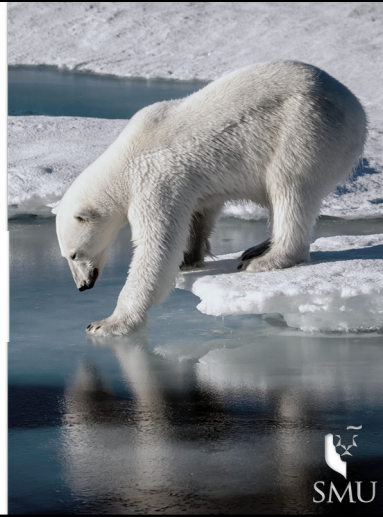


Kosmas Marinakis, Ph.D.

Lecture 6

Market Failure &
Government Intervention

Economics
& Society



1

Previously in E&S

- ★ Monopolistic Competition ▶
- ★ Cournot Oligopoly
- ★ Bertrand Oligopoly
- ★ Collusion ▶
- ★ Kinked demand model ▶

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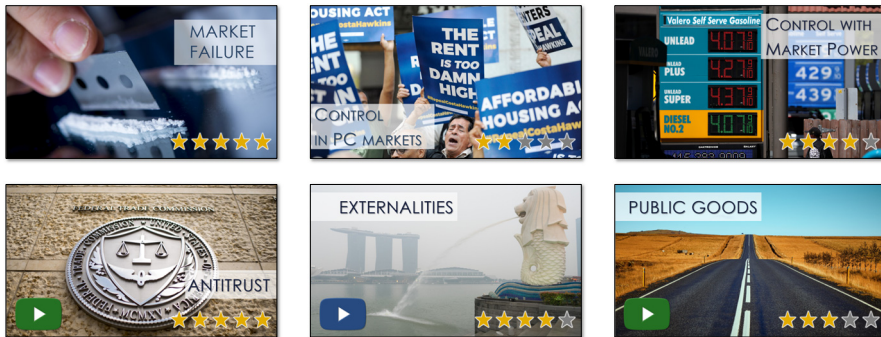
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Market Failure & Government Intervention

Estimated duration: 80min



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Market failure

> Market failure

- ★ Market failure is the situation when the market **outcome** is **socially undesirable**
- ★ Different societies have **different preferences**:
 - ▶ In Singapore is illegal but is legal
 - ▶ In L.A. is legal but is illegal
 - ▶ In Tehran is OK but is illegal
- ★ Market failure is a **subjective** notion

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Types of market failure

> Market failure

- ★ Monopolies are known to cause economic **inefficiency** and are socially **disliked**
- ★ But even PC outcomes, which are **100% efficient**, are socially disliked at times
- ★ There are **7 main types** of market failure:
 1. Market prices may fail to reflect the **real cost** or the **real benefit** of the product
 2. The market may fail to **allocate** the good to those who value it the most
 3. The market may fail to produce the good at the **min opportunity cost**
 4. The market may produce a good that fails to **cover the real needs** of the society
 5. The market may fail to control the abuse of **monopoly power**
 6. Consumers may **fail to evaluate the consequences** of the use of a product
 7. The market may fail to **equilibrate** for various reasons.

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Regulation

> Market failure

- ★ The **response** to market failure is **regulation**
- ★ Intervention may **lead to improvement** in social welfare
winners could **compensate** the losers and still be winners
- ★ Olga has the **right to choose** the plan
she would **choose B** causing a **DWL** of 8 units ($20 - 12 = 8$)
- ★ A regulator could **tax George** for 1 unit and pay it to **buy Olga's right** to choose
Olga has **no reason to object** because she will still receive 11
- ★ A is implemented; Olga receives $10 + 1 = 11$ and George receives $10 - 1 = 9$
no one is worse off and the **DWL is eliminated** by the intervention

