2 The Public Sector in the United States

FOCUS QUESTIONS

1 What are the principal activities of government?

2 What does government spend its money on? How have these expenditure patterns changed over time, and how do they compare across countries? Which expenditures occur at the federal level, which at the state and local level?

3 How does the government finance its expenditures? How do the sources of tax revenues differ between the federal government and the state and local governments? How have they changed over time?

A central topic of debate in the United States, and in other mixed economies, is the appropriate size of the public sector. Some believe that the public sector is too large. They are skeptical of government's ability to solve social and economic problems because of the kinds of government failures we discussed in Chapter 1—for example, government's limited control over private market responses. Or they may believe in limited government on philosophical grounds, because of a fear that big government undermines economic and political freedom.[1] Others believe that the public

[1] A leading proponent of this view, a form of libertarianism, is Robert Nozick. His ideas are summarized in the preface of his *Anarchy, State, and Utopia* (Oxford: Basil Blackwell, 1974). See also Milton Friedman, *Capitalism and Freedom* (Chicago: University of Chicago Press, 1962).

sector is too small. In their view, greater government spending could solve the problems of blighted inner cities and inadequate schools.

Whatever view you take, there is no doubt that the government today is far larger than it was before World War I. In 1997, tax revenues (and other nontax receipts)[2] collected at all levels of government were $2.6 trillion, or 32 percent of total U.S. production, and government expenditures were about the same.[3] By contrast, in 1913, prior to World War I, taxes and government expenditures were less than 10 percent of total production. How do we account for this dramatic change in the size of government? What does the government spend all this money on?

This chapter gives an overview of the scope of the U.S. public sector and how it has broadened over time. It also shows the ways in which government actions affect private markets. Chapter 4 will take up the economic rationale for government intervention in markets. These chapters will not resolve the debate over whether the U.S. public sector is too big or too small, but they provide a basis for formulating a reasonable position on this issue.

TYPES OF GOVERNMENT ACTIVITY

A primary role of government is to provide the legal framework within which all economic transactions occur. Beyond that, the activities of government fall into four categories: (a) the production of goods and services; (b) the regulation and subsidization of private production; (c) the purchase of goods and services, from missiles to the services of street cleaners; and (d) the redistribution of income, that is, payments, such as unemployment benefits, to particular groups of individuals that enable them to spend more than they could otherwise. Payments that transfer money from one individual to another—but not in return for the provision of goods or services—are called **transfer payments.**

These four categories—production, regulation, purchase, and redistribution—are simply a convenient way of grouping the vast array of government activities. But they do not correspond to the way the federal government organizes its budget or divides responsibilities between its various departments—Commerce, Health and Human Services, Interior, and so on. Moreover, government activities are undertaken at the state and local levels as well as at the federal level, with the relative importance of state, local, and federal expenditures of various types having changed over time.

A final complication is that the nature of some government expenditures is ambiguous. For example, government subsidies to small farmers could be considered a production subsidy or a redistributive (transfer) payment. Pension payments to military retirees are often counted as transfer payments, but they are more appropriately treated as part of the cost of national defense, just as the pension costs of a private firm are counted among its labor costs.

[2] Nontax receipts include, for instance, fees the government receives for various services.

[3] *Survey of Current Business,* May 1998, Table 3.1.

Thus, the task of constructing a quantitative description of the government's activities is a formidable one.

PROVIDING A LEGAL SYSTEM

An important activity of the government, but one that accounts for very little expenditure, is the establishment of the legal framework within which firms and individuals can engage in economic interactions. Economists and philosophers often try to imagine what life would be like in the complete absence of government. Without laws defining property rights, only the exercise of force would stop one individual from stealing from another. Without the ability to protect property, individuals would have little incentive to accumulate assets. Needless to say, economic activities would be severely restricted.

The U.S. legal system does much more than just protect property rights. It enforces contracts between individuals. It also imposes restrictions on the kinds of contracts that are legally enforceable. Our bankruptcy laws limit the liability of investors. Product liability laws have an important effect on the quality of goods produced. Antitrust laws attempt to encourage competition among firms: they restrict mergers, acquisitions, and unfair business practices.

The effects of our criminal justice system are pervasive, but expenditures for running it are relatively small: less than 5 percent of total government expenditures.[4]

GOVERNMENT PRODUCTION

The United States government directly undertakes certain types of production. Much of this is similar to corresponding activities carried out by private firms. For instance, both private and government enterprises produce and sell electricity (the most famous of the latter is perhaps the Tennessee Valley Authority). Also, under the Constitution, the federal government takes responsibility for running the postal service and for printing money.[5]

At the local level, many communities provide water and collect garbage, services which in other communities are provided by private firms. Most elementary and secondary school students go to public schools—schools run by the government—though others go to private schools, some of which are run by nonprofit organizations like churches, and a few of which are even run on a for-profit basis.

Comparing the public and private sectors in various countries, we see that some industries frequently fall within the public sector, while other industries seldom do. Agriculture and retail trade are seldom in the public sector. On the other hand, in most countries, at least part of the radio and

[4] Based on 1992 data, the most recent available. See *Economic Report of the President, 1998*, Table B-84, and Bureau of Justice Statistics, *Justice Expenditure and Employment Extracts, 1992*, Table A, p. 1.

[5] Though the U.S. Postal Service has a monopoly on the delivery of first-class mail, private carriers, such as United Parcel Service, Federal Express, and others, play a major role in the delivery of parcels and express mail.

TV broadcasting industry lies in the public sector. In many countries, the banking system is at least partially owned and operated by the government; in the United States it is closely regulated but privately owned.[6]

The line between public and private production shifts over time. During the past fifteen years in Europe, many countries have converted public enterprises into private enterprises, a process called privatization. (The process of converting private enterprises to government enterprises is called **nationalization**.) For instance, the British government has privatized enterprises in industries ranging from telecommunications to energy, automobiles, aerospace, and steel. In France, a wave of privatization began in 1986, which included the privatization of enterprises that had been nationalized earlier in that decade when the socialist party was in power.[7]

For technical reasons, the best way to measure the size of government production is to look at employment, as in Figure 2.1 shown on page 30. In 1997 public employees (including public education and the armed forces) represented 15.9 percent of total employment. This was almost double the percentage in 1929 (when it was 9 percent of the labor force). The figure shows a marked increase in the ratio of public employment from 1929 through 1936 (both in the Hoover and Roosevelt administrations), a burst of public employment during World War II, and a return to pre-War levels by 1952. Though there was a slight decrease in the pace of growth during the Eisenhower years, employment in the public sector did not begin to decline until the Nixon and Ford administrations. This decline has continued. In fact, as a percentage of civilian employment, by 1997 federal government employment was comparable to that of the early 1930s, before the New Deal.

It is also important to note the variations in the relative roles played by the federal, state, and local governments, as suggested by the bottom line in Figure 2.1. Comparing it to the top line, we see that total government employment and federal government employment do not always move together. While federal employment as a percentage of total employment declined in the early 1970s, this decline was offset by the rise in employment at the state and local level. It is important to bear this in mind: reductions in federal expenditures or employment do not of themselves necessarily imply a reduction in government expenditures or employment. More of a burden may simply be placed on states and localities.

[6] The Federal Reserve Banks, which are responsible for the management of the banking system, are publicly owned. Their profits are turned over to the U.S. Treasury. In 1997 these amounted to $21.5 billion. (*Survey of Current Business*, May 1998, Table 3.2, p. D-8.)

[7] For more on privatization, see William L. Megginson et al., "The Financial and Operating Performance of Newly Privatized Firms: An International Empirical Analysis," *Journal of Finance* 49, no. 2 (1994), and Pierre Guislain, *The Privatization Challenge: A Strategic, Legal, and Institutional Analysis of International Experience* (Washington, D.C.: World Bank, 1997).

