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# ECONOMICS NOW

ANALYZING CURRENT ISSUES

ANGELO BOLOTTA / CHARLES HAWKES / RICK MAHONEY / JOHN PIPER

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# Dedications

*To Mara, Alissa, and Alanna for their help and understanding, and to my parents for impressing upon me from an early age the value of economic reasoning.*

—Angelo Bolotta

*To Pat for her patience and support.*

—Charles Hawkes

*To my wife Cathie; my children Andrew, Daniel, and Jacob; and my parents for providing me with love, support, and the strength to achieve.*

—Rick Mahoney

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# FOREWORD

Welcome to *Economics Now!* If you are new to economics, rest assured that this subject is interesting, relevant to your life and future, and not difficult to grasp. Even if you do not go on to study economics in college or university, this course will give you a good understanding of how the Canadian economy works. At the same time, the authors hope that this text, and your class experience, will stimulate you to go on to further study—both to deepen your

understanding of economic issues and to possibly prepare you for an economics-related career.

As you flip through the text, you will notice that there are 20 chapters divided into five major units and an epilogue. Each unit begins with a brief overview of the content in the three or four chapters to follow, a list of learning goals you will achieve, and an outline of skills you will master as you complete your study of the unit.

## FEATURES

- **Chapter Openers** contain questions relating to a cartoon, a photograph, a game, an activity, or an excerpt, all intended to start you thinking about the content of the chapter that follows.
- **Chapter Goals** tell you what you can expect to learn in the chapter.
- **Case Studies** ask you to examine economic issues and concepts as they apply to real-life situations and to examine how the people and/or organizations involved are impacted.
- **Check Your Understanding** questions (which appear after major sections within each chapter) prompt you to review your knowledge of the chapter's content.
- **Economics in the News** features ask you to reflect on current news articles that profile real examples of issues and topics covered within the chapter.
- **A Matter of Opinion** features ask you to develop your own opinions about the controversies and arguments in which economists engage.
- **Primary Source** features ask you to consider quotes and original material from individuals and organizations discussed in the chapter.
- **Skill Builder: Thinking Like An Economist** features ask you to apply the skills that economists use (such as graphing, calculating, and applying theories) to economic problems or issues.
- **Chapter Summaries** condense the chapter into its major points in order to help you review its content.
- **Key Terms** lists the essential vocabulary defined in each chapter.
- **Activities** at the end of each chapter are divided into three sections.
  - *Thinking/Inquiry* questions ask you to think analytically and to investigate economic issues.
  - *Communication* questions allow you to be creative in presenting economic ideas and issues from the chapter.
  - *Application* questions direct you to apply your knowledge and skills to problems and new situations.
- The **Glossary** at the end of the book helps you recall the key terms that you have come across throughout the text.

## Performance Tasks

At the end of each unit, a performance task has been included. Each unit's task puts you in a real-life role that requires you to draw together the content, theories, and skills from the chapters in that unit. Each performance task has a suggested method of evaluation that you and your teacher can

use and adapt for your work. The final (or culminating) performance task found at the end of the text gives you an opportunity to creatively demonstrate the knowledge, ideas, and skills you have learned throughout the entire course.

The authors sincerely hope that this text helps make your study of economics stimulating and enjoyable.



# UNIT 1

## THE NATURE OF ECONOMICS AND THE ECONOMY



A business magazine rolls off the printing press. How have investors addressed the basic economic questions of *what* to produce, *how* to produce, and *for whom* to produce? What strategies have they used to make their enterprise more productive and profitable?

### Unit Overview

This unit will help to build a solid foundation for the learning that follows in the rest of this text. First, we'll explore some basic concepts and principles of economic thinking. Then, we'll identify career opportunities for those trained in economics and related fields. Next, we'll turn our attention to the concept of productive resources in order to understand how different types of economic systems attempt to answer basic production questions and set economic goals. Finally, we'll investigate seven "worldly philosophers" whose ideas have greatly advanced the science of economics. With this foundation, we'll be able to make sense of the issues and activities that unfold in the following units.



