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The Growth of Federal Expenditures, 1794–1952

It is a matter of common knowledge that federal expenditures, in current dollar amounts, have risen spectacularly since the founding days of the United States. Our concern in this section is to give some perspective to this growth by viewing it in relation to changes in prices, population, and national product.

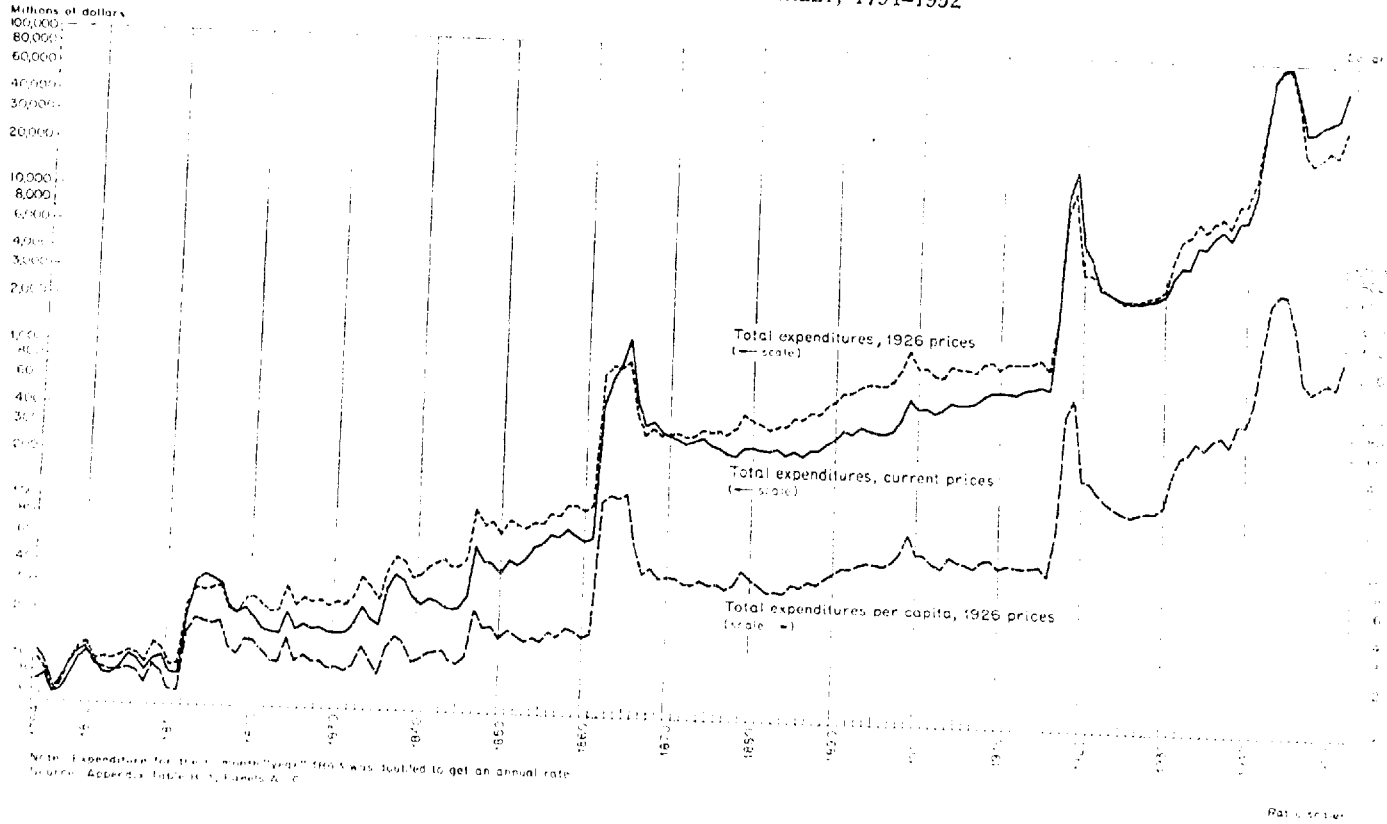
Total federal government expenditures [1] are defined in this study to include operating costs, capital outlays, and loans less repayments. Post office expenditures are included only to the extent of postal deficits, not gross postal outlays. The expenditure concept used here encompasses government disbursements that are designed to absorb resources directly, as well as those disbursements which merely transfer the command over resources from one group of citizens to another. Our data are thus intended to show as accurately as possible the scope of federal government activities rather than the annual amount of resources absorbed or expenditures made for goods and services by government.

In Chart 1 federal government expenditures are shown in terms of three measures for a period of 159 years. The presentation is on ratio scale to focus attention on relative rates of change over time. One of the curves of total expenditures is in current dollars. Prices, however, have varied greatly not only over the last century and a half but also within relatively short periods. When prices fall or rise, a given amount of money of course no longer has the same command over goods and services as formerly, and the gov-

[1] Both the total and the component expenditures are shown in Appendix Table B-1, Panels A–C. The text accompanying that table gives their derivation.

Chart 1

Federal Expenditures, Annually, 1791–1952



ernmental outlays, in real terms, thus become larger or smaller, respectively, per dollar spent. To adjust government expenditures according to this conception, purchases of commodities and payments for labor should be dealt with apart from transfer costs such as interest and pensions.

For the commodity and labor components the best index to use to remove the effect of price variations would be one composed, in the proper proportions, of the prices paid for the commodities and labor used by government. No such measure, however, exists for most of the period studied, and the adjustment was therefore made by the use of indexes of wholesale prices.[2] The resulting curve in Chart 1 of "total expenditures, 1926 prices" is clearly imperfect from the point of view of one who would find the trend of the real purchases by the federal government. Differences in the cost of labor are not included, except as reflected by variations in commodity prices. And the index is composed of general commodities and not exclusively of the kinds purchased by the federal government. Nevertheless, something of perhaps greater importance for the purposes of this study is accomplished. The adjustment of government expenditures to a given level of commodity prices gives a reasonable and comparable measure of the cost of government to

[2] For the period 1794–1890 the Warren and Pearson index was used; see George F. Warren and Frank A. Pearson, *Prices*, Wiley, 1933, pp. 11–13. For the period 1891–1952 the adjustments were made with the Bureau of Labor Statistics index. The calendar-year indexes, converted to the 1926 base, were applied to the expenditures through 1842, which were reported on a calendar-year basis. For subsequent years, expenditures are reported by fiscal years. The monthly price indexes therefore were combined to form fiscal-year averages, which were then used to express the expenditures in terms of 1926 dollars.

There are other deflators. One is the price index shown as implicit in gross national product except foreign claims, preliminary estimates, variant I, by Simon Kuznets, National Bureau of Economic Research, designed to be used in analyzing trends in capital formation and financing. This index, converted to a 1926 base for selected years, compares as follows with the index of the Bureau of Labor Statistics:

Year	*Kuznets' Index*	*BLS Index*
1900	48.4	56.1
1910	58.5	70.4
1920	121.5	151.4
1930	91.6	86.4
1940	82.4	78.6
1948	146.9	165.1

those who pay it. The same amount of taxes or loans turned over to the government signifies less or more to the taxpayer or bondholder as the prices of commodities are higher or lower, respectively.

Interest, however, is not an outlay for current output and labor services, but is a contractual payment arising from the past acquisition of some principal sum. With the exception of the depression borrowing of the thirties, most of the indebtedness of the federal government at any point of time was incurred during periods of war. If, then, the expenditures of a war are expressed in stable dollars, *all* costs, whether paid with tax or credit dollars, are corrected for the wartime increase in prices.

The conversion of the wartime principal to stable dollars, however, does not affect the treatment of the future payment of interest, which is another matter—a time charge for the use of borrowed money. Interest payments are adjusted for price changes because of variations in the real worth of the dollars surrendered and received.[3] They become more or less valuable and therefore harder or easier to obtain, respectively, as they buy more or fewer commodities. Thus the amount of the interest payment, like the amount for commodities and services, is properly converted to stable dollars through use of the general index of commodity prices. And, by the same reasoning, payments to veterans, farmers, and old persons, and other transfers should be similarly adjusted.

But if government expenditures in any one year are to be compared with those in another, particularly if the two years are far apart, an adjustment for price changes is not all that is required. Expenditures for many public goods and services and for some transfer payments vary with the size of the population. This relationship, however, is only general in character. Not all expenditures fluctuate directly with the number of persons in the country. Pensions, readjustment allowances, and other benefits to veterans are for *past* services. Exactly the same applies to the annual interest obligation on a war or a depression debt. The principal amount

[3] Another conceivable reason would be to ascertain what interest costs would have been if prices had been stable at the 1926 level. But this was not the purpose of the adjustment.

derives originally from the conditions of the period in which the borrowing was done. A current change in the population has no effect on these historical factors. Similarly, a wide variety of other federal expenditures would not be changed by a small increase in the number of inhabitants, say 5 per cent. Thus, if our population were slightly larger, we should probably spend no more for defense purposes, for foreign aid, or for atomic energy.

Nevertheless, if the gains in population are at all substantial, they increase the total of public services and therefore of expenditures.[4] Some of the additions are in products or services that can be expressed with fair accuracy on a per capita basis, for example, the several public assistance programs for which the federal government grants aid to the states on a per capita basis. With a growing population, the number eligible for governmental assistance increases in almost direct proportion, though developments such as a change in the age composition of the population may at times affect such expenditures more than population growth per se.

