

Monopoly

A monopoly has no close competitors and therefore has the power to influence the market of its product

- Competitive firm is a *price taker*
- Monopoly firm is a *price maker*

Market power alters the relationship between a firm's cost and the price at which it sells its product

- Monopoly charges a price that exceeds marginal cost
 - Unchecked by competition → monopoly is often not in the best interest of the society

WHY MONOPOLIES ARISE

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

- *Barriers to Entry*: 3 main sources
 - **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
 - **Production Process**: A single firm can produce output at a lower cost than can a larger number of producers

Monopoly Resources

- Monopolist has a much greater market power than any single firm in a competitive market because it owns a key resource
 - Could command a high price even if marginal cost is low
 - Reality, monopolies rarely arise for this reason
 - Economies are large, resources are owned by many people

Government-Created Monopolies

- Government gives one person/firm the exclusive rights to sell a good or service
 - Sometimes done for political clout, other times for public's best interest
 - Patent of new drugs → can get exclusive selling/manufacturing rights
 - Encourages desirable behavior of creating more products
 - Benefit: increase incentive for creative activity
 - Cost: higher monopoly pricing of goods

Natural Monopolies

Natural Monopoly – 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

- Arises when there are economies of scale over the relevant range of output

- At any given amount of output, a large number of firms leads to less output per firm and higher average total cost
 - EG: one firm providing water → one fixed cost of network of pipes
 - Two firms providing water → two fixed cost of network of pipes
 - More efficient for one sole provider
- Firm has trouble maintaining a monopoly position without ownership of a key resource or protection from the government
 - Monopolists profits attract entrants into market → make market more competitive
 - Size of market increases, then natural monopoly can become a competitive market

HOW MONOPOLIES MAKE PRODUCTION AND PRICING DECISIONS

How a monopoly firm decides how much of its product to make and what price to charge for it

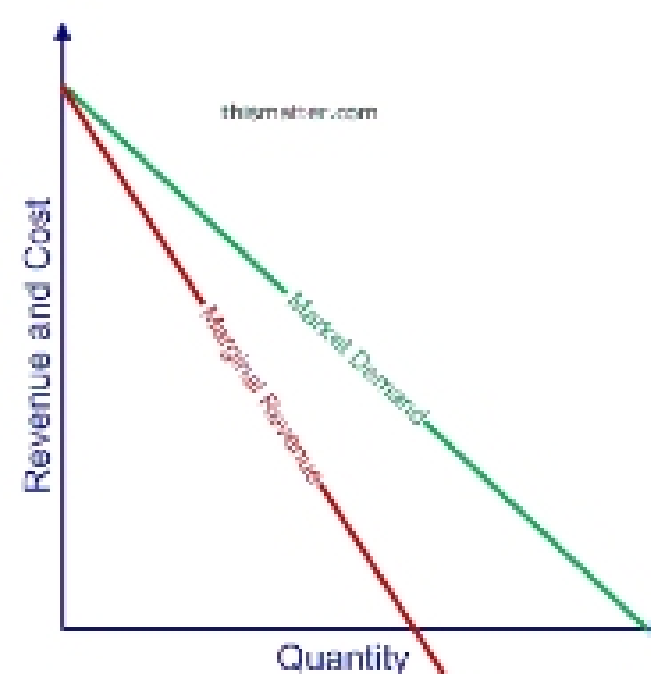
Monopoly versus Competition

- Monopoly is able to influence the price of its output
 - Competitive firm is small compared to market and has no power to influence price → takes the price given by market conditions
 - Monopoly is sole producer and can alter price by adjusting the quantity it supplies to the market
- Analyze the different demand curve for each firm
 - Competitive firm can sell as much or as little – horizontal demand curve
 - Many other substitutes so demand is perfectly elastic
 - Monopoly's demand curve is market demand curve – slopes downward
 - Raise price of good, consumer buys less
 - Reduces quantity of output, price of output increases
 - Adjusting price and quantity, monopoly can choose any point on demand curve but not outside it

A Monopoly's Revenue

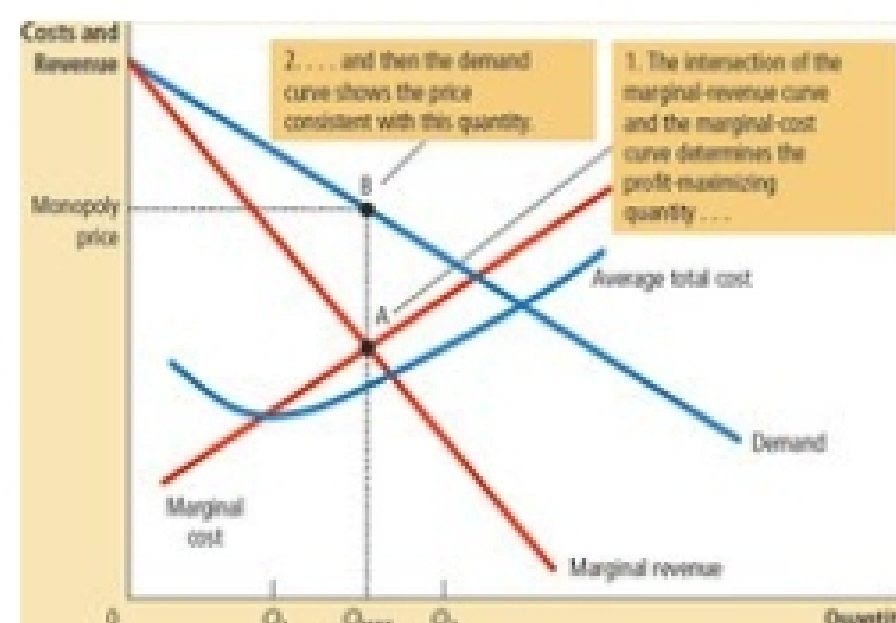
- Consider a town with a single producer of water
 - Monopolist's revenue depends on amount of water produced
 - A monopolist's marginal revenue is always less than the price of its good
- Marginal revenue for monopolies is very different from marginal revenue for competitive firms. Monopoly increases the amount it sells, this action has two effects on total revenue ($P \times Q$)

- *Output Effect* – More output is sold, so Q is higher, which tends to increase total revenue
- *Price Effect* – The price falls, so P is lower, which tends to decrease total revenue
 - When monopoly increases production by one unit it must reduce price charged for every unit it sells
 - Marginal revenue is less than its price



Profit Maximization

- Curves contain all the information we need to determine the level of output that a profit-maximizing monopolist will choose
 - Demand curve
 - Marginal-revenue curve
 - Cost curve
 - When the marginal cost is less than the marginal revenue, the firm can increase profit by producing more units
 - When marginal cost is greater than marginal revenue, the firm can raise profit by reducing production
- The monopolist's profit-maximizing quantity of output is determined by the intersection of the marginal-revenue curve and the marginal-cost curve
 - The marginal revenue for a competitive firm equals its price, whereas the marginal revenue of a monopoly is less than its price
 - Competitive firm – $P = MR = MC$
 - Monopoly firm – $P > MR = MC$
 - Price is related differently
- How does monopoly find profit-maximizing price for product?
 - After monopoly chooses quantity of output that equates marginal revenue and marginal cost → use demand curve to find highest price it can charge at that quantity
 - In competitive markets, price equals marginal cost
 - In monopolized markets, price exceeds marginal cost



A Monopoly's Profit

Recall, profit equals total revenue (TR) minus total cost (TC)