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the National Bureau of Economic Research

Volume Title: City Expenditures in the United States

Volume Author/Editor: Harvey E. Brazer

Volume Publisher: NBER

Volume ISBN: 0-87014-380-8

Volume URL: <http://www.nber.org/books/braz59-1>

Publication Date: 1959

Chapter Title: Appendix C: Correlation between the Independent Variables  
and between the Expenditure Categories and the Independent Variables

Chapter Author: Harvey E. Brazer

Chapter URL: <http://www.nber.org/chapters/c9206>

Chapter pages in book: (p. 76 - 81)

## APPENDIX C

### CORRELATION BETWEEN THE INDEPENDENT VARIABLES AND BETWEEN THE EXPENDITURE CATEGORIES AND THE INDEPENDENT VARIABLES

TABLE C-1

Coefficients of Simple Correlation, Selected Independent Variables and  
Expenditure Categories, 462 Cities

<i>Independent Variable or Expenditure Category</i>	<i>Population in 1950</i>	<i>Density of Population in 1950</i>	<i>Rate of Growth of Population 1940-1950</i>	<i>Median Family Income in 1949</i>	<i>Employment per 100 of Population in Manu- facturing (1947), Trade and Services (1948)</i>	<i>Intergovern- mental Rev- enue per Capita, 1951</i>
Density	0.267					
Rate of growth	-0.054	-0.216				
Income	0.025	0.118	0.007			
Employment	0.016	0.131	-0.395			
Intergovern- mental revenue	0.141	0.084	-0.180	0.028		
Total general operating	0.144	0.235	-0.236	0.063	0.151	
Common functions	0.135	0.216	-0.148	0.064	0.160	0.732
Police	0.239	0.412	-0.101	0.239	0.168	0.416
Fire	0.042	0.239	-0.208	0.211	0.198	0.234
Highways	-0.063	-0.262	-0.050	0.178	0.183	0.451
Recreation	0.059	0.029	-0.010	0.162	0.022	0.224
General control	0.103	0.121	-0.038	0.150	-0.028	0.199
Sanitation	0.091	0.184	-0.088	0.123	0.079	0.280
				0.169	0.110	0.222

TABLE C-2

Coefficients of Simple Correlation, Selected Independent Variables and Expenditure Categories, 35 California Cities

<i>Independent Variable or Expenditure Category</i>	<i>Population in 1950</i>	<i>Density of Population in 1950</i>	<i>Rate of Growth of Population 1940-1950</i>	<i>Median Family Income in 1949</i>	<i>Employment per 100 of Population in Manufacturing (1947), Trade and Services (1948)</i>	<i>Intergovernmental Revenue per Capita, 1951</i>
Density	0.158					
Rate of growth	-0.141	-0.041				
Income	-0.141	0.123	-0.107			
Employment	0.139	0.295	-0.381	0.268		
Intergovernmental revenue	0.319	0.605	-0.081	-0.163	0.139	
Total general operating	0.219	0.259	-0.466	0.222	0.466	0.505
Common functions	0.121	0.019	-0.505	0.300	0.464	0.210
Police	0.317	0.124	-0.423	0.173	0.585	0.239
Fire	0.111	0.156	-0.393	0.185	0.398	0.360
Highways	-0.234	-0.523	-0.260	0.023	-0.042	-0.264
Recreation	0.058	0.023	-0.328	0.313	0.316	0.090
General control	0.065	0.303	-0.263	0.093	0.160	0.511
Sanitation	-0.055	-0.153	-0.351	0.473	0.268	-0.302

TABLE C-3

Coefficients of Simple Correlation, Selected Independent Variables and Expenditure Categories, 30 Massachusetts Cities

<i>Independent Variable or Expenditure Category</i>	<i>Population in 1950</i>	<i>Density of Population in 1950</i>	<i>Rate of Growth of Population 1940-1950</i>	<i>Median Family Income in 1949</i>	<i>Employment per 100 of Population in Manufacturing (1947), Trade and Services (1948)</i>	<i>Intergovernmental Revenue per Capita, 1951</i>
Density	0.344					
Rate of growth	-0.110	-0.290				
Income	-0.076	-0.004	0.460			
Employment	0.147	-0.086	-0.240	-0.490		
Intergovernmental revenue	0.369	0.248	-0.490	-0.334	0.307	
Total general operating	0.616	0.289	-0.216	0.164	-0.118	0.372
Common functions	0.432	0.145	0.120	0.447	-0.252	-0.102
Police	0.783	0.465	-0.203	0.005	0.071	0.197
Fire	0.472	0.330	-0.304	0.032	-0.022	0.102
Highways	-0.178	-0.418	0.408	0.348	-0.285	-0.494
Recreation	0.378	0.421	-0.065	0.561	-0.151	0.088
General control	0.456	0.127	0.153	-0.008	-0.322	-0.193
Sanitation	0.194	0.092	0.194	0.602	-0.238	-0.010

