3 Demand and Supply

After studying this chapter, you will be able to

- Describe a competitive market and think about price as an opportunity cost
- Explain the influences on demand
- Explain the influences on supply
- Explain how demand and supply determine prices and quantities bought and sold
- Use the demand and supply model to make predictions about changes in prices and quantities

- **What makes the prices of oil and gasoline double in just one year?**
- **Some prices rocket, some slide, and some roller coaster.**
- **This chapter explains how markets determine prices and why prices change.**

Markets and Competition

- A **market** is a group of buyers and sellers of a particular product.
- A **competitive market** is one with many buyers and sellers, each has a negligible effect on price.
- In a **perfectly competitive** market:
  - All goods exactly the same
  - Buyers & sellers so numerous that no one can affect market price – each is a "**price taker**"
- In this chapter, we assume markets are perfectly competitive.

Demand

- If you demand something, then you
- 1. Want it,
- 2. Can afford it, and
- 3. Have made a definite plan to buy it.
- *Wants* are the unlimited desires or wishes people have for goods and services. Demand reflects a decision about which wants to satisfy.
- The **quantity demanded** of a good or service is the amount that consumers plan to buy during a particular time period, and at a particular price.

- **Preferences**
  your wants and their intensities
- **Demand**
  consumers’ willingness and ability to pay for
  particular product/service

Demand

- Demand Curve and Demand Schedule
  - The term **demand** refers to the entire relationship between the price of the good and quantity demanded of the good.
  - A **demand curve** shows the relationship between the quantity demanded of a good and its price when all other influences on consumers' planned purchases remain the same.

WHAT CAN CHANGE DEMAND?

Quantity demanded is changed only by a change in price.

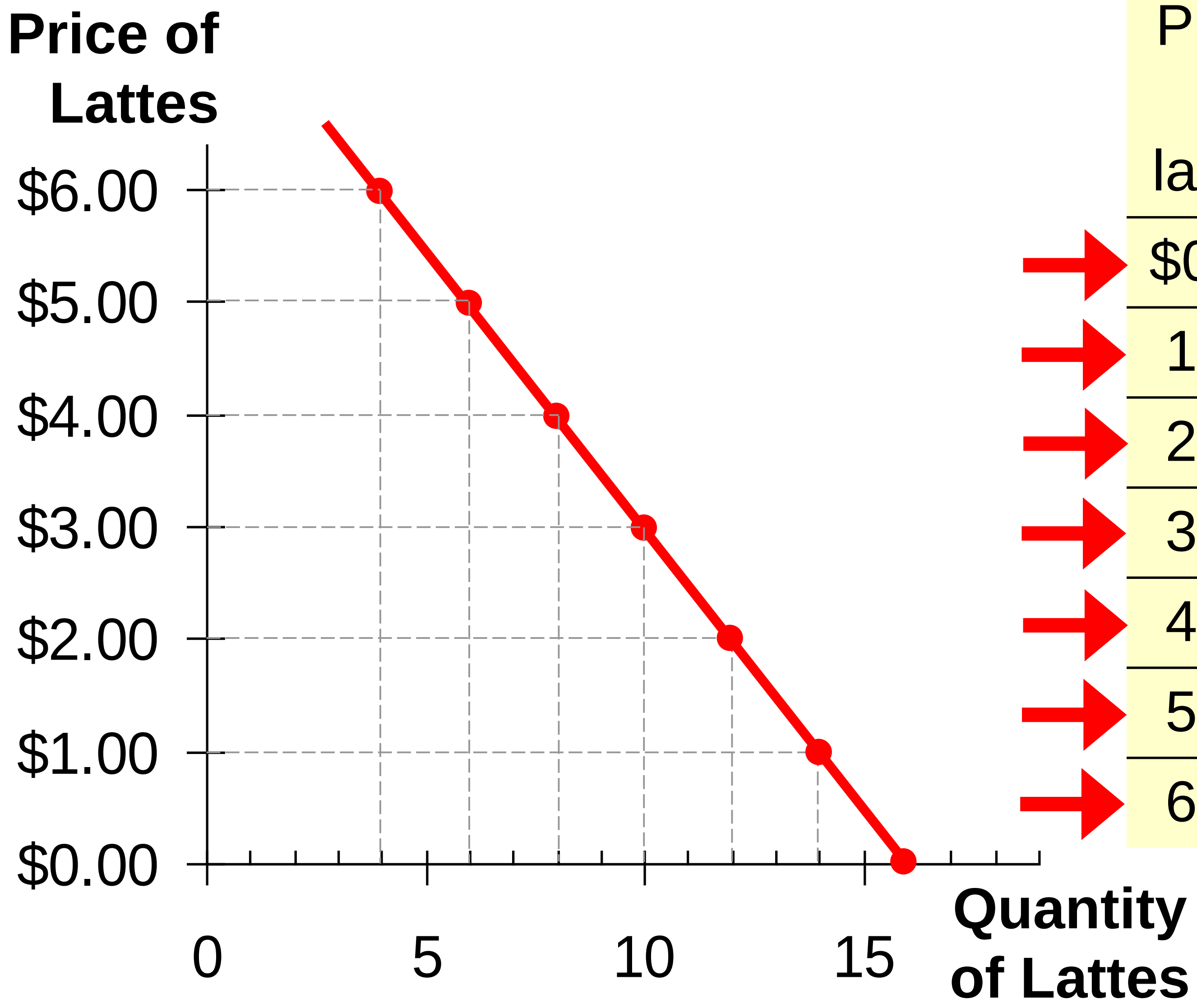
Demand is changed by all other influences on consumer choice.