An adjustment for population, made by dividing the aggregate of federal expenditures for each year by the number of persons in the country, thus makes allowance for expenditures that vary positively with increases in population. But this adjustment is less satisfactory when applied to expenditures arising from past historical events. Admitting the qualification, the reduction of federal expenditures to a per capita basis does much to improve historical comparisons, particularly those covering long periods of time.

The three curves of expenditures in Chart 1—the first showing total expenditures in stable dollars, the second showing total expenditures in current dollars, and the third showing per capita expenditures in stable dollars—all have a pronounced upward secular trend. Federal expenditures, however measured, have grown greatly over the course of our national history. But when

[4] See also Solomon Fabricant, *The Rising Trend of Government Employment*, National Bureau of Economic Research, Occasional Paper 29, 1949, p. 26. Fabricant thinks that "a doubling of the population would, apart from the effects of other factors, be accompanied by something like a corresponding rise in government workers."

adjusted for prices and for population, they have not increased continuously. Indeed, from 1791 to 1811, from 1817 to 1846, from 1866 to 1884, and from 1899 to 1916, federal expenditures so adjusted were either stationary or declining. The number of years in these periods total 81; thus for half the life of the nation real federal expenditures per capita were not increasing.

Our economic history as a whole has been characterized by an ever-increasing national product. The United States has produced over the years a larger and larger aggregate of goods and services. The output of the economy has indeed grown much more than the population. Accordingly, the share of each person in the mounting total has increased greatly. It would be expected on this account alone that the volume of public goods and services, and perhaps also of transfer payments, would likewise have increased. People desire public as well as private goods and services, and always wish for additional ones. When they have a larger aggregate product, the presumption is that the public as well as the private components (and any transfer payments) would be more.

The real question therefore is whether the contribution of the federal government has increased more than the national product. Chart 2 and Table 1 were designed to give the answer. They show the percentage that federal expenditures were of realized national income [5] by decades from 1799 to 1889, and of gross national product annually from 1869 to 1951. The gross national product is the better measure of the nation's economic activity [6] but is not available for the period prior to 1869.

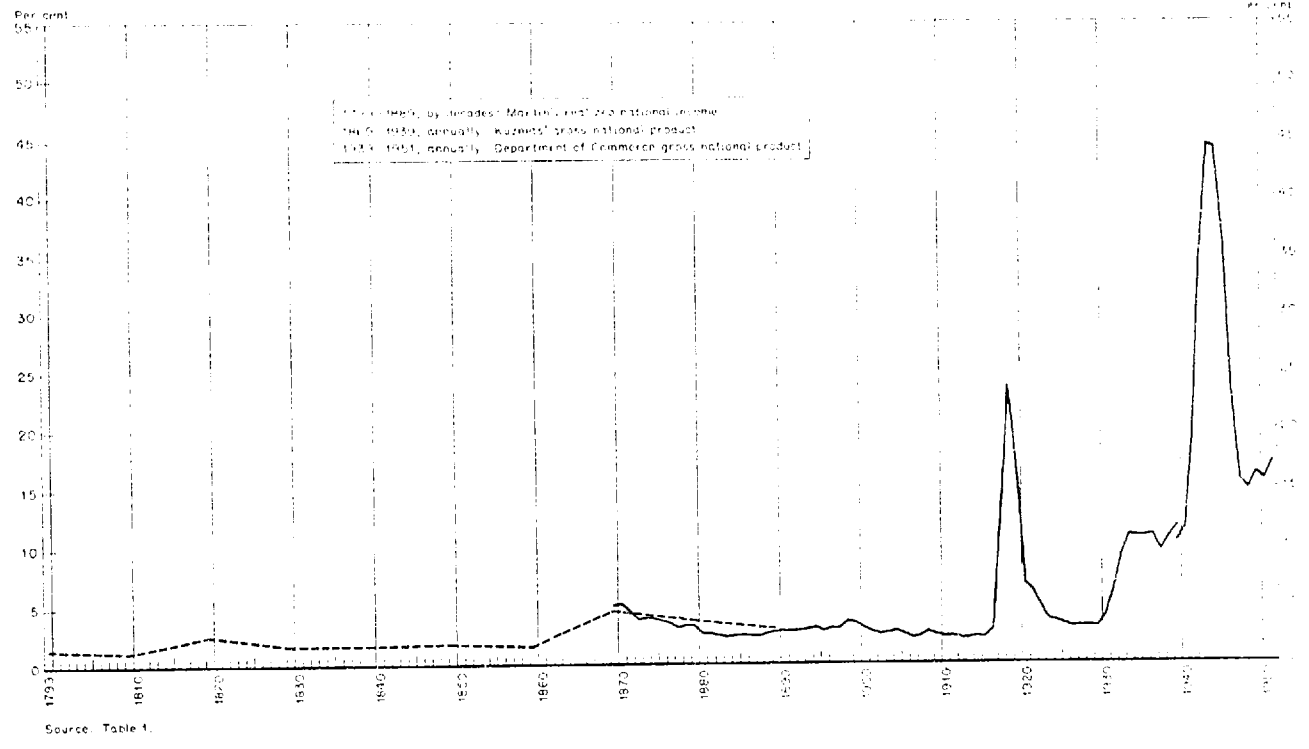
By the use of these estimates we find that the country's economy

[5] The series from Robert F. Martin, *National Income in the United States, 1799–1938*, National Industrial Conference Board, 1939, though questionable, is the only one available for the period before 1869. The figures conceptually approximate what is usually designated as "national income at factor cost." For an analysis of their validity see Simon Kuznets, "National Income Estimates for the United States prior to 1870," *Journal of Economic History*, Spring 1952, p. 115. Kuznets finds that Martin's estimates for the period 1800–1840 have a downward growth bias, and he doubts that real per capita income declined between 1800 and 1840 as is implied in Martin's figures. If Martin's estimates have this bias, it follows that during roughly the first half of the period under study federal expenditures may not have risen relative to income.

[6] The danger that comparisons with the national income may be misleading is discussed by Alan Sweezy in *American Economic Review*, December 1952, p. 887.

CHART 2

FEDERAL EXPENDITURES AS A PERCENTAGE OF NATIONAL PRODUCT, 1799–1951



Source: Table 1.

TABLE 1

FEDERAL EXPENDITURES AS PERCENTAGE OF NATIONAL INCOME, 1799–1889, OR OF GROSS NATIONAL PRODUCT, 1869–1951

Calendar Year	*Total Expenditures* [a] *(mill. $)* (1)	*Total Expenditures: as % of National Income (%)* (2)	*Military Expenditures* [a] *(mill. $)* (3)	*Military Expenditures: as % of National Income (%)* (4)
1799	10	1.4	5	0.8
1809	10	1.1	6	0.6
1819	21	2.4	10	1.2
1829	15	1.6	8	0.8
1839	27	1.6	15	0.9
1849	42	1.7	20	0.8
1859	66	1.5	31	0.7
1869	316	4.6	83	1.2
1879	267	3.7	46	0.6
1889	309	2.9	53	0.5
		As % of GNP (Kuznets)		*As % of GNP (Kuznets)*
1869	316	5.0	83	1.3
1870	301	5.1	68	1.1
1871	285	4.6	53	0.9
1872	284	3.8	61	0.8
1873	296	3.9	69	0.9
1874	289	3.9	64	0.9
1875	270	3.7	55	0.8
1876	253	3.4	50	0.7
1877	239	3.0	47	0.6
1878	252	3.2	47	0.6
1879	267	3.2	46	0.5
1880	264	2.5	45	0.4
1881	259	2.5	46	0.4
1882	262	2.3	48	0.4
1883	255	2.2	49	0.4
1884	252	2.3	48	0.4
1885	251	2.4	46	0.4
1886	255	2.3	44	0.4
1887	268	2.3	46	0.4
1888	284	2.5	50	0.4
1889	309	2.6	53	0.4

See page 12 for notes.

TABLE 1 (*Continued*)

Calendar Year	*Total Expenditures* [a] *(mill. $)*	*Total Expenditures: as % of GNP (Kuznets)*	*Military Expenditures* [a] *(mill. $)*	*Military Expenditures: as % of GNP (Kuznets)*
	(1)	(2)	(3)	(4)
1890	342	2.7	56	0.4
1891	355	2.7	60	0.5
1892	364	2.7	62	0.5
1893	376	2.8	63	0.5
1894	362	3.0	61	0.5
1895	354	2.7	58	0.4
1896	359	2.9	62	0.5
1897	405	2.9	97	0.7
1898	524	3.6	201	1.4
1899	563	3.4	221	1.3
1900	523	2.9	174	1.0
1901	505	2.6	171	0.9
1902	501	2.4	167	0.8
1903	550	2.5	181	0.8
1904	576	2.7	200	0.9
1905	569	2.4	203	0.9
1906	575	2.1	192	0.7
1907	619	2.2	202	0.7
1908	676	2.6	225	0.9
1909	694	2.3	238	0.8
1910	692	2.2	240	0.8
1911	690	2.2	240	0.7
1912	708	2.0	244	0.7
1913	730	2.0	252	0.7
1914	748	2.2	262	0.8
1915	748	2.1	274	0.8
1916	1,344	2.8	442	0.9
1917	7,308	12.8	3,856	6.7
1918	15,555	23.7	10,329	15.7
1919	12,402	16.7	8,772	11.8
1920	5,710	6.7	3,289	3.8
1921	4,180	6.1	1,755	2.5
1922	3,222	4.6	804	1.2
1923	3,027	3.7	664	0.8
1924	2,852	3.5	619	0.8
1925	2,802	3.2	588	0.7
1926	2,790	3.0	582	0.6
1927	2,821	3.1	617	0.7
1928	2,884	3.1	676	0.7
1929	3,000	3.0	715	0.7

