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# 9 The Role of Government: Taxes, Transfers, and Spending

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## 1. *George F. Break*

The role of government during the postwar period has been the subject of much passionate debate and has greatly enlivened the lecture, cocktail, and many other circuits too numerous to mention. The purpose of this paper is not to extend those discussions of what should be done about the government, or to add to the already extensive analyses of why governments grow. Rather it is the more sober one of taking a close look at the revenues and expenditures of United States governments during the past thirty years or so in order to identify the main structural changes that may have occurred during that period. Some of these changes, of course, are already well-known and broadly recognized, others may be less conspicuous, and still others may call forth dispute and discussion.

The focus throughout will be on what may be termed the official fiscal record of governmental spending and taxing. Two sources of data are available for this purpose—the national income and product accounts (NIPA) and the Bureau of the Census, Governmental Finances series (BOC:GF). For the federal government, in addition, there is the annual budget document and the accompanying special analyses. These are the

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statistical series studied, for what they do show, for what they don't show, and for what they could show with suitable adjustments.

## 9.1 Broad Expenditure Changes

By any of the standard measures, government expenditures have grown significantly during the postwar period. Table 9.1 summarizes the official record for all levels of government together. Bureau of the Census accounts show two broad expenditure measures, one covering general government activities only (table 9.1, section A), and the other adding to general expenditures those of public utilities, government liquor stores, and insurance trust funds (table 9.1, section B). The national income and product accounts show one expenditure series (table

**Table 9.1** Alternate Measures of Government Expenditure Growth during the Postwar Period

Expenditure Measures	Terminal Years		Average Annual Growth Rate During Period
<b>A. BOC:GF General Expenditures<sup>a</sup></b>	<b>1948</b>	<b>1976-77</b>	
1. Nominal dollars (billions)	50.1	514.0	8.4
2. Nominal dollars per capita	342	2,380	7.0
3. Billions of 1972 dollars <sup>b</sup>	89.6	375.7	5.1
4. Constant dollars per capita	900	1,682	2.2
5. Ratio of current dollar expenditures to GNP	.193	.272	1.1
<b>B. BOC:GF Total Expenditures<sup>a</sup></b>	<b>1948</b>	<b>1976-77</b>	
1. Nominal dollars (billions)	55.1	680.3	9.2
2. Nominal dollars per capita	376	3,150	7.7
3. Billions of 1972 dollars <sup>b</sup>	98.6	497.3	5.8
4. Constant dollars per capita	990	2,229	2.8
5. Ratio of current dollar expenditures to GNP	.213	.360	1.8
<b>C. NIPA Total Expenditures<sup>a</sup></b>	<b>1947</b>	<b>1977</b>	
1. Nominal dollars (billions)	42.5	621.7	9.3
2. Nominal dollars per capita	295	2,866	7.8
3. Billions of 1972 dollars <sup>b</sup>	80.5	441.9	5.8
4. Constant dollars per capita	559	2,037	4.4
5. Ratio of current dollar expenditures to GNP	.183	.325	1.9

<sup>a</sup>Intergovernmental expenditures are excluded from total expenditures of grantors.

<sup>b</sup>Computed using the NIPA implicit deflator for personal consumption expenditures.

9.1, section C) which differs both in conceptual framework and in measurement procedures from the BOC:GF series.<sup>1</sup>

Absolute dollar expenditures (lines A.1, B.1, and C.1 in table 9.1) show the most striking, and least meaningful, picture of postwar government growth. Clearly, one should make some allowance for the growth of population (lines A.2, B.2, C.2), for increases in the general price level (lines A.3, B.3, C.3), and for both together (lines A.4, B.4, C.4). Neither adjustment, however, is free of ambiguities. Unchanged expenditures on pure public goods yield unchanged public benefits to everyone as population grows, though per capita expenditures thereon decline steadily. Choice of the proper price index to convert different kinds of government expenditures to constant-dollar terms is a complex issue that will be discussed below. For the moment the best single measure of the postwar growth in the total expenditures of all levels of government in this country appears to be their ratio to gross national product (GNP) with both the numerator and denominator measured in nominal (current) dollars (lines A.5, B.5, C.5).<sup>2</sup>

Relative to the size of the economy, then, all three broad expenditure measures have grown significantly during the past thirty years. BOC general expenditures rose from 19 percent of GNP in 1948 to 27 percent in 1976-77, BOC total expenditures rose from 21 to 36 percent of GNP during the same period, and NIPA expenditures increased from 18 to 32.5 percent of GNP between 1947 and 1977.

#### 9.1.1 Economic Composition of Expenditures

The national income accounts distinguish five major economic categories of government expenditure. These show the different ways in which the government goes about its many activities, as distinct from the purposes or functions served thereby, to be discussed later. When the economic structure of all government activities in the country in 1977 or 1978 is compared with the structures in 1948, little change shows up (table 9.2). Purchases of goods and services were 63 percent of the total in all three years, and a modest rise in transfer payments from 29 to 32 percent of the total was matched by an equal fall, from 8 to 4 percent, in net interest payments. Indeed, for those who treat debt interest as one kind of transfer payment there would be virtually no change in the economic structure of government spending (see, for example, Rolph 1948; 1954).

When the federal and state-local sectors are separated, however, three structural changes that merit attention show up. Federal purchases of goods and services shrank from 43 to 33 percent of the budget, while state-local resource using programs grew from 87 to 93 percent, solidifying further their dominant position in that sector. Opposite shifts moved

**Table 9.2 Government Expenditures by Major Economic Category (Percentage Distributions), 1948, 1977, and 1978**

Category	1948			1977			1978		
	Fed- eral	State and Local	All Levels	Fed- eral	State and Local	All Levels	Fed- eral	State and Local	All Levels
	Purchase of Goods and Services	47.8	86.9	63.3	34.2	92.6	63.3	33.2	93.2
National defense	30.6	—	21.1	22.2	—	15.0	21.5	—	14.4
Nondefense	17.3	86.9	42.2	12.0	92.6	48.3	11.7	93.2	49.1
Transfer Payments	32.8	17.0	28.6	40.9	11.1	32.4	40.3	11.0	31.9
Grants-in-Aid	5.7	—	—	16.0	—	—	16.8	—	—
Net Interest Paid	11.8	0.5	8.3	6.9	-1.8	3.8	7.6	-2.3	4.0
Subsidies less Current Surplus of Government Enterprises	1.8	-4.4	-0.3	1.9	-1.9	-0.5	2.1	-1.8	0.6
Subsidies	—	—	—	1.8	0.0	1.2	2.0	0.1	1.4
Surplus of government enterprises	—	—	—	-0.1	-1.9	-0.7	-0.1	-1.9	-0.7

Source: *Survey of Current Business*, vol. 56 (January 1976), tables 3.2 and 3.4; vol. 59 (July 1979), tables 3.2 and 3.4.

federal transfer payments up from 33 to 40–41 percent of the total and state-local transfer payments down from 17 to 11 percent. The third change, which requires a three-level classification of governments to reveal its full significance, was the rapid increase in federal grants-in-aid, from 6 percent to nearly 17 percent of total federal expenditures.

A different kind of broad economic classification is given in BOC data. There the distinction drawn is between the ordinary activities of government financed by the general fund and the activities of various kinds of public enterprises that have their own revenues and operate more or less independently of the rest of government. These distinctions are hard to make very precisely, but they are clearly an important part of the postwar fiscal record.<sup>3</sup> Table 9.3 highlights one of the most widely recognized and much discussed postwar structural changes in these spending categories—the dramatic rise in insurance trust expenditures, and the corresponding fall in general expenditures.

### 9.1.2 Government Output

Government purchases of goods and services are particularly important economically because they, unlike the other categories shown in table 9.2, are made to acquire for public use the services of scarce resources. They are in Pigou's apt terminology "exhaustive expenditures."<sup>4</sup> As such, they are part of the economy's total productive activity, and their ratio to GNP shows the government's share of total output during each period.

The postwar record of that share, shown in table 9.4 and figure 9.1, reveals two major structural changes during the period. The first concerns the relation between the federal and state-local shares of total government output. From approximate equality at the beginning of the period, at 5.5 percent of GNP, the two sector shares first diverged

**Table 9.3**                      **Percentage Distributions of Total Government Expenditures by Type, 1946, 1948, and 1976–77**

Expenditure	1946	1948	1976–77
General Expenditure	.95	.91	.75
Utility and Liquor			
Store Expenditure	.02	.04	.03
Insurance Trust			
Expenditure	.03	.05	.21
Amount in \$ Billions	79.7	55.1	680.3

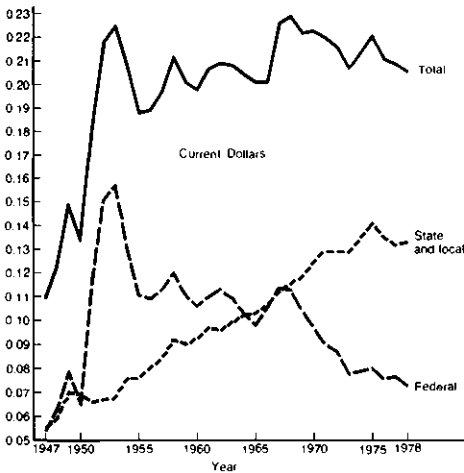
*Sources:* U.S. Bureau of the Census, *1977 Census of Governments*, vol. 6, *Topical Studies*, no. 4, *Historical Statistics on Governmental Finances and Employment* (Washington, D.C.: Government Printing Office, 1979).

sharply in favor of the national government because of the Korean War. In 1953, however, the federal share began a long-term decline that reached equality with the rising state-local share in the late 1960s and fell further and further behind thereafter. By 1978 federal output was only 7 percent of GNP compared to 13 percent for state and local gov-

**Table 9.4** Government Purchases of Goods and Services as a Percentage of GNP, in Current and Constant (1947) Dollars, by Level of Government, 1947-78

Year	Current Dollars (G/GNP)			1947 Dollars (G'/GNP')		
	Federal	State and Local	All Government	Federal	State and Local	All Government
1947	5.4	5.5	10.9	5.4	5.5	10.9
48	6.4	5.9	12.3	6.1	5.6	11.7
49	7.9	7.0	14.9	7.0	6.3	13.4
50	6.5	6.9	13.4	6.2	6.2	12.4
51	11.6	6.6	18.2	10.0	5.8	15.8
52	15.1	6.7	21.8	12.6	5.7	18.4
53	15.7	6.8	22.5	13.0	5.8	18.9
54	13.1	7.6	20.7	11.0	6.3	17.3
55	11.1	7.6	18.8	9.4	6.4	15.8
56	10.9	8.0	18.9	9.1	6.5	15.6
57	11.3	8.4	19.7	9.3	6.7	16.1
58	12.0	9.2	21.2	9.7	7.4	17.0
59	11.1	9.0	20.1	9.0	7.1	16.2
60	10.6	9.2	19.8	8.7	7.3	16.0
61	11.0	9.7	20.7	9.0	7.5	16.5
62	11.3	9.6	20.9	9.1	7.3	16.5
63	10.9	9.9	20.8	8.7	7.5	16.2
64	10.3	10.2	20.4	8.1	7.6	15.8
65	9.8	10.3	20.1	7.7	7.7	15.4
66	10.5	10.6	20.1	8.1	7.8	15.9
67	11.4	11.2	22.6	8.8	8.0	16.8
68	11.3	11.6	22.9	8.6	8.1	16.8
69	10.4	11.8	22.2	8.0	8.2	16.1
70	9.7	12.5	22.3	7.3	8.5	15.8
71	9.0	12.9	22.0	6.6	8.6	15.2
72	8.7	12.9	21.6	6.2	8.4	14.6
73	7.8	12.9	20.7	5.5	8.3	13.8
74	7.9	13.5	21.4	5.5	8.6	14.1
75	8.0	14.1	22.1	5.6	9.0	14.7
76	7.6	13.5	21.1	5.3	8.6	13.9
77	7.7	13.2	20.9	5.3	8.2	13.5
78	7.3	13.3	20.6	5.0	8.1	13.1

Source: *Survey of Current Business*, vol. 56 (January 1976); vol. 59 (July 1979).



**Fig. 9.1** Data from table 9.4.

ernments in the current-dollar series and 5 compared to 8 percent in the constant-dollar measures.

The second major structural change was the replacement of public sector growth exceeding the rate of growth of the total economy with growth that fell behind it. For the federal government this change occurred in 1953 in both the current- and constant-dollar series, and for the state-local sector it occurred in 1975. For both levels combined the postwar peak ratios to GNP were either in 1953 (constant-dollar measure) or in 1968 (current-dollar measure).

Official measures of government output are subject to a number of well-known limitations (see, for example, Musgrave 1959; Shoup 1947 and 1969). Prominent among these, as far as any assessment of the role of government during the postwar period is concerned, is the omission of government capital formation. Estimates of expanded measures of government product in the United States have recently been made available by Eisner and Nebhut (1979) for the 1946–76 period. Four major imputations are made in their series:

1. Values of the services of government capital are measured as the sum of an interest return and capital consumption allowances at replacement cost
2. Uncompensated factor services, such as those provided by military draftees and jurors, are added
3. Real gains and losses on government capital, or net revaluations, are estimated
4. Work-related expenses, mainly travel expenses of government employees, are estimated and deducted

The resulting ratios to GNP, computed in 1972 dollars, are shown in the first two columns of table 9.5, for government product both gross



and net of real capital gains and losses on government capital (current government product). When these two expanded product measures are compared with the official NIPA series for GNP originating in government relative to GNP (both in 1972 dollars), shown in the third column of table 9.5, two main differences stand out. One is the much

**Table 9.5**                    **Alternative Measures of Government Product as a Percentage of GNP, in Constant (1972) Dollars, 1946-76**

Year	Eisner and Nebhut Series		Official NIPA Series
	Current Product	Gross Product	
1946	44.3	37.9	15.9
1947	35.6	39.9	12.4
1948	30.1	33.2	11.9
1949	23.8	24.2	12.7
1950	20.1	20.0	12.1
1951	17.0	18.7	13.7
1952	18.4	17.9	14.3
1953	19.7	20.4	13.7
1954	20.5	20.7	13.7
1955	20.3	25.1	12.9
1956	21.3	22.3	12.9
1957	22.4	23.2	13.1
1958	22.4	22.7	13.3
1959	22.6	22.8	12.7
1960	22.8	23.9	12.9
1961	22.9	24.9	13.0
1962	22.2	22.8	12.8
1963	21.7	22.2	12.6
1964	21.3	22.5	12.4
1965	20.6	21.4	12.1
1966	20.6	21.0	12.3
1967	21.4	21.7	12.6
1968	21.4	21.8	12.5
1969	22.4	23.8	12.5
1970	23.1	24.3	12.6
1971	21.4	22.0	12.3
1972	20.0	22.6	11.7
1973	20.0	24.9	11.2
1974	21.3	24.9	11.7
1975	21.9	22.0	12.0
1976	19.9	19.7	11.5

*Sources:* Eisner and Nebhut 1979, table 5, p. 42; *Survey of Current Business*, vol. 56 (January 1976); vol. 59 (July 1979).

higher postwar peaks at the very beginning of the period in the expanded series. The other is the similarity in the timing of the peaks during the latter part of the period in all three series, both in the late 1960s and in 1974–75.