The Demand Schedule

- **Demand schedule**: a table that shows the relationship between the price of a good and the quantity demanded
- Example: Helen's demand for lattes.
  - Notice that Helen's preferences obey the Law of Demand.

Price of lattes	Quantity of lattes demanded
$0.00	16
1.00	14
2.00	12
3.00	10
4.00	8
5.00	6
6.00	4

Helen's Demand Schedule & Curve



Price of lattes	Quantity of lattes demanded
$0.00	16
1.00	14
2.00	12
3.00	10
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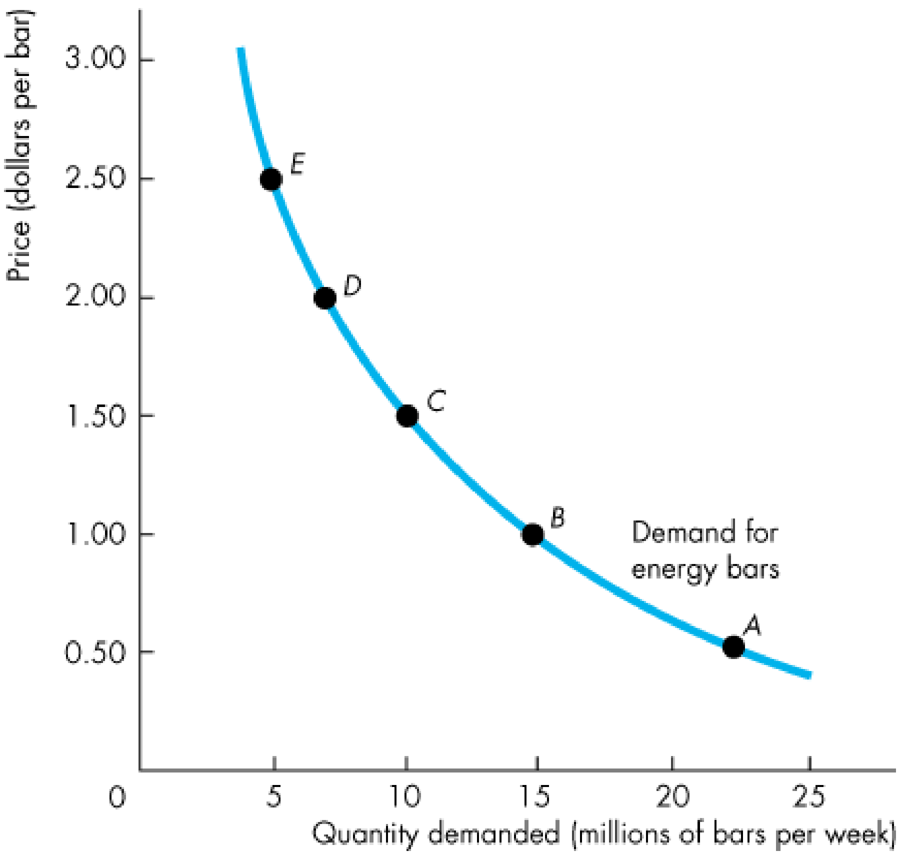
Demand

- Figure 3.1 shows a demand curve for energy bars.
- A rise in the price, other things remaining the same, brings a decrease in the quantity demanded and a movement along the demand curve.



