Overview: Asymmetric Information and Market Structure

Bargaining Games

Asymmetric Information (hidden attributes)

- The “Lemons” problem
- Adverse Selection
- Solutions

Bargaining Games : Introduction

- You will bargain over a car.
- Cars can be either good or bad. Half the cars currently owned by potential sellers are good and half are bad.
- A good car is worth $7000 to a seller (S), while a bad car is worth only $2000 to a seller.
- A potential buyer (B) always values the car $2000 more than the seller. A good car is thus worth $9000 to a buyer, while a bad car is worth $4000.
- The above facts are common knowledge among buyers and sellers.

Bargaining Game I

- Instructions
  - Bargaining on whether to sell and at what price (you may refuse to trade)
  - Record
    - whether you reached an agreement
    - if so, at what price
    - how long it took to get agreement

Bargaining Game II

- Instructions
  - Bargain on whether to sell and at what price (you may refuse to sell)
  - You ARE allowed to make any claim about your actual value. (Remember though that everyone knows the distribution over possible values).
  - You are NOT allowed to give any personal assurances that your claims are true, such as promise a beer if you lie.
  - Record
    - whether you reached an agreement
    - if so, at what price
    - how long it took to get agreement

Questions We'll Address:

- What are the implications of asymmetric information for market equilibrium and market structure?
- What can firms (or governments) do in such cases?

Examples of Asymmetric Information

- What happens when sellers know much more than buyers about the quality of a good that's being offered for sale?

- The market for "lemons"

Bargaining Game II: Market Failure

- Note, expected value of car to B is

  .5 * 4000 + .5 * 9000 = 6500

  => Buyer would not pay more than 6500
- At a price less than 7000, no good cars will be offered
- With only bad cars offered, equilibrium prices could be at most 4000.
- In equilibrium, only bad cars traded, at price between 2000 and 4000.

Market Responses to Asymmetric Information

- Sellers have strong incentives to provide information regarding product quality, but …

- Solutions to "market failure" caused by asymmetric information
  - by private firms

  - by government

Adverse Selection

- Refers to how health insurance tends to attract people with highest health risks
- Arises because insurance companies cannot observe an individual's health
- Other examples of adverse selection

Harvard's "Death Spiral" Experience with Adverse Selection

	Total Premium BC/BS	Total Premium HMO	Employee Premium BC/BS	% BC/BS Enrollees
1994	6,600	6,400	600	20
1995	6,400	5,500	1,050	15
1996	7,400	5,300	2,400	9
1997	Disbanded		Disbanded	

"SLOAN MBA"

Why do employers trust this signal?

Diplomas as Signals

- People with greater productive ability are more likely to attain a higher education level, *signaling* their productivity and thereby obtaining better-paying jobs

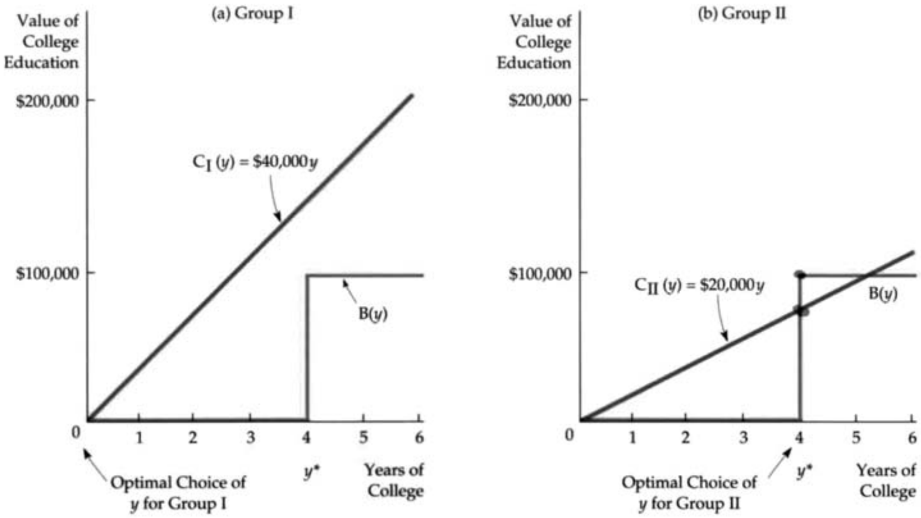
and

- Firms are correct in considering educational attainment a signal of productive ability

Simple Example from Text

- Two types of workers - high ability and low ability (50/50)
- Value of employing high ability worker - $200,000
- Value of employing low ability worker - $100,000
- Cost of y years of college (financial + psychic):
  - $20,000y for high ability workers
  - $40,000y for low ability workers
- Note: here education doesn't increase productivity
- Perfect information vs. Asymmetric information

Figure 17.2 Signaling



“Our Product Tastes Great”

- Is this credible?
- When might it be?

Information and Incentives

- Most situations involve several information phenomena
  - Adverse Selection
  - Signaling and Screening
  - Moral Hazard
- Volvo drivers
- Free eyeglasses
- Start-ups and venture capital
- VPI Insurance

Start-Ups and Venture Capital

- Information Issues with Start-Ups
  - Adverse Selection
    - Which ideas have potential for big markets, sustainable profits?
    - Do management teams have ability to make business a success?
  - Moral Hazard
    - Will management teams work hard enough?
- Venture Capital Markets
  - VC's demand evidence of ongoing revenue, insist on severe conditions for lending
  - Market failure: VC's have money but no one gets it.

Features of VPI's 2004 Insurance Policy

- Eligibility:
  - Any individual 8 weeks old and up, no age limit.
  - No pre-existing conditions
- Coverage:
  - Most medical treatments and hospitalization, including mental health
  - Choose your own health care provider
  - No cosmetic surgery
  - Dollar cap for each condition (e.g., $300 for bladder infection)
- Cost Sharing:
  - 80% of first $180 per incident
  - $50 deductible per visit

Take Away Points

- Asymmetric Information can cause markets to fail.
- Adverse selection occurs when exactly the people with the worst characteristics accept the deal.
- To solve such information problems, you need credible communication.
- Signaling, screening, and warranties can provide credibility.