THIRD EDITION

ECONOMICS and MICROECONOMICS

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Chapter 1

First Principles

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
- 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, labor, capital
- Resources are scarce – the quantity available isn't large enough to satisfy all productive uses.
  - Examples: petroleum, lumber, intelligence

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.
- Opportunity cost is crucial to understanding individual choice
  - 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?
- All costs are ultimately opportunity costs.

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.

FOR INQUIRING MINDS

Got a Penny?

- At many cash registers there is a little basket full of pennies. People are encouraged to use the basket to round their purchases up or down.

FOR INQUIRING MINDS

Got a Penny?

- If it's too small a sum to worry about, why calculate prices that exactly? Why do we have pennies?
  - Sixty years ago, a penny was equivalent to 30 seconds worth of work—it was worth saving a penny if doing so took less than 30 seconds.
  - But wages have risen along with overall prices, so today a penny is equivalent to slightly more than 2 seconds of work—therefore, it's not worth the opportunity cost of the time it takes to worry about a penny.
- The rising opportunity cost of time in terms of money has turned a penny from a useful coin into a nuisance.

A Woman's Work

- In 1900, only 6% of married women worked for pay outside the home.
- By 2005, the number was about 60%. This change is in part due to changing attitudes, invention, 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

- You make a trade-off when you compare the costs with the benefits of doing something.
- Decisions about whether to do a bit more or a bit less of an activity are marginal decisions.

Marginal Analysis

Making trade-offs *at the margin*: comparing the costs and benefits of doing a little bit more of an activity versus doing a little bit less.

The study of such decisions is known as **marginal analysis**.

- Examples: Hiring one more worker, studying one more hour, eating one more cookie, buying one more CD, etc.

Principle# 4

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

- An incentive is anything that offers rewards to people who change their behavior.
  - Examples:
    1. Price of gasoline rises → people buy more fuel-efficient cars;
    2. There are more well-paid jobs available for college graduates with economics degrees → more students major in economics

- People respond to these incentives.

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 behavior, 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 behavior 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.
- *The design of incentives may depend quite a lot on the characteristics of the people you are trying to motivate*: what motivates a student from an economically privileged background may not motivate a student from an economically disadvantaged one.

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.

Boy or Girl? It Depends on the Cost

- So the government restricted most couples, particularly those in urban areas, 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.
  - Because China is an overwhelmingly rural country and sons can perform the manual labor of farming, families had a strong preference for sons over daughters.

Boy or Girl? It Depends on the Cost

- In addition, tradition dictates that brides become part of their husbands' families and that sons take care of their elderly parents.
  - As a result of the one-child policy, China soon had too many "unwanted girls."
  - 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

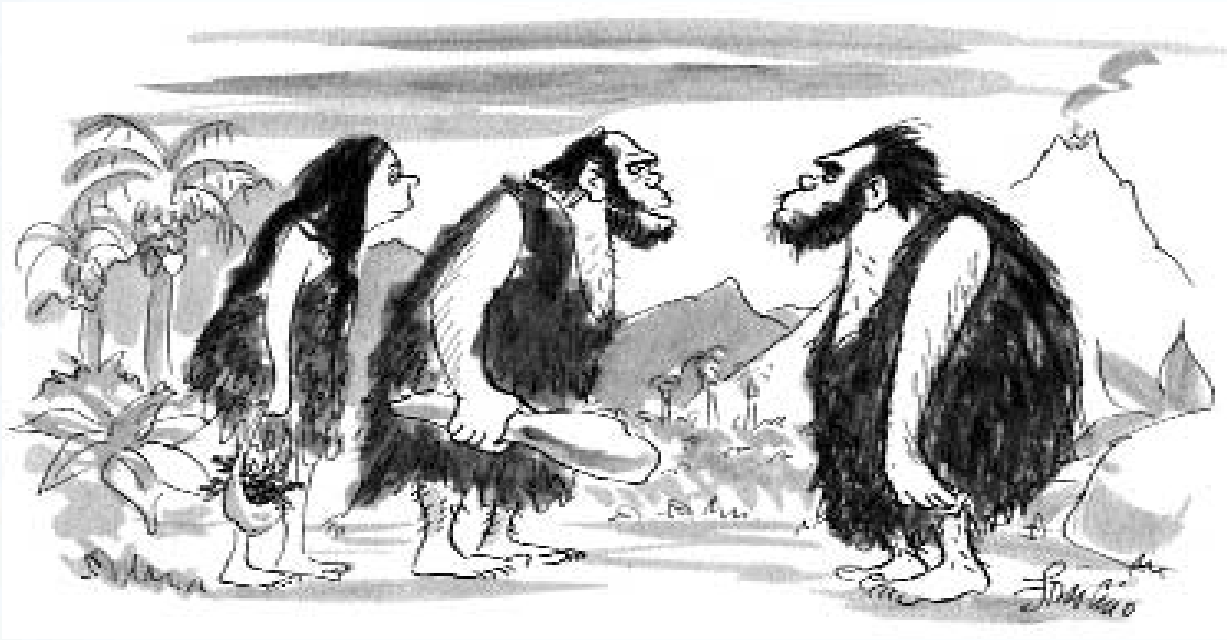
There Are Gains From Trade

- 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.

