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Government

TABLES G1–G7

G 1 Net Income Originating by Type (millions of dollars)

	WAGES & SALARIES	PENSIONS & RELIEF *	EMPL. COMP.	INTEREST	PAY. TO INDI- VIDUALS	NET SAVINGS	NET INCOME
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1919	3,646	380	4,026	1,044	5,071	—1,303	3,768
1920	3,385	491	3,877	1,246	5,123	1,894	7,017
1921	3,431	551	3,982	1,264	5,247	958	6,205
1922	3,410	545	3,956	1,326	5,282	854	6,136
1923	3,549	549	4,099	1,331	5,431	1,611	7,042
1924	3,732	549	4,281	1,279	5,560	1,717	7,277
1925	3,940	527	· 4,467	1,284	5,751	1,614	7,365
1926	4,147	532	4,680	1,281	5,962	2,151	8,113
1927	4,376	559	4,936	1,254	6,190	2,293	· 8,483
1928	4,575	576	5,152	1,240	6,392	1,897	8,289
1929	4,777	607	5,385	1,263	6,648	2,225	8,873
1930	4,904	644	5,549	1,266	6,816	2,104	8,920
1931	4,986	802	5,788	1,278	7,066	344	7,410
1932	4,808	908	5,716	1,364	7,081	—906	6,175
1933	4,364	1,790	6,154	1,461	7,616	—113	7,503
1934	4,504	2,690	7,194	1,568	8,763	—575	8,188
1935	4,901	2,849	7,751	1,489	9,240	—1,736	7,504
1936	5,334	3,539	8,874	1,537	10,412	—2,196	8,216
1937	5,598	2,947	8,546	1,681	10,227	497	10,724
1938	5,862	3,438	9,301	1,689	10,990	—175	10,815

* Relief payments included are, in millions of dollars:

1931	59	*1933*	1,128	*1935*	2,173	*1937*	2,190
1932	132	*1934*	2,087	*1936*	2,822	*1938*	2,621

G 2 Wages and Salaries (millions of dollars)

	FEDERAL					STATE	COUNTY	CITY	PUBLIC EDUC.	TOTAL
	Leg.	Judi-cial	Civil *	Military	Total					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1919	10.1	3.3	728	1,324	2,066	155	149	582	692	3,646
1920	11.1	3.6	815	699	1,529	179	176	684	815	3,885
1921	10.7	3.6	792	511	1,318	193	209	726	982	3,431
1922	10.1	3.5	783	341	1,138	195	223	739	1,114	3,410
1923	10.2	3.6	834	296	1,144	205	231	791	1,175	3,549
1924	10.5	3.7	869	291	1,174	223	247	845	1,240	3,732
1925	11.1	3.8	918	303	1,236	246	247	887	1,322	3,940
1926	11.7	3.8	961	306	1,284	237	259	951	1,415	4,147
1927	11.9	4.9	986	300	1,303	263	281	1,027	1,501	4,376
1928	12.3	5.8	1,026	298	1,343	282	303	1,073	1,573	4,575
1929	13.0	5.5	1,073	304	1,396	296	325	1,128	1,630	4,777
1930	13.6	5.8	1,097	306	1,423	315	341	1,154	1,669	4,904
1931	13.7	5.9	1,119	303	1,442	336	358	1,177	1,670	4,986
1932	13.1	5.6	1,051	288	1,358	339	349	1,187	1,622	4,808
1933	12.1	5.3	941	261	1,220	330	318	1,013	1,481	4,364
1934	12.5	5.3	1,133	264	1,415	346	322	1,014	1,407	4,504
1935	13.9	5.7	1,363	295	1,678	381	336	1,040	1,465	4,901
1936	14.4	5.9	1,550	322	1,892	418	356	1,117	1,549	5,334
1937	14.5	6.0	1,545	342	1,908	470	381	1,182	1,656	5,598
1938	14.5	6.4	1,546	364	1,931	502	403	1,307	1,716	5,862

* Including the Post Office Department.

G 3 Pensions and Employee Compensation [1] (millions of dollars)

	PENSIONS					EMPLOYEE COMPENSATION				
	Fed.	State	County	City [2]	Total	Fed.	State	County	City [2]	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1919	321	32.3	2.0	24.8	380	2,387	187	151	1,300	4,026
1920	406	53.3	2.9	29.0	491	1,935	233	179	1,528	3,877
1921	440	76.7	4.0	30.3	551	1,759	270	213	1,740	3,982
1922	445	68.6	3.5	27.6	545	1,583	264	226	1,881	3,956
1923	427	79.2	4.2	38.8	549	1,572	284	236	2,006	4,099
1924	403	95.8	5.1	44.8	549	1,578	319	252	2,131	4,281
1925	419	54.3	3.6	50.2	527	1,655	300	251	2,259	4,467
1926	451	28.1	2.6	50.3	532	1,736	265	261	2,417	4,680
1927	474	27.2	2.8	55.6	559	1,777	290	283	2,584	4,936
1928	483	27.9	3.2	62.7	576	1,826	310	306	2,709	5,152
1929	511	28.2	3.4	64.9	607	1,908	324	329	2,823	5,385
1930	539	29.0	3.7	72.8	644	1,962	344	345	2,896	5,549
1931	623	29.5	4.4	85.9	743	2,124	366	362	2,934	5,729
1932	645	30.6	4.7	95.6	776	2,135	370	354	2,856	5,584
1933	522	30.5	3.5	106	662	2,870	360	321	2,601	5,026
1934	451	33.1	3.9	114	603	3,953	379	325	2,535	5,107
1935	516	38.1	4.2	117	676	4,367	419	340	2,622	5,578
1936	550	41.1	4.2	122	717	5,265	459	360	2,789	6,052
1937	573	46.3	4.7	133	757	4,671	516	386	2,972	6,356
1938	601	50.3	5.4	160	817	5,154	553	408	3,184	6,680

[1] Excluding relief payments. [2] Including public education.

G 4 Interest (millions of dollars)

| | FEDERAL | | | | | | |
| | Public debt | Postal savings | Total | STATE | COUNTY | CITY | TOTAL |
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1919	819	2.3	822	—5.8	37.8	190	1,044
1920	1,010	2.2	1,012	—8.4	40.7	201	1,246
1921	993	2.2	995	—6.8	47.6	228	1,264
1922	1,022	2.1	1,024	—0.3	53.6	248	1,326
1923	996	2.1	999	4.2	65.2	263	1,331
1924	910	2.2	912	8.5	77.7	280	1,279
1925	856	2.3	859	14.2	97.4	313	1,284
1926	809	2.3	812	15.5	104	349	1,281
1927	759	2.5	762	15.7	94.6	381	1,254
1928	705	2.6	708	18.7	101	412	1,240
1929	668	2.6	671	20.5	126	445	1,263
1930	620	2.7	622	26.5	121	496	1,266
1931	613	3.4	616	36.6	105	519	1,278
1932	637	7.3	645	47.0	110	562	1,364
1933	713	12.8	726	57.1	111	566	1,461
1934	817	17.3	834	61.7	108	564	1,568
1935	764	19.0	783	58.6	103	543	1,489
1936	794	19.2	813	55.0	96.5	572	1,537
1937	895	21.1	916	51.7	88.6	623	1,681
1938	919	21.9	941	48.1	81.9	618	1,689

G 5 Total Payments to Individuals (millions of dollars)

| | FEDERAL | STATE | COUNTY | CITY * | TOTAL |
	(1)	(2)	(3)	(4)	(5)
1919	3,209	181	189	1,490	5,071
1920	2,948	224	220	1,730	5,123
1921	2,754	263	260	1,968	5,247
1922	2,608	263	280	2,130	5,282
1923	2,571	288	301	2,269	5,431
1924	2,490	327	330	2,412	5,560
1925	2,514	315	348	2,573	5,751
1926	2,548	281	366	2,766	5,962
1927	2,539	305	378	2,966	6,190
1928	2,534	328	407	3,121	6,392
1929	2,579	345	455	3,269	6,648
1930	2,585	371	466	3,392	6,816
1931	2,741	403	468	3,453	7,066
1932	2,780	417	464	3,418	7,081
1933	3,596	417	433	3,168	7,616
1934	4,788	441	434	3,099	8,763
1935	5,151	478	444	3,166	9,240
1936	6,079	514	456	3,362	10,412
1937	5,588	568	474	3,596	10,227
1938	6,095	601	490	3,803	10,990

* Including public education.

