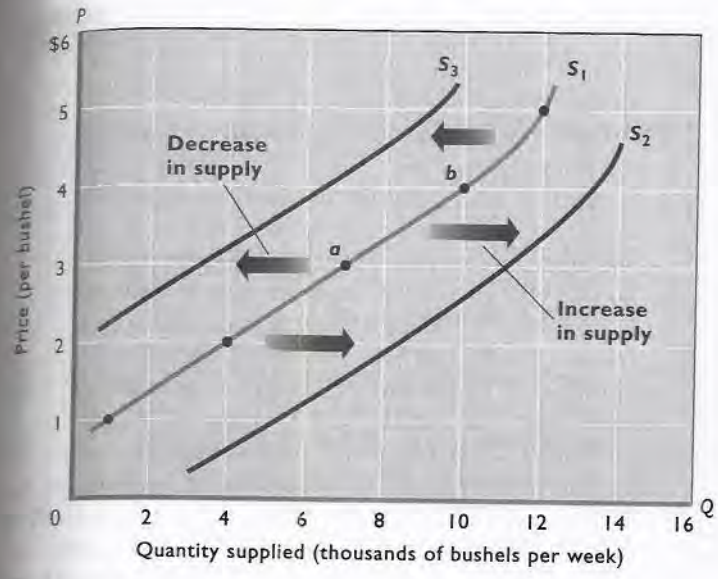


FIGURE 3.5 Changes in the supply of corn. A change in one or more of the determinants of supply causes a change in supply. An increase in supply is shown as a rightward shift of the supply curve, as from S_1 to S_2. A decrease in supply is depicted as a leftward shift of the curve, as from S_1 to S_3. In contrast, a change in the *quantity supplied* is caused by a change in the product's price and is shown by a movement from one point to another, as from *b* to *a* on fixed supply curve S_1.

Market Supply of Corn, 200 Producers, (S_1)	
(1) Price per Bushel	(2) Total Quantity Supplied per Week
$5	12,000
4	10,000
3	7000
2	4000
1	1000

In contrast, lower *resource* prices reduce production costs and increase profits. So when resource prices fall, firms supply greater output at each product price. For example, a decrease in the price of iron ore will decrease the price of steel.

Technology Improvements in technology (techniques of production) enable firms to produce units of output with fewer resources. Because resources are costly, using fewer of them lowers production costs and increases supply. Example: Technological advances in producing flat-panel computer monitors have greatly reduced their cost. Thus, manufacturers will now offer more such monitors than previously at the various prices; the supply of flat-panel monitors has increased.

Taxes and Subsidies Businesses treat most taxes as costs. An increase in sales or property taxes will increase production costs and reduce supply. In contrast, subsidies are "taxes in reverse." If the government subsidizes the production of a good, it in effect lowers the producers' costs and increases supply.

Prices of Other Goods Firms that produce a particular product, say, soccer balls, can sometimes use their plant and equipment to produce alternative goods, say, basketballs and volleyballs. The higher prices of these "other goods" may entice soccer ball producers to switch production to those other goods in order to increase profits. This *substitution in production* results in a decline in the supply of soccer balls. Alternatively, when the prices of basketballs and volleyballs decline relative to the price of soccer balls, producers of those goods may decide to produce more soccer balls instead, increasing their supply.

Producer Expectations Changes in expectations about the future price of a product may affect the producer's current willingness to supply that product. It is difficult, however, to generalize about how a new expectation of higher prices affects the present supply of a product. Farmers anticipating a higher wheat price in the future might withhold some of their current wheat harvest from the market, thereby causing a decrease in the current supply of wheat. In contrast, in many types of manufacturing industries, newly formed expectations that price will increase may induce firms to add another shift of workers or to expand their production facilities, causing current supply to increase.

