

# CHAPTER 2

## The United States Economic System



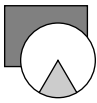
### O V E R V I E W

As you walk down the aisles of a supermarket, do you ever wonder how all the packaged foods, household products, and fresh produce got there? Many items may have traveled hundreds or thousands of miles in their journey to the grocery shelves. The store may have received its grapes from Chile, oranges from Florida, and tomatoes from California. Then, as one lot of produce is sold, a fresh supply appears, as if by magic.

What is true of grocery stores applies equally to most other enterprises: The goods and services they sell seem to be available whenever you need them. In all, some \$10 trillion worth of goods and services are produced annually by the U.S. economic system. Incredibly, this outpouring functions without government design or direction. Somehow, the more than 146 million people involved in running the economy are able to do so without central direction. As a result of those efforts, the U.S. standard of living is one of the highest in the world.

How does our economic system produce and distribute goods and services without centralized management and direction? How does the U.S. economy answer the fundamental economic WHAT, HOW, and WHO questions? (*WHAT goods and services should be produced? HOW should they be produced? WHO should receive the goods and services produced?*) As you read this chapter, you will learn the answers to these and the following questions:

- What are the principles of the free enterprise system?
- What is specialization?
- How are the economic activities of consumers, business, and government related?
- How does a market system function?
- What are the economic goals of the United States?



## PRINCIPLES OF THE U.S. ECONOMIC SYSTEM

The economic system of the United States is known as *capitalism*. In this system, the means of production are privately owned, and the fundamental questions of WHAT, HOW, and WHO are answered by the market rather than by tradition or an economic plan. Capitalism is founded on certain principles, the most important being free enterprise, private property, the profit motive, consumer sovereignty, and competition.

### Freedom of Enterprise

The free enterprise system takes its name from the freedom people in the system enjoy to enter any legal business and conduct it as they see fit. Those who venture into the business world hope that they might be quite successful at it. They know, however, that they also risk the possibility of loss.

Freedom of enterprise has its limitations. Because *public utilities* (industries that serve the public interest, such as gas and electric companies) are often the only source of a certain product in a community, government often regulates what they provide and how much they can charge. To protect consumers, government requires certain professions to be licensed. Most other businesses are subject to various other types of government supervision and regulation. Despite all these limitations, individuals have considerable freedom to organize and operate their businesses as they choose.

### Private Property

Having the *right to private property* means allowing individuals to own property and use it in any lawful manner they choose. The right of individuals to own the means of production (such as factories, farms, and stores) is one of the basic principles of capitalism. (In some command economies, by contrast, the means of production are owned by the government.) Like most other rights, property rights in the United States are subject to limitations. Government may, for example, tax those who own or inherit property. Similarly, the principal of *eminent domain* gives government the power to seize property it intends to use for some public purpose (such as to make room for building a road or school). Eminent domain requires, however, that government pay a fair price for the property it seizes.

## Profit Motive

The principal reason why entrepreneurs go into business is to earn profits. *Profits* are what remain after the expense of doing business is subtracted from a firm's income. Unlike wages and salaries, which are more or less fixed, profits are uncertain. If business is poor, the firm might not earn any profits. If the business is successful, there is no telling how much it might earn.

To improve profits, firms try to keep costs down while, at the same time, increasing income. Thus, profits provide entrepreneurs with an impartial measure of their firm's success and failure. When profits are increasing, entrepreneurs know that they must be doing something right; when profits fall, they know that something is wrong. Either way, entrepreneurs rely on the signals profits provide to keep their operation on track. Economists describe the willingness of entrepreneurs to risk financial loss by organizing and launching a business enterprise as the *profit motive*.

## Consumer Sovereignty

Just as people in business can produce and sell their goods and services as they wish, consumers are free to choose which goods and services they will buy (and which they will reject). However, even though sellers they can produce whatever they want, they know that unless they please their customers (consumers), their business will fail. Consequently, if consumers are unwilling to purchase purple ballpoint pens, manufacturers will stop producing them. On the other hand, if consumers want yellow ballpoints, manufacturers will do what they can to produce them. Economists describe the need to give consumers what they want as *consumer sovereignty*.

Consumers' likes and dislikes are expressed in a kind of marketplace election. Consumers "vote" for a product by buying it and "vote" against it by choosing not to buy it. The most successful businesses are those that either can "anticipate the market" by correctly predicting what consumers will want or can successfully create a demand for their products through advertising. Four decades ago, few parents would have thought of buying disposable paper diapers for their infants. In those days, diapers were made of cloth. The development of the disposable diaper was followed, however, by huge advertising campaigns that created a demand for the product. Today, more babies are diapered with disposables than with cloth diapers.

Consumer sovereignty can be limited by government policy. If government requires much titanium for making aircraft, then less of this scarce metal will be available for consumer products, such as paint. Consumer sovereignty is also limited when there are but two or three producers of a product. Most light-bulbs, for example, are manufactured by three producers. These manufacturers can pretty much determine the size, shape, wattage, and price of their products.

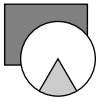


In what was one of the most costly business mistakes of the decade, executives of the Ford Motor Company in 1958 assumed that the public wanted another midsize automobile. This assumption led them to produce and promote an entirely new line, which they called the “Edsel.” The public, however, did not want another midsize family car. After swallowing millions of dollars of losses in only three years, Ford shut down its Edsel division. Consumer demand for a decades-old car is another matter. A restored and operable Edsel is worth more today than when it sat on showroom floors.

## Competition

The rivalry among sellers in the same field for consumer dollars is called *competition*. As we just learned, the profit motive is the driving force that pushes business firms to produce particular products or services. We also learned that consumers are free to choose what goods and services they want and from whom they wish to purchase those goods and services. The Ford Motor Company, for example, learned the hard way in the 1950s that consumers preferred other models of automobiles (many produced by General Motors and the Chrysler Corporation) to their Edsel.

For a while, Apple Computer and IBM pretty much dominated the personal computer market. Then as others saw how profitable this market was, more companies entered it. To win a share of the personal computer business, these other firms had to offer products or services that were either better or at lower prices than those of either Apple or IBM. Competition pressures business firms to constantly try to provide the best services and to create the best products at the lowest possible prices. This is the way that companies appeal to consumer sovereignty and, thus, earn greater profits.



## SPECIALIZATION AND THE ECONOMY

Jack and Mildred Green live in an apartment in a large city with their two teenage children, Ted and Laura. Jack works as a mechanic for a bus company, and Mildred is a manager in a law firm. Ted and Laura go to school. On a typical day, the Greens consume many of the same goods and services as do other families in their income bracket. They spend money for food, clothing, utilities (such as telephone service, gas, and electricity), recreation, a car, a television set, and all the many other items that go along with modern living. They also use such government-provided facilities as schools and highways.

It is likely that the Greens produce none of the goods and services that they consume. They live in a society where work is so specialized that few people are able to provide for more than a tiny fraction of their own needs. Mr. Green repairs buses, while Mrs. Green helps run a law office. In addition, both parents work at raising their children and caring for their home. How are the Greens able to obtain the hundreds of goods and services that they need and want in order to live comfortably?

The Greens, like millions of other residents of the United States, must count on the efforts of other people to provide them with most of their needs. This dependence on the labor of others was not always the rule in the United States and elsewhere. In the past, people relied mostly on their own efforts and nature's abundance to provide what they needed. Frontier families in this country had to grow their own food, build their own homes, and make their own clothing. Even today in traditional agricultural societies, each family provides most of the goods and services that its members consume.

The economic independence seen in traditional agricultural societies is not possible in the United States. Instead, the U.S. economy features *specialization*. In an industrial society, jobs are highly specialized. Workers perform one specialized task and depend on other workers to provide them with the things they need. There are many advantages to specialization. By concentrating on one activity, for example, workers produce more because they become highly skillful at what they do.

Just as individual workers become more efficient at their specialized tasks, so do companies. Many small companies produce only one type of good (such as dresses) or provide just one type of service (such as dry cleaning). Specialization encourages the efficient use of capital. If a business needs to use a delivery truck only twice a week, it is wasteful for the business to purchase and maintain its own truck. The business can use its capital more efficiently by hiring the services of another company, one that specializes in making deliveries. Specialization also promotes *innovation* (new ways of doing things). Companies that produce only a few products are able to concentrate on developing new machines and production techniques that will increase production, improve quality, and lower costs for these products.

Specialization is possible only where markets are large enough to support them. In New York City, for example, there are dozens of shops that sell only handbags. Others sell only pianos. By contrast, most small towns do not have a single shop selling only pianos. The number of potential customers is too small in a small town to support such highly specialized shops. In large cities, though, there are thousands of potential buyers for pianos. Such a market can support perhaps a dozen piano shops. Stated as an economic principle, the degree of specialization is limited by the extent of the market.

How are 146 million people, working at thousands of different tasks, able to produce the hundreds of thousands of goods and services that people want, in the quantities that can be sold, and at the price that people are willing to pay? And how are these goods and services distributed to where they are needed? We will answer these questions in the pages that follow.

## THE CIRCULAR FLOW OF ECONOMIC ACTIVITY

People receive income from a number of sources and spend it in a variety of ways. Workers receive wages and buy consumer goods. Business owners receive profits and pay their employees and suppliers. Landlords receive rent and purchase maintenance services and fuel for their buildings. Lenders earn interest and spend part of it on new loans or other investments. No matter how money is earned, it returns to the economy when buyers purchase the things they need or want.

Economists describe the stream of funds that is constantly passing back and forth between the public and the businesses of the country as a *circular flow*. Figure 2.1 represents this circular flow of funds. Businesses send out funds to the public in the form of wages to employees, rent to landlords, interest to banks

Figure 2.1 **Circular Flow of Money**

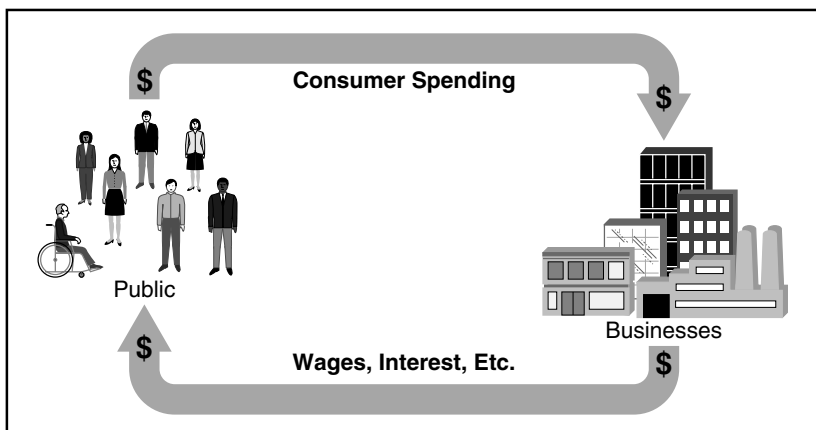
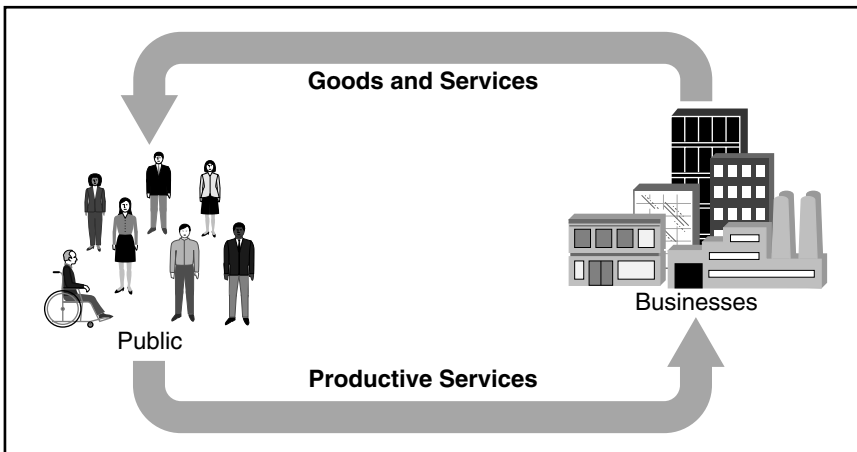


Figure 2.2 **Circular Flow of Goods and Services**

and bondholders, dividends to stockholders, and other payments. The public, as consumers and investors, sends money back to the business community.

In addition to the circular flow of funds between businesses and the public, there is also a circular flow of goods and services. The goods and services produced by businesses are purchased by the Greens and other consumers. Consumers in turn sell their productive services to businesses—in the Greens' case, to a bus company and a law firm. The flow of goods and services is illustrated in Figure 2.2. Businesses provide goods and services to the public (consumers), and the public provides productive services (land, labor, capital, and management) to businesses.

Now we have two circular streams moving in opposite directions. One carries money from the public to businesses and back again; the other carries goods and services between the same parties. These two flows are combined in Figure 2.3.

## **Adding Government to Our Model**

So far we have limited the discussion of economic activity to the public and business sectors of the economy. To complete the picture, we must add government. The public's relations with government are similar to its relations with businesses. The bus company that Jack Green works for is owned by the city. The city uses his productive services to provide a service to the public—in this case, transportation. The money that the public pays to the bus company in the form of fares is used by the city for wages, office expenses, equipment and supplies, and the like to individuals and business firms. Other city income, such as tolls and sales taxes, returns to the public in a similar way.