G 6   Net Savings (millions of dollars)

	CHANGE IN SECURITY ASSETS				NET VALUE, CHANGE IN PUBLIC DEBT				
	FEDERAL			STATE		PUBLIC		State		NET
	Foreign	Other	Total	& LOCAL	TOTAL	CONSTR.	Federal	& local	Total	SAVINGS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1919	2,052	66	2,118	149	2,268	1,520	4,539	552	5,091	—1,303
1920	312	49	361	104	465	826	—1,320	717	—603	1,894
1921	—24	110	86	268	354	1,149	—528	1,073	545	958
1922	4	—216	—212	347	135	1,277	—504	1,062	558	854
1923	256	—152	104	246	350	1,148	—983	870	—113	1,611
1924	232	—47	185	279	464	1,397	—972	1,116	144	1,717
1925	—12	0	—12	268	256	1,628	—745	1,015	270	1,614
1926	178	19	197	236	433	1,599	—1,072	953	—119	2,151
1927	186	—52	134	274	408	1,814	—1,088	1,017	—71	2,203
1928	—8	—1	—9	302	294	1,887	—729	1,013	284	1,897
1929	251	113	364	283	646	1,809	—912	1,142	230	2,225
1930	424	99	523	155	678	2,171	—405	1,150	745	2,104
1931	185	705	890	—209	681	1,980	1,644	673	2,317	344
1932	0.5	1,116	1,117	—112	1,006	1,246	2,929	229	3,158	—906
1933	119	1,169	1,288	302	1,590	634	2,591	—254	2,337	—113
1934	134	1,106	1,240	344	1,583	811	3,241	—272	2,969	—575
1935	0	283	283	301	584	742	2,868	194	3,062	—1,736
1936	0	396	396	139	535	1,372	4,013	90	4,103	—2,196
1937	1	1,093	1,094	22	1,116	1,092	1,732	—21	1,711	497
1938	1	945	946	72	1,019	1,185	2,142	237	2,379	—175

G 7   Employees (thousands)

| | FEDERAL | | | | | | | | PUBLIC | |
| | Leg. | Judi-cial | Civil* | Military | Total | STATE | COUNTY | CITY | EDUC. | TOTAL |
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1919	4.6	1.8	693	1,087	1,786	160	150	567	832	3,497
1920	4.6	1.8	702	345	1,054	168	156	579	861	2,820
1921	4.6	1.8	604	389	1,000	166	166	548	907	2,787
1922	4.6	1.8	567	273	847	164	174	552	946	2,685
1923	4.6	1.8	554	250	810	167	179	586	971	2,715
1924	4.6	1.8	559	267	833	179	189	622	1,001	2,826
1925	4.6	1.8	568	261	835	197	184	631	1,042	2,891
1926	4.6	1.8	563	257	827	185	187	658	1,080	2,937
1927	4.6	1.8	561	260	828	203	195	675	1,104	3,007
1928	4.6	1.8	570	263	839	206	207	702	1,124	3,080
1929	4.6	1.8	588	267	862	212	217	715	1,155	3,162
1930	4.6	2.0	599	266	873	224	224	722	1,169	3,213
1931	4.7	2.0	611	262	880	238	233	727	1,174	3,254
1932	4.7	1.9	598	259	864	243	237	738	1,168	3,251
1933	4.7	1.8	593	255	855	243	233	723	1,142	3,199
1934	4.7	1.8	677	257	941	259	238	726	1,129	3,296
1935	4.9	1.9	774	268	1,050	283	244	729	1,150	3,457
1936	5.1	2.0	859	300	1,167	300	257	768	1,182	3,675
1937	5.2	2.1	862	320	1,190	325	270	792	1,222	3,801
1938	5.2	2.2	846	334	1,187	334	280	835	1,222	3,860

* Including the Post Office Department.

TABLE G 1

Net Income Originating by Type

Col. 1 Wages and salaries: see Table G 2.

Col. 2 Pensions and relief: see Table G 3 for pensions. For 1931–38 relief payments, a total of work and direct relief, are included. The work relief estimates are from the Bureau of Foreign and Domestic Commerce, National Income Division (see the *Survey of Current Business,* June 1940). The direct relief figures begin in 1933, and for 1933–35 are from the *Statistical Summary of Emergency Relief Activities, January 1933 through December 1935;* the 1936–38 figures are from the *Social Security Bulletin,* February 1940.

Col. 3 Employee compensation: sum of col. 1 and 2.

Col. 4 Interest: see Table G 4.

Col. 5 Total payments to individuals: sum of col. 3 and 4.

Col. 6 Net savings: see Table G 6.

Col. 7 Net income originating: sum of col. 5 and 6.

TABLE G 2

Wages and Salaries

FEDERAL

Col. 1 Legislative: for 1929–38, estimates prepared by the Bureau of Foreign and Domestic Commerce, National Income Division; for the description of their sources and methods see *National Income in the United States, 1929–35.* The 1929 estimate is extrapolated to 1919 by the figures on pay, reported as such by the Treasury Department in the *Combined Statement of the Receipts and Expenditures, Balances, etc. of the United States.*

Col. 2 Judicial: see the notes to col. 1.

Col. 3 Civil executive, including Post Office: see the notes to col. 1. The pay of Post Office employees is estimated separately from that of other civil executive departments.

Col. 4 Military: for cash pay see the notes to col. 1. Estimates are made separately for the Army, Navy, Marine Corps, and Coast Guard.

The estimates of allowance for subsistence in 1929 and later years are from the Bureau of Foreign and Domestic Commerce, National

Income Division. For 1919–28 allowance for subsistence is esti-
mated by multiplying the per capita figures by the estimated mili-
tary personnel (see the notes to Table G 7). Per capita subsistence
figures for 1929 are derived from the Bureau of Foreign and
Domestic Commerce estimates and extrapolated to 1919 by the
BLS index of the wholesale price of food.

Col. 5 Total: sum of col. 1–4.

STATE

Col. 6 Total: for 1919–31 and 1937, the product of operating ex-
penditures and the ratio of salaries and wages to them. Salaries and
wages in sample states are used to interpolate between 1931 and
1937 and to extrapolate for 1938.

The ratio of salaries and wages to operating expenditures in 1926
is from the 'Extent, Costs and Significance of Public Employment
in the United States', by William E. Mosher and Sophie Polah,
National Municipal Review, Supplement, January 1932. This
ratio is extrapolated for other years by the ratios for sample states.