### 9.1.3 Total Expenditures

When the focus is expanded from government purchases to total expenditures, several complications arise. Whereas a  $G/\text{GNP}$  ratio has a precise meaning—namely, the relative importance of a specific component of total national output—a total expenditure ratio ( $E/\text{GNP}$ ) does not. Transfer expenditures are not necessarily less than GNP, and GNP is only one of a number of measures of the size of the economy that might be used to show the relative growth of government transfer payments. Nevertheless, GNP is the measure commonly used, and that practice will be followed here.

Two more important difficulties in dealing with total government expenditures arise from their heterogeneous character, which complicates the derivation of constant-dollar measures, and their greater sensitivity to economic fluctuations, which may mean that trends are obscured in unadjusted data.

#### *Constant-Dollar Adjustments*

Arriving at a good set of constant-dollar adjustments is mainly a problem of measurement for government output expenditures and mainly a problem of choice for all other expenditures. The measurement problems, arising from the intangible nature of many governmental benefits and services, are well known (see, however, Hulten 1979). For example, to adopt a Baumol-type hypothesis of zero productivity growth in the public sector (Baumol 1967), as is often done for simplicity, could be regarded both as too pessimistic or too optimistic. Given a private sector in which labor productivity and money wage rates rise steadily, the lower the rate of productivity growth assumed in the derivation of the constant-dollar government output series, the more rapid the increase in the implicit price deflator for the public sector and the greater the divergence between current- and constant-dollar government output measures. If, as the Baumol hypothesis would suggest, the relative price of government output is rising steadily over time, the government's share of national output will be shown to rise more rapidly by current- than by constant-dollar measures. This, indeed, is the relation shown in table 9.4 above.

The critical question, of course, concerns the quality of the constant-dollar series for government output. Criticizing the Canadian national income accounts for implicitly assuming a zero rate of productivity growth in the government sector, a rate which he regarded as too low,

Stanbury (1973) computed the effects of different degrees of productivity understatement on the relative size of the public sector shown by constant-dollar measures. His results, shown in table 9.6, clearly indicate that constant-dollar government output shares must be interpreted with great care. Since the base year used for the price adjustments was 1961, earlier constant-dollar output shares ( $G'/GNP'$ ) are overstated and later ones understated by any  $G'$  measure that uses too low a rate of government output productivity growth. Whereas the Canadian national income accounts, for example, showed a 1926–68 increase in the relative size of the government sector from 13.2 percent to 19.0 percent of GNP, the true increase would have been from 7.3 percent to 21.1 percent if the government sector had in fact experienced a 2 percent average annual rate of productivity growth over that period.

NIPA measures of constant-dollar government purchases in this country are also based on an assumption of zero factor-productivity growth.<sup>5</sup> Use of this standard convention has produced significant differences in the measured rates of price increase in the private and public sectors during the postwar period. These are illustrated in the following tabulation, which compares changes in the implicit price deflators for the government sector as a whole (FSL), the federal sector (F) and the state-local sector (SL) with the deflators for personal consumption expenditures (PCE) and national income (NI).

**Table 9.6** Productivity and the Relative Size of the Public Sector in Canada (In Percentages)

Alternative Rates of Long-Run Average Annual Productivity in the General Government Sector	Ratio of Government Expenditures on Current Goods and Services and Capital Formation to GNP in 1961 Dollars <sup>a</sup>	
	1926	1968
–1.0	17.5	18.0
–0.5	15.2	18.5
0.0 <sup>b</sup>	13.2	19.0
+0.5	11.4	19.5
+1.0	9.8	20.0
+1.5	8.5	20.6
+2.0	7.3	21.1
+2.5	6.3	21.7
+3.0	5.4	22.2

Source: Stanbury 1973.

<sup>a</sup>Note that transfer payments and subsidies have been omitted.

<sup>b</sup>This is the rate implicitly assumed in the Canadian national accounts.

## NIPA Implicit Price Deflators (1972 = 100)

<i>Year</i>	<i>FSL</i>	<i>F</i>	<i>SL</i>	<i>PCE</i>	<i>NI</i>
1947	33.8	35.1	32.5	52.8	51.3
1978	157.8	153.3	160.4	150.3	153.4
1978/1947	4.67	4.37	4.94	2.85	2.99

Whether long-term changes in the government's share of total national output are better measured by current-dollar ( $G/GNP$ ) or by constant-dollar ( $G'/GNP'$ ) ratios remains an open question. For the other kinds of government expenditure, which are mainly transfer and net interest payments (table 9.2), the problem is less one of measurement than one of choice. The real value of these expenditures is determined not by productivity in the public sector but rather by productivity in private markets. They should, in other words, be converted to constant-dollar terms by the use of private, not public, sector price indexes (Dubin 1977). It is what those payments will buy in private markets that determines their real value, and they should be treated accordingly.

This means, for one thing, that there is no simple way to convert total government expenditures into constant-dollar terms. In principle, transfer and interest payments should be deflated by price indexes specific to the different groups receiving them. In practice, such measurement refinements may or may not be worth the costs of making them. To gain some insights into the nature of these tradeoffs three alternative constant-dollar/expenditure-to-GNP ratio series have been constructed and are given in table 9.7, along with the usual current-dollar series. In the first, presented as a standard of reference, all government expenditures, regardless of type, are deflated by the appropriate NIPA implicit price deflators for government output. In the second constant-dollar series, real government purchases of goods and services are taken directly from NIPA sources—i.e., are measured in the same way as in the first series—but all other expenditures are deflated by the NIPA deflator for personal consumption expenditures (PCE). The third series is constructed in the same way as the second except that the Consumer Price Index (CPI) is used in place of the PCE deflator.

Two questions are of particular interest concerning the alternative series shown in table 9.7. What differences, if any, are there in the measured growth rates for the whole postwar period? When do the postwar peaks in the different  $E/GNP$  ratios occur? The answer to the first question is shown at the bottom of the table where the 1978 values for each series are given as a ratio to their corresponding 1947 values. Greater rates of growth are shown by the current-dollar series than by any of the others; and among the constant-dollar measures, much the least growth is shown by the conventional series based on the implicit gov-

ernment sector price deflators. Indeed, it shows federal expenditures to have fallen slightly as a percentage of GNP between 1947 and 1978. The growth trends shown by the two expenditure measures deflated in part by alternative consumer price indexes are very similar. Finally, the more rapid growth in state-local, relative to federal, expenditures shows up clearly in all four series.

The years in which the relative size of government, measured by E/GNP ratios, peaked during the postwar period are remarkably con-

**Table 9.7** Direct Government Expenditures as a Percentage of GNP: Alternative NIPA Measures, Selected Years 1947-78

Year	Level of Government <sup>a</sup>	Current Dollars	Implicit Deflators for Government Purchases	Implicit Deflator for Personal Consumption Expenditures	Consumer Price Index
1947	F	12.1	19.1	13.9	13.9
	SL	6.2	11.8	9.1	9.1
	FSL	18.3	30.9	23.0	23.0
1948	F	12.7	22.1	14.6	14.5
	SL	6.8	12.2	9.4	9.4
	FSL	19.5	34.2	24.0	23.9
1953	F	20.3	31.8	22.7	22.6
	SL	7.5	11.7	9.5	9.5
	FSL	27.7	43.5	32.2	32.1
1957	F	17.0	25.9	18.7	18.7
	SL	9.0	12.9	10.9	10.9
	FSL	26.0	38.8	29.6	29.6
1967	F	18.6	23.5	19.4	19.5
	SL	11.9	13.3	12.9	12.9
	FSL	30.4	36.8	32.2	32.4
1972	F	17.7	17.7	17.7	17.7
	SL	14.0	14.0	14.0	14.0
	FSL	31.7	31.7	31.7	31.7
1975	F	19.8	20.6	19.8	19.6
	SL	15.1	15.4	14.8	14.8
	FSL	34.9	36.0	34.6	34.4
1978	F	18.0	18.7	18.0	17.6
	SL	14.3	14.8	13.5	13.4
	FSL	32.2	33.5	31.5	31.0
1978/	F	1.49	0.98	1.29	1.27
1947	SL	2.31	1.25	1.48	1.47
Ratios	FSL	1.76	1.08	1.37	1.35

Source: *Survey of Current Business*, various issues.

Note: Direct government expenditures are those made to provide benefits directly to the private sector. Intergovernmental grant expenditures are accordingly omitted from the series.

<sup>a</sup>F=federal; SL=state-local; FSL=federal, state, and local.

sistent both among the different table 9.7 series and with the output share measures shown in table 9.4. The peak year for the federal government was 1953 in all cases, and for the state-local sector it was 1975. For both governmental levels combined there was more variation, but the same two years show up in all but one of the measures used.

### *Full Employment Adjustments*

Isolating short-term changes in government expenditures and economic activity and eliminating them from all affected measures in order to reveal long-term trends more clearly has long been a major preoccupation of empirical researchers. A good example for the postwar period is provided by Charles Schultze's analysis of federal government spending trends and priorities (1976, pp. 323-69). In his measures, which cover the 1955-77 period, both federal expenditures and GNP are adjusted for recession by computing their hypothetical levels at a constant national rate of unemployment of 5 percent. In addition, any incremental costs of the Vietnam War are subtracted from federal expenditures. These baseline budget expenditures are then divided by nonrecession GNP estimates to provide an improved measure of federal governmental growth. For the period studied Schultze's two adjusted series show a significantly slower rise in the relative size of the federal sector than does the standard unadjusted measure (table 9.8).

Which of these two pictures is the more realistic is debatable. The unadjusted series may be unduly affected by temporary developments; the adjusted series may fail to eliminate these aberrations properly. The Schultze estimates, for example, are based on a constant unemployment rate as the appropriate standard of adjustment,<sup>6</sup> but postwar changes in

**Table 9.8**                      **Alternative Federal E/GNP Ratios, 1955-77**

Fiscal Year	Ratio of Federal Budget Outlays to GNP (%)	Schultze's Baseline Budget Outlays as a Percentage of Nonrecession GNP	
		Current Dollars	Constant Dollars (1955 = 100)
1955	18.4	18.2	18.2
1960	18.5	18.1	17.0
1965	18.0	18.1	16.4
1970	20.5	19.0	16.1
1975	22.5	19.9	15.9
1977*	22.2	20.1	15.8

Source: Schultze 1976, pp. 327-31.

\*Estimated.

the structure of United States labor markets may mean that a weighted rate that varies with changes in the composition of the labor force would be more appropriate (G. Perry 1970). The difficulties the Council of Economic Advisers (CEA) has had recently in distinguishing temporary from long-term changes in the economy's rate of productivity growth indicate clearly the slipperiness of full employment or potential GNP estimates.<sup>7</sup> It is interesting to note that when CEA estimates of full-employment GNP are used to measure growth in the relative size of the federal government, the picture is indeed different (table 9.9). The measures, by Pechman and Hartman (1979), show the full employment federal E/GNP ratio rising from 17.6 percent in 1960 to 21.0 percent in 1979, an increase slightly greater than 19 percent. Actual budget outlays, in contrast, rose from 18.5 to 21.6 percent of actual GNP, a growth of only 17 percent.

### *GNP Adjustments*

A third difficulty with the measures of the size of government under discussion is that there may be some systematic biases in the measurement of GNP over the postwar period. Two sources of these problems, tending to produce opposing biases in measured GNP during the period, have been widely discussed.

The first is especially troublesome because its presence would indicate that the two component terms of the E/GNP ratios are not independent, as unbiased size-of-government estimates require, but rather are negatively correlated. High government expenditures require high tax rates, and higher tax rates may induce many activities and transactions that would ordinarily be recorded in NIPA series to go underground and hence to disappear from measured GNP. How large the underground economy has become is a subject for vigorous current debate,<sup>8</sup> and by its very nature it presents an elusive target for NIPA estimators, not to mention Internal Revenue Service agents. At this point one can only note the distinct possibility that nonrecorded transactions do increase systematically in response to rising tax rates, and that these developments, if significant, impart an inherent upward bias to all E/GNP measures of the size of government.

The other source of postwar bias in the GNP accounts has been created by the steady movement of more and more married women into the labor force (Boskin 1979). This represents a shift from nonmarket production of household services or leisure, neither of which are part of measured GNP, into market production, which is. Over the postwar period, in other words, measured GNP has been rising faster than has total economic activity. This upward bias in the E/GNP denominator offsets, or dominates, the opposite bias created by the growth of the underground economy. The net effect on measures of the relative size

**Table 9.9**                    **Relation of Federal Budget Outlays to the Gross National Product, in Current and Constant Dollars, Fiscal Years 1960–79**

Fiscal Year <sup>a</sup>	Budget Outlays as Percentage of GNP			
	Current Dollars		Constant Dollars <sup>c</sup>	
	Actual (1)	Full Employment <sup>b</sup> (2)	Actual (3)	Full Employment <sup>b</sup> (4)
1960	18.5	17.6	20.6	19.6
1961	19.2	17.7	21.3	19.6
1962	19.5	18.5	21.6	20.4
1963	19.3	18.4	21.0	20.0
1964	19.2	18.7	20.8	20.2
1965	18.0	17.8	19.3	19.1
1966	18.7	19.0	19.6	20.0
1967	20.4	21.0	21.3	21.9
1968	21.5	22.1	22.3	22.9
1969	20.4	21.1	20.8	21.6
1970	20.5	20.3	20.5	20.3
1971	20.7	19.9	20.5	19.7
1972	20.9	20.1	20.5	19.7
1973	20.0	20.0	19.3	19.3
1974	19.8	19.7	18.8	18.6
1975	22.4	20.5	21.2	19.5
1976	22.6	20.9	21.5	19.9
1977	22.0	20.8	20.5	19.6
1978	22.1	21.3	20.5	19.9
1979 <sup>d</sup>	21.6	21.0	19.9	19.5

*Sources: The Budget of the United States Government, Fiscal Year 1980, pp. 577–78. Full-employment figures are from the Office of Management and Budget.*

*Note: From Pechman 1979, p. 26.*

<sup>a</sup>Ending June 30 for 1960–76 and September 30 for 1977–79.

<sup>b</sup>Full-employment outlays as a percentage of full-employment GNP.

<sup>c</sup>Calculated in fiscal 1972 prices.

<sup>d</sup>Estimated.

of government may be guessed at and speculated about, but quantitative determination seems out of reach, at least for the present.