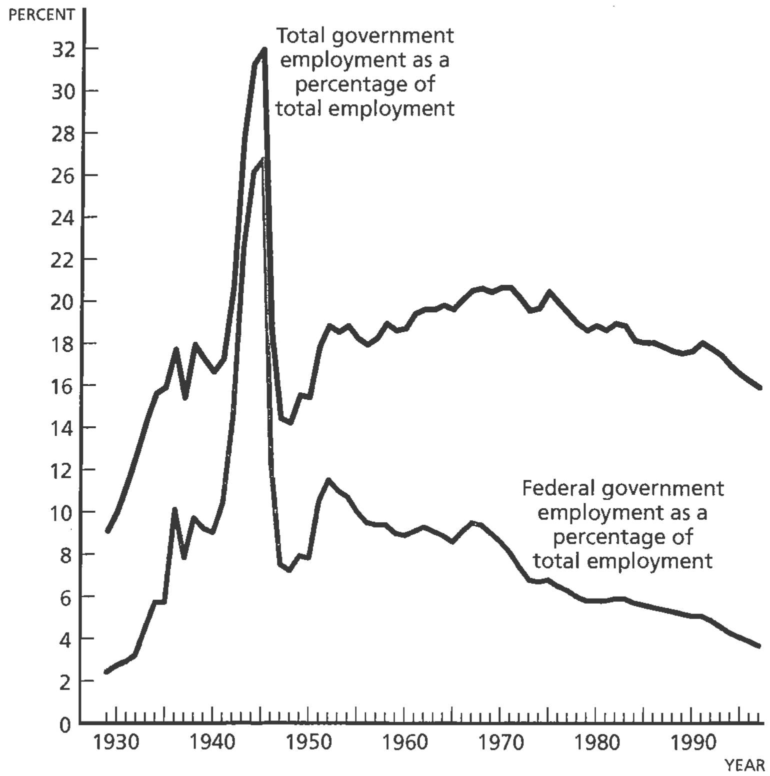

FIGURE 2.1 **Government Employment as a Percentage of Total Employment, 1929–1997**
Government employment as a percentage of all employment provides a view of the government's role as producer. Employment is defined here as the number of full-time equivalent employees.

SOURCES: U.S. Department of Commerce, *National Income and Product Accounts, 1929–1958*, Tables 1.7, 6.5A; *National Income and Product Accounts, 1959–1988*, Tables 1.7, 6.5B, 6.5C; *Survey of Current Business*, July 1992, Tables 1.7, 6.5C; *Survey of Current Business*, January 1999, Table B.9.

GOVERNMENT'S INFLUENCE ON PRIVATE PRODUCTION

In industries in which the government is neither a producer nor a consumer, it may nevertheless have a pervasive effect on the decisions of private producers. This influence is exercised through subsidies and taxes—both direct and indirect—and through regulations. There are many motives for such government influence. There may be dissatisfaction with particular actions of firms, such as pollution. There may be concern about the monopoly power of some firms. Special interest groups may convince Congress that they are particularly deserving of help. Private markets may fail to provide certain goods and services that are felt to be important.

SUBSIDIES AND TAXES Government subsidizes private production in three broad ways: direct payments to producers, indirect payments through the tax system, and other hidden expenditures. The most extensive of the U.S. government's subsidy programs is that for agriculture. Direct payments to farmers rose precipitously during the 1980s, from $1.3 billion in 1980 to a peak of $16.7 billion in 1987. In 1987, direct payments amounted to 37 percent of income from wheat, 40 percent of income from rice, and 20 percent of income from all crops. At least one of every five dollars in farm income was a gift from the government. The size of agricultural subsidies has fallen since 1987, and fluctuates markedly from year to year. Under the new farm bill passed in 1996, these subsidies are scheduled to decline over the coming years.[8]

The tax system also sometimes serves to subsidize production. If the government gives a grant to a producer to assist her in buying a machine, it appears as an expenditure. But suppose the government allows her to take a tax credit on her expenditures on machines—that is, if she buys a $100 machine with a 7 percent tax credit, she will get a $7 tax credit, which reduces the taxes she otherwise would have paid by $7. Though it is not accounted as such, for all intents and purposes the tax credit is equivalent to a government expenditure, and is thus referred to as a *tax expenditure.* The value of federal tax expenditures has become very large in recent years: amounting to in excess of 34 percent of direct expenditures for fiscal year 1998.[9]

Finally, many government subsidies show up neither in the statistics on government expenditures nor in those on tax expenditures. For instance, when the government restricts the importation of some foreign good or imposes a tariff on its importation, this raises the prices of that good in the United States. American producers of competing goods are helped. In effect, there is a subsidy to American producers, paid not by the government but directly by consumers.

GOVERNMENT CREDIT A special type of subsidy is government provision of credit below market interest rates, in the form of low-interest loans and loan guarantees. Government subsidies tend to lead to the expansion of the subsidized industry, by lowering its cost of doing business. This is as true for subsidies to credit as it is for other forms of subsidies. Though such subsidies were once hidden, the Credit Reform Act of 1990 required the government to treat as expenditures any difference between the interest rates it paid and the interest rates it charged (taking into account the probability that the borrower might not repay).

In addition to loan subsidies, other government programs affect the allocation of credit, and thus of productive resources. In the United States, the subsidies are often to buy particular goods and services. For instance, government-sponsored enterprises (called GSEs) encourage lending to enable people to buy homes and go to school. In 1993, the Clinton administration began directly lending funds to college students.

[8] United States Department of Agriculture, Economic Research Service, *Economic Indicators of the Farm Sector: National Financial Summary, 1992,* January 1994, Tables 14 and 22, and *Survey of Current Business,* June 1997, Table B-10, p. D-24.

[9] *Budget of the United States Government, Fiscal Year 1999,* Table 5-1, Analytical Perspectives; Historical Tables, Table 3.1.

REGULATING BUSINESS Government regulates business activity in an attempt to protect workers, consumers, and the environment, to prevent anticompetitive practices, and to prevent discrimination.

The Occupational Safety and Health Administration attempts to ensure that workers' places of employment meet certain minimal standards. The National Labor Relations Board attempts to ensure that management and unions deal fairly with each other. The Federal Trade Commission attempts, among other things, to protect consumers from misleading advertising. The Environmental Protection Agency attempts to protect certain vital parts of our environment by regulating, for instance, emissions from automobiles and toxic waste disposal.

In addition to these broad categories, there are regulations that apply to specific industries. The banking industry is regulated both by the Federal Reserve Board and the Comptroller of the Currency. Trucking is regulated by the Federal Highway Administration. The airlines are regulated by the Federal Aviation Administration. The telecommunications industry is regulated by the Federal Communications Commission. The securities industry is regulated by the Securities and Exchange Commission.

Beginning in the late 1970s, there was a concerted effort to reduce the extent of federal regulation. As noted earlier, the process of reducing or eliminating regulations is referred to as deregulation. There has been deregulation in the airline industry (with the elimination of the Civil Aeronautics Board in 1984), in natural gas (gas prices have been allowed to rise gradually to market levels), in trucking, and in banking (the range of services that banks are now allowed to provide has been greatly increased).

In 1993, the Clinton administration initiated a systematic effort to reexamine all government regulations, to ascertain whether they were still required and whether they achieved their objectives in the most cost-effective way. The initiative was called "re-inventing government" or "National Performance Review," and focused on making government agencies more client oriented and employing more marketlike regulatory mechanisms. Legislation in 1996 provided for major changes in the regulation of telecommunications; it recognized the increased scope for competition, but that nevertheless competition in certain segments of the industry remained limited. New regulations in electricity in the mid-1990s expanded the scope for competition in that sector.

While the overall trend entailed reduced regulation, there were some instances of tightened regulation: the massive failure of the savings and loan associations in the 1980s was attributed in part to lax banking regulation, and legislation enacted in 1989 provided for heightened scrutiny. In other cases, the focus was on changing regulation to reflect changing circumstances. For example, while several cases of deaths from food poisoning reinforced the importance of food safety regulations, there was increasing recognition that the visual inspection system (did the meat smell and look rotten?) that had been employed since the beginning of the twentieth century needed to be replaced with a more scientific process.

Federal outlays for the regulatory agencies are minuscule relative to the rest of the budget. But these expenditures do not give an accurate view of the impact of the federal regulatory agencies. The extent to which these agencies influence virtually every aspect of business practices goes well beyond the simple measure of government expenditures. Many regulations have effects that are similar to those of taxes and subsidies. For example, regulations on utility prices may reduce prices for certain users below the free-market level, while raising the price to other users.

GOVERNMENT PURCHASES OF GOODS AND SERVICES

Every year the government buys billions of dollars' worth of goods and services. It does this to provide for our national defense, to maintain a network of highways, to provide education, police protection, fire protection, and parks. These purchases of goods and services amount to nearly one-fifth of the total production in the United States. In 1997, total government purchases were $1.2 trillion. Of these purchases, 15.3 percent was for investments, for expenditures, for instance, on roads and bridges and buildings that increase the economy's future productivity.[10]

What we characterize as government purchases are amounts spent for goods and services made available to the public, such as national defense, public schools, and highways. Government payments to the aged through the Medicare program to finance their hospital expenses or to the poor through the food stamp program are categorized as transfer payments, not as direct government purchases. They are discussed in the next section, on government redistribution of income.