Operating expenditures are the sum of expenditures for general
operation and maintenance, excluding schools, and for public
service operation and maintenance (given for the fiscal years 1919,
1921–31, and 1937 in *Financial Statistics of States*). Since the 1921
figure reported is incomplete, it is raised by the 1922 ratio of total
expenditures to expenditures of those states reporting in 1921. The
1920 figure is interpolated between 1919 and 1921 by the operating
expenditures of sample states, as given in state auditors' reports
for 1919, 1920, 1921. The 1932 figure is based on partial data for
41 states as published by the Bureau of the Census. Since there is a
preponderance of fiscal year periods ending June 30, averages of
pairs of fiscal years are assumed to represent operations for calen-
dar years.

The operating expenditures for the sample states are from *Finan-
cial Statistics of States*. Wages and salaries for these states, 1919–29,
are from state auditors' reports. For 1929 and later years they are
from questionnaire returns of the Bureau of Foreign and Domestic
Commerce, National Income Division.

The states and years for which wages and salaries are available
and for which the ratio of wages and salaries to operating expendi-
tures is derived are:

1919-20 New York, Massachusetts, Illinois, Ohio, and Indiana
1920-21 New York, Massachusetts, Illinois, Ohio, Indiana, and Iowa
1921-23 New York, Massachusetts, Illinois, Ohio, Indiana, Iowa, West Virginia, and Washington
1923-24 New York, Massachusetts, Ohio, Indiana, Iowa, West Virginia, and Washington
1924-25 Massachusetts, Ohio, Indiana, Iowa, West Virginia, Washington, and Illinois
1925-26 Massachusetts, Ohio, Indiana, Iowa, West Virginia, Washington, and Illinois
1926-29 New York, Massachusetts, Illinois, Indiana, Iowa, West Virginia, and Washington
1929-31 Vermont, Massachusetts, Connecticut, New York, New Jersey, Ohio, Illinois, Wisconsin, Minnesota, Kansas, Delaware, Tennessee, Montana, Nevada, Pennsylvania, Indiana, Virginia, North Carolina, Washington, and Wyoming
1931 and 1937 The states listed for 1929-31 except Ohio and Indiana; and, in addition, South Dakota and Utah

The states whose wage and salary data are used to estimate the total wage and salary bill since 1931 are, by fiscal years:

1931-32 Those listed for 1929-31 except Massachusetts; and, in addition, Michigan
1932-34 Those listed for 1931-32 and, in addition, New Hampshire, Massachusetts, Rhode Island, Iowa, Georgia, Utah, and South Dakota
1934-35 Those listed for 1932-34 except Rhode Island and Kansas
1935-36 Those listed for 1934-35 except Ohio; and, in addition, Kansas and California
1936-37 Those listed for 1935-36 except Michigan and Georgia; and, in addition, Missouri, Maryland, Oklahoma, and Kentucky
1937-38 Those listed for 1936-37 except Maine, Vermont, New Jersey, Iowa, Missouri, Kentucky, Massachusetts, Oklahoma, Wyoming, and California; and, in addition, Michigan and Florida

In interpolating the total between 1919 and 1921 the operating expenditure figures of New York, Massachusetts, Illinois, Iowa, Ohio, and Indiana are used.

COUNTY

Col. 7 Total: in the Mosher and Polah report referred to above, total wages and salaries in 1926 are given by four geographic regions. They are estimated for the other years from 1919 through 1931 by applying to the estimated operating expenditures in each year the 1926 ratio of wages and salaries to operating expenditures.

The items included in operating expenditures are the same as for states and are reported for 1912 and 1931 in the *Census of Wealth, Debt and Taxation,* 1913, and *Financial Statistics of State and Local Governments,* 1932. Interpolation for intervening years is by the operating expenditures of the states in each geographic region. For 1932–35 the combined total of wages and salaries for states and cities is used as an index of county wages and salaries. For 1936–38 the estimates are extrapolated from 1935 by sample county data (from the Bureau of Foreign and Domestic Commerce, National Income Division).

CITY EXCLUDING PUBLIC EDUCATION

Col. 8 Total: estimated for (1) city-county consolidations, (2) cities over 500,000, (3) cities of 250,000–500,000, (4) cities of 100,000–250,000, (5) cities under 100,000. The fifth group, in which all the smaller municipalities are included, is divided for 1919–31 into cities of 50,000–100,000, 30,000–50,000, and under 30,000. The first group is estimated by adding the New York City data, available throughout the period, to the estimate for city-county consolidations excluding New York City.

a) The Larger Cities: The method for all groups of 50,000 or over for 1919–31 and of 100,000 or over for the years after 1931 is the same as that used in estimating state wages and salaries (see the notes to col. 6). Basic operating expenditures for the calendar years 1918, 1920, and 1922–36 are from *Financial Statistics of Cities.* The data for cities are incomplete in 1920 and are raised to the total by the average of the ratios in 1918 and 1922 of the total for all cities in the given size group to those reporting for 1920. Interpolation for 1919 and 1921 is by sample city data from auditors' reports. The 1926 ratio of wages and salaries to operating expenditures, from the Mosher and Polah report, is extrapolated for other years by sample data. For 1919–29 the sample city wage and salary data are from auditors' reports. For later years they are from questionnaire returns of the Bureau of Foreign and Domestic Commerce, National Income Division. The 1937–38 estimates of wages and salaries are extrapolated from 1936 by sample city data.

The cities whose operating expenditures are used to interpolate total operating expenditures between 1918, 1920, and 1922 are:

Group 1: For city-county consolidations, excluding New York City: Denver, Colo., and Washington, D. C.
Group 2: Chicago, Ill.
Group 3: Cincinnati, Ohio
Group 4: Oakland, Cal., Yonkers, N. Y., and Providence, R. I.
Group 5: For cities of 50,000-100,000: Saginaw, Mich., Rockford, Ill., Manchester, N. H., and Allentown, Pa.

The cities and years for which wages and salaries are available through 1938 and whose ratio of wages and salaries to operating expenditures is used to extrapolate the 1926 ratios back to 1919 and through 1936 are:

Group 1:
1919-29 Denver, Colo., and Washington, D. C.
1929-30 Denver, Colo., Washington, D. C., and Baltimore, Md.
1930-31 Denver, Colo., Washington, D. C., Baltimore, Md., and Philadelphia, Pa.
1931-32 Denver, Colo., Washington, D. C., and Philadelphia, Pa.
1932-33 Denver, Colo., Washington, D. C., Philadelphia, Pa., and St. Louis, Mo.
1933-35 Denver, Colo., Washington, D. C., Philadelphia, Pa., St. Louis, Mo., Baltimore, Md., and San Francisco, Cal.
1935-38 Denver, Colo., Washington, D. C., St. Louis, Mo., San Francisco, Cal., Philadelphia, Pa., and New Orleans, La.

Group 2:
1919-29 Chicago, Ill.
1929-30 Chicago, Ill., Los Angeles, Cal., Cleveland, Ohio, and Pittsburgh, Pa.
1930-31 Chicago, Ill., Detroit, Mich., Los Angeles, Cal., Cleveland, Ohio, Pittsburgh, Pa., and Buffalo, N. Y.
1931-32 Chicago, Ill., Detroit, Mich., Cleveland, Ohio, Pittsburgh, Pa., and Buffalo, N. Y.
1932-33 Chicago, Ill., Detroit, Mich., Cleveland, Ohio, Pittsburgh, Pa., Milwaukee, Wis., and Buffalo, N. Y.
1933-37 The entire group: Chicago, Ill., Detroit, Mich., Los Angeles, Cal., Cleveland, Ohio, Boston, Mass., Pittsburgh, Pa., Milwaukee, Wis., and Buffalo, N. Y. Since the total is available for 1926 and 1933 the final estimates for intervening years are interpolated by the estimates obtained by multiplying operating expenditures by the ratio of wages and salaries to them.
1937-38 The cities listed for 1933-37 except Milwaukee

Group 3:
1919-20 Cincinnati, Ohio
1920-22 Cincinnati, Ohio, and Rochester, N. Y.
1922-29 Cincinnati, Ohio, Rochester, N. Y., and Louisville, Ky.
1929-30 Cincinnati, Ohio, Newark, N. J., Kansas City, Mo., Seattle, Wash., Rochester, N. Y., Louisville, Ky., Portland, Ore., Columbus, Ohio, Houston, Texas, St. Paul, Minn., Akron, Ohio, Providence, R. I., Birmingham, Ala.