### *Conclusion*

There is, it seems, no single expenditure series that can be said to predominate as the best measure of changes in the size of the public



sector. Each candidate has its own strengths and weaknesses, and no one of them can be relied upon alone. When questions arise as to whether government is becoming more or less important, a procedure similar to the NBER's identification of business cycle phases has much to recommend it. A sustained two- or three-year rise in one particular E/GNP series may be no more indicative of government growth than a two-quarter fall in real GNP is of the occurrence of a national recession. Moreover, expenditures measure only one aspect of the government's total impact on the economy. Tax expenditures, lending and loan guarantee operations, and regulatory activities must also be taken into account. Only when all, or most, of these complex dimensions of the public sector's economic role show a definite expansion can one be sure that government is really growing.

## 9.2 Trends in Intergovernmental Relations

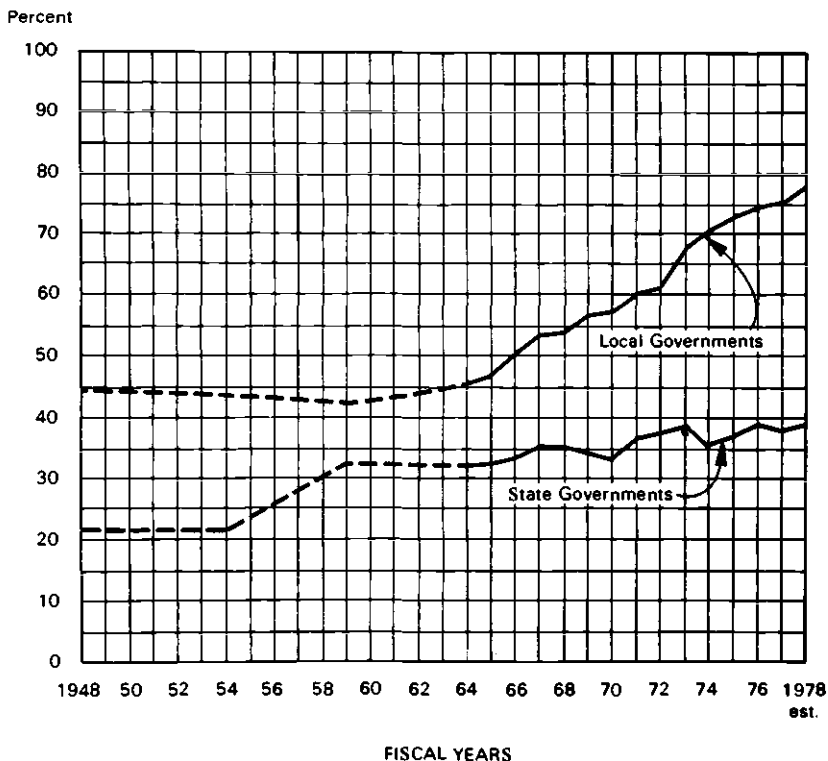
Prominent among the widely recognized and discussed postwar fiscal changes in this country has been a greatly increased public sector interdependence. The fiscal measure of this trend is the rapid rise in federal and state grants-in-aid. As table 9.10 shows, both types grew much faster than did the economy as a whole; federal grants rose from .05 percent to 3.5 percent of GNP and state grants from 1 percent to 3.5 percent. As a result both state and local governments are now much more dependent on outside funds than they were at the beginning of the postwar period. Figure 9.2 shows the development of this important structural change.

**Table 9.10** Federal and State Intergovernmental Grants as a Percentage of GNP, Selected Years, 1946-78

Year	Federal Grants/GNP	State Grants/GNP
1946	0.5	1.0
1950	0.8	1.5
1955	0.8	1.5
1960	1.3	1.9
1965	1.6	2.2
1970	2.5	3.0
1975	3.6	3.4
1978	3.6	n/a*

Sources: NIPA data for federal grants and for state grants since 1960. *Survey of Current Business*, vol. 56, part 2 (January 1976); May 1978, p. 16; and other issues. State grant data prior to 1960 are from ACIR, *The States and Intergovernmental Aids*, Report A-59 (February 1977), p. 9.

\*n/a=not available. In 1976-77 state grants were 3.4 percent of GNP.



**Fig. 9.2** The growing state and local dependency on outside aid, selected years 1948–78. (Outside aid as a percentage of general revenue from own sources.) Data from ACIR, *Significant Features of Fiscal Federalism, 1978–79 Edition, Report M-115* (May 1979), p. 80.

Though no sharp reversal in these trends appears to be imminent, there are signs that here too postwar growth rates may be slowing markedly. Federal grants are projected in the 1981 United States budget to grow less rapidly than the economy, falling to 3.5 percent of GNP in 1979 and to 3.4 percent in 1981.<sup>9</sup> If these projections are realistic, they represent a new phase in intergovernmental relations. With relatively less federal money flowing in, states may slow the growth in their own aid to local governments. It will be some time, however, before the full significance of these developments is revealed.

In a federal fiscal system with significant flows of intergovernmental aid two distinct measures of the relative importance of different levels of

government can be constructed. Like transfer payments in the national income accounts, intergovernmental grants may be treated in aggregate fiscal accounting by either the *deduct-add* or the *omission* rule (Rolph 1948). Under the latter they are simply omitted from total expenditures of all grantors. This yields for each level of government a measure of spending made directly for the benefit of the private sector, or what the Bureau of the Census calls direct expenditures. The focus here is on the provision of final services to consumers or intermediate services to business, regardless of whether the financial means came from the operating level of government or from outside sources. Under the *deduct-add* rule, in contrast, intergovernmental expenditures are recorded in the spending totals of grantors but then, in order to arrive at a nonduplicating total for all levels of government, intergovernmental revenues are deducted from the recorded expenditures of grantees. The focus here is on the expenditures made by each level of government that are financed by that same level, or what may be called own-financed expenditures.

The changes that have occurred during the postwar period in both measures of relative fiscal importance are shown in table 9.11. For this purpose BOC measures of general expenditures are used because of their availability for all three levels of government throughout the postwar period. The first change of note, in direct general expenditure (DGE) shares, is the decline in the importance of the federal government as a provider of services to the private sector. Its share fell from 65 percent of total direct general expenditures in 1948 to one of 47 percent in 1976-77. These losses in relative importance were added more or less equally to the state and local DGE shares. As a financing agent, however, the federal government has remained supreme through-

**Table 9.11** Federal, State, and Local Percentage Shares of Direct General Expenditures and Own-Financed General Expenditures, Selected Years, 1948-77

Years	Direct General Expenditures			Own-Financed General Expenditures		
	Federal	State	Local	Federal	State	Local
1948	65	12	23	66	15	19
1950	62	13	24	67	16	17
1960	65	15	20	71	17	12
1965-66	56	15	28	63	18	19
1970-71	50	19	31	59	22	20
1975-76	46	20	34	59	22	19
1976-77	47	20	33	60	22	18

Sources: U.S. Bureau of Census, *1977 Census of Governments*, vol. 6, *Topical Studies*, no. 4, *Historical Statistics on Governmental Finances and Employment*, tables 3, 5, and 6.

out the postwar period. Its share of own-financed general expenditures (OFGE) did vary from one year to another but never fell much below 60 percent. During the period, state governments steadily increased the relative importance of their financing role from 15 percent of OFGE in 1948 to 22 percent in 1976–77, while local governments stayed close to the 18 to 20 percent range.

Three-level estimates of government receipts and expenditures on a NIPA basis have recently been made available for the 1959–76 period (Levin 1978). Intergovernmental shares for direct and own-financed expenditures, computed from these data, are shown in table 9.12. Some of the same trends show up for both types, but the conceptual and measurement differences between the two sources alter other trends. Federal dominance of direct spending does decline during the period but less rapidly than is shown in BOC data. In 1976 the federal share of direct expenditures was 57 percent on a NIPA basis but only 46–47 percent on a BOC basis. In both series the state share of direct expenditures rises by one-third between 1960 and 1976, but the local share rises by only one-eighth in NIPA data compared to a two-thirds increase in BOC measures. In the own-financed expenditure series the federal government leads the other two sectors by comparably wide margins, but the trends are different. In NIPA measures the federal share is 68 percent in both 1960 and 1976 but declines from the 66 to 71 percent range at the beginning of the period to 60 percent at the end in the BOC measures. The local share stays close to 18–20 percent throughout the period in BOC data (except for 1960), but falls from 17 to 14 percent in NIPA data. In both sets of measures the state share of own-financed expenditures rises during the postwar period.

### 9.3 Public Sector Functions

Three major changes in the functional structure of government expenditures have occurred during the postwar period: (1) domestic pro-

**Table 9.12**      **Federal, State, and Local Percentage Shares of NIPA Direct and Own-Financed Expenditures, Selected Years, 1960–76**

Year	Direct Expenditures			Own-Financed Expenditures		
	Federal	State	Local	Federal	State	Local
1960	64	12	24	68	15	17
1965	60	14	26	66	17	17
1970	58	16	26	65	19	16
1975	57	16	27	67	18	15
1976	57	16	27	68	18	14

Source: Levin 1978, pp. 16–17.

grams have gained significantly in relation to defense programs; (2) social security and welfare spending has risen rapidly; and (3) social investment expenditures in health, education, and other areas have also increased in relative importance, but less dramatically.

There are a number of sources that could be used to document these trends. The basic statistical data used here are those given in the NIPA tables on "Government Expenditures by Type and Function" (table 3.14 in recent years). They were chosen because they provide a valuable cross-classification by government ends and means—dividing expenditures into twenty major functional classes and forty-three subclasses, all carried out by the four major economic methods shown earlier in table 9.2.<sup>10</sup> Discussion of these basic data is again supplemented by reference to the fiscal analyses made in the Brookings Institution's *Setting National Priorities* series.

Various measures of the postwar shift from defense to domestic spending, differing in their allocation of particular spending programs to the two broad categories, are readily available. Table 9.13 shows the Pechman-Hartman breakdown, which simply separates national defense budget outlays from all others. In their measures defense spending declines from 49 percent of total federal outlays in fiscal 1960 to 23 percent in 1978 and 1979. Schultze combines federal budget outlays for national defense and foreign affairs in his baseline series and classifies all others as domestic. In this treatment domestic programs rise from 7 to nearly 15 percent of nonrecession GNP between 1955 and 1977, while national security programs fall from 11 percent to 5 percent (table 9.14). A still broader definition of defense spending is used by the Advisory Commission on Intergovernmental Relations (ACIR). It includes national defense, international affairs and finance, space research and technology, and an allocated portion of net federal interest payments. In their tabulations federal domestic own-financed expenditures begin the postwar period in the 6 to 8 percent of GNP range (between 1949 and 1959) and rise to a 15–16 percentage plateau in the late 1970s (table 9.15).

During the past quarter decade, then, government domestic programs have gained significantly with the structural shift away from defense spending. In the nature of the case, that shift could not continue indefinitely, and indeed President Carter's 1981 budget indicates that it may soon be stopped, or even reversed. Within the domestic sector itself, the largest growth in relative importance has occurred in education programs (mainly at the state and local level), and in social security and welfare services (mainly at the federal level). Table 9.16 provides the details. The NIPA tabulations used begin with 1952, but since that year was significantly influenced by the Korean War, 1955 is also given in table 9.16 as an alternative initial year for the identification of postwar

changes in functional shares. Whichever early year is taken, the large relative decline in national defense expenditures stands out. The other major fall in relative importance occurred in transportation programs, but in the state and local sector only. Education expenditures rose from 12 percent of total direct government expenditures in 1955 to 18 percent in 1978, from 36 to 38 percent of state-local direct expenditures, and from 0.6 to 2.7 percent of total federal expenditures over the same

**Table 9.13** Federal Budget Outlays as a Percentage of Total Outlays, by Major Category, Fiscal Years 1960-79

Fiscal Year <sup>a</sup>	Nondefense					Grants-in-Aid to State and Local Governments <sup>c</sup>
	Defense	Total	Payments for Individuals <sup>b</sup>	Net Interest	Other	
1960	49.0	51.0	24.8	7.5	18.7	7.6
1961	47.7	52.3	26.5	6.9	18.9	7.3
1962	45.9	54.1	25.4	6.4	22.3	7.4
1963	45.0	55.0	25.7	6.9	22.4	7.7
1964	43.5	56.5	25.1	6.9	24.5	8.6
1965	40.1	59.9	25.7	7.2	27.0	9.2
1966	40.7	59.3	25.5	7.0	26.8	9.6
1967	43.1	56.9	25.3	6.5	25.1	9.6
1968	44.0	56.0	25.7	6.2	24.1	10.4
1969	43.0	57.0	28.6	6.9	21.5	11.0
1970	40.0	60.0	30.4	7.3	22.3	12.2
1971	35.9	64.1	35.3	7.0	21.8	13.3
1972	33.0	67.0	36.8	6.7	23.5	14.8
1973	30.2	69.8	38.8	7.0	24.0	16.9
1974	28.8	71.2	41.2	8.0	22.0	16.1
1975	26.2	73.8	43.7	7.1	23.0	15.3
1976	24.4	75.6	45.7	7.3	22.6	16.1
1977	24.2	75.8	45.3	7.4	23.1	17.0
1978	23.3	76.7	43.3	7.9	25.5	17.3
1979 <sup>d</sup>	23.2	76.8	43.2	8.7	24.9	16.6

Sources: Office of Management and Budget, "Federal Government Finances" (January 1979), pp. 40-42, 65-67.

Note: From Pechman and Hartman 1979, p. 28.

<sup>a</sup>Ending June 30 for 1960-76 and September 30 for 1977-79.

<sup>b</sup>Payments for retirement, disability, and unemployment (principally social security, medicare, veterans' pensions and compensation, and unemployment insurance) and low-income assistance (principally welfare, food stamps, housing, and medicaid). Includes grants-in-aid to state and local governments that subsequently result in payments for individuals.

<sup>c</sup>Total grants-in-aid, including grants for payments for individuals.

<sup>d</sup>Estimated.

**Table 9.14** Federal Baseline Budget Outlays for Defense and Domestic Programs, as a Percentage of Nonrecession GNP, Selected Fiscal Years, 1955-77

Fiscal Year	Baseline Budget Outlays as Percentage of Nonrecession GNP		
	National Defense and Foreign Affairs	Domestic Programs	Total
1955	11.2	7.0	18.2
1960	9.5	8.6	18.1
1965	8.1	10.0	18.1
1970	6.9	12.1	19.0
1975	5.7	14.2	19.9
1977*	5.4	14.7	20.1

Source: Schultze 1976, p. 328.

\*Estimated.

period. By far the largest rise, however, was in social security and welfare services. From a 7-11 percent share in 1952-55 for all levels of government combined they vaulted to a 25 percent share in 1978.

