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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 D: Components of Variation in Mean Expenditures
per capita of 462 Cities Grouped by Type of City, 1951

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

Chapter pages in book: (p. 82)

APPENDIX D

COMPONENTS OF VARIATION IN MEAN EXPENDITURES PER CAPITA OF 462 CITIES GROUPED BY TYPE OF CITY, 1951

TABLE D-1

Components of Variation in Mean Expenditures per Capita,
462 Cities Grouped by Type, 1951

<i>Expenditure Category</i>	<i>Sums of Squares of Deviations from the Mean</i>		<i>Variance</i>		<i>F Value^e (F .99 = 2.8) (5)</i>
	<i>Between^a Groups (1)</i>	<i>Within^b Groups (2)</i>	<i>Between^c Groups (3)</i>	<i>Within^d Groups (4)</i>	
Total general					
operating	21,645	347,547	3,607.49	763.84	4.7
Common functions	7,117	33,972	1,186.13	74.66	15.9
Police	587	2,066	97.87	4.54	21.6
Fire	223	2,285	37.22	5.02	7.4
Highways	232	2,004	38.70	4.40	8.8
Recreation	310	998	51.63	2.19	23.6
General control	119	1,292	19.89	2.84	7.0
Sanitation	262	2,322	43.69	5.10	8.6

^aSum of the squared deviations of the group means from the mean for 462 cities, weighted by the number of cities in each group.

^bSum of the sums of the squared deviations of the per capita expenditures for each city from the mean.

^cColumn 1 divided by 6, the number of degrees of freedom between groups.

^dColumn 2 divided by 455, the number of degrees of freedom within groups.

^eF is the ratio of variance between groups to variance within groups.

Note: Additional tables are available in mimeographed form and may be requested from the author or from the National Bureau. These are:

TABLE E-1. Differences between the Observed and Computed Values of per Capita Expenditures for 462 Cities, 1951.

TABLE E-2. Differences between the Observed and Computed Values of per Capita Expenditures for 40 Large Cities and Their Overlying Units of Local Government, 1953.