GOVERNMENT REDISTRIBUTION OF INCOME

The government takes an active role in redistributing income, that is, in taking money away from some individuals and giving it to others. There are two major categories of explicit redistribution programs: public assistance programs, which provide benefits to those poor enough to qualify; and social insurance, which provides benefits to the retired, disabled, unemployed, and sick.

As we saw above, outlays for explicit redistribution programs are called *transfer payments.* These expenditures are qualitatively different from government spending on, say, roads or bombers. Transfer payments are simply changes in who has the right to consume goods. In contrast, a government outlay for a road or a bomber reduces the amount of other goods (e.g., private consumption goods) that society can enjoy. Transfer payments affect the way in which society's total income is divided among its members, but (neglecting here losses of output due to distorted incentives associated with transfers) transfers do not affect the total amount of private goods that can be enjoyed.

PUBLIC ASSISTANCE PROGRAMS Public assistance programs take two forms. Some provide cash, while others provide payment only for specific services or commodities. The latter are referred to as **in-kind benefits.** Of the cash

[10] The investment numbers do not include investments in people—human capital, for either education or health—but they do include investments in military aircraft and other hardware that enhance the country's future defense capabilities; in transportation infrastructure, such as highways and airports; and in natural resource investments, such as pollution control facilities.

TABLE 2.1 Selected Government Public Assistance Programs (in millions 1997 dollars)

PROGRAM	DATE ENACTED	1990 OUTLAY	1996 OUTLAY
CASH BENEFITS			
AFDC	1935	26,034	24,220
SSI	1972	21,162	31,064
General assistance		3,591	2,946
Earned income tax credit*	1975	6,512	22,061
Other assistance		8,221	9,010
IN-KIND BENEFITS			
Medicaid	1965	89,020	163,013
Food stamps	1964	21,718	27,971
Low-income housing assistance	1937	12,989	15,360
National School Lunch Program	1946	3,873	4,894
TOTAL		193,120	300,539

*Includes only the refunded portion.
SOURCE: *Statistical Abstract of the United States,* 1998, Table 605.

programs, the largest are Temporary Assistance to Needy Families (TANF), the program that in 1997 replaced the long-standing Aid to Families with Dependent Children (AFDC), and Supplemental Security Income (SSI), which provides cash to the poor who are aged, blind, or disabled. The largest in-kind public assistance program is Medicaid, which covers the medical costs of the poor, and accounts for about one half of total public assistance.

Table 2.1 lists the main public assistance programs with their date of enactment and their benefits. (In-kind benefits are valued at government cost in the table; we will see later that this may be different from their value to the recipients.) The table shows that most benefits (roughly two thirds) were in-kind, not cash.

SOCIAL INSURANCE PROGRAMS **Social insurance** differs from public assistance in that an individual's entitlements are partly dependent on his or her contributions, which can be viewed as insurance premiums. To the extent that what individuals receive is commensurate with their contributions, social insurance can be viewed as a government "production activity" not a redistribution activity. But since what some receive is far in excess of what they contribute (on an actuarial basis), there is a large element of redistribution involved in government social insurance programs.

The largest of these programs is the Old-Age, Survivors, and Disability Insurance Program (OASDI, the proper name for social security). It provides income not only for the retired, but also to their survivors (in particular, widows and widowers) and to the disabled. The other major social insurance programs are workers' compensation, which provides compensation for workers injured at work; unemployment insurance, which provides temporary benefits after an individual loses a job; and Medicare. The Medicare program, providing medical services to the aged, has (like Medicaid) grown rapidly since it was first introduced in 1965, and now is the second largest program. Figure 2.2 gives the relative size of the various social insurance and public assistance programs.

The social security and Medicare programs are sometimes referred to as **middle-class entitlement programs,** because the main beneficiaries are the middle class, and benefits are provided not on the basis of need but because

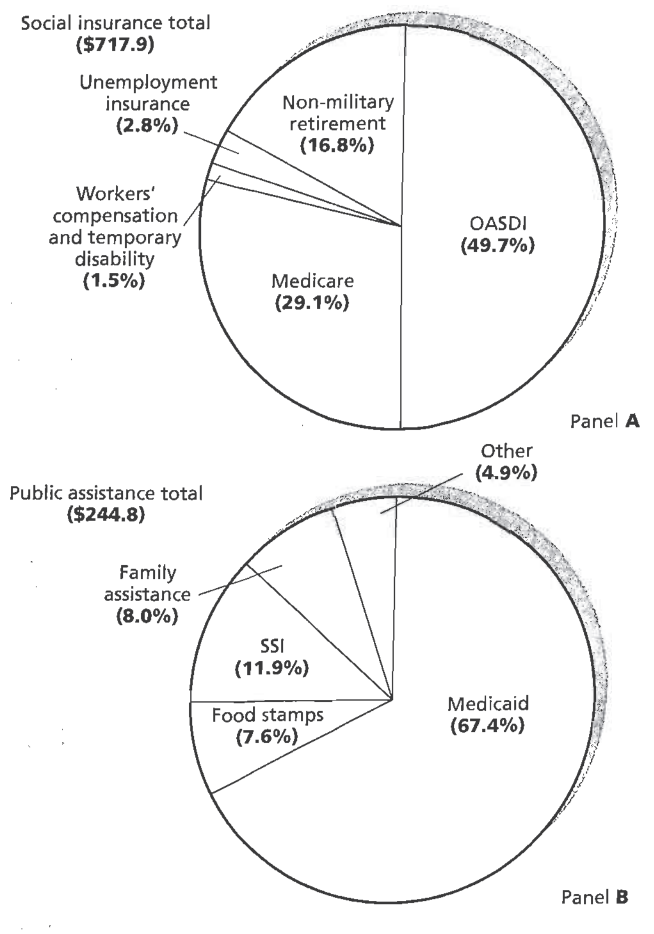

FIGURE 2.2 **Relative Importance of Social Insurance and Public Assistance Programs, 1996** Social Security (OASDI) is by far the largest social insurance expenditure, and the largest overall transfer program. Medicaid is the largest public assistance expenditure. (Workers' compensation includes Workers' Compensation, Temporary Disability, and Black Lung benefits. Other retirement includes Railroad Retirement and Pension Benefit Guaranty.)

SOURCE: *Survey of Current Business*, August 1998, Table 3.1, 65.

GOVERNMENT ACTIVITIES

- Providing a legal system—required if a market economy is to function
- Producing goods—defense, education, mail
- Affecting what the private sector produces, through subsidies, taxes, credit, and regulation
- Purchasing goods and services from the private sector, which are then supplied by the government to firms and households
- Redistributing income

the beneficiaries satisfy certain other eligibility standards (e.g., age). As soon as they satisfy these criteria, they become entitled to receive the benefits.

HIDDEN REDISTRIBUTION PROGRAMS The government affects the distribution of income not only through direct transfers but also through the indirect effects of the tax system and other government programs. One could imagine the government taxing everyone at the same rate but then giving grants to those whose income fell below a certain level. This would have the same effect as taxing the lower-income individuals at a lower rate. Thus, there is a certain arbitrariness in distinguishing between transfer payments through spending programs and the implicit transfers through the tax system.[11]

The major example of a transfer program run through the tax system is the earned income tax credit (EITC), which actually provides income to low-income earners (such as families with two children with income under $28,000). Under the Clinton administration, expenditures for the EITC were expanded in an effort to enhance the incentives for low-skilled workers to stay off welfare.

The government also redistributes income in the guise of subsidy programs and quotas. Our agricultural programs in effect redistribute income to farmers. The oil import quotas of the 1950s redistributed income to owners of oil reserves. The alleged reason for the quotas was to ensure the energy independence of the United States; nonetheless the redistributive effects were among the primary consequences, and they may indeed provide the true motivation for the legislation.

Spending for goods and services also has its redistributive consequences: subsidies to urban bus transport may help the poor, while subsidies to suburban rail lines may help the middle class.

[11] Some of the tax expenditures can be viewed explicitly as forms of social insurance. The fact that unemployment insurance and social security are only partially taxed, and disability benefits not taxed at all, means that a dollar of direct expenditures for those purposes goes further than it would if subjected to taxation.

