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Volume Author/Editor: Solomon Fabricant, assisted by Robert E. Lipsey

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Chapter Author: Solomon Fabricant, Robert E. Lipsey

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Chapter 3

Shares of Federal, State, and Local Governments in Resource Input

The huge federal budget and large volume of federal employment have been discussed widely and often. Some readers may suppose, therefore, that the larger part of today's seven million government workers is on federal payrolls and that expansion of federal payrolls accounts for all or most of the six million persons taken on since 1900. And they may have similar impressions of the distribution of government-owned capital assets and government purchases from private industry. The facts show that these notions exaggerate the role of the federal government.

Distribution of Employment among Types of Government

Even today, when the uneasy peace keeps our armed forces at an unprecedented peacetime level, federal employment is barely larger than that of state and local governments. Of the seven million full-time equivalent workers on government payrolls, very close to half are employed by state and local governments. (The proportion before adjusting part-time work to a full-time equivalent basis is even higher because part-time work is more common in local governments.) In 1940, just before the big expansion in national defense activities, state and local governments accounted for almost two-thirds of the 4.4 million employees on government payrolls (excluding emergency workers). And at three of the four earlier decennial dates, the share of state and local governments was close to three-quarters.

Of the increase between 1900 and 1949, about three and a third million workers were additions to federal payrolls; two and two-thirds million, to state and local government payrolls. The biggest part of the increase in federal personnel, over two million, came

in 1940-49. The jump in this decade accounted for well over half of all employees on federal payrolls in 1949. The next biggest rise, which came in 1930-40, was much smaller, under three-quarters of a million. Nevertheless, more federal workers were added in the 1930's alone than during the preceding three decades combined. State and local employment was much more consistent in amount of net growth during the five decades. But there were variations here too: the rise in the 1920's was substantially bigger than in other decades.

The changes in the distribution of government employees among the various types of unit from 1940 to 1949, and before and after 1920 as well (Table 8), reflect the effects of war, about which more will be said in a moment. The great depression, too, is re-

Table 8

GOVERNMENT WORKERS, DISTRIBUTION AMONG MAIN TYPES OF GOVERNMENT UNIT, 1900-1949

(payroll data, full-time equivalent number; public emergency workers excluded)

	1900	*1910*	*1920*	*1930*	*1940*	*1949*
			Thousands of Workers			
Federal	312	484	956	820	1,532	3,608
Armed forces	126	140	344	266	532	1,642
Civilian	186	345	613	554	1,000	1,966
State and local	852	1,209	1,654	2,436	2,883	3,478
States, nonschool	68	108	183	279	457	642
Cities, nonschool	194	336	429	702	754	933
Other local, nonschool	123	(189)	(235)	345	444	535
School	467	576	807	1,110	1,228	1,368
Total	1,164	1,693	2,610	3,256	4,415	7,086
			Percentage of Total			
Federal	26.8	28.6	36.6	25.2	34.7	50.9
Armed forces	10.8	8.3	13.2	8.2	12.0	23.2
Civilian	16.0	20.4	23.5	17.0	22.7	27.7
State and local	73.2	71.4	63.4	74.8	65.3	49.1
States, nonschool	5.8	6.4	7.0	8.6	10.4	9.1
Cities, nonschool	16.7	19.8	16.4	21.6	17.1	13.2
Other local, nonschool	10.6	(11.2)	(9.0)	10.6	10.1	7.6
School	40.1	34.0	30.9	34.1	27.8	19.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

School employment cannot be distributed among the types of state and local governments in most years. Figures in parentheses are very rough estimates.

flected in the table. If we focus on the net change between 1900 and 1940, we find little alteration in the relative importance of the armed forces, municipal nonschool employment, and other local nonschool employment. The net change in the relative position of federal civilian employment was definitely upward. State nonschool employment also expanded relatively. The share in the total of school employment (entirely a state and local matter, but not available by type of government unit in most years) fell rather consistently and very considerably.

Even the sectors of government that dropped in relative importance show substantial increases in absolute number. In the slowest growing sector, schools, the number of teachers and other employees tripled between 1900 and 1949.