(Continued on page 12)

TABLE 1 (*Continued*)

Calendar Year	*Total Expenditures*[a] *(mill. $)* (1)	*Total Expenditures: as % of GNP (Kuznets)* (2)	*Military Expenditures*[a] *(mill. $)* (3)	*Military Expenditures: as % of GNP (Kuznets)* (4)
1930	3,600	4.1	734	0.8
1931	4,450	6.3	718	1.0
1932	4,750	9.2	676	1.3
1933	5,600	11.0	594	1.2
1934	6,400	10.9	626	1.1
1935	6,950	10.9	812	1.3
1936	8,000	11.0	926	1.3
1937	7,800	9.6	984	1.2
1938	8,300	10.8	1,054	1.4
1939	9,500	11.7	1,287	1.6
		As % of GNP (Commerce)		*As % of GNP (Commerce)*
1939	9,500	10.4	1,287	1.4
1940	11,800	11.6	3,934	3.9
1941	24,250	19.2	16,608	13.1
1942	56,705	35.1	48,557	30.1
1943	86,432	44.5	77,016	39.6
1944	94,570	44.3	84,168	39.4
1945	78,461	36.5	64,852	30.1
1946	49,099	23.3	28,804	13.6
1947	36,492	15.6	12,312	5.3
1948	38,550	14.9	12,116	4.7
1949	41,868	16.2	12,244	4.7
1950	44,484	15.7	16,514	5.8
1951	56,888	17.3	30,208	9.2

[a] From 1849 on, this is an average of the two fiscal years that include the calendar year. It should be understood that this adjustment was made for purposes of long-term comparisons *only*.

Source:

Column 1

Derived from Appendix Table B-1, Panel A.

Column 2

Column 1 divided by national income or GNP from following sources: 1799–1889, realized national income, Robert F. Martin, *National Income in the United States, 1799–1938*, National Industrial Conference Board, 1939, p. 6; 1869–1939, GNP, pre-

has grown from a realized national income of $0.7 billion in 1799 to a gross national product of $329 billion in 1951. Federal expenditures over the same period, however, increased from $9.67 million, or 1.4 per cent of national income, to $56,888 million, or 17.3 per cent of gross national product. Thus, over a time span of 152 years federal expenditures grew strikingly more than the total economic activity of the nation. But, as the reader may note from Chart 2, this growth in relation to the total national product was not evenly distributed over the period under study. It appears to have been slight throughout the nineteenth century but very substantial during the first half of the twentieth.

Chart 2 also shows that 1930 marks the start of the exceptionally large increases in federal expenditures compared with gross national product. From that year to the present is only a little more than twenty years. During the much longer preceding period, the increase of federal expenditures in relation to the size of the economy was moderate, except in time of war. It is not surprising that the influence of that fundamental change on the character of public services, on the attitude of the public toward government spending, and on the structure of the economy has become the subject of much discussion and speculation.

Higher Plateaus of Government Expenditures after Major Wars

As a part of the long-term upward movement of federal expenditures, the succession of wartime peaks stands out (see Chart 1). After all major wars part of the increase was maintained: expenditures never returned to the prewar level. Federal expenditures were substantially higher from the end of the War of 1812 to the

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liminary estimates by Simon Kuznets, National Bureau of Economic Research, prepared for use in the study of long-term trends in capital formation and financing in the United States; 1939–1951, *Survey of Current Business*, July 1952, p. 15.

Column 3
Same source as column 1.

Column 4
Column 3 divided by same national income or GNP figures as were used for column 2.

opening of the Civil War than they were before 1812; at a higher level during the years from the close of the Civil War to the beginning of the First World War; at a still higher level from the close of the First World War to the beginning of the Second World War; and at a much higher level after the Second World War than before that struggle.

But comparisons in terms of the national product are more meaningful for purposes of appraising the changing scope of the federal government in relation to the whole economy. Our data show that after the War of 1812 the ratio of federal expenditures to national income (Chart 2 and Table 1) rose to a level slightly above that in the prewar period and then remained relatively stable through 1859.[7] Following the close of the Civil War the ratio declined from 5.0 per cent in 1869 to a level between 2 and 3 per cent in the 1880's and throughout the early 1900's up to the First World War. In 1912–1913 the ratio fell as low as 2 per cent. Nevertheless, over the entire post–Civil War period the level of the annual ratios remained above that prevailing before 1860. After the close of the First World War the ratio at first declined rapidly, from 6.7 per cent in 1920 to 3.7 per cent in 1923, and then slowly to 3.0 per cent in 1926. But again the level in that period was higher than in the prewar one. Then came the depressed years of the 1930 decade. At the outset the value of the gross national product declined rapidly and federal expenditures rose, thus causing the percentage of the latter to the former to climb from 4.1 to 11.0 between 1930 and 1933. During the rest of the decade, as economic activity showed some recovery, the percentage became comparatively stable. With one exception the range was from 10.9 to 11.7. The Second World War carried the ratio to heights never before reached, and in the years since the war's end it has averaged considerably above the level for the period immediately after the First World War and even above that of the depression years of the 1930's.

[7] Based on the figures in column 2 of Table I. federal expenditures rose from a prewar average of 1.25 per cent to a postwar average of 1.6 per cent. In the light of the possible shortcomings of Martin's estimates of national income. already noted in footnote 5, this upward trend in the percentages may be partly or wholly fictitious.

As we have shown, this upward movement was steplike. The first two steps were long, the earliest covering about 40 years (from four years after the War of 1812 to two years before the Civil War), and the second about 47 years (from four years after the Civil War to a year before the First World War). For each step, the average rise from the preceding level was substantial, but it was measured from a low base. The third step, from three years after the close of the First World War through 1929, was short (about 8 years), and again the considerable rise was from a low level. The fourth step, during the depression, was also short; the rise, however, was not only greater than in the other steps, but it was from a higher base. Finally, after the Second World War came the fifth step, and the average for the 3 years 1949–1951 was much higher than that of the fourth step.

Short-Term Effects of Wars on Federal Expenditures

The course of federal expenditures from the immediate postwar years through the ensuing short-term interval of peace shows most clearly the effects of war on such expenditures. Annual averages of total expenditures and of the component parts (military, interest, veterans, and civil) [8] were computed for the five years preceding each of the four major and the two minor wars.[9] These averages were calculated in per capita amounts of 1926 dollars. Similar averages were computed for the war period, and where the transition to conditions of peace included more than one year, for that interval also. Likewise, postwar averages were computed for the first and the second five years after the transition.[10] Finally, the average costs for each of the component parts in the prewar and in the postwar periods as percentages of the totals for those periods

8 Foreign was also included for the First and Second World Wars, making five in all.
9 The naval actions against France from 1798 to 1800 and against Tripoli from 1801 to 1805, the periods of fighting with Indians, and various military and naval ventures of a police or corrective kind were excluded.
10 Since wars neither begin nor end with fiscal years and the bounds of transition periods are not marked for the convenience of the investigator, judgment had to be exercised in determining the years used. For the post-Second World War average the 1948–1950 fiscal years were chosen.

were determined, so that comparisons of the relative importance of the items included might be made.[11]

Effects on Total Expenditures. The course of total expenditures before, during, and after the four major wars of our history is shown in Charts 3 and 4; [12] Chart 5 shows their course for the two minor wars. The data are adjusted for changes in both the price level and population.

During the first major war, that of 1812,[13] total expenditures were, in 1926 dollars adjusted for population change, 224 per cent of the prewar annual average. Corresponding percentages in current dollars and in 1926 dollars are shown in Table 2 for this and the three other major wars, but the text discussion is restricted to 1926 dollars per capita. The annual average for the two years of transition was a little in excess of the average during the period of hostilities. During the first five years of peace, average annual expenditures amounted to 164 per cent of prewar. For the second five years the percentage was 147.

The Civil War [14] had a much greater effect on federal expenditures than the War of 1812. The average total cost per year during the war period was 733 per cent of prewar after adjustment for population and price changes. During the first five years of peace the figure for average annual expenditures declined to 246 per cent of the prewar level, and in the second five-year period to 222 per cent. Federal expenditures after the Civil War were much higher than before.

Total adjusted federal expenditures during the average year of

[11] The data from which all these calculations were made are given in Appendix Table B-1, Panels A–C.

[12] In Chart 3 the horizontal scale is drawn so as to facilitate comparisons of the costs in one war with those in another. In Chart 4 the horizontal scale is devised so as to focus attention on differences between wars during the transition and early peacetime years.

[13] The war lasted from June 18, 1812 to the Battle of New Orleans, which was fought January 8, 1815, two weeks after the treaty of peace was signed. The calendar years 1812, 1813, and 1814 were taken as the war period, and 1815 and 1816 as the transition period.

[14] The war began April 12, 1861 and ended April 9, 1865. The war period included the fiscal years 1862 through 1865. The base (prewar) period was from 1857 through 1861. The single year of transition was 1866. The first five years of peace were from 1867 through 1871, and the second from 1872 through 1876.

