The Growth of Local Government in the United States from 1820 to 1870

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As the United States became more urbanized in the nineteenth century, local-government expenditures increased as local governments expanded their services in response to their growing populations. Expenditures at all levels of government increased substantially in the nineteenth century, but local governments grew more than either the states or the federal government. Total local-government expenditures increased along with the growing urban population, but expenditures per urban resident also increased substantially. The major expansion in local-government expenditures began in the 1830s. This study examines the period of transition to local-government growth from 1820 to 1870.[1]

LOCAL-GOVERNMENT EXPENDITURE DATA

The data on local-government expenditures come from an Inter-university Consortium for Political and Social Research (ICPSR) database developed by Richard Sylla, John Legler, and John Wallis.[2] It includes both city- and county-government expenditures, but is much more comprehensive in its coverage of cities than counties. Table 1 gives some idea of the comprehensiveness of the data. The total population of all counties and cities included in the database (found by summing census figures for those areas), and the populations in the database as a percentage of the total U.S. population are shown in Table 1. County population is shown as a percentage of total U.S. population, under the assumption that everybody in the United States lives in a county, and city population is shown as a percentage of the total U.S. urban population as given in the *Historical Statistics*.[3] As Table 1 shows, only a small percentage of the U.S. population is in counties for which the database provides data, but the city data include a much greater proportion of the total U.S. urban population.

To estimate total local-government expenditures from the sample, linear regressions were run to find the relationship between the population of cities and counties and their per capita expenditures. This relationship was then used to extrapolate expenditures from the sample to the total U.S. population. Ideally, one would like to control for factors other than population differences, but the sample sizes were small enough to preclude adding any substantial number of other independent variables. The "Observations" column in Table 2 shows that the empirical results are based on a small number of observations; and Table 1 shows that whereas these observations represent a substantial portion of city dwellers throughout the period, the same is not true for counties.

The remainder of Table 2 shows the results of four sets of regressions run on the data; two sets for the city data and two identical sets run on the county data. The first set, under

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[1] See Davis and Legler, "Government"; Legler, Sylla, and Wallis, "U.S. City Finances"; and Wallis, "American Government Finance" for earlier studies on this subject. Those studies looked at local-government expenditures only back to 1880, 1850, and 1840 respectively. The first two used less comprehensive data than the present note, and Wallis ("American Government Finance") gives summary data on local expenditures without discussing how they were calculated.

[2] Sylla et al., *State and Local Government*.

[3] The assumption that everyone lives in a county is an approximation, but is not exactly true. For example, in Virginia, county boundaries exclude incorporated cities, so people living in Virginia cities do not live in counties.

TABLE 1
PERCENTAGE OF POPULATION IN THE ICPSR DATABASE

Year	County Population	County as Percentage of United States	City Population	City as Percentage of Urban
1820	315,247	3.28	142,590	21.2
1830	330,859	2.58	369,109	33.6
1840	14,789	0.09	591,547	32.6
1850	207,473	0.90	1,754,963	50.2
1860	1,106,015	3.55	2,293,685	37.3
1870	607,216	1.60	4,819,586	49.3

Source: U.S. Department of Commerce, *Historical Statistics*.

the "Per Capita Linear" and "City" headings, is a regression using per capita city-government expenditures as the dependent variable and city population as the independent variable. The 1820 result, using only four observations, shows a significant and positive relationship, but none of the other years shows a statistically significant relationship between the variables. From this, one can conclude that in general there is not a statistically significant relationship between city size (measured by population) and per capita city expenditures. Even though the relationship is significant in 1820, one might discount it because of the small sample size, and because even random numbers will generate statistically significant coefficients (at the 0.05 level) 5 percent of the time.

In the right section of Table 2, the dependent variable is the log of total expenditures in a city and the independent variable is the log of city population. The coefficients are all close to one (usually within one standard deviation, and except for 1820 always within two standard deviations). This indicates that a 1 percent increase in city population is associated with a 1 percent increase in total city expenditures. The results shown on the left side of Table 2 indicate that per capita city-government expenditures are not correlated with city population, and the results shown on the right side of the Table 2 indicate that city-government expenditures increase in proportion to city population.

