

# CHAPTER 1

## Individuals and Government

### INSTRUCTIONAL OBJECTIVES

Chapter 1 is a general introduction to the field of public finance, emphasizing the relationship between individuals and government. The functions of government are outlined, and the importance of taxes in household budgets is highlighted. The chapter seeks to develop an understanding of the economic role of government as a supplier of useful goods and services. Students are also expected to digest data on the actual extent of government activity in the United States and other nations. They should know the current structure of government expenditures and revenues in the United States, how government has grown since 1920, and how the structure of federal government spending has changed since 1960.

In addition, the chapter seeks to demonstrate that the problem of scarcity implies that an increase in resources devoted to government goods and services decreases availability of resources for nongovernment uses. It is also made clear to students how government provision of goods and services differs from market provision of goods and services.

### CHANGES IN THIS EDITION

Chapter 1 has a new introduction that discusses the growth in government spending, the impact of the recession on public finance on the federal, state and local government levels, and health care issues. All data on government spending and revenues have been updated to 2008 or the latest available year. Public expenditure data have been revised using the latest NIPA data for government consumption and investment documenting the rise in the share of the public sector to 35 percent of GDP since 2001. The data now include all years from 1929 to 2008 based on latest NIPA revisions. The *International View* on government spending has been revised and updated with the latest empirical data. Graphs have been redone to reflect the latest available observations. The discussion of the mix between transfer payments and government consumption has been revised to reflect changes in NIPA accounting. The growth in health care spending by the government has been documented showing that it is now the largest category and fastest growing category of federal government expenditure. More analysis of state government spending is provided in the revised *Public Policy Perspective* entitled “The State of State Finances 2009-2010: Impact of a Recession”. The impact of the recession on revenues and spending is discussed along with provisions of the *American recovery and Reinvestment Act of 2009*, the affecting state governments and the federal government mandates that influence state spending. The analysis of the implications of aging populations for public finance has been updated based on empirical analysis of the latest U.N. projections of changing world demographics.

## CHAPTER OUTLINE

Individuals, Society, and Government

Governments and Political Institutions

The Allocation of Resource between Government and Private Use  
How Government Goods and Services Are Distributed

The Mixed Economy, Markets, and Politics  
Circular Flow in the Mixed Economy

*International View: How Much Government? The Share of Government Expenditure in Modern Economies*

Government Expenditures in the United States  
Growth of Government Expenditures  
Structure of Federal Government Expenditure

The Structure of State and Local Government Expenditure

Financing Government Expenditure in the United States

*Public Policy Perspective: The State of State Government Finances 2009-2010: Impact of a Recession*

Market Failure and the Functions of Government: How Much Government is Enough?

Aging Populations: Implications for Public Finance

## MAJOR POINTS AND LECTURE SUGGESTIONS

1. My objective in the first lecture is to make it clear to students how economic analysis of the functions and activities of governments fits in with their other courses. Since most students have already had at least one course in microeconomics, I point out how governments can be thought of as agents for supplying goods and services whose quantities have been determined through political, as opposed to market, interaction. The role of government in the mixed economy is schematically illustrated with a modified circular flow diagram. Figure 1.2 represents a useful starting point for illustrating how the economic analysis of government fits in with previous analyses of markets to which most students will have already been exposed. I usually draw the diagram on the board and show how both households and business firms have economic relations with governments.
2. The tradeoff between government goods and services, and private goods and services is illustrated with the production possibility curve. Figure 1.1 is familiar to most students, and its application to analysis of government goods and services usually captures their attention. It helps to use the graph in class to discuss reallocation of resources from military to nonmilitary uses. Another interesting use of the graph is to show how increased environmental quality improvement services supplied by government will require the sacrifice of material goods and services, as the prices of such products as fuel, electricity, and automobiles rise.
3. Emphasize that government goods and services are usually made available through nonprice rationing:

