

MODULE 9: MONOPOLY

Definition: Monopoly is a market structure characterized by a single seller, selling a unique product in the market. In a monopoly market, the seller faces no competition, as he is the sole seller of goods with no close substitute. A monopoly refers to when a company and its product offerings dominate one sector or industry. Monopolies can be considered an extreme result of free-market capitalism and are often used to describe an entity that has total or near-total control of a market.

Monopoly is a single supplier, the only firm in an industry. Monopolies have monopoly power, which is the ability to set the market price.

For example, "The Google of today is a monopoly gatekeeper for the internet, and one of the wealthiest companies on the planet, with a market value of \$1 trillion and annual revenue exceeding \$160 billion.

Even though there are very few true monopolies in existence, we do deal with some of those few every day, often without realizing it: The U.S. Postal Service, your electric and garbage collection companies are a few examples.

Types of Monopolies

There are two main types of monopolies that differ in the ways they exploit barriers of entry: natural monopolies and legal monopolies.

Natural monopoly occurs where the economics of an industry naturally lead to a single firm dominating the industry. A natural monopoly occurs when the most efficient number of firms in the industry is one. A natural monopoly will typically have very high fixed costs meaning that it is impractical to have more than one firm producing the good. An example of a natural monopoly is tap water.

Legal monopoly refers to a company that is operating as a monopoly under a government mandate. A legal monopoly offers a specific product or service at a regulated price. It can either be independently run and government regulated, or both government-run and government regulated.

Profit Maximization for a Monopoly

The **profit-maximizing** choice for the monopoly will be to produce at the quantity where marginal revenue is equal to marginal cost: that is, $MR = MC$. If the monopoly produces a lower quantity, then $MR > MC$ at those levels of output, and the firm can make higher profits by expanding output.

There is an assumption in classical economics that firms seek to maximize profits.

$$\text{Profit} = \text{Total Revenue (TR)} - \text{Total Costs (TC)}$$

Therefore, profit maximization occurs at the biggest gap between total revenue and total costs. A monopolist calculates its profit or loss by using its average cost (AC) curve to determine its production costs and then subtracting that number from total revenue (TR). Recall from previous lectures that firms use their average cost (AC) to determine profitability.

Total Cost and Total Revenue for a Monopolist

In order to determine profits for a monopolist, we need to first identify total revenues and total costs. An example for the hypothetical «Health Pill» firm is shown in figure below:

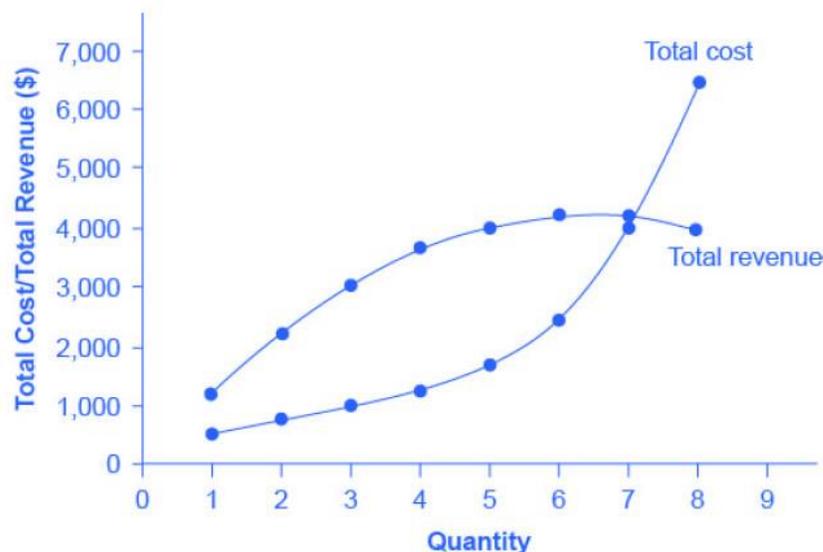


Figure 2. Total Revenue and Total Cost for the «HealthPill» Monopoly

Total revenue for the monopoly firm called «HealthPill» first rises, then falls. Low levels of output bring in relatively little total revenue, because the quantity is low. High levels of output bring in relatively less revenue, because the high quantity pushes down the market price. The total cost curve is upward-sloping. Profits will be highest at the quantity of output where total revenue is most above total cost. The profit-maximizing level of output is not the same as the revenue-maximizing level of output, which should make sense, because profits take costs into account and revenues do not.