In Figure 2.4, the inner loop represents the money flow between the public and government. The upper portion of the inner loop represents the taxes that the public pays to provide government with the major part of its income. The

Figure 2.3 **Circular Flow of Money, Goods, and Services**

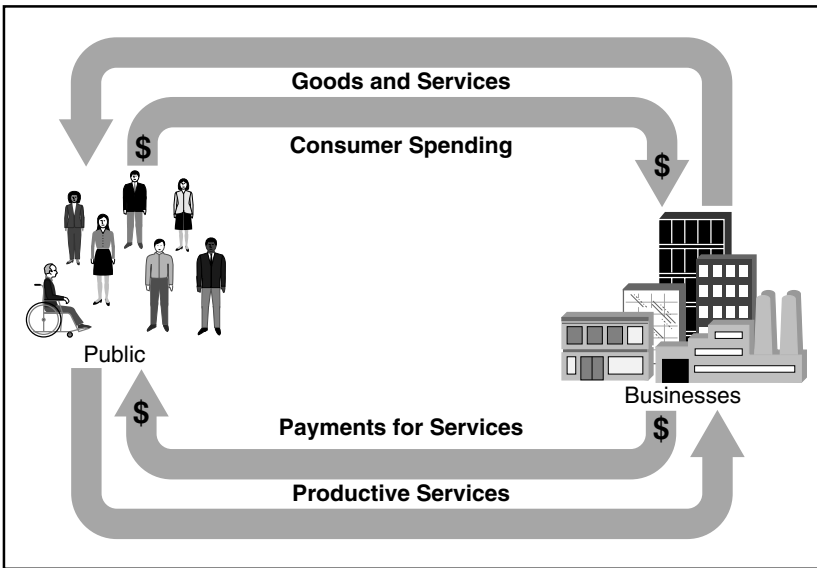
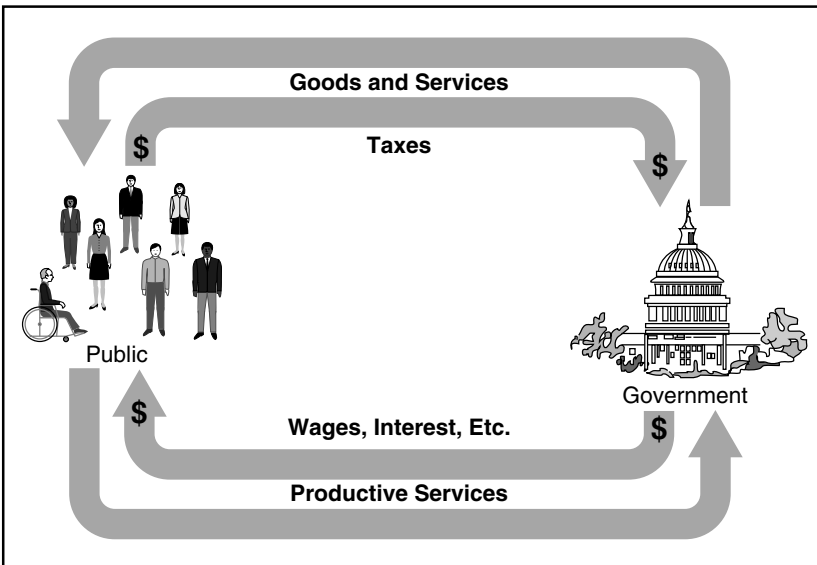


Figure 2.4 **Circular Flow of Money, Goods, and Services Between the Government and the Public**



lower portion of the inner loop indicates the payments that government makes to the public in the form of wages, rent, welfare, interest, and so on.

The outer loop in Figure 2.4 shows (at the top) the flow of government goods and services to the public, and (at the bottom) the flow of productive services of individuals who provide labor or other services to the government.



A similar flowchart would represent the economic exchange between business and government. Productive services flow from businesses to government—as, for example, if Mrs. Green’s law firm were to do some legal work for a government agency. Business firms also provide government with goods, such as office furniture, paper, and military hardware. Productive services flow from government to businesses, as when businesses use the Postal Service to send and receive mail. The size of the streams of money, goods, and services that flow between consumers, businesses, and the public is constantly changing.

Money flows from government to businesses in the form of fees (such as those charged by Mrs. Green’s law firm) and other payments. Money flows from businesses to government as taxes, tolls, postage, fees, and so on.

Using the preceding information, one could construct a chart showing the circular flow of goods and services, and of money, between businesses and government. If we combine this information with the relationships described in Figures 2.1 through 2.4, we get a picture of the general flow of economic activity among the three major sectors of our economy: government, businesses, and consumers (the public). This economic activity is shown in Figure 2.5.

Circular flowcharts give a bird’s-eye view of the economy and help us to see how changes in one part of the economy may affect the other parts. For example, when we read in the newspaper that the government plans to increase spending, we will understand that this could lead to an increase in the size of the total economic flow. Similarly, a reduction in the amount of goods and services purchased by the public will reduce the amount of income received by businesses and will thus reduce the size of the total flow of spending.

## **Gross Domestic Product**

The magnitude of the streams of goods, services, and payments that flow among consumers, businesses, and government is constantly changing. Economists call the total value of the goods and services produced in a single year the *gross domestic product (GDP)*. Since goods and services produced by the economy are purchased by either consumers, businesses, or government, the GDP can be expressed as  $C + I + G = GDP$

Where

$C$  = consumer spending

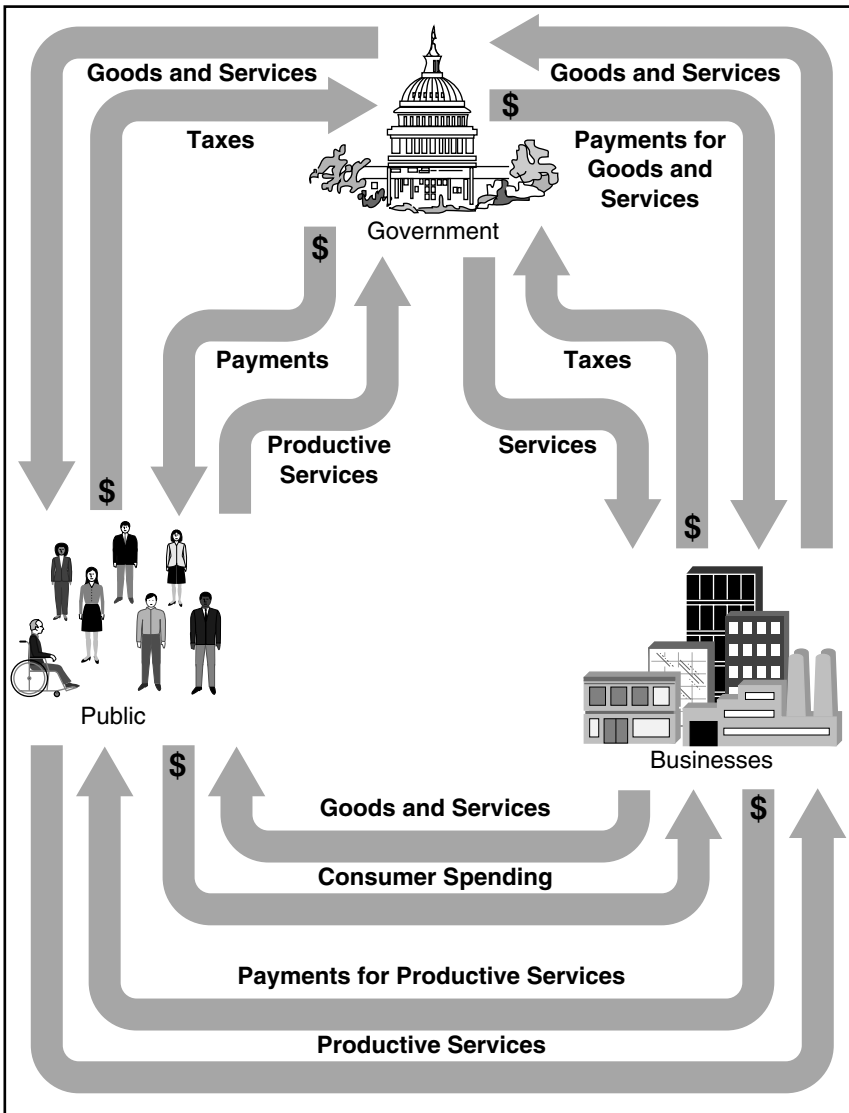
$I$  = investment (business spending)

$G$  = government spending

(*Note:* Components of GDP are discussed in more detail in Chapter 18.)

Economists classify circular flows and the factors affecting them as macroeconomic events. Remember that macroeconomics deals with the economy as a whole, while microeconomics studies its parts.

Figure 2.5 **Circular Flow of Economic Activity Among the Public, Businesses, and the Government**



## THE UNITED STATES ECONOMY IS A MARKET SYSTEM

A market is any place or circumstance in which goods or services are bought and sold. If you rent a videotape, you become part of the video rental market. Similarly, if you take an after-school job in your local grocery store, you become part of the food industry's labor market.

Since the buyers and sellers who make up a market do not have to meet face to face, markets can exist without a meeting place. In the NASDAQ stock exchange, for example, millions of shares of securities are bought and sold daily by buyers and sellers who never meet.

## Dollars as Votes in a Market Economy

Circular flowcharts can illustrate the role of markets in the economy. Figure 2.6 shows the flow of goods and services between businesses and the public (households). In addition, the diagram shows the markets that are involved in the money transactions.

Figure 2.6 likens markets to an election. In the upper half of the flowchart, households “vote” for the things they want by casting their “ballots” (money) for goods and services at a certain price. Businesses put up their “candidates for office” (the goods and services they produce) so as to attract the greatest number of “votes” (dollars). The votes represent demand and the candidates represent supply. As sales are made, businesses receive the “votes” of the electorate (consumers’ dollars), and their “candidates” (their goods and services) are either elected (purchased) or defeated (not purchased).

In the lower half of the flowchart, the roles are reversed: Households are the sellers and businesses, the buyers. Here the “candidates” running for election are the factors of production supplied by households: labor, buildings, and machinery. The “votes” are the dollars paid by businesses for the factors of production. Money flows from firms as part of their cost of doing business, and households receive payments in the form of wages, rent, interest, and profits.

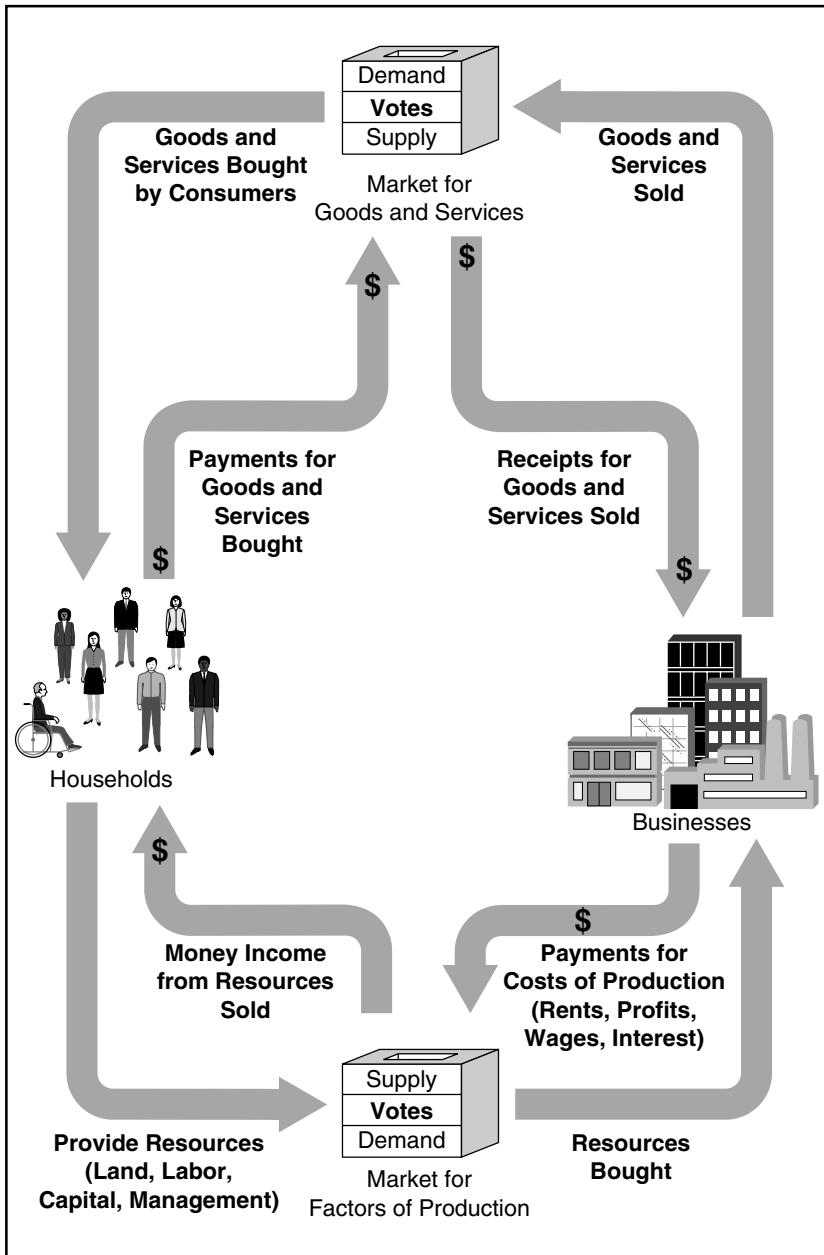
What does the circular flowchart tell us about markets? Markets provide the “polling place” for buyers and sellers. Out of the never-ending round of elections, the prices at which goods and services will be sold are determined.