1930-32 The cities listed for 1929-30 and, in addition, Oakland, Cal., and Dallas, Texas

1932-33 The cities listed for 1930-32 and, in addition, Atlanta, Ga., Toledo, Ohio, and Minneapolis, Minn.

1933-34 The cities listed for 1932-33 except Louisville

1934-35 The cities listed for 1933-34 except Toledo

1935-36 The cities listed for 1934-35 except Newark and Houston; and, in addition, Louisville, Ky.

1936-37 The cities listed for 1935-36 except Akron; and, in addition, Toledo, Ohio

1937-38 The cities listed for 1936-37 except Kansas City, Rochester, Toledo, and Oakland

Group 4:

1919-29 Oakland, Cal., Yonkers, N. Y., and Providence, R. I.

1929-30 Salt Lake City, Utah, Cambridge, Mass., Duluth, Minn., Yonkers, N. Y., Bridgeport, Conn., Camden, N. J., Evansville, Ind., Fort Worth, Texas, Long Beach, Cal., New Bedford, Mass., Oklahoma City, Okla., Omaha, Nebr., Paterson, N. J., Reading, Pa., Richmond, Va., San Antonio, Texas, Scranton, Pa., South Bend, Ind., Tampa, Fla., Wichita, Kans., Albany, N. Y., Somerville, Mass., Spokane, Wash., Tacoma, Wash., El Paso, Texas, Norfolk, Va., Jacksonville, Fla., and Fort Wayne, Ind.

1930-32 The cities listed for 1929-30 and, in addition, San Diego, Cal.

1932-33 The cities listed for 1930-32 and, in addition, Springfield, Mass., Worcester, Mass., Elizabeth, N. J., Lynn, Mass., and Grand Rapids, Mich.

1933-34 The cities listed for 1932-33 and, in addition, Flint, Mich., and New Haven, Conn.

1934-35 The cities listed for 1933-34 and, in addition, Kansas City, Kans., and Utica, N. Y.

1935-36 The cities listed for 1934-35 except Yonkers and Scranton

1936-37 The cities listed for 1935-36 except San Diego and Worcester; and, in addition, Des Moines, Iowa

1937-38 The cities listed for 1936-37 except Cambridge, Flint, Paterson, and Des Moines

Group 5:

1919-29 Saginaw, Mich., Rockford, Ill., Manchester, N. H., and Allentown, Pa.

1929-30 Allentown, Pa., Savannah, Ga., Saginaw, Mich., Manchester, N. H., Lincoln, Nebr., Huntington, W. Va., Pueblo, Colo., Binghamton, N. Y., Rockford, Ill., Austin, Texas, Cedar Rapids, Iowa, Davenport, Iowa, East Orange, N. J., Hammond, Ind., Greensboro, N. C., Hoboken, N. J., Kalamazoo, Mich., McKeesport, Pa., St. Joseph, Mo., Topeka, Kans., Mt. Vernon, N. Y., Pasadena, Cal., and San Jose, Cal.

1930-31 The cities listed for 1929-30 and, in addition, Covington, Ky.

b) The Smaller Cities: The estimates of wages and salaries in cities with populations under 50,000 through 1931 are derived similarly to those for larger cities but the basic data are not available in as great detail.

Operating expenditures are estimated as follows:

For cities of 30,000–50,000 in 1918, 1920, and 1922–31 they are from *Financial Statistics of Cities.* Since the 1920 figure as reported is incomplete it is raised to the total by the average of the ratios in 1918 and 1922 of the totals to the cities reporting in 1920.

For cities of 2,500–30,000 and of 30,000 or over, operating expenditures, including school costs, in 1912 and 1931 are from the *Census of Wealth, Debt and Taxation, 1913,* and *Financial Statistics of State and Local Governments, 1932,* respectively. The ratio of the per capita cost for cities of 2,500–30,000 to that for cities of 30,000 or over is determined for 1912 and 1931, and interpolated along a straight line. This ratio is then used to extrapolate the 1912 ratio of per capita cost, excluding education, for cities of 2,500–30,000 (as determined from the *Census of Wealth, Debt and Taxation, 1913*) to that for cities of 30,000 or over. The resulting ratio applied to the per capita cost, excluding education, for cities of 30,000 or over yields an estimate of per capita cost, excluding education, for cities of 2,500–30,000. Total operating expenditures are estimated by multiplying the per capita by the population figures.

For municipalities with populations under 2,500 the 1931 per capita operating expenditures, including school costs, are from *Financial Statistics of State and Local Governments, 1932.* The estimated ratio of this figure to that for cities of 2,500–30,000 is extrapolated for other years by the relation between the cost in cities of 2,500–30,000 and that in cities of 30,000 or over. The resulting ratio is applied to the estimated per capita cost, excluding education, for cities of 2,500–30,000 to give operating expenditures per capita for municipalities under 2,500. Total operating expenditures are estimated by multiplying per capita cost by the population figures.

Total urban population is obtained by subtracting from the totals for the United States (*Statistical Abstract*) the estimated farm population (*Agricultural Situation*). Population figures for cities of 30,000 or over are from *Financial Statistics of Cities* except for 1919 and 1921 when straight-line interpolation is used. The esti-

mates for cities under 30,000 are divided into those under 2,500 and
those of 2,500–30,000 on the basis of the ratios derived for Census
years and interpolated along a straight line for other years. Opera-
ting expenditures for 1919 and 1921 are estimated for the entire
group of cities under 50,000 by multiplying the population figures
by per capita cost, obtained by straight line interpolation of the
1918, 1920, and 1922 estimates.

Wages and salaries are estimated by the same method as for the
other city groups, the 1926 ratio to operating expenditures as given
in the Mosher and Polah report (see the notes to col. 6) being extra-
polated by the ratio in sample cities. The estimates for cities of
30,000–50,000 are made on the assumption that the relation be-
tween salaries and wages and operating expenditures is the same
for cities of 30,000–50,000 as for those under 50,000.

The cities and years for which wages and salaries are available
for computing the ratio to operating expenditures are:

1919–21 Jamestown, N. Y., Jackson, Miss., Pittsfield, Mass., Portsmouth, Va.,
        Bangor, Me., Fredericksburg, Va., and Red Wing, Minn.
1921–23 The cities listed for 1919–21 except Jamestown; and, in addition, New
        Castle, Pa.
1923–26 The cities listed for 1921–23 except Portsmouth
1926–27 The cities listed for 1921–23
1927–28 The cities listed for 1921–23 and, in addition, Jamestown
1928–29 The cities listed for 1927–28 except Portsmouth
1929–30 Pittsfield, Mass., New Castle, Pa., Waterloo, Iowa, Jamestown, N. Y.,
        Wichita Falls, Texas, Dubuque, Iowa, Everett, Mass., Newport News,
        Va., Poughkeepsie, N. Y., Oshkosh, Wis., Moline, Ill., Jackson, Miss.,
        Bangor, Maine, Fredericksburg, Va., and Red Wing, Minn.
1930–31 The cities listed for 1929–30 except Bangor; and, in addition, Port
        Arthur, Texas, Dearborn, Mich., Phoenix, Ariz., Everett, Wash., Plain-
        field, N. J., Tucson, Ariz., Baton Rouge, La., Bellingham, Wash.,
        Amarillo, Texas, and Joplin, Mo.

