Slide 1

Kosmas Marinakis, Ph.D.

Lecture 4

Monopoly & Market Efficiency

Economics
& Society

SMU

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Slide 2

Previously in E&S

* Production function ▶
* Cost of production ▶
    short-run vs. long-run
* Returns and Economies of Scale ▶
* Assumptions of PC
* Profit maximization condition
    in general and in PC
* S-R supply of a PC firm
* Zero profit in the L-R

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Slide 3

Monopoly & Market Efficiency

MONOPOLY ★★★☆☆

MARKET POWER ★★★★★

EFFICIENCY ▶ ★★☆☆☆

TAXATION ▶ ★★★☆☆

ORGAN MARKETS ▶ ★★★★☆

Lecture 4

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Slide 4

MONOPOLY

★★★☆☆

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Monopoly assumptions

A market is a *pure monopoly* when:

1. There is only one **seller** but many **buyers**
2. The **product** has no (close) substitutes
3. There exist **barriers** to entry

★ *Examples* of (near) monopolistic markets:

 patented medications, replacement parts, wholesale diamonds, airports

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Price setting

★ The generalized *profit maximization* condition applies in monopoly
$$MR = MC$$

★ In monopoly, MR **is NOT equal** to the price:

  ▶ The monopolist **does not face** a horizontal demand curve for its brand

  ▶ She faces the entire **market demand**

  ▶ Once she sets a price, she has to **decrease** it to sell an extra unit

  ▶ Thus, in monopoly $p > MR$
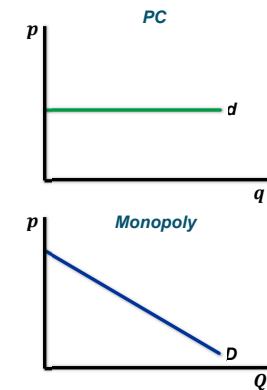
MR for linear demand
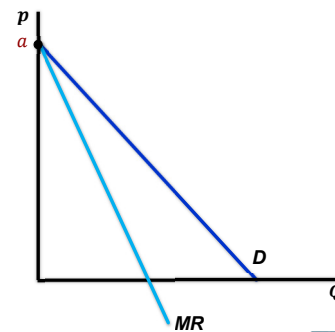
★ Consider a *linear* demand
$$p = a - bQ$$

★ Then, *marginal revenue* is
$$MR = a - 2bQ$$
for every linear demand, we can calculate the MR by *doubling the gradient*
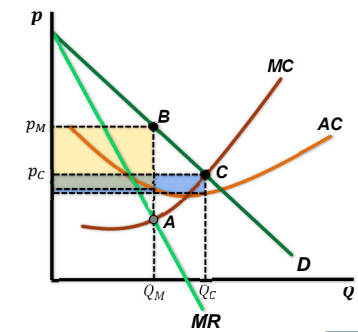

Profit maximization in Monopoly vs. PC

★ A monopoly, maximizes profit when $MR = MC$

  ▶ Profit maximizing **quantity** is Q_M

  ▶ **Price** p_M is given by the demand curve at B.

★ If this was a PC market, profit maximization would occur when $p = MC$

★ **Profit** in monopoly

★ **Price** in monopoly

★ **Quantity** in monopoly

How real firms set prices

★ $MR = MC$ is quite **impractical** to use in the **real world**

★ There is a much **simpler expression**, mathematically **equivalent** to $MR = MC$:

$$p = MC \cdot \left[1 + \frac{-1}{1 + \varepsilon_d}\right]$$

| markup as % of MC |

the seller maximizes profit when **MC is marked up** by $\frac{-1}{1+\varepsilon_d}$

★ The markup is **determined solely** by ε_d

the **more inelastic** the good, the **higher the markup**

★ **For instance**, a markup of 30% implies that $\varepsilon_d = -4.333$

MARKET POWER

Assessing market power

★ Market power is **NOT an abstract** notion

it is clearly defined as the extent to which **price can exceed the MC**

★ Market power can even exist in industries with **more than one firms**

as long as products are **not perfect substitutes**

★ Firms in such markets can still use the **markup rule** to maximize profit

$$p = MC \cdot \left[1 + \frac{-1}{1 + \varepsilon_d}\right]$$

in this case, ε_d refers to elasticity of demand **for the firm's brand**, not for the product in general

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Market power & Profit

★ Market power **does NOT necessarily imply** profit

★ If **demand** is weak and **costs** are high, a monopoly can have **losses**

★ Market power is the extend to which **price** exceeds **MC**

★ Profit depends on volume of **sales** and the difference between **price** and **AC**

Sources of market power ⚠️

Market power for a brand *originates* in its *elasticity of demand*

1. A brand's elasticity is *positively* affected by the *elasticity of the product*
   ▸ If the demand of *cars* becomes less elastic, *VW cars* will also become less elastic

2. A brand's elasticity is *negatively* affected by *entry* of new firms:
   ▸ Consumers are offered more chances for *substituting* the product

3. A brand's elasticity is *negatively* affected by the *intensity of competition* among brands:
   ▸ When firms compete *aggressively,* prices fall closer to *MC*
   ▸ If firms agree to *moderate* competition and *co-exist*, prices may stay way above *MC*

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How to create market power

1. **Work** on your product
   innovate or *differentiate* so that consumers cannot *substitute* you

2. **Show** the world
   communicate why you are better

3. **Close the door** behind you
   create *barriers* so that potential entrants will keep out of your profits

4. **"Kill"** the competition
   make it *harder* for the competition to keep up with you

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Thank you!

(you are welcomed to stay for *consultation* or *discussion*)

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⚠️ WARNING! ⚠️

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