Economics
Course: ECON 1211

Demand and Supply Analysis

"Teach a Parrot to Say 'Supply and Demand' and You Have an Economist" --Thomas Carlyle

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learning objectives

- **Discuss the variables that influence demand**

- **Discuss the variables that influence supply**

- **Use a graph to illustrate market equilibrium**
-
- **Use demand and supply graphs to predict changes in prices and quantities**

Some Basic Issues

- Supply and demand have been called the “bread and butter” of economics
- Supply and demand are the two words that economists use most often.
- Supply and demand are the forces that make market economies work
- Modern microeconomics is about supply, demand, and market equilibrium.

MARKETS AND COMPETITION

- A *market* is a group of buyers and sellers of a particular good or service.

- The terms supply and demand refer to the behavior of people . . . as they interact with one another in markets.

MARKETS AND COMPETITION

- Buyers determine *demand*.

- Sellers determine *supply*

- A *competitive market* is a market in which there are many buyers and sellers so that each has a negligible impact on the market price.

DEMAND

- *Quantity demanded* is the amount of a good that buyers are willing and able to purchase.
- Law of Demand
  - The *law of demand* states that, other things equal, the quantity demanded of a good falls when the price of the good rises.


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PRICES

- Absolute Price: the price of a good in monetary terms (Ex: A new Car costs $30,000).
- Relative Price: the price of a good in terms of another good (Ex: A new Car costs 30 computers)
- Relative price is calculated by dividing the absolute price of one product with the absolute price of another product

  (Ex: A Car costs $30,000; A Computer costs $1,000; The relative cost of a Car is 30 Computers)

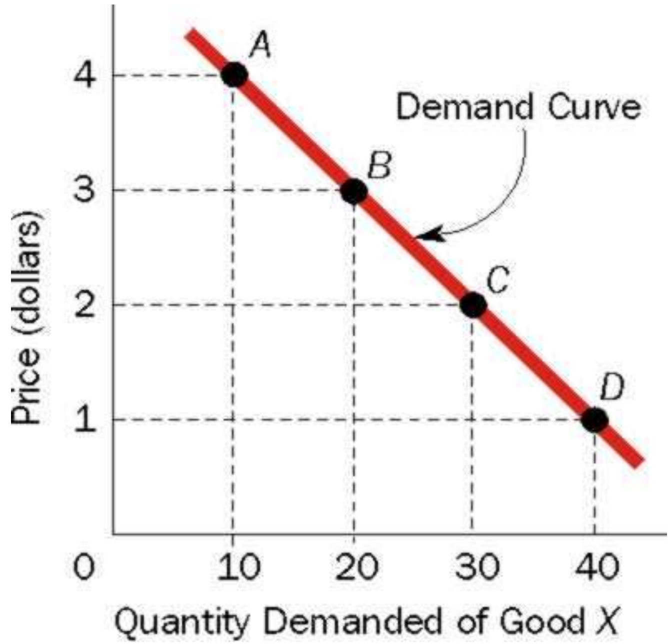
What Explains the Law of Demand?

- ✓**Substitution effect** The change in the quantity demanded of a good that results from a change in price, making the good more or less expensive relative to other goods that are substitutes. People substitute lower-priced goods for higher-priced goods.
- ✓**Income effect** The change in the quantity demanded of a good that results from the effect of a change in the good's price on consumers' purchasing power.
- ✓ **The Law of Diminishing Utility:** for a given time period, the marginal utility or satisfaction gained by consuming equal successive units of a good will decline as the amount consumed increases.

The Demand Schedule and Curve

Demand Schedule for Good X		
Price (dollars)	**Quantity Demanded**	**Point in Part (b)**
4	10	A
3	20	B
2	30	C
1	40	D

(a)

