Monopoly

Introduction

- **Monopoly** is a market structure in which a single firm makes up the entire market.
- Monopolies exist because of barriers to entry into a market that prevent competition.

- **Legal barriers**, such as patents, prevent others from entering the market.
- **Sociological barriers** – entry is prevented by custom or tradition.
- **Natural barriers** – the firm has a unique ability to produce what other firms can’t duplicate.
- **Technological barriers** – the size of the market can support only one firm.
The Key Difference Between a Monopolist and a Perfect Competitor

- For a competitive firm, marginal revenue equals price.
- For a monopolist it does not.
- The monopolist takes into account the fact that its production decision can affect price.

A competitive firm is too small to affect the price.
- It does not take into account the effect of its output decision on the price it receives.

A Model of Monopoly

- How much should the monopolistic firm choose to produce if it wants to maximize profit?

- A competitive firm's marginal revenue is the market price.

- A monopolistic firm’s marginal revenue is not its price – it takes into account that its output decision can affect price.
The Monopolist’s Price and Output Numerically

- The first thing to remember is that marginal revenue is the change in total revenue that occurs as a firm changes its output.

\[
TR = P \times Q \\
MR = \frac{\text{Change in Total Revenue}}{\text{change in output}}
\]

Another way to say it is: "how much does your Total Revenue changes as you increase output"

- When a monopolist increases output, it lowers the price on all previous units.

- As a result, a monopolist’s marginal revenue is always below its price.

The Monopolist’s Price and Output Numerically

- In order to maximize profit, a monopolist produces the output level at which marginal cost equals marginal revenue.

- Producing at an output level where \( MR > MC \) or where \( MR < MC \) will yield lower profits.

Profit Maximization for a Monopolist

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The Monopolist’s Price and Output Graphically

- The marginal revenue curve is a graphical measure of the change in revenue that occurs in response to a change in price.
- It tells us the additional revenue the firm will get by expanding output.

MR = MC Determines the Profit-Maximizing Output**

- If MR > MC, the monopolist gains profit by increasing output.
- If MR < MC, the monopolist gains profit by decreasing output.
- If MC = MR, the monopolist is maximizing profit.

The Price a Monopolist Will Charge

- The MR = MC condition determines the quantity a monopolist produces.
- The monopolist will charge the maximum price consumers are willing to pay for that quantity.
- That price is found on the demand curve.

To determine the profit-maximizing price (where MC = MR), first find the profit maximizing output.
Determining the Monopolist’s Price and Output

Comparing Monopoly and Perfect Competition

- Equilibrium output for both the monopolist and the competitor is determined by the $MC = MR$ condition.

Comparing Monopoly and Perfect Competition

- Because the monopolist’s marginal revenue is below its price, price and quantity will not be the same.
- The monopolist's equilibrium output is less than, and its price is higher than, for a firm in a competitive market.
Profits and Monopoly

- Draw the firm's marginal revenue curve.
- Determine the output the monopolist will produce by the intersection of the $MC$ and $MR$ curves.

Profits and Monopoly

- Determine the price the monopolist will charge for that output.
- Determine the average cost at that level of output.

Profits and Monopoly

- Determine the monopolist's profit (loss) by subtracting average total cost from average revenue ($P$) at that level of output and multiply by the chosen output.

Profits and Monopoly

- The monopolist will make a profit if price exceeds average total cost.
- The monopolist will make a normal return if price equal average total cost.
- The monopolist will incur a loss if price is less than average total cost.
A Monopolist Making a Profit

- A monopolist can make a profit.

A Monopolist Breaking Even

- A monopolist can break even.
A Monopolist Making a Loss

- A monopolist can make a loss.