## How the Price-Directed Market System Works

Like many other teenagers, Ted Green and his sister Laura are concerned with keeping up with their friends. Ted stopped going to his father’s barber so he can use a stylist who cuts hair in the latest fashion. Laura recently talked her parents into buying her a stereo system so that she could start collecting her own CDs. Then the other day, Laura and her mother visited FoundSound, their local stereo store. Mrs. Green was amazed to see how many CDs the store carried that catered to her daughter’s taste. Although Mrs. Green did not recognize most of the titles, the salesclerk assured her that business had never been better.

How was it that Ted Green was able to find a hairstylist who offered the latest look? Why did Laura Green have no difficulty locating the CD titles for which she was looking? Did a government agency direct that hairstylists be assigned

Figure 2.6 The Role of Markets in Our Economy



to neighborhoods in which their skills were in demand? Did a government supply board issue a list of CDs that music shops had to carry? Of course not.

The decisions to supply the goods and services that consumers like Ted and Laura were willing to pay for were made by thousands of individuals and business firms acting in their own interest. Taken together, the economic decisions made

by the nation's business enterprises and those who buy from them have come to be known as the "market system" or "market economy."

## The Role of Prices

Some economists compare the market system to a factory fueled by prices.

Ted Green's hairstylist became very popular. Recently, she raised her price to \$35 per cut. "That's too much money," Ted said to himself. "I'm going back to the barber Dad uses. He'll do the job for half the price. Then I can use the money I save on haircuts to buy some new clothes."

Meanwhile, Laura was excited about an ad she saw in the morning newspaper. FoundSound was running a "One-Day-Only, Half-Off-Everything Sale!!"

"Half off everything," she exclaimed. "I can hardly wait till school's out. I'm going to buy a hundred CDs!"

"With what?" her friend Rebecca asked. "Half off doesn't mean it's free, you know."

"OK," Laura agreed, "so I'll buy one CD. And if I have enough left over, I'll buy another one, too."

Laura's and Ted's decisions to buy and not to buy were affected by the prices of the goods and services in which they were interested. As a matter of fact, almost every decision made by buyers and sellers is influenced in some way by the price of the product in which they are interested. Consumers compare the prices of goods they want to buy. Workers try to get the highest price, or wage, for their labor. Producers consider the prices, or cost, of the items needed for production and the prices they will be able to charge for the goods and services that they produce.

Indeed, price is such an important factor in the U.S. economy that economists often describe it as a "price-directed market system."

**PRICES AFFECT WHAT GOODS AND SERVICES WILL BE PRODUCED.** How did it happen that FoundSound had the CDs that Laura Green wanted? With so many people willing to pay the price for its products, the store saw an opportunity to add to its profits by ordering more CDs from its suppliers. Moreover, FoundSound knew that if it did not have the recordings its customers wanted, they would simply buy them from its competitors.

What is true for FoundSound applies to all business firms. They must offer the products that customers want. They must do so at a price (1) that customers are willing to pay and (2) at which the firm can afford to sell.

In other words, while you and all your friends might love to buy a new mountain bike for \$25, your local bike shop is not likely to offer any at that price. Why? Rather than profiting from the sale, it would lose money on the sale. If you and your friends, however, were willing to pay \$500 for such a bike, the store would make sure that there were plenty from which to choose.

We can see, therefore, that the fundamental economic question of WHAT

goods and services are produced in a market economy is ultimately decided by the prices that consumers are willing and able to pay for the things they want. If customers will pay the price, they can have just about anything they want. If they are not willing to pay the price, they will have to do without.

**PRICES AFFECT HOW GOODS AND SERVICES ARE PRODUCED.** Business firms are constantly seeking ways in which to increase their profits. Since profits represent the difference between income and costs, a surefire way to increase profits is to reduce costs while maintaining or increasing income.

In their never-ending search for lower costs, business firms constantly seek to improve the way in which they combine the factors of production (natural resources, human resources, capital, and management). In the recording industry, for example, manufacturers have to decide how many workers are needed to package and ship compact discs. The extent to which the manufacturers can, in part, rely on machinery for those operations affects both selling prices and profits. Although machines can be expensive to buy, in the long run using machines is often less costly than hiring additional workers. Similarly, retail shops have to decide how much of their operations they can turn over to computers. Does it make more sense, for example, to hire five employees and also use computers or have six employees doing the necessary operations without computers? Usually the use of computers reduces the number of workers needed. Buying and maintaining computers, though, is costly. The final determination as to how to combine the factors of production depends on estimates as to which combination will result in the lowest cost. Since individual business firms in a competitive market have little or no control over prices, their efforts to reduce costs can make the difference between profit and loss.

**PRICES AFFECT WHO WILL RECEIVE GOODS AND SERVICES.** Chapter 1 described how economic systems everywhere must wrestle with the problem of scarcity. Since there is not enough of everything to go around, societies have to find ways to ration the things they produce. The U.S. economic system, like all market economies, relies on prices to ration its output. Those willing and able to pay the price asked for a good or service can obtain it. Those unable or unwilling to pay the price will simply do without.

Since we have to pay for the goods and services we want, the amount of things that we can have depends on our income. For the most part, the income that people earn comes from the jobs they hold, their savings and investments, and (in some cases) business profits.

In most instances, the size of an individual's income determines the amount of goods and services that person can buy. Here again, price comes into play because the amount that people earn is largely a result of the price employers are willing to pay for their services and the availability of workers willing to accept that wage. There are millions of people willing to pay to see the best tennis, football, and baseball players in action. In contrast, there are only a handful of people who can perform at championship levels. Consequently, some of the highest paid people in the country are athletes.

# MAKER OF ECONOMIC THOUGHT



## Adam Smith

The year 1776 was a landmark in the history of the West for at least two reasons. First, a new vision of political freedom was proclaimed in the American Declaration of Independence. Second, a new vision of economic freedom was heralded when Scottish economist **Adam Smith** published *An Inquiry Into the Nature and Causes of the Wealth of Nations*. So great was Smith's impact upon Western thinking that he came to be known as the "father of modern economics."

Born in Scotland in 1723 and educated at Oxford University in England, Smith returned to his native land to teach for a time at the Univer-



sity of Glasgow. In 1763, he began a three-year tour of Europe, during which he met with a number of prominent thinkers. Returning to London in 1766, Smith spent the next ten years writing *The Wealth of Nations*. In 1778, Smith was placed in charge of the customhouse in Glasgow, and he held that post until his death in 1790.

In Adam Smith's time, most European nations followed the doctrine of *mercantilism*. The mercantilists believed that gold and silver were sources of wealth. Governments, therefore, ought to do everything they could to build up their nations' supply of these precious metals. Since most governments followed the mercantilists' doctrine, they enacted laws whose purpose was to enlarge their nations' supplies of silver and gold. The laws limited the economic activities of their colonies in such a way that the net effect of trade was to build up the home country's supply of silver and gold. Britain's imposition of mercantilism on its colonies was one of the principal causes of the American Revolution.

Smith strongly disagreed with the mercantilists. Wealth, he said, sprang from the production of goods and services, not from the accumulation of gold and silver. People cannot eat precious metals, nor can they be sheltered by them in storms, or warmed by them in winter. Those who want to measure the true wealth of a nation, Smith said, should look to the amount of goods and services available for each of its citizens, not the size of its treasury.

How, then, can a government encourage the production of the greatest quantity of goods and services? Here is where Smith's break with mercantilism is most clearly seen. Government, he wrote, could serve the economy best by keeping its hands off business. To the French (who had first proposed such a policy), the idea was described as *laissez-faire* (literally, "let them do"). *Laissez-faire* achieved enormous popularity in Britain as a result of *The Wealth of Nations*.

Why should government allow businesses to conduct their affairs without interference? Left to

their own devices, Smith said, businesspeople would seek to make the greatest profits by turning out the greatest quantity of goods and services at the lowest possible prices. These low-cost goods and services would have to benefit society as a whole. Smith put it this way:

Every individual . . . intends only his own gain; and he is in this . . . led by an *invisible hand* to promote an end which was no part of his intention. . . . By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it.

The “invisible hand” that Smith saw guiding business along a path of public good was, in reality, the pursuit of profits. This took place in a market subject to the laws of supply and demand, which we will discuss in the next chapter. To allow the laws of the marketplace to function, Smith supposed the philosophy of *laissez-faire*. But Smith was also a realist. He recognized that govern-

ment would have to intervene in the economy to preserve competition and to protect the general welfare.

*The Wealth of Nations* deals with many other subjects besides *laissez-faire*, among them labor, production, income distribution, rent, and taxation. Later economists would look to Smith’s ideas as the springboard for the development of their own theories in each of these fields.

Smith’s influence was dramatized in 1983 when the Nobel Prize in Economics was awarded to **Gerard Debreu** of the University of California at Berkeley. (See Chapter 9 for a discussion of the Nobel Prize Winners in Economics.) Debreu’s prize was awarded in recognition of his work on a fundamental question of economics: How do prices operate to balance what producers offer for sale with what buyers want? Debreu developed a mathematical foundation that could be used to demonstrate the laws of supply and demand in action in a modern economy. In this way, the invisible hand of the 18th century became a mathematical reality in the 20th.

Similarly, rents (the price of housing) in poorer sections of town are lower than rents in more prosperous areas. This difference exists because (1) people who can afford higher rents are often unwilling to live in poorer areas and (2) landlords in poorer areas have to offer lower rents in order to find tenants.

We see, therefore, that prices provide the answer to the question “WHO will receive the goods and services produced in a market economy?”

## **Evaluation of the Market System**

We can gain a better understanding of the market system if we look at its advantages and disadvantages.

**ADVANTAGES.** Among the most frequently cited advantages of the market system are the following:

**1. The market system is the most efficient of all economic systems.** In their quest for profits, producers compete with one another for the consumers’ dollars. Since consumers prefer to buy the best products at the lowest prices, producers must constantly strive to increase their efficiency. They can do this by improving their products and services and reducing their costs. Those producers who succeed are rewarded with increased sales and profits. Those who fail stand to lose money and their businesses.



**2. The market system is more sensitive to consumer demand than other economic systems.** Since entrepreneurs are in business to earn profits, they do everything they can to produce or offer the things consumers “elect” to buy. They do this to increase their sales and their profits. For similar reasons, entrepreneurs stop producing or offering certain things as soon as they realize that these goods and services are no longer wanted.

**DISADVANTAGES.** The market system is not without its shortcomings. Some of the more serious of these are discussed below.

**1. The market system does not provide all of the goods and services needed by society.** Although it is true that there are private roads, private schools, and private hospitals, it is highly unlikely that private individuals and groups would be willing or able to pay for the construction of the thousands of needed public schools and hospitals and the hundreds of thousands of miles of needed public roads. Little in the price system ensures that natural resources will be preserved or life and property protected. This is not to say that private businesses do not take measures to protect life or to attempt to restore natural resources (for example, by replanting trees). These actions, however, are by no means certain. Why does the market system fail to provide some essential public goods and services? The reason is that people are often willing to buy products only if they acquire the right to exclusive use of those products. They do not want to pay for goods and services that the public can also use. Food and clothing are examples of *private goods and services*. They are customarily enjoyed only by those who pay for them. Streets, police protection, national defense, foreign relations, and public health services are *public goods and services*. They benefit us all whether we pay for them or not. But since those who use public goods and services cannot always be made to pay for the cost of providing them, private sellers will not produce them. Therefore, where public rather than private goods and services are concerned, society must find ways other than the price system to determine WHAT things to produce, HOW to produce them, and WHO will receive them.

**2. The market system does not adequately provide for the needs of all the people.** Critics often point to the large number of people living in poverty in the United States. In a recent year, the figure was some 36 million persons. While the market economy generally does a good job of rewarding the most efficient and productive citizens, it does not provide adequately for all. Examples of groups often not sufficiently provided for are single-parent households headed by a woman, children, members of many minorities, and the mentally ill. Critics of the market system maintain that all people are entitled to a decent standard of living whether or not they are capable of earning it.

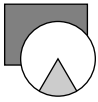
**3. The market system is likely to experience periods of expansion and contraction of business activity.** Widespread unemployment and personal hardship often accompany the contraction of business. Unlike other economic systems in which workers are guaranteed jobs regardless of business conditions,

the U.S. market economy has witnessed periods of high unemployment. In recent decades, the federal government and state governments have taken an active role in economic affairs to lessen the impact of those periods. As a result, there has been no repetition of the Great Depression of the 1930s when U.S. President **Franklin D. Roosevelt** said “. . . one-third of a nation . . .” was “. . . ill-housed, ill-clad, ill-nourished.” Although government action has helped to compensate for swings in the business cycle, critics maintain that the need for such government intervention reveals weaknesses in the market system.

**4. The market system cannot account for many harmful costs of doing business.** Consider, for example, a coal-powered manufacturing facility that spews harmful pollutants into the atmosphere. To economists, both the coal that powers the machinery and the air currents that carry off the smoke are resources. But they are significantly different kinds of resources. Coal, on the one hand, is privately owned. It must be paid for by those who use it. Coal, therefore, is one of the costs of doing business. Air, on the other hand, belongs to all of us. Traditionally, the cost of cleaning it up does not have to be paid entirely by those who pollute it. To economists, coal represents an *internal cost*—a cost that is part of the expense of doing business. By contrast, air is an externality, or *external cost*. *Externalities* are business costs paid for by society as a whole. Since the market system does not impose a penalty for polluting the air, the coal-powered manufacturing facility has no economic reason for changing its policies. (Manufacturers do, however, have legal reasons for not polluting. Local, state, and the federal government impose hefty fines on polluters.)



