Chapter 2

Key Definitions:

- **Market Demand Curve**: The total quantity of goods all consumers are willing and able to purchase at a possible price, holding other variables constant.

- **The Law of Demand**: Price and quantity are inversely related. As the price of a good falls, its quantity demanded rises.

- **Demand Shifters**: Variables, other than the price, that would cause the demand curve to shift. (A change in price causes a movement along the demand curve, while a change in other variables causes a shift in the demand curve.)
  
  - Income: A *normal good* will rise in demand as the income of the consumer increases. An *inferior good* will show the opposite behavior. Airplane transportation vs intercity public transportation.
  
  - Price of related goods: If the price of Coke goes up, you consume more of Pepsi (substitutes). If the price of tennis rackets goes down, you consume more tennis balls as you play more tennis (complements).
  
  - Advertising and Consumer Tastes: As consumer tastes shift and preferences change so does the demand for the good. Informative advertising vs persuasive advertising.
  
  - Population: Changes in the composition and size of the population affects demand of certain products. For instance, as baby-boomers reach retirement age there will be a shift in demand for certain services that would cater for them.
  
  - Consumer expectations. If we believe oil prices to rise significantly during the next year, our demand for gas guzzling machines may shift dramatically.
• **Consumer Surplus**: The amount that the consumer is willing to pay but does not have to pay in order to consume a good is called the consumer surplus. It is the value the consumer puts to a good above its equilibrium price. For instance, if a consumer values a good for $15, but only has to pay $10, will get a consumer surplus of $5.

• **Supply**: Similar definition as a demand curve, except that we have to take account of the preferences of the producer/supplier.

• **Supply Shifters**:
  
  – Input prices: As the price of input goes up, producers will be willing to produce less output at each given price.
  
  – Technology or Government Regulations: Technological progress that lowers the output prices will shift the supply curve to the right. Government regulation, such as emission standards may shift the supply curve to the left.
  
  – Number of Firms: As the number of firms increases, the supply curve shift towards the right.
  
  – Substitutes in Production: When a plant may substitute the production of one good for another, it affects the quantities of the good supplied.
  
  – Taxes: Excise tax will shift the supply curve to the left. Ad valorem will shift the supply curve to the left, but as it is a percentage tax, higher priced goods will have higher taxes.
  
  – Producer Expectations: If the price of a good is expected to rise in the future a producer can hold back the good to sell it later at a higher price.

• **Producer Surplus**: It is the amount of money producers receive in excess of the amount that would be necessary to make them produce. It is analogous to the consumer surplus.

• **Price Ceilings**: The maximum price set by the government that can be charged. This is imposed mostly to protect consumers from exorbitant prices. For instance, city officials may impose a rent ceiling in order to protect the interests of the tenants.

• **Full Economic Price**: The dollar amount paid to a firm plus some nonpecuniary price.

\[ P_F = P_c + (P_F - P_C) \]

\( P_F \) is the amount paid to the firm, \( P_c \), and the implicit amount paid (opportunity cost).
• **Price Floor**: Minimum price that can be charged in a market. Buyers end up paying more than the equilibrium price. This is set by the government in order to protect the interest of the producers. For instance, the minimum wage can be considered as a wage floor.

**Concepts:**

**Demand Function**

The demand function: $Q_x^d = f(P_x, P_y, M, H)$, where $M$ is income and $H$ is the value of any other variable that affects demand.

Example of a linear demand function:

$$Q_x^d = \alpha_0 + \alpha_x P_x + \alpha_y P_y + \alpha M + \alpha H$$

where $\alpha_i$ is the fixed numbers that the firm’s research department or an economic consultant typically provides to the manager.

Ordinary demand function:

$$Q_x^d = 6,060 - 3P_x$$

and inverse demand function:

$$P_x = 2,020 - \frac{1}{3} Q_x^d$$

**The Supply Function:**

Supply function for good X:

$$Q_x^s = f(P_x, P_r, W, H)$$

where $W$ is the price of the inputs and $P_r$ is the price of technologically related goods.

$$Q_x^s = \beta_0 + \beta_x P_x + \beta_r P_r + \beta_w W + \beta_H H$$