## Learning Goals

### In this unit, you will

- apply economic concepts and models that are used to identify and analyze choices, to forecast economic change, and to define a reality, problem, or issue,
- compare the nature of economic inquiry with that of scientific inquiry,
- identify specific examples of economic choices (both individual and collective) that Canadians must make as a result of scarce economic resources,
- examine the issues arising from competing goals and self-interests,
- compare the ways in which different economic systems make choices about how productive resources are owned and used,
- compare different national economies with regard to their ability to produce and share wealth, respect individual economic freedom, and promote responsible decision making and the common good,
- explain the criteria used by different groups of stakeholders and economists to evaluate economic change, issues, and choices, and account for the disagreement among them,
- describe how groups of stakeholders and markets within a free-enterprise economy are interdependent and may be affected simultaneously by a change,
- demonstrate an understanding of the major ideas and theories of prominent economists in the context of the economic issues and challenges of their times,
- conduct research to locate information from a variety of different media, institutions, businesses, interest groups, and other sources,
- communicate economic information and analysis clearly, effectively, and accurately in an appropriate format and style.

## Skill Builder

### Thinking Like an Economist

In this unit, you can develop some of the skills that economists use. These include

- using graphs to understand relationships,
- valuing productive resources,
- differentiating between production and productivity,
- testing hypotheses.

## Unit Performance Task

The activity at the end of this unit provides a focused opportunity for you to

- assume the role of a manager of human resources for a growing Canadian corporation,
- apply economic knowledge and skills in order to recommend the best course of action for the corporation,
- prepare and support a persuasive argument, and
- use a performance task rubric and feedback to produce high-quality work.



# CHAPTER 1

## BASIC PRINCIPLES OF ECONOMICS

### The Economics of Terrorism

On 11 September 2001, terrorists hijacked commercial airliners in the US and turned them into weapons of mass destruction.

Two of the airliners were crashed into the World Trade Center in New York City. Of the 50 000 people who worked in the twin towers each day, an estimated 3000 perished in the attack. The world will never be the same—politically, economically, militarily, and socially—as a result of this attack on the world's most powerful nation.

Evidence indicates that the terrorists planned and executed their suicide missions carefully. It appears that their targets were specifically chosen to cause as much pain and suffering as possible, to attack important symbols of American strength and power, and, ultimately, to have maximum negative impact on global economic systems. Stock markets around the world experienced a sharp decline as a result of the attack and its destabilization of investor confidence. The recovery was slow and fragile.



### QUESTIONS

1. What was the symbolic significance of a successful terrorist attack on the World Trade Center?
2. Explain the economic significance of the changes in stock market prices illustrated by the graph above.
3. The short-term consequences of the attack appear significant. Do you expect the long-term effects to be as significant? Explain.

### Chapter Goals

**By the end of this chapter, you will be able to**

- realize the importance of economics as a social science,
- understand how an economy works,
- begin thinking like an economist,
- use models to explore basic economic laws and fallacies,
- explore career opportunities in the field of economics.



## A Beginner's Perspective on Economics

This chapter introduces you to the most basic concepts and principles of economics—the social science of scarcity and choice. It also presents several examples of disciplined economic reasoning and some of the most common examples of faulty economic thinking. You will encounter a number of opportunities in this first chapter to apply the decision-making and graphing skills that you'll need to complete this course of study successfully and to analyze current economic issues.

### Decisions, Decisions, Decisions

- How badly do I need a new winter coat? Should it be leather, wool, or polyester?
- Should we rent or buy a family home?
- Who will use the family car tonight?
- Should I spend my entire paycheck on the weekend, or should I save some money for later?
- Will I go to college next fall or take a full-time job as a sales clerk?
- Will I study for my unit test or go to my friend's birthday party tonight?
- Will I cook dinner, or will the family eat out tonight?