Number of Sellers Other things equal, the larger the number of suppliers, the greater the market supply. As more firms enter an industry, the supply curve shifts to the right. Conversely, the smaller the number of firms in the industry, the less the market supply. This means that as firms leave an industry, the supply curve shifts to the left. Example: The United States and Canada have imposed restrictions on haddock fishing to replenish dwindling stocks. As part of that policy, the Federal government has bought the boats of some of the haddock fishers as a way of putting

TABLE 3.2 Determinants of Supply: Factors That Shift the Supply Curve

Determinant	Examples
Change in resource prices	A decrease in the price of microchips increases the supply of computers; an increase in the price of crude oil reduces the supply of gasoline.
Change in technology	The development of more effective wireless technology increases the supply of cell phones.
Changes in taxes and subsidies	An increase in the excise tax on cigarettes reduces the supply of cigarettes; a decline in subsidies to state universities reduces the supply of higher education.
Change in prices of other goods	An increase in the price of cucumbers decreases the supply of watermelons.
Change in producer expectations	An expectation of a substantial rise in future log prices decreases the supply of logs today.
Change in number of suppliers	An increase in the number of tattoo parlors increases the supply of tattoos; the formation of women's professional basketball leagues increases the supply of women's professional basketball games.

them out of business and decreasing the catch. The result has been a decline in the market supply of haddock.

Table 3.2 is a checklist of the determinants of supply, along with further illustrations.

Changes in Quantity Supplied

The distinction between a *change in supply* and a *change in quantity supplied* parallels the distinction between a change in demand and a change in quantity demanded. Because supply is a schedule or curve, a **change in supply** means a change in the schedule and a shift of the curve. An increase in supply shifts the curve to the right; a decrease in supply shifts it to the left. The cause of a change in supply is a change in one or more of the determinants of supply.

In contrast, a **change in quantity supplied** is a movement from one point to another on a fixed supply curve. The cause of such a movement is a change in the price of the specific product being considered.

Consider supply curve S_1 in Figure 3.5. A decline in the price of corn from \$4 to \$3 decreases the quantity of corn supplied per week from 10,000 to 7000 bushels. This movement from point *b* to point *a* along S_1 is a change in quantity supplied, not a change in supply. Supply is the full schedule of prices and quantities shown, and this schedule does not change when the price of corn changes.

QUICK REVIEW 3.2

- A supply schedule or curve shows that, other things equal, the quantity of a good supplied varies directly with its price.
- The supply curve shifts because of changes in (a) resource prices, (b) technology, (c) taxes or subsidies, (d) prices of other goods, (e) expectations of future prices, and (f) the number of suppliers.
- A change in supply is a shift of the supply curve; a change in quantity supplied is a movement from one point to another on a fixed supply curve.

Market Equilibrium

With our understanding of demand and supply, we can now show how the decisions of buyers of corn and sellers of corn interact to determine the equilibrium price and quantity of corn. In the table in Figure 3.6, columns 1 and 2 repeat the market supply of corn (from the table in Figure 3.5), and columns 2 and 3 repeat the market demand for corn (from the table in Figure 3.3). We assume this is a competitive market so that neither buyers nor sellers can set the price.

Equilibrium Price and Quantity

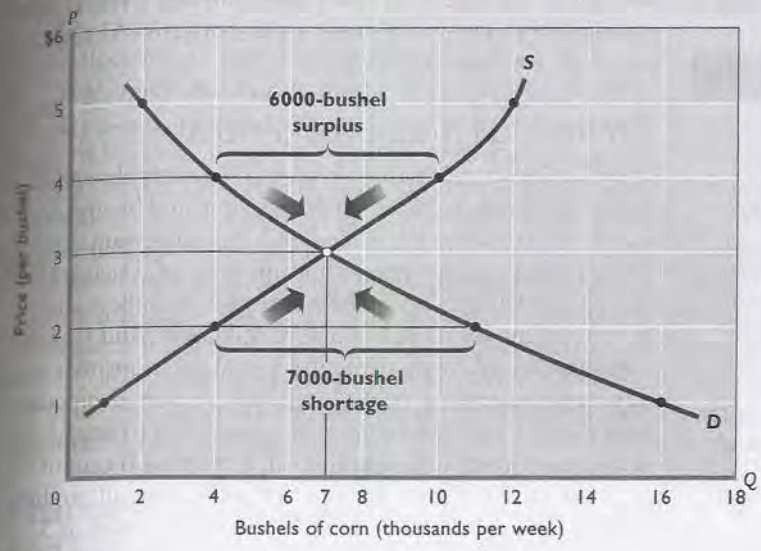
We are looking for the equilibrium price and equilibrium quantity. The **equilibrium price** (or *market-clearing price*) is the price where the intentions of buyers and sellers match. It is the price where quantity demanded equals quantity supplied. The table in Figure 3.6 reveals that at \$3, *and only at that price*, the number of bushels of corn that sellers wish to sell (7000) is identical to the number consumers want to buy (also 7000). At \$3 and 7000 bushels of corn, there is neither a shortage nor a surplus of corn. So 7000 bushels of corn is the **equilibrium quantity:** the quantity at which the intentions of buyers and sellers match, so that the quantity demanded and the quantity supplied are equal.

