

# Chapter 3

## Demand and Supply

### Markets and Prices

- A **competitive market** is a market that has many buyers and many sellers, so that no single buyer or seller can influence the price.
- The ratio of one price to another is called a **relative price**, and a relative price is an opportunity cost.

### Demand

- The **quantity demanded** is the amount of a good or service that consumers plan to buy in a given time period at a particular price.
- The law of demand states **Other things remaining the same, the higher the price of a good, the lower is the quantity demanded; and the lower the price of a good, the greater is the quantity demanded.**
- **Demand** refers to the entire relationship between the price of the good and the quantity demanded of the good.
- Demand is illustrated by a:
  - Demand schedule
  - Demand curve
- 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.
- When any factor that influences buying plans other than the price of the good changes, there is a **change in demand**.
- There are six key factors that change demand.
  1. The prices of related goods
    - A **substitute** is a good that can be used in place of another good. If the price of a substitute rises, people buy less of the substitute and more of the other good.
    - A **complement** is a good that is used in conjunction with another good. If the price of a donut, a complement of coffee rises, people buy less coffee.
  2. Expected future prices

### 3. Income

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

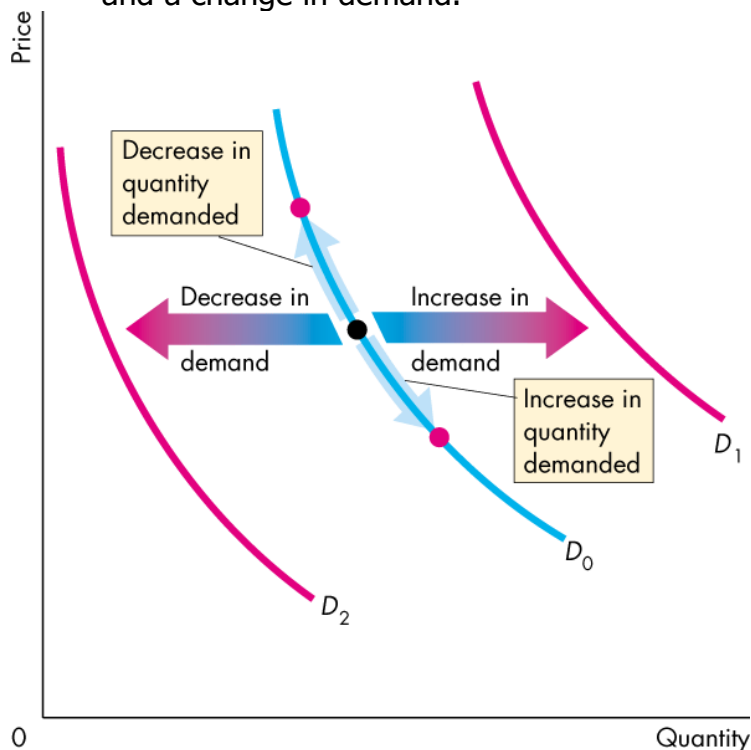
An **inferior good** is one for which demand decreases as income increases.

### 4. Expected future income and credit

### 5. Population

### 6. Preferences

- When demand increases, the demand curve shifts rightward and when demand decreases, the demand curve shifts leftward.
- The figure below shows the distinction between a change in the quantity demanded and a change in demand.

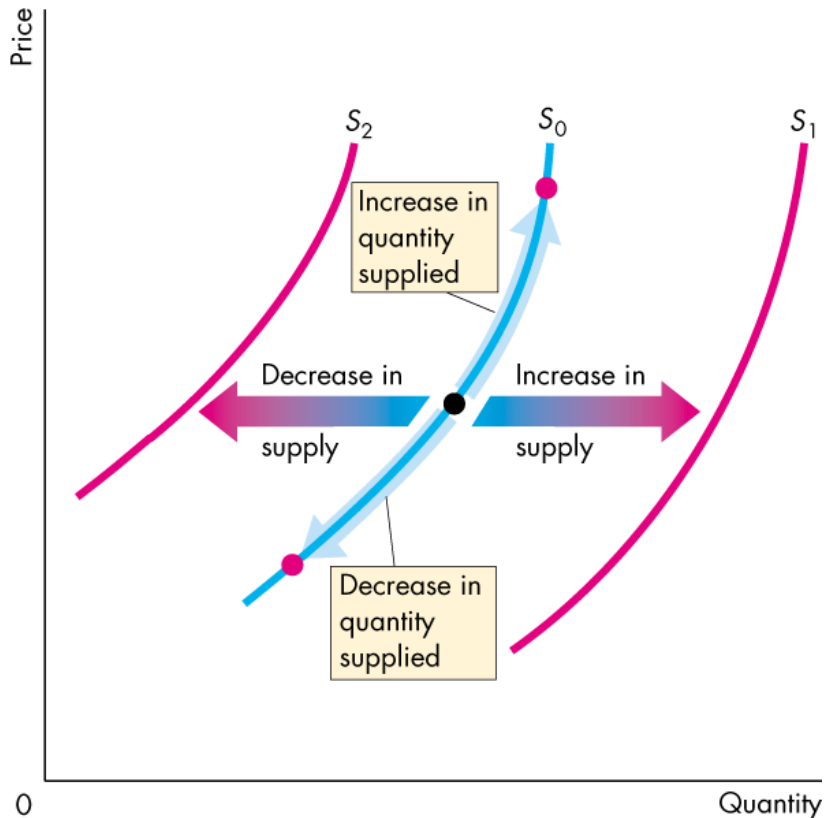


- When the price of a good changes, there is a **change in the quantity demanded**, which is shown by a movement along the demand curve.
- When any other influence on buying plans changes, there is a change in demand, which is shown by a shift of the demand curve.

