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## APPENDIX E

### OTHER DATA

This appendix includes two tables containing data basic to certain text tables and charts, and two tables to which reference is made in the text of Chapter 6.

Table E1

POSTAL SYSTEM, INDEXES OF OUTPUT, EMPLOYMENT, HOURS  
MANHOURS, AND OUTPUT PER EMPLOYEE AND PER MANHOUR  
1908-1940  
(1929: 100)

<i>Year</i>	<i>Total Output</i>	<i>Employment (full-time basis)</i>	<i>Output per Employee</i>	<i>Hours*</i>	<i>Manhours</i>	<i>Output per Manhour</i>
1908	38.2	65.2	58.6	100.0	65.2	58.6
1910	44.1	68.5	64.4	100.0	68.5	64.4
1912	49.4	70.0	70.6	100.0	70.0	70.6
1926	93.1	95.2	97.8	100.0	95.2	97.8
1927	95.7	96.8	98.9	100.0	96.8	98.9
1928	96.4	98.0	98.4	100.0	98.0	98.4
1929	100.0	100.0	100.0	100.0	100.0	100.0
1930	101.2	100.7	100.5	100.0	100.7	100.5
1931	95.2	99.6	95.6	100.0	99.6	95.6
1932	85.6	98.0	87.3	91.7	89.9	95.2
1933	71.5	95.4	74.9	91.7	87.5	81.7
1934	74.3	90.2	82.4	91.7	82.7	89.8
1935	79.8	89.6	89.1	91.7	82.2	97.1
1936	84.8	94.5	89.7	83.3	78.7	107.8
1937	92.6	95.8	96.7	83.3	79.8	116.0
1938	92.7	96.3	96.3	83.3	80.2	115.6
1939	94.3	97.1	97.1	83.3	80.9	116.6
1940	98.2	98.9	99.3	83.3	82.4	119.2

\* Not including overtime.

Source: Witt Bowden, "Technological Changes and Employment in the United States Postal Service", Bureau of Labor Statistics, *Bulletin No. 574*, December 1932. Bowden's indexes are supplemented by later figures compiled in an unpublished study of the National Research Project, for which we are indebted to Alexander Gourvitch and David Weintraub. The data for the whole period are summarized in the latter source, Part II, Chapter H, pp. 59-61.

Table E2

PER CAPITA STATE AND LOCAL GOVERNMENT EXPENDITURES FOR OPERATION  
BY FUNCTION, 1903 AND 1942

STATE AND LOCAL GOVERNMENT EMPLOYMENT PER 10,000 POPULATION  
SCHOOL AND NONSCHOOL, 1942

PER CAPITA INCOME PAYMENTS, AVERAGE OF 1938-1942

DEGREE OF URBANIZATION AND DENSITY OF POPULATION, 1900 AND 1940  
(48 States)

