1 TEN PRINCIPLES OF ECONOMICS

WHAT'S NEW IN THE SEVENTH EDITION?

There is a new FYI feature on the opportunity cost of gasoline. There is also a new In the News feature, "Even Criminals Respond to Incentives." There are new Quick Check Multiple Choice questions. Questions 14 and 15 in the Problems and Applications section have been removed.

LEARNING OBJECTIVES

By the end of this chapter, students should understand:

- that economics is about the allocation of scarce resources.
- that individuals face tradeoffs.
- the meaning of *opportunity cost.*
- how to use marginal reasoning when making decisions.
- how incentives affect people's behaviour.
- why trade among people or nations can be good for everyone.
- why markets are a good, but not perfect, way to allocate resources.
- what determines some trends in the overall economy.

WHY IS THIS CHAPTER IMPORTANT TO STUDENTS?

Chapter 1 is the first chapter in a three-chapter section that serves as the introduction to the text. Chapter 1 introduces ten fundamental principles on which the study of economics is based. In a broad sense, the rest of the text is an elaboration on these ten principles. Chapter 2 explains how economists approach problems while Chapter 3 shows how individuals and countries gain from trade.

The purpose of Chapter 1 is to lay out ten economic principles that will serve as building blocks for the rest of the text. The ten principles can be grouped into three categories: how people make decisions, how people interact, and how the economy as a whole works. These ten principles are referred to often throughout the text.

IF NOTHING ELSE, MY STUDENTS SHOULD LEARN…

1. The fundamental lessons about individual decision making are that people face tradeoffs among alternative goals, that the cost of any action is measured in terms of forgone opportunities, that rational people make decisions by comparing marginal costs and marginal benefits, and that people change their behaviour in response to the incentives they face.

2. The fundamental lessons about interactions among people are that trade can be mutually beneficial, that markets are usually a good way of coordinating trades among people, and that the government can potentially improve market outcomes if there is some sort of market failure or if the market outcome is inequitable.

3. The fundamental lessons about the economy as a whole are that productivity is the ultimate source of living standards, that money growth is the ultimate source of inflation, and that society faces a short-run tradeoff between inflation and unemployment.

WHAT CAN I DO IN CLASS?

I. Introduction

> Begin by pointing out that economics is a subject that students must confront in their everyday lives. Point out that they already spend a great deal of their time thinking about economic issues: prices, buying decisions, use of their time, etc.

A. The word "economy" comes from the Greek word meaning "one who manages a household."

B. This makes some sense since in the economy we are faced with many decisions (just as a household is).

C. Fundamental economic problem: resources are scarce.

> You will want to start the semester by explaining to students that part of learning economics is to understand new vocabulary. Economists generally use very precise (and sometimes different) definitions for words that are commonly used outside of the economics discipline. Therefore, it will be helpful to students if you follow the definitions provided in the text as much as possible.

D. Definition of **scarcity: the limited nature of society's resources.**

E. Definition of **economics: the study of how society manages its scarce resources.**

> Because most first-year students have limited experiences with viewing the world from a cause-and-effect perspective, do not underestimate how challenging these principles will be for the student.

> As you discuss the ten principles, make sure that students realize it is okay if they do not grasp each of the concepts completely or find each of the arguments fully convincing. These ideas will be explored more completely throughout the text.

II. How People Make Decisions

A. Principle #1: People Face Tradeoffs

1. "There is no such thing as a free lunch." Making decisions requires trading off one goal against another.

2. Examples include how a student spends her time, how a family decides to spend its income, how the Canadian government spends tax dollars, how regulations may protect the environment at a cost to firm owners.

3. A special example of a tradeoff is the tradeoff between efficiency and equity.

a. Definition of **<u>efficiency</u>: the property of society getting the most it can from its scarce resources.**

b. Definition of **<u>equity</u>: the property of distributing economic prosperity fairly among the members of society.**

c. For example, tax dollars paid by wealthy Canadians and then distributed to those less fortunate may improve equity but lower the return to hard work and therefore reduce the level of output produced by our resources.

d. This implies that the cost of this increased equity is a reduction in the efficient use of our resources.