The bottom section of Table 2 repeats the exercise for counties, with similar results. The regression of population on per capita expenditures shows that in none of the years was there a statistically significant relationship between the variables. However, the log-linear regressions again show that the level of total expenditures is roughly proportional to population, with the coefficients on all of the log-linear regressions being close to one. Except for 1840 all have *t*-statistics in excess of 2.5, and the low *t*-statistic in 1840 can be attributed to the fact that there were only three counties in the database for that year. Based on this data, both city and county government expenditures appear to be roughly proportional to population. This greatly eases the extrapolation of these data to the entire United States because it means that the per capita levels of expenditures in the dataset can be multiplied by population, with no further adjustment, to produce national estimates.[4]

THE GROWTH IN LOCAL-GOVERNMENT EXPENDITURES

Because per capita government expenditures across both cities and counties appear to be roughly proportional to population, and because expenditures do not appear to systematically vary by city or county, per capita city- and county-government expenditures can be estimated by taking the average per capita level of expenditures across the cities and coun-

[4] To further check for systematic relationships in the data, fixed-effects models were run for both cities and counties using pooled datasets for both cities and counties. In the city regressions, only two out of 73 city coefficients were significant at the 5 percent level; and in the county regressions, none of the 50 county coefficients was significant, showing that there are not systematic differences associated with different cities and counties.

TABLE 2
REGRESSION RESULTS RELATING EXPENDITURES TO POPULATION

		Per Capita Linear		Log-Linear	
Year	Observations	Coefficient	*t*-Statistic	Coefficient	*t*-Statistic
		City			
1820	4	3.54E-05	3.40	1.40	17.94
1830	7	2.01E-06	0.16	1.12	5.85
1840	14	4.40E-06	0.54	1.14	11.26
1850	27	6.29E-07	0.04	1.06	10.93
1860	35	3.77E-06	0.34	1.09	12.92
1870	64	1.76E-05	1.30	1.04	11.76
		County			
1820	10	1.58E-07	0.07	0.84	2.53
1830	10	8.89E-07	0.60	0.95	4.11
1840	3	1.75E-05	0.19	1.11	1.27
1850	5	7.24E-07	0.41	1.13	6.33
1860	18	1.71E-06	1.21	1.16	12.94
1870	22	3.42E-06	0.59	1.02	7.88

Note: See the text for a description of the regressions.

ties in the dataset. Doing so yields the data in Table 3. On the left side of Table 3 the estimates are presented in nominal form, and on the right side they are presented in constant 1914 dollars.[5] Looking first at the city data, per capita expenditures show a consistent increase over the 50-year period, with bigger increases in the 1840s and 1860s. After adjusting for inflation, city expenditures per capita were about nine times greater in 1870 than they were in 1820, and in nominal terms were about eight times greater. County expenditures show a similar trend. Adjusted for inflation, county expenditures per capita were nearly ten times higher in 1870 than in 1820, and their growth may have been smoother than that of city expenditures. Table 3 shows a massive increase in county expenditures per capita from 1830 to 1840, but a glance back at Table 2 shows that there were only three counties in the 1840 sample, and there is good reason to be more skeptical of the 1840 county estimates for expenditures than the others.[6]

If one is interested in total local-government expenditures, there is less reason to be concerned with the county data because county expenditures are small relative to city expenditures. County expenditures per person are only 5.4 percent as large as city expenditures per person in 1870, and 4.8 percent as large as city expenditures in 1820. The balance does not tilt quite so heavily toward city expenditures if one looks at total city and county expenditures in the United States. The data in Table 3 are in expenditures per city resident for city expenditures and per county resident for county expenditures. Because almost all residents live in a county but many do not live in cities, total county expenditures would be per capita county expenditures times the U.S. population, whereas city expenditures would

[5] Price-level data are from U.S. Department of Commerce, *Historical Statistics*, vol. 2, p. 210.