Demand

- The Law of Demand
  - The **law of demand** states:
  - Other things remaining the same, the higher the price of a good, the smaller is the quantity demanded; and
  - the lower the price of a good, the larger is the quantity demanded.
  - The law of demand results from
    - Substitution effect
    - Income effect

Demand

– **Substitution effect**

– When the relative price (opportunity cost) of a good or service rises, people seek substitutes for it, so the quantity demanded of the good or service decreases.

– **Income effect**

– When the price of a good or service rises relative to income, people cannot afford all the things they previously bought, so the quantity demanded of the good or service decreases.

- **Market demand**
  sum of demands of all individuals willing and able to buy a particular product/service

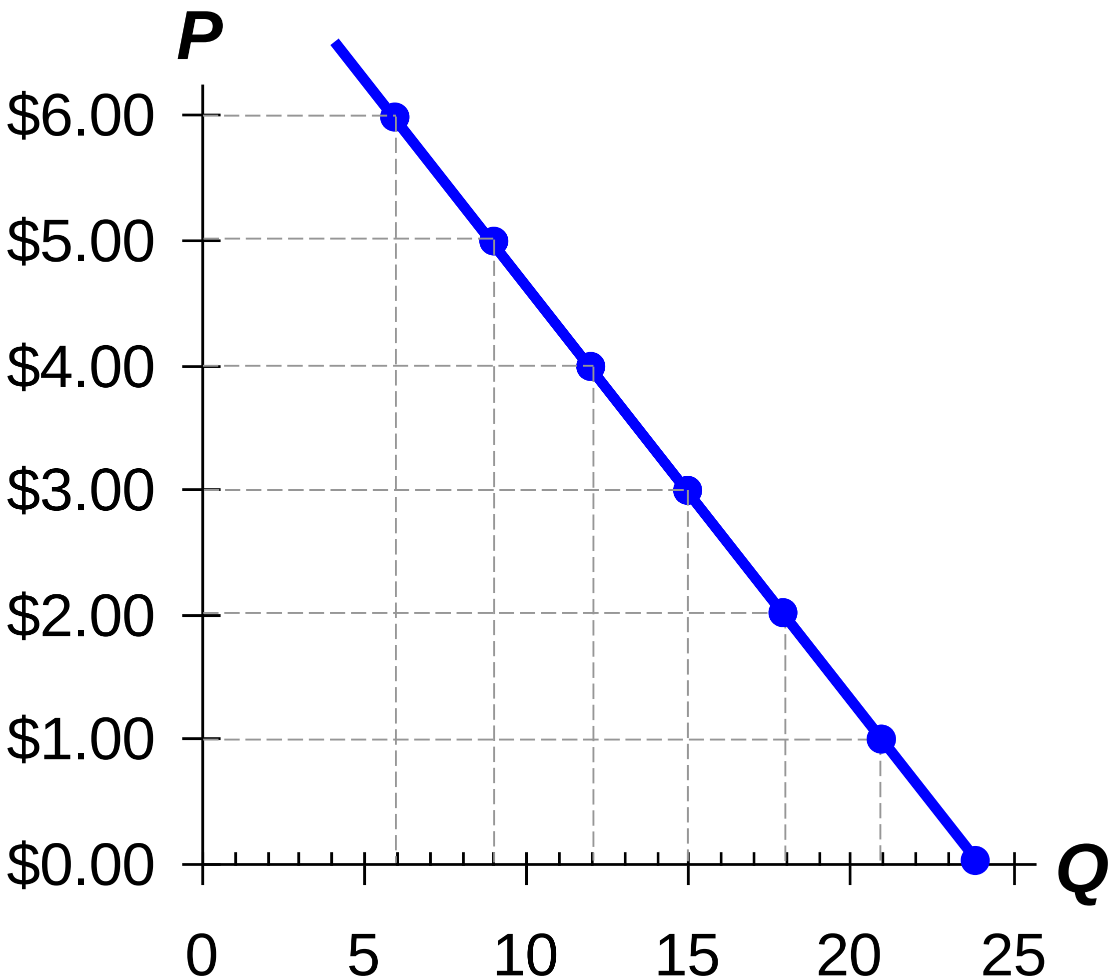
- **Law of demand**
  if the price of a product/service rises, quantity demanded decreases