INTERACTIVE GRAPHS
G 3.1
Supply and demand

Graphically, the equilibrium price is indicated by the intersection of the supply curve and the demand curve in **Figure 3.6 (Key Graph).** (The horizontal axis now measures both quantity demanded and quantity supplied.) With neither a shortage nor a surplus at \$3, the market is *in equilibrium*, meaning "in balance" or "at rest."

Competition among buyers and among sellers drives the price to the equilibrium price; once there, it will remain there unless it is subsequently disturbed by changes in

FIGURE 3.6 Equilibrium price and quantity. The intersection of the downsloping demand curve *D* and the upsloping supply curve *S* indicates the equilibrium price and quantity, here $3 and 7000 bushels of corn. The shortages of corn at below-equilibrium prices (for example, 7000 bushels at $2) drive up price. The higher prices increase the quantity supplied and reduce the quantity demanded until equilibrium is achieved. The surpluses caused by above-equilibrium prices (for example, 6000 bushels at $4) push price down. As price drops, the quantity demanded rises and the quantity supplied falls until equilibrium is established. At the equilibrium price and quantity, there are neither shortages nor surpluses of corn.



Market Supply of and Demand for Corn

(1) Total Quantity Supplied per Week	(2) Price per Bushel	(3) Total Quantity Demanded per Week	(4) Surplus (+) or Shortage (−)*
12,000	$5	2000	+10,000 ↓
10,000	4	4000	+6000 ↓
7000	3	7000	0
4000	2	11,000	−7000 ↑
1000	1	16,000	−15,000 ↑

*Arrows indicate the effect on price.

QUICK QUIZ FOR FIGURE 3.6

1. Demand curve *D* is downsloping because:
   a. producers offer less of a product for sale as the price of the product falls.
   b. lower prices of a product create income and substitution effects that lead consumers to purchase more of it.
   c. the larger the number of buyers in a market, the lower the product price.
   d. price and quantity demanded are directly (positively) related.
2. Supply curve *S*:
   a. reflects an inverse (negative) relationship between price and quantity supplied.
   b. reflects a direct (positive) relationship between price and quantity supplied.
   c. depicts the collective behavior of buyers in this market.
   d. shows that producers will offer more of a product for sale at a low product price than at a high product price.
3. At the $3 price:
   a. quantity supplied exceeds quantity demanded.
   b. quantity demanded exceeds quantity supplied.
   c. the product is abundant and a surplus exists.
   d. there is no pressure on price to rise or fall.
4. At price $5 in this market:
   a. there will be a shortage of 10,000 units.
   b. there will be a surplus of 10,000 units.
   c. quantity demanded will be 12,000 units.
   d. quantity demanded will equal quantity supplied.

Answers: 1. b; 2. b; 3. d; 4. b

demand or supply (shifts of the curves). To better understand the uniqueness of the equilibrium price, let's consider other prices. At any above-equilibrium price, quantity supplied exceeds quantity demanded. For example, at the $4 price, sellers will offer 10,000 bushels of corn, but buyers will purchase only 4000. The $4 price encourages sellers to offer lots of corn but discourages many consumers from buying it. The result is a **surplus** (or *excess supply*) of 6000 bushels. If corn sellers produced them all, they would find themselves with 6000 unsold bushels of corn.

Surpluses drive prices down. Even if the $4 price existed temporarily, it could not persist. The large surplus would prompt competing sellers to lower the price to encourage buyers to take the surplus off their hands. As the price fell, the incentive to produce corn would decline and the incentive for consumers to buy corn would increase. As shown in Figure 3.6, the market would move to its equilibrium at $3.