[6] Two of the three 1840 counties may have had extraordinarily high levels of expenditures. Only one of the counties, DeWitt in Illinois, is represented in any one of the other decades in the dataset, and in 1840 DeWitt spent $0.29 per capita, which would be in line with a smooth increase in expenditures from 1830 to 1850. The other two counties were Lucas, Ohio, which spent $0.84 per capita, and Scott, Iowa, which spent $0.99 per capita. Because neither Lucas nor Scott appear in any other years in the database, it is not possible to see if they might be, in general, outliers. Although this method of computation produces an estimate of $0.75 per capita, it is likely that the DeWitt level of $0.29 per capita is a better estimate of 1840 county expenditures, and is more consistent with a trend of gradual growth.

TABLE 3
PER CAPITA LOCAL-GOVERNMENT EXPENDITURES

	Nominal Dollars		Constant 1914 Dollars	
Year	City	County	City	County
1820	3.35	0.16	2.40	0.12
1830	3.23	0.18	3.04	0.17
1840	4.32	0.75	4.33	0.75
1850	8.56	0.44	10.30	0.53
1860	11.46	0.73	12.78	0.81
1870	27.00	1.47	21.39	1.16

Note: See the text for the calculation of these figures.

be per capita city expenditures times the urban population. Calculated this way, total county expenditures in the United States were 21 percent as large as city expenditures in 1870, and were 69 percent as large in 1820, when a smaller fraction of the population lived in cities. The data show that cities consistently have spent much more per resident than counties, and that even when taking account of the fact that most Americans did not live in urban areas during this period, total city expenditures were still much larger than total county expenditures.

LOCAL-GOVERNMENT EXPENDITURES AS A SHARE OF TOTAL GOVERNMENT

To place local-government expenditures in context, Table 4 compares federal, state, and local expenditures during the period. The total for each year is the sum of the three remaining columns. Federal-government expenditures were taken from the *Historical Statistics of the United States* and converted to per capita terms. State-government expenditures are from the work of Lance Davis and Legler.[7] Local-government expenditures were calculated from the data in Table 3. First, per capita city expenditures were multiplied by the total urban population in the United States to estimate total U.S. city expenditures. Then per capita county expenditures were multiplied by the total U.S. population to estimate total U.S. county expenditures. The sum of city and county expenditures was then defined as total local-government expenditures for that year, and this total was divided by the U.S. population to show per capita local-government expenditures in Table 4.

Table 4 allows a comparison of local-government expenditures with federal- and state-government expenditures over this half-century. As Table 4 shows, there was substantial growth in expenditures at all levels of government, but local-government expenditures grew much more rapidly than expenditures at either of the other levels. Over the 50-year period, federal-government expenditures (adjusted for inflation) were 5.27 times as large in 1870 as in 1820, state-government expenditures were 3.94 times as large, and local-government expenditures were 23.75 times as large. This growth of local government in comparison to the other levels reflects, in part, the substantial increases in city expenditures per resident; but the substantial increase in the share of the U.S. population living in urban areas had an even larger impact.[8] The bottom three rows of Table 4 add federal-, state-, and local-government expenditures for 1902, 1913, and 1922, as reported in the *Historical Statistics,* and adjusted to 1914 dollars using the consumer price index reported in the *Historical*

[7] Davis and Legler ("Government") report state government by region. The figure given in Table 5 was calculated by taking a weighted average of the regional state expenditure figures in that article, where the regional expenditures were weighted by the state populations in each region as reported in the census.

[8] Urban population was only 5.7 percent of the total population in 1820, and had grown to 25.7 percent by 1870.