The estimates of wages and salaries in cities under 100,000 for
1932–38 are based on their ratio to salaries in cities of 100,000 or
over, the 1931 ratio being extrapolated by the ratios of the respec-
tive sample figures. The list of cities included in the sample of
cities under 100,000 is available at the Bureau of Foreign and
Domestic Commerce, National Income Division.

Col. 9 Public education: for all years except 1937 and 1938, esti-
mated for (1) elementary and secondary schools, (2) special schools,

(3) higher schools. The basic data for the even school years 1918–36 are from the *Biennial Survey of Education*. The final calendar year figures are weighted averages of those for school years with the given year having a weight of 2 and the following year a weight of 1.

1) Elementary and secondary schools: the salaries paid supervisors, principals and teachers (also total expense figures) in day schools in cities of 100,000 or over are from Statistics of City School Systems in the *Biennial Survey of Education*. The ratio of salaries to expenses is applied in each Survey year to the total instruction expense at night, part-time, and summer schools for the same city group, also reported in the Survey, to yield the salaries paid supervisors, principals and teachers in these schools. This procedure is used for all years except 1934, for which the salaries of this group in part-time schools are given in the Survey. In 1934 also the figures for cities in county units are not reported with those for other cities. Data for the larger cities in county units are shown separately and have been added to make the series comparable. The 1936 figures for cities in county units are based on their ratio in 1934 to the figures for other cities. Total salaries for inter-Survey years are interpolated along a straight line.

The pay of other employees excluding janitors is the product of the estimated number (see the notes to Table G 7) and the average pay. Average pay for odd years since 1925 is derived from National Education Association sample data. Intervening year interpolation and extrapolation from 1925 to 1919 are by the average pay of the teaching staff.

School salaries in cities of 30,000–100,000, 10,000–30,000, and 2,500–10,000 are estimated by the same procedure as that outlined for schools in cities of 100,000 or over, with the following exceptions: (a) salaries of other employees in cities of 10,000–30,000 for the Survey years before 1926 are obtained by applying the 1926 ratio of salaries to total auxiliary expense as reported in the Survey to the comparable item for the earlier Survey years; estimates for inter-Survey years are interpolated along a straight line; (b) for cities of 2,500–10,000 the average salary of other employees is extrapolated from 1925 to 1919 by the average salary in cities of 10,000–30,000.

Salaries of teaching staffs in rural schools are estimated for Survey years by subtracting those for city day schools from the total

for all public day schools. Estimates for inter-Survey years are inter-polated along a straight line. Since the 1918 Survey figure includes only teachers' salaries the salaries of supervisors and principals are estimated by multiplying their number (see the notes to Table G 7) by the average salary. The average salary is assumed to have the same relation to the average salary of teachers as it does in city day schools. The pay of other employees excluding janitors is the product of their number (see the notes to Table G 7) and the average pay. Average pay is estimated by applying to the average pay of teachers, etc. in rural schools the ratio of the average pay of other employees to that of teachers in cities of 2,500–10,000.

Salaries of administrative officers are estimated for all schools as a unit by multiplying the number (see the notes to Table G 7) by the average pay. Average pay for odd years, 1925–37, is derived from National Education Association sample data; for even years, 1926–36, interpolated along a straight line; for 1919–24, extrapolated by the average pay of the teaching staff.

Janitors' wages are estimated on the basis of total operating costs of all schools reported in Statistics of State School Systems in the *Biennial Survey of Education* and the ratio of wages to total cost for those schools that report these items separately. Estimates for inter-Survey years are interpolated along a straight line. For 1935 and 1936 janitors' wages are estimated by multiplying the number (see the notes to Table G 7) by the average wage, the latter extra-polated by the average pay of other employees.

Bus drivers' wages are estimated to be 8.62 per cent of the total cost of pupil transportation as reported in the Survey. For the derivation of the percentage going to wages see the National Education Association *Research Bulletin,* May 1938.

For 1937 and 1938 wages and salaries in all elementary and high schools combined are estimated by multiplying the number of employees (see the notes to Table G 7) by the average pay. Average pay, computed for 1936, is extrapolated for 1937 and 1938 by National Education Association data on employees and salaries in city school systems. The NEA data are available for 1935, 1937, and 1939; estimates for intervening years are interpolated along a straight line.

2) *Special schools:* covers schools for blind, deaf, mentally defi-cient, and delinquent children. Total pay is estimated by multiply-

ing the number of employees (see the notes to Table G 7) by the average pay. The average pay of the teachers is assumed to be the same as that of teachers in public day schools; for attendants the average pay of other employees excluding janitors is used. The 1937 and 1938 estimates are assumed to be the same as the 1936.

3) Higher schools: negro land-grant colleges and universities are estimated separately from other higher schools which include junior colleges, normal schools, teachers' colleges, and universities.

Salaries of principals and instructors in normal schools and teachers' colleges, reported for 1918–30 in the *Biennial Survey of Education,* are interpolated for inter-Survey years along a straight line. Salaries of university teachers are estimated by multiplying the number (see the notes to Table G 7) by the average salary. Average salary is derived from Viva Boothe's *Salaries and the Cost of Living in Twenty-Seven State Universities and Colleges, 1913– 1932* (Ohio State University Press, Nov. 1932). Total salaries for universities and colleges are based on the estimated salaries for instruction and the ratio of total salaries to the salaries for instruction as reported for land-grant colleges by the Office of Education in their bulletins, *Land-Grant Colleges and Universities,* for 1925– 29. For the years back to 1919 the 1925 ratio is used; for 1930, the 1929 ratio. For salaries other than for instruction in teachers' colleges and normal schools the ratio of salaries other than for instruction and research to current expenditures excluding instruction, as derived for land-grant colleges from the above mentioned bulletins, is applied to the current expenditure figures for teachers' colleges and normal schools reported in the Survey and interpolated for intervening years along a straight line. For the years back to 1919 the 1925 ratio is used; for 1930, the 1929 ratio.

For 1931–38 the estimates of faculty salaries are based on the 1929 land-grant college ratios of salaries to total expenditures. Total expenditures are reported for individual colleges and universities in the *Biennial Survey of Education* for 1932 and 1934. For those that do not report expenditures but do report the number on the faculty, salaries are estimated on the basis of the average salary derived from the data for universities reporting both. Estimates for library workers' and other salaries in 1932 also are based on the 1929 ratio for land-grant colleges and universities. For 1933 and 1934 they are obtained by multiplying the estimated number (see

the notes to Table G 7) by the average salary. The average salary of library workers in 1932 is extrapolated to 1933 and 1934 by the average salary of the faculty. The average pay of other employees is that of similar employees in elementary and high schools. The extrapolation of the total wage and salary bill after 1934 is by administrative and teaching salaries in elementary and secondary schools in cities of 30,000 or over.

Total wages and salaries in negro land-grant colleges and universities, 1926–29, are from the Office of Education bulletins, *Land-Grant Colleges and Universities*. For other years salaries are estimated by multiplying the number (see the notes to Table G 7) by the average salary. Average salary is computed for 1926–29 and extrapolated to 1919 and 1936 by the average salary in other higher public education.

