CHAPTER EIGHT
(Part 2)

Pricing and Output Decisions in Monopoly

Basic Characteristics of Monopoly Market Structure
1. A single firm produces the entire market supply of a particular good or service which has no close substitutes.
2. Since there is only one firm, then the firm is the market (or the industry).
3. The demand curve facing the monopoly firm is identical to the downward sloping market demand curve. Thus, monopoly faces a trade off between price and quantity sold.

4. The monopoly has a market power. Market power is the ability to influence the market price of a good or service. Monopoly firm is a price maker.
   - A monopoly firm has no absolute market power. It can charge any price (within the demand curve limits);
5. A monopoly receives larger profits than a comparable competitive firm by reducing the quantity supplied and increasing the price.

6. There are high barriers that prevent other firms from entry.
   - Barriers to entry are restrictions that make it difficult or impossible for new firms to enter a particular market.
   - These barriers could be legal or natural.
   - Examples of legal restrictions include government license, patent, copyright, etc.
   - Natural monopoly exists when one firm can supply the entire market at a lower price than any other firm.

7. The marginal revenue no longer equals price. MR curve is a down-ward sloping and lies below demand curve at every point but the first (MR < P).
8. As in perfect competition, monopoly should expand production as long as MR > MC and produce at that rate of output where MR = MC.
9. Applying profit-maximizing rule (MR =MC), the following must be true: 1. P > MC, 2. P > MR, 3. P > ATC (to have positive economic profit), 4. P > AVC

• How strong a constraint is depends on the price elasticity of demand. The greater the price elasticity of demand, the less power the monopolist has. The lower the price elasticity of demand, the more power the monopolist has.
10. In short run, there may be economic loss (or of course economic profit) but in long run there will be positive (greater than zero) economic profit.

• Although monopoly is usually regulated by government, our focus now is on how monopoly behaves in the absence of regulation. So we can understand why government must regulate the monopolies.

Example:
From this table, you can see that \( P > MR \) except for the first unit.

<table>
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<th>P</th>
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<tr>
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Example
P_m = 9
X

Q_m = 50
Y

• That rate of output (\( Q_m = 50 \)) can be sold at the monopoly price of \( P_m = $9 \) (point X on demand curve).

• Price is determined by moving directly up from point M to demand curve. i.e., the monopolist price will move upward along the same demand curve.

• As a result of monopoly, Total profit (for monopoly) = \( (P - ATC) \times Q = (9 - 4) \times 50 = \$250 \) (area: XYZP_m)

• We know that the high economic profits tend to attract other firms to enter the market.

• However, in monopoly, profits are maintained as long as barriers to entry prevent any competitors from entering the market.

• Monopolist has less pressure to reduce costs or improve quality.

Example
A monopolist’s demand function is \( P = 100 - 8Q \), and its Total Cost function is \( TC = 50 + 80Q - 10Q^2 + 0.6 Q^3 \).

• Find
a. The price and output level that maximizes profit
b. The price and output level that maximizes TR

c. At what price should the monopolist shut down?
### Price Discrimination

- One of the results of market power is **price discrimination**, which refers to the sale of an identical good at different prices to different consumers by a single seller.
- It allows a producer to reap the highest possible average price for the output which increases TR and profit.
- Monopoly would charge higher prices from those who have lower price elasticity of demand (more price-inelastic demand)
- It requires the firm to eliminate possible resale of its product otherwise it is ineffective. Price discrimination is limited to firms that sell products that cannot be resold.

### Barriers to Entry

- Lack of competition gives monopolist the pricing power. To keep this power, keep the potential competitors out of market. Thus, keep high entry barriers.
- The main types of Barriers to Entry are:
  1. **Patents** – offers a producer 20 years of exclusive rights to produce a particular product.
  2. **Public Franchises** – governments also create and maintain monopolies by giving a single firm the exclusive right to supply a particular good or service, although other firms can produce it.

### Control of Key Inputs
- A company may prevent competition by securing exclusive access to key inputs.

### Lawsuits
- May be used to prevent new companies from entering an industry.

### Acquisition
- When all else fails, purchase a potential competitor.

### Economies of Scale
- A monopoly may persist because of cost advantages over smaller firms.

### Contestable Markets

1. **Contestable markets** are characterized by moderate (low) barriers to entry.
2. When profit increase to a certain level other firms will enticed to enter the market.
3. Entry occurs when price increase above ATC, but the LR economic profit is low
4. Potential competition may come from foreign firms or from a new technology that may produce new substitutes
5. As a monopolist’s profits grow, would-be competitors will try to overcome barriers to entry. If entry is possible, a monopolized market may be contestable.