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## OUR NATION'S ECONOMIC GOALS

How we deal with economic issues depends on our economic goals. Although some disagreements exist over what our country's economic goals should be, most people in the United States include the following in their list.

### **Economic Freedom**

Americans have guarded their traditional economic freedoms as carefully as their political freedoms. Workers in the United States take for granted their right to accept or reject a job. In some nations, workers do not have this right. U.S. workers can form labor unions that are free to strive for better working conditions—another economic freedom not enjoyed in all nations.

Economic freedom includes the right to spend or save money as one wishes and to own the goods one has purchased. It also includes the right of businesspeople to own property and make a profit. Of course, our economic freedoms (like our political freedoms) are limited by rules of law. The right of businesspeople to run their own firms does not permit them to produce or sell merchandise that endangers the health or safety of others.

### **Economic Justice**

Most Americans agree that everyone should have equal economic opportunity regardless of nationality, age, sex, race, or income level. Not everyone agrees on what constitutes equal economic opportunity or what steps should be taken to ensure it.

In a market economy, those with special skills or wealthy families generally earn higher incomes than others. At its extremes, the unequal distribution of income results in some people becoming billionaires while others live in poverty and/or homelessness. In these circumstances, government is often called on to do something to make income distribution fairer. Government efforts to redistribute income may focus on solutions extending over the long and/or the short run. Long-term strategies focus on improving education and training as a way of improving workers' skills. This, in turn, qualifies them for higher-paying jobs. In the short term, taxes can be designed to take more from high-income groups than those with lower incomes. Similarly, government programs such as welfare and other benefits may be enacted to aid those in need.

### **Economic Stability**

A period of economic stability is one in which changes in the level of prices, employment, and business activity are modest. In stable times, prices of most

goods and services remain at levels that people can afford, and jobs are plentiful. An important economic goal, therefore, is to maintain stable prices and employment.

Unfortunately, there have been times when the United States has experienced economic decline or inflation. During an economic decline, business activity falls off, workers lose their jobs, and many resources lie idle. When the decline is severe, as it was during the 1930s, it is called a *depression*. A milder decline is known as a *recession*.

*Inflation* is a general rise in prices. During inflation, people find that unless their incomes are increasing as fast as prices, they cannot buy as much as before. Inflation is particularly cruel for people with fixed incomes, such as pensions.

The hardships resulting from depression and inflation led Congress to take action to maintain national economic stability. The **Employment Act of 1946** declared that it is the responsibility of the federal government “to promote maximum employment, production, and purchasing power.” In later chapters in this book, we will discuss how our government tries to maintain the nation’s economic stability.

## **Economic Efficiency**

A nation must make the best use of its resources to provide the greatest quantity of the goods and services that its citizens want. How well it achieves that goal is a measure of the nation’s economic efficiency.

## **Economic Security**

People like to know that in times of illness or unemployment and in old age, they and their families will be provided for. They may set aside a portion of their earnings in the form of savings, insurance, and other investments for that purpose. Many business firms and labor unions provide their employees and members with insurance and retirement plans.

Because *economic security* is so important and many people could not otherwise obtain it, all levels of government have established programs to offset the risks resulting from loss of income. Examples of such programs are Social Security, unemployment insurance, welfare, and savings deposit insurance.

## **Economic Growth**

Most people want more of the goods and services that make for a rising standard of living. But the society as a whole can obtain more only if it is producing more. An increasing output of goods and services is called *economic growth*. Some question whether unlimited economic growth is desirable. For example, as production increases, pollution and the loss of natural resources also increase.

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## S U M M A R Y

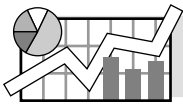
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The U.S. economic system of capitalism rests on the principles of free enterprise, private property, the profit motive, consumer sovereignty, and competition. In modern economies, people and businesses specialize. Individuals and businesses must rely on the labors of others to supply them with most of their needs. The circular flow model describes the stream of funds, goods, and services constantly passing back and forth among consumers, businesses, and government. In our market economy, prices determine WHAT goods and services will be produced, HOW they are produced, and WHO will receive these goods and services.

The market system has many advantages, including efficiency and sensitivity to consumer demands. It does not, however, provide all of the goods and services needed by society. Moreover, it does not ensure stability of production and employment.



## REVIEWING THE CHAPTER

### BUILDING VOCABULARY

Match each item in Column A with its definition in Column B.

#### Column A

1. capitalism
2. public utility
3. circular flow
4. profits
5. consumer sovereignty
6. competition
7. eminent domain
8. internal cost
9. external cost
10. gross domestic product

#### Column B

- a.* the rivalry among buyers and among sellers in the same field
- b.* the power of government to seize property it intends to use for some public purpose
- c.* the dollar value of all goods and services produced by an economy in a single year
- d.* an economic system in which the means of production are privately owned
- e.* a cost of a business that is paid for by society as a whole
- f.* an industry that serves the public interest
- g.* a cost of business paid for by the business firm
- h.* the amount of money left over after subtracting business expenses from business income
- i.* the freedom to choose which goods one can buy
- j.* the stream of funds, goods, and services passing back and forth among households, businesses, and government

### UNDERSTANDING WHAT YOU HAVE READ

1. The greatest degree of economic specialization is most likely to be found in (*a*) a traditional agricultural society (*b*) a frontier farming community (*c*) a poor rural area in India or Latin America today (*d*) an industrial society such as that of the United States.

2. Which *one* of the following forces will be most influential in determining the number of pairs of brown as compared to black shoes a manufacturer will produce in a market economy? (a) government directives (b) views of production supervisors' spouses (c) consumer demand (d) factory workers' preferences.
3. In an economic system operating under capitalism, the fundamental questions of WHAT, HOW, and WHO are answered by (a) tradition (b) the market (c) a government agency (d) congressional legislation.
4. In the circular flow of economic activity, we see that businesses (a) receive money but no productive services from households (b) receive money from both government and households (c) sell more goods to government than to households (d) receive no money from government.
5. All other things being equal, if consumers are willing to pay more for an item, it is likely that (a) more of that item will be produced (b) less of that item will be produced (c) producers will continue to produce regardless of production costs (d) the price of that item will be reduced.
6. Which *one* of the following is most influential in causing firms to produce the goods and services that the public wants? (a) the profit motive (b) competition (c) consumer sovereignty (d) the needs of the public.
7. Competition and the desire for profits pressure business firms to (a) provide inferior services to consumers (b) provide consumers with the goods and services they want (c) produce products of poor quality (d) charge high prices for products and services.
8. In a market economy, consumers can have just about anything they want if they (a) are willing and able to pay the price (b) belong to the ruling party (c) are famous persons (d) have enough friends.
9. Which *one* of the following statements is a major criticism of the market system? (a) It rewards inefficiency and waste. (b) It is insensitive to changes in consumer demand. (c) It fails to deal with certain harmful side effects of production. (d) It encourages the overproduction of goods and services that no one really wants.
10. Which *one* of the following statements is said to be a major advantage of the market system? (a) It is the most efficient of all economic systems. (b) It ensures that natural resources will be preserved. (c) It always provides for essential public goods and services. (d) It provides adequately for the needs of all U.S. citizens.

## THINKING CRITICALLY

1. Some people claim that a command economy is more efficient than a market economy. In support of this position, they remind us that in time of war the U.S. government has found it necessary to assume wide economic powers. These powers have included controlling prices, wages, and hours of work, along with rationing certain goods that are in short supply. Opposing this position are those who point to the events in Europe following the breakup of the Soviet Union in 1991. The nations formed out of the USSR, as well as the nations of Eastern Europe, have all abandoned command economies in favor of market economies.

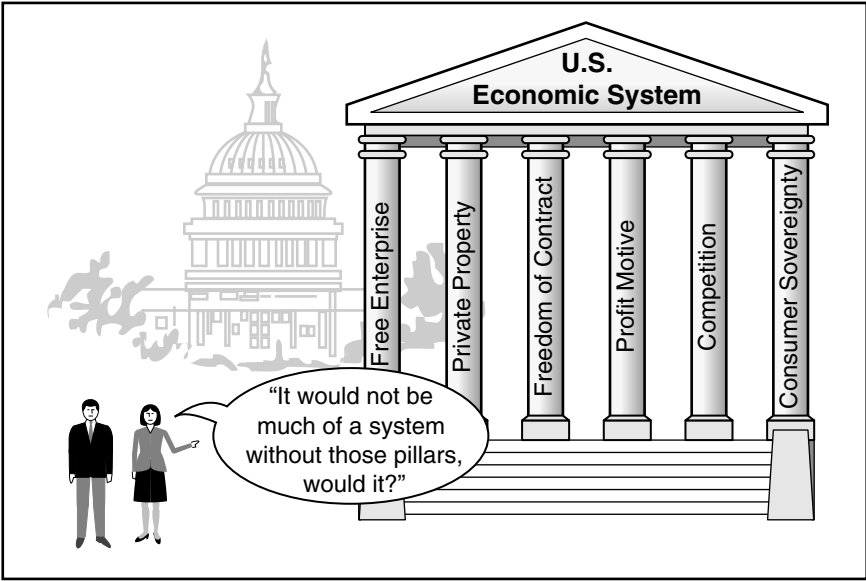
Answer *each* of the following questions by giving *two* reasons, with explanations for each.

- a. Why do you agree or disagree that a command economy is more efficient than our market economy?
  - b. Why do you think the United States abandoned central planning after World War II?
  - c. Why do you think countries that were formerly part of the Soviet Union are trying to develop market economies today?
2. Assume that three members of the nation's leading rock group were recently seen at a popular club wearing buttoned shoes. Consequently, many fashion-conscious young men and women have sought to do the same. (a) How would the public inform shoe manufacturers that it wanted shoes with buttons? (b) What economic factors would shoe manufacturers consider before deciding to produce the buttoned models? (c) What economic groups other than shoe manufacturers are likely to be affected by the public's decision to wear buttoned shoes? Explain.
3. HOW goods and services are produced is very much influenced by the expectation of profit. (a) Under what circumstances might theater owners substitute counters and salesclerks for soda-, popcorn-, and candy-vending machines? (b) What factors might an insurance company consider before it replaced five clerical workers with one computer system? (c) What factors would a dress manufacturer take into consideration in deciding where to locate a new factory?
4. Critics have charged that the market economy (1) fails to provide goods and services that are needed yet are unprofitable and (2) imposes certain harmful effects, or "externalities," upon the public at no expense to those who caused them. (a) Explain these arguments. (b) Tell whether you agree or disagree with them and why.
5. Some observers maintain that the economic goals of the American people are impractical, unachievable, and inconsistent. They argue, for example, that economic efficiency and economic justice are frequently in conflict with each other. Explain, with examples to back up your point of view, why you agree or disagree with this statement.

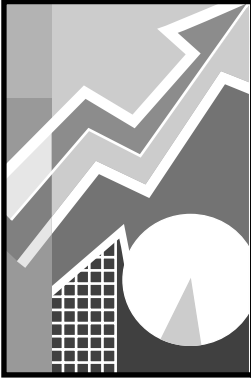
### **SKILLS:** Analyzing a Political Cartoon

Base your answers to the following questions on your knowledge from reading the text and on the cartoon on the next page.

1. Explain the meaning of the cartoon. In your explanation, make reference to the two buildings.
2. Each of the "pillars" in the cartoon has certain limitations. For example, private property rights are limited by eminent domain.
  - a. Explain how eminent domain limits one's right to own property.
  - b. Identify and explain *three other* limitations on the "pillars" of the U.S. economy.







# CHAPTER 3

## Demand, Supply, and Price



### O V E R V I E W

*"You mean you bought another watch?"*

*"I know, I already own two watches. But at the price, I simply couldn't pass this one up."*

*"I just took a job at Vendors Mart."*

*"Vendors Mart? That's a department store. I thought you were working for Gold Star Clothing."*

*"I was until Vendors Mart offered me twice as much as I was making at Gold Star."*

*"I'm looking for a new 18-speed bike."*

*"I thought you already owned one."*

*"I did. But Gloria offered me so much money for it that I had to sell it to her."*

There are many reasons why people decide to make a purchase, get a job, or sell something. Whatever the reasons, one element that is always present is price. If the price is too low, sellers will not sell. If the price is too high, buyers will not buy. Prices play a crucial role in our economic system. To understand how a nation's economy functions, it is necessary to have some understanding of that nation's price system.

This chapter describes the forces that determine the price of a good or service. Economists call these forces "demand" and "supply." Our discussion will consider these two forces and explain how they interact to establish "market price."



## DEMAND

Many people would like to own a sports car, wear designer clothes, or travel to distant lands. To an economist, these desires are merely wishes that have no economic significance. But if a person steps forward with the necessary amount and says, “I will pay \$40,000 for a sports car now,” the economist would identify this as *demand*. Demand is the desire to purchase a particular item at a specified price and time, accompanied by the ability and willingness to pay.



### Demand Schedule

The quantity demanded varies with the price of an item. Suppose, for example, you surveyed a class of students to find out how many would purchase a slice of pizza for \$2.50. Two hands might go up. If the price you quoted was \$1.75, 23 hands might be raised. What you would find is that (up to a certain point) the lower the price, the greater the number of pizza slices students would be willing to buy. If we were to insert the data into a table, the *demand schedule* might look like this:

 **TABLE 3.1 DEMAND FOR PIZZA SLICES**

At a price of	Number of slices students would buy
\$2.75	1
2.50	2
2.25	6
2.00	12
1.75	23
1.50	45



### Demand Curve

The demand schedule shown in the table can be illustrated with a *demand curve*. (See Figure 3.1 on page 50.) This is a line graph that shows the amount of a product that would be demanded at each price. The vertical axis represents price per unit, while the horizontal axis represents number of units, or quantity. In Figure 3.1, the demand curve D slopes downward and to the right. The points on the curve correspond to the demand schedule for pizza slices. A demand curve thus shows how much of a commodity will be sold at any given price.