Any price below the $3 equilibrium price would create a shortage; quantity demanded would exceed quantity

supplied. Consider a $2 price, for example. We see both from column 2 of the table and from the demand curve in Figure 3.6 that quantity demanded exceeds quantity supplied at that price. The result is a **shortage** (or *excess demand*) of 7000 bushels of corn. The $2 price discourages sellers from devoting resources to corn and encourages consumers to desire more bushels than are available. The $2 price cannot persist as the equilibrium price. Many consumers who want to buy corn at this price will not obtain it. They will express a willingness to pay more than $2 to get corn. Competition among these buyers will drive up the price, eventually to the $3 equilibrium level. Unless disrupted by changes of supply or demand, this $3 price of corn will continue to prevail.

CONSIDER THIS . . .

Ticket Scalping: A Bum Rap!

Ticket prices for athletic events and musical concerts are usually set far in advance of the events. Sometimes the original ticket price is too low to be the equilibrium price. Lines form at the ticket window and a severe shortage of tickets occurs at the printed price. What happens next? Buyers who are willing to pay more than the original price bid up the ticket price in resale ticket markets.

Tickets sometimes get resold for much greater amounts than the original price—market transactions known as "scalping." For example, an original buyer may resell a $75 ticket to a concert for $200. Reporters sometimes denounce scalpers for "ripping off" buyers by charging "exorbitant" prices.

But is scalping really a rip-off? We must first recognize that such ticket resales are voluntary transactions. If both buyer and seller did not expect to gain from the exchange, it would not occur! The seller must value the $200 more than seeing the event, and the buyer must value seeing the event at $200 or more. So there are no losers or victims here: Both buyer and seller benefit from the transaction. The scalping market simply redistributes assets (game or concert tickets) from those who would rather have the money (and the other things that the money can buy) to those who would rather have the tickets.

Does scalping impose losses or injury on the sponsors of the event? If the sponsors are injured, it is because they initially priced tickets below the equilibrium level. Perhaps they did this to create a long waiting line and the attendant news media publicity. Alternatively, they may have had a genuine desire to keep tickets affordable for lower-income, ardent fans. In either case, the event sponsors suffer an opportunity cost in the form of less ticket revenue than they might have otherwise received. But such losses are self-inflicted and separate and distinct from the fact that some tickets are later resold at a higher price.

So is ticket scalping undesirable? Not on economic grounds! It is an entirely voluntary activity that benefits both sellers and buyers.

Rationing Function of Prices

The ability of the competitive forces of supply and demand to establish a price at which selling and buying decisions are consistent is called the rationing function of prices. In our case, the equilibrium price of $3 clears the market, leaving no burdensome surplus for sellers and no inconvenient shortage for potential buyers. And it is the combination of freely made individual decisions that sets this market-clearing price. In effect, the market outcome says that all buyers who are willing and able to pay $3 for a bushel of corn will obtain it; all buyers who cannot or will not pay $3 will go without corn. Similarly, all producers who are willing and able to offer corn for sale at $3 a bushel will sell it; all producers who cannot or will not sell for $3 per bushel will not sell their product.

Efficient Allocation

A competitive market such as that we have described not only rations goods to consumers but also allocates society's resources efficiently to the particular product. Competition among corn producers forces them to use the best technology and right mix of productive resources. If they didn't, their costs would be too high relative to the market price, and they would be unprofitable. The result is **productive efficiency:** the production of any particular good in the least costly way. When society produces corn at the lowest achievable per-unit cost, it is expending the least-valued combination of resources to produce that product and therefore is making available more-valued resources to produce other desired goods. Suppose society has only $100 worth of resources available. If it can produce a bushel of corn using $3 of those resources, then it will have available $97 of resources remaining to produce other goods. This is clearly better than producing the corn for $5 and having only $95 of resources available for the alternative uses.

Competitive markets also produce **allocative efficiency:** the *particular mix* of goods and services most highly valued by society (minimum-cost production assumed). For example, society wants land suitable for growing corn used for that purpose, not to grow

ndelions. It wants diamonds to be used for jewelry, not ushed up and used as an additive to give concrete more arkle. It wants iPods and MP4 players, not cassette play- s and tapes. Moreover, society does not want to devote its resources to corn, diamonds, and portable digital edia players. It wants to assign some resources to wheat, soline, and cell phones. Competitive markets make ose allocatively efficient assignments.