- a. Government goods are often available for collective use at no direct charge, as is the case for roads, national defense, police services, fire protection, and environmental protection.
  - b. Eligibility for obtaining the benefits of government services is determined by criteria other than ability and willingness to pay. Politically determined criteria, such as age, income, family status, and location of residence, often determine a person's eligibility to receive government transfers, such as food stamps, and services, such as public schooling.
4. A general listing of the functions of government, as discussed in the text, is useful to students. These functions are as follows:
  - a. Provision of useful goods and services, including the establishment of property rights and the underlying legal system
  - b. Redistribution of income and economic opportunity among citizens
  - c. Stabilization (Note that this is not covered in the text.)
  - d. Regulation of private action
5. Note that the discussion of government finance in the chapter briefly outlines the fact that the consequences of alternative means of finance differ in terms of the impact on incentives to produce and on the distribution of well-being.
6. I usually photocopy the tables in Chapter 1 and bring them to class for the second lecture. I believe that it is important for students to have some appreciation of the current extent of government and the growth of expenditures and revenues in recent years.
7. In addition to illustrating the growth of government, I seek to show how the structure of federal government expenditure has changed significantly since 1960. First, point out to students the spectacular growth in the relative importance of transfers from 1960 to 1980. You can also point out that transfers stabilized at close to 40 percent of federal spending in the 1970s. After declining slightly as a share of federal spending in the 1980s, they rose again in the 1990s, and now account for about 43 percent of federal spending. Federal government purchases of goods and services for consumption and investment has declined over 60 percent of federal spending in 1960 to 27 percent in 1999. Since the end of the Cold War, purchases have declined as defense spending has been cut back. However, the terrorist attacks of September 11, 2001, have resulted in both increased government spending and a shift away from transfers toward government consumption.
8. In discussing actual expenditures, use Table 1.3 and the accompanying pie chart to show the importance of Social Security, income security, Medicare, and health for the federal government, and point out that these programs account for about 60 percent of federal government expenditures. Also point out that 34 percent of state and local government expenditure is accounted for by education. Health care spending by state and local governments, mainly for Medicaid, has been growing rapidly and now accounts for 20 percent of state and local government spending.
9. Use the data and accompanying pie charts in the chapter to show students how income taxes, including payroll taxes and corporate profits taxes, account for more than 90 percent of federal government revenue. Also point out that sales and property taxes account for nearly half of state and local government revenues and that one in five dollars of receipts received by state and local governments comes from federal grants-in-aid.
10. Many instructors are now spending more time in class discussing state and local government fiscal problems. A section in Chapter 1 discusses the structural problems that are underlying state government budgets and discusses the situation and impact on budgets for selected states that have been particularly hard hit by revenue shortfalls.

11. Aging of populations has implications for public finance especially for Social Insurance programs. A section in this chapter provides information on aging of the population, dependency ratios worldwide along with implications for government spending.

## ANSWERS TO TEXT PROBLEMS

1. Given a point on the old production possibility curve, the outward shift allows movement in the northeast direction to a point on the new production possibility curve corresponding to an increase in production of both private and government goods and services.
2. The increased allocation of resources to government provision of health services implies that fewer resources can be used for other goods and services. The student should plot health care services on one of the axes and “all other goods and services” on the other axis. As production of health care services increases, given fixed resources and technology, production of other goods and services must decline.
3. Social Security pensions are government transfers. Except for a small amount of purchases for personnel and other resources to administer the transfer, no government purchases are required.
4. The debt accumulated by past budgets amounts to many times more than the amount of federal spending. It will take many years to retire the outstanding debt. The interest on the outstanding debt will have to be paid for many years until the debt is retired. Running a budget surplus would accelerate the rate of debt repayment.
5. A slowdown in the economy during the recession in 2007 to 2009 sharply reduced tax collections for many state governments. During the booming 1990s, many state governments also cut tax rates. As income tax collections and sales tax collections have fallen budget deficits have increased. Also contributing to the deficits were sharp increases in state government spending for medical assistance to the poor. Because state governments are required by law to balance their budgets, they must either raise taxes, cut spending, or find other ways of generating revenue when a deficit is forecast. State governments rely heavily on both income taxes and sales taxes. Sales taxes are typically not levied on services and because services as a share of consumer spending has been rising, sales tax collections have been growing more slowly than expected.
6. Even though many programs are federally funded, such as, Medicare, programs such as Medicaid are partially state funded. Consequently, the aging population will increase state expenditures as Medicaid and other healthcare programs become more expensive due to increased demand. The aging population will also impact state government revenue as the population leaves the workforce and contribute less and less in the form of personal income tax, sales tax and property tax.
7. This answer is more in the form of an opinion, but should be based on Figure 1.1. The key observation in the student’s answer is that all the spending cuts/additions suggested should still proportionately add to 100% with justifications for increases and decreases in spending.