OVERVIEW OF GOVERNMENT EXPENDITURES

We can now put together the discussion of purchases and transfers to get an overview of government expenditures. Figure 2.3 shows the distribution of government expenditures in 1997. In panel A, which combines outlays at all levels of government, we can see that purchases of goods and services, pri-

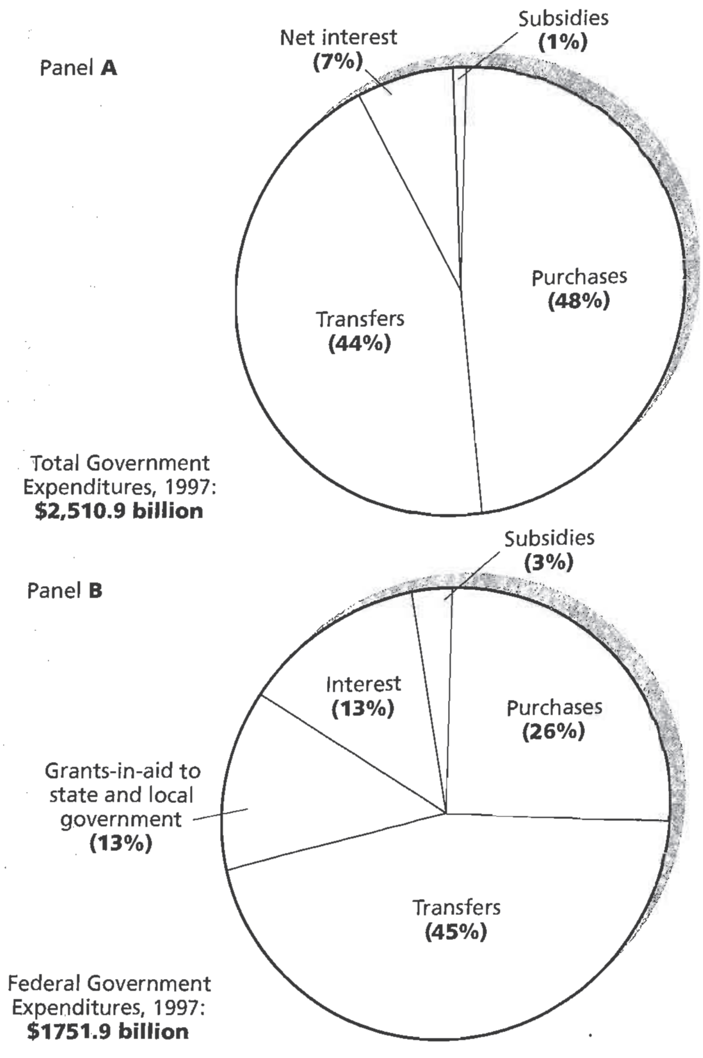

FIGURE 2.3 **Government Expenditures by Type** Today, almost half of all government expenditures at the federal, state, and local levels are transfers. As a result of the huge deficits accumulated since 1981, almost one out of every seven dollars goes to pay interest on the government debt.

SOURCE: *Economic Report of the President,* 1998, Tables B-82, B-84.

marily for defense and education, constitute almost half of expenditures, and transfer payments comprise the bulk of the rest.

Figure 2.4 shows the purpose of the expenditures by broad categories, both for the federal government's expenditures and for all government expenditures. Note that at the federal level, social security (OASDI) and de-

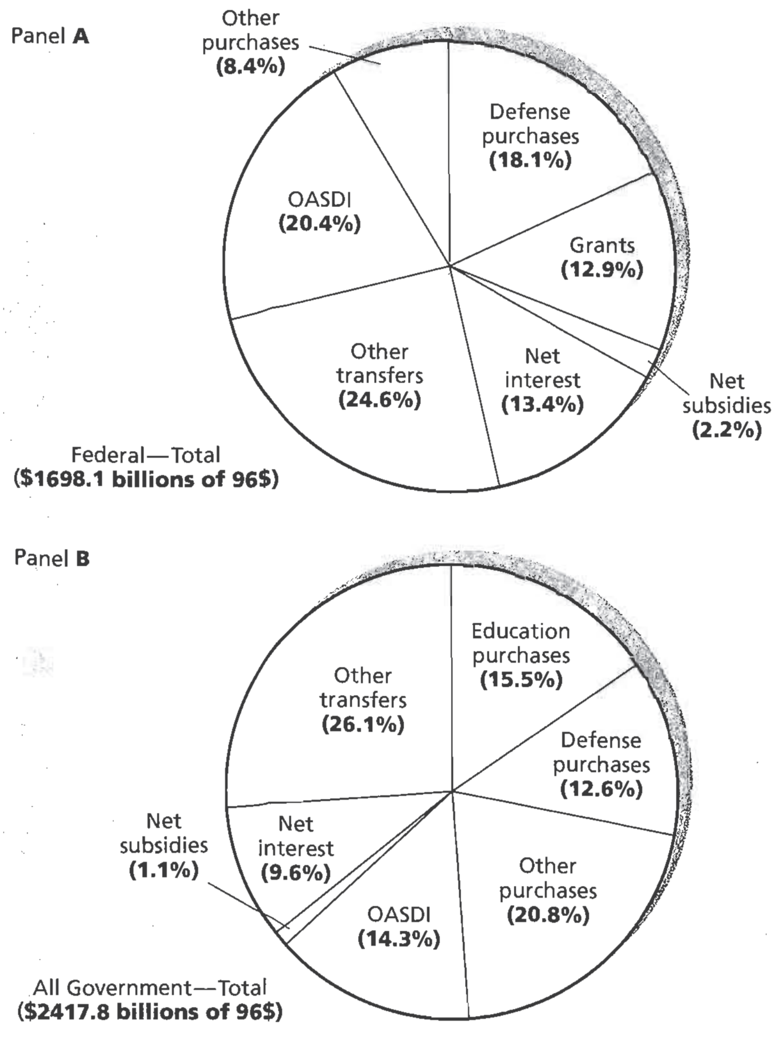

FIGURE 2.4 **Government Expenditures by Purpose** At the federal level, the most important expenditures, other than transfers, are for defense; at the state and local level, the most important expenditures are for education.

SOURCE: *Survey of Current Business*, October 1997, Tables 3.1, 3.15, 3.16, 3.17.

fense purchases play major roles. For total government expenditures, education appears as a major category because it is the largest type of expenditure at the state and local level.[12]

There have been marked changes in the relative importance of expenditures at different levels of government over the past century. For instance, the federal share of all non-defense government spending grew from slightly less than a fifth in 1902 to more than 60 percent in 1997.

GAUGING THE SIZE OF THE PUBLIC SECTOR

Since the government's impact on the private economy depends on its regulatory and tax policies as well as on its outlays, no single number can provide an accurate indicator of the government's effect on the economy. Nonetheless, one indicator that economists have found particularly convenient to use is the size of public expenditures relative to the size of the total economy. A standard measure of the size of the total economy is gross domestic product (GDP), which is a measure of the value of all the goods and services produced in the economy during a given year.

GROWTH IN EXPENDITURES AND THEIR CHANGING COMPOSITION

During the past fifty years, public expenditures as a share of GDP have grown rapidly. In 1940 they were 10 percent of GDP. In 1997, they represented 31 percent of GDP, as we see in Figure 2.5.[13]

DEFENSE EXPENDITURES Figure 2.5 also shows that between 1967 and 1979 defense expenditures as a percentage of GDP declined from 9 percent to 4.9 percent. They then increased during the Reagan years until 1986, peaking at 6.2 percent, but after the end of the Cold War they once again declined to a projected 3 percent of GDP in 2000.

In order to avoid the misleading impressions that can be caused by failing to take account of inflation, economists like to express expenditures in dollars of constant value. Thus, if last year the government spent $1 billion on some program, and this year it spends $1.1 billion, but prices have increased by 10 percent, we say that the current expenditures (measured in last year's prices) are $1 billion—in constant dollars expenditures have not increased at all. Thus, in constant 1997 dollars, defense expenditures shrank from an average of $353 billion in 1967–1969 to $263 billion in

[12] Note that there is some inherent imprecision in any classification. For instance, veterans' benefits, which are typically not included in defense expenditures, can be thought of as expenditures for previously delivered defense services. Some of the expenditures on space are motivated by defense concerns.