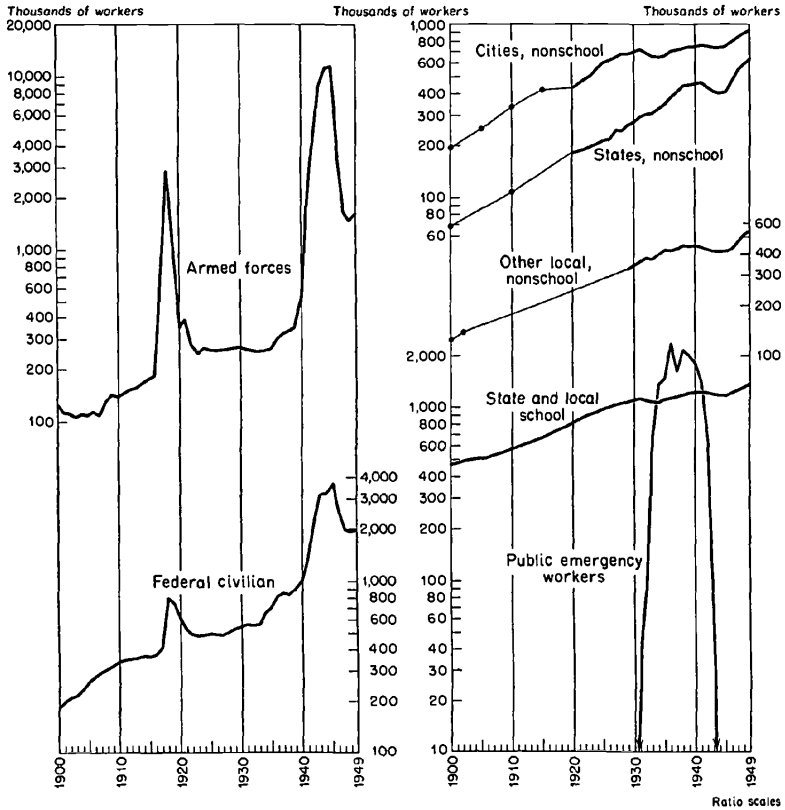
Varied Impress of Wars and Business Cycles on Government Employment

The two major wars of our time are clearly reflected in the annual series plotted in Chart 5. In both wars, federal civilian as well as federal military employment rose to great heights, then fell sharply. After both wars, however, the decline halted at a level substantially above the prewar.

State and local government employment also felt the impact of war. But the effect was the reverse of what happened to federal employment. During World War II each nonfederal sector cut employment. After the war, each restored its personnel to prewar levels and pushed on to new heights. The effect of World War I is not so clear, partly because our information is scanty. Municipal nonschool employment did not increase from 1915 to 1920. Scattered information for one or two state governments suggests the war had the same effect on their employment. On the other hand, the rate of increase in school employment was not affected by World War I. On employment by other units of local government at that time we have no information.

Apart from the war periods, fluctuations in ordinary government employment are few, and none is really large. Employment in most private industries fluctuates closely and usually substantially with general business conditions, even when measured on an

Chart 5
Number of Government Workers Employed by Each Main Type of Government Unit, 1900–1949
(Payroll data, full-time equivalent number)



annual basis. Our annual series on government employment — with the notable exception of public emergency employment — shows hardly any such repercussions.

The sharp business contractions of 1920-21 and 1937-38, and the mild contractions of 1923-24 and 1926-27 seem to have caused scarcely a ripple in the series. Even the big contraction of 1929-32 made only a modest impression, certainly one much different from that stamped on the line for total employment, including private industry, plotted in Chart 2. All types of government employment except the armed forces continued to gain until 1931, some with-

out slowing down much (Chart 5). Even the few declines after 1931 were over by 1933 or 1934. After 1933 federal civilian and state nonschool employment accelerated sharply, as did the armed forces after 1935.

The most striking reflection of the great depression, and of the 1937-38 contraction as well, is in the count of public emergency workers — those on WPA and similar rolls. Few persons were on work-relief before the New Deal in 1933. All through the preceding severe contraction in employment, additions to work-relief lists were large in percentage terms but small in absolute terms. The big expansion in number came after 1933 and continued through 1936, a period when private employment also was growing. Work relief did not begin to move counter to regular employment until after 1936. With the onset of the war, and the resulting labor shortages, the number of emergency workers declined, then vanished.

To return to a question posed at the outset of this report, these figures suggest clearly that the activities government took on under the New Deal were a very substantial factor in expanding government employment. After 1933 growth in both federal and state government employment speeded up. Yet, as we shall see, the New Deal was not the sole factor determining trends in government employment even in that period. And growth before 1933 is obviously attributable to other factors.