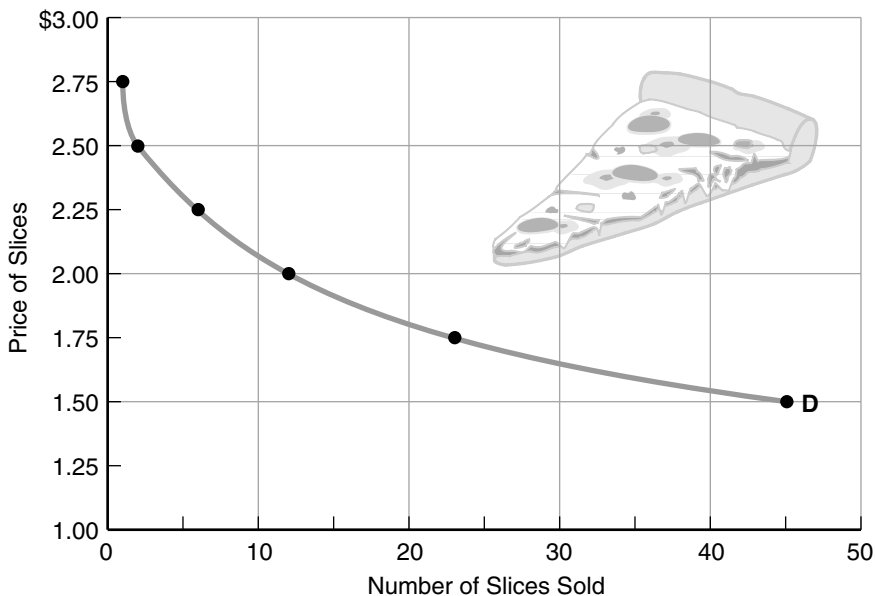
## The Law of Demand

The *Law of Demand* tells us that buyers will purchase more of an item at a lower price and less at a higher price. The reasons for this are that at a lower price (1) more people can afford to buy the product, (2) people tend to buy larger quantities of the product, and (3) people tend to substitute the product for similar items that are either more expensive or less desirable. Similarly, as the price of a product goes up, (1) fewer people can afford to buy the product, (2) buyers tend to purchase smaller quantities of the product, and (3) people tend to substitute cheaper products for the more expensive one. The Law of Demand can be generalized as follows: *Quantity demanded varies inversely with* (in the opposite direction to) *changes in price*.

In our example, the Law of Demand affected how many pizza slices would be sold at each price. As the price of the slices was reduced, more students demanded them. The lower price might also have attracted students who had not been planning to eat at that time. Others who would have purchased one slice at a higher price will now buy two or more at a lower price. And still others who had been planning to buy a sandwich or a burger after class might decide to eat pizza instead.

Storekeepers are well aware of the Law of Demand. That is why they lower prices when they want to clear out merchandise. Butchers know, for example,

Figure 3.1 Demand Curve for Pizza Slices



that consumers who would not buy steak at \$10 a pound will pay \$5. They also know that while some consumers prefer steak, they also eat chicken, fish, and other foods. At \$10 a pound, steak is more expensive than many other foods that consumers might purchase. But with steak at \$5 a pound, the difference in price between steak and some alternative foods is less.

## Principle of Diminishing Marginal Utility

Once you buy something, the money spent is no longer available for any other purchase. When we conducted our pizza-slice survey, we in effect made each member of the class ask herself or himself the question, “Do I want to give up some of my purchasing power in order to have a slice of pizza?” Anyone about to make any purchase must ask a similar question.

Why does a buyer choose one product instead of another? Assume, for example, that you have 75 cents with which you plan to buy either chewing gum or candy. After a few moments’ consideration in front of the candy counter, you decide to buy the gum. Why gum and not candy? The economist would explain this choice in terms of utility: the measure of satisfaction one gets from the use of a good or service. When you chose the chewing gum, you decided that it would better satisfy your wants than a candy bar. In economic terms, the utility of chewing gum is greater than the utility of a candy bar.

Economists have devised the concept of *marginal utility* to help explain the spending patterns of consumers. Marginal utility is the degree of satisfaction or usefulness a consumer gets from each additional purchase of a product or service. The word “marginal” has several meanings in economics. In this case, it means “additional.”

People will buy something if they expect the purchase to yield them more satisfaction, or utility, than something else. In the example of the pizza slices, many students are willing to buy a second, a third, or even a fourth slice if the price is low enough. But as the pizza is consumed, it becomes less satisfying. By the time the second or third slice is downed, the thought of still another slice has become less appealing. In economic terms, each additional slice has less utility than the preceding one. This phenomenon is summarized in the *Principle of Diminishing Marginal Utility*, which states: Each additional purchase of a product or service by a given consumer will be less satisfying than the previous purchase.

The Principle of Diminishing Marginal Utility applies to almost any product. One overcoat may be a necessity; two or three may be desirable; but what would persuade you to buy four or five? Each new purchase will be less satisfying than the one before. It will have less utility. You will be less willing to give up something else to buy an additional overcoat. You may still decide to buy another coat, but only at a lower price.

## Elasticity of Demand

The Law of Demand is clear: Fewer items are bought at a higher price than at a lower one. The Law of Demand, however, does not tell by how much the quantity demanded will increase or decrease at different prices. If the price of milk doubles, less milk will be sold. Similarly, if the price of steak doubles, consumers will buy less steak. Nevertheless, will sales of milk and steak fall by the same percentage? For example, if milk sales drop 20 percent as the price doubles, will steak sales also drop 20 percent as the price of steak doubles? Certainly not. The population as a whole can do without steak far more easily than it can do without milk. Even at the higher price, the demand for milk will be greater than the demand for steak, and the decline in steak sales will be far greater than the decline in milk sales.

If the prices of milk and steak drop by 50 percent, more of both products will be sold, in accordance with the Law of Demand. The percentage increase in steak sales, however, will probably be far greater than that of milk sales. The reason is that after consumers purchase what they consider a sufficient amount of milk, they are still willing to buy more steak. Of course, in this example we are referring to the population as a whole. Many individuals do not or cannot drink milk at any price. Some people avoid red meats such as steak, while others do not eat meat at all, at any price.

One way to measure the degree of demand is through the concept of *elasticity of demand*. This term describes the percentage change in demand (as measured by the dollar value of spending for an item) that follows a price change. The more demand expands or contracts after a price change, the greater the elasticity



Law of Demand. What factors will affect the demand for hot dogs at this stand?

 **TABLE 3.2 DEMAND FOR MILK AND STEAK**

	Price (P)	×	Units Sold (Q)	=	Total Revenue (TR)
Milk	\$ 1.20		200		\$240.00
	.60		350		210.00
Steak	\$10.00		60		\$600.00
	5.00		175		875.50

of the demand. The demand for most goods and services may be described as either relatively elastic or relatively inelastic. When a drop in the price of an item causes an even greater percentage increase in demand, we say that the demand for that item is relatively “elastic” (the demand has “stretched” a great deal). When a drop in price results in a decrease or only a small increase in demand, we say that the demand is relatively “inelastic.” The same holds true for increases in price. Demand is considered elastic if a rise in price results in a large drop in demand, and inelastic if a rise in price results in a small drop in demand.

Elasticity of demand is measured by the amount that price changes affect total dollar sales. If a decrease in price of an item results in an increase in revenue, the demand for the item is said to be elastic. If a decrease in price results in a decrease in revenue, the item is said to be inelastic. Similarly, if an increase in price results in a decrease in total dollar sales, the demand is elastic; and if an increase in price results in an increase in revenue, the demand is inelastic.

Suppose that your local supermarket reduced the price of both milk and steak by 50 percent. Before the sale, milk was selling for \$1.20 a quart and steak at \$10 a pound. At those prices, the store sold 200 quarts of milk and 60 pounds of steak each day. At the sale prices, customers bought 350 quarts of milk and 175 pounds of steak per day. This information is summarized in Table 3.2.

Table 3.2 shows that total revenue from the sale of milk fell from \$240 to \$210 when the price of milk was reduced. This result indicates that the demand for milk is inelastic. Total revenue from the sale of steak, however, increased from \$600 to \$875. This increase shows that the demand for steak is elastic.

## What Makes Demand Elastic or Inelastic?

When we question why some items are subject to elastic demand and others are not, we are really asking why price changes affect the purchase of some things more than of others. If one of the following four conditions is present, the demand for a good or service will usually be sensitive to price changes.

**1. The item is considered a luxury.** *Luxuries* are goods or services that consumers regard as something they can live without. Consumers are less likely

to buy a luxury if the price is high. They will, however, consider buying one if the price drops enough. An item considered a luxury need not be costly in dollars. For example, a person with a modest income might consider fresh flowers, a steak dinner, and a taxi ride as luxuries. Also, what are considered luxuries by one person (for example, plane tickets, meals in restaurants, and expensive clothes) may be normal or even necessary expenses for someone else. If a product or service is considered a luxury by a large number of consumers, it will be subject to elastic demand.

**2. The price represents a large portion of the family income.** Buying an automobile or a home would represent a significant portion of most families' incomes. Therefore, a rise in the price of such items will discourage many consumers from buying them. Because of the greater utility of many costly items, however, a decrease in their price will cause a significant increase in sales.

**3. Other products can easily be substituted for it.** Because there are many less expensive substitutes for steak, many people will shift to chicken or some other meat if the price of steak goes up. Similarly, if the price of steel rises, manufacturers and builders will substitute other materials, such as aluminum or concrete. At present, though, there are no competitive substitutes for gasoline as a fuel for automobiles. Therefore, the demand for this fuel is inelastic. Our society is trying to develop alternative energy sources that pollute less and can be produced at competitive prices. Such products include natural gas, solar-powered cells, and battery-powered electric motors.

**4. The items are durable.** Furniture, appliances, and automobiles are relatively long-lasting. Since they are often major household items, many consumers purchase new ones if the prices are low enough. If prices remain high, however, people tend to "make do" with the old ones rather than replace them.

## **What Is the Significance of Demand Elasticity?**

The elasticity of demand for a good or service is an important factor in many business decisions. Suppose, for example, that a local bus company whose fares are regulated by the government finds itself in need of additional funds. Should the company apply for a fare increase? The answer depends on the elasticity or inelasticity of demand for the bus service.

Table 3.3 shows two possible results of a 20 percent fare increase. If the demand for the bus service was elastic, a 20 percent fare increase might lead to a 25 percent reduction in riders and a decrease in earnings. If the demand for the bus service was inelastic, however, a 20 percent fare increase might lead to only a 15 percent loss in riders and an increase in earnings. In order for the bus company to decide whether or not to apply for the fare increase, someone (possibly an economist) has to estimate the degree of elasticity of demand for its service.

 **TABLE 3.3 DEMAND FOR BUS SERVICE**

	If the fare is	And the number of passengers is	Total revenue will be
Present	\$1.00	10,000	\$10,000
Elastic Demand	1.20	7,500	9,000
Inelastic Demand	1.20	8,500	10,200

## What Economists Mean by an Increase or a Decrease in Demand

Certain events can make people more or less willing to pay a certain price for something than they once were. This change in willingness affects the demand for goods or services at all prices. If buyers are willing to buy more items at each price, we say that there has been an increase in demand. When buyers are willing to buy fewer items at each price than they once did, we say there has been a decrease in demand. To illustrate increased demand, consider the following situation.

It is mid-July, and temperatures have been going above 90 degrees all week. Sally Simmons, a local fast-food vendor, tells us that on December 15, during a cold spell, ice cream cones that sold for \$1.50 each found only 2 buyers. Now, she says, she is able to sell 9 cones a day at that price. Moreover, Ms. Simmons believes that she could sell as many as 30 cones at \$1.10 each. She adds that if she reduced her prices to 70 cents each, sales would jump to 66 cones. (Some customers would consume more than one!) Let us look at a demand schedule for sales of ice cream cones on December 15 and on July 15, in Table 3.4.

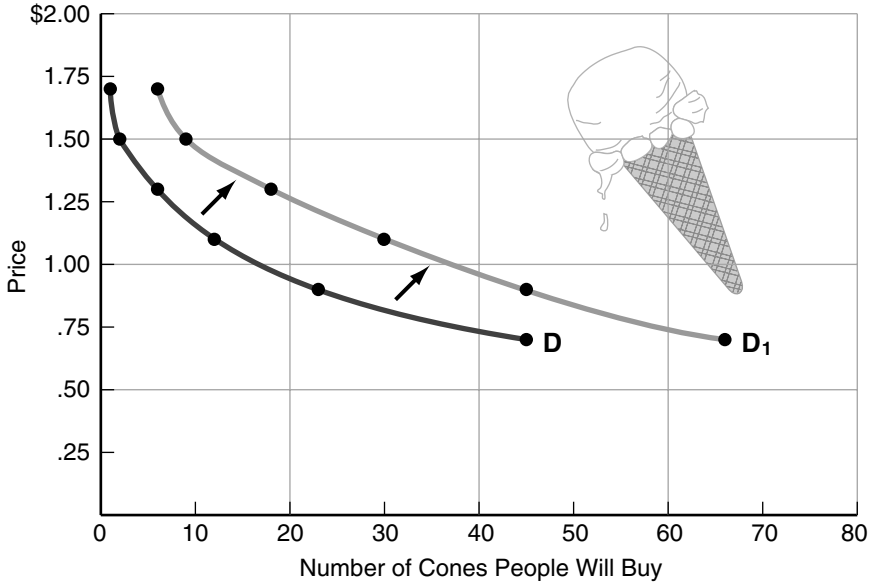
This demand schedule can be plotted as a demand curve. (See Figure 3.2 on page 56.)  $D$  represents the demand on December 15, while  $D_1$  represents the demand on July 15. We can see that when demand changes, the entire schedule shifts. Because the change in this case was an increase in demand, the curve shifted to the right. Had there been a decrease in demand, the curve would have shifted to the left.