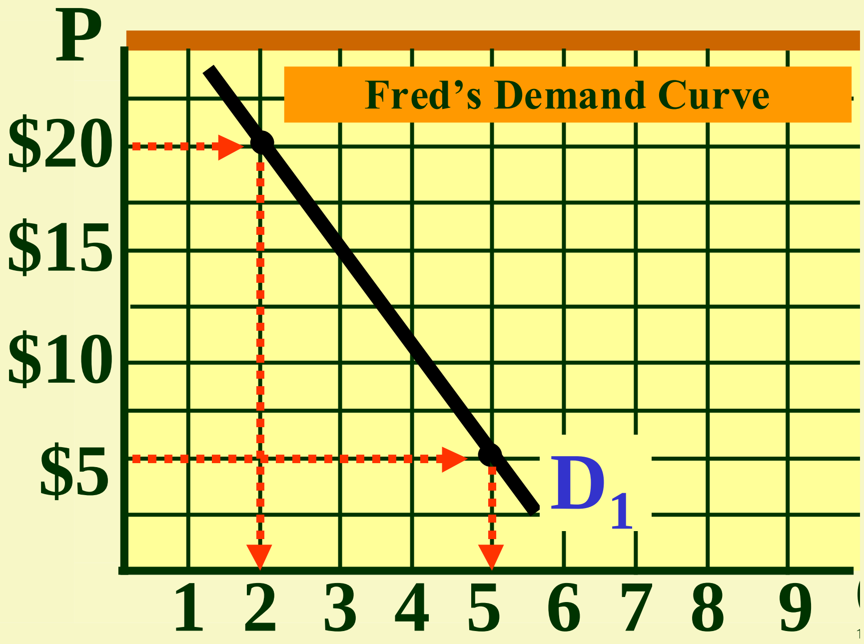


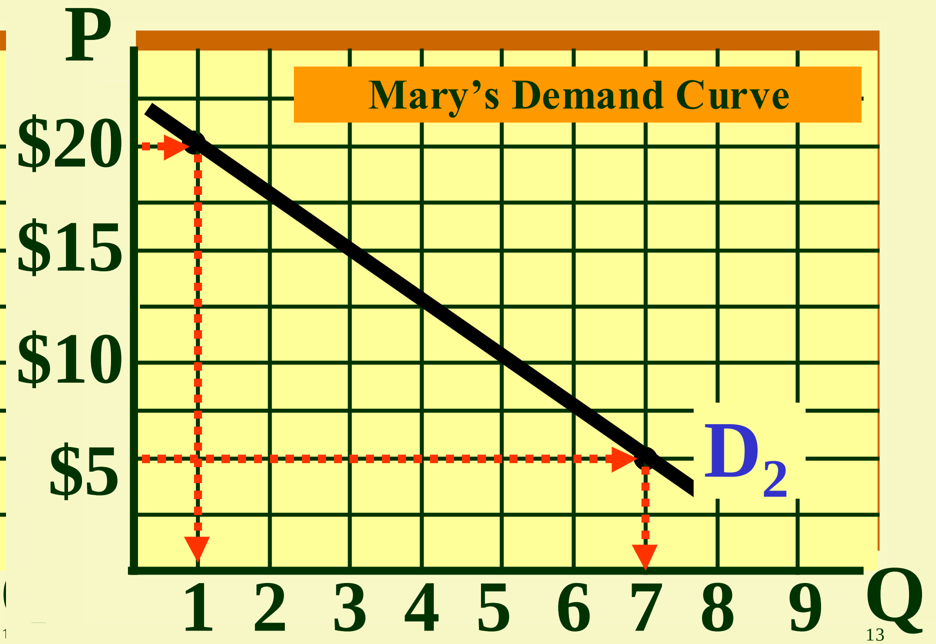
(b)

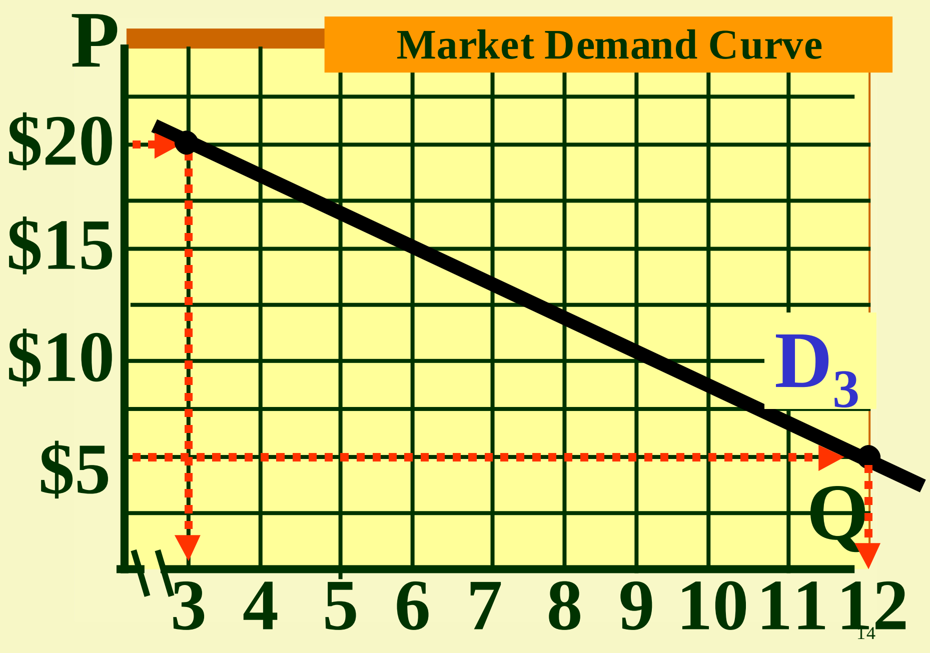
- Market demand refers to the sum of all individual demands for a particular good or service.
- Graphically, individual demand curves are summed horizontally to obtain the market demand curve.

Market Demand Schedule for Compact Discs

Price	Fred		Mary		Total Demanded
$25	1	+	0	=	1
$20	2		1		3
$15	3		3		6
$10	4		5		9
$5	5		7		12


Fred's Demand Curve
P
$20
$15
$10
$5
D1
1 2 3 4 5 6 7 8 9


Mary's Demand Curve
P
$20
$15
$10
$5
D2
1 2 3 4 5 6 7 8 9
Q
13


Market Demand Curve
P
$20
$15
$10
$5
D3
Q
3 4 5 6 7 8 9 10 11 12
14

Variables That Shift Market Demand

Many variables other than price can influence market demand.

- ***Income***
  - **Normal good** A good for which the demand increases as income rises and decreases as income falls.
  - **Inferior good** A good for which the demand increases as income falls and decreases as income rises.