A more detailed analysis of federal domestic programs alone is provided by Schultze's baseline budget tabulations, shown in table 9.17. The rapid growth in payments to individuals, both for retirement, disability and unemployment, and for low-income assistance, stands out. It is also interesting to note that while expenditures for Schultze's categories of physical and social investment were both 2.1 percent of non-recession GNP in 1977, those for physical investment were 1.6 percent of GNP in 1955, while those for social investment were only 0.6 percent.

#### 9.4 Government Revenue Systems

That the governmental revenue structure has changed significantly during the postwar period is not likely to be disputed. Some of the specific dimensions of that change, however, vary with the view one wishes to take of government finance. In the revenue game there are many individual players. While the contribution each has made to the total revenue raised during the postwar period is a matter of record, the significance of each contribution depends on the context in which it is evaluated, and in particular on the performance of its most directly competing contributors.

Three alternative sets of revenue data are presented here for two or three levels of government, depending on the availability of data. The

first, given in table 9.18, compares the percentage distributions in 1948 and 1976-77 of BOC:GF total own-source government revenue. For all levels of government combined by far the largest relative increase during the period occurred in insurance trust revenues, from 7 percent of the total in 1948 to 20 percent in 1976-77. General sales taxes were next with a doubling of their percentage share, but it was still only 5.5 percent at the end of the period. The property tax, in contrast, main-

**Table 9.15** Federal Government Expenditures from Own Funds on Defense and Domestic Programs, Selected Years, 1929-79

Calendar Year	Sector	Federal		
		Total	Defense	Domestic
<i>Amount in Billions of Current Dollars</i>				
1929	10.2	2.6	1.1	1.5
1939	17.4	8.9	1.5	7.4
1949	59.3	41.3	22.0	19.3
1954	97.0	69.8	47.1	22.7
1959	131.0	91.0	53.6	37.4
1964	176.3	118.2	64.0	54.2
1969	285.6	188.4	95.5	92.9
1974	458.2	299.3	105.3	194.0
1975	532.8	356.8	114.5	242.3
1976	570.3	385.2	120.1	265.1
1977	621.8	422.6	129.8	292.8
1978 P	685.0	461.0	141.2	319.8
1979 est.	764.5	507.0	155.0	352.0
<i>As Percentage of GNP</i>				
1929	9.9	2.5	1.1	1.5
1939	19.2	9.8	1.7	8.1
1949	23.0	16.0	8.5	7.5
1954	26.5	19.1	12.9	6.2
1959	26.9	18.7	11.0	7.7
1964	27.7	18.6	10.1	8.5
1969	30.5	20.1	10.2	9.9
1974	32.4	21.2	7.5	13.7
1975	34.9	23.3	7.5	15.8
1976	33.5	22.7	7.1	15.6
1977	32.9	22.4	6.9	15.5
1978 P	32.5	21.9	6.7	15.2
1979 est.	32.6	21.6	6.6	15.0

Source: ACIR, *Significant Features of Fiscal Federalism, 1978-79 Edition*, Report M-115 (May 1979), p. 7.

Note: P = preliminary; est. = estimated.



**Table 9.16** Government Expenditures by Major Function, 1952, 1955, and 1978 (Percentage Distributions)

Expenditures	Federal Total Expenditures			Federal Direct Expenditures		
	1952	1955	1978	1952	1955	1978
National Defense	65.8	57.8	23.7	68.2	60.4	28.3
Space Research and Technology	—	—	0.9	—	—	1.0
Central Administration	8.9	9.7	12.0	9.2	10.1	14.3
International Affairs and Finance	3.3	3.3	1.2	3.5	3.5	1.4
Education	0.4	0.6	2.7	0.2	0.6	1.2
Health and Hospitals	0.6	0.4	2.0	0.5	0.3	1.5
Social Security and Special Welfare Services	7.3	12.7	34.1	5.6	11.0	34.5
Civilian Safety	0.0	0.0	0.2	0.0	0.0	0.1
Labor	0.3	0.4	4.8	0.0	0.1	3.0
Veterans Benefits and Services	7.0	7.4	4.3	7.1	7.7	5.2
Regulation of Commerce and Finance	0.0	0.0	0.1	0.0	0.0	0.2
Transportation	1.6	1.8	3.6	0.9	0.8	2.5
Other Commerce and Transportation	0.0	0.0	0.3	0.0	-0.1	0.4
Utilities and Sanitation	—	—	1.2	—	—	0.2
Housing and Community Development	-0.1	-0.4	2.5	-0.1	-0.5	1.2
Nuclear Energy Research and Development	—	—	0.6	—	—	0.6
Postal Services	1.2	0.7	0.5	1.2	0.8	0.6
Agriculture and Agricultural Resources	1.8	4.3	1.6	1.8	4.4	1.7
Natural Resources	1.7	1.2	2.0	1.7	1.1	2.1
General Revenue Sharing	—	—	1.7	—	—	—
Sum	99.8	99.9	100.0	99.8	100.2	100.0
Amount in \$ Billions	71.0	68.1	459.7	68.4	65.0	382.4

Sources: U.S. Department of Commerce, Office of Business Economics, *The National Income and Product Accounts of the United States, 1929-65*; Statistical Tables (Washington: Government Printing Office, 1966), table 3.10; and *Survey of Current Business*, vol. 59 (July 1979), table 3.14.

tained a stable share of total revenue while the individual income tax declined slightly. More significant losses in production of revenue were registered by the corporation income tax and excises. If state liquor store profits are combined with them, excise revenues fell from 16 percent of the total in 1948 to less than 7 percent in 1976-77.

When attention is focused on each of the three levels of government, several new dimensions of the total revenue picture appear. The property tax remained the most important source of local government revenue, but its share fell from 60 to 50 percent. The individual income tax

Table 9.16—continued

Expenditures	State and Local Direct Expenditures			Federal State and Local Direct Expenditures		
	1952	1955	1978	1952	1955	1978
National Defense	0.5	0.5	0.3	50.0	40.4	15.9
Space and Technology	—	—	0.0	—	—	0.6
Central Administration	9.8	10.1	13.1	9.4	10.1	13.7
International Affairs and Finance	—	—	—	2.5	2.3	0.8
Education	32.7	36.2	38.2	9.0	12.3	17.6
Health and Hospitals	9.0	8.2	9.1	2.8	2.9	4.9
Social Security and Welfare Services	11.2	9.8	13.7	7.1	10.6	25.3
Civilian Safety	7.7	7.5	7.7	2.1	2.6	3.4
Labor	0.8	0.7	2.3	0.2	0.3	2.7
Veterans Benefits	0.6	0.3	0.0	5.4	5.2	2.9
Regulation of Commerce and Finance	1.4	1.3	0.7	0.4	0.5	0.4
Transportation	18.2	18.8	7.5	5.6	6.8	4.7
Other Commerce and Transportation	-0.7	-0.5	-0.2	-0.2	-0.2	0.1
Utilities and Sanitation	3.3	3.3	4.3	0.9	1.0	2.0
Housing and Community Development	1.9	0.2	0.1	0.4	-0.3	0.7
Nuclear Energy Research and Development	—	—	0.1	—	—	0.4
Postal Services	—	—	—	0.9	0.5	0.3
Agriculture	1.2	1.1	0.6	1.6	3.3	1.2
Natural Resources	2.4	2.5	2.5	1.9	1.6	2.3
General Revenue Sharing	—	—	—	—	—	—
Sum	100.0	100.0	100.0	100.0	99.9	99.9
Amount in \$ Billions	25.2	32.7	303.6	93.6	97.6	686.0

more than tripled its relative importance at the state level, from 5 to 16 percent, and for local governments it rose from insignificance in 1948 to provide 3 percent of total revenues in 1976–77. Excise tax receipts fell most dramatically at the federal level and significantly at the state level, but rose in relative importance for local governments. Finally, the heterogeneous category “charges and miscellaneous” raised its standing moderately at the state level and significantly among local governments. If user charges make up a large portion of that last category at the local level,<sup>11</sup> the ten percentage point increase in it, accompanied by an equal percentage point decline in the local revenue share of the property tax, provides an intriguing, though no doubt wholly coincidental, adumbration of the two revenue trends most likely to result from California’s Proposition 13 and similar local tax limitation measures.

**Table 9.17 Federal Expenditures on Domestic Programs, by Category, Selected Fiscal Years, 1955-77**

Category	Billions of Dollars							As Percentage of Nonrecession GNP		
	1955	1960	1965	1970	1975	1977	1955	1965	1970	1977
Baseline Domestic Expenditures	26.4	43.8	65.7	115.4	225.8	292.2	7.0	10.1	12.1	14.7
Payments to Individuals	12.1	21.9	31.1	61.3	131.4	167.4	3.2	4.8	6.4	8.4
Retirement, disability, and unemployment	10.4	19.4	27.2	51.8	107.2	136.5	2.8	4.2	5.4	6.9
Low-income assistance	1.7	2.5	3.9	9.5	24.2	30.9	0.5	0.6	1.0	1.5
Physical Investment and Subsidies	6.1	10.7	20.7	23.8	32.5	41.4	1.6	3.2	2.5	2.1
Natural resources and environment	4.7	4.3	6.9	8.8	11.2	16.4	1.2	1.1	0.9	0.8
Transportation	1.0	4.2	5.8	7.0	10.4	15.5	0.3	0.9	0.7	0.8
Commerce, science, research and development, and other	0.4	2.2	8.0	8.0	10.9	9.5	0.1	1.2	0.8	0.5
Social Investment and Services	2.4	3.5	4.9	16.3	32.3	40.9	0.6	0.8	1.7	2.1
Education	1.0	1.0	1.3	6.0	12.2	14.2	0.3	0.2	0.6	0.7
Health	1.0	1.8	2.3	5.0	9.7	12.4	0.3	0.4	0.5	0.6
Manpower training	0.1	0.2	0.5	1.6	2.8	4.7	—	—	0.2	0.2
Social services and other	0.3	0.5	0.8	3.7	7.6	9.6	—	—	0.4	0.5
Revenue Sharing	0.1	0.2	0.2	0.5	7.0	7.4	—	—	—	0.4
Outlays for Net Interest	4.8	6.9	8.6	14.4	23.3	33.0	1.3	1.3	1.5	1.7
Other	1.1	1.8	1.6	1.7	5.7	9.6	0.3	0.2	0.2	0.5
Less: Intragovernmental Transactions, etc.	-0.2	-1.2	-1.4	-2.6	-6.4	-7.5	—	—	—	—
Addendum: Recession-Oriented Expenditures (all classified as "payments to individuals")	0.0	0.0	0.0	-1.7	7.8	14.5	—	—	—	—

Source: Schultze 1976, p. 334.

**Table 9.18      Own-Source Government Revenue, by Type and Level of Government (Percentage Distributions)**

	1948				1976-77			
	All Govern-ments	Fed-eral	State	Local	All Govern-ments	Fed-eral	State	Local
Taxes	76.5	80.1	66.9	68.3	63.8	63.8	64.9	62.7
Property	9.4	—	2.7	60.5	9.5	—	1.4	50.5
Individual income	29.6	40.8	4.9	0.4	28.3	41.0	16.4	3.1
Corporation income	15.3	20.5	5.8	— <sup>a</sup>	9.7	14.4	5.9	— <sup>a</sup>
Customs duties	0.6	0.8	—	—	0.8	1.4	—	—
General sales & gross receipts	2.8	—	14.7	4.1	5.5	—	19.8	4.5
Excises	14.6	15.3	25.4	— <sup>b</sup>	6.4	4.6	13.8	2.4
Motor vehicle & operator's license	0.9	—	5.9	— <sup>b</sup>	0.7	—	2.9	0.3
Death & gift	1.3	1.9	—	— <sup>b</sup>	1.4	1.9	1.2	— <sup>b</sup>
All other	2.1	0.7	7.4	3.1	1.4	0.4	3.5	1.8
Charges & Miscellaneous	12.6	13.5	7.7	13.2	13.3	10.4	12.9	22.8
Utility Revenue	2.3	—	—	16.2	2.2	—	—	11.9
Liquor Store Revenue	1.4	—	8.5	0.9	0.4	—	1.4	0.3
Insurance Trust Revenue	7.2	6.3	17.0	1.4	20.3	25.8	20.8	2.3
Amount in \$ Billions	67.0	47.2	10.1	9.7	657.3	382.1	155.8	119.4

Sources: U.S. Bureau of the Census, *1977 Census of Government*, vol. 6, *Topical Studies* no. 4, *Historical Statistics on Governmental Finances and Employment*, tables 1, 3, 5, and 6.

<sup>a</sup>Minor amount included in individual income tax.

<sup>b</sup>Minor amount included in "All other" taxes.

Among the revenue sources used by governments taxes clearly attract the most public interest. Postwar changes in the structure of United States tax systems are therefore of special interest. Before these can be elucidated, however, a decision must be made about how to treat the payroll tax for social security. Is it simply a tax, or is it so closely related to benefits-to-be-received that it should be treated as a public price or user charge? The answer, of course, is that it is a rather ambiguous mixture of both of those features (see, for example, Break 1977). Since it cannot readily be classified as the one or the other, the United States tax structure will be shown both ways, with social insurance revenues treated as taxes (total tax revenue in table 9.19) and with those receipts excluded from the tax category (general tax revenue in table 9.19). International tax comparisons must deal with the same troublesome issues (see, for example, D. Perry 1979).

**Table 9.19** Structure of the United States Tax System: Percentage Distributions of Major Sources of Tax Revenue for Selected Years, 1946-78

Tax	1946	1948	1950	1975	1977	1978
<i>Total Tax Revenue</i>						
Individual Income	33.5	32.4	27.0	32.3	33.7	34.6
Corporation Income	18.2	21.3	26.4	10.0	11.5	11.9
Sales and Excise	21.2	20.8	20.1	16.6	15.2	14.9
Property	10.0	10.7	11.0	12.2	11.2	10.0
Estate and Gift	1.8	1.9	1.3	1.5	1.6	1.1
Social Insurance	12.2	9.3	10.5	24.9	24.5	25.2
Other	3.1	3.6	3.7	2.4	2.3	2.2
Total	100.0	100.0	100.0	99.9	100.0	99.9
Amounts (\$ Billions)	\$50.0	\$57.4	\$67.2	\$443.4	\$572.4	\$650.1
<i>General Tax Revenue</i>						
Individual Income	38.1	35.7	30.2	43.0	44.6	46.3
Corporation Income	20.7	23.5	29.5	13.3	15.2	15.9
Sales and Excise	24.1	22.9	22.5	22.2	20.1	19.9
Property	11.4	11.8	12.2	16.3	14.8	13.4
Estate and Gift	2.0	2.1	1.4	1.9	2.1	1.5
Other	3.6	3.9	4.2	3.2	3.0	3.0
Total	99.9	99.9	100.0	100.0	99.8	100.0
Amounts (\$ Billions)	\$43.9	\$52.1	\$60.2	\$332.8	\$433.1	\$486.0

Source: *Survey of Current Business*, January 1976 and July 1979, tables 3.2 and 3.4.