TABLE 2

AVERAGE ANNUAL TOTAL EXPENDITURES IN WARTIME AND POSTWAR PERIODS AS PERCENTAGE OF PREWAR EXPENDITURES, FOR FOUR MAJOR WARS

	Current Dollars	*1926 Dollars*	*1926 Dollars per Capita*
War of 1812:			
Wartime	322	253	224
Postwar:			
1st 5 years	217	219	164
2nd 5 years	185	230	147
Civil War:			
Wartime	1,231	825	733
Postwar:			
1st 5 years	487	313	246
2nd 5 years	414	319	222
First World War:			
Wartime	1,512	823	776
Postwar:			
1st 5 years	410	289	252
2nd 5 years	432	333	270
Second World War:			
Wartime	863	671	630
Postwar:			
1st 3 years	475	241	210

Source: Appendix Table B-1, Panels A–C.

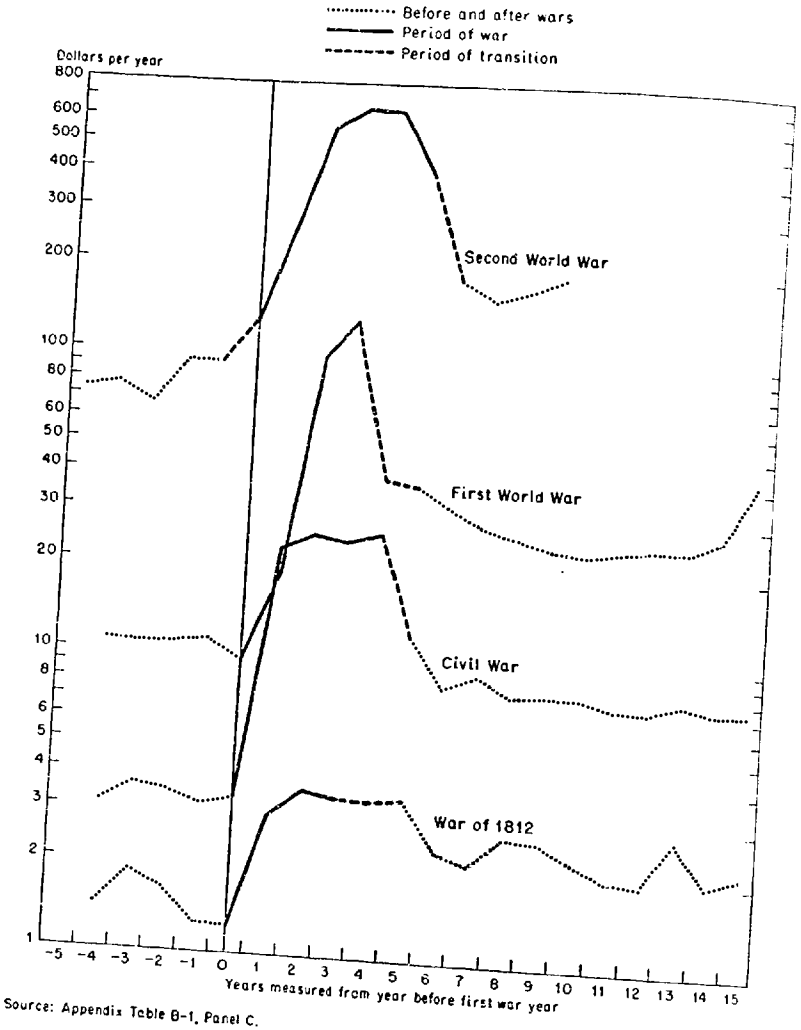
the First World War were 776 per cent of their average during the years immediately before that struggle.[15] During the first five years after the transition the annual average of all expenditures was 252 per cent of the prewar average, and for the second five years of the postwar period it was 270 per cent. Thus total real expenditures per capita greatly exceeded those for the prewar period. It may

15 The First World War began for the United States on April 6, 1917. The fighting ended with the armistice of November 11, 1918, but the treaty of peace was not signed until much later.

The fiscal years 1917, 1918, and 1919 have been taken as the war period. The prewar base years are from 1912 through 1916, and the transition years are 1920 and 1921. The first five postwar years are from 1922 through 1926, and the second from 1927 through 1931.

CHART 3

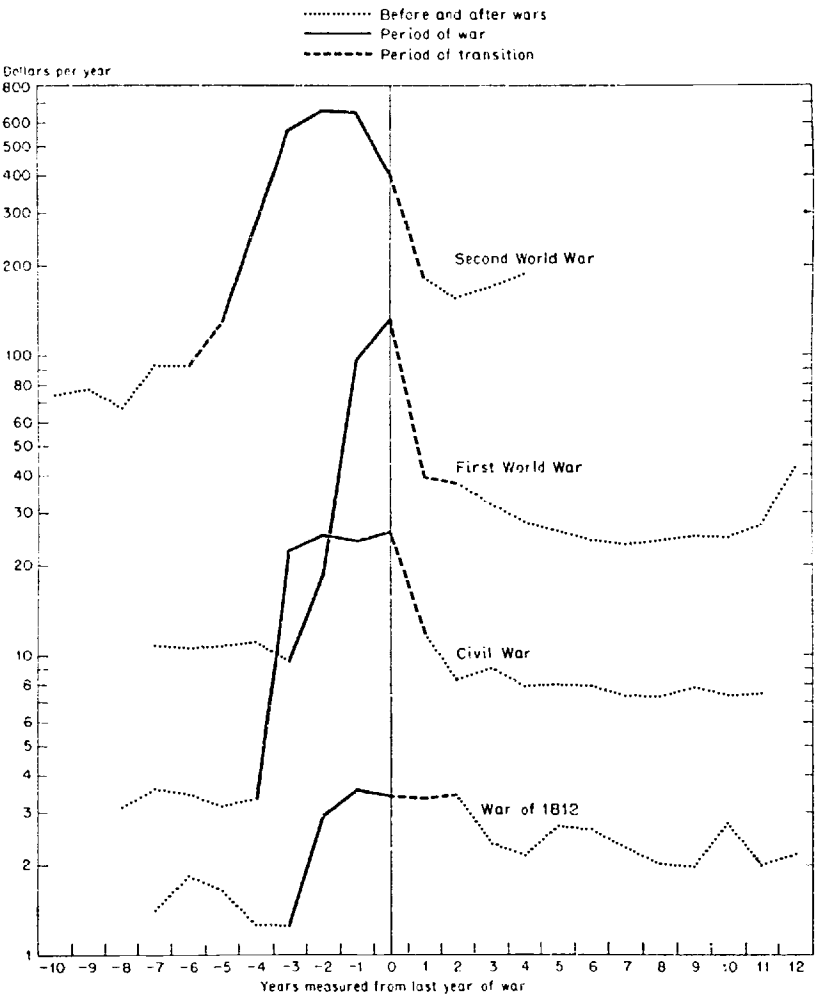
TOTAL FEDERAL EXPENDITURES BEFORE, DURING, AND AFTER THE FOUR MAJOR WARS, MEASURED FROM YEAR BEFORE FIRST WAR YEAR, PER CAPITA, IN 1926 PRICES



Source: Appendix Table B-1, Panel C.

CHART 4

TOTAL FEDERAL EXPENDITURES BEFORE, DURING, AND AFTER THE FOUR MAJOR WARS, MEASURED FROM LAST WAR YEAR, PER CAPITA, IN 1926 PRICES



Source: Appendix Table B-1, Panel C.

Ratio scale

also be noted that the magnitude of the effects of the Civil and First World Wars on total expenditures was very much the same.

The aggregate of federal expenditures in the average year of the Second World War [16] was 630 per cent of the corresponding total in the average year of the preceding peacetime period. In the three postwar years of peace before the Korean War,[17] fiscal 1948 through 1950, the average annual expenditures were 210 per cent of the prewar level.

We thus find that the pattern of total expenditure changes in all four major wars was remarkably similar. There were only a few differences of any significance. The War of 1812 was notable for the large expenditures in the transition years and for the comparatively small decline in the postwar period. After the close of the other wars, total expenditures decreased sharply and the postwar level was much below that of the war period. The trend of aggregate expenditures following both the War of 1812 and the Civil War was slightly downward over the ten years of peace shown on the chart. The same declining movement characterized most of the interval after the First World War, but was reversed toward the end. After all wars, however, expenditures were much larger than in the preceding years of peace.

Adjusted data for aggregate federal expenditures before, during, and after the Mexican and Spanish-American Wars are shown on Chart 5. These minor struggles raised the level of federal expenditures in the ensuing period of peace, but the increases were of lesser magnitude than those resulting from the great wars.

The war with Mexico was brief,[18] but during it the annual rate

[16] The Second World War began December 7, 1941 and ended with the surrender of Japan August 14, 1945.

The war period has been included within the fiscal years 1942 through 1946. The base years are from 1936 through 1940, the postwar years are from 1948 through 1950, and the transition years are 1941 (before the war) and 1947 (after its close).

[17] South Korea was invaded on June 25, 1950. The cold war did not involve fighting; hence, 1948–1950 is considered a period of peace.