	George	Olga
Plan A	10	10
Plan B	1	11

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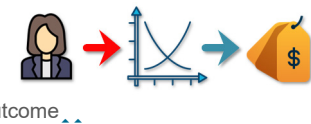
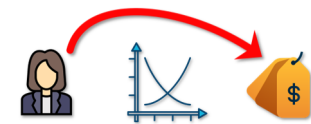
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Regulatory intervention

> Market failure

- ★ There are **2 approaches** to regulatory intervention:
 1. **Direct** intervention:
 - ▶ The regulator overrides the market and directly **sets the desired outcome**
 - ▶ For example, setting **prices**, product **specifications** or product **variety**.
 2. **Indirect** intervention:
 - ▶ The regulator **adjusts the market rules** to steer clear of failing outcomes
 - ▶ For example, **antitrust** or **other legislation** that enables the market to yield the desired outcome



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Price ceiling

> Price control > Competition

- ★ Market equilibrates at A with price p^*
- ★ If a **maximum price** p_{max} is imposed:
 - ▶ Quantity demanded **increases** from Q^* to Q_D
 - ▶ Quantity supplied **decreases** from Q^* to Q_S
 - ▶ A shortage equal to $Q_D - Q_S$ is created.
- ★ Producers **sell less** at **lower price**
- ★ Consumers along **EA** can **no longer** buy
- ★ Consumers along **FE** **buy cheaper**
- ★ This policy creates **winners and losers**
- ★ Intervention decreases price but creates a **DWL**

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Price floor

> Price control > Competition

- ★ Market equilibrates at A with p^*
- ★ If a **minimum price** p_{min} is imposed:
 - ▶ Quantity supplied **increases** from Q^* to Q_S
 - ▶ Quantity demanded **decreases** from Q^* to Q_D
 - ▶ A surplus equal to $Q_S - Q_D$ is created.
- ★ Producers **sell less** (Q_D) at **higher price**
- ★ Consumers along **CA** can **no longer** buy
- ★ Consumers along **FC** **buy but more expensive**
- ★ The policy creates **winners and losers**
- ★ Intervention comes at an **efficiency cost**

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3 useful facts to remember

> Price control > Market power

1. In every market structure, **price** is always determined by the **demand curve**
2. **Price takers** always face **horizontal demand** curves
3. Horizontal demand curves always **coincide** with their **MR curves**

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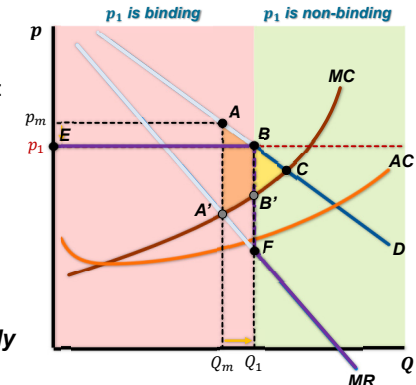
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Price regulation in monopoly

> Price control > Market power

- ★ If **left alone**, the seller charges p_m
DWL ACA' exists in the market
- ★ The regulator may **impose** max price p_1 :
to **raise** quantity to Q_1 ;
- ★ For quantities up to Q_1 :
 - ▶ D yields prices **above** p_1
 - ▶ D and MR **do not apply** with regulation
 - ▶ The seller **takes** p_1 from the regulator
 - ▶ **Demand** and MR are line EB .
- ★ Above Q_1 , original demand and MR **apply**
- ★ Monopolist indeed **wants to produce** Q_1



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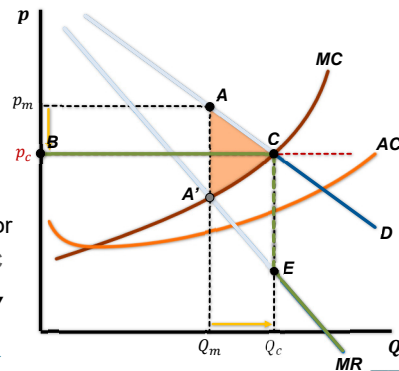
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Elimination of DWL