Market Demand versus Individual Demand

- The quantity demanded in the market is the sum of the quantities demanded by all buyers at each price.
- Suppose Helen and Ken are the only two buyers in the Latte market. (Q^d = quantity demanded)

Price	Helen's Q^d		Ken's Q^d		Market Q^d
$0.00	16	+	8	=	24
1.00	14	+	7	=	21
2.00	12	+	6	=	18
3.00	10	+	5	=	15
4.00	8	+	4	=	12
5.00	6	+	3	=	9
6.00	4	+	2	=	6

The Market Demand Curve for Lattes



P	Q^d (Market)
$0.00	24
1.00	21
2.00	18
3.00	15
4.00	12
5.00	9
6.00	6

Demand

- A Change in Demand
  - When some influence on buying plans other than the price of the good changes, there is a **change in demand** for that good.
  - The quantity of the good that people plan to buy changes at each and every price, so there is a new demand curve.
  - When demand *increases*, the demand curve shifts *rightward*.
  - When demand decreases, the demand curve shifts *leftward*.

Demand

– Six main factors that change demand are

- The prices of related goods
- Expected future prices
- Income
- Expected future income and credit
- Population
- Preferences

Demand

- **Prices of Related Goods**
- A **substitute** is a good that can be used in place of another good.
- A **complement** is a good that is used in conjunction with another good.
- When the price of substitute for an energy bar rises or when the price of a complement of an energy bar falls, the demand for energy bars increases.

Demand

– **Expected Future Prices**

– If the price of a good is expected to rise in the future, current demand for the good increases and the demand curve shifts rightward.

– **Income**

– When income increases, consumers buy more of *most* goods and the demand curve shifts rightward.

– A **normal good** is one for which demand increases as income increases.

– An **inferior good** is a good for which demand decreases as income increases.

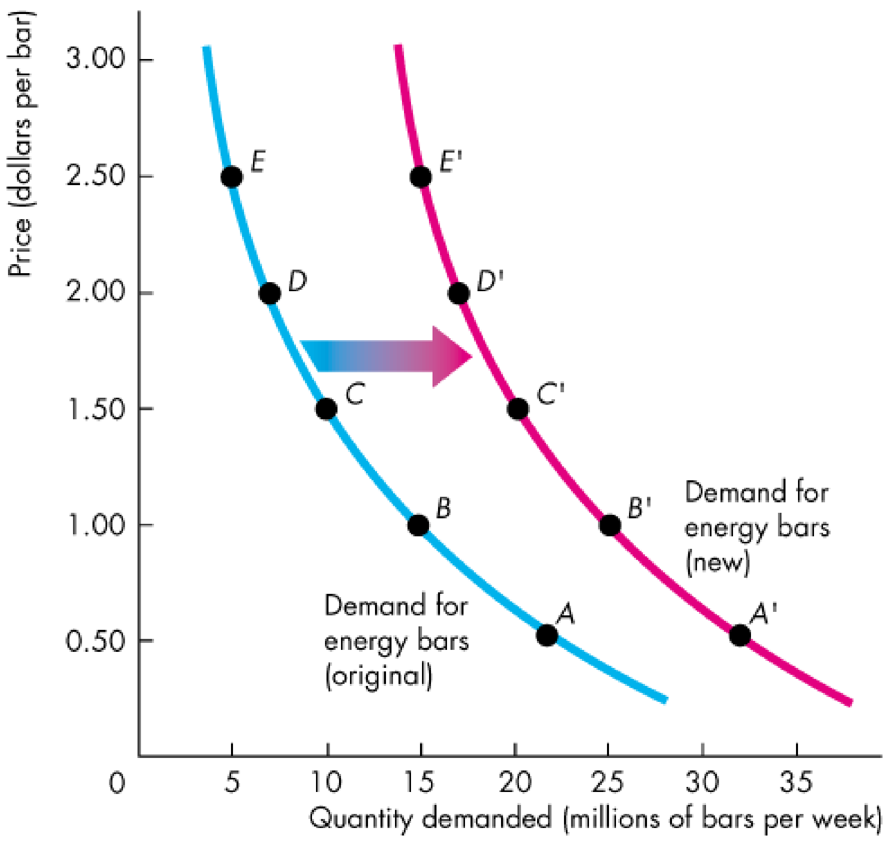
Demand

- **Expected Future Income and Credit**
- When income is expected to increase in the future or when credit is easy to obtain, the demand might increase now.
- **Population**
- The larger the population, the greater is the demand for all goods.
- **Preferences**
- People with the same income have different demands if they have different preferences.