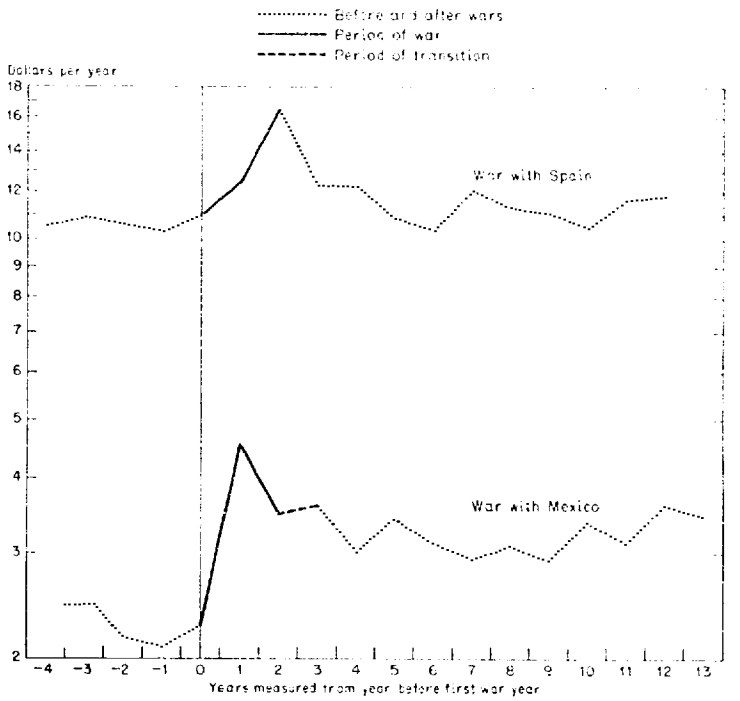
[18] The war was from May 13, 1846 to September 17, 1847. The treaty of peace, however, was not signed until February 1848.

The fiscal years 1847 and 1848 comprised the war period. The base (prewar) period includes the calendar year 1842, and the fiscal years 1843 (six months) through 1846. The year of transition is 1849. The first five years of peace are from 1850 through 1854, and the second from 1855 through 1859.

of expenditures was 177 per cent of prewar level in constant dollars per capita. After the transition to peace annual expenditures were 137 per cent of prewar during the first five years and continued at a slightly higher level in the second five-year period. An

CHART 5

TOTAL FEDERAL EXPENDITURES BEFORE, DURING, AND AFTER TWO MINOR WARS, MEASURED FROM YEAR BEFORE FIRST WAR YEAR, PER CAPITA, IN 1926 PRICES



Source: Appendix Table B-1, Panel C

Ratio scale

informative glance at the data behind these percentage increases is afforded by the report of the Secretary of the Treasury in 1850.[19] With reference to the additional costs of government in the fiscal year 1852 arising from the war he stated:

[19] *Annual Report of the Secretary of the Treasury on the State of the Finances*, H.R. Doc. 11, 31st Cong., 2d sess., 1850.

It thus appears that these largely increased expenditures commenced in the year 1845–'6, and in consequence of the War with Mexico; and it will be shown that, by reason of our new acquisition of territory and the fulfillment of the obligations of government resulting from that war, a continuance of these expenditures will be required for an indefinite period.

Among other factors he cited the following—here repeated in order of their importance—as responsible for the increased cost of government: the War and Navy Departments; interest and installments under treaty with Mexico; pensions (Acts of 1848); lighthouses, dry dock, and customhouse and marine hospital in California; surveys of new coasts and boundaries; Indians in new territories; and territorial governments of Utah and New Mexico.

The war with Spain lasted less than four months but extended over parts of two fiscal years.[20] Since the readjustment to conditions of peace was made in the second year, the war and transition periods could not be separated. During the two years included total annual expenditures were 136 per cent of prewar, and then in the first and second five years of peacetime stood at 108 and 106 per cent of prewar, respectively. The pattern of change in total expenditures that we observed after each of the major wars has thus been confirmed, even by the two minor wars of the nineteenth century.

Effects on War-Connected Expenditures. Federal expenditures in 1926 dollars per capita for military, veterans, and interest are shown in Charts 6–9 for the periods before, during, and following each of the four major wars. The relative standing of military expenditures during the war periods was highest in the Second World War, when they were 4,157 per cent of the prewar level, and lowest in the War of 1812, when they were only 373 per cent. For the Civil War the increase was to 1,406 and for the First World War to 1,389 per cent. The smaller percentage rise in the First World War may be accounted for by the comparatively short duration of the fighting, which did not give time for a full mobilization

[20] The war began April 24 and ended August 12, 1898. The war and transition periods include 1898 and 1899. The base period is from 1893 through 1897. The first five years of peace after the war are from 1900 through 1904, and the second from 1905 through 1909.

of the nation's military resources. After all wars military expenditures remained higher than in prewar years, though in differing degrees (Table 3). During the three years of nonfighting following

TABLE 3

SUMMARY OF SHORT-TERM EFFECTS OF MAJOR WARS ON FEDERAL EXPENDITURES

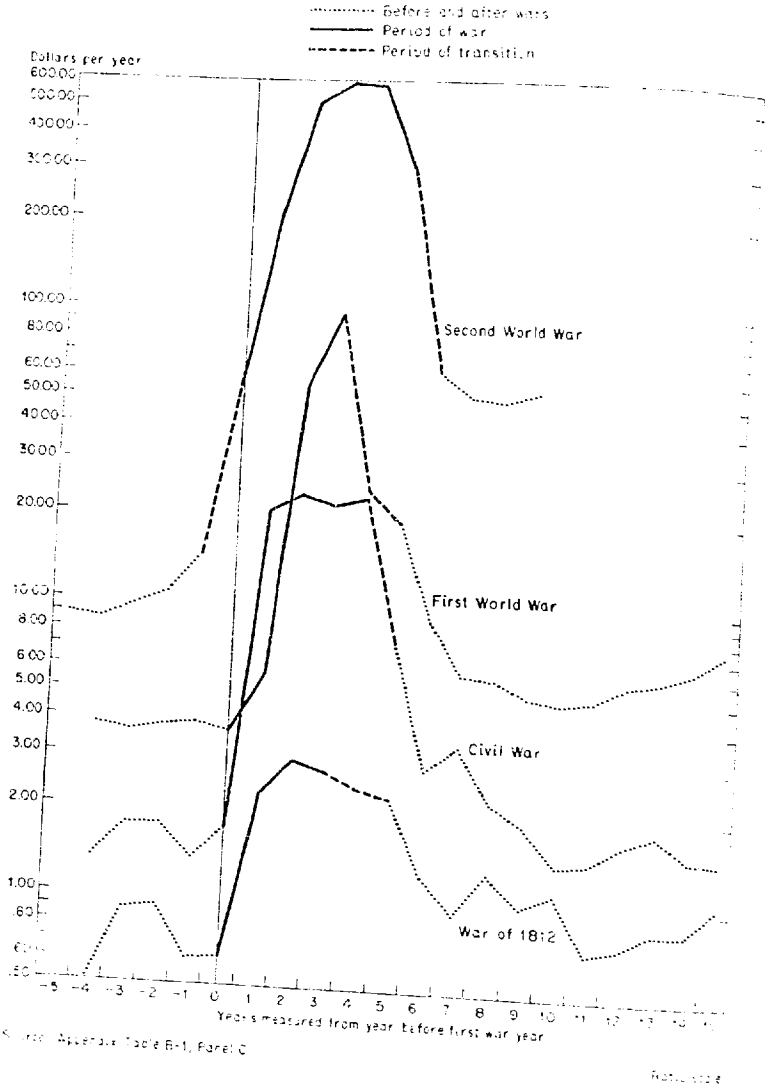
	TOTAL EXPENDITURES	PURPOSES				
		Military	*Veterans*	*Interest*	*Foreign*[a]	*Civil*
	Postwar Average Expenditures as Percentage of Prewar Average Expenditures, per Capita, 1926 Prices					
War of 1812:						
1st 5 years	164	158	1,800	138		165
2nd 5 years	147	118	2,100	124		196
Civil War:						
1st 5 years	246	119	986	2,546		118
2nd 5 years	222	101	1,114	2,154		141
First World War:						
1st 5 years	252	164	245	2,512	171	150
2nd 5 years	270	163	237	1,815	186	264
Second World War:						
1st 3 years	210	494	332	225	10,038	84
	Percentage Distribution of Expenditures					
War of 1812:						
Prewar	100	48.0	0.9	33.5		17.6
Postwar:						
1st 5 years	100	46.3	7.3	28.6		17.8
2nd 5 years	100	38.6	9.8	28.3		23.3
Civil War:						
Prewar	100	47.4	2.1	3.8		46.7
Postwar:						
1st 5 years	100	29.1	8.3	40.3		22.3
2nd 5 years	100	21.5	10.5	37.8		30.2
First World War:						
Prewar	100	35.5	23.7	3.2	0.7	36.9
Postwar:						
1st 5 years	100	23.0	23.2	31.2	0.5	22.1
2nd 5 years	100	21.6	21.3	21.3	0.5	35.3
Second World War:						
Prewar	100	12.9	12.2	9.4	0.3	65.2
Postwar:						
1st 3 years	100	30.5	19.2	10.1	14.2	26.0

[a] Not calculated for years before 1915, but for 1912–1914 assumed to be the same as in 1915.

Source: Based on Appendix Table B-1, Panels A and C.