Variables That Shift Market Demand

- ***Price of related goods***

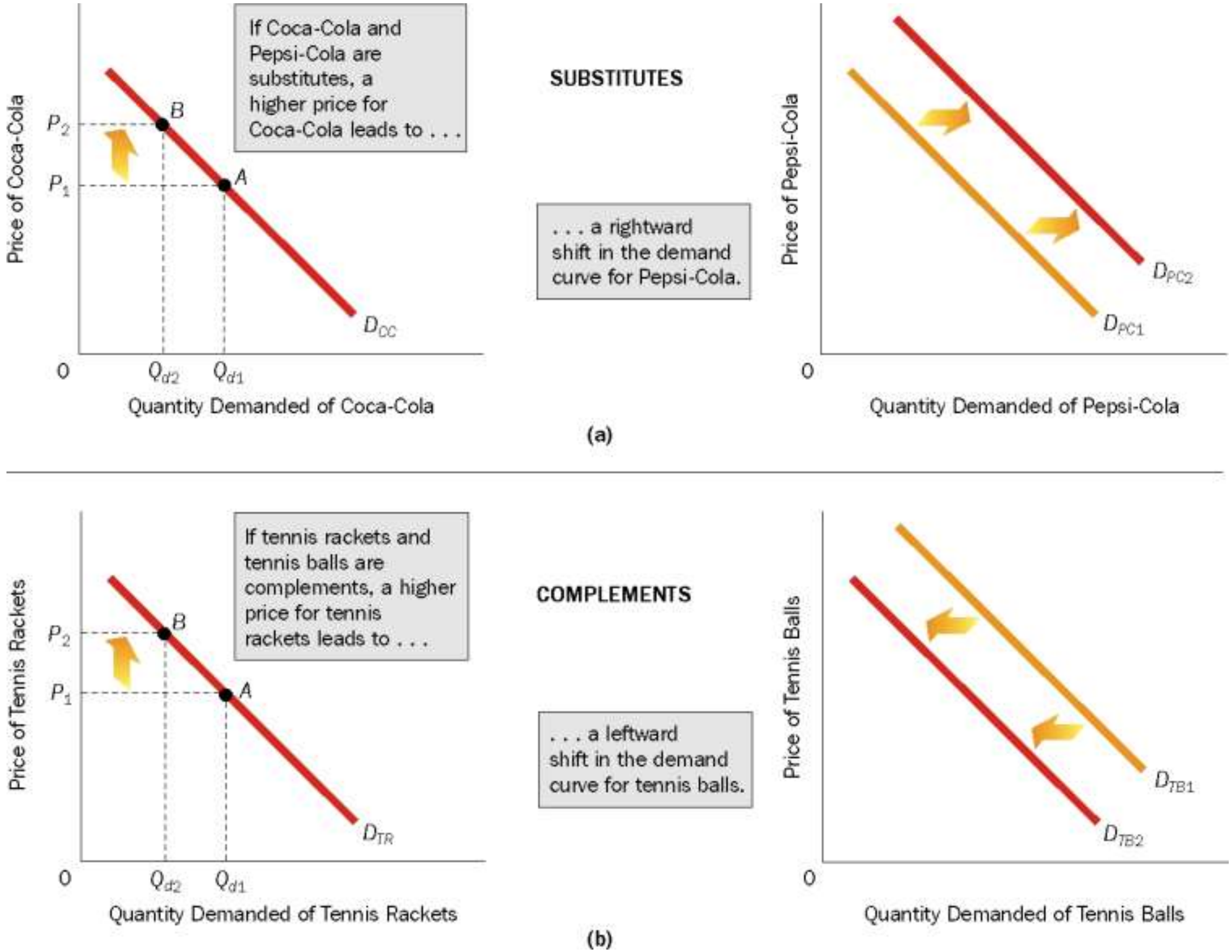
• **Substitutes** Goods and services that can be used for the same purpose.

Complements Goods and services that are used together.

- ***Tastes***

Consumers can be influenced by an advertising campaign for a product.

Exhibit 4 Substitutes and Complements



Variables That Shift Market Demand

- ***Population and demographics***

Demographics The characteristics of a population with respect to age, race, and gender.

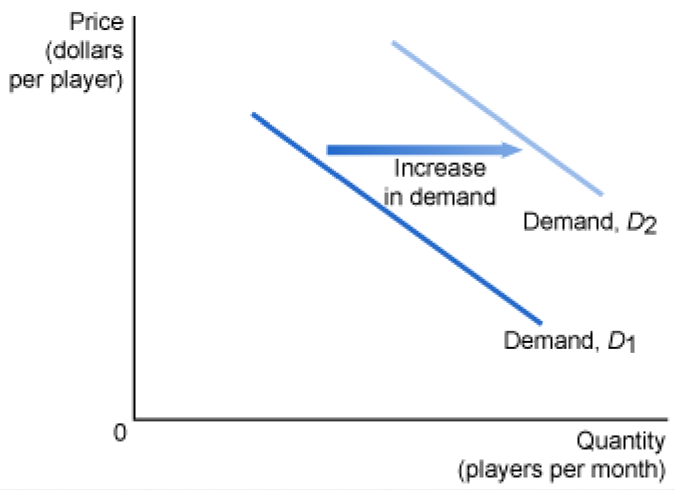
- ***Expected Future Prices***

Consumers choose not only which products to buy but also when to buy them.

Variables That Shift Market Demand

Variables That Shift Market Demand Curves

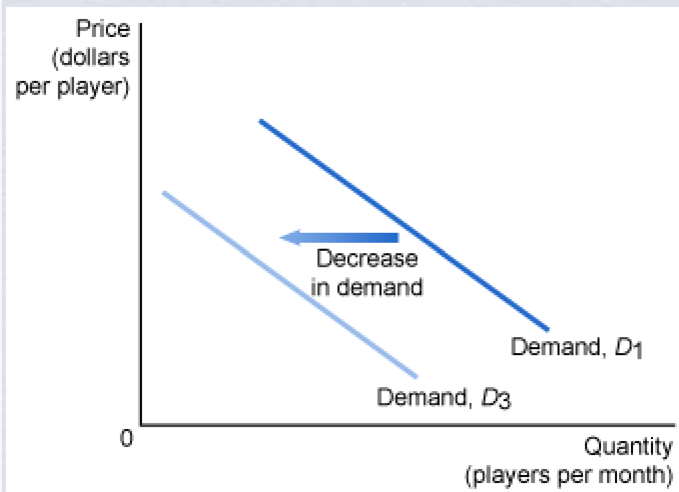
An increase in ...	Shifts the demand curve to the right ...	Because ...
income (and the good is normal)		consumers spend more of their higher income on the good.
the price of a substitute good		consumers buy less of the substitute good and more of this good.
taste for the good		consumers are willing to buy a larger quantity of the good at every price.
population		additional consumers result in a greater quantity demanded at every price.
the expected price of the good in the future		consumers buy more of the good today in order to avoid the higher price in the future.



