Managerial
# ECONOMICS

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## Demand & Supply – Objectives

- Describe a competitive market and think about a 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 demand and supply to make predictions about changes in prices and quantities

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## 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*.

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## Demand

- If you demand something, then you:
- Want it,
- Can afford it, and
- 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.

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## What Determines Buying Plans?

- The amount of any particular good or service that consumers plan to buy is influenced by
- 1. The price of the good,
- 2. The prices of other goods,
- 3. Expected future prices,
- 4. Income,
- 5. Population, and
- 6. Preferences.

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## 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.
- The law of demand results from
- a *substitution effect*
- an *income effect*

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## Substitution Effect and Income Effect

- **Substitution effect**—when the relative price (opportunity cost) of a good or service rises, people seek substitutes for it, so the quantity demanded 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 decreases.



## 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.

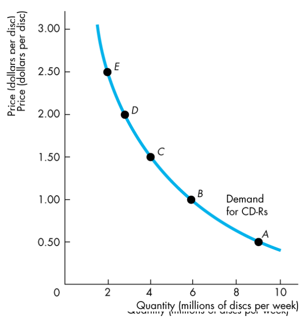


## Demand Curve for a Product

- Price hike decreases the quantity demanded and a movement along the demand curve.

A demand curve is a *willingness-and-ability-to-pay* curve.

The smaller the quantity available, the higher is the marginal willingness to pay.
Willingness to pay measures *marginal benefit.*






## A Change in Demand

- When any factor that influences 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 quantity that people plan to buy increases at each and every price so the demand curve shifts rightward.

- When demand decreases, the quantity that people plan to buy decreases at each and every price so the demand curve shifts leftward.

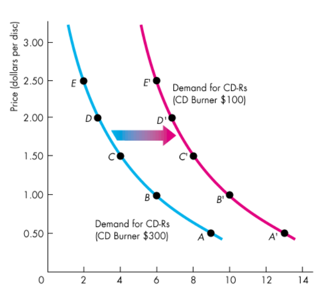


## Change in Demand: Prices of Related Goods

- 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 CD-Rs rises or when the price of a complement for CD-Rs falls, the demand for CD-Rs increases.



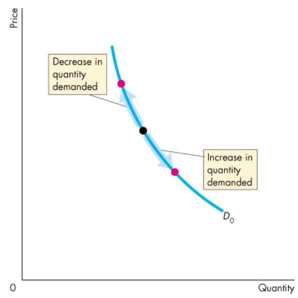



## Change in Demand

- **Expected future prices**
- If the price is expected to rise in the future, current demand increases and the demand curve shifts rightward.
- **Income**
- 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.
- **Population**
- The larger the population, the greater is the demand.
- **Preferences**
- People with the same income may have different preferences.

## A Change in the Quantity Demanded Vs. a Change in Demand.

- When the price of the good changes and everything else remains the same, there is a change in the quantity demanded and a movement along the demand curve.

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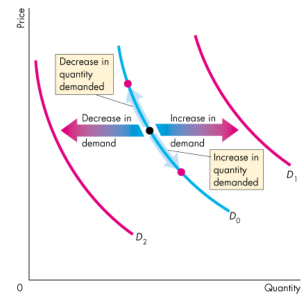
## A Change in the Quantity Demanded Vs. a Change in Demand

- When one of the other factors that influence buying plans changes, there is a change in demand and a shift of the demand curve.

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## Supply

- If a firm supplies a good or service, then the firm:
- Has the resources and the technology to produce it,
- Can profit form producing it, and
- Has made a definite plan to produce and sell it.
- ***Resources*** and ***technology*** determine what it is possible to produce. Supply reflects a decision about which technologically feasible items to produce.
- 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.

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## What Determines Selling Plans?

The amount of any particular good or service that a firm plans to supply is influenced by

1. The price of the good,
2. The prices of resources needed to produce it,
3. The prices of related goods produced,
4. Expected future prices,
5. The number of suppliers, and
6. Available technology.

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## The Law of Supply

- The **law of supply** states:
- Other things remaining the same, the higher the price of a good, the greater is the quantity supplied.
- The law of supply results from the general tendency for the marginal cost of producing a good or service to increase as the quantity produced increases (Chapter 2, page 35).
- Producers are willing to supply only if they at least cover their marginal cost of production.

