Chapter 25

Monopoly

Economics, 7th Edition

Boyes/Melvin

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What is a Monopoly?

- A **monopoly** is a market structure in which there is a single supplier of a product.

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- The **monopoly firm (monopolist)**:
  - May be small or large.
  - Must be the **ONLY** supplier of the product.
  - Sells a product for which there are **NO** close substitutes.

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- Monopolies are fairly common: U.S. Postal Service, local utility companies, local cable providers, etc.

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The Creation of Monopolies

- Monopolies often arise as a result of barriers to entry.

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- **Barrier to entry**: anything that impedes the ability of firms to begin a new business in an industry in which existing firms are earning positive economic profits.

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- There are three general classes of barriers to entry:
  - Natural barriers, the most common being **economies of scale**
  - **Actions by firms** to keep other firms out
  - **Government (legal) barriers**

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Economies of Scale

- In some industries, the larger the scale of production, the lower the costs of production.
- Entrants are not usually able to enter the market assured of or capable of a very large volume of production and sales.

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- This gives incumbent firms a significant advantage.
- Examples are electric power companies and other similar utility providers.
- ***These are called natural monopolies.***

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Actions by Firms

- Entry is barred when one firm owns an essential resource.
- Examples are inventions, discoveries, recipes, and specific materials.
  - Microsoft owns Windows, and has been challenged by the U.S. Dept. of Justice as a monopolist.

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Government

- Governments often provide barriers, creating monopolies.

- As incentives to innovation, governments often grant **patents**, providing firms with legal monopolies on their products or the use of their inventions or discoveries for a period of 17 years.

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- **Regulated monopoly**: a monopoly firm whose behavior is overseen by a government entity. (government or technological)

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Types of Monopolies

- **Local (or geographic) monopoly**: a monopoly that exists in a limited geographic area.

- The only gas station in a small town.

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- **The monopolist IS the industry** because it is the sole producer.

- **The industry demand curve is the firm's demand curve.**

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Marginal Revenue

- Recall that the **marginal revenue (MR)** is:

$$MR = \frac{\Delta TR}{\Delta Q}$$

- MR is less than price for a monopoly firm.

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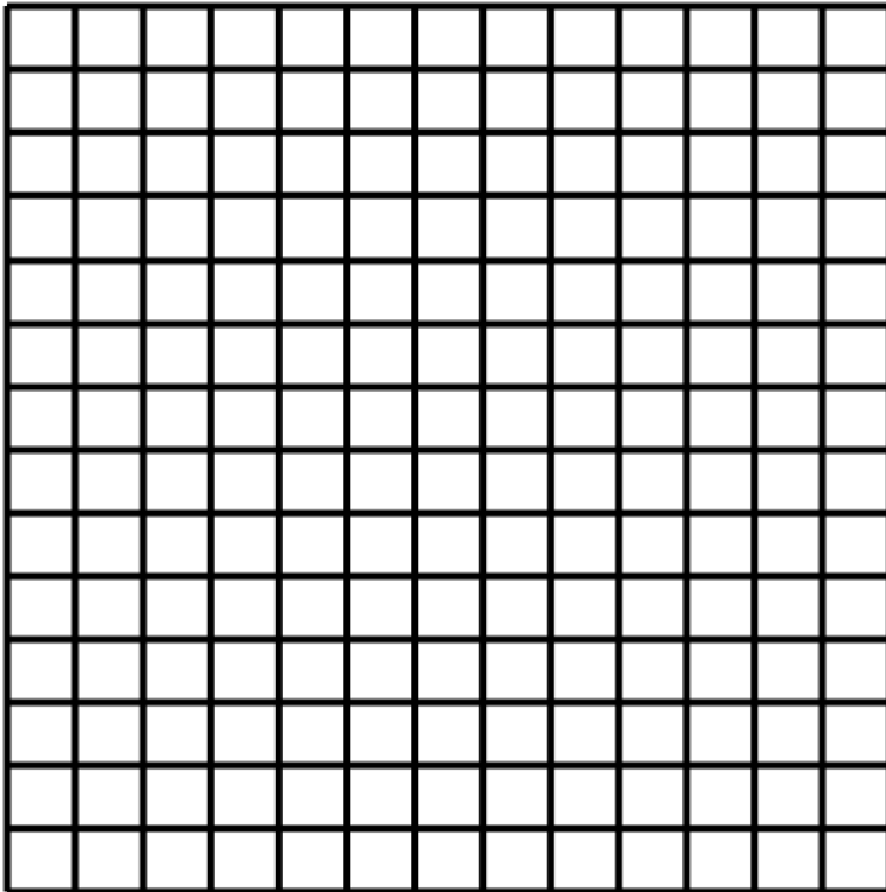

