

Chapter 15

Monopoly = a firm that is the sole seller of a product without close substitutes

- Cause of monopoly is *barriers to entry*:
 - A monopoly remains the only seller in its market because other firms cannot enter the market and compete with it
 - 3 main sources of barrier to entry:
 - Monopoly Resources
 - A key resource required for production is owned by a single firm
 - Government Regulation
 - The government gives a single firm the exclusive right to produce some good or service
 - *Examples*: patent, copyright, trademark, etc.
 - The Production Process
 - A single firm can produce output at a lower cost than can a larger number of firms

Natural Monopolies = a monopoly that arises because a single firm can supply a good or service to an entire market at a smaller cost than could two or more firms

- *Example*: distribution of water
- It is less concerned about new entrants eroding its monopoly power
- In some cases, the size of the market is one determinant of whether an industry is a natural monopoly
 - *Example*: bridges (one single bridge could satisfy the entire population, until that population starts growing and the need for another bridge increases)

Monopoly versus Competition:

- The key difference between a competitive firm and a monopoly is the monopoly's ability to influence the price of its output
- A competitive firm is small relative to the market in which it operates and has no power to influence price of its output (it takes the given market conditions)
- Because the monopoly is the sole producer in its market, it can alter the price of its good by adjusting the quantity it supplies to the market
- Competitive firm's demand curve is horizontal and perfectly elastic
- Monopoly demand curve is the market demand curve → it slopes downward
 - If the monopolist raises the price of its good, consumers buy less of it
 - If monopolist reduces the quantity of output it produces and sells, the price of its output increases

Monopoly's Revenue:

- Total Revenue = Price times Quantity
- Average Revenue = total revenue divided by quantity
- Marginal Revenue = amount of revenue that the firm receives for each additional unit of output
- *A monopolist's marginal revenue is always less than the price of its good*
- Effects of marginal revenue in a monopoly: (no effect in competitive market)
 - *Output Effect* = more output is sold, so quantity is higher, which tends to increase total revenue
 - *Price Effect* = the price falls, so price is lower, which tends to decrease total revenue
- Marginal revenue curve lies below its demand curve

- Marginal revenue is negative when the firm produces an extra unit of output, the price falls by enough to cause the firm's total revenue to decline, even though the firm is selling more units

Profit Maximization:

- A monopoly maximizes profit by choosing the quantity at which marginal revenue equals marginal cost
 - It then uses the demand curve to find the price that will induce consumers to buy that quantity
- Competitive $\rightarrow P = MR = MC$
- Monopoly $\rightarrow P > MR = MC$
- In competitive markets, price equals marginal cost... in monopolized markets, price *exceeds* marginal cost

Monopoly's Profit:

- Profit = total revenue minus total cost
 - Profit = $(TR/Q - TC/Q) \times Q$
 - TR/Q is average revenue, which equals price, and TC/Q is average total cost, therefore:
 - Profit = $(P - ATC) \times Q$

Deadweight Loss:

- The socially efficient quantity is found where the demand curve and the marginal-cost curve intersect
 - Marginal cost curve = costs to monopolist
 - Demand curve = value to buyers (willingness to pay)
- Below this quantity, the value of an extra unit to consumers exceeds the cost of providing it, so increasing output would raise total surplus
- Above this quantity, the cost of producing an extra unit exceeds the value of that unit to consumers, so decreasing output would raise total surplus
- At the optimal quantity, the value of an extra unit to consumers exactly equals the marginal cost of production
- The monopolist produces less than the socially efficient quantity of output
- Inefficiency of Monopoly:
 - Because a monopoly charges a price above marginal cost, not all consumers who value the good at more than its cost buy it
 - Thus, the quantity produced and sold by a monopoly is below the socially efficient level
 - The deadweight loss is represented by the triangle between demand curve and marginal cost curve

Price Discrimination = the business practice of selling the same good at different prices to different consumers

- Not possible in a competitive market
 - For a firm to price discriminate, it must have some market power
- *Example:* publishing companies
 - Textbooks are often sold at a lower price in Europe than in the United States
 - Price difference between hardcover and paperbacks
 - By selling the hardcover to die-hard fans and the paperback to less enthusiastic readers, the publisher price discriminates and raises its profit
- Price discrimination is a rational strategy for a profit-maximizing monopolist
- Price discrimination requires the ability to separate customers according to their willingness to pay (customers distinguished geographically, by age, or by income, etc.)
- Certain market forces can prevent firms from price discrimination

- Arbitrage = the process of buying a good in one market at a low price and selling it in another market at a higher price to profit from the price difference
- Price discrimination can raise economic welfare (can eliminate the inefficiency)

The Analytics of Price Discrimination:

- *Perfect Price Discrimination* describes a situation in which the monopolist knows exactly each customer's willingness to pay and can charge each customer a different price
 - The monopolist gets the entire surplus in every transaction
 - Marginal cost and average total cost are constant and equal
- Without price discrimination, the firm charges a single price above marginal cost
 - Because some potential customers value the good differently and do not buy the good at this price, there is a deadweight loss
- When a firm can perfectly discriminate, each customer who values the good at more than marginal cost buys the good and is charged her willingness to pay
 - No deadweight loss occurs and entire surplus goes to monopolist
- See figure 9 on page 316
- In reality, price discrimination is not perfect
 - Instead, firms price discriminate by dividing customers into groups
 - Young vs. old, Americans vs. Australians, etc.

Examples of Price Discrimination:

- Movies Tickets
 - Lower prices for children and senior citizens
- Airline Prices
 - Leisure vs. business travelers (flexibility)
 - Holiday travelers
- Discount Coupons
 - Rich customer is less likely to spend time cutting coupons, compared to an unemployed customer who is in need of money saving items
- Financial Aid
 - Wealthy students versus un-wealthy students attending college
 - Same education, different willingness to pay
- Quantity Discounts
 - Price declines as more quantity is bought

Public Policy Toward Monopolies:

- Policymakers in the government can respond to the problem of monopoly in 4 ways:
 - By trying to make monopolized industries more competitive
 - By regulating the behavior of the monopolies
 - By turning some private monopolies into public enterprises
 - By doing nothing at all

Increasing Competition with Antitrust Laws:

- Antitrust laws = a collection of statutes aimed at curbing monopoly power
 - Sherman Antitrust Act → congress passed to reduce the market power of the large and powerful trusts that were viewed as dominating the economy at the time
 - Clayton Antitrust Act → strengthened the government's powers and authorized private lawsuits
- The antitrust laws are a comprehensive charter of economic liberty aimed at preserving free and unfettered competition as the rule of the trade
- The antitrust laws give the government various ways to promote competition