZIP Code	0.09478	-0.01162	-0.00662	-0.09779	0.01868	-0.01635	0.00632	-0.0824
Population, Ages 55 or above by ZIP Code	0.07610	-0.00967	-0.00520	-0.01956	0.02076	-0.02600	0.01122	-0.0289
Population, adults who completed high school by ZIP Code	0.07665	-0.01780	-0.00439	-0.02013	0.03566	-0.02061	0.03017	0.0167
Population, adults who completed some college by ZIP Code	0.06612	-0.00881	-0.01461	0.02677	0.01271	-0.01862	0.00353	0.0489
Owner-Occupied Dwellings by ZIP Code	-0.01284	-0.00260	-0.03313	0.10310	-0.09723	0.07155	-0.01604	0.2618
Renter-Occupied Dwellings by ZIP Code	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0000
Housing units, Built 1970 to 1979 by ZIP Code	0.06301	-0.02006	-0.01333	0.03922	-0.04329	0.00061	-0.04718	0.0033
Population, adults with bachelor's degree by ZIP Code	0.03204	-0.00563	-0.03072	0.15918	-0.00194	-0.00111	-0.04435	0.0523
Population, adults with graduate or professional degree by ZIP Code	0.03415	-0.00991	-0.03791	0.15628	0.01276	0.02199	-0.05116	0.0555
Housing units, Built 1980 to 1989 by ZIP Code	0.06702	-0.01039	-0.03608	-0.01336	-0.12892	0.06117	-0.00224	0.2568
5		0.13540				-0.01768		0.0068
								0.0664
								-0.0311
								-0.0063
								-0.0511
								-0.0174
								0.0172
								-0.0209
·								0.0752
								0.1300
								-0.0304
								-0.0040
								-0.0324
								0.0132
January Ave Low Temp (deg. F) by ZIP Code								-0.0315
Annual Ave Temp (deg. F) by ZIP Code	-0.02104	-0.01313	0.12544	0.02013	-0.01432	-0.01258	-0.02470	-0.0316
July Ave Temp (deg. F) by ZIP Code	-0.00919	-0.01828	0.06444	-0.03686	0.02707	0.02606	-0.22717	0.0758
July Ave High Temp (deg. F) by ZIP Code	-0.00814	-0.00426	0.06559	-0.03357	0.01528	-0.04657	-0.26646	0.0231
Ave Vehicles per Household by ZIP Code	-0.05039	-0.00060	0.08430	0.17398	0.04912	-0.10126	-0.18057	-0.0896
July Ave Low Temp (deg. F) by ZIP Code	-0.00837	-0.03478	0.04925	-0.03477	0.03915	0.12501	-0.12334	0.1357
Annual Snowfall (Inches) by ZIP Code	0.00219	-0.00271	-0.11847	0.02329	0.03188	0.03156	-0.06716	0.0739
Average Household Income by ZIP Code	-0.05670	-0.01028	0.00537	0.33270	0.00659	0.02051	0.03345	-0.0327
Median Cash Rent (2000) by ZIP Code	-0.01319	0.00210	-0.01185	0.25008	-0.00246	0.06294	-0.04602	-0.2172
Population, White (Non-Hispanic) by ZIP Code	0.00901	0.00133	-0.04072	0.19488	0.00666	0.03853	-0.06942	0.0506
Population, Asian/Pacific Islander by ZIP Code	-0.02960	-0.01973	0.01516	0.21227	0.01634	-0.04470	-0.01766	0.0556
Wind Index by ZIP Code	-0.02915	-0.00153	0.00639	0.08179	0.33909	-0.03312	0.02416	0.0478
•	-0.01207	-0.00163	0.00108	-0.00515	0.32696	-0.08685	-0.03940	0.0598
								0.0102
								-0.2073
·								-0.0051
								-0.0746
								0.2146
								0.2146
Flouring units, built 1990 to March 2000 by ZIP Code					0.06078	-0.12238		0.3878
Population, Native American/Inuit/Aleut by ZIP Code	0.01392	-0.01086	-0.01698	-0.08352			-0.10028	
	Population by ZIP Code Households by ZIP Code Population, Ages 25-44 by ZIP Code Population, Ages 45-54 by ZIP Code Population, Ages 45-54 by ZIP Code Population, Ages 15-24 by ZIP Code Population, Ages 55 or above by ZIP Code Population, adults who completed grades 9-12, no diploma by ZIP Code Population, Ages 55 or above by ZIP Code Population, adults who completed high school by ZIP Code Population, adults who completed some college by ZIP Code Population, adults who completed some college by ZIP Code Renter-Occupied Dwellings by ZIP Code Housing units, Built 1970 to 1979 by ZIP Code Population, adults with bachelor's degree by ZIP Code Population, adults with graduate or professional degree by ZIP Code Housing units, Built 1980 to 1989 by ZIP Code Households That Use Cents-Off Coupons by ZIP Code Households That Spend \$11 to \$124 In Food Stores Per Week by ZIP Code Households That Spend \$150 Or More In Food Stores Per Week by ZIP Code Households That Spend \$150 Or More In Food Stores Per Week by ZIP Code Households That Spend \$150 Or More In Food Stores Per Week by ZIP Code Households That Spend \$15 to \$149 In Food Stores Per Week by ZIP Code Households That Spend \$15 to \$60 In Food Stores Per Week by ZIP Code Households That Spend \$51 to \$60 In Food Stores Per Week by ZIP Code Households That Spend \$31 to \$40 In Food Stores Per Week by ZIP Code Households That Spend \$30 Or Less In Food Stores Per Week by ZIP Code Households That Spend \$30 Or Less In Food Stores Per Week by ZIP Code January Ave High Temp (deg. F) by ZIP Code Annual Ave High Temp (deg. F) by ZIP Code Annual Ave Low Temp (deg. F) by ZIP Code January Ave Temp (deg. F) by ZIP Code Annual Snowfall (Inches) by ZIP Code Ave Vehicles per Household by ZIP Code Ave Vehicles Ave Temp (deg. F) by ZIP Code Ave Vehicles Average Household Income by ZIP Code Average Househol	Pactor	Population by ZIP Code	Population by ZIP Code	Population yZIP Code	Population by ZIP Code	Population by ZIP Code         Factor         Factor	Population by ZIP Code