4. Recognizing that tradeoffs exist does not indicate what decisions should be made.

a. People are likely to make good decisions only if they understand the options that they have available.

B. Principle #2: The Cost of Something Is What You Give Up to Get It

1. Making decisions requires individuals to consider the benefits and costs of some action. However, the cost of an action is not always as obvious as it might appear.

2. What are the costs of going to college or university?

a. We cannot count room and board (at least all of the cost) because the person would have to pay for food and shelter even if he or she were not in school.

b. We would want to count the value of the student's time since he could be working for pay instead of attending classes and studying.

3. Definition of **<u>opportunity cost</u>: whatever must be given up to obtain some item**.

4. FYI: "The Opportunity Cost of Gasoline"

   a. Out-of-pocket monetary costs can be a misleading indicator of opportunity cost; consider for example the opportunity cost of gasoline.

   b. Even though the price of gasoline in Ontario has risen 130 percent from 1997 to 2014, it would be misleading to think of it only in terms of price.

   c. It's better to think of the price of gasoline in terms of how much it costs per kilometre driven.

   d. Taking into account the fuel efficiency of cars and the average wage, which have both increased significantly, we can conclude that opportunity cost of gasoline has remained relatively constant.

C. Principle #3: Rational People Think at the Margin

> One of the hardest ideas for students to grasp is that "free" things are not truly free. Thus, you will need to provide students with numerous examples of such "free" things with hidden costs, especially the value of time.

1. Many decisions in life involve incremental decisions: Should I remain in school this semester? Should I take another course this semester? Should I study an additional hour for tomorrow's exam? Rational people often make decisions by comparing marginal benefits and marginal costs.

2. Definition of **<u>rational people</u>: those who systematically and purposefully do the best they can to achieve their objectives.**

3. Definition of **<u>marginal changes</u>: small incremental adjustments to a plan of action.**

4. Example: Suppose that flying a 200-seat plane across the country costs the airline $100 000, which means that the average cost of each seat is $500. Suppose that the plane is minutes from departure and a passenger is willing to pay $300 for a seat. Should the airline sell the seat for $300? In this case, the marginal cost of an additional passenger is very small (the cost of the bag of peanuts and can of soda the extra passenger will consume). Therefore, as long as the passenger pays more than the marginal cost, selling him a ticket is profitable.

5. Marginal decision making can help explain puzzling economic phenomena.

   a. Why is water so cheap while diamonds are so expensive?

   b. The reason is that a person's willingness to pay for any good is based on the marginal benefit that an extra unit of the good would yield. The marginal benefit, in turn, depends on how many units a person already has.

6. A rational decision maker takes an action if and only if the marginal benefit of the action exceeds the marginal cost.

D. Principle #4: People Respond to Incentives

1. Definition of **<u>incentive</u>: something that induces a person to act.**

2. Because rational people make decisions by weighing costs and benefits, they respond to incentives. Incentives are crucial in analyzing how markets work.

   a. When the price of a good rises, consumers will buy less of it because its cost has risen.

   b. When the price of a good rises, producers will allocate more resources to the production of the good because the benefit from producing the good has risen.

3. Sometimes policymakers fail to understand how policies may alter incentives and behaviour.

4. Example: Seat belt laws increase use of seat belts and lower the incentives of individuals to drive safely. This leads to an increase in the number of car accidents. This also leads to an increased risk for pedestrians.

5. In the News: "Even Criminals Respond to Incentives"

   a. Crime rates have been falling all around the industrialized world, but why?

   b. Thieves are simply responding to market signals where the payoffs from theft are much lower than they use to be. For example, fewer people carry cash in their wallets today.

   c. However, cybercrimes and identity theft are on the rise.

> If you include any incentive-based criteria on your syllabus, discuss it now. If you reward class attendance (or penalize students who do not attend class), explain to students how this change in the marginal benefit of attending class can be expected to alter their behaviour.

III. How People Interact

A. Principle #5: Trade Can Make Everyone Better Off

1. Trade is not like a sports contest, where one side gains and the other side loses.

2. Consider trade that affects your family. Certainly the family is involved in trade with other families on a daily basis. Each family in an economy competes with all other families. Most families do not build their own homes, make their own clothes, or grow their own food.

