Chapter 15: Monopoly

Discussion section 4

November 2023

Monopolies

Is Amazon a monopoly?

Monopolies

What are some monopolies you encounter?

Monopolies

What are some monopolies you encounter?

- BG&E
- Verizon (certain neighborhoods)
- Post office

Outline

- We have focused so far on *competitive firms*; now we will look at monopolies
- This means firms with *market power*
  - Instead of price *takers* they are price *makers*
- Look at their behavior, implications for welfare, and government responses

But first: what *is* a monopoly?

Characteristics of monopolies

Monopolies:

- Produce goods with no close substitutes
- Are the sole provider of that good
- Can set prices as a result of 1 and 2

Why might a monopoly emerge?

Reasons for monopolies

Why might a monopoly emerge?

- Resources (mine for a rare resource)
- Regulations (patents and copyright)
- Production process (natural monopolies, economies of scale, network effects)

If monopolies can set prices, how will they decide how much to produce/at what price?

Pricing decision

- How does a monopoly decide on its production?
- Just like the firm in the competitive market, monopolies want to maximize profits
- Set price too high, no one will buy the good; find the “sweet spot”

What is the demand curve that a monopoly faces? Why?

Demand curve

- In a competitive market, no matter what quantity a firm produces, they sell at the market price; a *vertical demand curve*
- With a monopoly, the demand curve is now *downward sloping*
- Now, the firm *sets the market price* by their output decision

Thus we return to the demand curve from the free market equilibrium.

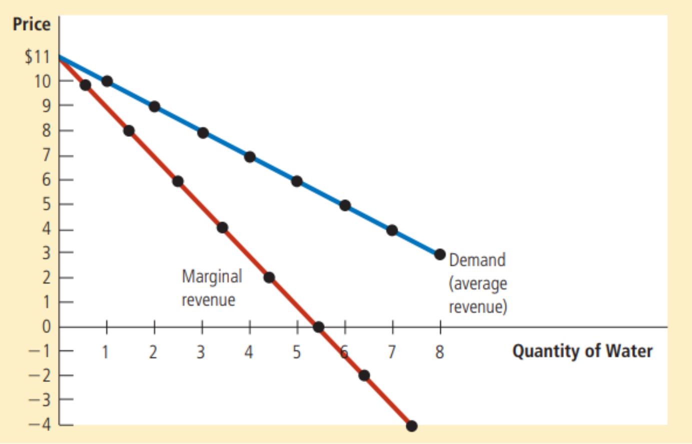
What happens to total revenue if we increase quantity?

Demand

What happens to total revenue if we increase quantity?

- Remember, TR = Q * P
- So there will be two effects:
  - Output (direct) effect: increase Q $\rightarrow$ higher revenue
  - Price (indirect) effect: increase Q $\rightarrow$ decreased P $\rightarrow$ lower revenue
  - (Note: for competitive firm, price effect is 0)
- Not clear ex ante which will dominate!

Demand curve



Profit maximization

Note that P $=$ AR.

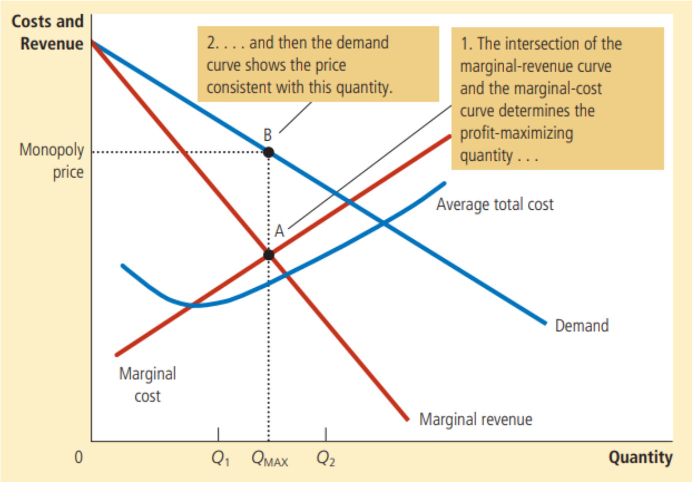
Where does the profit maximizing firm want to produce?

Profit maximization

Where does the profit maximizing firm want to produce?