Notes: All receipts listed in "nontaxes" categories are excluded. Receipts from Federal Reserve banks are excluded from corporation profits tax accruals. Customs duties are included under Sales and Excise taxes and motor vehicle license receipts are included under the Other category.

The main distinction between the two interpretations of tax totals collected by all levels of government during the postwar period lies in the roles played by social insurance contributions and the individual income tax. In the "total tax" structure, social insurance revenue is the big gainer, from 10 percent of total taxes in 1948-50 to 25 percent in 1978, while the individual income tax provided close to a third of total tax revenues at both the beginning and the end of the period. As a source of "general tax" revenue, on the other hand, the individual income tax made a significant gain in its relative position, from 36 percent of the total in 1948 to 46 percent in 1978. In both tabulations the property tax has been falling in relative importance in recent years, and the corporation income tax again shows a significant postwar decline. The sales and excise category combines opposing movements on the part of general sales taxes, which grew considerably, and excises, which lost ground during the period.<sup>12</sup>

While the federal general fund has become almost a single tax system during the postwar period, both state and local governments have sig-

nificantly diversified their general tax structures. The federal individual income tax provided just over half of all federal government general tax receipts in 1948; in 1978 it provided 66 percent (table 9.20). When the corporate profits tax is added to the picture, the federal government's reliance on income taxation is seen to have increased during the period from 76 percent to 87 percent of total general revenues. Excises provide the only other major source of federal tax receipts, and their share of the total declined from 20 percent in 1948 to 10 percent in 1978.

State governments began the postwar period with heavy reliance on selective sales and general sales taxes (table 9.21). The principal changes during the period were the rapid increase in the importance of individual income taxes (from 7 percent of the total in 1948 to 26 percent in 1978), and the less meteoric rise in the general sales tax (from 22 to 30 percent of the total). Selective sales taxes showed the greatest decline.

In the local government sector individual income and general sales taxes have also increased in relative importance in the last thirty years, but their role is still a minor one compared to the property tax (table 9.22). That venerable levy, which produced 89 percent of total local tax collections in 1948 (as it had in 1902), was still producing 86 percent in 1968, but by 1978 it had declined to an 80 percent share. This may seem a relatively modest rate of decline, but it is, of course, an average for a highly diverse set of individual local government units throughout the country. If city revenue systems are studied by themselves, a very different picture emerges (tables 9.23 and 9.24). Whether one takes only the largest cities or all those with populations above 25,000 in

**Table 9.20      General Tax Revenue of the Federal Government, by Major Type, Percentage Distributions for Selected Years, 1948-78 (Amounts in \$ Billions)**

Tax	Fiscal Year				
	1948	1950	1975	1977	1978*
Individual Income	51.0	44.7	64.4	64.3	65.8
Corporation Income	25.5	29.8	21.4	22.5	21.7
Sales and Excise	20.2	22.3	11.1	9.5	9.9
Property	—	—	—	—	—
Death and Gift	2.3	2.0	2.4	3.0	2.1
Motor Vehicle	—	—	—	—	—
Other	0.9	1.2	0.8	0.7	0.5
Amounts	\$37.9	\$35.2	\$190.2	\$243.8	\$271.8

*Source:* ACIR, *Significant Features of Fiscal Federalism, 1978-79 Edition*, Report M-115 (May 1979), p. 44.

\*Estimated.



Table 9.21—continued

Year	Total Excluding Employment Taxes	Individual Income Taxes	Corporation Income Taxes	Death and Gift Taxes	General Sales Taxes <sup>a</sup>	Selective Sales and Gross Receipts					Motor Vehicle and Operators' Licenses	All Other	
						Motor Fuel Taxes	Alcoholic Beverage Taxes	Tobacco Taxes	Amusement Taxes	Public Utility Taxes			Property Taxes
1963	100.0	13.4	6.8	2.7	25.0	17.4	3.6	5.1	1.5	2.0	3.1	8.0	11.3
1964	100.0	14.1	7.0	2.7	25.1	16.7	3.6	4.9	1.6	2.1	3.0	7.9	11.4
1965	100.0	14.0	7.4	2.8	25.7	16.5	3.5	4.9	1.6	1.9	2.9	7.7	11.2
1966	100.0	14.6	6.9	2.8	26.8	15.7	3.4	5.2	1.5	1.9	2.8	7.6	10.8
1967	100.0	15.4	7.0	2.5	27.9	15.2	3.3	5.1	1.4	1.9	2.7	7.2	10.5
1968	100.0	17.1	6.9	2.4	28.7	14.2	3.1	5.2	1.3	1.8	2.5	6.8	9.9
1969	100.0	18.0	7.6	2.4	29.7	13.5	3.0	4.9	1.3	1.8	2.3	6.4	9.3
1970	100.0	19.1	7.8	2.1	29.6	13.1	3.0	4.8	1.2	1.9	2.3	6.2	9.0
1971	100.0	19.7	6.6	2.1	30.0	12.9	3.0	4.9	1.2	2.0	2.2	6.2	9.1
1972	100.0	21.7	7.4	2.2	29.4	12.1	2.8	4.7	1.1	2.0	2.1	5.6	8.9
1973	100.0	22.9	8.0	2.1	29.1	11.8	2.7	4.6	1.0	2.0	1.9	5.3	8.6
1974	100.0	23.0	8.1	1.9	30.5	11.1	2.6	4.4	1.0	1.9	1.8	5.1	8.7
1975	100.0	23.5	8.3	1.8	30.9	10.3	2.4	4.1	1.0	2.2	1.8	4.9	8.8
1976	100.0	24.0	8.1	1.7	30.6	9.7	2.3	4.0	0.9	2.3	2.4	4.9	9.0
1977	100.0	25.2	9.1	1.8	30.6	9.0	2.1	3.5	0.8	2.3	2.2	4.5	8.9
1978 est.	100.0	26.1	9.0	1.8	30.3	9.1	2.1	3.5	0.8	2.4	2.0	4.3	8.6

Source: ACLR, *Significant Features of Fiscal Federalism, 1978-79 Edition*, Report M-115 (May 1979), p. 53.

<sup>a</sup>Includes the collections from the business and occupation taxes levied by Hawaii, Washington, and West Virginia. The amounts in fiscal 1977 were \$146 million (est.), \$263 million, and \$299 million respectively.



**Table 9.22 Local Tax Collections, by Major Source, Selected Years 1902-78**

Fiscal Year	Total Tax Collections	Property Taxes	Sales and Gross Receipts Taxes		Individual Income Taxes <sup>a</sup>	All Other Taxes
			General	Selective		
<i>Amount (in \$ Millions)</i>						
1902	704	624	—	—	—	80
1913	1,308	1,192	—	3	—	113
1922	3,069	2,973	—	20	—	76
1927	4,479	4,360	—	25	—	94
1932	4,274	4,159	—	26	—	89
1936	4,083	3,865	40 <sup>b</sup>	50 <sup>b</sup>	—	128
1940	4,497	4,170	55 <sup>b</sup>	75 <sup>b</sup>	18	179
1944	4,703	4,361	60 <sup>b</sup>	76 <sup>b</sup>	26	180
1948	6,599	5,850	210 <sup>b</sup>	190 <sup>b</sup>	44	305
1952	9,466	8,282	369	258	85	473
1956	12,992	11,282	546	343	164	657
1960	18,081	15,798	875	464	254	692
1964	23,542	20,519	1,170	635	376	841
1968	31,171	26,835	1,204	728	1,077	1,327
1972	48,930	40,876	2,675	1,562	2,241	1,575
1976	67,557	54,884	4,711	2,445	3,127	2,390
1977	74,794	60,275	5,417	2,815	3,752	2,535
1978 <sup>c</sup>	81,500	65,250	6,270	2,730	4,300	2,950
<i>Percentage Distribution</i>						
1902	100.0	88.6	—	—	—	11.4
1913	100.0	91.1	—	0.2	—	8.6
1922	100.0	96.9	—	0.7	—	2.5
1927	100.0	97.3	—	0.6	—	2.1
1932	100.0	97.3	—	0.6	—	2.1
1936	100.0	94.7	1.0	1.2	—	3.1
1940	100.0	92.7	1.2	1.7	0.4	4.0
1944	100.0	92.7	1.3	1.6	0.6	3.8
1948	100.0	88.6	3.2	2.9	0.7	4.6
1952	100.0	87.5	3.9	2.7	0.9	5.0
1956	100.0	86.8	4.2	2.6	1.3	5.1
1960	100.0	87.4	4.8	2.6	1.4	3.8
1964	100.0	87.2	5.0	2.7	1.6	3.6
1968	100.0	86.1	3.9	2.3	3.5	4.3
1972	100.0	83.5	5.5	3.2	4.6	3.2
1976	100.0	81.2	7.0	3.6	4.6	3.5
1977	100.0	80.6	7.2	3.8	5.0	3.4
1978 <sup>c</sup>	100.0	80.1	7.7	3.3	5.3	3.6

Source: ACIR, *Significant Features of Fiscal Federalism, 1978-79 Edition, Report M-115* (May 1979), p. 55.

<sup>a</sup>Includes minor amounts of local corporation income taxes.

<sup>b</sup>The distribution of sales and gross receipts taxes between "General" and "Selective" for the years 1936-48 are estimated.

<sup>c</sup>Partially estimated.

1940 and 50,000 in 1970, the postwar decline in relative importance of the property tax is precipitous. As a source of general revenue, the contribution of the property tax declined from 55 percent in 1947 to 23–26 percent in 1976–77, while within the tax category alone its share fell from 81 to 60 percent for all cities and from 77 to 53 percent for large cities. As noted earlier, city fiscal systems have become more and more dependent on outside aid (20 percent of the total in 1947 and 44 percent in 1976–77), with much more of it coming directly from the federal government.

### 9.5 Tax Expenditures

No account of postwar changes in government expenditures and revenues would be complete without some discussion of that hybrid category known as federal tax expenditures. Their official definition is “revenue losses attributable to provisions of the federal tax laws which allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of tax liability.”<sup>18</sup> In principle, these are all departures from the “normal”

**Table 9.23**      **City Revenues, by Major Source, 1947 and 1976–77 (Percentage Distributions)**

	1947 <sup>a</sup>	1976–77 <sup>b</sup>
General Revenue	100.0	100.0
Taxes, total	69.8	42.8
property	56.4	25.7
general sales and gross receipts	8.0	5.8
selective sales and gross receipts	— <sup>c</sup>	3.8
other	5.4	7.6
Charges and Miscellaneous	10.8	17.5
Intergovernmental Revenue	19.4	39.7
from state governments	18.4	23.4
Amount in \$ millions	3,305	60,921

*Sources:* 1947 data: U.S. Department of Commerce, Bureau of the Census *Compendium of City Government Finances in 1947*, 1949 table 2, p. 6. 1976–77 data: U.S. Department of Commerce, Bureau of the Census. *City Government Finances in 1976–77*, 1979 table 1, p. 5.

<sup>a</sup>1947 data are for 397 cities with 1940 populations greater than 25,000.

<sup>b</sup>1976–77 data are for the 392 cities with 1970 populations greater than 50,000 and a sampling of cities with 1970 population less than 50,000.

<sup>c</sup>Category not listed separately in original source. Amounts included in “other” taxes.

**Table 9.24** Large City Revenues, by Major Source, 1947 and 1976-77 (Percentage Distributions)

	1947 <sup>a</sup>	1976-77 <sup>b</sup>
General Revenue	100.0	100.0
Taxes, total	70.9	42.6
property	54.9	22.6
general sales and gross receipts	10.8	5.7
selective sales and gross receipts	— <sup>c</sup>	4.0
income taxes	— <sup>c</sup>	8.0
other taxes	5.3	2.3
Charges and miscellaneous	8.8	13.9
Intergovernmental revenue	20.3	43.5
from state government	19.3	27.3
Amount in \$ millions	2,245	31,520

*Sources:* 1947 data: U.S. Department of Commerce, Bureau of the Census, *Large-City Finances in 1947* (Washington, D.C.: Government Printing Office, 1948), table 1, p. 5. 1976-77 data: U.S. Department of Commerce, Bureau of the Census, *City Government Finances in 1976-77* (Washington, D.C.: Government Printing Office, 1979), table 8, p. 97.

<sup>a</sup>1947 data are for 37 cities with 1940 populations greater than 250,000.

<sup>b</sup>1976-77 data are for 46 cities with 1970 populations greater than 300,000.

<sup>c</sup>Category not listed separately in original source. Amounts included in "other" taxes.

structure of individual and corporation income taxes chosen expressly to pursue various public policy objectives. Seen in this light, tax expenditures are "alternatives to budget outlays, credit assistance, or other policy instruments,"<sup>14</sup> and as such should be included in any analysis of federal government expenditure policies or trends. That they merit close attention is indicated by their rapid postwar growth, shown in table 9.25 and figure 9.3.

In dealing with tax expenditures, however, one encounters serious conceptual and measurement difficulties. There is, in the first place, no general consensus as to what the "normal" structure of an income tax is. Of the top ten federal tax expenditures in fiscal 1980, shown in table 9.26, three are debatable candidates for the list. Andrews (1972) has questioned this interpretation of the medical and charitable contribution deductions and Break (in press) has argued that the deductibility of state and local nonbusiness ability-to-pay taxes may be an integral part of a federal structure. Conceptual problems also exist for the most important item on the list—long-term capital gains. Would a shift to the

**Table 9.25 Federal Tax Expenditures and Other Measures of Federal Finances 1970-80**

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979 <sup>a</sup>	1980 <sup>a</sup>
<i>Amounts (in \$ Billions)</i>											
Gross national product	959	1,019	1,111	1,238	1,359	1,457	1,622	1,834	2,043	2,289	2,506
Total budget outlays	197	211	232	270	326	366	403	451	493	493	532
Income tax revenue, total	123.2	113.0	126.9	139.4	158.6	163.0	173.0	211.6	241.0	273.9	298.4
Individual income tax	90.4	86.2	94.7	103.2	119.0	122.4	131.6	157.6	181.0	203.6	227.3
Corporation income tax	32.8	26.8	32.2	36.2	38.6	40.6	41.4	54.9	60.0	70.3	71.0
Estimated tax expenditures, total	44.0	51.7	59.8	74.4	82.0	92.9	98.5	111.6	133.9	149.9	169.0
Individual income tax	37.6	41.8	46.5	56.0	62.8	70.6	72.6	83.9	100.7	111.4	126.2
Corporation income tax	6.4	9.9	13.3	18.4	19.2	22.3	25.9	27.7	33.2	38.5	42.8
<i>Indexes (1970 = 100)</i>											
Gross national product	100	106	116	129	142	152	169	191	213	239	261
Total budget outlays	100	108	118	126	137	166	186	205	229	250	270
Income tax revenue, total	100	92	103	113	129	132	140	172	196	222	242
Individual income tax	100	95	105	114	132	135	146	174	200	225	251
Corporation income tax	100	82	98	110	118	124	126	167	182	214	216
Estimated tax expenditures, total	100	118	136	169	186	211	224	254	304	341	384
Individual income tax	100	111	124	149	167	188	193	223	268	296	336
Corporation income tax	100	155	208	288	300	348	405	433	519	602	669

*Sources:* Data on tax expenditures: for 1970 through 1976, from Joint Committee on Taxation, *Issues in Simplification of the Income Tax Laws* (19 September 1977), table 7; for 1977 through 1980, by summation of detail in table G-1, *Special Analyses, Budget of the United States Government, Fiscal Year 1979 and Fiscal Year 1980*; other data, from *Budget of the United States Government, Fiscal Year 1980*, tables 16 and 19.