 **TABLE 3.4 DAILY DEMAND SCHEDULE FOR ICE CREAM CONES**

At a price of	Number of cones people will buy	
	On December 15	On July 15
\$1.70	1	6
1.50	2	9
1.30	6	18
1.10	12	30
.90	23	45
.70	45	66

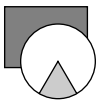


**Figure 3.2 Demand Curve for Ice Cream Cones  
(Increase in Demand as Reflected by a Shift in  
the Demand Curve)**



In the previous example, a rise in temperature caused an increase in the demand for ice cream cones. There are many other things that can cause a change in demand. What effect do you think each of the following situations would have on the demand for a given product?

1. an increase in the price of substitute products
2. an increase in most people's income
3. a change in the taste of buyers
4. the expectation that the price of the product will soon fall
5. the appearance of a new substitute product
6. the fear that the economy is about to go into a recession, one in which many firms fail and unemployment increases



## SUPPLY

Neil Simi, an economics teacher, opened the day's lesson with an experiment.

"Class, how many of you are wearing wristwatches?" Twenty-eight hands went up.

"You may have noticed this paper bag sitting on my desk," Mr. Simi continued.

"This bag contains \$100 in one-dollar bills. I will give this bag of money to any one of you in exchange for your wristwatch. Please raise your hand if you are willing to

sell me your watch for \$100.” The teacher counted the raised hands and wrote the number 24 on the chalkboard.

“Brenda,” Mr. Simi said, “I noticed that you did not raise your hand. Don’t you want to sell me your watch?”

“No, because it cost much more than \$100 only a few months ago.”

“I see,” the teacher replied and then peered into the bag.

“Class,” he went on, “I seem to have made a terrible mistake. I thought I had \$100 in this bag. Actually, it looks more like \$50. Let’s start over again. Who would sell me his or her watch for \$50?” Once again Mr. Simi counted the raised hands, wrote the total (15) on the board, and then looked into the bag. With feigned surprise, he took a smaller bag out of the paper bag.

“Oh, this is embarrassing,” he said. “I thought I had only money in this bag, but I see I packed my lunch in it, too. I don’t believe there’s more than \$20 here. Will anyone sell me a watch for \$20?”

Five hands went up, and the number was duly noted.

Mr. Simi reached into the bag and started counting off bills. “Seven, eight, nine, ten! Well, it seems I have only \$10 here. Does anyone want to sell his or her watch for \$10?”

Only one hand was raised this time. The teacher placed the number 1 on the board.

“Bill,” Mr. Simi said to the remaining seller, “it looks as if you have the only watch I will be buying today. Here is your \$10.”

“On second thought, Mr. Simi,” said Bill, “I think I’ll hold on to my watch. You can keep the \$10.”

Why did Bill suddenly refuse? Perhaps it was the name “Monopoly™” printed on the money that changed Bill’s mind.

Mr. Simi’s experiment demonstrated the economic concept of *supply*. Economists use the word “supply” to describe the amount of goods or services offered for sale at a particular price. As the price that Mr. Simi offered for a wristwatch went down, fewer watches were offered for sale. Just the opposite would have happened if Mr. Simi had offered \$10 to start and had increased the price: More watches would have been offered for sale.

The dress shirts worn by members of the U.S. Army are produced by several different manufacturers in accordance with specifications prepared by the military. Let us assume that a survey was taken among the manufacturers to see how many shirts each could provide at various prices. The *supply schedule* prepared after all of the manufacturers had submitted their bids is shown in Table 3.5.



**TABLE 3.5 SUPPLY SCHEDULE FOR ARMY SHIRTS**

At a price of	Sellers will offer
\$ 6	8,000
8	8,600
10	9,600
12	11,200
14	14,000

## The Law of Supply

The examples of the wristwatches and army shirts both illustrate the Law of Supply. The *Law of Supply* states: The quantity of a good or service supplied varies directly with its price. That is, the number of units of something offered for sale increases as the price increases, and decreases as the price decreases. There are two reasons for this. First, existing producers will increase their output at the higher price. Second, new producers will be lured into the market by the higher prices. The Law of Supply will become clearer as you look at the supply schedule for in-line skates in the following example.

The supply schedule in Table 3.6 lists the number of in-line skates that manufacturers are willing to sell at the prices indicated. The schedule shows that at a price of \$90, only 8,000 pairs of in-line skates will be offered for sale. At \$270 each, however, 56,000 pairs will be offered. Why are sellers willing to offer so many more in-line skates at the higher price? One reason is that at a price of \$270, manufacturers can afford to take on the extra help and pay for the overtime necessary to increase output to 56,000 pairs. Another reason is that manufacturers of related products such as skateboards and roller skates will find it worth their while to stop making those goods and start making in-line skates instead.

A supply schedule, like a demand schedule, can be plotted on a graph as a *supply curve*. In Figure 3.3, the supply curve S, which slopes upward to the right, summarizes the information contained in the in-line skate supply schedule for March 1.

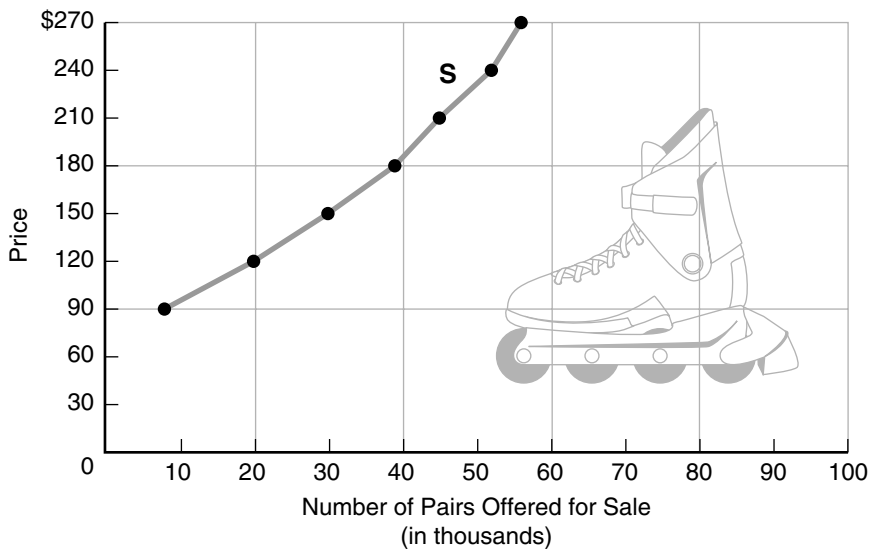
## Changes in Supply

Suppose that in-line skate manufacturers discovered they could turn out the skates in a way that was less expensive and quicker. This changeover in production methods would enable producers, large and small, to increase their production



**TABLE 3.6 SUPPLY SCHEDULE FOR IN-LINE SKATES ON MARCH 1**

At a price of	Pairs sellers will offer
\$ 90	8,000
120	20,000
150	30,000
180	39,000
210	45,000
240	52,000
270	56,000

Figure 3.3 **Supply Schedule for In-Line Skates on March 1**

so that more skates would be available for sale at each price. The supply of in-line skates would increase. Table 3.7 summarizes such a possibility. If we plot this increase on a graph, the shift from the  $S$  curve to the  $S_1$  curve will be to the right, as in Figure 3.4 on page 60.

Suppose that instead of a decrease in costs, the industry experienced an increase, such as one resulting from an increase in wages. What would happen then to the supply schedule and the supply curve?

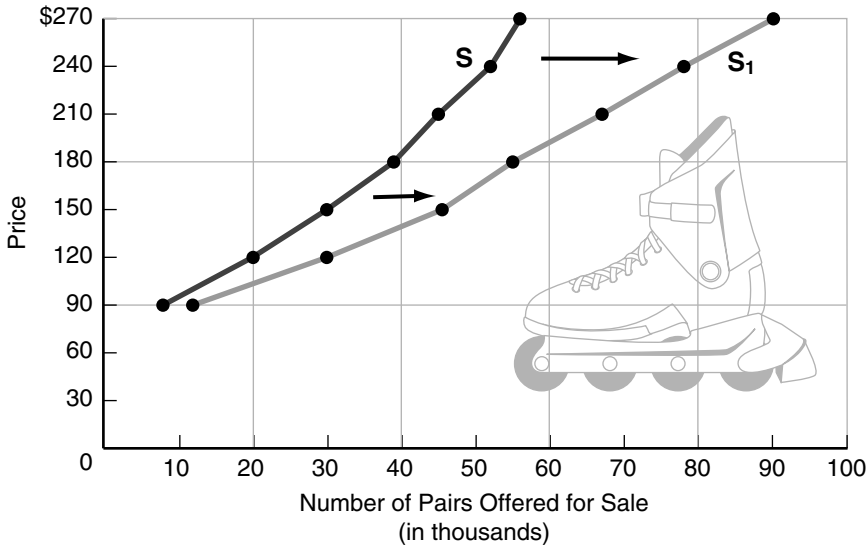
## Elasticity of Supply

Like demand, supply is subject to elasticity. The supply of some commodities is more sensitive to price changes than the supply of others. If a change in price

 **TABLE 3.7 SUPPLY SCHEDULE FOR IN-LINE SKATES ON OCTOBER 1**

At a price of	(Percent Increase in Price)	Sellers will offer	(Percent Increase in Supply)
\$ 90	(0)	12,000	(0)
120	(33.3)	30,000	(150)
150	(25.0)	45,500	(50.0)
180	(20.0)	55,000	(82.7)
210	(16.7)	67,000	(82.1)
240	(14.3)	78,000	(85.9)
270	(12.5)	90,000	(86.7)

Figure 3.4 **Supply Schedule for In-Line Skates on October 1**  
**(Increase in Supply as Reflected by a Shift**  
**in the Supply Curve)**

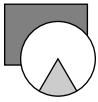


causes a larger percentage change in supply, the supply is said to be elastic. If a change in price produces a smaller percentage change in supply, the supply is said to be inelastic.

The supply of in-line skates in our example is elastic. It is elastic because as the price for a pair of skates increases from \$120 to \$150 (a 25 percent increase), the quantity of in-line skates offered for sale at that price increases by 50 percent.

Manufactured goods generally are subject to greater supply elasticity than goods provided by nature. In-line skate manufacturers might be able to increase their output by asking their employees to work overtime. Dairy farmers, however, could not expect such cooperation from their herds. Therefore, an increase in milk production would take longer to achieve than an increase in in-line skate production.

The amount of natural resources available is usually limited. While some resources, such as trees and wildlife, can eventually be replaced (through reforestation, conservation, and repopulation), these measures take many years. Some additional land can be made fit for farming by draining swamps or through irrigation. For the most part, though, we have to make do with the land we have. Minerals such as petroleum, iron, and copper also are subject to relatively inelastic supply. The output of these minerals is limited by the expense of the equipment needed to extract them, the size of the known deposits, and the uncertainty of discovering new sources.



## HOW PRICES ARE DETERMINED

Our discussion of demand and supply has thus far concentrated on the number of items buyers and sellers are willing to consider at different prices. We have seen that the amount of goods and services that buyers and sellers are willing to exchange fluctuates with changes in price. What people are willing to do, however, is not always what they are able to do. You may be willing to buy a new, imported 18-speed bicycle for \$50, but since no one is likely to sell you one at that price, you will probably not be able to buy it.

The price at which goods and services may actually be bought or sold is called the “market price.” The following discussion describes how market price is determined.

### **Supply, Demand, and Market Price: Bringing It All Together**

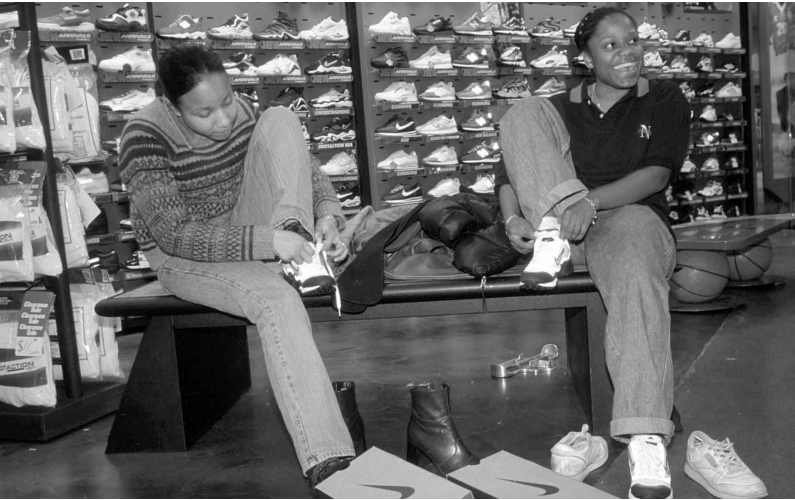
In describing how the forces of supply, demand, and price come together, we will be dealing with a model of *perfect competition*. Under perfect competition, the following conditions are assumed to exist:

- There are many buyers and sellers acting independently. No single buyer or seller is big enough to influence the market price.
- Competing products are practically identical, so that buyers and sellers of a given product are not affected by variations in quality or design.
- All buyers and sellers have full knowledge of prices being quoted all over the market.
- Buyers and sellers can enter and leave the market at will. That is, buyers are free to buy or not to buy; sellers are free to sell or not to sell.