The equilibrium price and quantity in competitive arkets usually produce an assignment of resources that is ight" from an economic perspective. Demand essentially flects the marginal benefit (MB) of the good, based on e utility received. Supply reflects the marginal cost (MC) producing the good. The market ensures that firms oduce all units of goods for which MB exceeds MC and units for which MC exceeds MB. At the intersection of e demand and supply curves, MB equals MC and alloca- e efficiency results. As economists say, there is neither "underallocaton of resources" nor an "overallocation of sources" to the product.

hanges in Supply, Demand, nd Equilibrium

e know that demand might change because of fluctua- ns in consumer tastes or incomes, changes in consumer pectations, or variations in the prices of related goods. pply might change in response to changes in resource ces, technology, or taxes. What effects will such changes supply and demand have on equilibrium price and antity?

anges in Demand Suppose that the supply of ne good (for example, health care) is constant and de- nd increases, as shown in Figure 3.7a. As a result, the w intersection of the supply and demand curves is at ther values on both the price and the quantity axes. early, an increase in demand raises both equilibrium ce and equilibrium quantity. Conversely, a decrease in nand such as that shown in Figure 3.7b reduces both ilibrium price and equilibrium quantity. (The value of phical analysis is now apparent: We need not fumble h columns of figures to determine the outcomes; we d only compare the new and the old points of intersec- n on the graph.)

anges in Supply What happens if the demand for ne good (for example, flash drives) is constant but sup- increases, as in Figure 3.7c? The new intersection of ply and demand is located at a lower equilibrium price at a higher equilibrium quantity. An increase in supply reduces equilibrium price but increases equilibrium quantity. In contrast, if supply decreases, as in Figure 3.7d, equilibrium price rises while equilibrium quantity declines.

Complex Cases When both supply and demand change, the effect is a combination of the individual effects.

Supply Increase; Demand Decrease What effect will a supply increase and a demand decrease for some good (for example, apples) have on equilibrium price? Both changes decrease price, so the net result is a price drop greater than that resulting from either change alone.

What about equilibrium quantity? Here the effects of the changes in supply and demand are opposed: the increase in supply increases equilibrium quantity, but the decrease in demand reduces it. The direction of the change in equilibrium quantity depends on the relative sizes of the changes in supply and demand. If the increase in supply is larger than the decrease in demand, the equilibrium quantity will increase. But if the decrease in demand is greater than the increase in supply, the equilibrium quantity will decrease.