Total costs for a monopolist follow the same rules as for perfectly competitive firms. In other words, total costs increase with output at an increasing rate. Total revenue, by contrast, is different from perfect competition. Since a monopolist faces a downward sloping demand curve, the only

way it can sell more output is by reducing its price. Selling more output raises revenue, but lowering price reduces it.

Marginal Revenue and Marginal Cost for a Monopolist

In the real world, a monopolist often does not have enough information to analyze its entire total revenues or total costs curves; after all, the firm does not know exactly what would happen if it were to alter production dramatically. But a monopolist often has fairly reliable information about how changing output by small or moderate amounts will affect its marginal revenues and marginal costs, because it has had experience with such changes over time and because modest changes are easier to extrapolate from current experience. A monopolist can use information on marginal revenue and marginal cost to seek out the profit-maximizing combination of quantity and price.

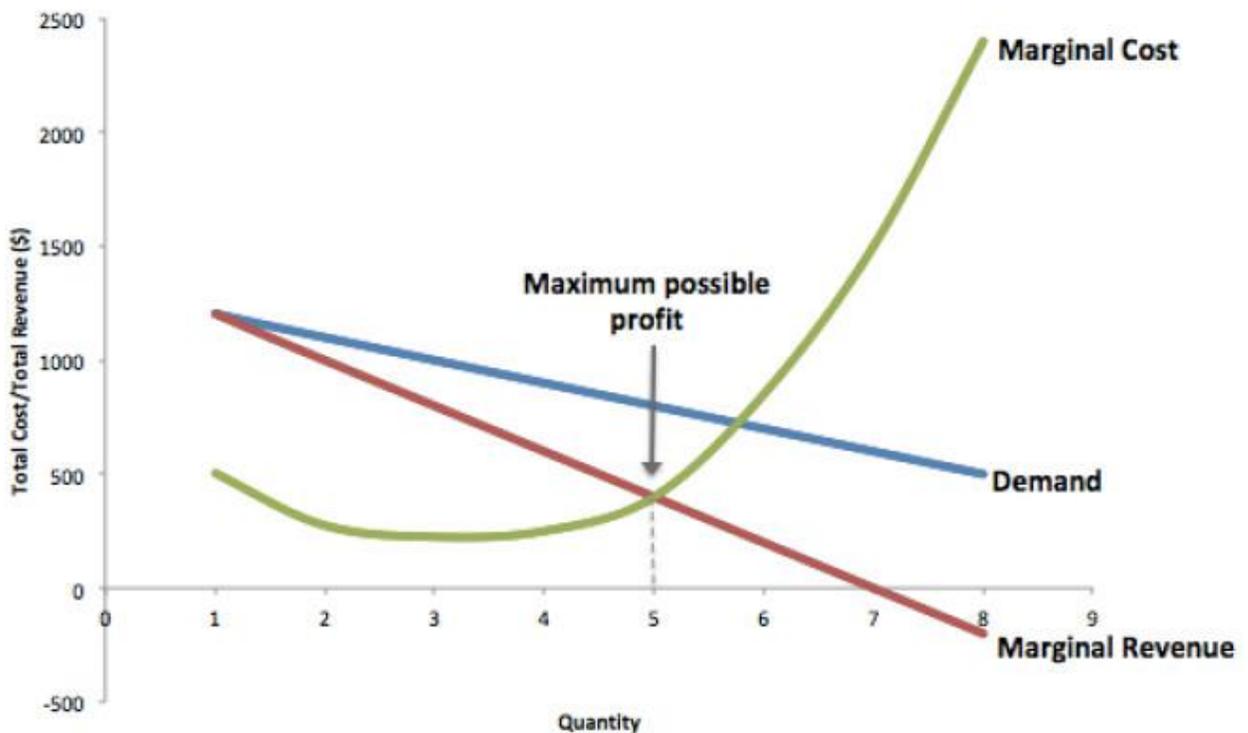


Figure 2. Marginal Revenue and Marginal Cost for the «HealthPill» Monopoly.

For a monopoly like «HealthPill», marginal revenue decreases as it sells additional units of output. The marginal cost curve is upward-sloping. The profit-maximizing choice for the monopoly will be to produce at the quantity where marginal revenue is equal to marginal cost: that is, $MR = MC$. If the monopoly produces a lower quantity, then $MR > MC$ at those levels of output, and the firm can make higher profits by expanding output. If the firm produces at a greater quantity, then $MC > MR$, and the firm can make higher profits by reducing its quantity of output.