CHART 6

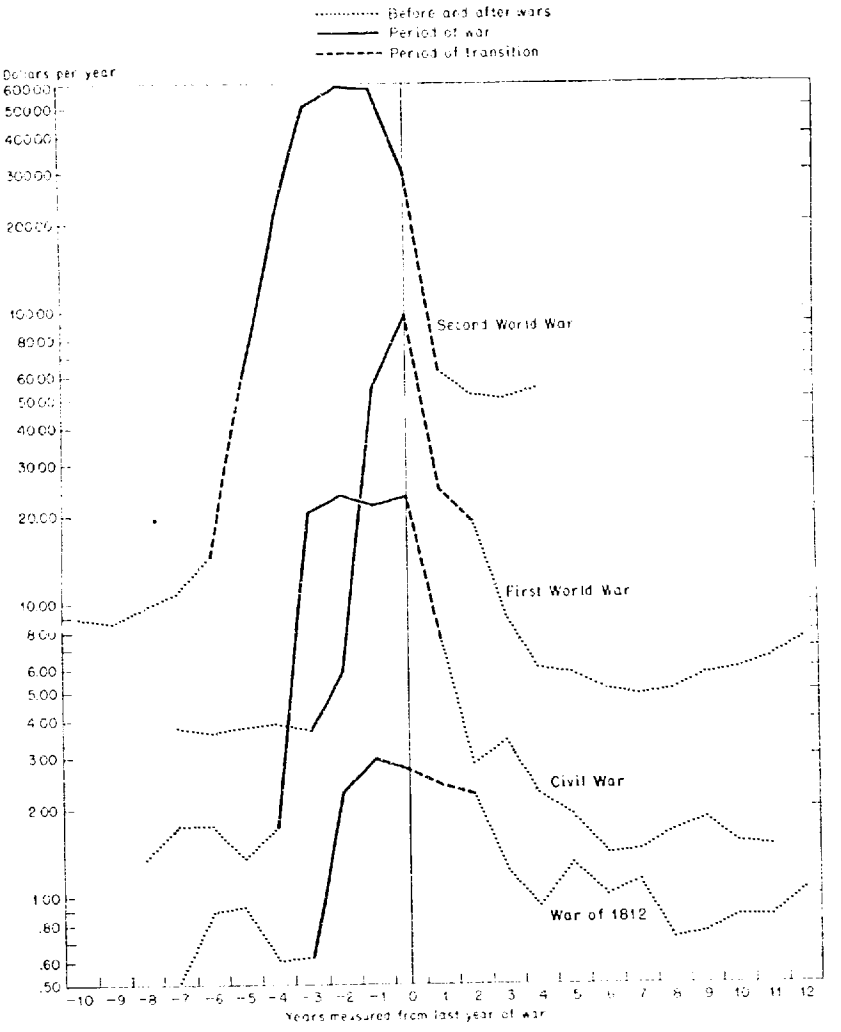
FEDERAL MILITARY EXPENDITURES BEFORE, DURING, AND AFTER THE FOUR MAJOR WARS, MEASURED FROM YEAR BEFORE FIRST WAR YEAR, PER CAPITA, IN 1926 PRICES



Source: Appendix Table B-1, Panel C

CHART 7

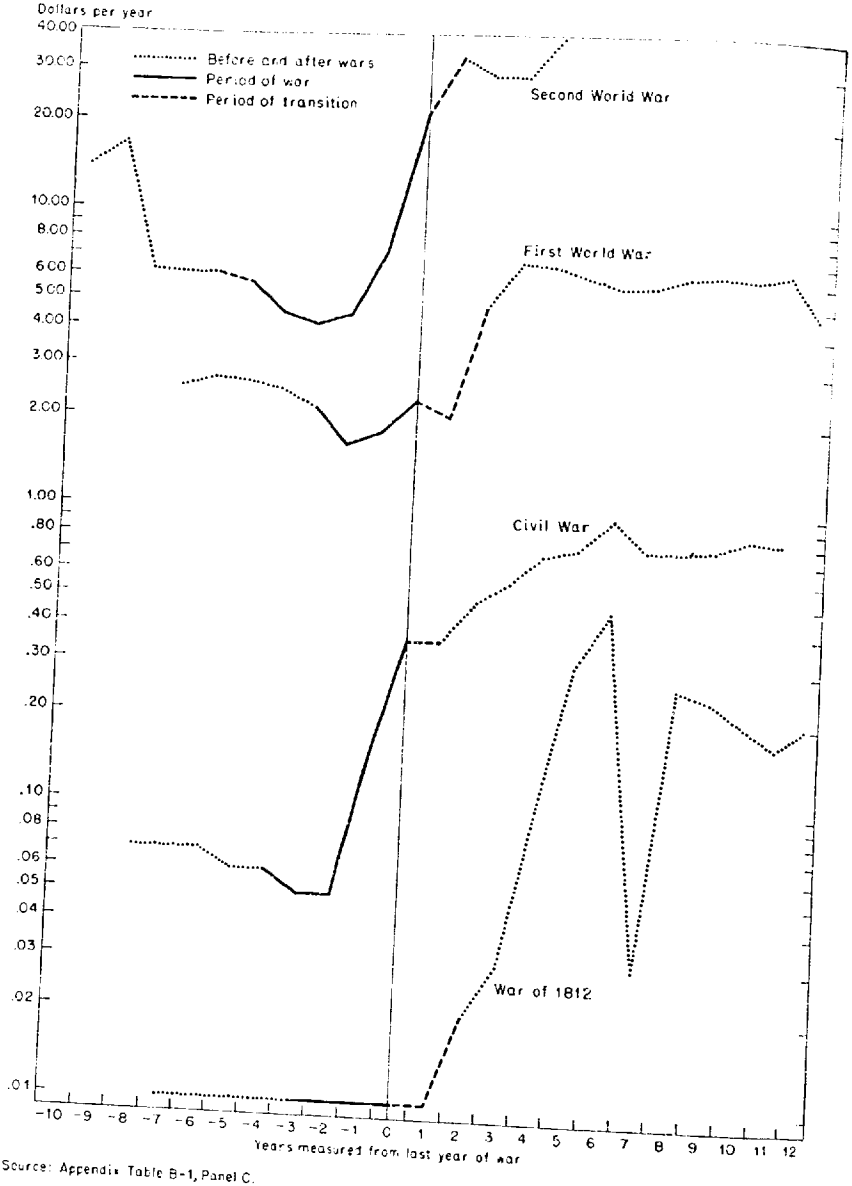
FEDERAL MILITARY EXPENDITURES BEFORE, DURING, AND AFTER THE FOUR MAJOR WARS, MEASURED FROM LAST WAR YEAR, PER CAPITA, IN 1926 PRICES



Source: Appendix Table B-1, Panel C

CHART 8

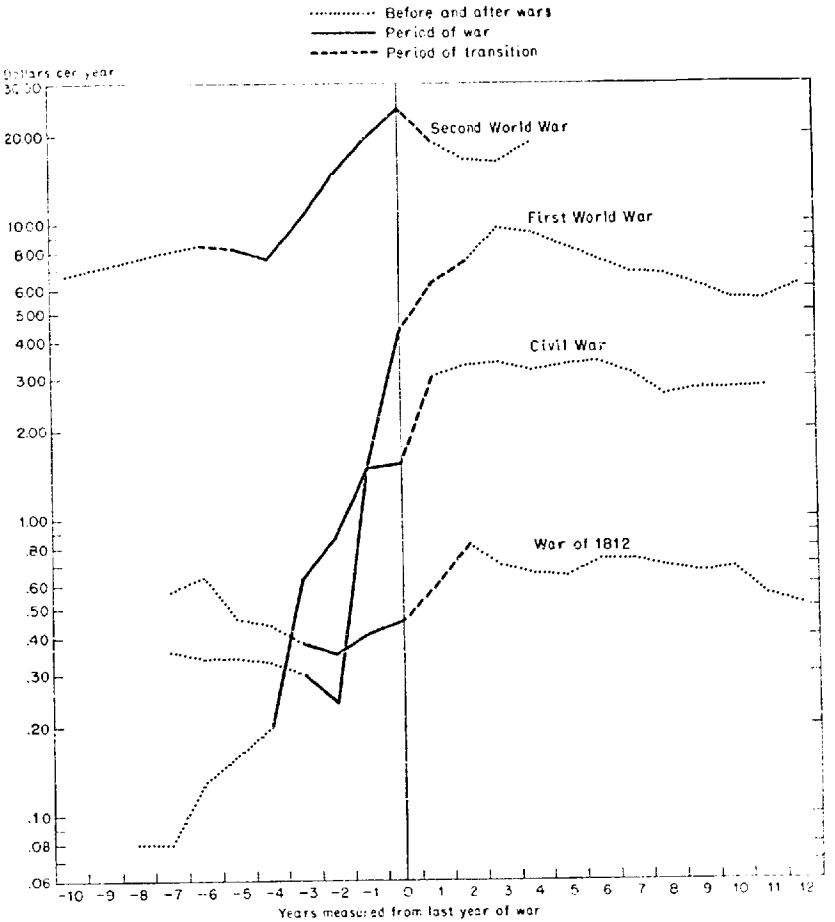
FEDERAL VETERANS EXPENDITURES BEFORE, DURING, AND AFTER THE FOUR MAJOR WARS, MEASURED FROM LAST WAR YEAR, PER CAPITA, IN 1926 PRICES



Source: Appendix Table B-1, Panel C.