[13] Recall from the earlier discussion the arbitrariness of this measure. For instance, if the government switches from providing aid to education through direct grants to providing it through tax expenditures, these statistics would show a fall in the share of public expenditures.

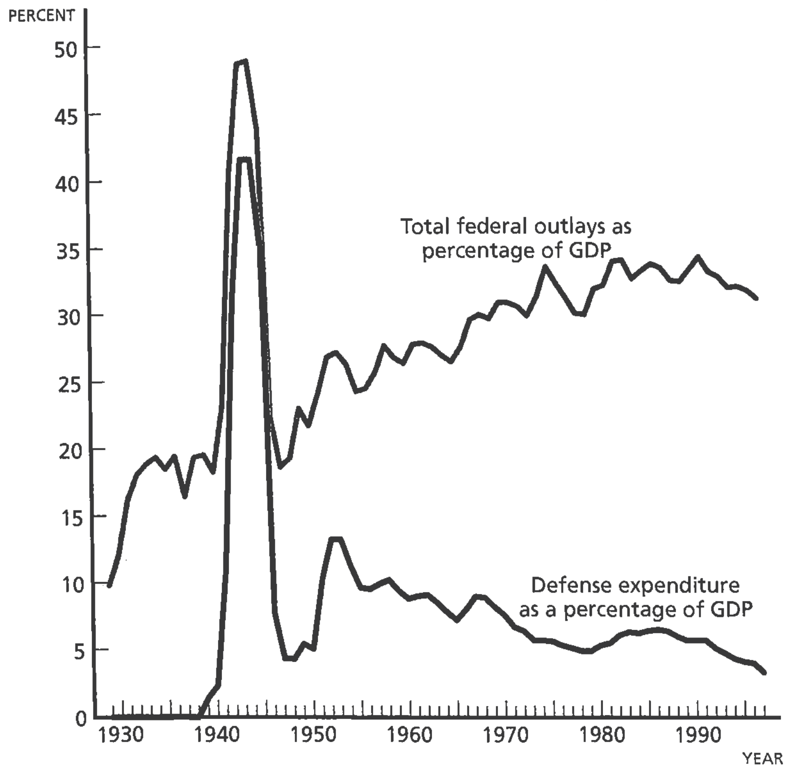

FIGURE 2.5 **Federal Defense Outlays and Total Federal Outlays as a Percentage of Gross Domestic Product (GDP), 1929–1999** Total government expenditures as a percentage of GDP have increased markedly since 1929.

SOURCES: *National Income and Product Accounts, 1929–1958,* Tables 1.7, 3.1, 3.2, 3.15; *National Income and Product Accounts, 1959–1988,* Tables 1.7, 3.15; *Survey of Current Business,* July 1992, Tables 1.7, 3.15; *Survey of Current Business,* August 1997, Tables 1.7, 3.15; *Survey of Current Business,* May 1998, Table 3.10.

1976, but they increased to a post–Korean War high of $412 billion in 1987. Subsequently, they declined to a projected level of $269 billion by 2000.

TRANSFER PAYMENTS AND INTEREST Growth in expenditures for social security, Medicare, and interest account for much of the increase in public expenditures since 1950. (See Figure 2.6.) The increase in interest payments is a consequence of the huge deficits that began under President Reagan, as the government spent more than it received. It was not until Clinton succeeded in passing a deficit reduction act in 1993 that the deficit was brought under control; interest payments actually came down, as interest rates fell by more than the deficit increased. Though public assistance is often blamed for the growth

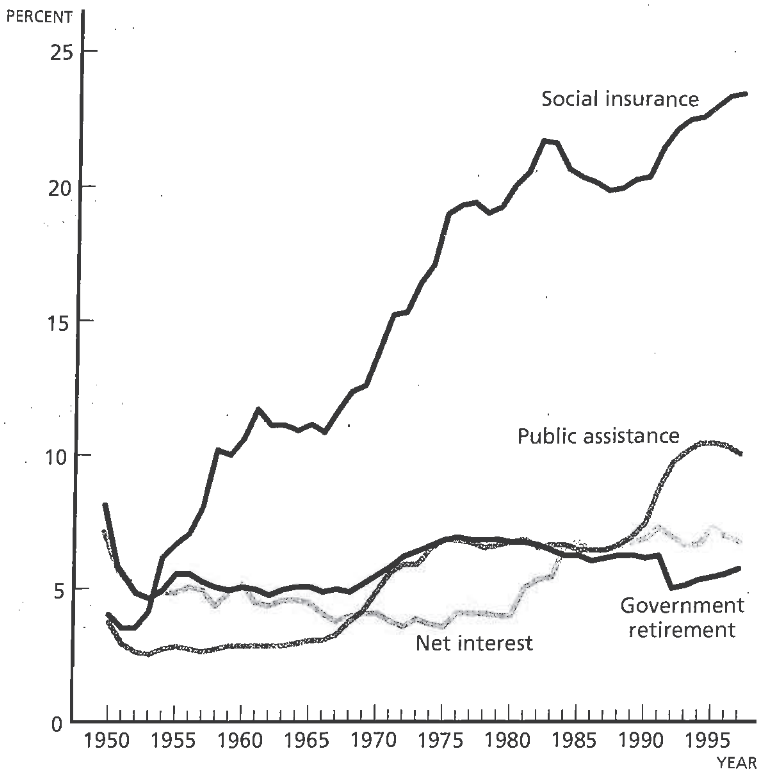

FIGURE 2.6 **Government Transfer and Interest Payments as a Percentage of Total Expenditures, 1950–1997** Social insurance payments (largely OASDI) have grown from less than 5 percent of expenditures in 1950 to over 23 percent of expenditures in 1997. Interest payments grew from a low of 3.5 percent of expenditures in 1975 to a high of 7.1 percent in 1991. Government retirement in this graph includes retirement benefits for civilian and military personnel and veterans' benefits.

SOURCES: *National Income and Product Accounts, 1929–1958*, Tables 3.1, 3.12; *National Income and Product Accounts, 1958–1988*, Tables 3.1, 3.12; *Survey of Current Business*, July 1992, Tables 3.1, 3.12; *Survey of Current Business*, August 1997, Tables 3.1, 3.12; *Survey of Current Business*, May 1998, Table 3.1; *Survey of Current Business*, August 1998, Table 3.12.

in public expenditures, its share of total government expenditures only increased from 4 percent of expenditures in 1950 to about 10 percent in 1996.

A major source of increased expenditure during the past two decades has been health care—Medicaid and Medicare—and there is real concern that these expenditures will continue to soar in coming decades as well.

Figures 2.5 and 2.6 tell one other interesting story. Total non-defense expenditures as well as social insurance expenditures increased rapidly from the mid-1960s through the mid-1970s, under both Democratic and Republican administrations. The most significant break in the *rate of increase* of expenditures occurred under President Carter (1976–1980). And although Reagan and Bush preached that they would cut back the size of government, they failed to do so.

One reason for this is the tremendous inertia in the fiscal system. The full economic consequences of the Medicare program, enacted in 1965, were not felt until many years later. The scope for discretion, for changing directions, within any administration is accordingly limited.

COMPARISON OF EXPENDITURES ACROSS COUNTRIES

The share of government appears to be smaller in the United States than in most other Western countries (see Figure 2.7), and its relative growth has also been much smaller than in most other industrialized countries.

Compared to other industrial countries public expenditures as a percentage of GDP in the United States is among the lowest. Because defense

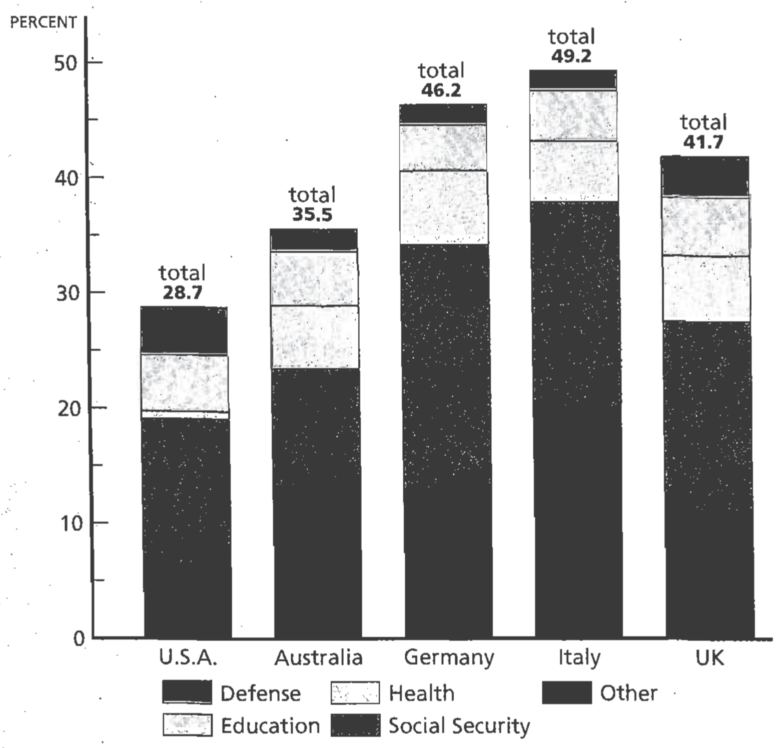

FIGURE 2.7 **Government Programs as a Percentage of GDP in Five Countries** Despite the growth of government in the United States, it has the smallest public sector of the five countries shown here.