The description of the estimates for higher education is not valid for 1929–38, since for these years we substituted estimates prepared by the Bureau of Foreign and Domestic Commerce, National Income Division. However, as the above description is referred to in the notes on the estimates of private education, we retained the notes on our original estimates of salaries in higher public education.

Col. 10 Total: sum of col. 5–9.

TABLE G 3

Pensions and Employee Compensation

PENSIONS

Col. 1 Federal: estimates for 1929–38, from the Bureau of Foreign and Domestic Commerce, National Income Division, and described in *National Income in the United States, 1929–35*. For 1919–28 they are the sum of (a) military and naval pensions, obtained from the Veterans' Administration, (b) military and naval retirement pay, extrapolated from 1929 by the pension figures, (c) civil retirement pay extrapolated from 1929 by civil salaries.

Col. 2 State: difference between total pensions paid and pension assessments; both are reported for the fiscal years 1919 and 1923–31 in *Financial Statistics of States*, but for 1921 and 1922 only total miscellaneous expense is reported and the 1921 figure does not

cover all states. The miscellaneous expense item in 1921 is raised
to include the states not reporting by the 1922 ratio of the total to
that for the states reporting in 1921. Pensions for these two years
are then estimated on the basis of the ratio of pensions to total mis-
cellaneous expense for 1919 and 1923, interpolated along a straight
line. Pensions paid in 1920 are interpolated between 1919 and 1921
by the total salary bill.

Pension assessments are combined with donations in the 1922
report. Donations are interpolated along a straight line between
1919 and 1923. Pension assessments are obtained by subtraction.
The reported 1921 figure is raised to the total by the method used
for pensions paid. The 1920 figure is interpolated between 1919
and 1921 along a straight line.

The estimate for 1932 is obtained by raising the data for the 41
states reporting to the Bureau of the Census by the 1931 ratio of the
totals for all states to those for the 41 available in 1932 for both
pensions paid and pension assessments. The extrapolation for
later years is by pension payments of sample states from data col-
lected by the Bureau of Foreign and Domestic Commerce, National
Income Division.

Col. 3 County: for 1931 and 1932 from the Bureau of Foreign and
Domestic Commerce, National Income Division, as derived from
sample county pensions and the ratio of total county cost pay-
ments to sample county cost payments. The estimates for 1933–37
are extrapolated from 1932 by sample county pensions, collected
by the National Income Division. The estimates for 1919–30 and
1938 are based on the county salary bill and the ratio of pensions
to salaries. The ratio, computed for 1931 and 1937, is extrapolated
for other years by the corresponding ratio for states and cities
combined.

Col. 4 City, including public education: difference between pen-
sions paid and pension assessments; both are reported for cities of
30,000 or over for 1918 and 1923–31 in Financial Statistics of Cities,
but for 1920 and 1922 only total miscellaneous expenditures are
reported. For 1919–22 the method of estimation is similar to that
for states. Pensions, 1932–36, in cities of 100,000 or over are based
on data from Financial Statistics of Cities; for 1937 and 1938 they
are extrapolated by sample data collected by the Bureau of Foreign
and Domestic Commerce, National Income Division. Pensions in

cities of 30,000–100,000 in 1931 are extrapolated through 1938 by
the sample for that city size group.

Pensions, 1919–31, in cities under 30,000 are based on the salary
bill and the ratio of pensions to salaries. For 1931 the ratio for
cities of 30,000–100,000 is used and is extrapolated by the corre-
sponding ratio for cities of 30,000 or over. The 1931 estimate of
pensions is extrapolated through 1938 by the sample data of the
National Income Division, for that city size group.

Col. 5 Total: sum of col. 1–4.

EMPLOYEE COMPENSATION

Col. 6 Federal: sum of col. 5, Table G 2, and col. 1, above.

Col. 7 State: sum of col. 6, Table G 2, and col. 2, above.

Col. 8 County: sum of col. 7, Table G 2, and col. 3, above.

Col. 9 City, including public education: sum of col. 8 and 9, Table
G 2, and col. 4, above.

Col. 10 Total: sum of col. 10, Table G 2, and col. 5, above.

TABLE G 4

Interest

Col. 1 Public debt: for fiscal years, from the *Annual Report of the
Secretary of the Treasury.* Pairs of fiscal years are averaged to yield
calendar year figures.

Col. 2 Postal savings: for 1920 and later years, from the *Annual
Report of the Comptroller of the Currency.* The 1919 estimate is
derived by applying the 1920 interest rate to 1919 deposits (from
the same source). Pairs of fiscal years are averaged to yield calendar
year figures.

Col. 3 Total federal: sum of col. 1 and 2.

Col. 4 State: pairs of fiscal years are averaged to yield calendar year
figures after the estimates are made. Net interest is the difference
between total interest paid and interest received.

Total interest paid in 1919 and 1921–31 is reported in *Financial
Statistics of States.* The 1921 figure reported is not a total and is
raised by the 1922 ratio of total interest to interest of the states
that reported in 1921. The 1920 estimate is based on the gross new
issues estimated by the *Commercial and Financial Chronicle* and
the ratio of the net to the gross increase as derived from data in

the *Bond Buyer*, 1928. The 1932 estimate is based on the percentage change from 1931 to 1932 in interest payments of the 41 states reporting to the Bureau of the Census in 1932. Extrapolation for later years is by the interest payments of sample states collected by the Bureau of Foreign and Domestic Commerce, National Income Division.

Interest received in 1919 and 1923–31 is reported in *Financial Statistics of States*. The 1922 estimate is the product of total receipts from rents and interest (*Financial Statistics of States*) and the ratio of interest to them. This ratio, computed for 1923, is extrapolated to 1921 by the ratio for states reporting in 1921, and interpolated between 1921 and 1923 along a straight line. Total interest received in 1921 is estimated on the basis of the percentage change from 1921 to 1922 in interest received by reporting states, as described above. The 1932 estimate of interest received is based on the percentage change from 1931 to 1932 in receipts from highway privileges, rents, and interest as indicated by partial data reported to the Bureau of the Census. Estimates for later years are extrapolated from 1932 by the sample data of the National Income Division.

Net interest in 1920 is estimated by applying to total interest paid in 1920 the ratio of net to total interest paid in 1919 and 1921, interpolated along a straight line.

Col. 5 County: total interest paid by county governments in **1912**, from the *Census of Wealth, Debt and Taxation,* 1913; in **1931**, from *Financial Statistics of State and Local Governments,* 1932. For 1922 and 1925–29 it is the difference between interest payments of state and local governments as derived by the National Industrial Conference Board and our estimates of state and city interest payments. Intervening year estimates are interpolated by the sum of state and city interest payments.

The ratio for states and cities of interest received to total receipts from highway privileges, rents, and interest is used to estimate interest received in 1931. Receipts from highway privileges, rents, and interest are reported in *Financial Statistics of State and Local Governments,* 1932. Interest received in 1919–30 is estimated by multiplying interest paid by the ratio of interest received to it, computed for counties in 1931 and extrapolated to 1919 by the corresponding ratio for states and cities.

Net interest is the difference between total interest paid and

interest received. For the years after 1931 both are extrapolated by
data for sample counties collected by the Bureau of Foreign and
Domestic Commerce, National Income Division.