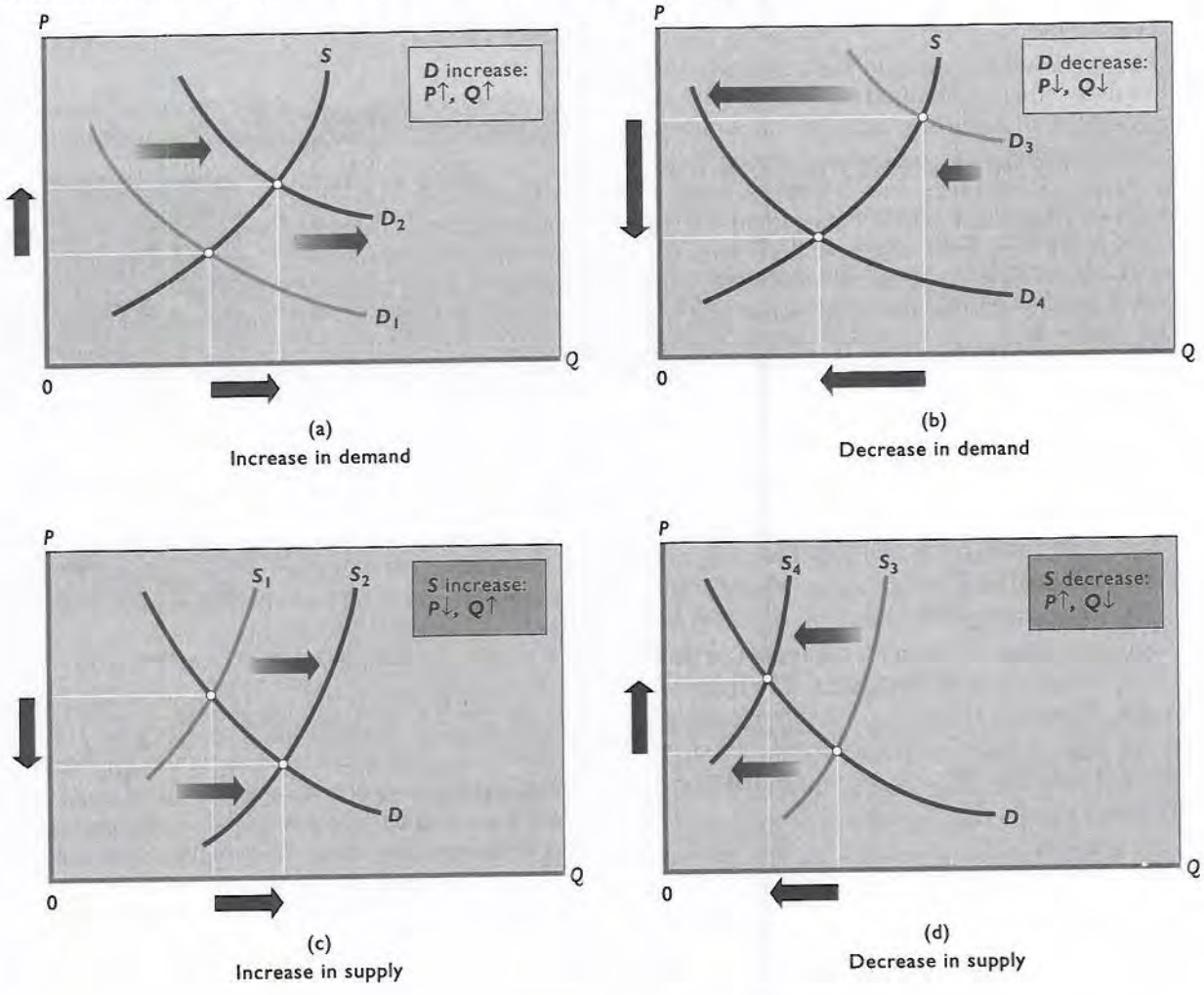
Supply Decrease; Demand Increase A decrease in supply and an increase in demand for some good (for example, gasoline) both increase price. Their combined effect is an increase in equilibrium price greater than that caused by either change separately. But their effect on the equilibrium quantity is again indeterminate, depending on the relative sizes of the changes in supply and demand. If the decrease in supply is larger than the increase in demand, the equilibrium quantity will decrease. In contrast, if the increase in demand is greater than the decrease in supply, the equilibrium quantity will increase.

Supply Increase; Demand Increase What if supply and demand both increase for some good (for example, cell phones)? A supply increase drops equilibrium price, while a demand increase boosts it. If the increase in supply is greater than the increase in demand, the equilibrium price will fall. If the opposite holds, the equilibrium price will rise.

The effect on equilibrium quantity is certain: The increases in supply and demand both raise the equilibrium quantity. Therefore, the equilibrium quantity will increase by an amount greater than that caused by either change alone.

Supply Decrease; Demand Decrease What about decreases in both supply and demand for some good (for example, new homes)? If the decrease in supply is greater

FIGURE 3.7 Changes in demand and supply and the effects on price and quantity. The increase in demand from D_1 to D_2 in (a) increases both equilibrium price and equilibrium quantity. The decrease in demand from D_3 to D_4 in (b) decreases both equilibrium price and equilibrium quantity. The increase in supply from S_1 to S_2 in (c) decreases equilibrium price and increases equilibrium quantity. The decline in supply from S_3 to S_4 in (d) increases equilibrium price and decreases equilibrium quantity. The boxes in the top right corners summarize the respective changes and outcomes. The upward arrows in the boxes signify increases in equilibrium price (P) and equilibrium quantity (Q); the downward arrows signify decreases in these items.



than the decrease in demand, equilibrium price will rise. If the reverse is true, equilibrium price will fall. Because the decreases in supply and demand each reduce equilibrium quantity, we can be sure that equilibrium quantity will fall.

Table 3.3 summarizes these four cases. To understand them fully, you should draw supply and demand diagrams for each case to confirm the effects listed in this table.

Special cases arise when a decrease in demand and a decrease in supply, or an increase in demand and an increase in supply, exactly cancel out. In both cases, the net effect on equilibrium price will be zero; price will not change.

The optional appendix accompanying this chapter provides additional examples of situations in which both supply and demand change at the same time.

