AS.180.102 (04): Elements of Microeconomics

Chapter 10 - Externalities

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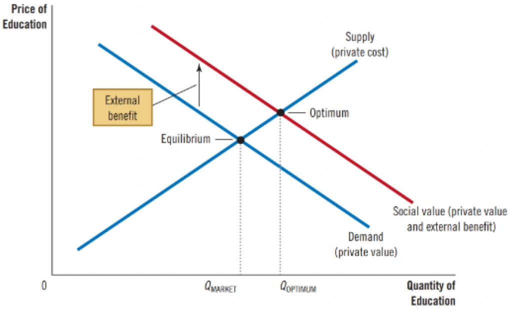
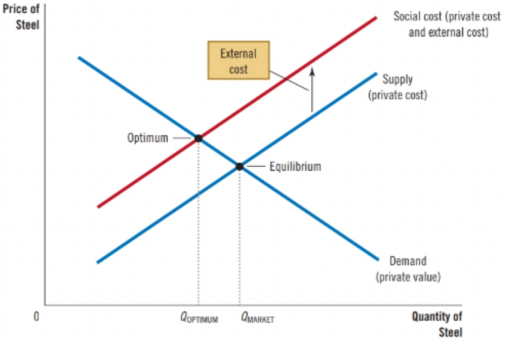
Externalities

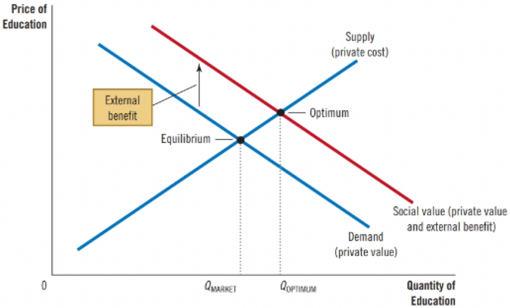
- Externalities occur when someone engages in an action that causes a cost or benefit on bystanders around them and affects their utility

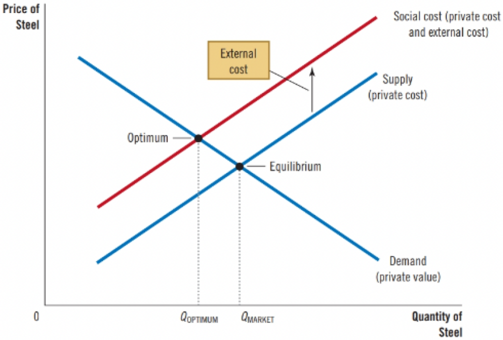




Externalities

- External benefit $>$ Private benefit $\Rightarrow$ Under-supply
- External benefit $<$ Private benefit $\Rightarrow$ Over-supply





Question

- Shell Oil has a private value for crude oil of $100 - 2Q$ and a private cost of $10 + Q$. However the public receives an additional cost of \$9 for each unit of oil consumed by Shell.
    1. How would we draw the private cost and benefit?
    2. How would we draw the social cost?
    3. How much is rude oil being under/over consumed by?
    4. What price is currently charged and would be charged at the social optimum?
    5. What is the deadweight loss in this case?

Solutions

- 2 Primary Solutions
  - Taxes/Subsidies
  - Quantity Regulation

Question Revisited

- Shell Oil has a private value for crude oil of $100 - 2Q$ and a private cost of $10 + Q$. However the public receives an additional cost of \$9 for each unit of oil consumed by Shell.
  1. How would we draw the private cost and benefit?
  2. How would we draw the social cost?
  3. How much is rude oil being under/over consumed by?
  4. What price is currently charged and would be charged at the social optimum?
  5. What is the deadweight loss in this case?
  6. What is the size of a tax that would get us to the optimal social price and quantity

Questions

Questions?

Key Points

- Know the determinants of supply and demand
- Understand a list of key definitions (e.g. from Exam 2 - the difference between a sunk cost and a fixed cost)
- Know how to shift supply and demand curves, calculate consumer and producer surplus, and calculate deadweight loss
- Understand the difference between short run and long run equilibria
- Try recognizing the patterns that run throughout the course (e.g. MR=MC is always profit maximizing, in the long run we have move flexibility, etc.)
- Use your intuition
- Be precise with your language and wording

Oligopoly Question

- Little Kona is a small coffee company that is considering entering a market dominated by Big Brew. Each company's profit depends on whether Little Kona enters and whether Big Brew sets a high price or a low price:

	BB High Price	BB Low Price
LK Enter	Kona makes \$2mil Brew makes \$3mil	Kona loses \$1mil Brew makes \$1mil
LK Don't Enter	Kona makes \$0 Brew makes \$7mil	Kona makes \$0 Brew makes \$2mil

1. Does either player in this game have a dominant strategy?
2. Does your answer to part (a) help you figure out what the other player should do? What is the Nash equilibrium? Is there only one?
3. Big Brew threatens Little Kona by saying, "If you enter, we're going to set a low price, so you had better stay out." Do you think Little Kona should believe the threat? Why or why not?
4. If the two firms could collude and agree on how to split the total profits, what outcome would they pick?