Variables That Shift Market Demand

TABLE

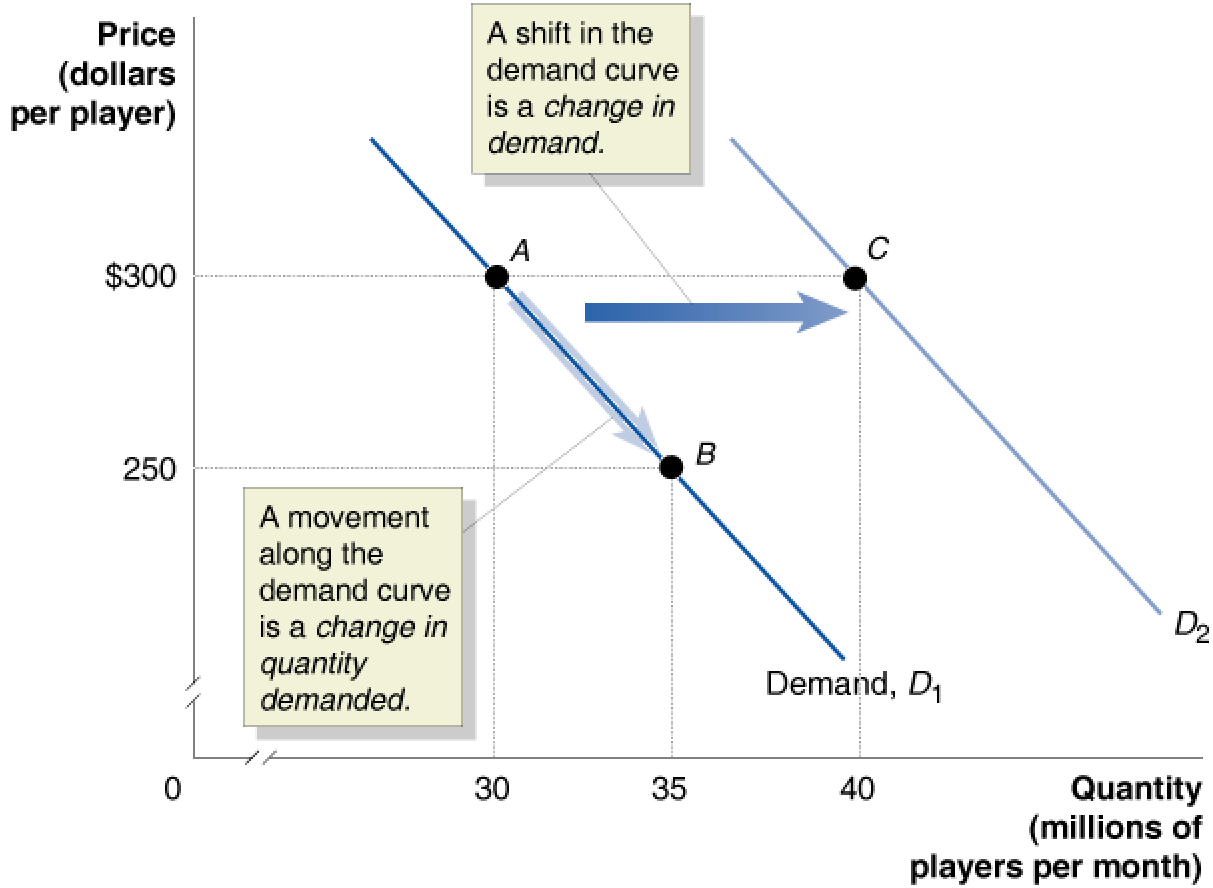
Variables That Shift Market Demand Curves (continued)

An increase in ...	Shifts the demand curve to the left ...	Because ...
income (and the good is inferior)		consumers spend less of their higher income on the good.
the price of a complementary good		consumers buy less of the complementary good and less of this good.

A Change in Demand versus a Change in Quantity Demanded

FIGURE

A Change in Demand versus a Change in the Quantity Demanded



The Supply Side of the Market

- *Quantity supplied* is the amount of a good that sellers/firms are willing and able to sell.

- Law of Supply
  - The *law of supply* states that, other things equal, the quantity supplied of a good rises when the price of the good rises and vice versa.

The Supply Side of the Market

Supply Schedules and Supply Curves

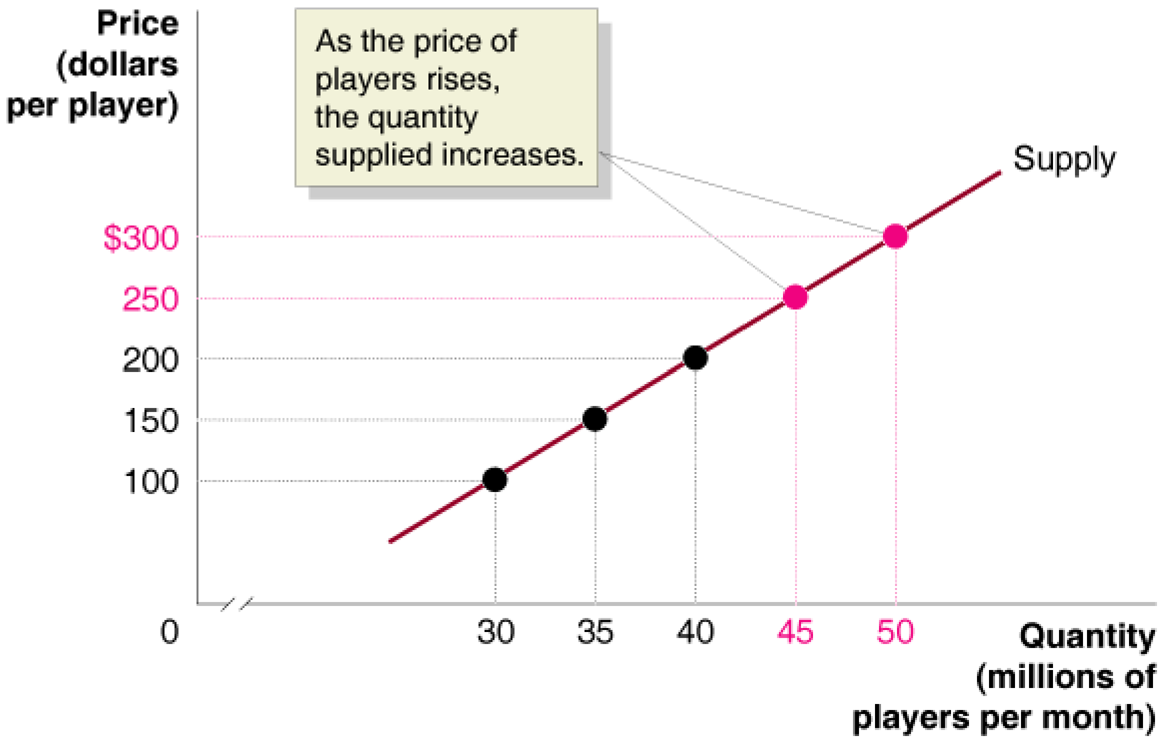
Supply schedule A table that shows the relationship between the price of a product and the quantity of the product supplied.