STATE	URBANIZATION		PER CAPITA STATE AND LOCAL GOVERNMENT OPERATION EXPENDITURES (DOLLARS), 1903										URBANIZATION	
	1900	DENSITY 1900	Total	General Control	Public Safety	Highways	Schools	Health, Hospitals, & Pub. Welfare	Sanitation	Other	INCOME 1938-42	1940	DENSITY 1940	
Ala.	11.9	35.7	3.63	.83	.22	.51	1.44	.37	.03	.23	323	30.2	55.5	
Ariz.	15.9	1.1	11.60	4.14	.58	1.00	3.76	1.02	.00	1.11	531	34.8	4.4	
Ark.	8.5	25.0	4.37	1.04	.19	.85	1.77	.34	.01	.17	307	22.2	37.0	
Calif.	52.3	9.5	23.64	4.20	2.39	3.05	9.95	2.35	.32	1.38	880	71.0	44.1	
Colo.	48.3	5.2	21.06	5.24	1.62	2.40	8.81	1.38	.18	1.43	597	52.6	10.8	
Conn.	59.9	188.5	12.66	1.80	1.69	2.42	3.97	1.53	.47	.79	938	67.8	348.9	
Del.	46.4	94.0	8.96	1.74	.94	1.24	3.44	.78	.34	.49	907	52.3	134.7	
Fla.	20.3	9.6	6.24	1.47	.51	.97	1.94	.66	.16	.53	506	55.1	35.0	
Ga.	15.6	37.7	5.03	.82	.52	.98	1.58	.78	.12	.24	358	34.4	53.4	
Idaho	6.2	1.9	12.72	4.12	1.10	1.43	5.60	.78	.00	.67	518	33.7	6.3	
Ill.	54.3	86.1	11.17	2.56	1.72	1.26	3.72	.93	.37	.61	782	73.6	141.2	
Ind.	34.3	70.1	11.66	2.88	.90	1.56	4.65	1.09	.16	.43	613	55.1	94.7	
Iowa	25.6	40.2	10.08	2.66	.52	1.63	3.14	1.48	.11	.53	557	42.7	45.3	
Kans.	22.4	18.0	9.82	2.78	.59	1.19	3.71	.78	.04	.73	513	41.9	21.9	
Ky.	21.8	53.4	6.81	1.34	.47	.88	2.92	.71	.10	.38	348	29.8	70.0	
La.	26.5	30.4	6.59	1.41	.66	.60	1.44	.45	1.48	.55	410	41.5	52.3	
Maine	33.5	23.2	10.66	2.31	1.00	1.74	3.19	1.77	.14	.51	569	40.5	27.3	
Md.	49.8	119.5	9.19	1.63	1.66	1.22	2.82	.85	.35	.66	774	59.3	184.2	
Mass.	86.0	349.0	24.17	3.12	3.21	3.33	4.89	3.28	1.81	4.52	821	89.4	545.9	
Mich.	39.3	42.1	10.58	2.38	1.10	1.11	4.09	1.16	.20	.53	721	65.7	92.2	
Minn.	34.1	21.7	12.07	2.35	1.01	2.07	4.63	.98	.15	.87	562	49.8	34.9	
Miss.	7.7	33.5	3.86	.97	.20	.46	1.65	.40	.02	.16	250	19.8	46.1	