*Note:* From Manvel 1979, p. 207.

<sup>a</sup>Amounts shown for fiscal year 1979 and 1980 are budget estimates or projections.

“normal” income tax structure simply involve elimination of the present 60 percent exclusion of long-term capital gains, or would it also include full deductibility of capital losses from ordinary income, indexation of capital gains and losses for inflation, and the substitution of a full accrual

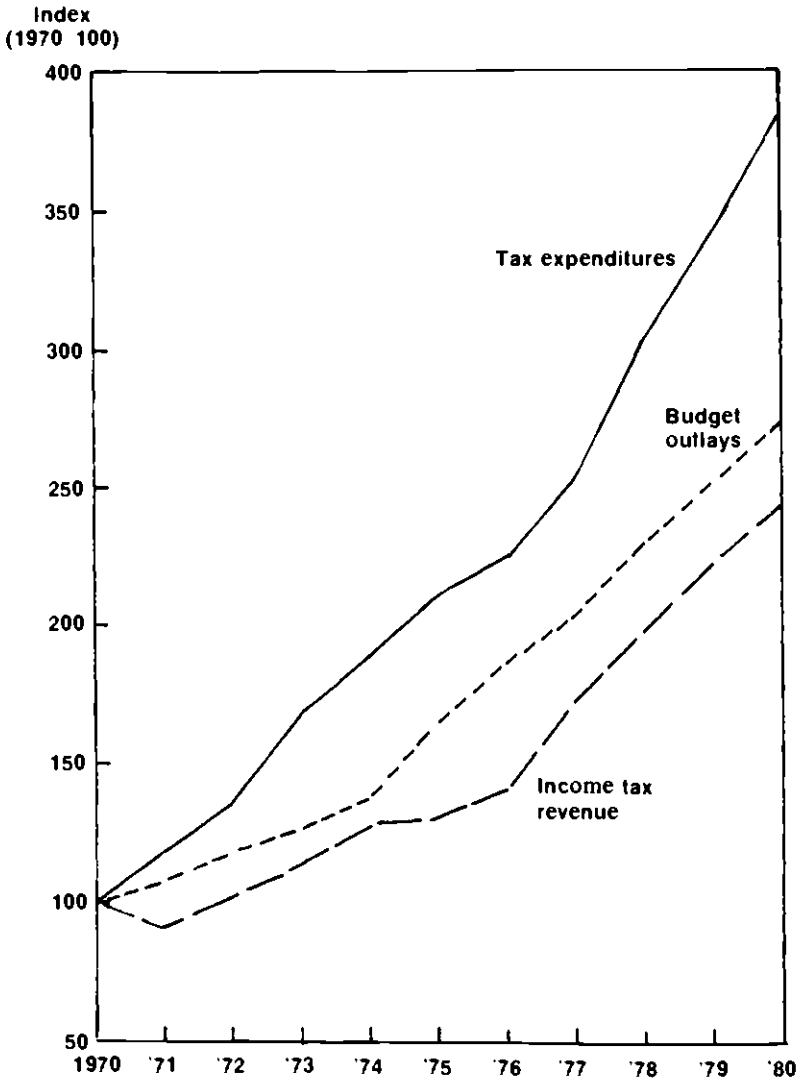


Fig. 9.3 Trends in tax expenditures and other measures of federal finances, 1970-80. Data from table 9.25.

**Table 9.26      The Top Ten Federal Tax Expenditure Categories, Fiscal Year 1980 (Amounts in \$ Billions)**

Category <sup>a</sup>	Estimated Revenue Loss: Individuals and Corporations
1. Capital gains	23.3
2. Investment tax credit	19.1
3. State and local nonbusiness taxes	17.7
4. Exclusion of pension contributions and earnings	15.1
5. Medical expense exclusions and deductions	12.7
6. Interest on home mortgages and consumer credit	12.2
7. Charitable contributions	9.0
8. Exclusion of social security and railroad retirement benefits	8.4
9. Interest on state and local debt	7.7
10. Excess of percentage over cost depletion; expensing of exploration and development costs	3.4

*Source: Special Analyses (1979, pp. 207–11).*

<sup>a</sup>Constructed in some cases from separate items in the official tax expenditure list; addition of separate revenue loss estimates subject to the qualifications discussed in the text.

basis for the current realization basis of the tax? The answers given to these questions, which are likely to differ from one expert to another, would make a great deal of difference in the reported size of the capital gains tax expenditure, as indicated by a recent study of corporate capital gains and losses by Feldstein and Slemrod (1978). According to their calculations for 1973 the taxation of real corporate capital gains at ordinary tax rates with full deductibility for real capital losses would have raised only slightly more revenue, assuming no investor reactions to tax change, than did the existing tax law.<sup>15</sup> According to this definition of the “normal” tax structure, then, virtually no capital gains tax expenditure was made in 1973.<sup>16</sup>

Even if all the individual tax expenditure items were, by some ideal standard, correctly defined and measured, further difficulties would be encountered in adding them together to obtain separate totals for particular functional areas or a grand total for the whole set, since the presence of important interactions among them would make the revenue loss from any one of them a function of the tax treatment of various others. The revenue to be gained from eliminating two tax expenditure items, then, may be either larger or smaller than the sum of their individual estimated costs.<sup>17</sup> Official tabulations of tax expenditures, in fact, deliberately omit functional and grand totals. To expect people not to add together the individual items, however, is like expecting no one to climb Mount Everest. They will be added because they are there. What insights may be obtained from such exercises, however, are highly prob-

lematical. For the moment it seems best to note the presence and development of federal tax expenditures but not to add them formally to any of the expenditure series discussed earlier.

## **9.6 Summary**

This paper has scrutinized alternative measures of government expenditures and revenues, assessed their usefulness as indicators of postwar fiscal trends, and identified what appear to be the major structural changes that have occurred in this area during the past thirty years. Among these changes are the following:

1. The government sector is larger than it was at the beginning of the period, but in many of its dimensions it has been growing recently less rapidly than the economy as a whole.
2. The federal government's tax-transfer programs have grown rapidly, especially in the domestic program sector.
3. Defense spending has declined significantly, but that trend may be stopped, or reversed, soon.
4. Social insurance expenditures and the payroll taxes that finance them have been major growth components of the public sector.
5. The public sector's share of national output has not grown significantly since 1953, but state and local governments have replaced the federal government as the major partner in these activities.
6. Intergovernmental grants have grown rapidly, and the public sector has consequently become significantly more interdependent.
7. The state-local sector has become more centralized, especially in the financing of its major programs.
8. Federal grants made directly to local governments have become an important part of the intergovernmental picture and have converted traditional hierarchical relations into triangular ones.
9. The federal tax structure has become more homogeneous during the postwar period. Insurance trust programs are mainly financed by payroll taxes and the general fund relies heavily on individual and corporation income taxes.
10. State-local tax systems, in contrast, have become more diversified and more responsive to economic growth and inflation.
11. The property tax remains the dominant contributor to own-source local government revenues, but its position is considerably less secure than it was at the beginning of the period, and there are now wide variations in its relative use among different kinds and sizes of local governments.
12. Federal tax expenditures appear to have grown rapidly, but the significance of these developments cannot readily be discerned.

13. Strong inflationary pressures in recent years have not only complicated the measurement of fiscal trends, but they may also be causing important structural changes that are only beginning to appear on the scene. Extrapolation of past trends is always a dangerous game; it appears to be especially so at this time.

## Notes

1. Table 3.18 in the NIPA accounts, published each year in the July issue of the *Survey of Current Business*, shows the relation between NIPA and BOC:GF measures of state and local government receipts and expenditures.

2. Even that measure can be questioned for its choice of the two terminal years used. In principle, one would like two years when the economy was at peacetime levels of full, or comparably high, employment. In practice, one must use single years that fall short of those requirements, averages of several years that may obscure important changes, or single years adjusted to estimate what peacetime full employment values would have been. The terminal years used in table 9.1, while not ideal, seem good enough to show the broad trends sought at this point.

3. See, for example, the discussion of the treatment of federal government sponsored enterprises and of the offsetting of receipts against expenditures for particular programs in the federal budget in the President's Commission on Budget Concepts (1967), pp. 187-95 and 245-76, respectively.

4. This was the term used in the first edition of *A Study in Public Finance*. In the second Pigou changed it to "real" expenditures and in the third to "non-transfer" expenditures. Of the three the most memorable and distinctive is surely the first (Pigou 1947, p. 19).

5. In the 1976 revisions the measurement of real factor inputs in the government sector was changed so as to distinguish, within the limits of data availability, between wage bill increases created by the hiring of better qualified workers or the promotion of employees on the basis of merit, which are interpreted as increases in the quality of government inputs, and wage bill increases resulting from general upward adjustments in the whole pay structure, which are not. Estimates of constant-dollar purchases from business were also improved by the use of new information on prices and the composition of the inputs. *Survey of Current Business*, Part I, January 1976, p. 22.

6. Schultze used a 5 percent rate as a matter of convenience but noted the use of a 4 or a 6 percent rate would have made little difference (1976, pp. 327-28).

7. *Economic Report of the President 1979*, pp. 72-76.

8. *Business Week* 1978, pp. 73-77; 1979, p. 26; the Internal Revenue's first attempt to study tax noncompliance comprehensively, *Estimates of Income Unreported on Individual Income Tax Returns*, was released in September 1979.

9. *Special analyses* (1980, pp. 8, 254).

10. Transfer and interest payments are combined in NIPA table 3.14.

11. Census publications do not provide the needed detail, but NIPA data for the state and local sector show that in 1977, for example, education, health, and hospital charges were 75 percent of the "nontax" category of total receipts.

12. State retail sales taxes were 2.8 percent of total tax revenues in 1948 and 5.8 percent in 1978. The corresponding shares of general tax revenues were 3 per-



cent in 1948 and 7.7 percent in 1978. In addition, local general sales taxes increased from 3 percent of general tax revenues in 1948 to 8 percent in 1978 (table 9.22).

13. *Special analyses* (1979, p. 183).

14. *Ibid.* The basic conception and its importance for policy analysis was developed by Stanley S. Surrey as assistant treasury secretary in the Johnson administration in 1967 and later (Surrey 1973; see also Feldstein 1975).

15. The amounts were \$1,138 million from the 1973 tax law and \$1,193 from the revised structure indicated (Feldstein and Slemrod 1978, p. 114).

16. All tax expenditure estimates are impact measures. That is, they take no account of the potential effects on tax revenues of taxpayer reactions to elimination of the particular tax expenditure item under study. In the situation under discussion here, as studies by Feldstein and his associates strongly suggest, any tightening of the capital gains tax rules, while retaining a realization basis, would significantly reduce capital asset sales with correspondingly important effects on federal income tax revenues (Feldstein, Slemrod, and Yitzhaki 1978; Feldstein and Yitzhaki 1978).

17. See for example, *Special analyses* (1979, pp. 189–93).

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## 2. George P. Shultz

### The Comparative Advantage of Government

No one can question that government's role in the postwar economy has grown tremendously, changed qualitatively, and has affected markedly virtually every aspect of economic activity. We all know that government is legitimate and necessary and that government is here to stay. But, along with other leading institutions in our society, its performance is now widely criticized and reactions to its size, power, and pervasiveness are increasingly sharp.

The postwar surge of its spending, taxing, regulating, and judging has produced some important accomplishments, but also much to worry us. Not least of these worries is the uneasy and widespread feeling that the juggernaut may be out of control—powered by a dynamic of its own, unrelated to our broad concerns almost because of its close relation to our parochial concerns, with results that are as disagreeable for our allies and friends around the world as they are for us. Certain issues stand out that illustrate problems brought about by the role that government has played in changing the postwar American economy. I will discuss five such issues in this commentary.

*Issue: Comparative advantage (and disadvantage) in the tasks that government undertakes: the need for limits.*

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Even governments need to recognize that a given form of organization or aggregation of people cannot do everything. Competence is important and it demands specialization. But as the reach of government has extended more and more into our economic and private lives, government officials have been led more and more into areas where they have no comparative advantage and may even be out of their element entirely. Government increasingly has come to dominate the production of essential goods and services and their allocation to various uses, substituting a system of bureaucratic command and control for the incentives of private enterprise and the pulls and hauls of the marketplace.

Private enterprises operating in a competitive market have a clear comparative advantage whenever the objective is efficiency in the use of resources, adaptation to variations in local and individual needs, or responsiveness to meet new issues and changed conditions. The superiority of the private market over governmental command and control of large sectors of the economy derives in part from its superiority in the essential tasks of collecting and evaluating information, of giving opportunity for the expression of individual tastes, and of driving producers to seek the lowest cost methods for transforming raw materials into goods that people want and value.

In addition, important managerial distinctions may be drawn between government and private business that bear on their respective areas of comparative advantage. These distinctions start with the deliberately flat organization structure of the federal government, stemming from the very concept of checks and balances. The resulting disposition to delay has been compounded in recent years by the wide distribution of action-stopping power among Congress, the executive branch, the judiciary, and the regulatory agencies. Government action is crablike at best, with an overwhelming emphasis on criticism and on policy formulation as opposed to execution of concrete tasks.

By contrast, the pyramidal structure of organization described in most textbooks does reasonably resemble the reality of business. A “doing” organization must be set up to force the decisiveness that gets action. One of the first lessons I learned in moving from government to business is that in business you must be very careful when you tell people who are working for you to do something, because the probability is high that they will do it. In government, no way! For, among other things, they don’t necessarily consider themselves to be really working for you in the first place.

This contrast between “debating” and “criticizing” organizations with their disposition to delay, and “doing” organizations with their spirit of action underlies the comparative disadvantage of government in managing important parts of the economy. And many of our economic problems today result from the large and increasing proportion of economic

decisions being made through the political process rather than the market process.