Col. 6 City: payments by cities and all smaller municipalities in-
cluding other civil divisions. Total interest paid in 1931 is from
Financial Statistics of State and Local Governments, 1932, and is
estimated for 1912 and 1922 by multiplying the total debt out-
standing by the average interest rate. Total debt in 1912 is recorded
in the report mentioned above; that in 1922 in the *Census of
Wealth, Public Debt and Taxation,* 1922. The average interest
rate in 1912 is assumed to be the same as in cities of 2,500 or over.
The same figure is used for 1922 since the interest rate for larger
cities remained constant during the period. Interpolation between
1912, 1922, and 1931 is by the interest payments of cities of 30,000
or over as reported in *Financial Statistics of Cities.* For 1919 and
1921, when no reports were issued, the method is similar to that
for states for 1920. For 1920, when the Census coverage was incom-
plete, the total for the cities that reported is raised by the average
of the 1918 and 1922 ratios of all cities to those reporting in 1920.

Interest received is estimated on the basis of the ratio to interest
paid, derived for 1931 from *Financial Statistics of State and Local
Governments,* 1932, and *Financial Statistics of Cities.* In the
former, receipts from highway privileges, rents, and interest for
cities of 30,000 or over and for all other cities and civil divisions
are reported. From the latter we obtained the ratio of interest
received to receipts from highway privileges, rents, and interest
for cities of 30,000 or over and of 30,000–50,000. The ratio for the
latter is used also for cities with populations under 30,000. The
application of these ratios to the Census figures for receipts from
highway privileges, rents, and interest for cities of 30,000 or over
and for those of under 30,000 yields estimates of interest received
in 1931. The 1931 ratio of interest received to interest paid is
extrapolated to 1918 by the corresponding ratio for cities of 30,000
or over, estimated for 1918, 1920, 1922–31 from interest payments
and receipts recorded in *Financial Statistics of Cities.* Receipts
reported for 1920 are raised to include cities not covered. The
reported figure for 1922 includes receipts from highway privileges
and rents. To this is applied the estimated ratio of interest received
to receipts from highway privileges, rents, and interest computed

for 1922 from data for 1918, 1920, 1922, and 1923 in *Financial
Statistics of Cities.*

Net interest paid is the difference between total interest paid
and interest received. For 1919 and 1921 it is estimated on the basis
of the ratio of net to total interest paid. The ratios in these years
are by straight line interpolation between those for 1918, 1920, and
1922. For the years after 1931 only cities of 100,000 or over are
covered in *Financial Statistics of Cities.* Net interest paid is com-
puted for these cities and used as an index for net interest of all
cities and minor civil divisions.

Col. 7 Total: sum of col. 3–6.

TABLE G 5

Total Payments to Individuals

Sum for each type of government of employee compensation
(Table G 3) and interest (Table G 4). Relief payments (given in
Table G 1, footnote 1) are added to the federal total in 1933 and
later years.

TABLE G 6

Net Savings

Difference between net changes in assets and in liabilities. Com-
plete figures are not available but information has increased
throughout the period. The estimates are therefore crude; year to
year changes are computed for comparable lists of items. Data on
security assets and the public debt of state and local governments
are reported for fiscal years only; calendar years are averages of
pairs of fiscal years.

Col. 1 Federal, change in foreign security assets: see the notes to
col. 3.

Col. 2 Federal, change in other security assets: see the notes to col. 3.

Col. 3 Federal, total change in security assets: federal security assets
and the fiscal years for which annual changes can be determined
are (1) foreign government securities and loans, 1918–39 (before
1920 termed 'credits advanced for war purposes'), (2) capital stock
of the War Finance Corporation, 1918–20, (3) capital stock of war
emergency corporations, 1920–29, (4) capital stock of other govern-

ment corporations, 1920–29, (5) other obligations and securities, 1920–39, (6) proprietary interest of the United States in government corporations, 1929–39, (7) federal securities held by United States government trust funds and government agencies,. 1918–29, (8) federal securities held by United States government trust funds, 1929–39, (9) state and local securities held by United States government trust funds, 1930–39. All these items are given in the *Annual Report of the Secretary of the Treasury on the State of the Finances.*

Col. 4 State and local, change in security assets: the security assets of state and local governments are their sinking fund holdings, from the *Annual Report of the Secretary of the Treasury,* plus estimated other security investments. The investments of states, other than state securities in sinking funds, in 1918, 1919, and 1923–31 are from *Financial Statistics of States.* The 1920–22 estimates are obtained by applying to the estimated state debt in 1920–22 the ratios of such investments to state debt in 1919 and 1923, interpolated along a straight line; the 1932–37 estimates, by extrapolating the 1931 ratio to debt by the ratio for city governments and applying it to the state debt for the respective years. The 1938 estimate is extrapolated from 1937 by sinking fund holdings.

Total state debt outstanding in 1918, 1919, and 1922–31 is from *Financial Statistics of States.* The 1921 total is interpolated between 1919 and 1923 by the debt of the 30 states reporting in 1921. The 1920 total is by straight line interpolation of the 1919 and 1921 figures. Estimates of state debt, 1932–36, are from *Long-Term Debts in the United States* (Bureau of Foreign and Domestic Commerce). Total debt of local governments is the difference between the total debt of state and local governments (given in the *Annual Report of the Secretary of the Treasury*) and the estimated debt of state governments.

Financial Statistics of Cities shows the debt and security holdings, other than sinking fund assets, of cities of 30,000 or over in 1918 and 1923–31, and of 100,000 or over in 1931–36. Data for the latter are utilized to extrapolate through 1936 data for the former. The ratio of these security holdings to debt is computed for 1918 and 1923 to date; the 1918 and 1923 ratios are interpolated along a straight line to yield estimates for 1919–22. The application of

these ratios to the estimates of local government debt yields secu-
rity holdings other than sinking fund assets.

Col. 5 Total change in security assets: sum of col. 3 and 4.

Col. 6 Net value, public construction: the net change in real prop-
erty assets is assumed to equal the value of public construction less
the estimated depreciation on government fixed assets. The con-
struction figures are totals for federal, state, and local governments
as given in *Construction Activity in the United States, 1915–37*
(Domestic Commerce Series 99) and the *Survey of Current Busi-
ness,* August 1939. The depreciation figures are the current price
figures in *Capital Consumption and Adjustment* and unpublished
estimates for recent years, estimated similarly to the published
figures.

Col. 7 Federal, change in public debt: net debt for calendar years,
from the *Annual Report of the Secretary of the Treasury.* The
change in debt during the year is the difference between the amount
outstanding at the end and at the beginning of the year.

Col. 8 State and local, change in public debt: net debt for fiscal
years, from the *Annual Report of the Secretary of the Treasury.*
Averages of pairs of fiscal year figures yield calendar year-end fig-
ures. The change in debt for the calendar year is the difference
between year-end figures.

Col. 9 Total change in public debt: sum of col. 7 and 8.

Col. 10 Net savings: col. 5 plus col. 6 minus col. 9.

TABLE G 7

Employees

Col. 1 Legislative: estimates for 1929–38, from the Bureau of For-
eign and Domestic Commerce, National Income Division, and
described in *National Income in the United States, 1929–35.* For
the earlier years the number is kept constant at the 1929 level.

Col. 2 Judicial: see the notes to col. 1.

Col. 3 Civil executive, including Post Office: see the notes to col. 1
for estimates for 1929–38. The 1929 estimates of employees in the
Post Office Department and of other civil executive employees are
extrapolated to 1919 by the number given in the *Annual Report
of the United States Civil Service Commission.*

Col. 4 Military: see the notes to col. 1 for estimates for 1929–38.

The number in the Army, Navy, Marine Corps, and Coast Guard is extrapolated to 1919 by the number of active military personnel in the Army, the organized strength of the Navy, the active military personnel of the Marine Corps (all given in the *Statistical Abstract*), and the active military personnel of the Coast Guard (given in the *Annual Report of the Secretary of the Treasury*).