Demand Curve for a monopolist

Q	P	TR	MR
0	175		
1	170		
2	165		
3	160		
4	155		
5	150		
6	145		
7	140		
8	135		
9	130		

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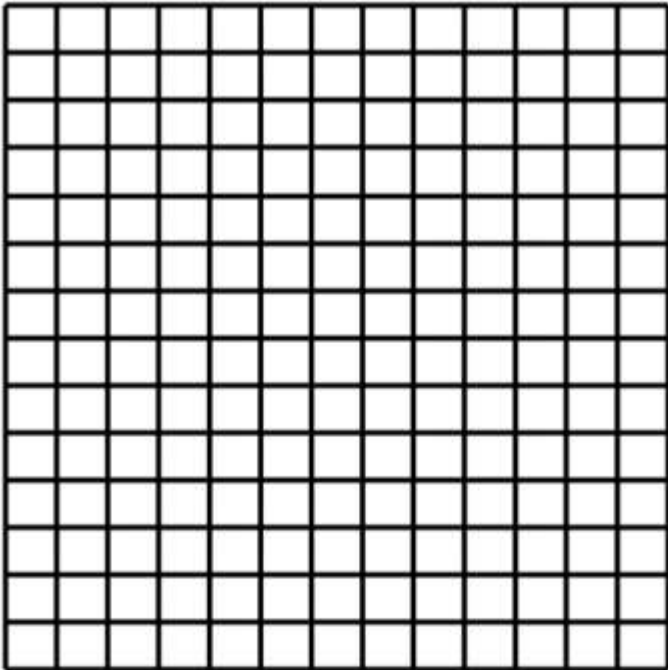

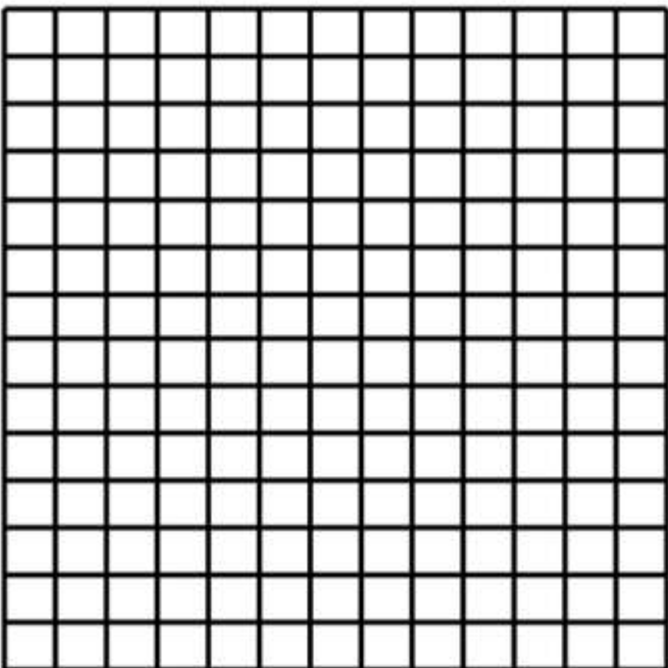

Demand Curve for a monopolist

Q	P	TR	MR
0	175		
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4	155		
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6	145		
7	140		
8	135		
9	130		