CHART 9

FEDERAL INTEREST EXPENDITURES BEFORE, DURING, AND AFTER THE FOUR MAJOR WARS, MEASURED FROM LAST WAR YEAR, PER CAPITA, IN 1926 PRICES



Source: Appendix Table B-1, Panel C

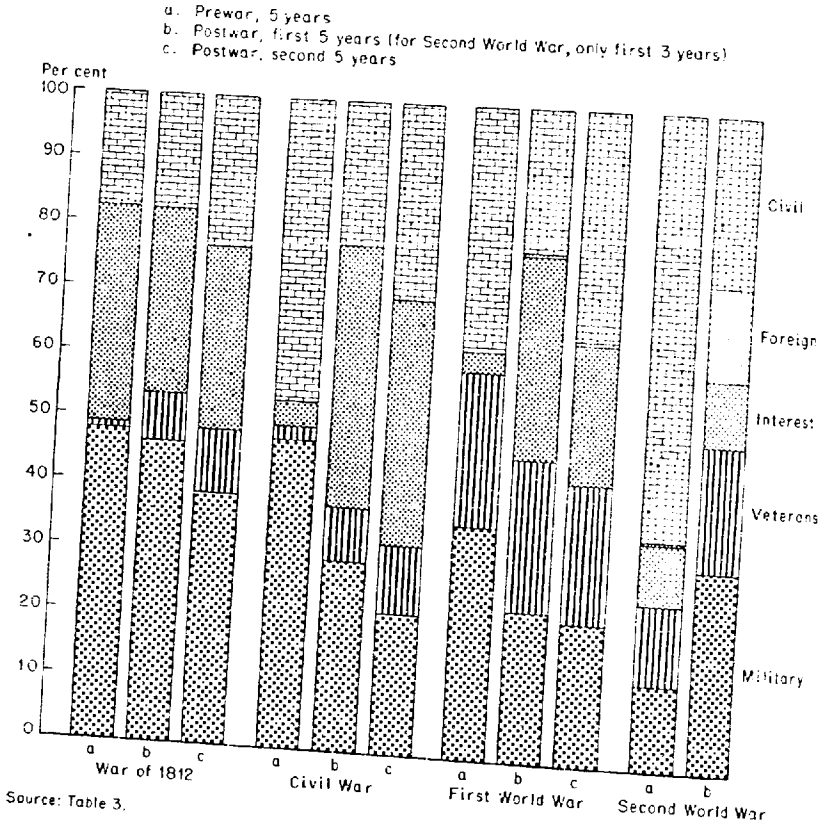
the Second World War, military expenditures were 494 per cent of prewar. During the first and second five years of peace after the First World War, they were 164 and 163 per cent, respectively, of the earlier level. The corresponding percentages for the same periods after the War of 1812 were 158 and 118, and for the Civil War 149 and 101.

Expenditures for veterans jumped to an average significantly higher than prewar following each of the major wars. In the second five years after the War of 1812 and the Civil War, veterans' expenditures increased beyond the average of the first, while in the second five years after the First World War, they declined slightly. Interest costs declined in the second five years after all three of these wars. The three years after the Second World War are too few for a trend to be indicated.

When we view military expenditures as a percentage of total outlays of the federal government (Table 3 and Chart 10), two de-

CHART 10

PATTERN OF FEDERAL EXPENDITURES BEFORE AND AFTER FOUR MAJOR WARS



Source: Table 3.

velopments stand out. First, military costs, after all major wars except the Second World War, have tended to have less relative importance than prior to these wars. They averaged 48 per cent of the annual total before the War of 1812, but in the first five years afterward they averaged 46.3 per cent, and in the second, 38.6 per cent. For similar periods pertaining to the Civil War, the percentages are 47.4, 29.1, and 21.5; and for the First World War, 35.5, 23.0, and 21.6. The second noteworthy feature is the tendency for the proportion of military to total expenditures to decline during the interval from one war to the next.

Except for the First World War, the share of governmental costs represented by payments to veterans has been larger after each war than it was before. The share represented by interest has also been larger than prewar, after each major war, with the single exception of the War of 1812, though the increase following the Second World War was slight. The proportions expended for veterans and for interest have manifested different trends over the whole of the periods included in the table. The share of the total paid out for veterans increased greatly, rising from 7.3 per cent in the first five years after the War of 1812 to 19.2 in the three years after the Second World War. On the other hand, over the same intervals the percentage for interest declined from 28.6 to 10.1.

We turn now to the two minor wars. Taking first the percentage change from prewar, military costs in the Mexican war stood at an annual rate of 249 per cent of prewar, and in the first and second five-year periods afterward at 94 and 117 per cent of prewar, respectively. For the war with Spain the corresponding percentages were 307, 213, and 213. (These figures for the minor wars do not appear in any of the tables or charts but may be readily computed from Table B-1, Panel C.)

Taking now the percentage distribution of expenditures (which may also be computed from Table B-1, Panel A), the military share in the first five years after the Mexican war was smaller than prewar, and the interest share larger, in fact almost double. Curiously, the veterans share was little more than half of prewar. In the second five years the military share stood above the first five years, while the interest and veterans shares were less than half their level

in the first five years. After the war with Spain the proportion of total expenditures devoted to military purposes was nearly double that in the period before the war; and during the second five years, it was double. The costs of veterans and of interest, on the other hand, decreased in both periods, compared with prewar.

Effects on Civil Expenditures. Civil expenditures, as well as war-connected expenditures, have shown a marked response to wars. During the War of 1812 these costs, on an average annual basis adjusted for price and population changes, were 4 per cent less than the prewar level. But in the first five years of the succeeding peace, they averaged 65 per cent above those in prewar years; and in the second five-year period, 96 per cent. In the first of these intervals they comprised 17.8 per cent and in the second, 23.3 per cent of all expenditures, compared with 17.6 per cent before the war. During the short war with Mexico, annual civil expenditures averaged 19 per cent less than in prewar years; but afterward they surged upward to a level of 112 per cent in the first five-year period and of 128 per cent over prewar in the second. These gains exceeded the growth of other expenditures. Whereas civil expenditures were 31.4 per cent of total expenditures in the prewar years, they were 49.4 per cent in the first five-year period after the war and 49.8 per cent in the second.

In the Civil War, annual civil expenditures were 41 per cent below prewar; they were 18 per cent above prewar in the first five years of peace and 44 per cent in the second. The proportion of total expenditures absorbed by civil outlays, 22.3 per cent and 30.2 per cent per year on the average, was less than the 46.7 per cent during the prewar period. During the Spanish-American War, in contrast, civil expenditures stood at 5 per cent above prewar. Subsequently, the excess over prewar years was small—7 per cent in the first period and 17 per cent in the second. In these respective intervals they averaged 32.8 and 36.7 per cent of total expenditures, compared with 33.0 per cent before the war.

The annual average of civil expenditures during the First World War was 27 per cent below the prewar average, 50 per cent above prewar during the first five years after the war, and 164 per cent above prewar during the second postwar period. The initial in-

crease, however, was insufficient to keep up with the growth of other expenditures. Civil expenditures in the first five postwar years were 22.1 per cent of total expenditures, compared with 36.9 before the war; and in the second they were 35.3 per cent. During the depression that followed they increased greatly both in amount and in proportion to the total.

In the Second World War, annual civil expenditures, again expressed per capita in 1926 prices, averaged only 11 per cent below prewar—a slighter drop than for any other major struggle except the War of 1812. In the first three postwar years of peace, contrary to the experience after other wars, civil expenditures declined, averaging 16 per cent less annually than in the years preceding the war and amounting to 26 per cent of total expenditures, as compared with the prewar figure of 65.2 per cent. But the base period of this comparison was one of high expenditures, caused by the depression. On the other hand, many of the expenditures initiated at that time were continued in the postwar period. These will now be examined, first in relation to the depression and the ensuing years of prosperity, and next in connection with the account just given of the behavior of civil expenditures.

It is well known that the depression of the 1930's was accompanied by a great upsurge of federal expenditures. Undoubtedly, there was a causal relation, but several of the new expenditures would have been initiated anyway, and the depression merely brought them about earlier, or on a larger scale, than would otherwise have been the case.

Some of the expenditures reported in Table 4 were clearly for the mitigation of the hardships of the depression and for the associated motive of generating recovery. This was particularly true, with emphasis on the former purpose, of the expenditures for relief and work relief, which reached large magnitudes by the middle years of the depression but which, with the return of prosperity, decreased rapidly and finally dwindled to zero. Much the same can be said of the expenditures of the Public Works Administration. The projects financed by this agency were designed to increase employment and purchasing power. When recovery came, the

TABLE 4

CHIEF FEDERAL EXPENDITURES BEGINNING IN OR INCREASED BY THE DEPRESSION, 1930–1951

Fiscal Year Ending June 30	Relief and Work Relief	Public Works Administration	Aid to Agriculture	Social Security Grants to States	Old-Age Retirement	Railroad Employees' Retirement	Railroad Employees' Unemployment Payments	Interest on Depression Loans	Chief Depression-Induced Expenditures	Total Federal Expenditures	Ratio of Chief Depression-Induced Expenditures to Total (%)	Chief Depression-Induced Expenditures, per Capita, 1926 Prices
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
					(millions of dollars)							
					A. Depression Period							
1930	...	...	$ 152	...	...	...	...	...	$ 152	$ 3,100	4.9	$ 1.34
1931	...	...	242	...	...	...	...	...	242	4,100	5.9	2.47
1932	...	...	337	...	...	...	...	...	337	4,800	7.0	3.96
1933	$ 350	...	103	...	...	...	...	$ 40	493	4,700	10.5	6.24
1934	1,845	$ 156	710	...	...	...	...	83	2,794	6,500	43.0	30.71
1935	2,267	218	1,001	...	...	...	...	140	3,626	6,300	57.6	36.53
1936	2,292	70	810	$ 28	...	...	...	64	3,264	7,600	42.9	31.82
1937	2,376	249	820	183	...	$ 6	...	147	3,781	8,400	45.0	34.73
1938	1,869	149	726	292	$ 5	78	...	176	3,295	7,200	45.8	30.80
1939	2,602	408	1,081	342	14	109	...	187	4,743	9,400	50.5	46.04
1940	1,966	348	1,413	369	28	116	$20	247	4,447	9,600	46.3	43.04
1941	1,575	126	1,218	420	91	125	21	266	3,842	13,999	27.4	35.65
Total, 1930–1941	$17,082	$1,724	$8,613	$1,634	$138	$434	$41	$1,350	$31,016	$85,699	36.2	$304.23
Average,[a] 1930–1941	1,898	216	718	272	34	87	20	150	2,585	7,142	36.2	25.35