Capital Assets Held by Each Type of Government

Apart from military and quasi-military items, by far the larger share of government capital assets always has been held by state and local governments. Schools, roads, state hospitals, county courthouses, and the various municipal facilities — these make up the bulk of government property. Thus in 1902 federal nonmilitary assets accounted for only a sixth of the total not including streets and roads (Table 9). In 1939, before the sharp rise in national defense facilities began, the federal fraction was under a fifth. Including roads (almost entirely state and local property), the federal share was only an eighth in 1939.

Rapid growth usually has characterized the book value of capital assets held by every major type of government unit (Chart 6).

Table 9

Book Values of Capital Assets, Distribution among Main Types of Government Unit, 1902-1946

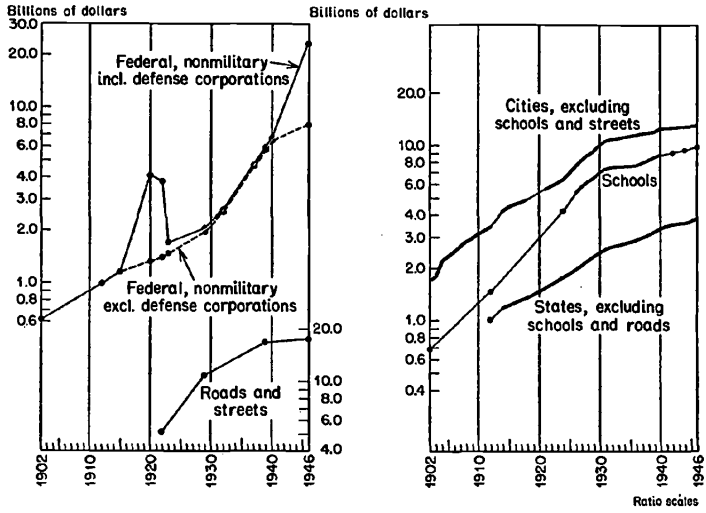
	EXCLUDING ROADS AND STREETS						INCLUDING ROADS AND STREETS			
	1902	*1912*	*1922*	*1929*	*1939*	*1946*	*1922*	*1929*	*1939*	*1946*
					Percentage of Total					
Federal, nonmilitary	16.1	13.4	24.6	9.7	19.1	45.2	18.4	6.4	12.4	33.7
States, nonschool	(14.4)	13.7	10.4	10.9	10.4	7.4	7.8	7.2	6.7	5.6
Cities over 2,500, nonschool	44.5	46.5	37.9	43.4	38.6	25.3	28.5	28.7	25.0	18.9
Counties, nonschool	7.1	6.5	(5.0)	(5.2)	(4.2)	(2.9)	(3.8)	(3.4)	(2.7)	(2.2)
State & local, school	18.0	19.9	22.1	30.7	27.7	19.1	16.6	20.3	17.9	14.2
Total, excl. roads & streets	100.0	100.0	100.0	100.0	100.0	100.0	75.1	66.2	64.7	74.6
Roads & streets							24.9	33.8	35.3	25.4
Total, incl. roads & streets							100.0	100.0	100.0	100.0
					Billions of Dollars					
Total	3.8	7.3	15.4	21.1	30.9	51.4	20.5	31.9	47.8	68.8

Figures in parentheses are very rough estimates.

Exclusive of defense corporations and roads and streets, the percentages for 1922 and 1946 (but not other years) are different enough to be noted:

	1922	*1946*
Federal, nonmilitary	10.8	22.1
States, nonschool	12.4	10.6
Cities over 2,500, nonschool	44.8	36.0
Counties, nonschool	(5.9)	(4.2)
State & local, school	26.1	27.2
Total	100.0	100.0

Chart 6
Capital Assets Owned by Each Main Type of Government Unit
Book Values, 1902 – 1946



Apparently only during the depression of the 1930's and World War II did state and local governments increase their assets slowly; and if corrections for price changes could be made, this slow growth would probably also show up in the World War I period. But it was precisely during these periods that federal assets multiplied most rapidly.