Supply curve A curve that shows the relationship between the price of a product and the quantity of the product supplied.

The Supply Side of the Market

Supply Schedules and Supply Curves

Supply Schedule	
Price (dollars per player)	Quantity (millions of players per month)
$300	50
250	45
200	40
150	35
100	30



The Supply Side of the Market

Law of supply The rule that, holding everything else constant, increases in price cause increases in the quantity supplied, and decreases in price cause decreases in the quantity supplied.

- Explanation
  - Price acts as an incentive to producers
  - At some point, costs will rise

The Supply Side of the Market

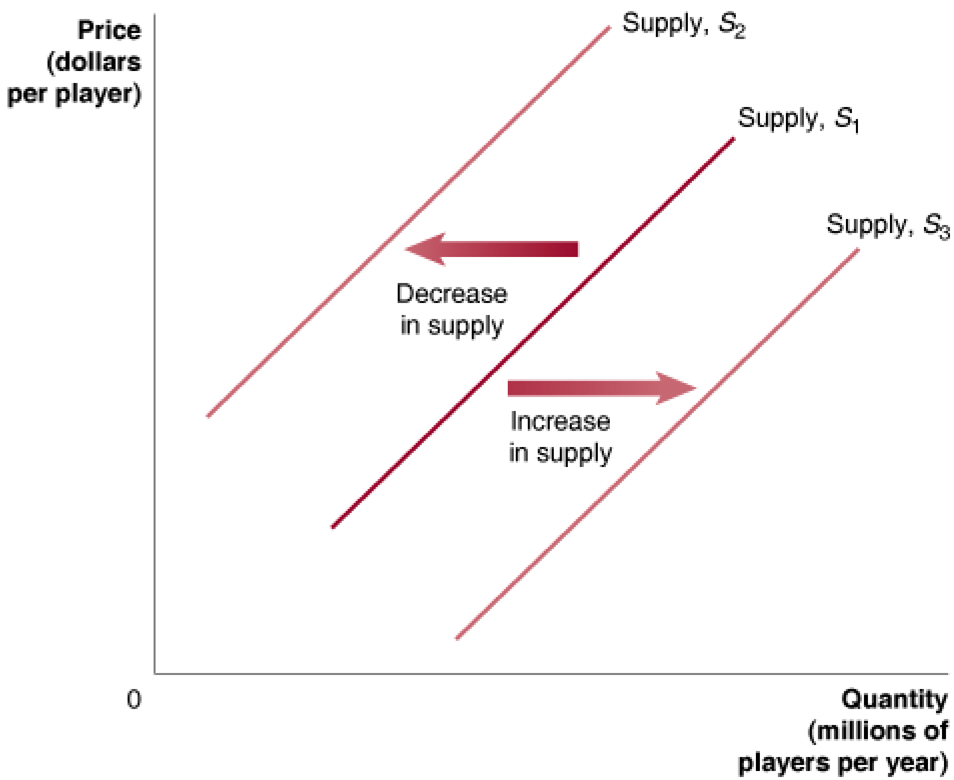
Law of supply: Explanation

- Producers are willing to produce and sell more of their product at a high price than at a low price.
- There is a direct relationship between price and quantity supplied.
- Given product costs, a higher price means greater profits and thus an incentive to increase the quantity supplied.
- Beyond some level of output, producers usually encounter increasing costs per added unit of output.

The Supply Side of the Market

FIGURE

Shifting the Supply Curve



The Supply Side of the Market

Variables That Shift Supply

The following are the most important variables that shift supply:

- **Prices of inputs**
- **Technological change**

Technological change A positive or negative change in the ability of a firm to produce a given level of output with a given quantity of inputs.