TABLE 4 (*Continued*)

Fiscal Year Ending June 30	*Relief and Work Relief*	*Public Works Administration*	*Aid to Agriculture*	*Social Security Grants to States*	*Old-Age Retirement*	RAILROAD EMPLOYEES' *Retirement*	RAILROAD EMPLOYEES' *Unemployment Payments*	*Interest on Depression Loans*	*Chief Depression-Induced Expenditures*	*Total Federal Expenditures*	*Ratio of Chief Depression-Induced Expenditures to Total (%)*	*Chief Depression-Induced Expenditures, per Capita, 1926 Prices*
					(millions of dollars)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
					B. War and Prosperity Period							
1942	$ 909	$40	$ 1,376	$ 474	$ 137	$ 134	$ 12	$ 266	$ 3,348	$ 34,501	9.7	$ 26.25
1943	293	12	485	497	177	136	4	266	1,870	78,909	2.4	13.48
1944	12	3[b]	1,059	488	217	137	4	266	2,186	93,956	2.3	15.28
1945	−1	5	1,439	457	267	144	4	266	2,581	95,184	2.7	17.58
1946	1	4	578	500	358	155	21	266	1,883	61,738	3.0	12.34
1947	1	2	1,054	759	466	178	56	266	2,782	36,460	7.6	13.85
1948	...	8	380	861	559	227	66	266	2,367	36,524	6.5	10.06
1949	1	8	2,276	1,126	661	283	93	266	4,714	40,575	11.6	19.51
1950	...	...	2,560	1,397	784	305	153	266	5,465	43,160	12.7	23.52
1951	...	...	439	1,445	1,569	321	58	266	4,098	45,807	8.9	15.09
Total, 1942–1951	$1,216	$82	$11,646	$8,004	$5,195	$2,020	$471	$2,660	$31,294	$566,814	5.5	$166.96
Average,[a] 1942–1951	174	10	1,165	800	520	202	47	266	3,129	56,681	5.5	16.70

See page 34 for notes.

NOTES TO TABLE 4

[a] Averages are not of the total number of years but of the number for which expenditures are shown.

[b] In liquidation, at least since 1944. See *Budget of the United States Government*, 1949, p. 237.

. . . means less than $500,000.

Note: Conservation, flood control, Tennessee Valley Authority, and public works other than Public Works Administration and work relief, are excluded. The Reconstruction Finance Corporation is excluded, except that its loans and grants to states, municipalities, and other public bodies for relief and work relief fall in column 1, and except that some expenditures shown here might on investigation turn out to be from money that was originally appropriated to the Reconstruction Finance Corporation and was later transferred to and spent by other government agencies. As an example of the magnitude of the excluded RFC expenditures: RFC loans, stock subscriptions, and stock purchases to help nonagricultural financial institutions and railroads, net of repayments, amounted to (millions): 1932, $1,091; 1933, $531; 1934, $480; and 1935, −$241 (*Statistical Abstract of the United States*, Bureau of the Census, 1934-1936).

Source:

Column 1

1931–1940: *Annual Report of the Secretary of the Treasury*, 1939, 1940, and 1944, tables on "expenditures by major functions."

1941–1951: *Budget*, 1950 and 1952–1955, tables on "comparison of budget receipts and expenditures by function," code No. 204, less column 2 of the present table. It should be pointed out that there is a definite break in the series between 1940 and 1941. The 1941–1951 source, when extended backward, yields $1,841 million for 1940 and $2,702 million for 1939 (*Budget*, 1948, p. 1406, less column 2 of the present table).

Column 2

1933–1940: *Annual Report of the Secretary of the Treasury*, 1940, p. 28.

1941–1948: *Budget*, 1950, table on "comparison of expenditures by organization units." The series is continuous with 1933–1940 (see *Budget*, 1947, 1948, same table).

1949–1951: *Budget*, 1951–1953, detailed tables.

Column 3

1930–1932: Sum of farm credit expenditures listed in *Budget*, 1938, 1940, Table 5.

1933–1940: *Annual Report of the Secretary of the Treasury*, 1940, p. 29, less the regular expenses of the Dept. of Agriculture, and, in 1932–1933, less also the Treasury's purchases of the capital stock of the Federal Intermediate Credit Banks (*Budget*, 1940, p. 123).

1941–1949: *Budget*, 1950, 1951, tables on "comparison of budget receipts and expenditures by function." Extending these figures back gives $1,468 million in 1940 (*Budget*, 1949, p. 1324).

1950–1951: *Budget*, 1952 and 1953, message of the President.

Columns 4–7

Treasury Bulletin, 1945–1954. Administrative expenses, as well as pensions, assistance, unemployment payments, and other benefits, are included.

Column 8

The depression spending was assumed to have begun in 1930 and ended in 1941. The interest paid in 1930 was deducted from the interest paid in each succeeding year, and the difference, when positive, entered as the addition made by the depression. The final amount, $266 million for 1941, was included as the interest on depression borrowing for each of the following years, because the borrowings of the depression period were not repaid. No adjustment was made for changes in interest rates.

Column 9

Sum of columns 1–8.

Column 10

From Table B-1, Panel A.

Column 11

Column 9 divided by column 10.

Column 12

Column 9 divided by population and fiscal-year price index.

organization decreased in activity and eventually was placed in liquidation.

These purposes, however, were much less clear for the Tennessee Valley Authority, which was set up in the same year as the Public Works Administration. Expenditures for rivers and harbors, public roads, and reclamation all increased during the depression years, but it is possible that the additions to these outlays would have been made anyway. Since there appeared to be no method of separating out the increases in these categories caused by the depression, none of these expenditures has been given in Table 4.

Aid to agriculture was given for a variety of reasons. During the 1920's agriculture was depressed while industry was prosperous. This situation led to a powerful political movement for assuring farmers a "fair" return for their products, though little came of the agitation until the depression. Beginning in 1933, there was a spate of agricultural legislation. Farmers were to obtain parity prices for agricultural commodities, more and cheaper credit, and electricity. The poorer farmers were, in addition, to be given special assistance. These goals were variously justified as being "fair," as promoting recovery, or as affording relief. The emphasis, however, of the legislation and the implementing agencies was on the first two.

The social security legislation that initiated grants to the states for assistance to old persons, dependent or crippled children, and the blind, and for the furtherance of child welfare and maternal and child health; the measures that established the old-age and survivors' annuity and railroad retirement programs; and the laws for general [21] and railroad unemployment insurance gave effect to movements of long standing. In view of the progress that had already been made in this country toward public acceptance of the purposes served by such legislation, and in view of the actual application of similar legislation in various foreign countries, it appears fairly certain that, irrespective of the state of employment and trade, social legislation of the character described would at some

[21] Only the federal expenditures for the general unemployment program are included in Table 4. The benefit payments to unemployed workers are made by the states.

time have been enacted. The depression, however, caused the passage of these measures to come sooner than otherwise, and almost certainly operated to increase the financial provision for their implementation.

In columns 9–11 of Table 4, Panel A, the sum of the chief expenditures arising from, or increased by, the depression is compared with the aggregate of federal expenditures. They exceeded 40 per cent of the total in every year from 1934 to 1940. Work and direct relief, the Public Works Administration, and aid to agriculture were the largest items included. And these were for the very purposes most strongly influenced by the depression.

Panel B, which covers the war and prosperity period, shows a rapid decline in expenditures for relief and work relief and a rapid increase in social security grants to the states. Expenditures for the retirement of railroad workers and for the relief of such active workers as became unemployed also increased greatly. The growth of aid to agriculture was moderate. Although the average annual expenditures in these categories, expressed in current dollars, were slightly larger than in the other interval, their relative importance, owing to the great increase of government expenditures, was much less. The costs that originated in legislation passed during the depression ranged from 2.3 to 12.7 per cent of the total.

The last column of Table 4 gives in 1926 prices the per capita total expenditures for the functions mentioned. In the average year of the depression $25.35 was spent per member of the population; in that of the war and prosperity period, $16.70. The annual data from which these averages were derived permit a carrying forward of the earlier account of the course of civil expenditures. It will be recalled that these costs declined 11 per cent during the Second World War and then in the postwar period declined further to 16 per cent below their level in the base years. How did the depression-occasioned expenditure component behave? The per capita adjusted annual average was $37.47 in the base period, $16.99 in the war years, and $17.70 in the postwar interval. Clearly the great decline was in this division of civil expenditures. If it had not existed but all other outlays for civil purposes had been

the same, what would have happened to civil expenditures? We can answer this question by subtracting for the appropriate years the per capita depression-induced costs from the per capita civil ones. The residual averaged $15.36 in the base period, $29.96 in the war years, and $26.56 in the postwar period.