The problem is nowhere better or more tragically illustrated than in the field of energy. Decisions as to price, allocation of supplies, and siting of plants are based heavily on political rather than market considerations. Now the proposed bill, S.1246, if passed, would further extend the government's political intrusion into the allocation of capital within the energy industry. The inevitable result is that a potentially efficient system for producing and consuming energy becomes ensnared by high-visibility politics, dominated by regional considerations, varying corporate interests and their different abilities to exert political influence, and, importantly, attempts to use the energy system as a means for distributing welfare benefits. By this time, everyone knows the result is a mess.

Perhaps the situation is serious enough and the mess is obvious enough to allow the operation of Katz's law: "When things get bad enough, people will do even obvious and sensible things." If so, government should back off from its areas of comparative disadvantage and spend its time and the taxpayer's money in areas where it has special capabilities and responsibilities. In a field such as energy, these areas include seeing that externalities (e.g., the costs of dealing with pollutants) are reflected in the marketplace and insuring that the markets themselves are competitive.

More generally, government has a clear comparative advantage in the raising and distributing of money. In the postwar period government has in fact become, in considerable measure, an income redistribution system. But to perform this function, government need not, as it has, get into the business of providing health, housing, and a host of other in-kind services, where it operates at a comparative disadvantage. The feeling is widespread today that administration of these efforts is wasteful, unfair, and unwise—a feeling borne out by detailed analysis of the income maintenance system.

But government's special responsibility must primarily be the provision of a framework of law and security for people pursuing their own objectives, and the development of a military capacity able to defend the country's vital interests. We all rely on government to perform well in these areas of comparative advantage and unique responsibility.

*Issue: Regulations and, even more, the uncertainties created by the processes of implementing them—a real wild card—inhibit thinking and actions geared to long-term objectives and requiring long-term capital commitments.*

Regulations and the regulatory process are receiving increasing attention these days for a number of very good reasons. The problems to

which government regulations are addressed are heavily publicized. Sometimes publicity is based on faulty analysis or on dramatization of "horror" stories, both of which invite political overreaction. Nevertheless, many real problems do exist. Government must particularly concern itself with areas where externalities are involved, such as the cases of air and water pollution, although a pricing approach (e.g., an effluent tax) rather than a command and control approach is frequently preferable on grounds of fairness and efficiency. At the same time, one experiment in deregulation, with airlines, is moderately successful and others should be tried, though they may not be. Certainly the time is long past when regulation of the railroads can be justified on the grounds that railroads possess a monopoly in the field of transportation, and there never was any economic justification for the regulation of trucking.

Wide-ranging efforts are being made to estimate the costs of complying with regulation, with contributions coming from the academic, business, and governmental communities. Approximations like "\$100 billion per year and growing," conservative in that they take into account only a part of the problem, increasingly force attention to the questions: What are the benefits? And are they really worth it?

Important though it is to question the need for certain regulations and to estimate their costs as well as their benefits, it is even more essential to think through the long-term consequences of the extreme uncertainties inherent in the processes through which regulation is implemented. An individual project can be subject to a myriad of regulations administered by various levels and agencies of government with different jurisdictions and objectives. It often seems impossible to get a definitive decision, especially given the number of intervenors who have standing to interpose legal challenges at almost any stage of a project. It is worth noting that the Alaska Pipeline could only be built after Congress passed a law overriding all previous laws that were blocking its construction. And the proposed Energy Mobilization Board, still another level of bureaucracy, is based on the assumption that a supra-agency is necessary to cut through the maze of red tape if significant energy projects are to get under way.

A well-publicized example of difficulties posed by the regulatory maze involved Sohio's efforts to move oil from the West Coast inland by pipeline. In January 1975 the company began the process of securing necessary permits and government approvals: a total of approximately 700 permits were required from about 140 local, state, federal, or private agencies. On 13 March 1979, fifty months later, the decision was reached to abandon the project. In the interim, Sohio had spent \$50 million and managed to secure only 250 of the 700 permits required. When the oil company abandoned the project, it was spending at a rate of \$1 million

per month in the approval procedures. Governments regulated this project right out of existence.

The volume of permits Sohio had to obtain and of government bodies before whom it had to appear suggest another aspect of the problem. Adam Smith once remarked that specialization increases with the size of the market. Perversely, the vast increase in regulation in recent years has been accompanied by a form of specialization that amounts to a "balkanization" of problems. A whole host of federal, state, and local agencies regulate various aspects of what to a business is one problem.

The legitimate concern is not just a matter of the time involved to go to so many different places for answers. Action can be completely hung up by differences of view among those who represent regulatory interests that are deliberately insulated from each other by statute. A friend of mine once remarked that "whatever is not prohibited nowadays is required." I am forced to amend his statement to "whatever is prohibited may *also* be required."

These regulatory uncertainties continue into the operations phase of any major undertaking, and they are having a devastating impact on major long-term undertakings. The proposition involved here is fairly obvious: *The greater the uncertainty connected with future benefits from an investment, the more these benefits are discounted. The result surely is to skew the investment process into short-term undertakings and to discourage just those kinds of long-term efforts needed to make effective progress on such problems as energy.*

It is sometimes remarked that only the government can handle major undertakings with long-term consequences. That may well describe the world we now live in, but that unappealing situation is created not by the market, not by the inability of private enterprises to organize huge undertakings or by their unwillingness to assume risk. Rather it reflects the facts that government has injected unnecessary uncertainties and risks, including the risks of price and profit controls in the future, and that only government can use compulsion to raise capital for an unprofitable venture or one for which the wild card of regulatory uncertainty looms too large. The impending result: more government activity in areas of its comparative disadvantage. A far better course is to reduce regulatory uncertainty so that private capital can seek out the most promising ventures for the long term.

*Issue: High marginal rates of taxation at all income levels bring major distortions in economic activity and increasing resistance at the voting booth and in individual economic behavior.*

This problem is all too familiar for middle and high income earners. The distortions of economic activity involved in the avid search for tax shelters and the fact that relatively little revenue is collected at the high-

est marginal rates testify to their basic futility. The relentless way in which inflation projects middle income earners into ever-higher tax rate brackets has received increasing commentary, so that now the idea of "indexing" the tax system can almost be taken out of quotation marks. Unfortunately, even such a simple and basic change as indexing has not been made. Nevertheless, attention to and recognition of these undesirable consequences suggests that some action may well be in the offing.

Less attention has been paid to the high marginal rates of taxation on the poor and to the fact that they, too, react predictably and negatively. Of course, they can't afford tax lawyers, but they have found effective ways to shelter income. Reliance on government transfer payments instead of employment is one available tax shelter for the poor. Work in the underground economy, where people are paid in kind or cash, not reported for tax or GNP purposes, is another.

Unfortunately, neither the NBER nor anyone else has produced convincing evidence regarding the size and rate of growth of the underground economy. The more enthusiastic estimates range from 10 to 27 percent of the GNP (\$200 to \$500 billion) with recent growth at rates of from 20 to 40 percent per year. Though I doubt that the high end of these estimates can be taken seriously, this subject deserves much more attention. Intuitively, it is highly plausible that the poor will react to the high direct rates of taxation on earnings (in the form of withdrawal of benefits) and the high indirect taxes on spending by concealing earnings and acquiring goods and services so far as possible in ways that escape much or all indirect tax. Anecdotally, I have seen some astounding examples on a personal level—and not just confined to those in lower income brackets. The other day I noticed a judge insist on payment in cash for performing services at a wedding.

The implications of this government-induced change in the postwar economy are important, if the phenomenon itself is important. A growing underground economy means that, even at the low end of the range mentioned above, the rate of increase in real GNP is being underestimated by one percentage point and levels of unemployment are being significantly overestimated. Such mistakes give an obvious inflationary bias to economic policy.

But I wonder if a different and more powerful point is in the making. The electorate in eleven states has recently voted for greater control of spending or of tax rates at the state and local level, where control can be more direct than at the federal level; and thirty states have endorsed a constitutional amendment calling for a balanced federal budget. At the level of individual economic behavior another manifestation of this political reaction may well be the underground economy. If it is anywhere near as sizable as some estimates suggest, the implied tax revolt is very real indeed. As limits of government's overall size become more real and

compelling, decisions about the composition of government activity become as difficult as they are crucial. Increasingly, the answer to "which?" may no longer be "both," even in capitol cities.

*Issue: How do we provide for an adequate defense when an already high rate of taxation and expenditure reflects government's major role as the redistributor of income?*

The numerical facts involved are well brought out in Professor Break's paper: Total government expenditures have risen from 21 to 36 percent of the GNP during the period 1948 through 1977. These estimates do not take account of off-budget finance or spending required of the private sector by government, both growth areas. Meanwhile, drawing from Professor Break's paper, "domestic programs rise from 7 to nearly 15 percent of nonrecession GNP between 1955 and 1977, while national security programs fall from 11 percent to 5 percent"; "the federal government's tax-transfer programs have grown rapidly, especially in the domestic program sector"; and "social insurance expenditures and the payroll taxes that finance them have been major growth components of the public sector."

As is well known, the chief characteristic of government transfer programs is their "entitlement" nature, with people entitled to a payment based upon such characteristics as income, age, minority status, or place of residence. Sometimes, in fact, they are paid as a result of their ingenuity in beating the system. It is a misnomer to talk of a budget for these programs since the best that can be done is simply to estimate how heavy the drawings will be on the entitlements. With 46 percent of the families in the United States receiving a transfer payment of some kind, it is easy to see that this large and growing sector of the budget has considerable momentum behind it. I speak with some feeling as a former OMB director who, with scars and without success, tried to curtail school lunch spending on behalf of children of middle and upper income parents.

If there is anything to the idea that taxpayers are in a rebellious frame of mind about paying for burgeoning government growth, then the momentum behind the redistributive functions of government can overwhelm our ability to finance an adequate defense. This internally generated threat to our national security deserves sober thought and decisive action. Some way must be found, at a minimum, to make the transfer payment system more internally efficient, as one approach to curbing its growth. In the end, though, the entitlements themselves must be subject to critical scrutiny.

*Issue: The escalating rate of inflation is one postwar change in the American economy in which government's role is central and about which it is all too easy to be pessimistic.*

Without belaboring the whole gamut of budget, tax, regulatory, and other government actions that raise costs and the chronic monetary accommodation of rising prices, I will simply assert here that inflation, including our current roaring version, is rooted in government policy and behavior. However broad the agreement with this observation, the practical outcome seems to be—almost as though drawn toward it by a magnet—some form of wage and price controls. As these controls move into center stage, unwillingness to conform with them becomes conveniently tagged as the reason for inflation, and those unwilling to conform as the villains. This process of shifting blame from culprit to victim obscures the main point of government responsibility. Economic miseducation is given an added boost when prominent managements feel impelled to make public statements in support of such programs. The activities of OPEC and the political vulnerability of large oil companies offer apparently irresistible opportunities to shift political blame further. Such scapegoating may be good politics, but it is certainly lousy economics.

Inflation has been with us long enough now and has become enough of a preoccupation that many question whether the problem can be dealt with at all. The answer is a clear “yes.” Our own prior experience in the fifties and early sixties with relatively stable prices shows that it can be done. And today the experience of other countries has given us evidence that inflation is not an international disease. Even among tightly linked countries like those of the Common Market, rates of inflation vary tremendously (in 1978 the highest rate, in Italy, was over four times the lowest, in West Germany).

We know what to do. Classical economic measures—disciplined fiscal and monetary action and a tax and regulatory environment conducive to capital formation and productivity—have worked for us in the past and work for others at present. The problem is not *what to do* but *how to do it*. The problem is to rearrange the political landscape so that the *necessary* is also the *doable*.

### The Bottom Line

Political attitudes may be changing, with the public lowering its expectations about the ability of government to solve problems, insisting that legislators recognize limits to the tolerable level of taxation, give more attention to the importance of investment and productivity, and deal more effectively with high and rising rates of inflation. I hope these changes are for real, in part because such developments would help government do better those things where it has a comparative advantage and where, as citizens, we count on exemplary performance.

One prime objective involves the need in a stable and healthy society to serve the twin objectives of equity and efficiency. Clearly the system



of markets and enterprise, driven as it is by competitive pressures, is the way to an efficient society. Beyond efficiency, the market system metes out a great measure of equity and it is a profound respecter of the importance of individual choice. Nevertheless, fairness demands attention to equality of opportunity and to access, at least on some minimum level, to essential goods and services. We have seen many changes sweep through our society, a much more heterogeneous one than most, and yet it has held together. I believe a measure of the credit for this achievement must go to those elements of equity provided through the political process. Transfer payments, with all their faults, are the principal vehicle for the political expression of equity. That equity arguments are all too often used as a guise to support narrow self-interest does not alter the basic appeal to the body politic of the "fair shake." Certainly a key problem for policy is to recognize the legitimacy of concern for the poor and the disadvantaged, but to avoid having the rhetoric of poverty become the servant of well-placed interests.

Unfortunately, when this happens, as it does all too frequently, the systems for equity and efficiency become so entangled as to be almost indistinguishable. By the time our energy industry is transformed into a system for geographic and industrial redistribution of oil, let alone for redistribution of income, it is no wonder that so little progress is made toward solving the energy problem. This form of government effort to redistribute income is subverting the very processes that produce the income in the first place.

Returning to the concept of government's comparative advantage, our system of income maintenance should be simplified drastically, concentrating on cash payments rather than the provision of in-kind benefits. These cash payments should become the principal vehicle through which the political process pursues the goal of equity.

Other changes are as essential if the government role in the decades ahead is to reflect its comparative advantages and disadvantages. These changes call for a reversal of many postwar trends, for reduction and simplification in areas like taxes, spending, and regulation, and for reliance more on the use of market incentives to get the regulatory job done.

Such changes imply a rearrangement of the political landscape since, in the end, government is a mirror of our aspirations, our understanding, and our determination. The hope is, however, that we can follow the idea of comparative advantage: a less comprehensive government role can allow more concentration on areas of prime government responsibility, where first class performance is essential.

### 3. *Paul A. Samuelson*

#### The Public Role in the Modern American Economy

This is not the first time that groups like the NBER have taken a broad look at the cosmic future. Let us hope we are a bit luckier in the present exercise.

One almost hesitates to mention the 1929 *Recent Economic Trends*, commissioned by the confident President Herbert Hoover and blessed by Wesley Clair Mitchell, our founder and patron saint, then at the apex of his scholarly career. That group of economists took a careful look at the United States economy and reported it to be in great shape with a sunny future ahead. That was in 1929!

