

second is the administrative burden of complying with the tax laws.

- The equity of a tax system concerns whether the tax burden is distributed fairly among the population. According to the benefits principle, it is fair for people to pay taxes based on the benefits they receive from the government. According to the ability-to-pay principle, it is fair for people to pay taxes based on their capability to handle the financial burden.

When evaluating the equity of a tax system, it is important to remember a lesson from the study of tax incidence: The distribution of tax burdens is not the same as the distribution of tax bills.

- When considering changes in the tax laws, policymakers often face a trade-off between efficiency and equity. Much of the debate over tax policy arises because people give different weights to these two goals.

KEY CONCEPTS

budget deficit, p. 238
 budget surplus, p. 238
 average tax rate, p. 245
 marginal tax rate, p. 245
 lump-sum tax, p. 245
 benefits principle, p. 246

ability-to-pay principle, p. 247
 vertical equity, p. 247
 horizontal equity, p. 247
 proportional tax, p. 248
 regressive tax, p. 248
 progressive tax, p. 248

QUESTIONS FOR REVIEW

1. What proportion of taxes collected in the United States is collected by the federal government?
2. What are the two most important sources of revenue for the U.S. federal government?
3. Explain how corporate profits are taxed twice.
4. Why is the burden of a tax to taxpayers greater than the revenue received by the government?
5. Why do some economists advocate taxing consumption rather than income?
6. What is the marginal tax rate on a lump-sum tax? How is this related to the efficiency of the tax?
7. Give two arguments why wealthy taxpayers should pay more taxes than poor taxpayers.
8. What is the concept of horizontal equity and why is it hard to apply?

PROBLEMS AND APPLICATIONS

1. In a published source or on the Internet, find out whether the U.S. federal government had a budget deficit or surplus last year. What do policymakers expect to happen over the next few years? (Hint: The website of the Congressional Budget Office is <http://www.cbo.gov>.)
2. The information in many of the tables in this chapter can be found in the *Economic Report of the President*, which appears annually. Using a

recent issue of the report at your library or on the Internet, answer the following questions and provide some numbers to support your answers. (Hint: The website of the Government Printing Office is <http://www.gpo.gov>.)

- a. Figure 1 shows that government revenue as a percentage of total income has increased over time. Is this increase primarily attributable to changes in federal government revenue or in state and local government revenue?

- b. Looking at the combined revenue of the federal government and state and local governments, how has the composition of total revenue changed over time? Are personal income taxes more or less important? Social insurance taxes? Corporate profits taxes?
 - c. Looking at the combined expenditures of the federal government and state and local governments, how have the relative shares of transfer payments and purchases of goods and services changed over time?
3. The chapter states that the elderly population in the United States is growing more rapidly than the total population. In particular, the number of workers is rising slowly, while the number of retirees is rising quickly. Concerned about the future of Social Security, some members of Congress propose a "freeze" on the program.
 - a. If total expenditures were frozen, what would happen to benefits per retiree? To tax payments per worker? (Assume that Social Security taxes and receipts are balanced in each year.)
 - b. If benefits per retiree were frozen, what would happen to total expenditures? To tax payments per worker?
 - c. If tax payments per worker were frozen, what would happen to total expenditures? To benefits per retiree?
 - d. What do your answers to parts (a), (b), and (c) imply about the difficult decisions faced by policymakers?
4. Suppose you are a typical person in the U.S. economy. You pay 4 percent of your income in a state income tax and 15.3 percent of your labor earnings in federal payroll taxes (employer and employee shares combined). You also pay federal income taxes as in Table 3. How much tax of each type do you pay if you earn \$30,000 a year? Taking all taxes into account, what are your average and marginal tax rates? What happens to your tax bill and to your average and marginal tax rates if your income rises to \$50,000?
5. Some states exclude necessities, such as food and clothing, from their sales tax. Other states do not. Discuss the merits of this exclusion. Consider both efficiency and equity.
6. When someone owns an asset (such as a share of stock) that rises in value, he has an "accrued" capital gain. If he sells the asset, he "realizes" the gains that have previously accrued. Under the U.S. income tax, realized capital gains are taxed, but accrued gains are not.
 - a. Explain how individuals' behavior is affected by this rule.
 - b. Some economists believe that cuts in capital gains tax rates, especially temporary ones, can raise tax revenue. How might this be so?
 - c. Do you think it is a good rule to tax realized but not accrued capital gains? Why or why not?
7. Is a lump-sum tax efficient? Why or why not? Why do most governments fail to use lump-sum taxes?
8. The Tax Reform Act of 1986 eliminated the deductibility of interest payments on consumer debt (mostly credit cards and auto loans) but maintained the deductibility of interest payments on mortgages and home equity loans. What do you think happened to the relative amounts of borrowing through consumer debt and home equity debt?
9. Categorize each of the following funding schemes as examples of the benefits principle or the ability-to-pay principle.
 - a. Visitors to many national parks pay an entrance fee.
 - b. Local property taxes support elementary and secondary schools.
 - c. An airport trust fund collects a tax on each plane ticket sold and uses the money to improve airports and the air traffic control system.
10. Any income tax schedule embodies two types of tax rates: average tax rates and marginal tax rates.
 - a. The average tax rate is defined as total taxes paid divided by income. For the proportional tax system presented in Table 7, what are the average tax rates for people earning \$50,000, \$100,000, and \$200,000? What are the corresponding average tax rates in the regressive and progressive tax systems?
 - b. The marginal tax rate is defined as the extra taxes paid on additional income divided by the increase in income. Calculate the marginal tax rate for the proportional tax system as income rises from \$50,000 to \$100,000. Calculate the marginal tax rate as income rises from \$100,000 to \$200,000. Calculate the corresponding marginal tax

- rates for the regressive and progressive tax systems.
- c. Describe the relationship between average tax rates and marginal tax rates for each of these three systems. In general, which rate is relevant for someone deciding whether to accept a job that pays slightly more than her current job? Which rate is relevant for judging the vertical equity of a tax system?
12. Each of the following expenditures is a deduction for the purposes of calculating a person's federal income tax liability:
- a. Mortgage interest
 - b. State and local taxes
 - c. Charitable contributions

If the income tax base were broadened by eliminating these deductions, tax rates could be lowered, while raising the same amount of tax revenue.

For each of these deductions, what would you expect the likely effect on taxpayer behavior to be? Discuss the pros and cons of each deduction from the standpoint of efficiency, vertical equity, and horizontal equity. Would you keep or eliminate the deduction?

For further information on topics in this chapter, additional problems, applications, examples, online quizzes, and more, please visit our website at www.cengage.com/international.