## Supply

- The **quantity supplied** of a good or service is the amount that producers plan to sell during a given time period at a particular price.
- The law of supply states **Other things remaining the same, the higher the price of a good, the greater is the quantity supplied; and the lower the price of a good, the smaller is the quantity supplied.**
- **Supply** refers to the entire relationship between the quantity supplied and the price of a good.
- Supply is illustrated by a:
  - Supply schedule
  - Supply curve
- A **supply curve** shows the relationship between the quantity supplied of a good and its price when all other influences on producers' planned sales remain the same.
- When any factor that influences selling plans other than the price of the good changes, there is a **change in supply**.
- There are six key factors that change supply:
  1. The prices of factors of production
  2. Prices of related goods produced
    - Substitutes in production are goods that can be produced by using the same resources.
    - Complements in production are goods that must be produced together.
  3. Expected future prices
  4. The number of suppliers
  5. Technology
  6. The state of nature

- When supply changes, the supply curve shifts.
- When supply increases, the supply curve shifts rightward and when supply decreases, the supply curve shifts leftward.
- The figure below shows the distinction between a change in the quantity supplied and a change in supply.



- When the price of a good changes, there is a **change in the quantity supplied**, which is shown by a movement along the supply curve.
- When any other influence on selling plans changes, there is a change in supply, which is shown by a shift of the supply curve.

## Market Equilibrium

- At the **equilibrium price**, the quantity demanded equals the quantity supplied.
- The **equilibrium quantity** is the quantity bought and sold at the equilibrium price.
- Above the equilibrium price, there is a surplus—the quantity supplied exceeds the quantity demanded.
- Below the equilibrium price, there is a shortage—the quantity demanded exceeds the quantity supplied.

## Predicting Changes in Price and Quantity

- When there is **an increase in demand**:
  - At the original price, there is a shortage.
  - At the original quantity, buyers are willing to pay more than the current price.
  - The price rises.
- As the price rises:
  - The quantity supplied increases
  - The shortage is eventually eliminated
- When there is **a decrease in demand**:
  - At the original price, there is a surplus.
  - At the original quantity, buyers are willing to pay less than the current price.
  - The price falls.
- As the price falls:
  - The quantity supplied decreases.
  - The surplus is eventually eliminated.
- When there is **an increase in supply**:
  - At the original price, there is a surplus.
  - At the new quantity supplied, buyers are willing to pay less than the current price.
  - The price falls.
- As the price falls:
  - The quantity demanded increases.
  - The surplus is eventually eliminated.
- When there is **a decrease in supply**:
  - At the original price, there is a shortage.
  - At the original quantity, buyers are willing to pay more than the current price.
  - The price rises.
- As the price rises:
  - The quantity demanded decreases.
  - The shortage is eventually eliminated.
  - These events play out just like the ones we've looked at, but in the opposite direction.

- When **both demand and supply increase**, the equilibrium quantity increases but the price may either rise or fall.
- Whether there is a shortage or a surplus at the original price depends on whether demand or supply has increased most.
- When demand and supply increase by the same amount, there is neither a shortage nor a surplus.
- The price remains constant.
- But the equilibrium quantity increases.
- If demand increases by more than supply, there is a shortage at the original price.
- The price rises.
- And the rise in price eventually eliminates the shortage and restores equilibrium.
- If supply increases by more than demand, there is a surplus at the original price.
- The price falls.
- The surplus is eliminated.
- When **both demand and supply decrease**, the equilibrium quantity decreases but the price may either rise or fall.
- The reasons are analogous to the ones you've just studied.
- When **demand decreases and supply increases**, the price falls and the equilibrium quantity might increase or decrease.
- An increase in supply and a decrease in demand create a surplus at the original price.
- At the new quantity supplied, buyers are not willing to pay the current price.
- So, the price falls.
- As the price falls, the surplus is eliminated.
- But whether the quantity increases or decreases depends on the relative magnitude of the change in demand and supply.
- If the increase in supply equals the decrease in demand, the equilibrium quantity does not change.
- If the increase in supply exceeds the decrease in demand, the equilibrium quantity increases.
- If the increase in supply is less than the decrease in demand, the equilibrium quantity decreases.
- When **demand increases and supply decreases**, the price rises and the equilibrium quantity might increase, decrease, or remain the same.