Introduction to Microeconomics

Week 11

Imperfect Competition

Supply-Demand model:

- Many many producers

This week:

- One producer

- Two–to–handful of producers

Introduction to Microeconomics

Class 21

Monopoly

Monopoly

$\equiv$ Only 1 producer (in the industry)

What is a monopolist's objective?

Assume: Monopolist maximizes profit

What does a monopolist choose?

- Price?

- Output?

- Both?

If monopolist could choose both..

If monopolist could choose both..

set

$p = 1$ trillion

$q = 1$ trillion

Assume monopolist chooses price.

- What determines how much monopolist can sell?

The demand curve!

Example: $D(p) = 1000 - p$.

Assume monopolist chooses quantity.

- What determines the price?

The demand curve!

Example: $D(p) = 1000 - p$.

$=>$ Monopolist chooses either quantity or price

and demand curve determines the other.

Assume monopolist faces linear demand curve

$$p = 1000 - q$$

Assume marginal cost is constant

$$MC = 200$$

(for simplicity!)

Assume monopolist chooses quantity:

Monopolist solves:

$$\max_q \{pq - 200q\}$$
$$\text{s.t. } p = 1000 - q$$

Optimum?

Optimum?

$$MR = MC.$$

To solve for MR, we need calculus!

$=>$ Econ 201

Would the monopolist sell at

$$p = MC$$

or at a higher price ($p > MC$)?

[Figure 21.1]

When $p = MC$, the monopolist does not make any profit.

When $p > MC$ (and $p < 1000$) the monopolist makes a positive profit.

$=>$ Monopolist would set price higher than marginal cost because when

What would be the efficient level of output

- What would a benevolent dictator order the firm to do?

[Figure 21.2]

Conclusion:

- Monopolies produce too little relative to the social optimum.