In this chapter, look for the answers to these questions:

- How does asymmetric information affect market outcomes? How can market participants reduce the resulting problems?
- Why might democratic voting systems fail to represent the preferences of society?
- Why do people not always behave as rational maximizers?

Introduction

- Microeconomics continues to evolve.
- This chapter introduces three active areas of research:
  - Asymmetric information
  - Political economy
  - Behavioral economics
Asymmetric Information

- Information asymmetry:
  - Two types:
    - Hidden actions
    - Hidden characteristics

Hidden Actions and Moral Hazard

- Moral hazard:
  - Workers sometimes shirk their responsibilities because their employer cannot continually monitor their effort and performance.
  - Someone whose property is insured may not try as hard to protect it from theft/damage.
  - While the parents are out, the babysitter may spend more time watching videos than watching the children.

The Principal-Agent Problem

- Agent:
  - Principal:
    - When the principal cannot perfectly monitor the agent’s behavior, there is a risk (“hazard”) that the agent may do something undesirable (“immoral”).
    - *E.g.*, worker may play video games or surf the web while on the clock.
**How Principals May Respond**

- Parents plant hidden cameras in the home
- Employers pay workers *efficiency wages*
- Firms delay payment

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**Corporate Management**

- The separation of ownership and control of corporations creates a principal-agent problem:
  - **Principals:**
  - **Agents:**
    - Shareholders hire a board of directors to oversee management, create incentives for management to pursue the firm's goals instead of their own.
    - Corporate managers sometimes sent to jail for taking advantage of shareholders.

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**Hidden Characteristics and Adverse Selection**

**Adverse selection**

**Example 1: The market for used cars**

- The seller knows more than the buyer about the quality of the car being sold.
- Owners of “lemons” more likely to put their vehicles up for sale.
Hidden Characteristics and Adverse Selection

Example 2: Insurance

- Buyers of health insurance know more about their health than health insurance companies.
- People with hidden health problems have more incentive to buy insurance policies.

In both examples, the information asymmetry prevents some mutually beneficial trades.

Market Responses to Asymmetric Information

Signaling:

- Individual selling a good used car provides all receipts for work done on car.
- Dealership provides warranties on used cars.
- Firms spend huge sums on advertising to signal product quality to buyers.
- Highly competent workers get college degree to signal their quality to employers.

Market Responses to Asymmetric Information

Screening:

- Health insurance company requires physical exam before selling policy.
- Buyer of a used car requires inspection by a mechanic.
- Auto insurance company charges lower premiums to drivers willing to accept a larger deductible – they are most likely the safer drivers.
Asymmetric Information and Public Policy

- Asymmetric information

- Yet, public policy may not be able to improve on the market outcome:
  - Private markets can sometimes deal with the problem using signaling or screening.
  - The govt rarely has more information than private parties.
  - The govt itself is an imperfect institution.

**ACTIVE LEARNING 1**

**Asymmetric Information**

For each situation below,
- identify whether the problem is moral hazard or adverse selection
- explain how the problem has been reduced

A. Aperion Audio sells home theater sound systems over the Internet and offers to refund the purchase price and shipping both ways if the buyer is not satisfied.

B. Landlords require tenants to pay security deposits.

**ACTIVE LEARNING 1**

**Answers**
Political Economy

- Political economy

First, we consider voting.

Condorcet paradox:

Transitivity is a property of preference rankings:

Example of the Condorcet Paradox

A, B, and C are three candidates running for an open seat on the city council.

There are 3 types of voters, each with its own rankings of the candidates:

<table>
<thead>
<tr>
<th>Voter Type</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of all voters</td>
<td>35%</td>
<td>45%</td>
<td>20%</td>
</tr>
<tr>
<td>1st choice</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>2nd choice</td>
<td>B</td>
<td>C</td>
<td>A</td>
</tr>
<tr>
<td>3rd choice</td>
<td>C</td>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>
Lessons from the Condorcet Paradox

- Democratic preferences
- Majority voting

Arrow’s Four Desirable Properties of a Voting System

1. **Unanimity:**
2. **Transitivity:**
3. **Independence of irrelevant alternatives:**
4. **No dictators:**

Arrow’s Impossibility Theorem

- Arrow proved that no voting system can satisfy all four properties.
- **Arrow’s impossibility theorem:** A mathematical result showing that, under certain assumed conditions,
The Median Voter Theorem

- Suppose society is deciding the level of the government budget.
- Each voter has her own preferences about the size of the budget.
- If you line up all voters in order of their budget preferences, the median voter is the one right in the middle.
- **Median voter theorem**: a mathematical result showing that

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Example of the Median Voter Theorem

![Bar chart showing preferred government budgets with percentages of voters](chart.png)

- **Preferred govt budget (billions)**: $20, $30, $40, $50, $60, $70, $80

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Implications of the Median Voter Theorem

- In a two-party or two-candidate race,
- Minority views
Politicians are People Too

- Politicians motivated by self-interest, just like firms and consumers.
- Some politicians motivated by re-election, willing to sacrifice the national interest toward that goal.
- Others motivated by greed.
- The lesson: Economic policy is not made by benevolent leaders, and sometimes fails to resemble the ideals derived in economics textbooks.

ACTIVE LEARNING 2
Application of Median Voter Theorem

- Would you expect the Democratic presidential nominee to be more liberal during the primaries or the general election, or to be consistent throughout both?
- Would you expect the Republican nominee to be more conservative during the primaries or the general election, or to be consistent throughout both?

ACTIVE LEARNING 2
Answers
Behavioral Economics

- **Behavioral economics:**
  - People aren’t always as rational as traditional economic models assume.
  - Herbert Simon viewed humans as satisficers.
  - Other economists have suggested that people are only “near rational” or exhibit “bounded rationality.”

People Aren’t Always Rational

Studies find that people make systematic mistakes:

Even though people are not always rational, the assumption that they are is usually a good approximation for economic modeling.

People Care About Fairness

People’s choices are sometimes influenced

Example: The ultimatum game

The rules:
- Two players who do not know each other have a chance to share a prize of $100.
- Player A decides what portion of the prize to give to player B.
- B must accept the split or both get nothing.
People Care About Fairness

Predicted outcome if both players rational

Actual outcomes from experiments with real people
- B usually rejects lopsided splits like 99-1 as wildly unfair.
- Expecting this, A usually proposes giving $30 or $40 to B.
- B views this as unfair, but not so much as to abandon his self-interest, so B accepts.

People Care About Fairness

- The results of the ultimatum game apply in other situations.
- Example:

People Are Inconsistent Over Time

- People tend to
- Result: People fail to follow through on plans to do things that are dreary, take effort, or cause discomfort.
  - E.g.,
- To help follow through, people look for ways to commit themselves to their plans.
  - E.g., worker has money taken out of paycheck before he ever sees it
CONCLUSION

Recall two of the Ten Principles from Chapter 1:

- Markets are usually a good way to organize economic activity.
- Governments can sometimes improve market outcomes.

Research at the frontiers of microeconomics illustrates some caveats that go with these principles:

- Consumers aren’t always rational.
- Market outcomes may not be best when information is asymmetric.
- Government solutions are not always ideal.