Now let us see how prices of goods and services are set in the U.S. market system.

### **How Supply and Demand Determine Price**

As price increases, the number of items offered for sale (supply) increases, but the quantity that buyers are willing to buy (demand) decreases. There is only one price at which demand and supply are equal. On a graph, this price is shown by the point where the demand and supply curves intersect. Because it is the price at which supply and demand are equal, the price at which goods are sold is sometimes called the *equilibrium price*. Because this price is established in the market, it is also called the *market price*.



**Equilibrium Price.** What part do supply and demand play in determining the price a store charges for sneakers?

To summarize: The price at which sales take place is the price at which the amount demanded is equal to the quantity supplied.

Table 3.8 shows the demand for in-line skates on March 1. If we add the supply schedule for this day, we will have Table 3.9. The demand and supply schedule in Table 3.9 shows that at a price of \$150, the number of in-line skates offered by manufacturers is equal to the number that buyers are willing to buy. This information is illustrated graphically in Figure 3.5. Point M, which lies at the intersection of D and S, identifies the market or equilibrium price. The figure shows that this price is \$150 and that 30,000 pairs of skates can be sold at this price. As long as demand and supply do not change, this is the only price at which all the skates produced can be sold. At any higher price, there will be sellers with leftover in-line skates that they can sell only by lowering the price. At a price lower than the market price, buyers unable to find any skates but willing to pay more will bid the price up until they too are satisfied. All sellers willing to sell at the market price or less will be satisfied, and so will all buyers willing to pay that price or more.



**TABLE 3.8 DEMAND SCHEDULE FOR PAIRS OF IN-LINE SKATES ON MARCH 1**

Price	Demand
\$ 90	48,000 pairs
120	36,000 pairs
150	30,000 pairs
180	24,000 pairs
210	17,000 pairs
240	11,000 pairs
270	7,000 pairs



**TABLE 3.9 DEMAND AND SUPPLY SCHEDULE FOR PAIRS OF IN-LINE SKATES ON MARCH 1**

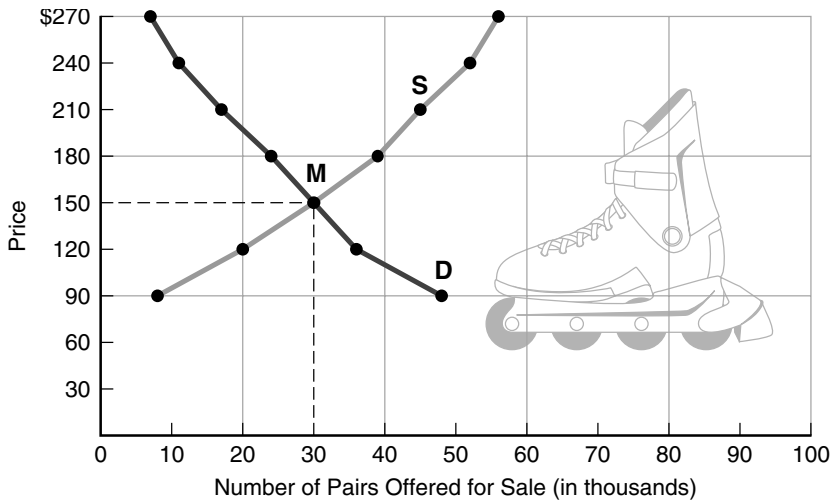
At a price of	Buyers will take	Sellers will offer
\$ 90	48,000	8,000 pairs
120	36,000	20,000 pairs
150	30,000	30,000 pairs
180	24,000	39,000 pairs
210	17,000	45,000 pairs
240	11,000	52,000 pairs
270	7,000	56,000 pairs

What will happen to the buyers who will not pay more than \$120 per pair of skates, and those sellers who will not sell for less than \$180? The buyers will have to do without skates, and the sellers will be unable to sell their skates because the market price is too high for the buyers and too low for the sellers. At the equilibrium or market price, the “market is cleared”—that is, all possible sales are made. For any new price to be established, there has to be a shift in supply, demand, or both.

### Effect of a Change in Demand on Market Price

Suppose that a panel of distinguished physicians announced that in-line skating was the key to good health and long life. Suppose also that this report received

**Figure 3.5 Demand and Supply Schedule for In-Line Skates on March 1**





nationwide publicity and that prominent people in all walks of life were soon observed in-line skating to and from work and social activities. Many thousands of people might now be willing to pay more than in the past to take up the hobby. The demand for in-line skates would increase dramatically. The new demand schedule is illustrated by line  $D_1$  in Figure 3.6. The new demand curve intersects the supply curve  $S$  at a higher point,  $M_1$ , and the new market price is \$175.

Suppose, however, that the panel of doctors announced that in-line skating was found to be harmful to one's health. It is very likely that the demand for in-line skates would fall off, and the demand curve would shift to the left. In Figure 3.7, curve  $D_2$ , which intersects  $S$  at  $M_2$ , represents the new, lessened demand for in-line

Figure 3.6 Increased Demand for In-Line Skates

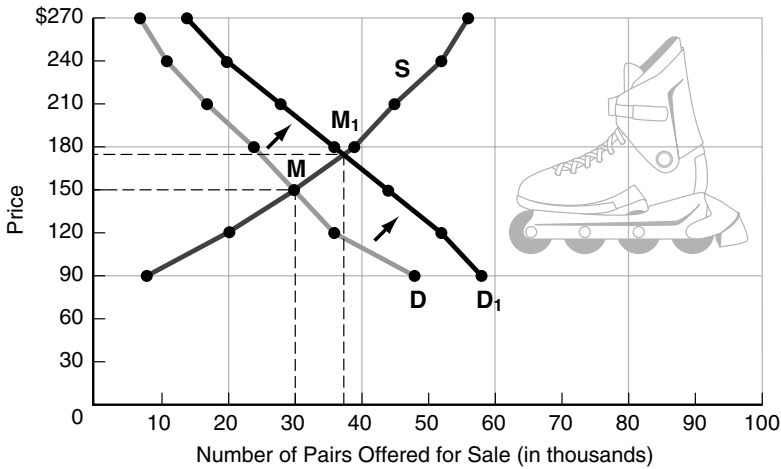
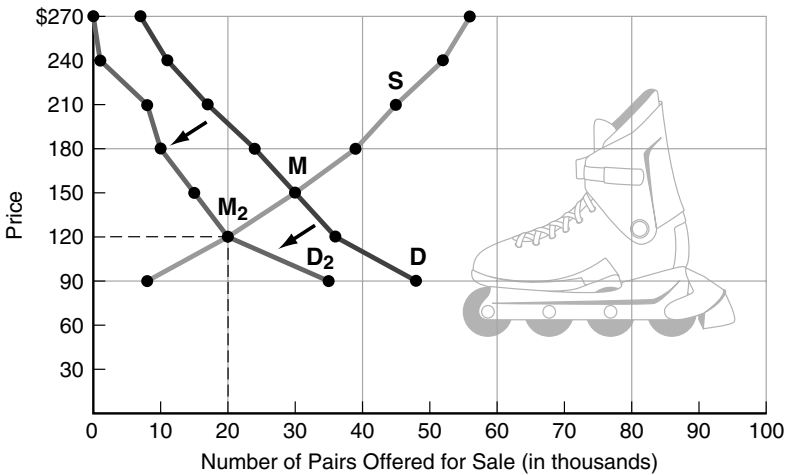


Figure 3.7 Decreased Demand for In-Line Skates



skates. The curve shows that as demand decreases, market price also decreases. Common sense tells us that this will be so. Manufacturers must sell what they have produced. If fewer people want a product while its supply remains constant, suppliers must lower the price to attract buyers. We can express this principle in general terms: *Price varies directly with changes in demand.*

## Effect of a Change in Supply on Market Price

How is market price affected if supply increases or decreases while demand remains constant? Earlier in the chapter, we described how an improved way of making in-line skates might result in an increase in supply. The effect of such an increase was to make more skates available for sale at every price and to shift the supply curve to the right. In Figure 3.8,  $S_1$  represents an increase in supply. The new market price,  $M_1$ , is lower than the old price,  $M$ .

Suppose that the price of wheels rose sharply and there was a decrease in the supply of in-line skates. In Figure 3.9 on page 66,  $S_2$  represents the new supply schedule. The curve has moved to the left, and  $M_2$ , the new market price, is higher than  $M$ . Again common sense tells us that if fewer items are available for sale, the price per item will increase.

The same principle applies to any product or service. If large quantities of diamonds were suddenly discovered and made available for sale, the price of diamonds would fall. When certain fruits and vegetables are in short supply, their prices rise. Thus, price increases when supply decreases, and price decreases when supply increases. In general terms: *Price varies inversely with changes in supply.*

Figure 3.8 Increased Supply of In-Line Skates

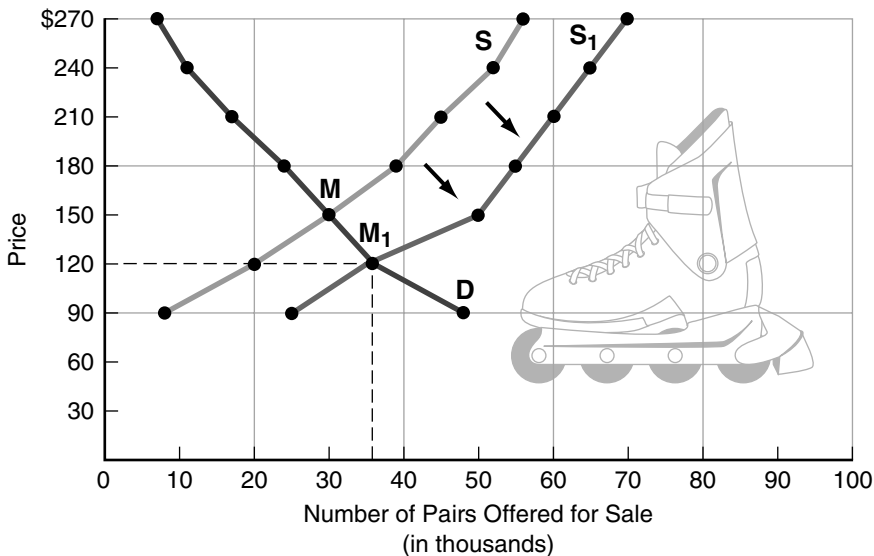
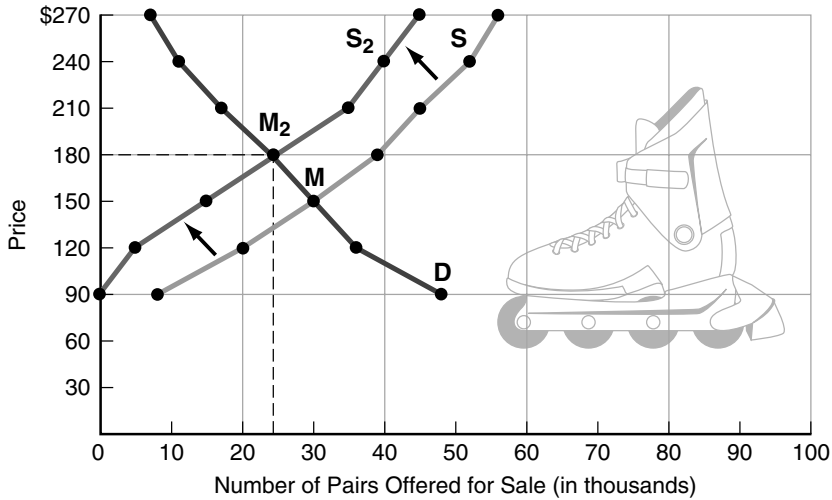


Figure 3.9 Decreased Supply of In-Line Skates



### To What Extent Do Supply and Demand Affect Price?

So far, our discussion of market price has been based on a model of perfect competition in which price is determined entirely by supply and demand. The model has the following characteristics: (1) there are many buyers and sellers; (2) similar products are assumed to be identical; (3) all buyers and sellers have full knowledge of market conditions; and (4) buyers and sellers can enter and leave the market at will.

In an actual economy, however, these conditions are very seldom met. The supply of an item may be controlled by only one company or by a handful of firms. Similar products are often not identical. Even when they are virtually identical, advertising and other factors influence consumers to prefer one product over another. Buyers may not know that they can get the same or similar item for less under a different brand name or at the store around the corner. For these and many other reasons, the laws of supply and demand do not operate in real life the way they do in the model.

If perfect competition is a laboratory concept that rarely exists in real life, why do we discuss it? The reason is that in spite of its limitations, competition does give us an insight into some of the forces that control prices. Although in the actual economy we may never see all four conditions of perfect competition, we may see one or two. In those instances, supply and demand will affect prices. Prices are important because they keep the market functioning, and the market system is at the heart of our economy.

So far, we have discussed supply, demand, and price determination in an open, competitive market. Now let us take a look at what happens to supply and demand when government, not the market, sets prices.