> Price control > Market power

- ★ If **left alone**, the seller charges p_m
DWL ACA' exists in the market
- ★ The regulator may **impose** max price p_c :
to **raise** quantity to Q_c ; **eliminate** the DWL
- ★ Up to Q_c , D yields prices **above** p_c
 D and MR **do not apply** with regulation
- ★ Up to Q_c , seller **takes** p_c from the regulator
with regulation, **demand** and MR are line BC
- ★ Above Q_c , original demand and MR **apply**
- ★ Monopolist indeed **wants to produce** Q_c



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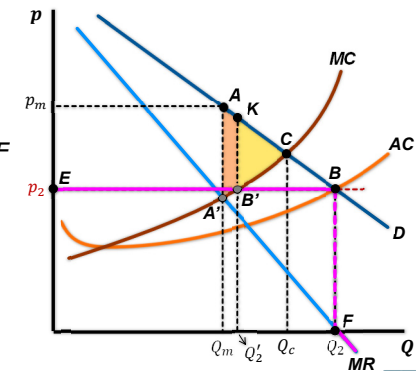
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Price regulation overshooting

> Price control > Market power

- ★ If **left alone**, the seller charges p_m
DWL ACA' exists in the market
- ★ The regulator may **impose** max price p_2
to cause **quantity to increase** to Q_2
- ★ With regulation, **MR curve** becomes EBF
- ★ At Q_2 the monopolist has **zero profit**
- ★ Monopolist **maximizes profit** at Q_2'



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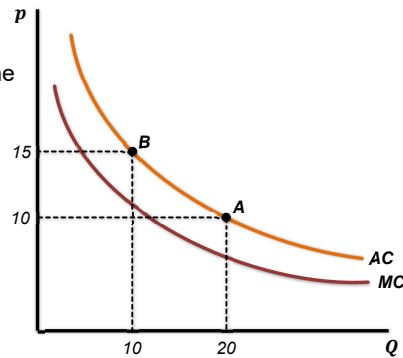
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Natural monopolies

> Price control > Market power

- ★ Some production processes may exhibit **intense Economies of Scale**
- ★ In this case, a single firm could produce the entire output at **lower cost** than if production was split over several firms
 - ▶ A monopoly would produce 20 units with cost $20 \cdot \$10 = \200
 - ▶ If the 20 units were split between 2 firms, cost would be $10 \cdot \$15 + 10 \cdot \$15 = \$300$.
- ★ **Examples:** metro, airports, city water



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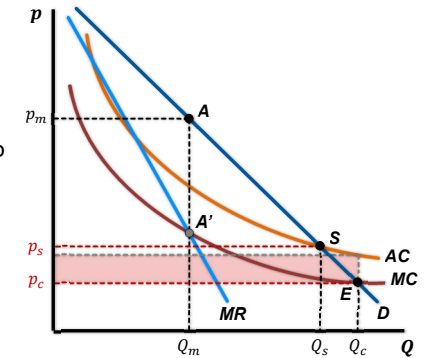
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Regulating a natural monopoly

> Price control > Market power

- ★ Unregulated monopolist would produce Q_m and charge p_m
- ★ Regulation at p_c yields the **maximum market efficiency** but at
- ★ Regulation at p_s allows the monopolist to **break even** and offers **sustainability** however, a **lower quantity** is produced



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Thank you!

(you are welcomed to stay for consultation or discussion)

⚠ WARNING! ⚠

The slides in this handout are created with the intention to serve a visual aid for the audience during the live presentation of the material in the lecture. As such, **they are not designed to be standalone reading material** and should be used strictly as **reference**, side by side with notes taken in the lecture. Studying solely from the slides **is not recommended** and might in some cases **mislead** those who have not attended the relevant lecture. **Less than 20% of tasks in test and exam can be answered solely from the slides.**

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