- Still where MR $=$ MC!
- If they produce below, there is extra profit to be made
- If they produce above, they are losing profits on additional units

Profit maximization

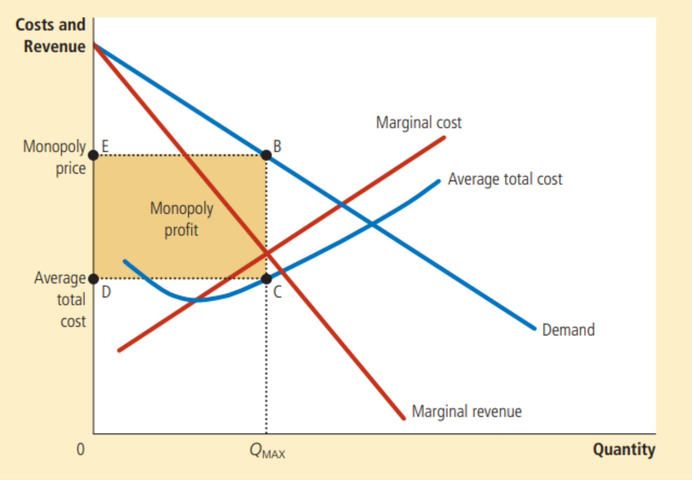


Profit maximization

- For the competitive firm, P = MC = MR
- For the monopolist, P > MC = MR
- Producing at a lower quantity!

$$\Pi = TR - TC$$
$$\Pi = (TR/Q - TC/Q) * Q$$
$$\Pi = (P - ATC) * Q$$

Profit maximization



Welfare

So, what does all this mean for society?

Is it good or bad?

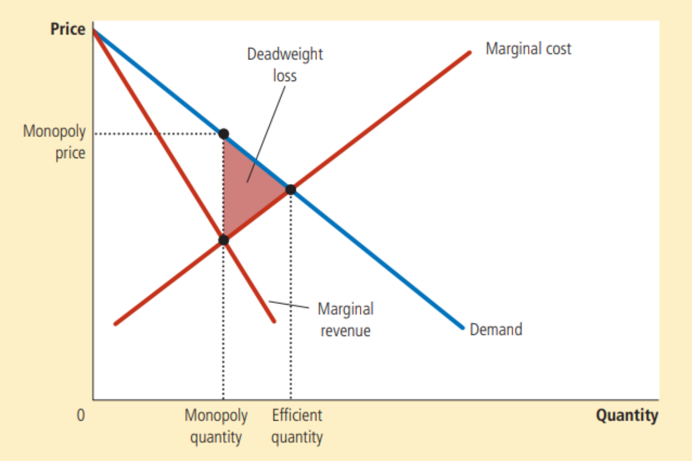
How do we know?

Welfare

For a normative evaluation, we need to return to our tools of *welfare economics*.

- Consumers pay more than they otherwise would have, and fewer are able to enjoy the good because of lower quantity
  - This suggests CS is decreasing
- But, the firm receives more revenue! So they are happy.
- What happens to total surplus? Is there any DL?

Profit maximization



Welfare

- DL similar to presence of a tax
- In fact, monopoly operates much like the government
- Or — government operates like a monopoly?
- Intuitively, DL comes from lower supply

Price discrimination

We have assumed all consumers face the same price.

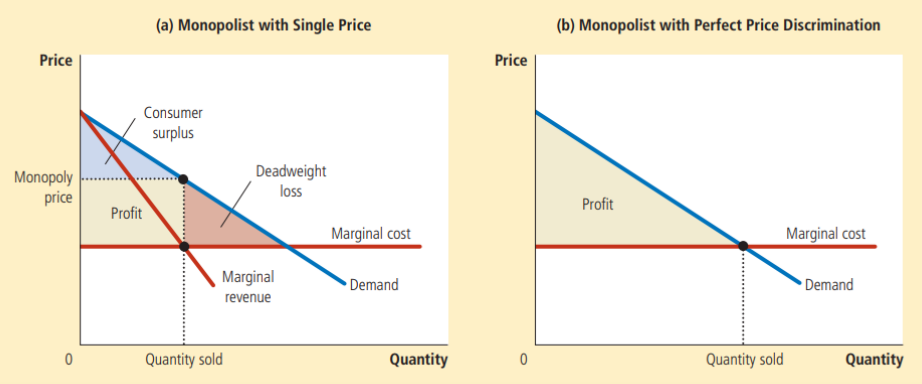
Could they charge different prices to different types of consumers? Why?

Price discrimination

This is called *price discrimination*.

- Requires market power
- May be perfectly rational
- Requires ability to distinguish between buyers
- Might be welfare improving!
    - How could this possibly be true??

Welfare


(a) Monopolist with Single Price
Price
Consumer
surplus
Monopoly
price
Deadweight
loss
Profit
Marginal cost
Marginal
revenue
Demand
0
Quantity sold
Quantity
(b) Monopolist with Perfect Price Discrimination
Price
Profit
Marginal cost
Demand
0
Quantity sold
Quantity

Government

OK, so presence of a monopoly might lead to welfare loss.

What might the government do to try and improve welfare?

Government

OK, so presence of a monopoly might lead to welfare loss.

What might the government do to try and improve welfare?

- Antitrust (breaking up AT&T)
- Regulation: cap or subsidize prices
- Public ownership
- Nothing