Mo.	36.3	45.2	10.04	1.85	1.16	1.25	2.81	.81	.24	1.92	562	51.8	54.6	
Mont.	34.7	1.7	20.46	6.28	1.58	2.14	6.58	2.16	.15	1.57	629	37.8	3.8	
Nebr.	23.7	13.9	9.16	2.54	.48	1.28	3.74	.67	.04	.40	511	39.1	17.2	
Nev.	17.0	.4	22.79	8.38	.14	.86	8.95	3.14	.02	1.31	947	39.3	1.0	
N. H.	46.7	45.6	11.12	2.15	1.06	2.45	2.81	1.81	.16	.69	593	57.6	54.5	
N. J.	70.6	250.7	12.99	2.20	2.14	1.54	4.67	1.32	.43	.69	861	81.6	553.1	
N. Mex.	14.0	1.6	5.49	2.04	.24	.34	1.47	.34	.03	1.03	398	33.2	4.4	
N. Y.	72.9	152.5	19.55	3.49	3.42	2.57	5.56	2.50	.95	1.06	922	82.8	281.2	
N. C.	9.9	38.9	3.00	.51	.14	.54	.97	.53	.05	.25	362	27.3	72.7	
N. Dak.	7.3	4.5	13.76	4.84	.23	1.15	5.58	.86	.03	1.07	458	20.6	9.2	
Ohio	48.1	102.1	11.72	2.15	1.15	1.76	4.52	1.38	.26	.51	726	66.8	168.0	
Okla.	7.4	11.4	5.38	1.33	.14	.58	2.68	.21	.02	.43	425	37.6	33.7	
Oreg.	32.2	4.3	13.77	2.54	.68	2.35	6.23	1.01	.14	.84	676	48.8	11.3	
Pa.	54.7	140.6	11.68	2.01	1.46	2.00	3.87	1.22	.33	.79	685	66.5	219.8	
R. I.	88.3	401.6	14.94	1.82	2.79	3.01	4.27	1.41	.69	.97	822	91.6	674.2	
S. C.	12.8	44.0	3.23	.63	.28	.49	1.12	.45	.06	.20	325	24.5	62.1	
S. Dak.	10.2	5.2	11.05	3.18	.15	.76	5.60	1.00	.002	.36	471	24.6	8.4	
Tenn.	16.2	48.5	3.89	.89	.33	.58	1.22	.46	.06	.35	365	35.2	69.5	
Tex.	17.1	11.6	6.67	1.46	.35	.77	2.91	.59	.07	.54	473	45.4	24.3	
Utah	38.1	3.4	10.30	2.85	.69	1.44	3.56	.69	.16	.91	563	55.5	6.7	
Vt.	22.1	37.7	8.84	1.56	.27	2.20	3.49	.91	.02	.38	563	34.3	38.7	
Va.	18.3	46.1	4.63	.92	.38	.48	1.87	.62	.14	.22	510	35.3	67.1	
Wash.	40.8	7.8	17.57	3.85	1.03	3.33	7.15	1.14	.09	.98	751	53.1	25.9	
W. Va.	13.1	39.9	6.28	1.10	.33	.58	3.28	.71	.04	.23	439	28.1	79.0	
Wis.	38.2	37.4	11.16	2.19	1.05	1.98	3.98	1.17	.16	.63	593	53.5	57.3	
Wyo.	28.8	.9	12.95	4.10	.59	1.02	4.78	1.66	.06	.73	626	37.3	2.6	