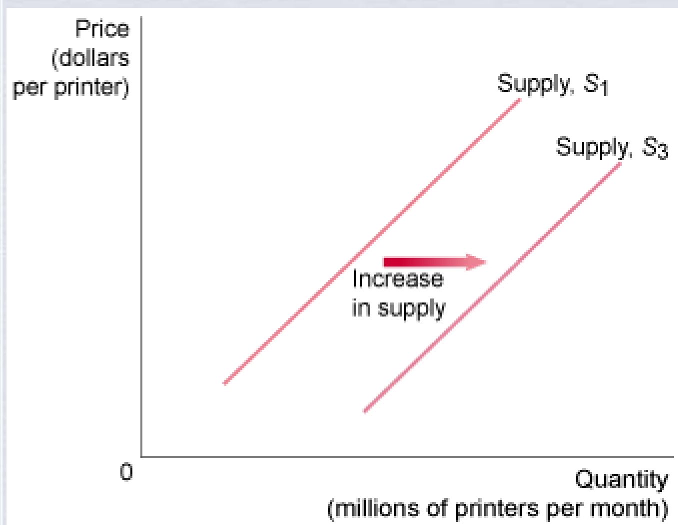
- **Prices of substitutes in production**
- **Number of firms in the market**
- **Expected future prices**

The Supply Side of the Market

Variables That Shift Supply

TABLE

Variables That Shift Market Supply Curves

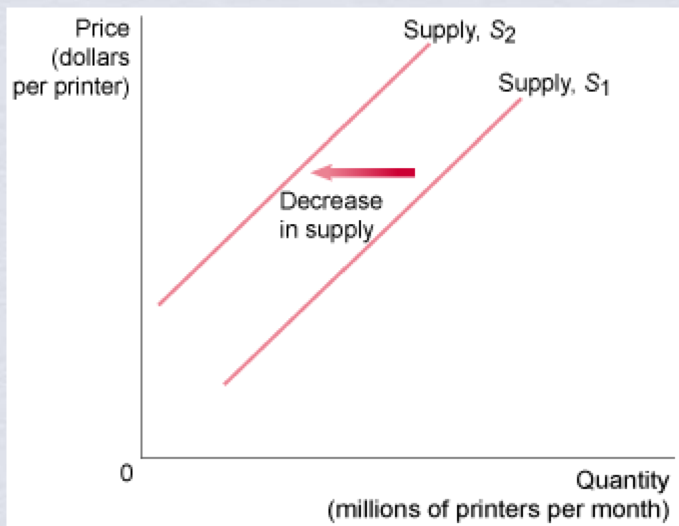
An increase in ...	Shifts the supply curve to the right ...	Because ...
productivity		the costs of producing the good fall.
the number of firms in the market		additional firms result in a greater quantity supplied at every price.

The Supply Side of the Market

Variables That Shift Supply

TABLE 3

Variables That Shift Market Supply Curves (continued)

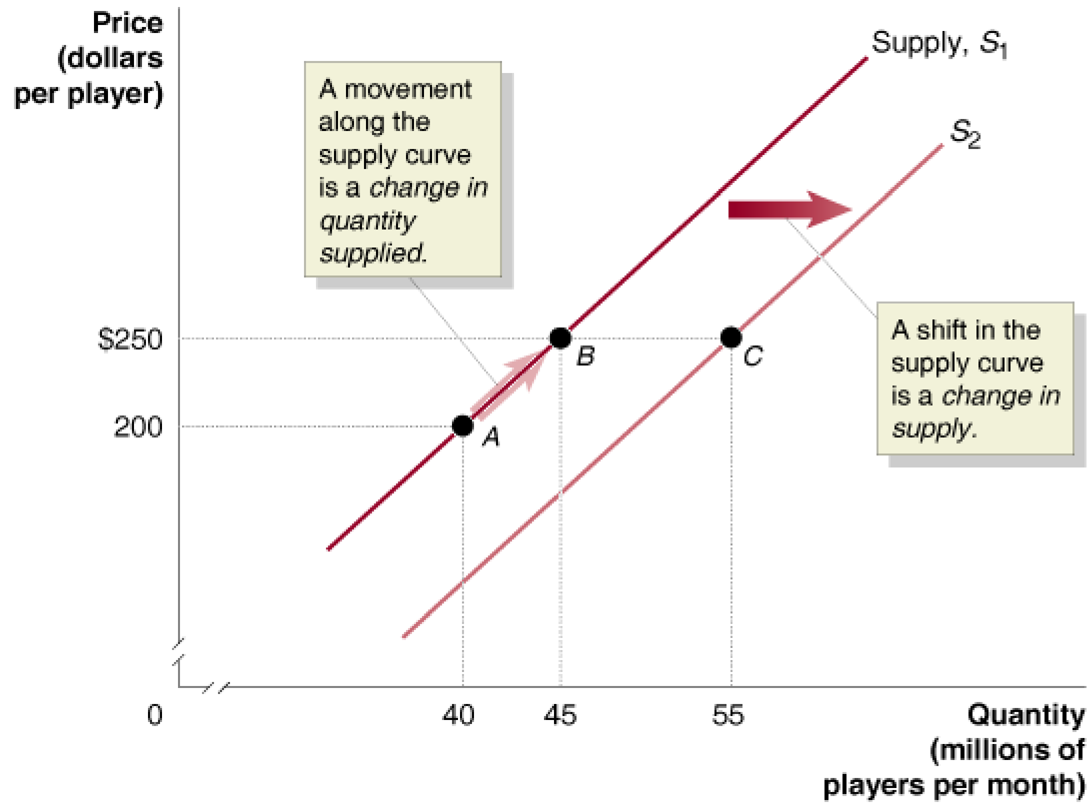
An increase in ...	Shifts the supply curve to the left ...	Because ...
the price of an input		the costs of producing the good rise.
the price of a substitute in production		more of the substitute is produced and less of the good is produced.
the expected future price of the product		less of the good will be offered for sale today to take advantage of the higher price in the future.