## A NOTE ON THE APPENDIX TO CHAPTER 1

The appendix to Chapter 1 is a concise review of basic microeconomic principles used throughout the text. The material is designed to aid students with weak backgrounds in basic economic theory. It also provides a convenient reference for students who wish to review basic concepts as they are needed. I advise my students to read the appendix, but I do not cover any of the material in class.

## OUTLINE OF THE APPENDIX TO CHAPTER 1

### Indifference Curve Analysis

- Assumptions about Preferences
- Indifference Curves and Indifference Maps
- The Budget Constraint
- Consumer Equilibrium
- Changes in Income and Prices
- Income and Substitution Effects of Price Changes
- The Law of Demand
- Price Elasticity of Demand
- Consumer Surplus
- Using Indifference Curves to Explain the Allocation of Time

### Analysis of Production and Cost

- Isoquant Analysis
- Cost

### Profit Maximization, Competition, and Supply

- Perfect Competition
- The Short-Run Supply Curve
- Producer Surplus
- Long-Run Supply
- Price Elasticity of Supply

## TRUE/FALSE QUESTIONS

1. On average, persons in the United States devote more of their annual budgets to taxes than they do to food. (T)
2. A universally observed function of government is the establishment of property rights. (T)
3. The total share of GDP accounted for by government spending in the United States has declined significantly since 1980. (F)
4. In 1929, the federal government spent more than was spent by state and local governments. (F)
5. Since 1930, the percent of GDP devoted to government expenditures has more than tripled. (T)
6. The costs imposed by government regulations on business firms are included in budget data on government expenditures. (F)
7. Government consumption does not require resources to be reallocated from private to government use. (F)
8. Since 1959, the percent of federal government expenditures devoted to transfers has increased by more than 50 percent. (T)
9. Transfer payments, including Social Security and welfare and medical assistance, account for nearly 60 percent of federal government expenditures. (T)
10. Interest on the federal government's debt accounts for about 20 percent of federal government expenditure. (F)

11. Federal grants-in-aid to state and local governments finance about 20 percent of annual spending by these governments. (T)
12. The federal government allocates about 10 percent of its budget to Social Security. (F)
13. State and local governments in the United States spend a bit more than one-third of their budgets on education. (T)
14. Sales taxes account for about 22 percent of state and local government revenue in the United States. (T)
15. The federal government obtains about half of its revenue annually from retail sales taxes. (F)
16. State governments do not fund any part of Medicaid. (F)
17. The *social compact* is an 18<sup>th</sup> century idea by political theorists. (F)
18. The proportion of revenue received by the federal government from payroll taxes is higher than the proportion of revenue received by state and local governments from payroll taxes. (T)

## MULTIPLE CHOICE QUESTIONS

1. The real cost of government goods and services is:
  - a. money.
  - b. taxes.
  - c. the private goods and services foregone.
  - d. inflation.
2. If the economy is currently operating on a point on the production possibility curve for government goods and services versus private goods and services,
  - a. an annual increase in government goods and services can be obtained without any sacrifice of annual private goods and services.
  - b. it will be impossible to increase annual output of government goods and services.
  - c. a decrease in the annual output of government goods and services will have no effect on the annual output of private goods and services.
  - d. a decrease in the annual output of government goods and services will allow an increase in annual output of private goods and services.
3. Government goods and services are usually:
  - a. not rationed by prices.
  - b. sold in markets.
  - c. made available to persons according to their willingness and ability to pay.
  - d. financed by revenue obtained from sales.
4. Taxes:
  - a. are prices paid for the right to consume government goods and services.
  - b. are compulsory payments not directly related to the benefits received from government goods and services.
  - c. never affect economic incentives.
  - d. are used by private firms to raise revenue.