Income is personal income per capita.  
Urbanization is percent of population in urban areas.  
Density is population per square mile.

PER CAPITA STATE AND LOCAL GOVERNMENT OPERATION EXPENDITURES (DOLLARS), 1942

GOVERNMENT EMPLOYMENT PER 10,000 POPULATION, 1942

<i>Total</i>	<i>General Control</i>	<i>Police</i>	<i>Fire</i>	<i>Other Public Safety</i>	<i>Highways</i>	<i>Schools</i>	<i>Health &amp; Hospitals</i>	<i>Public Welfare</i>	<i>Sanitation</i>	<i>Other</i>	<i>School</i>	<i>Nonschool Full- &amp; Part-Time</i>	<i>Nonschool Full-Time Equivalent</i>
25.34	2.57	1.24	.57	.39	4.52	9.71	1.41	1.98	.43	2.52	87	80	67
62.95	6.40	2.62	.96	.74	6.44	21.38	3.24	13.05	.88	7.24	102	145	130
21.36	2.20	.71	.32	.34	3.17	8.28	1.72	2.49	.14	1.99	94	73	61
80.36	6.88	4.16	2.65	2.87	6.71	25.80	6.22	15.53	1.28	8.26	92	187	171
72.23	6.22	2.04	1.39	.80	8.12	20.86	4.35	21.80	.61	6.04	122	156	139
68.31	6.75	4.23	2.57	1.89	7.63	22.11	5.77	9.35	1.63	6.38	79	171	149
54.60	5.23	3.22	1.48	1.04	5.01	20.06	5.75	4.29	1.78	6.74	107	163	145
51.24	6.21	3.38	1.48	1.32	5.96	14.18	3.90	5.95	1.56	7.30	96	168	148
28.64	3.04	1.60	.78	.39	2.93	11.00	2.29	3.46	.89	2.26	98	86	71
56.63	4.63	1.75	.69	.50	8.57	18.09	1.98	9.89	.80	9.73	119	145	117
59.88	5.73	3.54	1.62	1.17	4.26	19.41	3.95	11.65	2.67	5.88	81	135	110
52.78	4.69	2.13	1.87	.66	6.75	17.73	3.27	10.35	.97	6.57	109	126	106
56.14	4.53	1.27	.78	.53	9.23	20.07	3.93	9.67	.76	5.37	136	132	95
52.16	4.70	1.17	.96	.56	8.26	19.05	1.98	9.98	.33	5.17	153	167	120
27.03	3.09	1.09	.64	.34	3.41	10.34	1.80	3.48	.46	2.38	90	78	66
43.60	4.21	2.41	.94	1.01	4.26	14.34	4.16	7.40	1.19	3.68	111	142	127
56.16	4.18	1.69	1.69	1.21	12.22	15.43	3.51	9.22	.44	6.57	113	203	125
47.12	3.63	3.73	1.94	1.21	5.48	14.02	4.64	5.34	2.16	4.97	76	139	131
75.52	6.51	4.54	4.08	1.69	6.20	18.94	7.72	15.31	2.37	8.16	81	189	161
64.81	5.56	3.77	2.05	.92	7.63	20.19	6.39	10.64	1.99	5.67	96	178	151
58.62	4.23	1.81	1.24	1.13	8.92	19.52	4.00	11.35	1.05	5.37	119	191	131
25.39	2.90	.64	.32	.23	5.75	9.52	1.54	2.26	.31	1.92	108	87	67
43.82	4.19	2.37	1.14	.53	4.20	14.65	3.31	8.99	.67	3.77	90	116	96
67.85	6.84	2.19	.90	.95	10.45	22.63	2.96	13.12	.58	7.23	139	157	132
49.97	4.97	1.41	.87	.69	8.28	17.12	2.24	8.77	.69	4.93	139	159	117
99.77	14.41	4.81	1.59	1.71	16.41	27.47	8.92	11.81	.91	11.73	139	237	195
63.32	4.29	2.25	2.61	1.18	12.73	16.59	4.36	10.75	.80	7.76	94	276	167
71.96	7.84	5.95	3.81	1.59	5.90	23.92	8.14	5.77	2.75	6.29	88	158	135
45.14	3.58	.96	.28	1.01	6.58	18.99	2.38	4.55	.18	6.63	136	107	92
79.52	7.40	6.02	3.63	1.64	6.10	22.74	8.24	14.42	3.33	6.00	82	207	186
29.09	2.56	1.38	.55	.36	3.94	12.54	2.03	2.84	.62	2.27	100	85	72
47.84	4.52	1.19	.31	.65	6.87	19.68	2.48	8.13	.37	3.64	160	168	105
55.11	5.09	2.54	1.67	.94	7.77	18.79	3.51	9.81	1.49	3.50	98	157	127
45.12	3.99	1.54	.65	.26	5.65	16.42	2.03	11.53	.28	2.77	119	100	83
62.82	5.03	2.91	2.06	1.27	10.42	20.58	3.39	9.67	.65	6.84	125	163	135
54.05	5.51	2.92	1.46	.87	5.16	19.18	3.61	10.19	1.13	4.02	89	136	102
59.80	5.76	4.34	3.39	1.85	5.99	19.07	4.91	7.67	1.73	5.09	82	167	148
29.67	2.01	1.39	.44	.58	4.33	11.57	2.84	2.40	.63	3.48	107	88	74
54.02	5.94	1.21	.52	.40	9.32	20.55	2.68	9.01	.68	3.71	156	261	147
29.33	2.61	1.28	.83	.32	4.91	10.38	2.37	3.73	.47	2.43	102	89	77
36.33	3.97	1.46	.94	.81	5.73	13.56	1.92	4.37	.67	2.90	130	101	89
68.09	5.31	2.46	.97	1.06	6.48	25.42	3.33	16.66	.77	5.63	158	188	136
54.01	6.09	1.09	1.04	.92	12.31	16.13	3.52	7.09	.14	5.68	156	151	98
32.61	3.89	1.68	.94	.72	3.77	12.51	3.13	2.51	.78	2.68	102	116	93
74.50	5.91	2.78	2.02	3.02	7.86	22.82	4.10	19.89	1.02	5.08	110	194	168
41.42	3.16	1.38	.55	.58	5.68	17.14	2.24	7.19	.44	3.06	132	81	74
65.31	4.45	2.45	2.06	1.00	11.53	20.83	5.13	9.70	2.51	5.65	98	195	140
67.35	6.93	2.01	.68	.90	8.26	25.85	4.02	7.70	.71	10.29	171	163	130