TABLE 3.3 Effects of Changes in Both Supply and Demand

Change in Supply	Change in Demand	Effect on Equilibrium Price	Effect on Equilibrium Quantity
1. Increase	Decrease	Decrease	Indeterminate
2. Decrease	Increase	Increase	Indeterminate
3. Increase	Increase	Indeterminate	Increase
4. Decrease	Decrease	Indeterminate	Decrease

CONSIDER THIS . . .

Salsa and Coffee Beans

If you forget the other-things-equal assumption, you can encounter situations that seem to be in conflict with the laws of demand and supply. For example, suppose salsa manufacturers sell 1 million bottles of salsa at $4 a bottle in one year; 2 million bottles at $5 in the next year; and 3 million at $6 in the year thereafter. Price and quantity purchased vary directly, and these data seem to be at odds with the law of demand.

But there is no conflict here; the data do not refute the law of demand. The catch is that the law of demand's other-things-equal assumption has been violated over the three years in the example. Specifically, because of changing tastes and rising incomes, the demand for salsa has increased sharply, as in Figure 3.7a. The result is higher prices *and* larger quantities purchased.

Another example: The price of coffee beans occasionally shoots upward at the same time that the quantity of coffee beans harvested declines. These events seemingly contradict the direct relationship between price and quantity denoted by supply. The catch again is that the other-things-equal assumption underlying the upsloping supply curve is violated. Poor coffee harvests decrease supply, as in Figure 3.7d, increasing the equilibrium price of coffee and reducing the equilibrium quantity.

The laws of demand and supply are not refuted by observations of price and quantity made over periods of time in which either demand or supply curves shift.

Application: Government-Set Prices

Prices in most markets are free to rise or fall to their equilibrium levels, no matter how high or low those levels might be. However, government sometimes concludes that supply and demand will produce prices that are unfairly high for buyers or unfairly low for sellers. So government may place legal limits on how high or low a price or prices may go. Is that a good idea?

Price Ceilings on Gasoline

A **price ceiling** sets the maximum legal price a seller may charge for a product or service. A price at or below the ceiling is legal; a price above it is not. The rationale for establishing price ceilings (or ceiling prices) on specific products is that they purportedly enable consumers to obtain some "essential" good or service that they could not afford at the equilibrium price. Examples are rent controls and usury laws, which specify maximum "prices" in the forms of rent and interest that can be charged to borrowers.

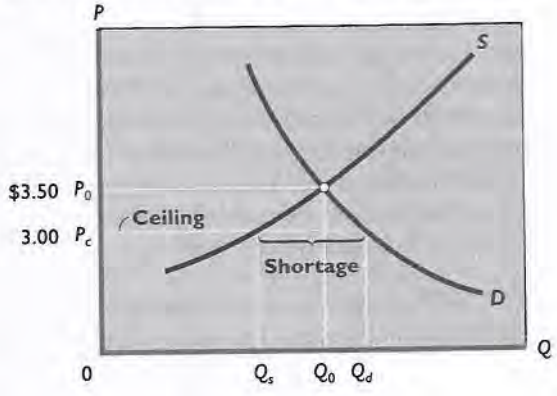
Graphical Analysis We can easily show the effects of price ceilings graphically. Suppose that rapidly rising world income boosts the purchase of automobiles and shifts the demand for gasoline to the right so that the market equilibrium price reaches $3.50 per gallon, shown as P_0 in Figure 3.8. The rapidly rising price of gasoline greatly burdens low- and moderate-income households, which pressure government to "do something." To keep gasoline prices down, the government imposes a ceiling price P_c of $3 per gallon. To impact the market, a price ceiling must be below the equilibrium price. A ceiling price of $4, for example, would have had no effect on the price of gasoline in the current situation.

What are the effects of this $3 ceiling price? The rationing ability of the free market is rendered ineffective. Because the ceiling price P_c is below the market-clearing price P_0, there is a lasting shortage of gasoline. The quantity of gasoline demanded at P_c is Q_d and the quantity supplied is only Q_s; a persistent excess demand or shortage of amount $Q_d - Q_s$ occurs.

The price ceiling P_c prevents the usual market adjustment in which competition among buyers bids up price, inducing more production and rationing some buyers out of the market. That process would normally continue until the shortage disappeared at the equilibrium price and quantity, P_0 and Q_0.