Demand

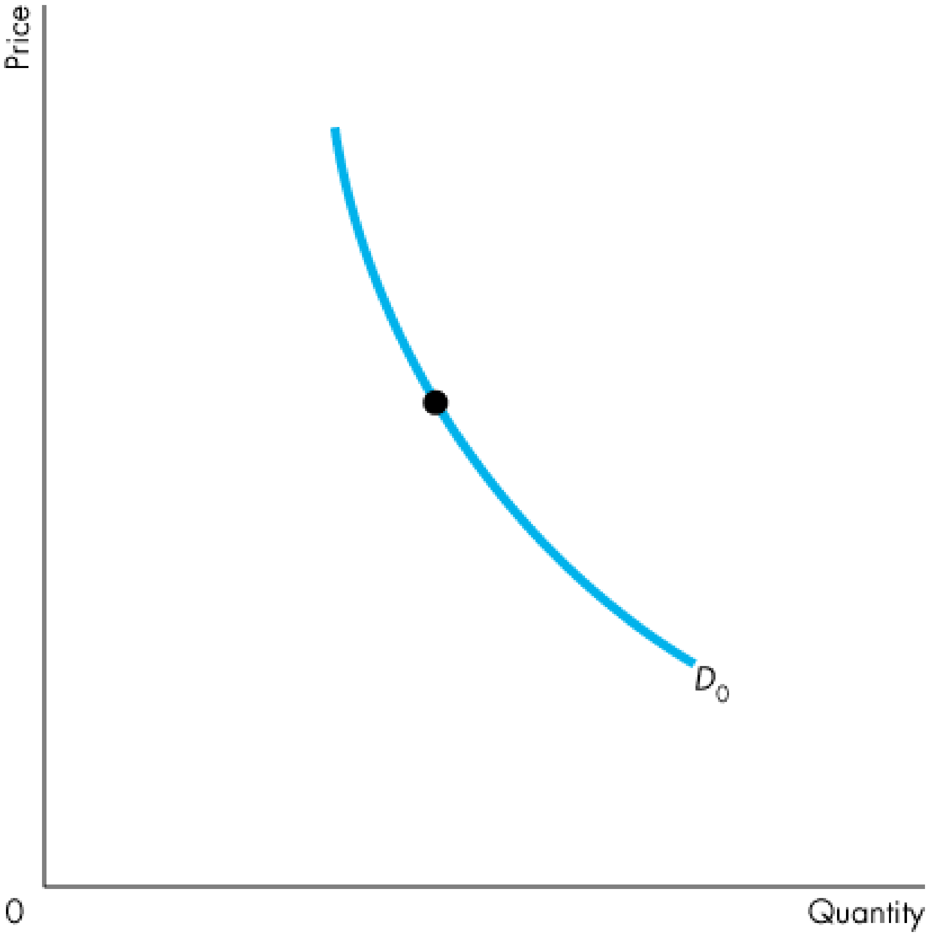
– Figure 3.2 shows an increase in demand.

– Because an energy bar is a normal good, an increase in income increases the demand for energy bars.