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## Supply Curve and Supply Schedule

- The term **supply** refers to the entire relationship between the quantity supplied and the price of a good.
- The **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.

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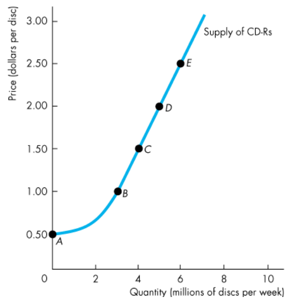
## Supply Curve of a Product

- A rise in the price, ceteris paribus, brings an increase in the quantity supplied and a movement along the supply curve.

A supply curve is also a *minimum-supply-price* curve.

The greater the quantity produced, the higher is the price that a firm must be offered to be willing to produce that quantity.






## Change in Supply

- When any factor that influences selling plans other than the price of the good changes, there is a **change in supply** of that good. The quantity of the good that producers plan to sell changes at each and every price, so there is a new supply curve.
- When supply increases, the quantity that producers plan to sell increases at each and every price so the supply curve shifts rightward.
- When supply decreases, the quantity that producers plan to sell decreases at each and every price so the supply curve shifts leftward.



## Factors That Change Supply

- **Prices of productive resources**
- If the price of resource used to produce a good rises, the minimum price that a supplier is willing to accept for producing each quantity of that good rises. So a rise in the price of productive resources decreases supply and shifts the supply curve leftward.
- **Prices of related goods produced**
- A *substitute in production* for a good is another good that can be produced using the same resources. Goods are *complements in production* if they must be produced together.
- The supply of a good increases and its supply curve shifts rightward if the price of a substitute in production falls or if the price of a complement in production rises.



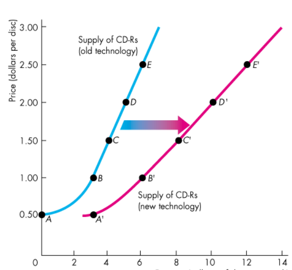
## Factors That Change Supply

- **Expected future prices**
- If the price of a good is expected to fall in the future, current supply increases and the supply curve shifts rightward.
- **The number of suppliers**
- The larger the number of suppliers of a good, the greater is the supply of the good. An increase in the number of suppliers shifts the supply curve rightward.
- **Technology**
- Advances in technology create new products and lower the cost of producing existing products, so they increase supply and shift the supply curve rightward.



## Change in Supply

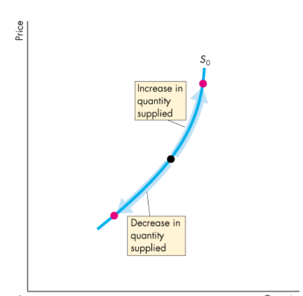
- An advance in the technology for producing recordable CDs increases the supply of CD-Rs and shifts the supply curve for CD-Rs rightward.





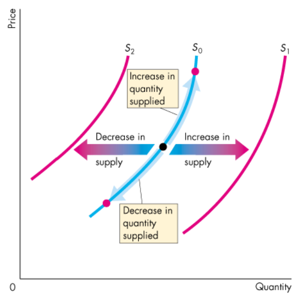

## A Change in the Quantity Supplied Vs. a Change in Supply

- When the price of the good changes and other influences on selling plans remain the same, there is a change in the quantity supplied and a movement along the supply curve.



## A Change in the Quantity Supplied Vs. a Change in Supply

- When one of the other factors that influence selling plans changes, there is a *change in supply* and a shift of the supply curve.

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## Market Equilibrium

- *Equilibrium* is a situation in which opposing forces balance each other. Equilibrium in a market occurs when the price balances the plans of buyers and sellers.
- The **equilibrium price** is the price at which the quantity demanded equals the quantity supplied.
- The **equilibrium quantity** is the quantity bought and sold at the equilibrium price.
- Price regulates buying and selling plans.
- Price adjusts when plans don't match.

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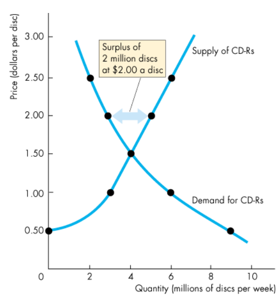
## Market Equilibrium (Cont.)

- Price as a Regulator
  - The figure illustrates the equilibrium price and equilibrium quantity in the market for CD-Rs.
  - If the price of a disc is $2, the quantity supplied exceeds the quantity demanded and there is a surplus of discs.

