Monopoly: Chapter 11
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Learning Objectives:

After completing this chapter, students should be able to understand, appreciate and analyze:

1) the characteristics of the monopoly market structure.

2) why monopolies occur.

3) how a profit-maximizing monopoly chooses output and price.

4) a graphical evaluation of a monopolist’s profit-maximizing quantity to produce.

5) a graphical evaluation of a monopolist’s profits or losses.
I) **Monopolist Intentions**

A- Monopolists want to keep out competition.

The Q is how to accomplish this.

1- **Legal ways:** provide a great product at with great service at a low price.

2- **Illegal ways:** predatory, non-competitive behavior.

**Ex:** Standard Oil, Microsoft, Arizona Dairies
II) Monopolist Decisions About Prices and Profits

A) Total revenue \( \uparrow \) initially, then \( \downarrow \).

1- The monopolist still faces the law of demand.

2- In order to sell more, must \( \downarrow P \) (though \( P \) is still higher than if competition existed).
This is one way a monopolist can maximize profit. But it’s not *productively efficient* (does not need to produce on the PPC)
EXHIBIT 11-3 The Perceived Demand Curve for a Perfect Competitor and a Monopolist

(a) Perceived demand for a perfect competitor. A perfectly competitive firm is a price-taker and thus perceives the demand curve that it faces to be flat. The flat shape means that the firm can sell either a low quantity $q_L$ or a high quantity $q_H$ at exactly the same price $p^*$. 

(b) Perceived demand for a monopolist. A monopolist is not a price-taker. It perceives the demand curve that it faces to be the same as the market demand curve, which for most goods is downward sloping. Thus, if the monopolist chooses a high level of output $q_H$, it can charge only a relatively low price $p_L$; conversely, if the monopolist chooses a low level of output $q_L$, it can then charge a higher price $p_H$. The monopolist can choose the combination of price and quantity that maximizes profits.
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B) Marginal Revenue ↓

1- TR ↓ as output ↑
2- MR can become negative, (must ↓P to sell more items)

But a monopolist would be crazy to do this!

C) MR < P

1- Except for the first product sold, MR will always be < P.
2- Reflects ↓P to sell additional goods.
B) Compare MR and MC

Reminder: \( \pi \) maximum is where MR=MC!

This is the second way for a monopolist to maximize profits! But this is not *allocatively efficient* (where \( P=MC \)).
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\[ \Rightarrow \text{\( MR < P \)} \]

\[ \Rightarrow \text{\( MC \uparrow \text{ as output } \uparrow \)} \]
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- $\Rightarrow \text{mc} \uparrow \text{as output}\uparrow$

- $\Rightarrow \text{Set } P \text{ when } mc=mr$
EXHIBIT 11-6 Illustrating Profits at the HealthPill Monopoly

This exhibit begins with the same marginal revenue and marginal cost curves from the HealthPill monopoly presented in Exhibit 11-5. It then adds an average cost curve and the demand curve faced by the monopolist. The HealthPill firm first chooses the quantity where MR = MC; in this example, 4 is the highest level of output before this occurs (although the intersection of MR and MC actually happens at a slightly higher level of output). The monopolist then decides what price to charge by looking at the demand curve it faces. The entire area of the shaded box (both dark and light shading), with quantity on the horizontal size and price on the vertical side, shows total revenue for the firm. Total costs for the firm are shown by the lighter-shaded area, which is quantity on the horizontal axis and average cost of production on the vertical axis. The large total revenue box minus the smaller total cost box leaves the darker-shaded area that shows total profits. Since the price charged is above average cost, the firm is earning positive profits.
IV) Why do monopolies exist?

A) Natural Monopolies

1- The costs of production are too high to have more than one profitable company at one time.

   Ex: cable, water, electricity.

B) Patents and Copyrights

1- The gov’t. grants protection to inventors and writers.

   Ex: computer chips
C) Licensing

1- Gov’t sells the right (a license) to a company to produce a product.

**Ex:** Postal Service, The Curry Company (licensed to operate/provide services in Yosemite National Park)

D) Monopolists try to create “barriers to entry” to maintain a monopoly.

1- Companies “punish” others or gov’t regulations do not allow competition.

**Ex:** DeBeers Mining Co., TEP
V) Price Discrimination

A) Many barriers lead to price discrimination

1- As the # of barriers ↑, the ability ↑ to charge different customer different prices.

2- At P₁, Q₁: seller chooses P where MC=MR.
   But, the seller would like to charge ↑ P for those willing to pay, ie, price discrimination!

3- Consumer surplus = consumer profit. Sellers want to capture as much consumer profit as possible.

**Ex:** Airline ticket prices vary with elasticity --
Buy today for tomorrow: inelastic D
for next week: more elastic
for one month: very elastic D
B) Three conditions for successful price discrimination

1- Seller must discover the buyer’s D-Curve

   **Ex:** “What price range are you looking for?”

2- Seller must prevent low-price buyers from reselling at a higher price.

   **Ex:** nontransferable airline tickets


3- Seller must control consumer resentment.

**Ex:** Prestigious University limits enrollment to 5000 students, but don’t want to look elite.

**Solution:**
1- Set tuition at $30,000

2- Create partial scholarships based on family income

3- Offer full scholarship to poorest students.
C) The Inefficiency of Monopoly

Monopolists are not *productively efficient*, because they do not produce at the minimum of the average cost curve.
C) The Inefficiency of Monopoly

- Monopolists are not *allocatively efficient*, because they do not produce at the quantity where $P = MC$.
C) The Inefficiency of Monopoly

- Monopolists are not *productively efficient* (they do not produce at the minimum of the average cost curve.)

- Monopolists are not *allocatively efficient* (they do not produce at the quantity where $P = MC$.)

- As a result, monopolists produce less, at a higher average cost, and charge a higher price than would a combination of firms in a perfectly competitive industry.

- Monopolists also may lack incentives for innovation because they need not fear entry by competitors.
The End!

Time to practice and apply our knowledge!