SOURCES: Organization for Economic Cooperation and Development, *National Accounts, Detailed Tables*, vol. 2, 1983–1995, Tables for Specific Countries; *Survey of Current Business*, October 1997, Table 3.15.

GAUGING THE SIZE OF GOVERNMENT

- The size of the U.S. government today is much larger than it was a hundred years ago.
  - During the past fifty years, public expenditures as a share of GDP have grown rapidly. In 1940, they were 10 percent of GDP. In 1997, they represented 31 percent of GDP.
  - Growth in expenditures for social security, Medicare, and interest account for much of the increase in public expenditures since 1950.
- The size of government relative to the economy is much smaller in the United States than in most European countries.

expenditures play a larger role in the United States, the relative size of nondefense expenditures is particularly low, viewed from this international perspective.[14]

GOVERNMENT REVENUES

Now that we have examined what the government spends its money on, we will briefly survey the methods by which government raises revenue to pay for these expenditures. The government levies a variety of taxes. When the revenues that it receives from taxes are less than its planned expenditures, it must either cut back expenditures or borrow the difference.[15]

TAXES AND THE CONSTITUTION

The issue of taxation was very much in the thoughts of the founders of the republic. Indeed, the American Revolution began as a tax revolt with the Boston Tea Party, which was a protest against the tax on tea, and with the slogan "Taxation without representation is tyranny." The first article of the Constitution provides that "The Congress shall have power to levy and collect Taxes, Duties, Imposts, and Excises, to pay the Debts and provide for the Common Defense and General Welfare of the United States."

[14] Comparisons across countries always need to be treated with caution. Particular problems are raised by the treatment of public enterprises. The fact that tax expenditures are relatively more important here than abroad may result in an understatement of the "effective" relative size of the public sector in the United States. On the other hand, regulations are perhaps less important in the United States than in most other developed countries.

[15] In many countries, when there is a gap between expenditures and revenues, the difference is financed by printing money. This is how the Continental Congress financed the Revolutionary War. (The expression "not worth a continental" arose from the fact that the currency was not highly valued.)

Three restrictions were imposed: The government could not levy taxes on exports; "all Duties, Imposts, and Excises" had to be "uniform throughout the United States" (referred to as the uniformity clause); and "no capitation or other direct tax shall be laid, unless in proportion to the Census or Enumeration herein before directed to be taken" (referred to as the apportionment clause). (A capitation tax is a tax levied on each person. These taxes are also called head taxes or poll taxes. They are no longer levied by any state.)

The constitutional provision restricting direct taxes proved to be a problem. Congress levied an income tax during the Civil War, and reenacted it in 1894 as a tax on very high incomes. But it was declared unconstitutional by the Supreme Court in 1895. The Court held that the individual income tax was, in part, a direct tax, which the Constitution stipulates must be apportioned among the states according to their population. Widespread criticism of this rule led to a constitutional amendment. The Sixteenth Amendment, ratified in 1913, declares that "Congress shall have the power to levy and collect taxes on incomes, from whatever sources derived, without apportionment among the several states, and without regard to census or enumeration."

The apportionment provision, however, still may restrict Congress's ability to impose some taxes. Several countries impose national property taxes or wealth taxes. But these are likely to be considered direct taxes, and thus precluded in the United States by the apportionment provision.

FEDERAL TAXATION TODAY

The federal government currently relies on five major forms of taxation: (1) the individual **income tax,** (2) **payroll taxes** (to finance social security and Medicare benefits), (3) **corporate income taxes,** (4) **excise taxes** (taxes on specific commodities, such as gasoline, cigarettes, airline tickets, and alcohol), and (5) **customs taxes** (taxes levied on selected imported goods). The individual income tax is the single largest source of tax revenue for the federal government, accounting for almost half of government revenues in recent years. In 1997, social security taxes accounted for another 37.5 percent, the corporation income tax 12.3 percent, and customs and excise taxes 4.5 percent of federal government revenue.[16]

Just as there has been a marked shift in the composition of expenditures over the past fifty years, so too there has been a marked change in the source of government revenues. With the two exceptions mentioned above, the federal government did not impose any income tax on individuals before 1913. The individual income tax accounted for 30 percent or less of government tax revenues before the 1940s, when rates were quadrupled to pay for World War II.[17] Since that war, the individual income tax has been the largest single source of federal revenues, as shown in Figure 2.8. The

[16] *Survey of Current Business,* May 1998, Table 3.2, p. D-8.
[17] For a historical summary of the major federal taxes, see Joseph Pechman, *Federal Tax Policy,* 5th ed. (Washington D.C.: Brookings Institution, 1987), Appendix A.

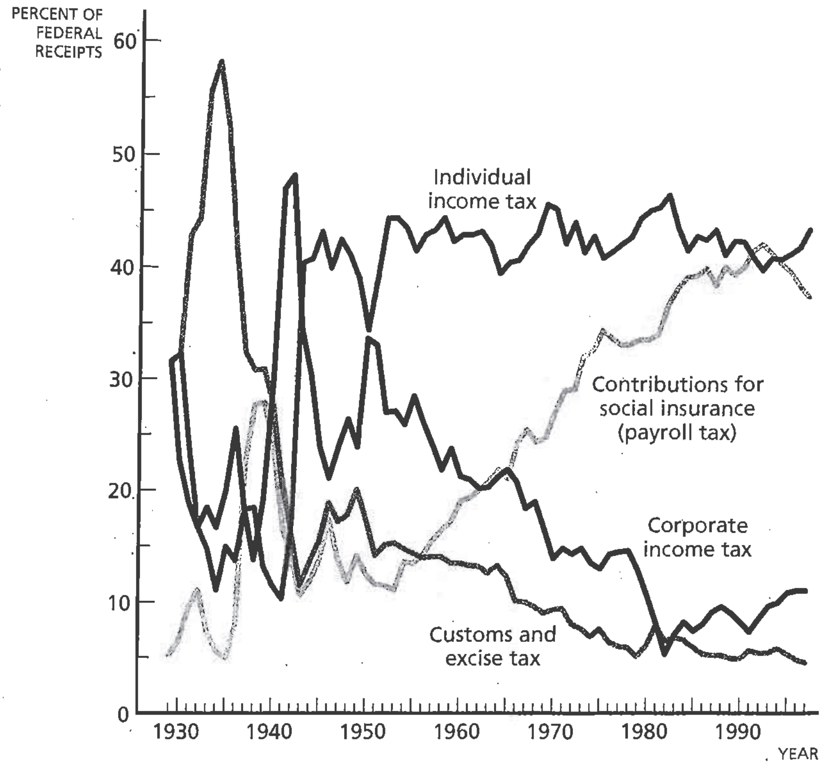

FIGURE 2.8 **Distribution of Federal Receipts by Source, as Percentages of Total Federal Receipts** The individual income tax and contributions to social insurance (primarily social security payroll taxes) are now by far the most important source of federal revenue. The shares of revenue provided by the corporate income tax and by customs and excise taxes have fallen sharply over the past forty years.

SOURCES: *National Income and Product Accounts, 1929–1982,* Table 3.2; *Survey of Current Business,* July 1986, Table 3.2; *Survey of Current Business,* July 1989, Table 3.2; *Survey of Current Business,* July 1992, Table 3.2; *Survey of Current Business,* August 1997, Table 3.2; *Survey of Current Business,* May 1998, Table 3.2.

corporation income tax has played a decreasing role, falling from 36 percent of federal revenues in 1927 to 23 percent in 1960 and 12.3 percent in 1997.