3. Just like families benefit from trading with one another, so do countries.

4. This occurs because it allows for specialization in areas that countries (or families) can do best.

Activity 1—Getting Dressed in the Global Economy

Type: In-class assignment
Topics: Specialization, interdependence, self-interest, consumer choice, international trade
Materials needed: None
Time: 20 minutes
Class limitations: Works in any class size

Purpose
The advantages of specialization and division of labour are very clear in this example. The worldwide links of the modern economy are also illustrated. We depend on thousands of people we don't know, won't see, and don't think of in order to get dressed each morning. Self-interest follows naturally from interdependence. Wages, profits, and rents give people the incentive to perform these varied tasks. We depend on them to clothe us and they depend on our purchases for their incomes.

Instructions
Ask the class to answer the following questions. Give them time to write an answer to each question, then discuss their answers before moving on to the next question. The first question can be answered with a brief phrase. The second question is the core of the assignment and takes several minutes. Ask them to list as many categories of workers as possible. The third question introduces demand concepts; most of the determinants of demand can be introduced during this discussion. For the fourth question, ask the class to look at the country-of-origin tags sewn in their garments.

1. Where did your clothes come from?
2. Who worked to produce your clothes?
3. What things do you consider when buying a garment?
4. Where were your clothes produced (what countries)?

Common Answers and Points for Discussion
1. Where did your clothes come from?

There are many possible ways to answer, but many students will say "the mall" or another retail outlet. Some may say "a factory," "a sweatshop," or "a foreign country."

Mention the importance of markets here (this can be emphasized by asking "Is anyone wearing something made by themselves, a friend, or a relative?") and discuss distribution versus production.

2. Who worked to produce your clothes?

There is no end to the possible answers; garment and textile workers are obvious but most students will also list workers dealing with raw materials, transportation, management, design, or machinery. Some may think more broadly to investors, road crews, bankers, engineers, or accountants.

3. What things do you consider when buying a garment?

Most answers focus on preferences (fit, style, quality, colour). Price is cited less frequently. Ask about the importance of price until someone volunteers that income is important. Prices of substitute goods should also be discussed. Expectations of price changes may also be mentioned. Few students mention complementary goods and most students reject the idea of choosing a sweater to match a particular outfit.

4. Where were your clothes produced (what countries)?

A large number of countries will be represented, even in small classes. Students are usually surprised to find how many garments are domestically produced. Asia is always well represented. Latin American and European goods appear in smaller numbers. African products are conspicuously absent.

This pattern shows the limits of simple explanations such as "cheap labour." Briefly discuss the importance of comparative advantage and specialization.

B. Principle #6: Markets Are Usually a Good Way to Organize Economic Activity

1. Most countries that once had centrally planned economies have abandoned this system and are trying to develop market economies.

2. Definition of **market economy: an economy that allocates resources through the decentralized decisions of many firms and households as they interact in markets for goods and services.**

3. Prices and self-interest guide the decision-making process in the marketplace. Market prices reflect both the value of a product to consumers and the cost of the resources used to produce it. Therefore, decisions to buy or produce goods and services are made based on the cost to society of providing them.

Explain to students that when households and firms do what is best for themselves, they often end up doing what is best for society, as if guided by market forces—or an invisible hand. Spend some time and emphasize the magic of the market. Use numerous examples to show students that the market most often allocates resources to their highest valued use.

4. When a government interferes in a market and restricts prices from adjusting naturally, such as with the use of taxes, decisions that households and firms make are not based on the proper information. Thus, these decisions may be inefficient.

5. Centrally planned economies failed because they did not allow the market to work. Prices were dictated by central planners as opposed to being determined in the marketplace.

6. FYI: "Adam Smith and the Invisible Hand"

   a. Adam Smith's 1776 work suggested that although individuals are motivated by self-interest, an invisible hand guides this self-interest into promoting society's economic well-being.

   b. Smith's astute perceptions will be discussed more fully in the chapters to come.

