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Lecture 6

Market Failure & Government Intervention

Economics & Society

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Previously in E&S

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

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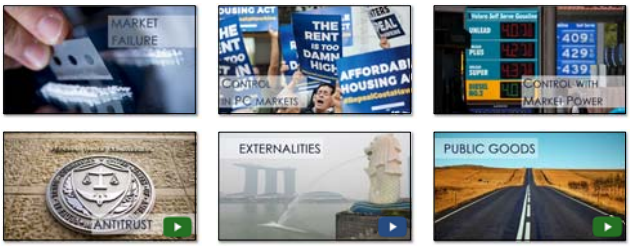
Market Failure & Government Intervention



Lecture 6

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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 ***marijuana*** is illegal but ***sex work*** is legal
  - In L.A. ***marijuana*** is legal but ***sex work*** is illegal
  - In Tehran ***marijuana*** is OK but ***alcohol*** is illegal

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Market failure

Types of 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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Market failure

Regulation

- Regulation is a ***response*** to market failure
  and may ***lead to improvement*** in social welfare
- Winners from intervention could ***compensate*** the losers and still be winners
- Olga has the ***right to choose*** the plan
  she would ***choose plan B*** causing a ***DWL*** of 8 units (20 – 12 = 8)

	George	Olga
Plan A	10	10
Plan B	1	11

- A regulator could ***tax George*** for 1 unit and pay it to ***buy Olga's right*** to choose
  Olga has ***no reason to not sell*** the right because she will anyway 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

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Market failure

Regulatory intervention

- There are ***2 approaches*** to regulatory intervention:
  1. ***Direct*** intervention:
     - The regulator directly ***sets the market outcome*** that is prone to market failure
     - For example, setting ***prices***, product ***specifications*** or product ***variety***.
  2. Affecting market ***institutions***:
     - The regulator ***adjusts the rules*** of competition to indirectly avoid failing outcomes
     - For example, ***antitrust*** or ***other legislation*** that sets market rules

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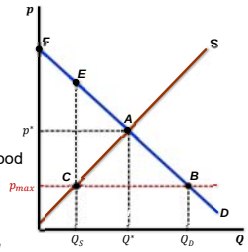
Price control | Competitive markets

Price ceiling

- 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 the good
- Consumers along *FE* ***buy it cheaper***
- This policy creates ***winners and losers***
- Intervention decreases price but creates a ***DWL***



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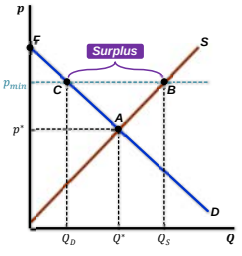
Price control | Competitive markets

Price floor

- 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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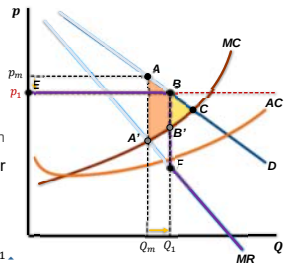
Price control | Market power

Price regulation in monopoly

- If ***left alone***, the seller charges p_m
  DWL *ACA'* is imposed in the market
- The regulator may ***impose*** max price p_1:
  to ***raise*** quantity to Q_1;
- Up to Q_1, demand yields prices ***above*** p_1
  demand and MR ***do not apply*** with regulation
- Up to Q_1, seller ***takes*** p_1 from the regulator
  with regulation, ***demand*** and ***MR*** are line EB
- Above Q_1, original demand and MR ***apply***
- Monopolist indeed ***wants to produce*** at Q_1



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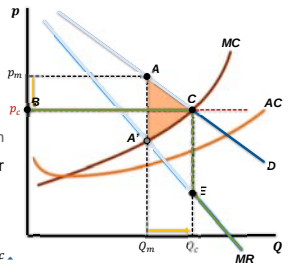
Price control | Market power

Elimination of DWL

- If ***left alone***, the seller charges p_m
  DWL *ACA'* is imposed in the market
- The regulator may ***impose*** max price p_c:
  to ***raise*** quantity to Q_c;
- Up to Q_c, demand yields prices ***above*** p_c
  demand 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*** at Q_c



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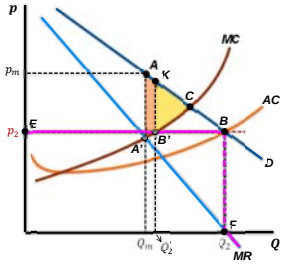
Price control | Market power

Price regulation overshooting

- If ***left alone***, the seller charges p_m
  DWL *ACA'* is imposed 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'
- Regulation is ***unsuccessful***:
  - ***Limits quantity*** to $Q_2' < Q_c$
  - ***Yields significant DWL*** *KCB'*



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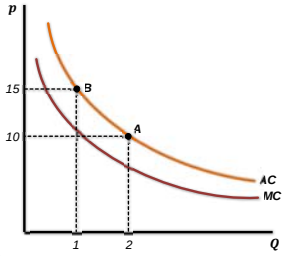
Price control | Market power

Natural monopolies

- In some markets, it is possible that a single firm can produce the entire output at a ***significantly lower cost*** than if there were several firms
  this happens when there are large ***economies of scale***
- ***Splitting*** the monopoly into 2 firms results in considerably ***higher cost***:
  - With 1 firm, 2 units cost 2·10 = 20
  - With 2 firms, 2 units cost 15 + 15 = 30.
- **Examples:** metro, airports, public utilities



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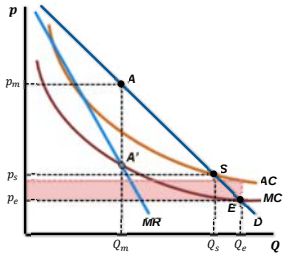
Price control | Market power

Regulating a natural monopoly

- Unregulated monopolist would produce Q_m and charge p_m
- Regulation at p_e yields the ***maximum market efficiency*** but at ***losses***
- 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 may stay for consultation or discussion

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