TABLE C-4

Coefficients of Simple Correlation, Selected Independent Variables and Expenditure Categories, 32 Ohio Cities

<i>Independent Variable or Expenditure Category</i>	<i>Population in 1950</i>	<i>Density of Population in 1950</i>	<i>Rate of Growth of Population 1940-1950</i>	<i>Median Family Income in 1949</i>	<i>Employment per 100 of Population in Manufacturing (1947), Trade and Services (1948)</i>	<i>Intergovernmental Revenue per Capita, 1951</i>
Density	0.443					
Rate of growth	-0.118	-0.306				
Income	-0.123	0.010	0.198			
Employment	0.094	-0.164	0.179	-0.552		
Intergovernmental revenue	0.647	0.095	-0.113	-0.116	0.304	
Total general operating	0.611	0.303	-0.163	0.245	-0.103	0.617
Common functions	0.410	0.239	0.057	0.678	-0.238	0.262
Police	0.562	0.329	0.400	0.385	0.007	0.374
Fire	0.223	-0.041	0.003	0.694	-0.208	0.204
Highways	-0.127	-0.245	0.083	0.432	0.000	0.018
Recreation	0.452	0.230	-0.183	0.433	-0.300	0.325
General control	0.112	0.145	-0.091	0.369	-0.200	0.044
Sanitation	0.358	0.430	-0.043	0.661	-0.348	0.167

TABLE C-5

Coefficients of Simple Correlation, Selected Independent Variables and Expenditure Categories, 40 Large Cities and Their Overlying Units of Local Government

<i>Independent Variable or Expenditure Category</i>	<i>Population in 1950</i>	<i>Density of Population in 1950</i>	<i>Rate of Growth of Population 1940-1950</i>	<i>Ratio of City Population to Metropolitan Area Population in 1950</i>	<i>Median Family Income in 1949</i>
Density	0.559				
Rate of growth	-0.199	-0.603			
Ratio city to met. area pop.	0.059	-0.426	0.225		
Income	0.157	0.185	-0.115	-0.156	
Employment	0.021	0.287	-0.724	0.071	0.152
Av. daily att.	-0.226	-0.604	0.614	0.050	-0.142
State direct exp. on welfare	-0.098	-0.287	0.075	0.321	-0.267
Intergovernmental revenue	0.074	-0.113	0.299	-0.093	0.419
Intergovernmental revenue for ed.	-0.014	-0.409	0.667	0.017	-0.151
Intergovernmental rev. other than ed.	0.098	0.064	0.035	-0.122	0.437
Total general operating	0.154	0.374	-0.115	-0.582	0.342
Common functions	0.085	0.276	-0.138	-0.466	0.383
Education	-0.029	-0.058	0.113	-0.320	0.317
Police	0.242	0.680	-0.379	-0.617	0.278
Fire	-0.021	0.461	-0.233	-0.611	0.156
Highways	-0.093	-0.322	0.026	0.183	0.120
Recreation	0.126	0.221	0.011	-0.375	0.415
Sanitation	0.191	0.359	-0.312	0.067	0.055
Welfare	0.119	0.114	0.060	-0.333	0.342

<i>Employment per 100 of Population in Manufacturing (1947), Trade and Services (1948)</i>	<i>Students in Average Daily Attendance per 1,000 of 1950 Population</i>	<i>State Direct Expenditures on Welfare per Capita, 1953</i>	<i>Intergovernmental Revenue per Capita, 1953</i>	<i>Intergovernmental Revenue per Capita, for Education, 1953</i>	<i>Intergovernmental Revenue per Capita, for Other Than Education, 1953</i>
-0.343					
-0.049	n.c.				
-0.262	0.239	-0.392			
-0.549	0.445	n.c.	n.c.		
-0.049	n.c.	-0.484	n.c.	n.c.	
-0.007	n.c.	n.c.	0.639	n.c.	0.706
0.167	n.c.	n.c.	0.502	n.c.	0.524
-0.009	0.359	n.c.	0.464	0.361	n.c.
0.123	n.c.	n.c.	0.216	n.c.	0.324
0.024	n.c.	n.c.	0.219	n.c.	0.327
0.262	n.c.	n.c.	0.253	n.c.	0.233
-0.052	n.c.	n.c.	0.504	n.c.	0.474
0.404	n.c.	n.c.	0.046	n.c.	0.173
-0.128	n.c.	-0.653	0.794	n.c.	0.846

n.c. = not computed.