The relatively high average rate of growth in school assets up to about 1929 and the relatively low average rate of growth in federal assets in the same period are outstanding in Chart 6. Indeed, the federal group of assets grew during 1902-29 at a rate below that of any other government unit except (probably) counties. It was after 1929 that federal assets grew more rapidly than the assets of other government units, including schools. This was a result first of a federal building program outside the District of Columbia to reduce the need for renting quarters for post offices and other field agencies, then of federal works stimulated by the depression, and finally the defense construction program.

There are wide differences between the distribution of capital goods among the various government units (Table 9) and the distribution of employment among them (Table 8). (This is true

even after allowing for the lack of information on military assets and the crudity of the estimates.) Neither the levels nor the trends of the two sets of percentages are similar. The explanation is simple: the functions of the various government units differ, as we shall see in some detail in the next chapter, and capital goods and workers have differing roles in each function.

Purchases by Type of Government

Our information on government purchases from private business (Table 10) suggests that the story of the relative importance of the several types of government as users of labor and capital applies fairly well also to this third class of input. Thus, we noticed that

Table 10

PURCHASES, DISTRIBUTION AMONG MAIN TYPES OF GOVERNMENT UNIT, 1903-1949

	NATIONAL BUREAU ESTIMATE (FISCAL YEARS)				DEPARTMENT OF COMMERCE ESTIMATE (CALENDAR YEARS)				
	1903	*1913*	*1932*	*1942*	*1929*	*1932*	*1939*	*1942*	*1949*
	Percentage of Total								
Federal	29.0	22.1	20.5	88.9	11.3	17.1	32.5	92.9	65.1
Nonwar	14.4	13.2	14.5	4.1					
War	14.5	18.8	6.0	84.8					
State & Local	71.0	77.9	79.5	11.4	88.7	82.9	67.5	7.1	34.9
State, nonschool	6.0	8.2	24.9	3.5					
Local, nonschool	55.7	58.0	42.9	5.5					
School	9.3	11.8	11.7	2.1					
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Billions of Dollars								
Total	.8	1.4	5.0	31.1	4.2	3.7	5.5	45.8	24.9

Compensation of public emergency workers is excluded. Higher education is excluded from the National Bureau school estimate.

at the opening of the century the federal government accounted for only a small fraction of the labor and capital resources used for public purposes; that its share rose during World War I but then fell back to approximately its prewar level, or lower, during

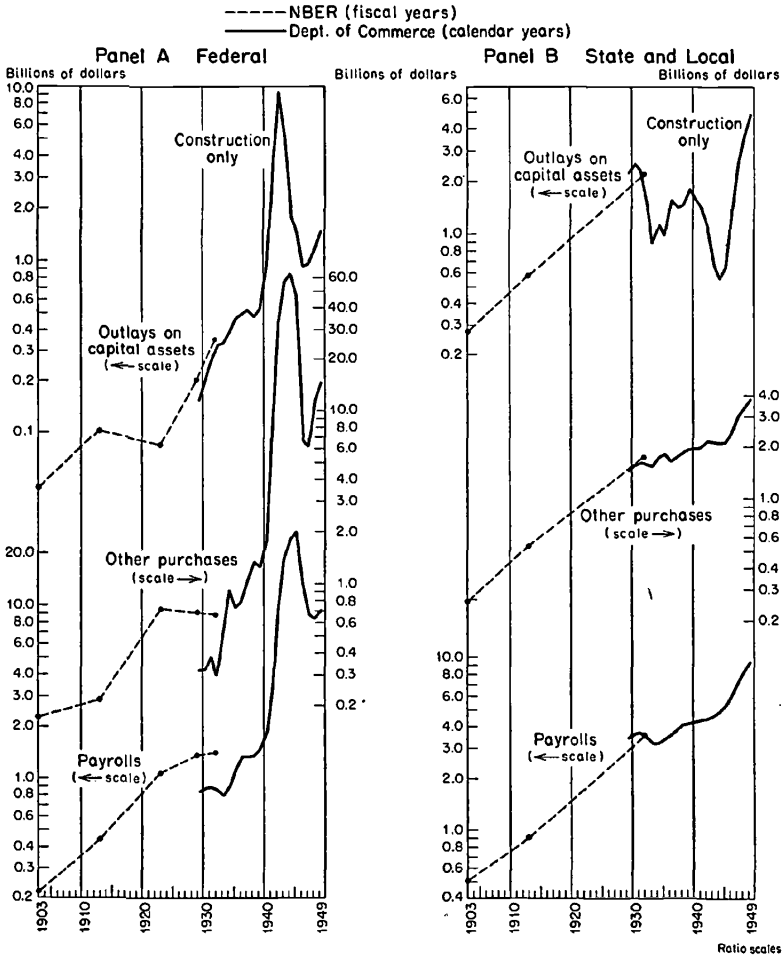
the 1920's; that the New Deal pushed it up above that level; and, finally, that World War II and its aftermath further raised this share so that today the federal government uses half, or more than half, of all resources (including military equipment) devoted to public purposes. The federal government's share in goods and services obtained from private business has roughly the same history, at least during the period for which information is available.