TABLE 4
FEDERAL-, STATE-, AND LOCAL-GOVERNMENT EXPENDITURES: 1820–1870

Year	Total	Federal		State		Local	
			Per Capita Current Dollars				
1820	2.93	1.79		0.75		0.40	
1830	3.26	1.67		1.14		0.45	
1840	4.51	1.64		1.66		1.21	
1850	5.01	1.84		1.43		1.74	
1860	6.73	2.19		1.55		2.99	
1870	19.59	8.51		2.69		8.40	
			Per Capita Constant 1914 Dollars				
1820	2.10	1.28	(61.0)	0.54	(25.5)	0.28	(13.5)
1830	3.07	1.57	(51.1)	1.07	(34.9)	0.43	(13.9)
1840	4.53	1.65	(36.5)	1.67	(36.8)	1.21	(26.7)
1850	6.03	2.21	(36.7)	1.72	(28.6)	2.09	(34.7)
1860	7.50	2.44	(32.5)	1.73	(23.1)	3.33	(44.4)
1870	15.52	6.74	(43.4)	2.13	(13.7)	6.65	(42.9)
1902	23.87	7.10	(29.7)	2.75	(11.5)	12.11	(58.8)
1913	31.92	7.45	(23.3)	4.04	(12.7)	20.42	(64.0)
1922	50.42	17.92	(35.5)	7.61	(15.1)	24.88	(49.4)

Note: Numbers in parentheses show federal, state, and local expenditures as a percentage of total government expenditures.
Sources: Federal expenditures, *Historical Statistics of the United States*; State expenditures were calculated from Davis and Legler, "Government"; Local expenditures were calculated from Table 4. All data for 1902, 1913, and 1922 are from U.S. Bureau of the Census, *Historical Statistics.*

Statistics. Those figures show that, whereas federal-government expenditures barely increased in the 43 years from 1870 to 1913, local-government expenditures more than tripled, and that the rapid growth of local-government expenditures, when compared to state and federal expenditures, came to an end with the onset of World War I.[9]

The numbers in parentheses in the bottom section of Table 4 give federal, state, and local expenditures as a percentage of total government expenditures. In 1820 federal-government expenditures were substantially larger than state- and local-government expenditures combined, even though Wallis argues that state governments dominated public finance during this time.[10] This is noteworthy because 50 years before, in 1770, there was no federal government. Although government spending at all levels was small during this period, it is apparent from the expenditure data that the federal government in 1820 was not just standing in the shadows of the states. The federal share of total government expenditures continued to drop through 1860, however, and was only revived by the War Between the States. Even then, because of the substantial growth of local-government expenditures, federal expenditures and local expenditures were about equal in 1870; and by 1913, when the federal income tax was instituted, local-government expenditures were 64 percent of total government expenditures.

[9] Higgs (*Crisis*) reports on the effects of World War I on the growth of federal expenditures through the twentieth century; and Holcombe ("Growth") argues that, contrary to conventional wisdom, the 1920s set the stage for federal expenditures during the New Deal. As Wallis ("Birth" and "American Government Finance") notes, the Depression had the further effect of reducing local expenditures (and especially local taxes) relative to the federal government.

[10] Wallis, "American Government Finance."

CONCLUSION

The growth in local governments began its substantial increase between 1820 and 1870. Using data from an ICPSR database, this study estimates that nominal local-government expenditures per U.S. resident rose from $0.40 per capita in 1820 to $8.20 per capita in 1870. In constant 1914 dollars the increase was from $0.28 per capita to $6.65 per capita. Over this 50-year period, local-government expenditures rose faster than either state or federal expenditures. Local-government expenditures were only 13.5 percent of total federal, state, and local expenditures in 1820, and rose to 42.9 percent of total government expenditures by 1870. The growth in local-government expenditures was due in part to the growing share of urban residents in the U.S. population, but also occurred because expenditures per urban resident increased substantially over the period. In 1820 cities spent about $2.40 per resident (in 1914 dollars) and by 1870 cities were spending $21.39 per resident. Federal-government expenditures were substantially larger than state- and local-government expenditures combined in 1820, but local expenditures grew much more rapidly and eventually rose to 64 percent of total government expenditures in 1913. The data on local-government expenditures in the nineteenth century are limited, but the general trends sketched here show the degree to which local-government expenditure growth outstripped the growth of other levels of government during the nineteenth century.

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