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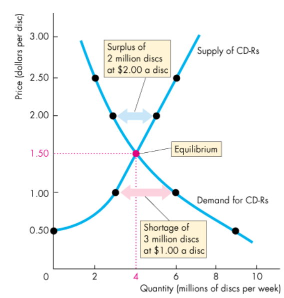
## Market Equilibrium (Cont.)

- If the price of a disc is $1, the quantity demanded exceeds the quantity supplied and there is a shortage of discs.
- If the price of a disc is $1.50, the quantity demanded equals the quantity supplied and there is neither a shortage nor a surplus of discs.

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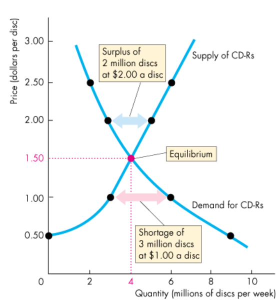
## Market Equilibrium (Cont.)

- Price Adjustments
  - At prices above the equilibrium, a *surplus* forces the price down.
  - At prices below the equilibrium, a *shortage* forces the price up.
  - At the equilibrium price, buying plans selling plans agree and the price doesn't change.

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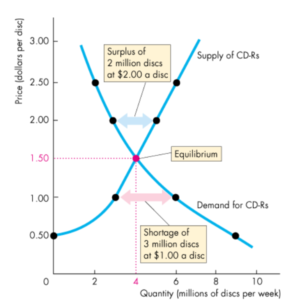
## Market Equilibrium (Cont.)

- Because the price rises if it is below equilibrium, falls if it is above equilibrium, and remains constant if it is at the equilibrium, the price is pulled toward the equilibrium and remains there until some event changes the equilibrium.

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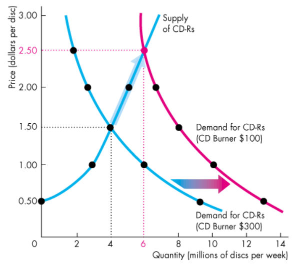
# Predicting Changes in Price and Quantity

- A Change in Demand
  - An increase in demand shifts the demand curve rightward and creates a shortage at the original price.
  - The price rises and the quantity supplied increases.

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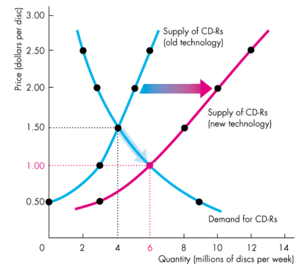
# Predicting Changes in Price and Quantity (Cont.)

- A Change in Supply
  - An increase in supply shifts the supply curve rightward and creates a surplus at the original price.
  - The price falls and the quantity demanded increases.

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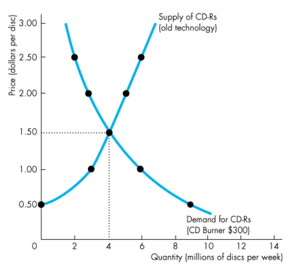
# Predicting Changes in Price and Quantity (Cont.)

- A Change in Both Demand and Supply
  - A change both demand and supply changes the equilibrium price and the equilibrium quantity but we need to know the relative magnitudes of the changes to predict some of the consequences.

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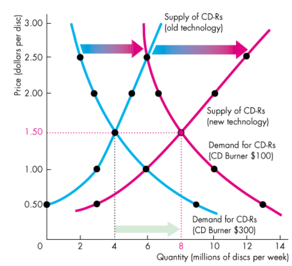
# Predicting Changes in Price and Quantity (Cont.)

- Effects of a change in both demand and supply in the *same direction*
  - An increase in *both* demand and supply increases the equilibrium quantity but has an uncertain effect on the equilibrium price

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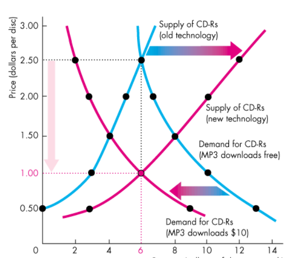
# Predicting Changes in Price and Quantity (Cont.)

- Effects of a change in both demand and supply when they change in *opposite directions*
  - An increase in supply and a decrease in demand lowers the equilibrium price but has an uncertain effect on the equilibrium quantity.

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