C. Principle #7: Governments Can Sometimes Improve Market Outcomes

1. Markets work only if property rights are enforced.

   a. Definition of **property rights: the ability of an individual to own and exercise control over scarce resources.**

2. Two broad reasons push governments to intervene: to promote efficiency and to promote equity. Government policy can be most useful when there is market failure.

   a. Definition of **market failure: a situation in which a market left on its own fails to allocate resources efficiently.**

3. Examples of market failure.

   a. Definition of **externality: the impact of one person's actions on the well-being of a bystander.** (A classic example being pollution.)

   b. Definition of **market power: the ability of a single economic actor (or small group of actors) to have a substantial influence on market prices.**

   c. Because a market economy rewards people for their ability to produce things that other people are willing to pay for, there will be an unequal distribution of economic prosperity.

4. Note that the principle states that the government can improve market outcomes. This is not saying that the government always does improve market outcomes.

IV. How the Economy as a Whole Works

A. Principle #8: A Country's Standard of Living Depends on Its Ability to Produce Goods and Services

1. Differences in living standards from one country to another are staggering.

2. Changes in living standards over time are also large.

3. The explanation for differences in living standards lies in differences in productivity.

4. Definition of **<u>productivity</u>: the quantity of goods and services produced from each hour of a worker's time.**

5. High productivity implies a high standard of living and low productivity leads to a lower standard of living.

6. The growth rate of a nation's productivity determines the growth rate of its average income.

7. Thus, policymakers must understand the impact of any policy on our ability to produce goods and services and must therefore strive to ensure workers are well educated, have the proper tools and the best available technology.

B. Principle #9: Prices Rise When the Government Prints Too Much Money

1. Definition of **<u>inflation</u>: an increase in the overall level of prices in the economy.**

2. Because high inflation imposes various costs on society, keeping inflation at a low level is a goal of economic policymakers around the world.

3. When the government creates a large amount of money, the value of money falls.

4. Examples: Germany after World War I (in the early 1920s), and Canada in the 1970s.

C. Principle #10: Society Faces a Short-Run Tradeoff between Inflation and Unemployment

1. The short-run effects of monetary injection:

   a. Increasing the amount of money in the economy stimulates the overall level of spending and thus the demand for goods and services.

   b. Higher demand may over time cause firms to raise their prices, but it also encourages them to increase the quantity of goods and services they produce and to hire more workers to produce those goods and services.

   c. More hiring means lower unemployment.

2. Some economists still question these ideas, but most accept that society faces a short-run tradeoff between inflation and unemployment.

3. Over a short period of time, economic policies push inflation and unemployment in opposite directions.

4. The policymakers face this tradeoff regardless of whether inflation and unemployment both start out at high or low levels.

5. The short-run tradeoff between inflation and unemployment is important for understanding the business cycle.

6. Definition of **<u>business cycle</u>: fluctuations in economic activity, such as employment and production.**

7. Policymakers can exploit this short-run tradeoff by using various policy instruments, but the extent and desirability of these interventions is of continuing debate.

8. This debate heated up in 2008 and 2009 when the Canadian economy, as well as many other economies around the world, experienced a deep economic downturn.

Activity 2—So Many Things to Do, So Little Time

Type: In-class assignment
Topics: Tradeoffs, opportunity cost, thinking at the margin, incentives
Materials needed: None
Time: 10 minutes
Class limitations: Works in any class size

Give students a list of activities with corresponding time requirements: sleep, 8 hours; sleep, 6 hours; eat breakfast, 30 minutes; ride a bike, 1 hour; go hiking, 2 hours; study, 3 hours; study, 2 hours; go to class, 4 hours; go to class, 6 hours; watch TV, 2 hours; watch TV, 6 hours; take a nap, 1 hour; work, 8 hours; work, 4 hours; etc.

Make sure that there are many choices and that there are many pleasurable experiences—too much for a 24-hour period.

Ask students which Principle of Economics this illustrates.

If they do not say 1, 2, 3, and 4, help them see that this exercise has tradeoffs in the choices they make, that each choice has an opportunity cost, that deciding whether or not to sleep 4 more hours may depend on whether you have already slept for 6, and that choices may be influenced by the incentives the student faces. For example, a student who is about to be placed on academic probation has an incentive to study harder.