Between 1789 and 1909, the federal government received almost all of its revenues from excise taxes and customs. Today, those taxes are relatively unimportant. On the other hand, the payroll tax, which was introduced by the Social Security Act of 1935, increased from 18 percent of federal revenues in 1960 to 37.5 percent in 1997.

STATE AND LOCAL GOVERNMENT REVENUES

Unlike the federal tax system, state and local tax systems rely heavily on sales and property taxes. As shown in Figure 2.9, until the 1970s property taxes were their major source of revenue. Today, sales taxes amount to 24 percent of their total revenue, and property taxes raise 22 percent. State and local individual income taxes amount to only 14 percent of the total, while corporate income taxes are 4 percent.

Competition among states for industry discourages the use of some state and local taxes, especially corporate income taxes. The federal government provides substantial aid to state and local governments, much of it directed at specific programs like road construction, mass transit, bilingual

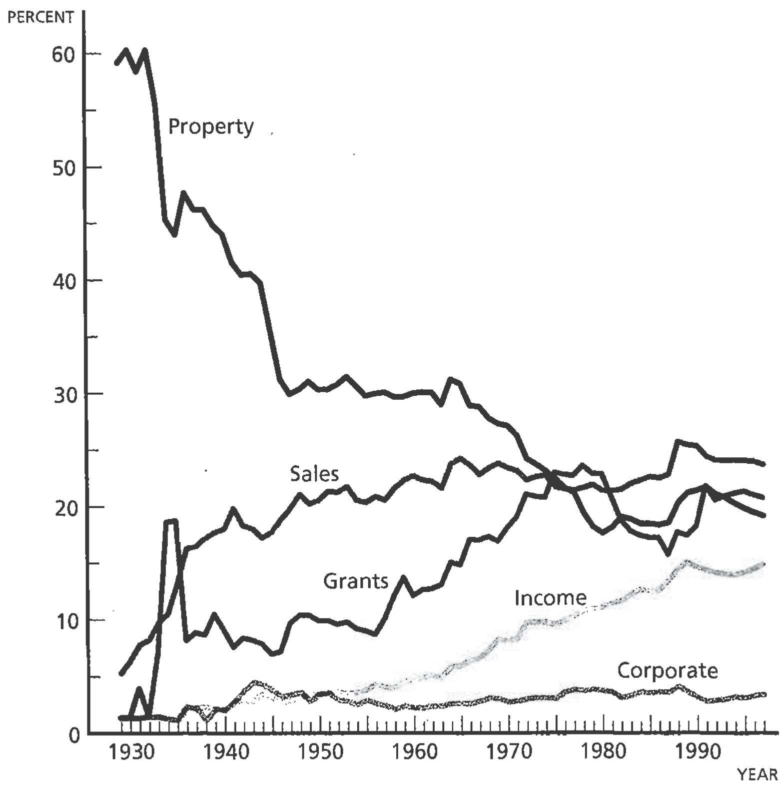

FIGURE 2.9 **Distribution of State and Local Government Receipts by Source, as Percentages of Total** Federal grants and individual income taxes have increased in importance while property taxes have decreased in importance as a source of state and local revenues.

SOURCES: *National Income and Product Accounts, 1929–1982*, Table 3.3; *Survey of Current Business*, July 1986, Table 3.3; *Survey of Current Business*, July 1989, Table 3.3; *Survey of Current Business*, July 1992, Table 3.3; *Survey of Current Business*, August 1997, Table 3.3; *Survey of Current Business*, May 1998, Table 3.3.

education, vocational education, and libraries. In 1996, federal grants to state and local governments provided one-fifth of their revenue.

COMPARISON OF TAXATION ACROSS COUNTRIES

Patterns of taxation differ from country to country. While in most European countries the individual income tax is less important than in the United States—it averages only 27 percent of government revenues throughout the European Union—taxes on goods and services are more important. Outside the United States, the **value-added tax** (a tax imposed on the value of the output of a firm less the value of goods and services purchased from other firms) is a major source of revenue. Social security taxes comprise about the same share of government revenues in Japan, Europe, and the United States.[18]

DEFICIT FINANCING

The major source of financing of government expenditures is taxes. But many governments, especially in recent years, have found tax revenues insufficient to pay for their expenditures. A **deficit** in any period is the excess of spending over revenues. A deficit is financed by borrowing. The cumulative value of borrowing by a firm, household, or government is its debt.

A firm or household that runs a deficit cannot continue to borrow indefinitely, but will be forced into bankruptcy once its debt gets too large. Because of the federal government's ability to tax, and the huge potential revenue sources it can tap, its deficits do not cause the same kinds of problems that large debts incurred by private firms or individuals would. Lenders will continue to willingly finance the federal government's debt, provided the interest rate is high enough.

In the early 1980s, the size of the federal deficit, both in dollar terms and, more importantly, as a fraction of GDP and of the budget, reached all-time highs (for peacetime); see Figure 2.10. The size of the deficits in the 1980s caused great consternation both in and outside of Washington. In order to finance the deficit, the role of the federal government as a *borrower* in U.S. credit markets soared.

The dollar value of the debt goes up each year by the amount of that year's federal deficit (a federal surplus reduces the federal debt). But the *real* value of the debt also depends very much on inflation. To see what this means, assume you promise to pay someone $100 next year. If the prices of all goods and services rise by 10 percent, next year that person will be able to purchase with $100 the same goods that he could have purchased with $91 this year. The "real value" of what you have to pay him has declined by $9.

[18] *OECD in Figures,* pp. 45–46, accessed at *Statistics at the OECD* (http://www.oecd.org/std/), April 7, 1998. Percentages reflect tax revenues in 1994.

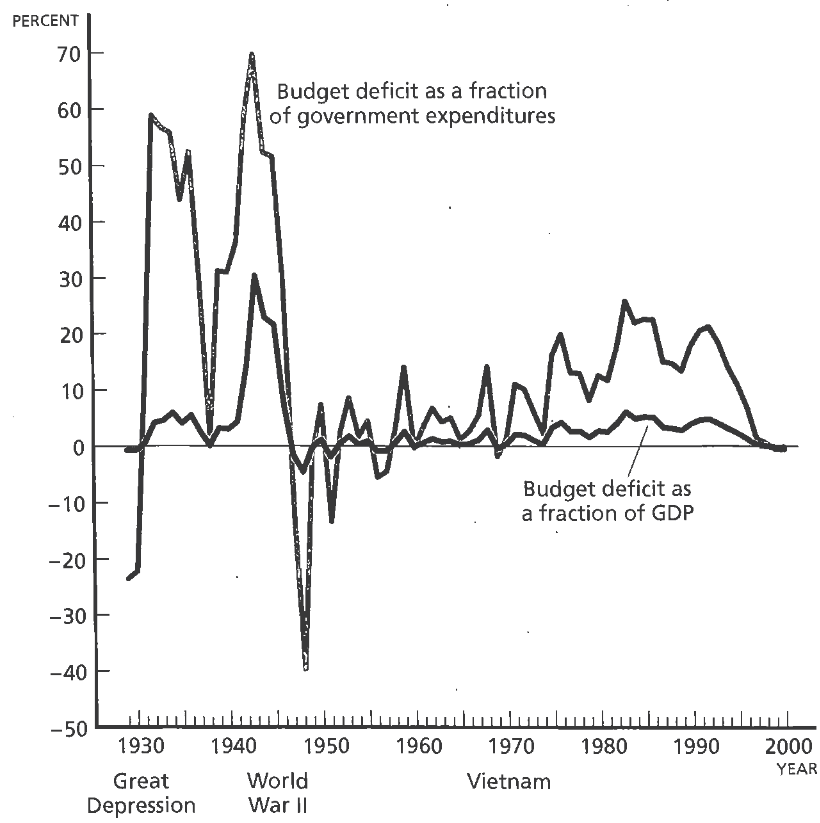

FIGURE 2.10 **The Federal Budget Deficit as a Percentage of Expenditures and of GDP, 1929–2000** The deficit increased markedly during the early 1980s, fell, and then increased again during the early 1990s. A federal budget surplus is projected after 1998. Note that figures for 1998–2000 are estimates.

SOURCE: *Budget of the United States Government, Fiscal Year 1999*, Historical Tables, Tables 1.1, 1.2.