There Are Gains From Trade

This increase in output is due to **specialization**: each person specializes in the task that he or she is good at performing.



"I hunt and she gathers – otherwise we couldn't make ends meet."

The economy, as a whole, can produce more when each person specializes in a task and trades with others.

Principle# 6

Markets Move Toward Equilibrium

- An economic situation is in equilibrium when no individual would be better off doing something different.

- Any time there is a change, the economy will move to a new equilibrium.
  - Example: What happens when a new checkout line opens at a busy supermarket?

FOR INQUIRING MINDS

Choosing Sides

Why do people in America drive on the right side of the road? *Of course, it's the law.*

- Long before it was the law, it was an equilibrium!

FOR INQUIRING MINDS

Choosing Sides

Why would some places choose the right and other places choose the left?

That's not completely clear, although it may have depended on the dominant form of traffic.

- Men riding horses and carrying swords on their left hip preferred to ride on the left (think about getting on or off the horse, and you'll see why).
- On the other hand, right-handed people walking but leading horses apparently preferred to walk on the right.

FOR INQUIRING MINDS

Choosing Sides

Once a rule of the road was established, there were strong incentives for each individual to stay on the "usual" side of the road.

- Those who didn't would keep colliding with oncoming traffic.

So, once established, the rule of the road would be self-enforcing—that is, it would be an equilibrium.

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.
- Opportunities to make people better off are not wasted.
- 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).
- One party prevents mutually beneficial trades from occurring in the attempt to capture a greater share of resources for itself.
- Some goods cannot be efficiently managed by markets.
  - Example: freeways in Los Angeles

ECONOMICS IN ACTION

Restoring Equilibrium on the Freeways

- In 1994, a powerful earthquake struck the Los Angeles area, causing several freeway bridges to collapse, disrupting the normal commuting routes of hundreds of thousands of drivers.
  - Motorists would now have to crowd onto alternative routes or detour around the blockages by using city streets.

Restoring Equilibrium on the Freeways

- Public officials and news programs warned commuters to expect massive delays and urged them to avoid unnecessary travel, reschedule their work to commute before or after the rush, or to use mass transit.
  - These warnings were unexpectedly effective → a new equilibrium was reached.

Restoring Equilibrium on the Freeways

- In fact, in the first few days following the quake, those who maintained their regular commuting routine actually found the drive to and from work faster than before!!!

- Of course, this situation could not last.
  - As word spread that traffic was actually not bad at all, people abandoned their less convenient new commuting methods and reverted to their cars—and traffic got steadily worse.
  - Within a few weeks after the quake, serious traffic jams had appeared.

Restoring Equilibrium on the Freeways

- After a few more weeks, however, the situation stabilized.
  - The reality of worse-than-usual congestion discouraged enough drivers to prevent the nightmare of citywide gridlock from materializing.

- Los Angeles traffic, in short, had settled into a new equilibrium, in which each commuter was making the best choice he or she could, given what everyone else was doing.

Economy-Wide Interactions

Principles that underlie economy-wide interactions

Principle# 10: One person's spending is another person's income.

Principle# 11: Overall spending sometimes gets out of line with the economy's productive capacity.

Principle# 12: Government policies can change spending.

Adventures in Babysitting

- In a babysitting cooperative, a number of parents exchange babysitting services.
  - Instead of money, most co-ops exchange tickets or points.
- Because there weren't that many tickets to begin with, most parents were anxious to add to their reserves by babysitting but reluctant to run them down by going out.
  - But one parent's decision to go out was another's chance to babysit so it became difficult to earn tickets.
  - Knowing this, parents became even more reluctant to use their reserves except on special occasions.

Adventures in Babysitting

- The co-op finally solved its problem by handing out more tickets, and with increased reserves, people were willing to go out more.

SUMMARY

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

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

SUMMARY

6. The study of how people *should* make decisions is also a good way to understand actual behavior. 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

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

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.

SUMMARY

SUMMARY

12. When markets fail and do not achieve efficiency government intervention can improve society's welfare.

13. Because people in a market economy earn income by selling things, including their own labor, one person's spending is another person's income. As a result, changes in spending behavior can spread throughout the economy.

SUMMARY

SUMMARY

14. Overall spending in the economy can get out of line with the economy's productive capacity. Spending below the economy's productive capacity, leads to a recession; spending in excess of the economy's productive capacity leads to inflation.

15. Governments have the ability to strongly affect overall spending, an ability they use in an effort to steer the economy between recession and inflation.

KEY TERMS

KEY TERM

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