## WHEN GOVERNMENT CONTROLS REPLACE THE LAWS OF SUPPLY AND DEMAND

We have seen that the equilibrium price “clears the market.” That is, the number of items offered for sale at the market price exactly equals the quantity demanded. Consequently, all buyers willing to pay the price will be satisfied, and no goods will remain unsold. Any price other than the equilibrium price results in either surpluses or shortages. That is, at a price higher than equilibrium, more goods will be offered for sale than buyers are willing to accept, thereby creating a surplus. Similarly, at a price lower than equilibrium, shortages will appear because there will be more buyers than there are sellers.

Sometimes governments attempt to control the market by imposing ceilings or floors on prices. A *price ceiling* sets a maximum price that sellers may charge for their products. A *price floor* guarantees sellers a minimum price for their products. The effects of price ceilings and floors are illustrated in Figures 3.10 and 3.11.

Figure 3.10 **Government Price Ceilings  
Result in Shortages**

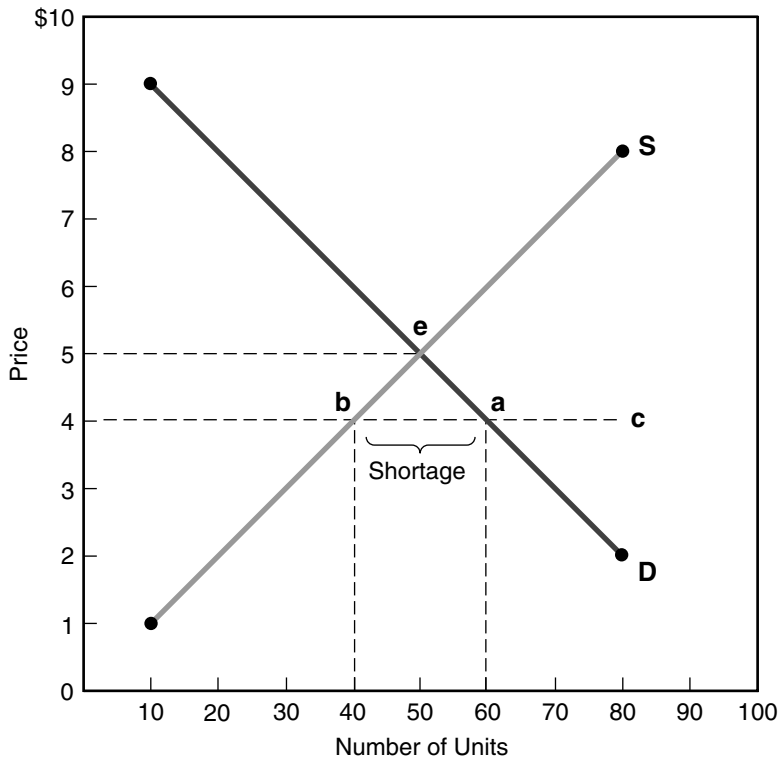
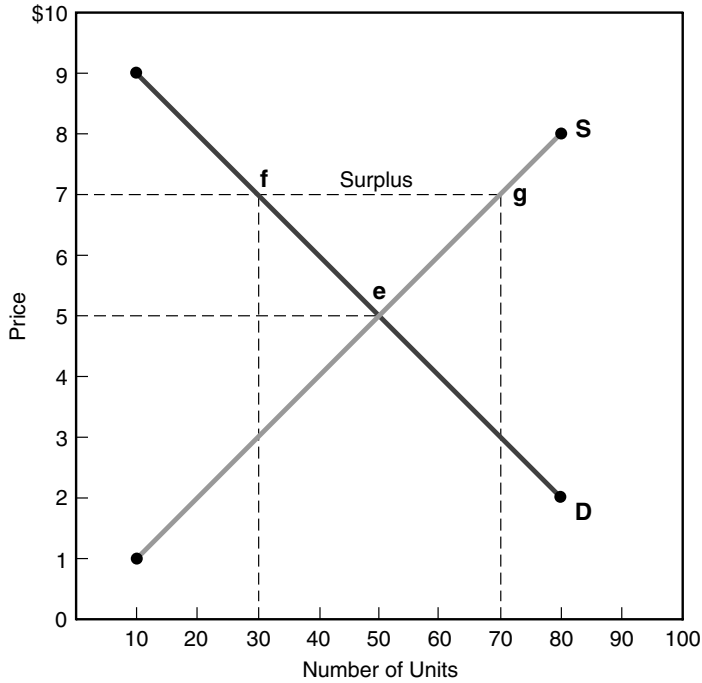


Figure 3.11 **Government Price Floors Result in Surpluses**



## Price Ceilings

Before its collapse in 1991, the Soviet government set the maximum price of bread artificially low to keep consumers happy. In this illustration, the demand curve D and the supply curve S intersect at e (at a market price of \$5). Government, however, has established a price ceiling at c (\$4). At that price, buyers are willing to take the number of items at point a (60 units), whereas sellers supply only the number at point b (40 units).

The difference between the two points ( $60 - 40 = 20$  units) represents the shortage of the product offered for sale at the government-set price of \$4. Since there was not enough bread to go around at that price, lines formed outside Soviet bakeries where those at the head of the line got their bread, and those at the end had to do without. (For additional information on the economy of the Soviet Union, see Chapter 24.)

## Price Floors

From time to time, the U.S. government has tried to help farmers by guaranteeing a minimum price on one or more of their crops. As a result, buyers had to

# MAKER OF ECONOMIC THOUGHT



## Alfred Marshall

As the 19th century drew to a close, the world described by Adam Smith and other economists had undergone considerable change. The *Industrial Revolution* had transformed Britain from a primarily agricultural society into an industrialized one whose very survival was dependent on its international trade. Political power, which in Smith's day was totally in the hands of the landed aristocracy, was now shifting to the middle class of the world of business, industry, and finance.

In the world of economics, critics of classical theory asserted that it failed to reflect these changes. Others, whom we would now describe as "socialists" and "Communists," called for the replacement of the existing order with a new kind of economic system. The publication of *Principles of Economics* by **Alfred Marshall** in 1890 came as a tonic to the "silent majority" of the day who were looking for a restatement in modern terms of the theoretical basis of their economic order.

Alfred Marshall (1842–1924), whose work became a bible for what came to be known as "neoclassical" economics, was a member of the faculty of Cambridge University from 1885 until his death. He became a legend in his own time, and his lecture hall became the center of economic thought and education for the English-speaking world. Even before the publication of his *Principles*, it was said that at least half the professors of economics in Britain's universities had been his pupils. Marshall's influence spread even wider as universities in Britain and the United States made the *Principles* required reading. Not

until the 1940s was the *Principles* supplanted by other works.

What Marshall had accomplished was a revitalization of the classical economics of writers like Smith by modernizing it and fleshing out areas of weakness in its theoretical framework. For example, Marshall developed the concept of elasticity of demand in order to explain price behavior.

For many years, too, classical economists had been debating whether supply or demand was the more important determinant of price. Marshall's introduction to his position on this issue is worth quoting as an example of his skill at slicing through complex issues with easy-to-grasp logic.

We might as reasonably dispute whether it is the upper or the under blade of a pair of scissors that cuts a piece of paper, as whether value is governed by utility or cost of production (demand or supply). It is true that when one blade is held still, and the cutting is effected by moving the other, we may say with careless brevity that the cutting is done by the second; but the statement is not strictly accurate and is to be excused only so long as it claims to be merely a popular and not a strictly scientific account of what happens.

Although today's economic students are no longer required to read the *Principles*, Marshall's theories and methods are reflected in the works of all modern textbook authors and are part of the education of practicing economists.

pay at the price floor (or more) for the protected crop. Meanwhile, farmers could sell any or all of their unsold crop to the government at the floor.

Government-imposed price floors often result in surpluses. This is illustrated in Figure 3.11 in which we assume that the demand (D) and supply (S) curves intersect at equilibrium *e* (a market price of \$5). But assume that the U.S. government has established a price floor of \$7. At that price, buyers will take 30, while farmers will offer 70. The difference of 40 ( $70 - 30 = 40$  units) is a *surplus*. Under its farm program, the U.S. government has had to assume the

cost of purchasing, storing, and finding ways to dispose of surplus farm products. (For further information on U.S. agricultural programs, see pages 297–301.)

## S U M M A R Y

Price is determined by the forces of supply and demand in a market economy. The quantity demanded varies inversely with the price, and this relationship can be indicated with a demand curve. Demand increases when prices fall and decreases when prices rise. The percentage change in the total value of spending that follows a price change is the elasticity of demand. An increase or decrease in demand at all prices is known as a shift in demand.

The quantity of a good or service supplied varies directly with price. More goods and services will be offered for sale as price increases, while fewer will be offered for sale as price decreases. A supply schedule can be indicated on a graph as a supply curve. The percentage change in the amount supplied brought about by a change in price is the elasticity of supply.

The price at which a sale takes place is the price at which the amount demanded is equal to the quantity supplied. This can be shown on a supply and demand curve as the point where the two curves intersect. Governments sometimes set limits to either supply or price. The price that is established may be higher or lower than the market price.



## REVIEWING THE CHAPTER

### BUILDING VOCABULARY

Match each item in Column A with its definition in Column B.

#### Column A

1. demand
2. demand curve
3. supply
4. supply curve
5. Law of Demand
6. Law of Supply
7. marginal utility
8. elasticity of demand
9. elasticity of supply
10. market price

#### Column B

- a. the price at which the amount demanded of a good or service is equal to the quantity supplied
- b. a line on a graph that shows the number of a particular item that will be sold at each price
- c. a line on a graph that shows the number of a particular item that will be purchased at each price
- d. the extent to which supply changes following a change in price
- e. the quantity of a product or service that would be purchased at a particular price
- f. the idea that the quantity of a good or service demanded varies inversely with changes in price
- g. the quantity of a good or service offered for sale at a particular price
- h. the idea that the quantity of a good or service supplied varies directly with its price
- i. the extent to which the dollar value of total spending changes following a change in price
- j. the degree of satisfaction from each additional purchase of a product or service

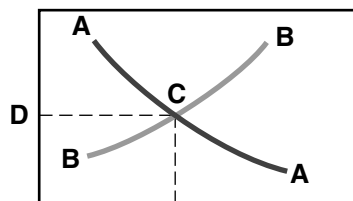
## UNDERSTANDING WHAT YOU HAVE READ

- When the supply of a commodity increases while the demand remains the same, the market price will (a) rise (b) fall (c) stay the same (d) vary directly with the change in supply.
- Which *one* of the following would probably lead to an increase in the demand for bricks? (a) an increase in the price of lumber, which can be used as a substitute for bricks (b) a decrease in the income of potential home builders (c) an increase in the wages of bricklayers (d) an increase in the price of bricks.
- Which *one* of the following would *not* have the same effect as the other three on the amount of beef consumed? (a) a rise in the price of lamb (b) a fall in the price of beef (c) an effective advertising campaign on the part of pork producers (d) an effective advertising campaign on the part of beef producers.
- When described in connection with supply and demand schedules, an increase in demand means that (a) the price will fall (b) buyers will take a larger quantity at all prices than before (c) the demand for the product has become more elastic (d) the demand curve slopes downward.
- In an industry that has many competing firms, an increase in demand may be expected to result in (a) a decrease in production (b) no change in production (c) an increase in production (d) the elimination of inefficient firms.
- The demand for a good is elastic when (a) total revenue increases with each decrease in price (b) total revenue decreases with each decrease in price (c) the demand curve shifts to the right (d) price changes have no effect on total revenue.
- For which *one* of the following commodities is supply most elastic? (a) eggs (b) plastic toys (c) gold (d) corn.

Base your answers to questions 8–10 on Figure 3.12.

- In the graph, AA represents (a) the supply curve (b) the demand curve (c) equilibrium (d) the market price.
- In the graph, D represents (a) the supply curve (b) the demand curve (c) the demand schedule (d) the market price.
- In the graph, BB represents (a) the supply curve (b) the demand curve (c) equilibrium (d) the market price.

Figure 3.12



## THINKING CRITICALLY

- For *each* of the five possible events described below, tell (1) how the event would affect either the supply of or the demand for the italicized product and (2) how the event would affect the price of the product. (a) Yields decline as *corn* crop is hit by mysterious blight. (b) The wearing of *hats* is again becoming fashionable among men



in the United States. (c) Only two days are left to buy a *turkey* for Thanksgiving, and food markets have many unsold turkeys. (d) Manufacturers of *U.S. automobiles* show great interest in the rise in European wages. (e) Midwestern drought forces ranchers to rush their *cattle* to market.

2. Explain the difference in prices for *each* of the following pairs of goods in terms of the laws of supply and demand: (a) natural diamonds and zircons (human-made diamonds), (b) a loaf of bread baked today compared with day-old bread, (c) roses in January and roses in June.
3. A clothing store will usually reduce the price of smoke-damaged merchandise following a fire. Explain why some customers will buy this clothing even though it smells of smoke.
4. In Middletown, there were five bakeries and five florists. Last year, however, one firm bought out all the bakeries and another firm bought out all the florists. Both of the remaining companies have now decided to increase their prices. Which will be able to increase prices the most, the bakery or the florist? Explain.

**SKILLS: Graphing Supply and Demand**

Price	\$16	14	12	10	8	6	4	2
Quantity	6	10	16	24	30	40	50	80

1. Construct a graph based on the data in the chart above. You may use graph paper for more precise plotting of points.
2. Does the graph show a demand or a supply curve?
3. Why does the curve slope downward?
4. On the same graph, construct another curve using the following:

Price	\$16	14	12	10	8	6	4	2
Quantity	48	44	40	36	30	20	0	0

5. Does this curve represent supply or demand?
6. Why does this curve slope upward?
7. What is the equilibrium or market price?