## NOTES TO TABLE E2

Expenditure figures for 1942 include operation only, but the 1903 figures include also most state government outlays, because they cannot be segregated. Expenditures by public enterprises and contributions from general government funds to public enterprises are excluded. Transfer payments to the public, other than interest on the public debt, are included. Apportionments, mainly by state governments, are entirely excluded in 1942, but included in 1903, so that expenditures in that year are overestimated, particularly for highways and education.

There are numerous differences in classification between 1903 and 1942. Wherever possible, the 1903 data were fitted into the 1942 classification. The 1903 classifications "general government" and "courts" were combined into "general government", and "military and police", "fire department", and "miscellaneous protection to life and property" were combined into "protection", though in both cases there are slight incomparabilities in the figures for the two years. "Health conservation", "charities", and "insane" were combined into "health, hospitals, and public welfare" although it is not clear whether hospitals are included in the 1903 figure. "Education" in 1903 includes libraries, which are in the miscellaneous category in 1942. In both years, the miscellaneous category probably includes some items which would be more properly classified under one of the other classifications.

Expenditure data for 1942 are from the Census Bureau's *Revised Summary of State and Local Government Finances in 1942* (1948), and the 1903 data are from the Census Bureau's *Wealth, Debt, and Taxation, 1903*.

The employment data are divided into school and nonschool workers. Full-time equivalent nonschool employment is estimated by adding one-third the number of temporary and part-time workers to the number of permanent full-time nonschool employees. The figures for school employment are from the Census Bureau's *Public Employment in the U. S.: 1941* (State and Local Government Quarterly Employment Survey, Vol. 2, No. 1, August 1941). They actually cover the school year 1939-40 and are taken by the Census Bureau from the *Biennial Survey of Education in the U. S.: 1938-40*, but, according to the Census Bureau, school employment in January 1941 was probably about the same as in 1939-40, judging from nonschool employment. The data on nonschool employment are from *Public Employment in the U. S.: January 1942* (State and Local Government Quarterly Employment Survey, Vol. 3, No. 5, December 1942).

The population data used to derive the per capita figures are for the census years 1900 and 1940, as are the figures for density and degree of urbanization. Arizona, New Mexico, and Oklahoma had not been admitted as states in 1900, but the expenditures of their territorial and local governments are included. The population figure for Oklahoma in 1900 includes Indian Territory.

The income figures are averages of income payments per capita for the five years 1938-42 from the *Survey of Current Business*, August 1949.

Table E3

STATISTICAL RELATIONS BETWEEN GOVERNMENT EXPENDITURES PER  
CAPITA OF THE 48 STATES AND THEIR RESPECTIVE LEVELS OF  
URBANIZATION AND DENSITY, 1903 AND 1942

