Chapter 3: Supply and Demand

Key Learning Objectives

- Understand what a **competitive market** is.
- Learn about **supply and demand curves**.
- Analyze how these curves determine **equilibrium price and quantity**.
- Examine how **price movements correct shortages and surpluses**.

Competitive Markets

- A market with **many buyers and sellers** where no single participant can influence price.
- The **Supply and Demand Model** explains how a competitive market functions.

Five Key Elements of the Model

1. Demand Curve
2. Supply Curve
3. Factors shifting demand & supply curves
4. Market equilibrium
5. Changes in market equilibrium

Demand

- Represents **buyer behavior**.
- **Demand Schedule**: Table showing quantity demanded at different prices.
- **Demand Curve**: Graphical representation of demand.
- **Law of Demand**: Higher price → Lower demand (*ceteris paribus*).

Shifts in Demand Curve

- **Increase in demand** → Rightward shift.
- **Decrease in demand** → Leftward shift.

Movement Along vs. Shift in Demand

- **Movement** occurs when **only price changes**.
- **Shift** occurs due to **external factors**.

Factors That Shift Demand

1. **Prices of Related Goods**
    - **Substitutes**: If the price of one increases, demand for the other increases *(e.g., coffee & tea)*.
    - **Complements**: If the price of one decreases, demand for the other increases *(e.g., cars & gasoline)*.
2. **Income Changes**
    - **Normal goods**: Demand **increases** with income rise.
    - **Inferior goods**: Demand **decreases** with income rise.
3. **Tastes & Preferences**: **Seasonal trends, fads, and societal changes** affect demand.
4. **Expectations**: **Anticipated future price changes** influence current demand.
5. **Number of Consumers**: **Larger population** → **Higher demand**.

Supply

- Represents **seller behavior**.
- **Supply Schedule**: Table showing quantity supplied at different prices.
- **Supply Curve**: Graphical representation of supply.
- **Law of Supply**: Higher price → Higher quantity supplied.

Shifts in Supply Curve

- **Increase in supply** → Rightward shift.
- **Decrease in supply** → Leftward shift.

Movement Along vs. Shift in Supply

- **Movement** occurs when **price changes**.
- **Shift** occurs due to **external factors**.

Factors That Shift Supply

1. **Input Prices**: Higher input costs → **Decreased supply**.
2. **Prices of Related Goods**
    - **Substitutes in production**: Higher profitability of one good **reduces supply** of another.
    - **Complements in production**: Higher production of one good **increases supply** of another.

3. **Technology**: **Improvements increase supply**.
4. **Expectations**: **Expected future price increases → Current supply decreases**.
5. **Number of Producers**: **More producers → Increased supply**.

Market Equilibrium

- **Equilibrium Price (Market-Clearing Price)**: Where **quantity supplied = quantity demanded**.
- **Equilibrium Quantity**: The quantity **exchanged at equilibrium price**.

Price Adjustments in the Market

Surplus (Excess Supply)

- Occurs when **price is above equilibrium**.
- Leads to **price decrease** as sellers try to **sell excess stock**.

Shortage (Excess Demand)

- Occurs when **price is below equilibrium**.
- Leads to **price increase** as consumers **compete for limited goods**.

Shifts in Market Equilibrium

- **Demand Increase → Higher price & quantity**.
- **Demand Decrease → Lower price & quantity**.
- **Supply Increase → Lower price, higher quantity**.
- **Supply Decrease → Higher price, lower quantity**.

Simultaneous Shifts in Supply and Demand

- **Both Increase → Quantity increases**, **price change depends** on relative shifts.
- **Both Decrease → Quantity decreases**, **price change depends** on relative shifts.
- **Demand Increases, Supply Decreases → Price rises**, **quantity change depends**.
- **Demand Decreases, Supply Increases → Price falls**, **quantity change depends**.

Practice Questions

1. **If petroleum prices rise, what happens to solar power demand?**
   Answer: Demand for solar power **increases**, demand for cars **decreases**.
2. **If gasoline prices drop by 50%, what happens to car demand?**
   Answer: Car demand **increases**.
3. **If garden gnomes become trendy again, what happens?**
   Answer: Equilibrium price & quantity **increase**.
4. **If the cost of wood falls, what happens to violin prices?**
   Answer: Price **decreases**, quantity **increases**.