By preventing these market adjustments from occurring, the price ceiling poses two related problems.

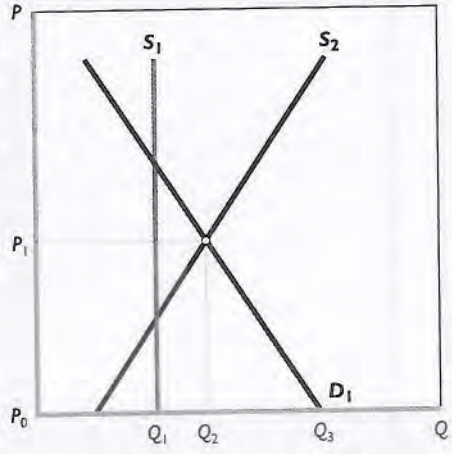
FIGURE 3.8 A price ceiling. A price ceiling is a maximum legal price such as P_c. When the ceiling price is below the equilibrium price, a persistent product shortage results. Here that shortage is shown by the horizontal distance between Q_d and Q_s.



LAST Word A Legal Market for Human Organs?

A Legal Market Might Eliminate the Present Shortage of Human Organs for Transplant. But There Are Many Serious Objections to "Turning Human Body Parts into Commodities" for Purchase and Sale.

It has become increasingly commonplace in medicine to transplant kidneys, lungs, livers, corneas, pancreases, and hearts from deceased individuals to those whose organs have failed or are failing. But surgeons and many of their patients face a growing problem: There are shortages of donated organs available for transplant. Not everyone who needs a transplant can get one. In 2010, there were 105,000 Americans on the waiting list for transplants. Indeed, an inadequate supply of donated organs causes an estimated 6900 deaths in the United States each year.



Why Shortages? Seldom do we hear of shortages of desired goods in market economies. What is different about organs for transplant? One difference is that no legal market exists for human organs. To understand this situation, observe the demand curve D_1 and supply curve S_1 in the accompanying figure. The downward slope of the demand curve tells us that if there were a market for human organs, the quantity of organs demanded would be greater at lower prices than at higher prices. Vertical supply curve S_1 represents the fixed quantity of human organs now donated via consent before death. Because the price of these donated organs is in effect zero, quantity demanded Q_3 exceeds quantity supplied Q_1. The shortage of $Q_3 - Q_1$ is rationed through a waiting list of those in medical need of transplants. Many people die while still on the waiting list.

Use of a Market A market for human organs would increase the incentive to donate organs. Such a market might work like this: An individual might specify in a legal document that he or she is willing to sell one or more usable human organs upon death or near-death. The person could specify where the money from the sale would go, for example, to family, a church, an educational institution, or a charity. Firms would then emerge to purchase organs and resell them where needed for profit. Under such a

Rationing Problem How will the available supply Q_s be apportioned among buyers who want the greater amount Q_d? Should gasoline be distributed on a first-come, first-served basis, that is, to those willing and able to get in line the soonest or stay in line the longest? Or should gas stations distribute it on the basis of favoritism? Since an unregulated shortage does not lead to an equitable distribution of gasoline, the government must establish some formal system for rationing it to consumers. One option is to issue ration coupons, which authorize bearers to purchase a fixed amount of gasoline per month. The rationing system might entail first the printing of coupons for Q_s gallons of gasoline and then the equal distribution of the coupons among consumers so that the wealthy family of four and the poor family of four both receive the same number of coupons.

Black Markets But ration coupons would not prevent a second problem from arising. The demand curve in Figure 3.8 reveals that many buyers are willing to pay more than the ceiling price P_c. And, of course, it is more profitable for gasoline stations to sell at prices above the ceiling. Thus, despite a sizable enforcement bureaucracy that would have to accompany the price controls, *black markets* in which gasoline is illegally bought and sold at prices above the legal limits will flourish. Counterfeiting of ration coupons will also be a problem. And since the price of gasoline is now "set by government," government might face political pressure to set the price even lower.

Rent Controls

About 200 cities in the United States, including New York City, Boston, and San Francisco, have at one time or another enacted rent controls: maximum rents established by law (or, more recently, maximum rent increases for existing tenants). Such laws are well intended. Their goals are to protect low-income families from escalating rents caused by perceived housing shortages and to make housing more affordable to the poor.