Then again I recall that, before World War II was over, a National Bureau group consisting of a Harvard statistician and a Wall Street financier published a volume on the subject I am asked particularly to comment on today: the future state of the government finance. It was a sorry performance. It is easy to see in retrospect how woefully it underestimated the scale of post-1945 fiscal activity. But even at the time, this objective study reeked of wishful thinking and of editorializing in favor of the conservative views of its authors. I remember my old master Alvin Hansen commenting to me that no one alive would ever see a federal budget less than twice this volume's predicted numbers. And, as Hansen later explained to me when I asked him how he thought his prewar doctrine of secular stagnation had actually worked out in the postwar epoch: "Paul, my numbers for federal expenditure, fiscal deficits, and tax revenues—which were considered so outlandish in 1939 and 1944—turned out to be far short of the actual mark. Nature never got the chance to perform the needed experiment for us to know what would have happened if the postwar budget had been always in balance at a low level" (and, I may add in 1980, if the low birthrate had continued after 1939—the only trend anyone had a right to extrapolate in 1939).

So, it is well that I as a commentator am chastened by the demonstrated complexity in forecasting the future and in understanding the present before it has become history. But it is also well that at least some of the scholars who have prepared the surveys that we are all to discuss should have been bold in their speculations and should have nominated theses for us to agree with or try to shoot down. It is part of the eclectic diversity of the National Bureau, preserved in each of its reincarnations, that its authors should differ in substance and style. Thus, Professor Mansfield has cautiously reported some of the available facts about

productivity and research, mentioned a few of the current hypotheses some have put forward to explain them, but has eschewed advancing a grand thesis of his own. Professor Easterlin, from the same university, has perceived the postwar movements in birthrates through the spectacles of his own self-generating every-other-generation cycle, giving his brainchild all the rope it can use. Professor Break, whose paper surveys my topic of government finance, has chosen to present the domestic facts in an analytical mode, so that at least our theories can know what it is they are purporting to explain.

What I want to do today is to examine critically some broad views about government that people outside of economics have been hotly debating. Here is (what, prior to hearing some of the speakers at this conference, I thought to be) a caricature, almost a parody, of what most businessmen believe. In a lower keyed version, but still in essentially the same thesis, I suspect it is a view that the majority of college graduates would essentially subscribe to. The thesis follows:

The Roosevelt New Deal brought in some needed reforms. But this last half century has witnessed an overshoot of government regulations, taxation, and deficit spending. The vigor of the market economy has thereby been sapped—just as it has been in so many of the mixed economies abroad. United States inflation, stagnation in productivity, class struggle, and popular unrest is the inevitable consequence of the cancerous growth of the public sector engineered by powerseeking bureaucrats and politicians.

Britain provides an archetypical case to prove that the hand of government withers progress and efficiency, and fails to make good on the “equity” it promises. As well, a comparative survey of all the mixed economies will bear out the same perverse correlation between the usurpations of the public sector and shortfalls of economic performance—Switzerland versus Sweden, Japan and West Germany versus Italy and the United States, and so forth.

Notice that I have included nothing in the above statement about the importance of limiting government for the sake of liberty itself. A Hayek, even if you could demonstrate to him a mixed economy where government planning, stabilization, and redistribution really worked well, would reject it in the same way he would reject a well-run jail. Such a view is still a minority view with the electorate, but where it does gain support from fellow travelers is to the degree that the actual “jails”—by which I mean the mixed economies as we know them—are not well run.

### Tasting Puddings

What I wish to do here is to display that “respect for the facts” which Arthur Burns once proclaimed must be the National Bureau’s watchword.

Is all of the above thesis borne out by the available facts?

Is any of it?

What is the cautious reading of experience on these controversial matters?

These are not easy questions. Since time is scarce, let me reveal at the beginning that I do not think the caricature as stated is unequivocally supported by the historical record. That doesn't mean it's wrong. It might be correct. But a fair-minded jury is under no compulsion to swallow its contentions on the basis of the empirical observations available.

#### Wishes of Bureaucrats

Here is one part of it that I find farfetched. Bureaucrats would of course like to have their empires grow; and politicians do prefer, other things equal, to be elected rather than defeated. It does not follow from this that I am able to make sense about trends, and to make good predictions, by assuming that it is the desires and psyches of Washington inhabitants that I must look to in explaining actual political happenings.

Social security is a good instance. As George Break observes, it has been one of the fastest growing elements of public expenditure and taxation. Those numerous clerks in Baltimore have been of least importance in the process. I have known most of the head actuaries in that program from the beginning. Their causal role has been, if not negligible, certainly minor. Indeed it was over their objections that so many of the evolving features have become dominant. Why then the growth? It was immanent from the beginning—once the national decision was made to introduce a general insurance scheme. Few of us had the imagination and courage to extrapolate what was immanent. But that is the usual story in these matters. My point is not that this has all been a beneficent thing. Franco Modigliani and Martin Feldstein may turn out to be right that the social security system is the cause of a reduced effective rate of saving and investing in the American economy. My point is that how Main Street and Congress feel about this matter, and not how civil servants do, is what has given us whatever it is we now have.

My old teacher, Josef Schumpeter, tried to set forth a theory of public finance based on the *realpolitik* of getting elected. I welcome modern revivals of this seminal idea. But all theories of revealed preference must be subject to the check of comparison with empirical data. And the inuendo that it is the power wishes of government officials that explains the police state is not a hypothesis that stands up well to explain the complexity of facts that need explaining.

#### Post Hoc, but . . .

The middle third of the twentieth century goes into the record book as the era in which the tax share of the public sector soared. The final third, we can confidently predict, is not going to be able to show a sim-

ilar acceleration. This is so, if only because of the nature of a fraction, which has to be bounded by one. But it is also so because, as the market sector shrinks, one can expect there will be a resistance and backlash rather like that we have begun to see in recent years.

How has real GNP fared in this middle third of the century in which governments grew like a cancer? Would a Hayek have predicted in 1933 that the patient would show the debilitation of cancer? Would a Schumpeter in 1942 have written about "capitalism in an oxygen tent" on its march to socialism? Of course. And that is what I was taught at the University of Chicago was the likely future to look forward to after 1935.

But when we turn to the real world, we see it has been a different story. Of course, the recoveries from the world depression consequent upon deficit financing in North America, Germany, and elsewhere in Europe are easy to understand in terms of short-term fluctuations. But what Schumpeter was writing about in *Capitalism, Socialism and Democracy* was the long pull. If he came back to Vienna, Bonn, and Cambridge today, he would be as surprised as that urbane mind could admit to, by what the Kuznetses and Denisons have measured to be the post-war miracles of growth by the mixed economy.

Am I arguing that, *because* the public sector was burgeoning from 1932 to 1970, that is *why* world GNP outperformed the growth rates previously witnessed under the gales of creative capitalistic destruction? No. What I am precisely warning against in this commentary is such a facile attempt to read into the chaos of facts the theses you want to believe about them (theses which may even have important germs of truth in them).

Thus, Switzerland and Sweden show almost identical paths of Kuznetsian progress. If I gave you their two time series blind, you couldn't tell them apart. More than that. It is a great mistake to think that Switzerland is a Walrasian economy and Sweden a totalitarian state. If you examine the long vector of attributes of these two, you will find them surprisingly alike; and also you will find some surprising reversals of the usual stereotypes.

Debaters and lawyers are always trying to overstate their cases. I recall how, just after the mid-1940s, conservative friends used to point to Belgium and Holland. Belgium, they claimed was a market economy and it was prospering. Holland was allegedly a controlled economy and it was stagnating. If you inquired about the different degrees of bombing of the ports of Antwerp and Rotterdam, they lost patience with your pedantry. But of course in a few years, both economies showed marked departures from *laissez-faire*; and their relative growth rates showed no simple patterns of dominance.

What is relevant to the present session is to look at the numbers Dr. Break has given for the United States and compare them with similar

numbers abroad. Everyone knows that Germany and France, to say nothing of the Low Countries and Scandinavia, have grown more in the postwar than has the United States. Is it then the case, as the above thesis would require, that these fast growing countries show a larger fraction for the market economy than we do? I have just had the occasion to prepare the eleventh edition of my elementary textbook *Economics*. Every four years I get reeducated on the world economy, and an economic historian could do worse—as Bob Gordon has indicated in footnoting his paper for this conference—than to use these successive revisions as a documentary source to chronicle both the change in events and in beliefs about them.

What I found, when preparing a table of comparative shares of GNP that taxes take, was that Switzerland and the United States each tax about the same fraction of national income. That paragon of growth and the free market, West Germany, has a larger total tax fraction than the United States or the United Kingdom do. And Germany, unlike America or Israel, has little call to spend on national defense. The Netherlands and Sweden are two nations whose public sectors have leaped above half their GNPs. Has Providence punished them for this profligacy?

Not yet. Their growth rates have for decades been exceeding our best performances. I happen to think that their future productivity trends will be adversely affected by this heavy load. But that thought of mine is not a National Budget thought: It is not a finding of statistical analysis or even a deducible lemma from a compelling model; but like so many of my best insights it is a Bayesian hunch that could never deserve the Mitchell-Burns imprimatur. If you match your hunches against mine, who is to be the referee to adjudicate between them?

Even Britain cannot serve as the whipping youth for the determined empiricist. For all the talk about the “British sickness,” the United Kingdom’s government’s fraction of GNP expended on goods and services has averaged out to less than those reported for the United States in Dr. Break’s tables. And, just to confuse the parable, Britain’s productivity trend in the third quarter of the century turns out to have surpassed that of the United States—just as growth rate in the United States production index has outperformed production growth in Switzerland and Germany in the 1970s.

I’ve made my point: Only ideologues can see simple morals writ large in historical record. The facts tell their own story, but it is not the *simple* story that so many want to hear.

### Welfare and Mutual Reinsurance

Thanks to earlier National Bureau authors, we have been reminded that conventional measures of product and productivity do not capture all the elements of welfare that the citizenry are concerned with. William

Nordhaus and James Tobin constructed their rough Measure of Economic Welfare (MEW) to make clear that there are offsets to the reduction in productivity which may result from environmental pollution standards and from occupational safety regulations. My neighbors and I go to the polls and by majority vote make sure that if we should happen to be unemployed, or blind, or penuriously old, we shall still receive some minimum of income payments. In agreement with Alan Blinder's paper, even though the ordinary measures of income inequality—e.g., Gini coefficients of Lorenz curves, Pareto-curve parameters—show no strong trends for the last three decades, it is my observation that there has been a perceptible reduction in lifetime inequality. Fewer people do go to bed hungry in present-day America; and life is not so short, nasty, and brutish for the poor as I can remember it being in my youth.

None of this is accomplished in a Pareto Optimal way. From the beginning of time such a state of thermodynamic efficiency has never been remotely approached. If economists were to wait for that day in which income redistributions are done in the Pareto Efficient way, they would wait forever. And society's members would wait with them.

Economists are a minority, no more numerous than chiropractors. Noneconomists go whole hours without thinking about Pareto Optimality. It is noneconomists who constitute our clients. We are their not-so-efficient servants. They are our not-so-clear-thinking masters.

Once democracies decide to second-guess the outcome of the market, the programs take on a momentum of their own. When I was a young student of what was to come to be known as macroeconomics, we all took for granted that F.D.R.'s new expenditures on welfare and unemployment compensation would have to last only so long as the economy remained significantly below its full employment potential. *After* recovery was achieved, those expenditures would recede in the simple anti-cyclical manner. That was the naïve expectation I shared.

Of course it didn't happen. You might think that this was the result of "politics"—a reflection of the weakness in the voting system that tends to make it easier to expand the economy than to restrain and contract it. Well, you would be wrong in thinking so. There may well be such a political bias in the workings of the mixed economy. But what I came to realize belatedly in the late 1930s—and it came from the writings of Bill Haber of the University of Michigan, writings that did not appear in refereed proper economic journals—that once society decided that people should not fall below certain minimum levels of well-being and income, the total of the welfare load would grow and grow. And so it has, no longer to my surprise, these last forty years.

### My Worries

I have reached the age to scold and nag. So I must not fail you. Although for the most part my own value judgments applaud the eco-

conomic trends that have been the trends of my times, my reason and experience with economic models leave me with a concern. Markets are more effective for many facets of economic activity than people have been able to make fiat and commands be. Any new nation freed from colonial bindings can give itself a socialist constitution and type out a crisp Five-Year Plan. But so often, we know from experience, these good intentions are not worth the paper they are written on.

The mixed economy is *mixed*. That is its strength: to mobilize for human ends the mechanisms of the market and to police those mechanisms to see that they do not wander too far away from the desired common goals.

The market can be a strong horse under us. But every horse has its limits. Those limits may not show up at once. A Sweden or Holland can for a time pile onto the horse ever greater relative loads. No one is wise enough to state exact limits beyond which the mechanism must begin to falter. But that doesn't mean limits are not there.

The problem for the United States, I have come to think, is to move beyond our good intentions. Our challenge is to preserve the useful features of the market—as when we want whatever slack there is in the economy to put effective downward pressure on prices and wage costs. But that should not mean that we have to submit to all the thoughtless consequences of the market's solution. To paraphrase Alfred Marshall of ninety-five years ago, economists need to put their cool heads to the service of their warm hearts. And that's what the American economy itself needs urgently to do in the years ahead.

## Summary of Discussion

The discussion turned first to the redistributing role of government. Benjamin Friedman suggested that the tables on income redistribution through government in the Break paper understate its true extent. Government expenditures on goods and services also have a large redistributive component. Procurement policies are often targeted to achieve specific distributional aims. Even military spending has some of this character, as evidenced by the difficulty of removing military bases from some Congressional districts even when the bases are not justified on defense grounds. Friedman asserted that a realistic debate about government would be not about the level of public goods provision but rather about how much redistribution we want. Friedman expressed puzzlement about the failure to debate that issue squarely. Wilbur Cohen suggested in response that redistribution has never captured the imagination of the noneconomist, as it is antithetical to middle class and even populist values. Martin Feldstein emphasized that the net redistribution of in-



come through government is far less than the gross redistribution, given the variety and often conflicting goals of redistributive programs. But since each program has negative incentive effects, the efficiency burden of the programs is related to the extent of gross, and not net, redistribution.

In response to a question, Paul Samuelson reiterated that any inverse correlation between government spending as a proportion of income and the rate of economic growth, is not strong, and that part of any simple correlation is spurious. Since public goods generally have an income elasticity greater than one, wealthier (and presumably slower growing) countries devote a larger share of income to public goods. Milton Friedman declared that these correlations would in any event understate the true burden of government spending on economic welfare, since the income statistics give equal welfare weight to public and private spending. This is because government spending is valued at factor cost and not at market price.

Herbert Giersch challenged Samuelson's comparison of United States and German manufacturing growth. The German manufacturing sector was overgrown in the 1960s because of an undervaluation of the DM exchange rate. It thus could have been expected to decline in the 1970s. While this happened with regard to employment, productivity growth accelerated. A comparison of productivity growth rates between the United States and Germany gave a picture completely different from Samuelson's comparison.

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