5. A mixed economy is one in which:
  - a. there are no markets.
  - b. government activity accounts for a significant proportion of the value of goods and services produced.
  - c. there is no government.
  - d. all goods and services are sold in markets.
6. Government purchases for consumption and investment:
  - a. are made to acquire resources necessary to produce government goods and services.
  - b. are designed to redistribute purchasing power among citizens.
  - c. have increased in importance as a percent of federal spending since 1959.
  - d. do not withdraw resources from private use.
7. Transfer payments by the federal government in the United States account for about:
  - a. 25 percent of federal government expenditures.
  - b. 10 percent of federal government expenditures.
  - c. 40 percent of GDP.
  - d. 60 percent of federal government expenditures.
8. Total annual expenditures by federal, state, and local governments in the United States in the 1990s accounted for roughly:
  - a. 20 percent of annual GDP.
  - b. 30 percent of annual GDP.
  - c. 50 percent of annual GDP.
  - d. 75 percent of annual GDP.
9. Federal government expenditures in the United States account for about:
  - a. 23 percent of annual GDP.
  - b. 33 percent of annual GDP.
  - c. 43 percent of annual GDP.
  - d. 53 percent of annual GDP.
10. About 80 percent of federal receipts are accounted for by:
  - a. corporate profits taxes.
  - b. sales taxes.
  - c. excise taxes.
  - d. payroll and personal income taxes.
11. If the economy is operating at full employment and using resources efficiently, then an increase in spending for homeland security this year will:
  - a. require that resources be reallocated to homeland security services without sacrificing any alternative goods and services.
  - b. be possible if resources are reallocated to homeland security services, but it will also mean that the output of some other goods and services will have to fall.
  - c. be impossible.
  - d. be possible only if there is an improvement in technology or more resources made available.

12. Which of the following is an example of a political institution?
- a. a market
  - b. elections with winners determined by majority rule
  - c. representative government
  - d. both (b) and (c)
13. Nonmarket rationing means that:
- a. those willing to pay can buy as much of a product as they choose.
  - b. prices are used to sell products.
  - c. goods and services are not rationed by prices.
  - d. willingness to pay is not a factor in determining who can enjoy a good or service.
  - e. both (c) and (d)
14. The U.S. economy is best characterized as a:
- a. pure market economy.
  - b. socialist economy.
  - c. pure capitalistic, free-enterprise system.
  - d. mixed economy.
15. State and local government expenditure in the United States accounts for about:
- a. 32 percent of GDP.
  - b. 22 percent of GDP.
  - c. 12 percent of GDP.
  - d. 7 percent of GDP.
16. Following the circular flow of a mixed economy, firms receive a flow of dollars from and send goods and services to:
- a. Output Markets.
  - b. Input Markets.
  - c. Households.
  - d. Government.
17. Following the circular flow of a mixed economy, which entity or entities distribute resources?
- a. Firms only.
  - b. Input Markets only.
  - c. Government and Households.
  - d. Households and Input Markets.
18. When has the U.S. experienced government expenditures in the range of 40% to 50% of GDP?
- a. 2000 to 2009.
  - b. 1950 to 1959.
  - c. 1940 to 1949.
  - d. It has never happened.



19. In 2008, which country listed below has the highest percentage of government spending relative to GDP?
- a. France.
  - b. Ireland.
  - c. Japan.
  - d. Canada.
20. The old-age dependency ratio is:
- a. the proportion of the population that is 60 years or older over the proportion of the population that is less than 60 years of age.
  - b. the proportion of the population that is 65 years or older over the proportion of the population that is 15 to 64 years of age.
  - c. the proportion of the population that is 70 years or older over the proportion of the population that is 20 to 69 years of age.
  - d. the total government expenditure on programs for the elderly over the number of citizens that are 65 years or older.

## ESSAY QUESTIONS

1. Taxes are likely to affect the incentives that persons have to use their own resources in the most productive way. Suppose that the taxes used to finance  $G_1$  units of government goods and services could purchase  $X_1$  units of private goods and services. Assume that more than  $X_1$  units of private goods and services could be produced if taxes did not impair incentives to produce. Use the production possibility curve to illustrate the effect of taxes on the output mix in the economy. Show the loss in private output from taxes on your graph. Show how an improvement in the technology of producing government goods and services will affect the production possibility curve.
2. What is the difference between transfer payments and government purchases? How has the mix of transfers and government purchases changed in the federal budget since 1960? List the most important transfer payments in the federal budget. What significant changes have occurred in the mix of all categories of federal government expenditures since 1960?