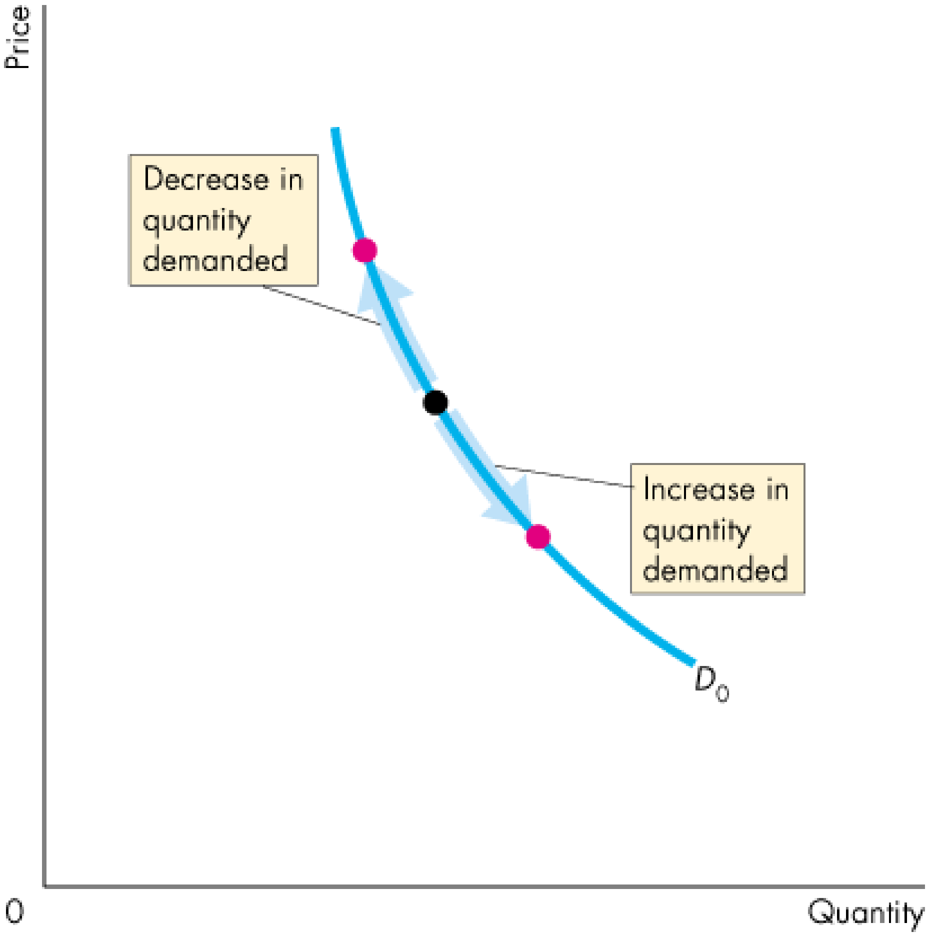
Demand

- A Change in the Quantity Demanded Versus a Change in Demand
  - Figure 3.3 illustrates the distinction between a change in demand and a change in the quantity demanded.



Demand

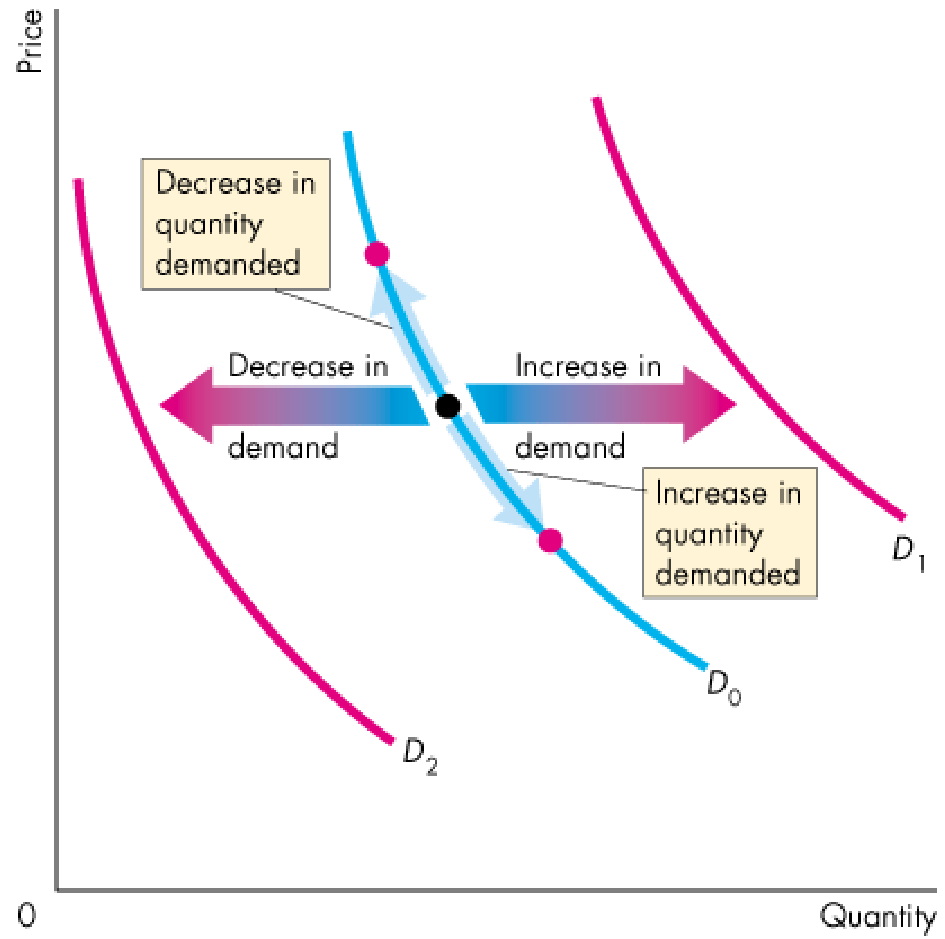
- **A Movement along the Demand Curve**
- When the price of the good changes and everything else remains the same, the quantity demanded changes and there is a movement along the demand