The Supply Side of the Market

A Change in Supply versus a Change in Quantity Supplied

FIGURE

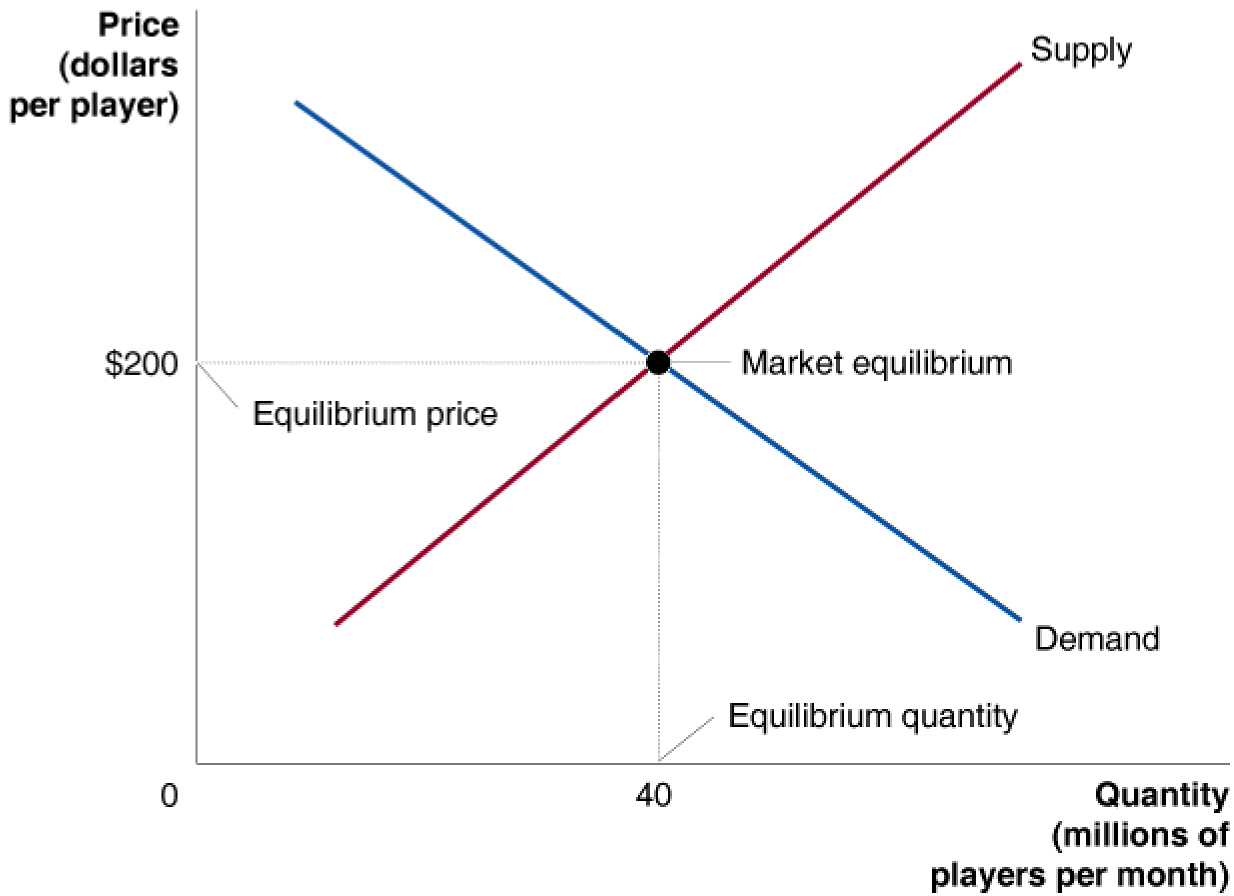
A Change in Supply versus a Change in the Quantity Supplied



Market Equilibrium: Putting Demand and Supply Together

FIGURE 3-7

Market Equilibrium



Market Equilibrium: Putting Demand and Supply Together

Market equilibrium A situation in which quantity demanded equals quantity supplied.

Competitive market equilibrium A market equilibrium with many buyers and many sellers.

Market Equilibrium: Putting Demand and Supply Together

How Markets Eliminate Surpluses and Shortages

Surplus A situation in which the quantity supplied is greater than the quantity demanded.

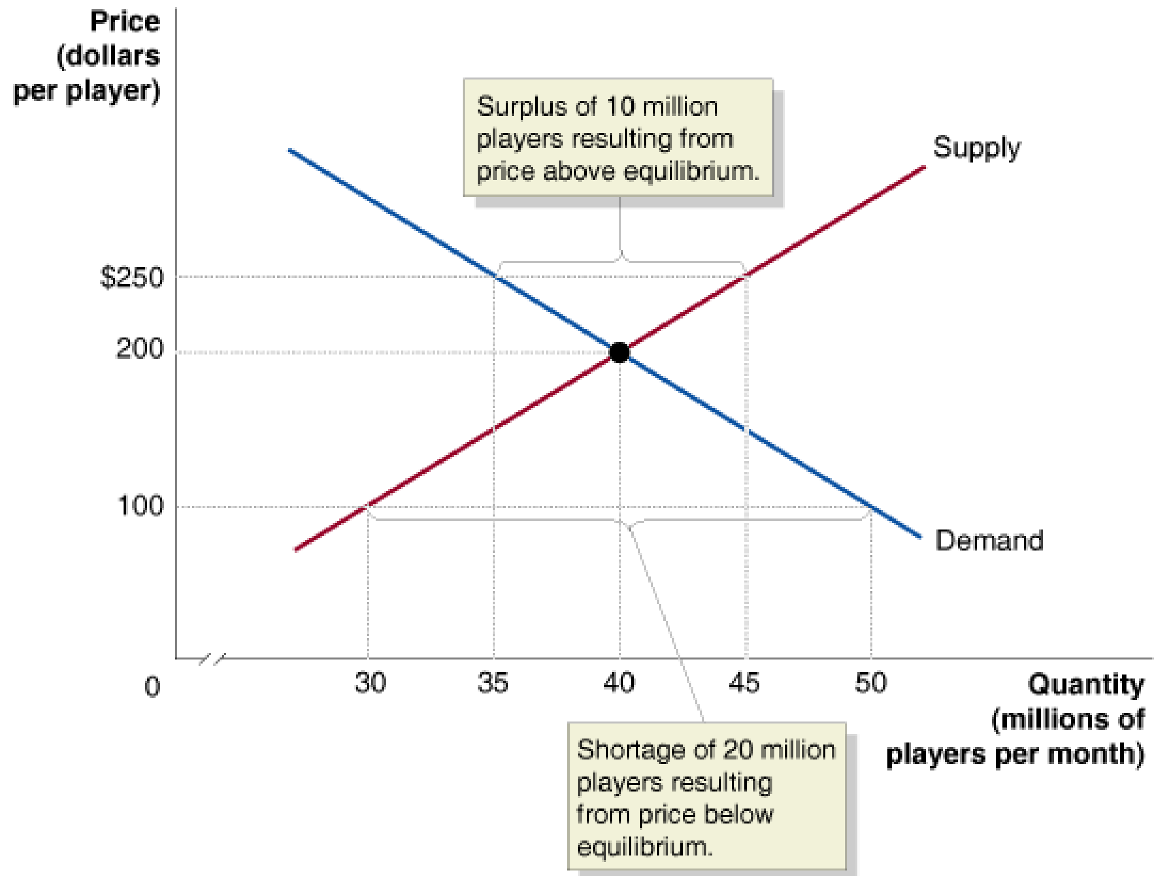
Shortage A situation in which the quantity demanded is greater than the quantity supplied.