There are, of course, some differences between the pattern of purchases and that of labor and capital, just as there are between the labor and capital patterns themselves. These differences also can be explained by differences in the scope and kind of activity of the several types of government. The relatively low proportion of purchases taken by schools and the high proportion taken by the military arm of the federal government during wartime, for example, are to be expected. Moreover, increase in the relative importance of the defense function explains the relatively rapid rise in the federal government's total share in purchases, even exceeding the rise in its share of workers and capital assets.

Table 11 adds further information (pp. 38-9). At the opening of the century, for example, purchases were much less important than payrolls in the costs of state government, more important in the costs of local government. And there is a striking difference between these two types of government in what happened later to these proportions. State payrolls fell sharply relative to purchases, while local nonschool government payrolls rose somewhat relative to purchases. Indeed, it is rather surprising, in view of the diversities shown by Table 11, that the various types of total government expenditure have such stable proportions (Table 5). Apparently the innumerable changes in relative importance of functions within each unit and of types of unit within the total, on the one hand, and in the distribution of expenditures among payrolls, outlays, and other purchases within each functional category, on the other, have offset one another. But the data at hand are not enough for a detailed description and analysis of these changes.

Dollar figures, annual when available, are given in Chart 7. Among other things, these show how the great depression and World War II distinctively marked the expenditures of the several

Chart 7
Government Outlays on Capital Assets, Other Purchases, and Payrolls by Level of Government, 1903–1949



types of government. We have noted that government employment tends to be cyclically stable; now we can note that payrolls, too, show little reaction even to the business decline of the 1930's; and this is true also of purchases of other than construction items. Only construction outlays of state and local governments fell sharply with the business contraction of the early 1930's.

These various expenditures do not, of course, include the transfer

Table 11

Relative Importance of Government Purchases and Payrolls by Type of Government Unit, 1903-1949

NATIONAL BUREAU ESTIMATE (fiscal year)	1903	1913	1923	1929	1932	1939	1942	1949
	Percentage of Total							
Federal, total								
Outlays on capital assets	11.0	13.5	4.5	9.0	14.6	25.7	30.8	
Other purchases	39.0	28.2	38.0	30.4	27.3	25.2	51.5	
Payrolls	50.0	58.2	57.5	60.6	58.1	49.1	17.7	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Federal, war								
Outlays on capital assets	21.2	14.7	9.0	15.0	15.3	32.2	32.4	
Other purchases	37.9	35.4	29.7	22.6	26.7	15.3	54.1	
Payrolls	40.9	49.9	61.3	62.4	57.9	52.5	13.6	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Federal, nonwar								
Outlays on capital assets	3.5	13.0	2.1	6.5	14.3	23.3	15.2	
Other purchases	39.7	24.6	42.5	33.6	27.5	28.9	26.2	
Payrolls	56.8	62.4	55.5	59.9	58.1	47.8	58.6	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
State and local, total								
Outlays on capital assets	26.6	28.7			29.4		16.3	
Other purchases	25.0	26.7			23.3		28.0	
Payrolls	48.4	44.6			47.3		55.8	
Total	100.0	100.0			100.0		100.0	
States, nonschool								
Outlays on capital assets	17.4	19.2	39.7	46.0	50.5	34.5	33.6	
Other purchases	27.0	33.1	28.6	25.3	23.0	30.3	25.9	
Payrolls	55.7	47.7	31.7	28.7	26.5	35.1	40.5	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Local, nonschool								
Outlays on capital assets	30.7	35.2			30.2		13.8	
Other purchases	30.2	29.6			26.2		32.1	
Payrolls	39.1	35.3			43.6		54.1	
Total	100.0	100.0			100.0		100.0	