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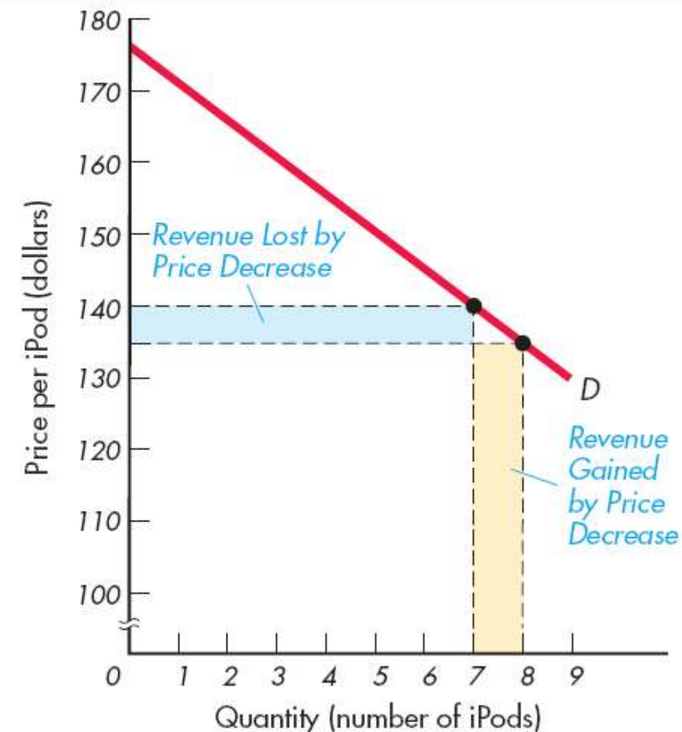
Demand Curve for Monopoly Firm

FIGURE 2 Demand Curve for a Monopolist

Quantity per Day	Price	Total Revenue	Marginal Revenue
1	$170	$ 170	$170
2	$165	$ 330	$160
3	$160	$ 480	$150
4	$155	$ 620	$140
5	$150	$ 750	$130
6	$145	$ 870	$120
7	$140	$ 980	$110
8	$135	$1,080	$100
9	$130	$1,170	$ 90



As the iPod price is reduced, the quantity demanded increases. But because the price is reduced on all quantities sold, not just on the last unit sold, marginal revenue declines faster than price.

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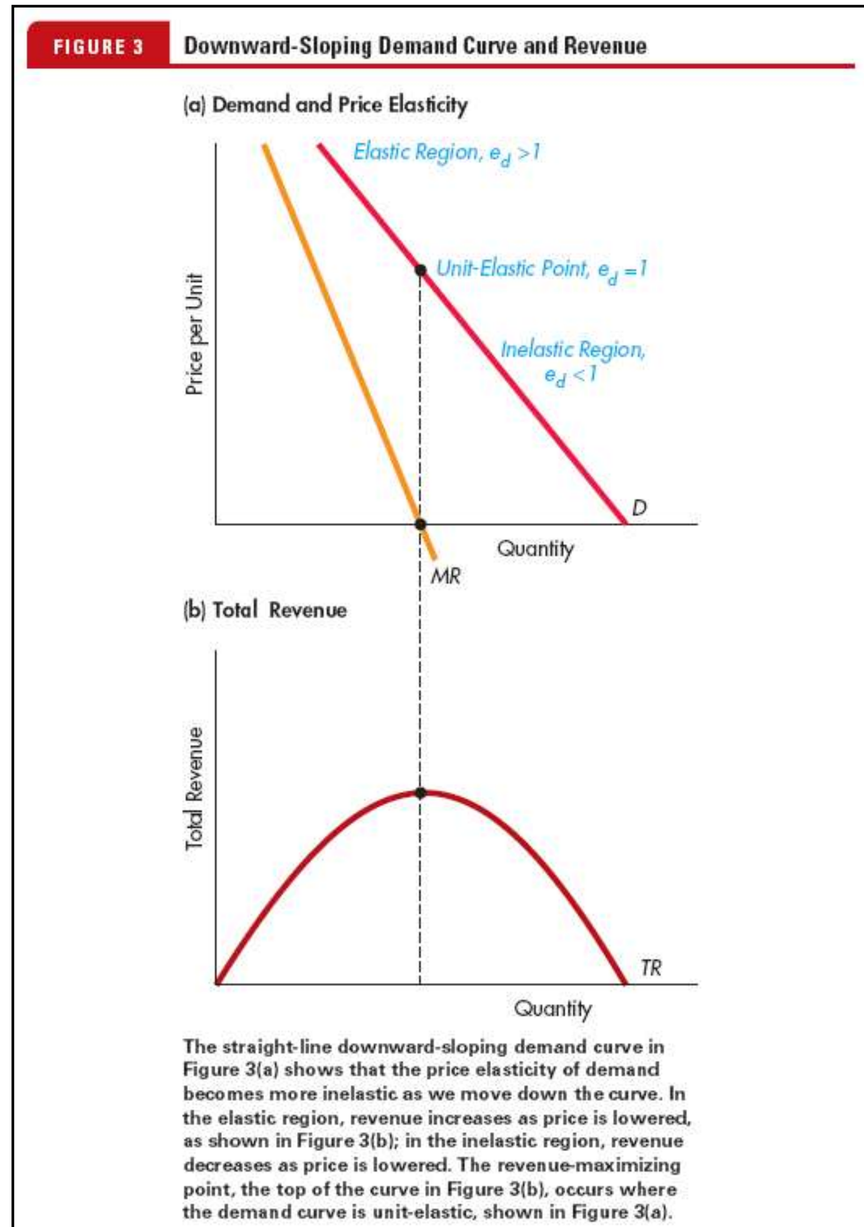
Demand and Revenue for the Monopolist



