Economic Welfare: Monopoly v. Perfect Competition
Agenda

◆ Societal Welfare/Economic Welfare: Criteria
  - Consumer Surplus
  - Producer Surplus
◆ Compare Monopoly and Perfect Competition
◆ Price Discrimination
Economic Welfare

- Consumer surplus measures economic welfare from the buyer/consumer perspective.
- Producer surplus measures economic welfare from the seller/producer perspective.
Consumer Surplus

- **Consumer surplus** is the amount a buyer is willing to pay for a product minus the amount the buyer actually pays.

- Consumer surplus is the area below the demand curve and above the market price.
  - A lower market price will increase consumer surplus.
  - A higher market price will reduce consumer surplus.
Producer Surplus

- **Producer surplus** is the amount a seller is paid for a product minus the total variable cost of production.
- **Producer surplus** is equivalent to economic profit in the long run.
Economic Welfare

- Economic welfare can be quantified as the sum of consumer surplus and producer surplus, i.e. equal weights assumed.
Consumer Surplus and Producer Surplus: Market Equilibrium

The graph illustrates the concept of market equilibrium, with the demand curve labeled as Demand and the supply curve as Supply. The equilibrium price and quantity are indicated by point E.

- **Consumer Surplus**: The area above the equilibrium price and below the demand curve up to the quantity sold.
- **Producer Surplus**: The area below the equilibrium price and above the supply curve up to the quantity sold.

The graph uses points A, B, C, D, and E to denote various price levels and quantities in the market.
Monopoly v. Perfect Competition

- Monopoly and perfect competition can be compared/contrasted by using consumer surplus and producer surplus (i.e. by using economic welfare/societal welfare measures).
Monopoly v. Perfect Competition

For PC, output will be set at $P = MR = MC$

Recall that for PC: $MR = AR = Demand$

![Graph showing the relationship between price (P), marginal cost (MC), and output (Q) for a monopolist and a perfect competitor. The graph illustrates how the output is set at $Q_{pc}$ such that $MR = MC$.](image-url)
Monopoly v. Perfect Competition

Price is $P_{pc}$
Recall that for monopoly, $MR \neq MC$.

Output is set where $MC = MR$. 
The monopoly output is less than the perfectly competitive output.
The monopoly output is less than the perfectly competitive output.

(The monopoly price is higher than the perfectly competitive price.)
Monopoly v. Perfect Competition

The green area represents the deadweight loss (triangle) of Monopoly.
The Deadweight Loss ("Triangle")

The green area from the previous diagram has been enlarged.

MC

"Loss" in consumer surplus

Demand
The Deadweight Loss ("Triangle")

The green area from the previous diagram has been enlarged.
The Deadweight Loss ("Triangle")

\[ \Delta CS + \Delta PS = \text{welfare loss associated with monopoly} = \text{DWL} \Delta \]
The Deadweight Loss ("Triangle"): Allocative Inefficiency

Allocative inefficiency: \( P \neq MC \)

Allocative Inefficiency: \( \Delta \text{DWL} \triangle \)

\[
\Delta CS + \Delta PS = \text{welfare loss} = \Delta \text{DWL}
\]
## Economic Efficiencies: Monopoly v. Perfect Competition

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Price Discrimination
Monopoly v. Perfect Competition

- **First degree (perfect) price discrimination**
  - Each consumer pays her/his reservation price. The producer/seller captures all consumer surplus
  - Implication for Monopoly v. Perfect Competition? (MR = AR \Rightarrow P = MC in monopoly, i.e. allocative efficiency)

- **Second degree price discrimination**
  - Bulk discounting
  - Non-linear pricing

- **Third degree price discrimination**
  - different prices to different groups.