Market Equilibrium: Putting Demand and Supply Together

How Markets Eliminate Surpluses and Shortages

FIGURE

The Effect of Surpluses and Shortages on the Market Price



Market Equilibrium: Putting Demand and Supply Together

Demand and Supply Both Count

Always keep in mind that it is the interaction of demand and supply that determines the equilibrium price.

Neither consumers nor firms can dictate what the equilibrium price will be.

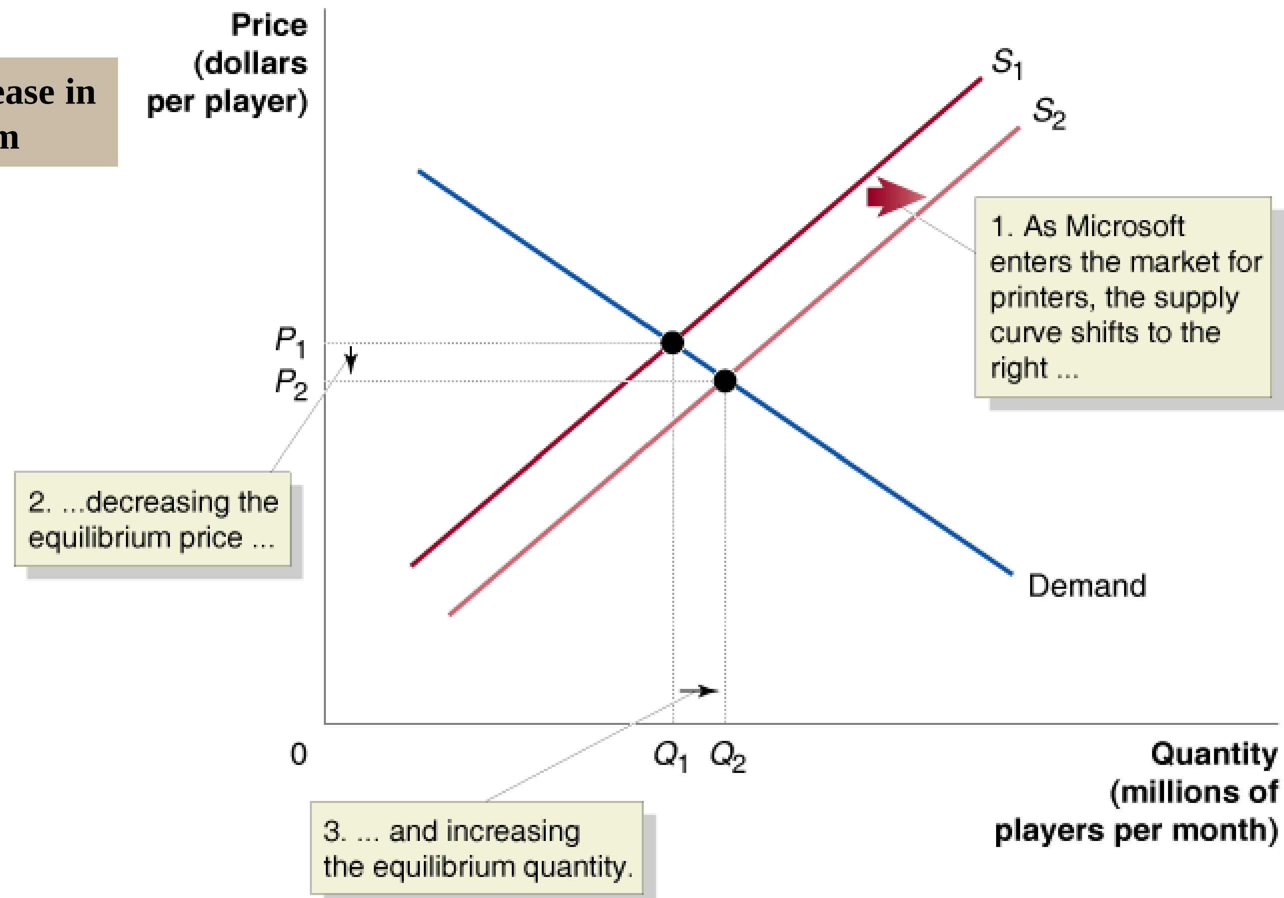
No firm can sell anything at any price unless it can find a willing buyer, and no consumer can buy anything at any price without finding a willing seller.

The Effect of Demand and Supply Shifts on Equilibrium

The Effect of Shifts in Supply on Equilibrium

FIGURE

The Effect of an Increase in Supply on Equilibrium



Making the Connection

The Falling Price of LCD Televisions