The straight-line downward-sloping demand curve in Figure 3(a) shows that the price elasticity of demand becomes more inelastic as we move down the curve. In the elastic region, revenue increases as price is lowered, as shown in Figure 3(b); in the inelastic region, revenue decreases as price is lowered. The revenue-maximizing point, the top of the curve in Figure 3(b), occurs where the demand curve is unit-elastic, shown in Figure 3(a).

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Average Revenue

- Note that the AR is the same as price. In fact, the **AR curve is the demand curve**.
- With a downward-sloping demand curve, prices fall as output increases. This means that AR falls.
- **MR must always be less than AR.**

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Profit Maximization

- The monopoly firm will not set the price arbitrarily high, the profit-maximizing price still corresponds to the point where MR=MC.

- The monopoly firm's **market power** will allow the firm to achieve above-normal profits.

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Monopoly Profit and Loss

- A monopolist will shut down permanently if revenue is not likely to equal or exceed all costs in the long run.
- In contrast, however, if a monopolist makes a profit, barriers to entry will keep other firms out of the industry.

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Monopoly and Perfect Competition: Comparison

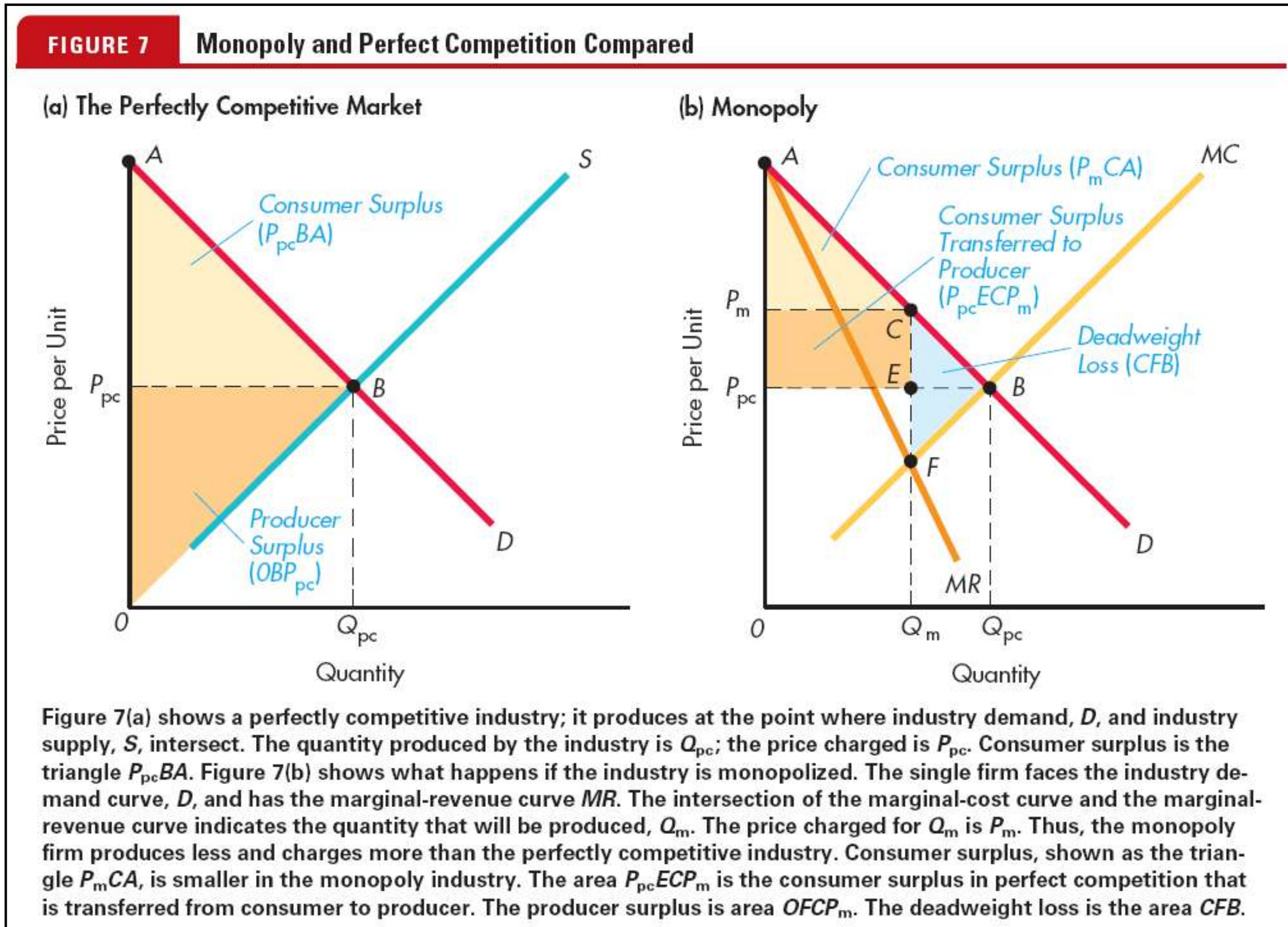

Figure 7(a) shows a perfectly competitive industry; it produces at the point where industry demand, *D*, and industry supply, *S*, intersect. The quantity produced by the industry is Q_{pc}; the price charged is P_{pc}. Consumer surplus is the triangle $P_{pc}BA$. Figure 7(b) shows what happens if the industry is monopolized. The single firm faces the industry demand curve, *D*, and has the marginal-revenue curve *MR*. The intersection of the marginal-cost curve and the