DEPENDENT VARIABLE	CON- STANT TERM	REGRESSION COEFFICIENT OF INDEPENDENT VARIABLE		COEFFICIENT OF MULTIPLE CORRELA- TION
<i>Expenditure per Capita</i>		<i>Urbanization</i>	<i>Density</i>	
<b>General control</b>				
1903	3.28	.1051 (.0331)	-.0266 (.0081)	.41
1942	2.27	.0643 (.0218)	-.0032 (.0027)	.40
<b>Public safety</b>				
1903	-.56	.0776 (.0066)	-.0006 (.0016)	.94
1942	-1.14	.1224 (.0151)	.0011 (.0019)	.88
<b>Highways</b>				
1903	.67	.0858 (.0119)	-.0076 (.0029)	.78
1942	5.17	.0584 (.0323)	-.0092 (.0040)	.26
<b>Schools</b>				
1903	6.80	.3308 (.0679)	-.0647 (.0167)	.56
1942	9.54	.2057 (.0477)	-.0145 (.0059)	.52
<b>Health, hospitals &amp; public welfare</b>				
1903	.76	.0554 (.0129)	-.0046 (.0032)	.60
1942	-.43	.3210 (.0465)	-.0224 (.0057)	.72
<b>Sanitation</b>				
1903	-.13	.0130 (.0061)	.0032 (.0015)	.68
1942	-.45	.0305 (.0055)	.0004 (.0007)	.80
<b>Other</b>				
1903	.45	.0347 (.0140)	.0001 (.0034)	.49
1942	1.93	.0836 (.0245)	-.0068 (.0030)	.42
<b>Total expenditures</b>				
1903	11.27	.7024 (.1175)	-.1008 (.0316)	.68
1942	16.89	.8860 (.1518)	-.0545 (.0188)	.66

## NOTES TO TABLE E3

Per capita expenditure is in dollars per capita (in 1942 prices); urbanization is percentage of population in cities of 2,500 or more; density is population per square mile.

Figures in parentheses are standard errors of the coefficients.

The basic data appear in Table E2. The 1903 expenditures were put into 1942 prices by multiplying by the following ratios of 1942 to 1903 prices (see footnote 8, Ch. 6): 2.065, for nonschool functions; 3.508, for schools. The implicit price ratio for total expenditures, derived from the individual functions, is 2.584, which differs a bit from the price ratio in footnote 8, Ch. 6, 2.454, because of differences in weights.

For 1942 we have equations for the following subdivisions of two functions:

	CONSTANT TERM	REGRESSION COEFFICIENT OF INDEPENDENT VARIABLE		COEFFICIENT OF MULTIPLE CORRELA- TION
		<i>Urbanization</i>	<i>Density</i>	
Public safety				
Police	-.33	.0558 (.0087)	.0008 (.0011)	.83
Fire	-.60	.0395 (.0047)	.0013 (.0006)	.91
Other	-.22	.0271 (.0054)	-.0009 (.0007)	.65
Health, hospitals, & public welfare				
Health & hospitals	.39	.0714 (.0155)	.0001 (.0019)	.70
Public welfare	-.81	.2496 (.0413)	-.0225 (.0051)	.65



Table E4

WEIGHTED AND UNWEIGHTED AVERAGE LEVELS OF STATE AND LOCAL  
GOVERNMENT EXPENDITURES PER CAPITA IN THE 48 STATES  
1903 AND 1942, BY FUNCTION

	STATE AND LOCAL GOVERNMENT EXPENDITURES PER CAPITA, AVERAGE OF 48 STATES					
	1903		1942		Ratio, 1942 to 1903	
	<i>Weighted by Popula- tion</i>	<i>Un- weighted</i>	<i>Weighted by Popula- tion</i>	<i>Un- weighted</i>	<i>Weighted by Popula- tion</i>	<i>Un- weighted</i>
General control	\$2.15	\$2.47	\$5.07	\$5.01	2.36	2.03
Public safety	1.27	.92	5.75	4.76	4.53	5.17
Schools	3.70	3.89	17.96	17.86	4.85	4.59
Highways	1.54	1.44	6.14	7.04	3.99	4.89
Sanitation	.35	.23	1.44	1.04	4.11	4.52
Health, hos- pitals & public welfare	1.20	1.10	13.61	12.58	11.34	11.44
Other	.81	.76	4.82	5.23	5.95	6.88
Total	11.01	10.81	54.80	53.51	4.98	4.95

Data are from same sources as in Table E2.