Col. 5 Total federal: sum of col. 1–4.

Col. 6 State: estimated by dividing the total salary bill by the average salary. The average salary for 1926 is derived from the Mosher and Polah report (see the notes to Table G 2, col. 6), adjustment being made for part-time employment. It is extrapolated for other years by the weighted average for sample states, the weights being the 1926 employment figures in the Mosher and Polah report. For the years before 1929 the sample is taken from data published in state auditors' reports. For 1929 and later years questionnaire material collected by the Bureau of Foreign and Domestic Commerce, National Income Division, is used.

The states and years for which average pay data are used are:

1919–21 New York (incl. county employees) and New Jersey
1921–26 New Jersey, California, Minnesota, Ohio, Texas, and Massachusetts
1926–27 New Jersey, California, Texas, and Massachusetts
1927–28 New Jersey and Massachusetts
1928–29 New Jersey, North Carolina, and Massachusetts
1929–30 Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Ohio, Minnesota, Kansas, Delaware, Virginia, North Carolina, Montana, Wyoming, Nevada, and Vermont
1930–32 The states listed for 1929–30 and, in addition, Michigan and Wisconsin
1932–33 The states listed for 1930–32 and, in addition, Maine, New Hampshire, Iowa, and South Dakota
1933–34 The states listed for 1932–33 except Kansas
1934–35 The states listed for 1933–34 except Ohio
1935–36 The states listed for 1934–35 except Massachusetts and Michigan; and, in addition, Indiana, Utah, and California
1936–37 The states listed for 1935–36 except Wisconsin; and, in addition, Ohio, Michigan, Maryland, and Kentucky
1937–38 Connecticut, New York, Pennsylvania, Minnesota, Delaware, North Carolina, Nevada, Indiana, Utah, Ohio, Illinois, Michigan, Maryland, and Georgia

Col. 7 County: the method is the same as that used for states. The basic average pay figure, for 1926 from the Mosher and Polah report (see the notes to Table G 2, col. 6), is extrapolated for 1919–25

and for 1927–35 by the average pay for state and city employees combined. Extrapolation from 1935 on is by the average pay in sample counties, derived from questionnaire material collected by the Bureau of Foreign and Domestic Commerce, National Income Division.

Col. 8 City: the method is essentially the same as that used for states. For 1929 and later years employees are estimated separately for city-county consolidations, cities of 500,000 or over, of 250,000–500,000, of 100,000–250,000, and under 100,000. In each case the average pay of the largest sample is considered to be the actual pay for the group for the year that the sample covers and is extrapolated by the samples for the other years. The sample data were collected by the Bureau of Foreign and Domestic Commerce, National Income Division.

For the years before 1929 employees are estimated for all groups of cities combined. The basic figures for average pay are for 1926 and 1929, the former derived from the Mosher and Polah report (see the notes to Table G 2, col. 6), the latter from the estimates by groups of cities. The cities used for interpolation between 1926 and 1929 and for extrapolation before 1926 are:

1919–21 New York, Washington, D. C., and San Francisco
1921–25 New York, Washington, D. C., San Francisco, and Cincinnati
1925–27 New York, Washington, D. C., San Francisco, Cincinnati, and Kalamazoo
1927–29 Washington, D. C., Cincinnati, and Kalamazoo

Col. 9 Public education: sum of employees in 1) elementary and high schools, 2) higher education, 3) special schools.

1) Elementary and high schools: the number of administrative employees as given in Statistics of State School Systems in the *Biennial Survey of Education* is interpolated along a straight line for the intervening years. Since the reported figure for 1936 is incomplete, it is raised to the total by the 1934 ratio of the total to those reporting in 1936.

The number of principals, supervisors and teachers in cities of 100,000 or over, 30,000–100,000, 10,000–30,000, and 2,500–10,000 is from Statistics of City School Systems in the *Biennial Survey of Education.* Inter-Survey year estimates are interpolated along a straight line. The number in rural schools is the difference between the *Biennial Survey of Education* figures for state day schools

(from Statistics of State School Systems) and those for city day
schools (from Statistics of City School Systems). Interpolation for
intervening years is along a straight line.

The number of other employees excluding janitors and bus
drivers is estimated separately for the various city groups and rural
schools on the basis of their ratios to the number on the teaching
staff. These ratios are derived for odd years, 1925–37, from the
National Education Association sample data. The 1925 ratios are
used for the earlier years. Examination of the ratio of other em-
ployees to those on the teaching staff for the various groups of cities
reveals that the ratio declines with the size of the city. The ratio
used for rural schools was selected after inspection of those for
cities and is kept constant at 2 per cent for the entire period.

The number of janitors is obtained for odd years 1925–33 and
for 1934 by dividing their total wages by the average wage. From
the National Education Association sample data for odd years
1925–37 the average wage figure for janitors is derived. It is ad-
justed by the ratio of actual per capita pay to sample per capita pay
of 'other' employees, the latter also derived from the National
Education Association data. The average wage for 1934 is inter-
polated by the average pay of other employees. The estimate of
janitors for 1925 is extrapolated back and that for 1934 forward
by the number on teaching staffs. For all other years the estimates
are by straight line interpolation.

The number of bus drivers is estimated by dividing their total
wage bill by the average wage derived from bus transportation
data.

For 1937 and 1938 employees in elementary and high schools as
a whole are estimated. The totals for 1936 are extrapolated by
National Education Association data on the number employed in
schools covered in their surveys. The NEA data, available for 1935,
1937, and 1939, are raised to the total by their estimate of the
percentage coverage of the sample and interpolated along a straight
line to yield the extrapolating index of the number of employees.
2) *Higher education:* from the *Biennial Survey of Education* the
number on the teaching staff is derived and interpolated along a
straight line for intervening years. In estimating the number doing
research and library work the assumption is made that per capita
pay is the same as for teachers. These per capita figures divided into

the estimated salaries for research and library work yield the number employed in these activities. The number of 'other' employees is estimated by dividing their total pay by the average pay of 'other' employees in public elementary and high schools. For 1932–34, however, the number on the teaching staff is used as the index for the number of 'other' employees. For years after 1934 the total of employees is extrapolated by the number of teaching and administrative employees in elementary and secondary schools in cities of 30,000 or over.

The preceding estimates exclude figures for negro land-grant colleges. The number on the latter's faculties are reported in the Office of Education bulletins, *Land-Grant Colleges and Universities*. 'Other' employees in this group are assumed to have the same relation to the faculty as they do in other higher educational institutions.

The description of the estimates for higher education is not valid for 1929–38 since for these years we substituted estimates prepared by the Bureau of Foreign and Domestic Commerce, National Income Division. However, as the above description is referred to in the notes on the estimates of private education, we retained the notes on our original estimates of salaries in higher public education.

3) *Special schools:* the estimate of employees in these schools is not complete since it excludes Indian schools, which are combined with Alaskan schools, and employees other than teachers and attendants. The number excluded is probably negligible.

For 1918, 1922, 1927, and 1932 data are reported in the *Biennial Survey of Education* and include schools for the blind, deaf, feeble-minded and subnormal, and delinquent. For inter-Survey years interpolation is along a straight line. The number of employees for 1932 is extrapolated through 1936 by the number of teachers in public elementary and secondary day schools. For 1937 and 1938 the 1936 figure is used.

For the minor adjustments in the basic Survey data and for the conversion of fiscal to calendar year figures see the notes to Table G 2.