marginal-revenue curve indicates the quantity that will be produced, Q_m. The price charged for Q_m is P_m. Thus, the monopoly firm produces less and charges more than the perfectly competitive industry. Consumer surplus, shown as the triangle P_mCA, is smaller in the monopoly industry. The area $P_{pc}ECP_m$ is the consumer surplus in perfect competition that is transferred from consumer to producer. The producer surplus is area $OFCP_m$. The deadweight loss is the area *CFB*.

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Efficiencies

- Productive efficiency: min ATC
- Allocative efficiency: P=MC
- Economic efficiency: both productive and allocative occur

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Copyrig

- Under certain conditions, a firm with market power is able to charge different customers different prices.

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Necessary Conditions for Price Discrimination

- For price discrimination to work, the firm must be able to set the price.

- The firm must be able to **"segment the market"** That is, the firm must be able to:
  - Separate the customers
  - Prevent resale of the product

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The Early Bird Gets a Lower Price

- Early Bird Specials—Restaurants charge special, lower prices for early diners.
- Matinees—Theaters charge less for earlier shows.
- Air Fares—Airlines charge less for flyers willing to fly “off peak,” i.e. early morning and late night.

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Perfect Price Discrimination

- By discriminating, a monopoly firm makes greater profits than it would make by charging both groups the same price.

- A firm with market power could collect the entire consumer surplus if it could charge each customer exactly the price that that customer was willing and able to pay. This is called ***perfect price discrimination***.

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