School								
Outlays on capital assets	18.8	16.4	19.9	18.3	10.4	11.3	6.2	
Other purchases	9.6	16.7	16.0	17.7	18.3	20.6	22.8	
Payrolls	71.6	66.9	64.1	64.0	71.3	68.1	71.0	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
DEPARTMENT OF COMMERCE ESTIMATE (adjusted, calendar year)								
Federal, total								
New construction				11.8	22.5	16.4	18.0	5.8
Other purchases				24.2	19.8	38.2	64.7	57.7
Payrolls				64.0	57.7	45.5	17.3	36.4
Total				100.0	100.0	100.0	100.0	100.0
State and local, total								
New construction				31.2	22.2	22.9	14.2	27.1
Other purchases				20.5	24.4	24.3	28.1	20.8
Payrolls				48.3	53.4	52.8	57.7	52.1
Total				100.0	100.0	100.0	100.0	100.0
NATIONAL BUREAU ESTIMATE (total purchases and payrolls)				*Millions of Dollars*				
Federal, total	437	758	1,882	2,245	2,423	4,294	33,556	
Federal, war	185	253	667	652	707	1,179	30,486	
Federal, nonwar	251	505	1,215	1,593	1,716	3,115	3,070	
State and local, total	1,037	2,015			7,493		7,786	
States, nonschool	102	224	809	1,343	1,681	2,024	1,822	
Local, nonschool	689	1,282			3,779		3,750	
Schools	246	509	1,537	2,092	2,034	2,117	2,213	
DEPARTMENT OF COMMERCE ESTIMATE (total purchases and payrolls)								
Federal, total				1,311	1,480	3,282	51,447	25,473
State and local, total				7,161	6,505	7,901	7,695	18,126

Compensation of public emergency workers is excluded. Higher education is excluded from the N.B.E.R. school estimate.

items and grants mentioned in Chapter 2. We measure the input of any type of government by the real resources it absorbs. Money granted by state governments to local governments (or state government receipts shared with local governments), for example, are spent for real resources at the local level, and we account for these expenditures at that level. However, input at the local government level has been financed increasingly by grants from state governments; and input at the state government level (and grants-in-aid by state to local governments) have been financed increasingly by grants from the federal government. Thus, grants received by state governments accounted for less than 2 percent of their total revenues in 1903 and 13 percent in 1942. Grants-in-aid received by local governments amounted to 7 percent of their revenues in 1903 and 26 percent in 1942. As for transfers to the public, these too have grown at all levels of government. The figures for each type of government are given in Appendix D.

Factors Affecting the Distribution of Input among Types of Government

Before we take the next step in our review of government activity, we may note the factors that have determined the distribution of input among types of government. This is useful preparation even if our list is skeletal and rather formal.

First, the several types of government increased their input at diverse rates because the functions performed by them at the opening of the century grew at diverse rates. The federal government's input, for example, expanded more rapidly than that of state and local governments partly because of the increased importance of the functions constitutionally allocated to the central government. National defense is the outstanding illustration of the last decade.

Second, while all levels of government have taken on new functions, as we shall see in detail in the next chapter, the speed of acquisition has differed. The rapid growth of federal functions under the New Deal explains, at least in part, the relatively rapid growth of federal input during the 1930's.

Third, functions or parts of functions have been shifted from one level of government to another. Centralization at the state level of functions formerly undertaken by local governments, for example, is one reason why state employment has grown more rapidly than local government employment. Centralization of a different kind has occurred through the expansion of the grant-in-aid. The uses to be made of grants are almost always specified by the grantor, and matching by the grantee is often required. In some degree, therefore, the power to decide what functions are to be undertaken has been taken away from the recipient of a grant and become centralized at a higher level of government. The rise of income taxation has contributed to this development.

Finally, different rates of change in the prices of resources used at the several levels of government have affected the distribution of input (in terms of cost) among them. For example, the average salary paid employees of schools rose much more rapidly than salaries paid by other government units (Appendix B and D).

Diverse trends in efficiency also may have had a part although, as we shall see in Chapter 5, there is little that can be nailed down in this area.

How the distribution of input among types of government has changed should not be over-emphasized. It is well to remember, too, that during the last half-century every level of government has substantially increased the volume of resources it uses. We shall want, therefore, to consider also how the basic factors underlying our economic development have caused expansion of activity at all levels of government; and how growth at one level of government has tended to stimulate growth at other levels: state roads are patrolled by county police and federal social security is administered by state governments.