Figure 2.11 traces the changes since 1940 in the real value of the federal debt owed to U.S. citizens and foreigners—known as the publicly held federal debt. In real terms, the increase in the debt after 1980 is dramatic. As a result of the high deficits and the fall in the inflation rate, the period 1980–1986 saw a near doubling of the publicly held real debt, from $1,147 billion in 1980 to $2,264 billion in 1997 (both amounts measured in 1997 prices). To put it another way, in the first six years of the Reagan administration, the total increase in *real* debt of the federal government was nearly equal to the total real debt accumulated over the first two hundred years of this country, including the entire debt required to finance U.S. participation in World War II.

In 1998, the expanding economy (which had grown strongly since 1993), the tax increases enacted in 1993, and the limitations on expendi-

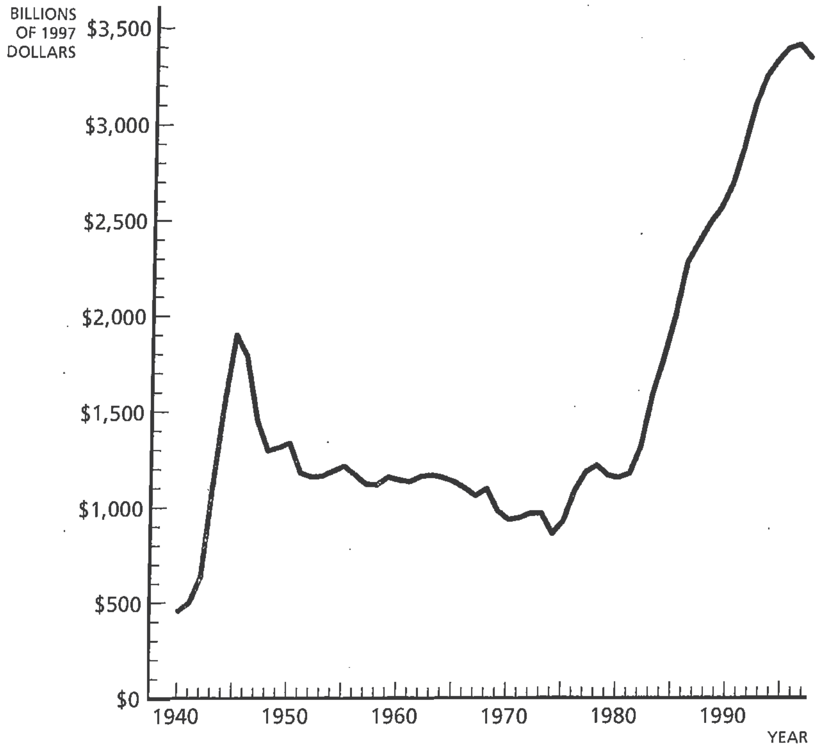

FIGURE 2.11 **Gross Federal Debt Held by the Public (1997 prices)** Government debt has grown enormously since 1974.

SOURCE: *Budget of the United States Government, Fiscal Year 1999*, Historical Tables.

tures that had been imposed for almost a decade, beginning in 1990, finally achieved their long sought goal: there was a $70 billion surplus. Further surpluses were projected for the following years, though the President and Congress quickly began a heated discussion of what should be done with those surpluses, in particular, whether they should be primarily used for tax cuts or for ensuring the viability of social security.

PLAYING TRICKS WITH THE DATA ON GOVERNMENT ACTIVITIES

The budgets of the federal, state, and local governments set out their expenditures and receipts. As we have seen, however, budgets provide only a partial view of the size of government and the effect of government on economic activity. As a result, one must treat with caution any comparisons of the size of the public sector either over time or across countries.

Earlier in this chapter the sections on government subsidies and credits discussed how tax expenditures may result in misleading conclusions concerning not only the size of the public sector but also the composition of its expenditures. If the federal government wishes to hide the size of its subsidies to business, it provides tax credits to businesses. It hides the extent of its subsidies to states and localities by providing "tax expenditures" in the form of tax deductions on the federal individual income tax for most state and local taxes and tax exemption for interest on state and local bonds.

There is a second method by which the budget may be manipulated: by recording the revenues obtained when assets are sold, but not the cost—the reduction in the assets of the government. Such tricks were important in Reagan's attempt to reduce the deficit. For instance, he accelerated the sale of offshore oil and gas leases.

Speeding tax collections by increasing withholding or by increasing penalties for failing to pay taxes in a timely fashion is another one-time way of reducing a current deficit.

The overall size of the public sector (but not the deficit) can be decreased by the setting up of independent agencies and enterprises. It makes no real difference whether the post office is a department of the U.S. government or, as is the case today, a separate "corporation" receiving a subsidy from the federal treasury. But if it is a department, all of its income and all of its expenditures will be included in the government budget; if it is a separate enterprise, only the deficit (the difference between its expenditures and income) is recorded.

Though these problems provide considerable room for politicians to select statistics to support their views, the pattern of changes in the level and structure of expenditures and taxation in the United States over the past twenty-five to fifty years has been significant enough that there can be little question about three major observations that have been made in this chapter:

1 The public sector exerts a major influence on the production of goods and the distribution of income in the United States.
2 Social insurance has been the fastest-growing category of government expenditures in the past thirty years. Since 1960, the rapid growth in nondefense expenditure by government was largely accounted for by social security, government retirement programs, Medicare, and interest.
3 The individual income tax has become the principal source of federal revenue, and the role of the corporation income tax as a revenue source has dwindled.

REVIEW AND PRACTICE

SUMMARY

1 The government performs many roles:
  a It provides the basic legal framework within which we live.
  b It regulates economic activities. It encourages some activities by subsidizing them and discourages others by taxing them.

REVIEW AND PRACTICE

c It produces goods and provides credit, loan guarantees, and insurance.

d It purchases goods and services, including many that are produced by private firms (such as weapons manufacturers).

e It redistributes income, transferring income from some individuals to others.

f It provides social insurance, for retirement, unemployment, disability, and medical care for the aged.

2 The size of the government relative to GDP is much larger now than it was forty years ago. Much of this increase is accounted for by increased payments for social insurance.

3 The relative size of the public sector in the United States is smaller than in most Western European countries.

4 The three major areas of government expenditures are defense, social insurance, and education. Together, these accounted for 65 percent of governmental expenditures in 1996.

5 The major source of revenue for the federal government is the individual income tax, followed by the payroll tax, corporation tax, and customs and excise taxes.

6 The major sources of revenue for state and local government are the sales tax, the property tax, and the income tax.

7 The Constitution provides the basic framework for the government of the United States. It provides some restrictions on the taxes that can be imposed, but no effective restrictions on what the government can spend its money on.

8 The deficit—the difference between the government's expenditures and revenues—grew enormously, beginning in 1981, with the total real debt accumulated between 1981 and 1987 alone equaling the total real debt accumulated over the first two hundred years of the country. Deficit reduction measures, begun in 1990 and extended in 1993, combined with a growing economy, enabled a surplus to be achieved in 1998.

KEY CONCEPTS

Transfer payments
Nationalization
In-kind benefit
Social insurance
Middle-class entitlement programs
Income tax
Social security (payroll) tax
Corporate income tax
Excise tax
Customs tax
Value-added tax
Deficit

QUESTIONS AND PROBLEMS

1 To see what is going on, economists often "adjust" the data to reflect changes in the economy. For instance, in the text, we discussed the adjustments in dollar amounts made to correct for inflation. Another adjustment that is frequently made is to take into account the increase in population. What adjustments might you make in looking at education expenditures? At social security expenditures?

2 In each of the following areas, give one or more examples (where possible) in which the government is involved as a producer; a regulator; a purchaser of final goods and services distributed directly to individuals or used within government:

- **a** Education
- **b** Utilities
- **c** Transportation
- **d** Credit markets
- **e** Insurance markets
- **f** Food
- **g** Housing

3 In each of the following areas, give an example of a tax expenditure and a conventional expenditure. Explain how the same results could be obtained by converting the tax expenditure into a conventional expenditure.

- **a** Medicine
- **b** Housing
- **c** Education

4 Assume you were President and your planned expenditures exceeded your receipts. Describe some of the tricks you might use to reduce the apparent budget deficit while maintaining current levels of services and transfers (subsidies).

Assume, on the other hand, that you had run on a platform of keeping the growth in total governmental expenditures down to 3 percent. Once in office, you see, however, that you would like expenditures to rise by 5 percent. How might you do this while appearing to keep your election promises?