Demand

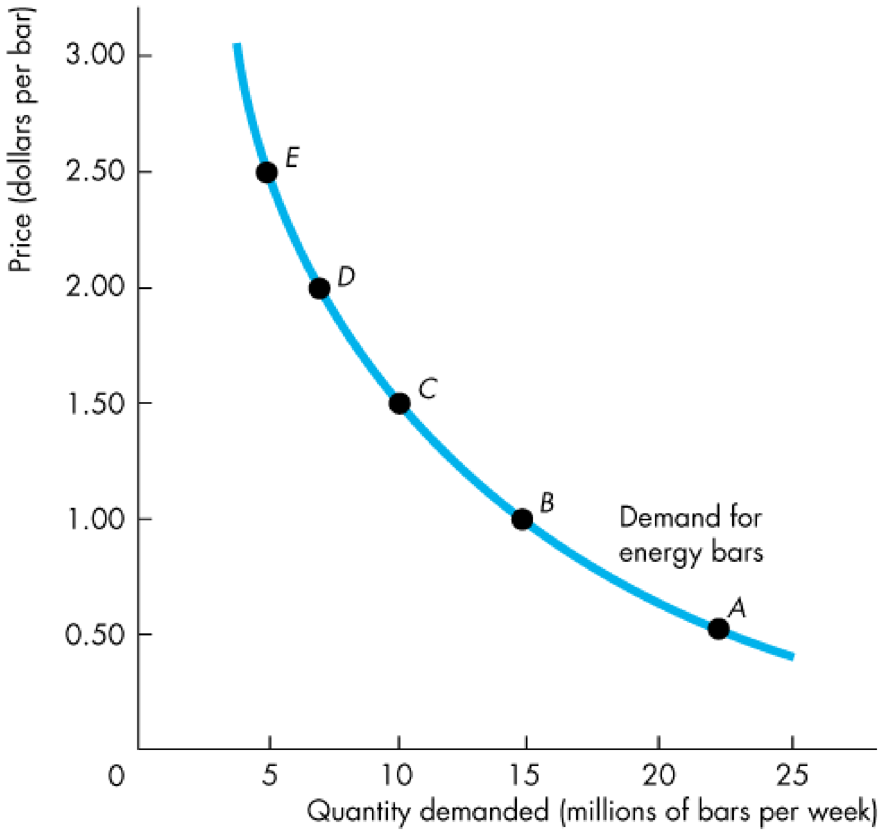
– **A Shift of the Demand Curve**

– If the price remains the same but one of the other influences on buyers' plans changes, demand changes and the demand curve shifts.



Demand

- **Willingness and Ability to Pay**
- A demand curve is also a *willingness-and-ability-to-pay* curve.
- The smaller the quantity available, the higher is the price that someone is willing to pay for another unit.



Markets and Prices

- A *market* is any arrangement that enables buyers and sellers to get information and do business with each other.
- A **competitive market** is a market that has many buyers and many sellers so no single buyer or seller can influence the price.
- The **money price** of a good is the amount of money needed to buy it.
- The **relative price** of a good—the ratio of its money price to the money price of the next best alternative good—is its *opportunity cost*.