

SECOND CANADIAN  
EDITION

# MICROECONOMICS

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## Chapter 1 First Principles

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# Economics and Microeconomics

- Some questions about our economic system:
  - How does it work?
  - How does it manage to deliver the goods?
  - Who's in charge?
  - Does it lead to efficient/fair outcomes?
- **Microeconomics:** Study individual decisions and how they interact

*“Economics is the study of mankind in the ordinary business of life”*

*-Alfred Marshall*

**WHAT YOU  
WILL LEARN  
IN THIS  
CHAPTER**

- A set of principles for understanding how individuals make choices
- A set of principles for understanding how individual choices interact
- I will NOT talk about: A set of principles for understanding economy-wide interactions

# Individual Choice

**Individual choice** is the decision by an individual of what to do, which necessarily involves a decision of what *not* to do.

Basic principles behind the individual choices:

1. Resources are scarce.
2. The real cost of something is what you must give up to get it.
3. “How much?” is a decision at the margin.
4. People usually take advantage of opportunities to make themselves better off.

# Principle# 1

## Choices Are Necessary Because Resources Are Scarce

- A resource is anything that can be used to produce something else.
  - Examples: land, labour, capital, human capital, time
- Resources are **scarce** – the quantity available isn't large enough to satisfy all productive uses.

# Principle# 2

## The True Cost of an Item Is Its Opportunity Cost

- The real cost of an item is its **opportunity cost**: what you must give up in order to get it.
- Example: The cost of attending an economics class is what you must give up to be in the classroom during the lecture. Sleep? Watching TV? Rock climbing? Work?
  - Opportunity cost is crucial to understanding individual choice
- Sometimes *monetary* costs are poor indicators of opportunity cost... If tuition and housing were free, is there no O.C. of attending school?

# Opportunity Cost

## I WOULD RATHER BE SURFING THE INTERNET

- In fact, everybody thinks about opportunity cost.
- The bumper stickers that say “I would rather be ... (fishing, golfing, swimming, etc...)” are referring to opportunity cost.
- It is all about what you have to *forgo* to obtain your choice.  
Think: movie A vs movie B at Cineplex. What is the OC of A...
  - ... if tickets for A and B cost the same (say, \$20)?
  - ... if ticket for A is \$20 and ticket for B is \$12?

# ECONOMICS IN ACTION

## A Woman's Work

- In 1900, only 6% of married women worked for pay outside the home. Early twenty-first century, the number was about 65%.
- This change is in part due to changing attitudes and the growing availability of home appliances, especially washing machines.
- In pre-appliance days, the opportunity cost of working outside the home was very high: it was something women typically did only in the face of dire financial necessity.
- With modern appliances, the opportunities available to women changed—and the rest is history.

# Principle# 3

## “How Much?” Is a Decision at the Margin

- Making trade-offs *at the margin* (or **marginal decisions**): comparing the costs and benefits of doing a little bit more of an activity versus doing a little bit less.
  - You make a **trade-off** when you compare the costs with the benefits of doing something.
- The study of such decisions is known as **marginal analysis**.
  - Examples: Hiring one more worker, studying one more hour, eating one more Timbit, etc.

# Principle# 4

## People Usually Respond to Incentives, Exploiting Opportunities to Make Themselves Better Off

- An **incentive** is a reward to people who change their behaviour
- People respond to incentives
  - Examples:
    1. Price of gasoline rises → people buy more fuel-efficient cars;
    2. There are more well-paid jobs available for university graduates with economics degrees → more students major in economics

# FOR INQUIRING MINDS

## Cashing In at School?

- In a 2007–2008 study, Harvard economist Roland Fryer Jr. found that monetary incentives— cash rewards— could improve students’ academic performance in schools in economically disadvantaged areas.

# FOR INQUIRING MINDS

## Cashing In at School?

- Fryer conducted his research in four different school districts, employing a different set of incentives and a different measure of performance in each.
  - In New York, students were paid according to their scores on standardized tests.
  - In Chicago, they were paid according to their grades.
  - In Washington, D.C., they were paid according to attendance and good behaviour, as well as their grades.
  - In Dallas, second-graders were paid each time they read a book.

# FOR INQUIRING MINDS

## Cashing In at School?

Fryer's experiment revealed some critical insights about how to motivate behaviour with incentives.

- *How incentives are designed is very important:* the relationship between effort and outcome, as well as the speed of reward, matters a lot.

# ECONOMICS IN ACTION

## Boy or Girl? It Depends on the Cost

- In 1978, the government of China introduced the “one-child policy” to address the economic and demographic challenges presented by China’s large population.
  - China was very, very poor in 1978, and its leaders worried that the country could not afford to adequately educate and care for its growing population.
  - The average Chinese woman in the 1970s was giving birth to more than five children during her lifetime.

# ECONOMICS IN ACTION

## Boy or Girl? It Depends on the Cost

- So the government restricted most couples to one child, imposing penalties on those who defied the mandate.
  - As a result, by 2009 the average number of births for a woman in China was only 1.8.
- The one-child policy had an unfortunate unintended consequence: families had a strong preference for sons over daughters
  - China is an overwhelmingly rural country and sons can perform the manual labour of farming
  - Tradition dictates that brides become part of their husbands' families and that sons take care of their elderly parents.

# ECONOMICS IN ACTION

## Boy or Girl? It Depends on the Cost

- As a result of the one-child policy, China soon had too many “unwanted girls”: Missing Women
  - Some were given up for adoption abroad, but all too many simply “disappeared” during the first year of life, the victims of neglect and mistreatment.

# Interaction: How Economies Work

**Interaction** of choices—my choices affect your choices, and vice versa—is a feature of most economic situations.

Principles that underlie the interaction of individual choices:

1. There are gains from trade.
2. Markets move toward equilibrium.
3. Resources should be used as efficiently as possible to achieve society's goals.
4. Markets usually lead to efficiency.
5. When markets don't achieve efficiency, government intervention can improve society's welfare.

# Principle# 5

## There Are Gains From Trade

- In a market economy, individuals engage in **trade**: They provide goods and services to others and receive goods and services in return.
- There are **gains from trade**: people can get more of what they want through trade than they could if they tried to be self-sufficient.
  - Why? Because of the benefits of **specialization** (or **division of labour**)

# Specialization and the Gains From Trade

- Adam Smith (The Wealth of Nations, 1776), on the pin factory:

*“One man draws out the wire, another straightens it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving the head; to make the head requires two or three distinct operations; to put it on, is a particular business, to whiten the pins is another... and the important business of making a pin is, in this manner, divided into about eighteen distinct operations ... . Ten persons, therefore, could make among them upwards of forty-eight thousand pins in a day. But if they had all worked separately and independently, and without any of them having been educated to this particular business, they certainly could not each of them have made twenty, perhaps not one pin a day...”*

- Similarly, the economy can produce more when each person specializes in a task and trades with others.
  - But, what assures people that markets will deliver what they want? Our next Principle...

# Principle# 6

## Markets Move Toward Equilibrium

- An economic situation is in **equilibrium** when no individual would be better off doing something different.
  - What happens when a new checkout line opens at a busy supermarket?
- Any time there is a change, the economy will move to a new equilibrium.
  - Why? People respond to incentives (Principle #4)
- In a market economy, equilibrium is reached via changes in prices and quantities.
  - What happens when demand for oil exceeds its supply?

# Principle #7

## Resources Should Be Used As Efficiently As Possible to Achieve Society's Goals

- An economy is **efficient** if it takes all opportunities to make some people better off without making other people worse off.
- Should economic policy makers always strive to achieve economic efficiency?
- **Equity** means that everyone gets his or her fair share. Since people can disagree about what's "fair," equity isn't as well-defined a concept as efficiency.

# Efficiency vs. Equity

- Example: Handicapped-designated parking spaces in a busy parking lot
- A conflict between:
  - equity, making life “fairer” for handicapped people, and
  - efficiency, making sure that all opportunities to make people better off have been fully exploited by never letting parking spaces go unused.
- How far should policy makers go in promoting equity over efficiency?



# Principle #8

## Markets Usually Lead to Efficiency

- The incentives built into a market economy already ensure that resources are usually put to good use (we will study this later in the course)
- Exceptions: Market failure (the individual pursuit of self-interest found in markets makes society worse off ) → the market outcome is inefficient

# Principle #9

## When Markets Don't Achieve Efficiency, Government Intervention Can Improve Society's Welfare

Why do markets fail?:

- Individual actions have side effects not taken into account by the market (externalities).
- Some goods/services cannot be efficiently managed by markets. Example: National security

# SUMMARY

1. All economic analysis is based on a set of basic principles that apply to three levels of economic activity. First, we study how individuals make choices; second, we study how these choices interact; and, third, we study how the economy functions overall.
2. Everyone has to make choices about what to do and what not to do. **Individual choice** is the basis of economics.
3. The reason choices must be made is that **resources**—anything that can be used to produce something else—are **scarce**.

# SUMMARY

4. Because you must choose among limited alternatives, the true cost of anything is what you must give up to get it— all costs are **opportunity costs**.
5. Many economic decisions involve questions not of “whether” but of “how much?” Such decisions must be taken by performing a **trade-off** at the margin—by comparing the costs and benefits of doing a bit more or a bit less. Decisions of this type are called **marginal decisions**, and the study of them, **marginal analysis**, plays a central role in economics.

# SUMMARY

6. The study of how people *should* make decisions is also a good way to understand actual behaviour. Individuals usually respond to **incentives** -- exploiting opportunities to make themselves better off.
7. The next level of economic analysis is the study of **interaction**—how my choices depend on your choices, and vice versa. When individuals interact, the end result may be different from what anyone intends.

# SUMMARY

8. Individuals interact because there are **gains from trade**: by engaging in the **trade** of goods and services with one another, the members of an economy can all be made better off. **Specialization** – each person specializing in the task he or she is good at – is the source of gains from trade.
9. Because individuals usually respond to incentives, markets normally move toward **equilibrium**—a situation in which no individual can make himself or herself better off by taking a different action.

# SUMMARY

10. An economy is **efficient** if all opportunities to make some people better off without making other people worse off are taken. Resources should be used as efficiently as possible to achieve society's goals. But efficiency is not the sole way to evaluate an economy: **equity**, or fairness, is also desirable, and there is often a trade-off between equity and efficiency.
11. Markets usually lead to efficiency, with some well-defined exceptions.
12. When markets fail and do not achieve efficiency government intervention can improve society's welfare.

# KEY TERMS



- Individual choice
- Resource
- Scarce
- Opportunity cost
- Trade-off
- Marginal decisions
- Marginal analysis
- Incentive
- Interaction
- Trade
- Gains from trade
- Specialization
- Equilibrium
- Efficient
- Equity