There are, indeed, many decisions each of us has to make on a daily basis. For this reason, and whether or not we realize it, economics is continually at work in our lives. If we use time, energy, money, or materials to do one thing instead of another, we are engaged in economic decision making. If we face questions about what we need, what we want, and what we can afford to do, we are engaged in economic decision making.

We constantly face economic decisions because our needs and wants are virtually unlimited, while our means to satisfy them (what economists call our available resources) are quite limited. For most of us, available resources consist of our income and savings, and since these are limited, we must **economize**, or use these resources wisely. We can define “wise use” as that which most furthers our personal or group goals while consuming

the least amount of available resources. Since there is a relative scarcity of these resources, we will always live with the economic dilemma of our wants exceeding our ability to satisfy them.

### What Is Economics?

If we look in the dictionary, we'll find economics defined rather dryly as a practical science dealing with the production, distribution, and use of goods, services, resources, and wealth. If we consider the origin of the word, however, we can arrive at a simpler and more concrete idea of what it means in its most basic sense. The word *economics* can be traced back to ancient Greece where it was formed by joining two shorter words together: *oikos*, the word for “house,” and *nemo*, the word for “to manage.” In its root sense, then, *oikonomia* dealt with matters relating to the wise management of one's own household.

Today, economics is often referred to as “the science of scarcity and choice.” As mentioned previously, the fact that human material wants always exceed the available resources means that we live in a condition of constant scarcity. Each person, family, business, society, and government attempts to economize by making decisions that satisfy the largest number of material wants while using the smallest amount of resources possible. In a nutshell, **economics** is the study of the way we make decisions about the use of scarce resources.

### Economics as a social science

Economics involves the study of people (either individually or in groups) making decisions about the choices available to them; it therefore falls into the category of a **social science**. Other social sciences include history, geography, sociology, and anthropology. Like economics, each of these sciences attempts to understand an important aspect of the human condition and of the world in which we live. This social aspect of the study gives economics both relevance and complexity.

When we broaden the study to consider the way economic decision making affects society as a whole, we can see how important



# PRIMARY SOURCE

## Xenophon's *Oeconomicus*

**X**enophon was born a free citizen-soldier of Athens around 430 BCE. As a young man, he studied under the philosopher Socrates until he joined a group of mercenary soldiers. Eventually, he rose to the rank of general. After being expelled from Athens around 395 BCE for favouring the enemy forces of Sparta, Xenophon was granted a family estate by the Spartans.

While in exile, his past experiences led him to theorize about private estate management, the division of labour between men and women, and the accumulation of personal wealth. His work, entitled *Oeconomicus* and published around 362 BCE, is recognized as one of the richest primary sources of the social, economic, and intellectual history of classical Athens. *Oikonomia* refers to the science of household or estate management. The *oikos*, the basic unit of classical Greek society, was a large family estate or household, including land, crops, a house, family members, slaves, animals, and accumulated wealth. The economy of Greece was based on agriculture, and society consisted of two distinct, yet complementary, spheres. The public, or political, sphere was a world where men were dominant. The private, or domestic, sphere was the realm of women.

The following excerpts are taken from Sarah Pomeroy's translation of the original Greek text.

*... a wife who is a good partner in the estate carries just as much weight as her husband in attaining prosperity. Property generally comes into the house through the exertions of the husband, but it is mostly dispensed through the housekeeping of the wife. If these activities are performed well, estates increase, but if they are managed incompetently, estates diminish.*

*... the man who is going to be a successful farmer must make his labourers eager and disposed to be obedient. ... Slaves need some good thing to look forward to no less, in fact, even more than free men so that they will be willing to stay. ... When farming is successful, all other arts prosper, but whenever the earth is forced to lie barren, the other arts, both on earth and sea, are virtually extinguished.*

*... land is not wealth for a man who cultivates it in such a way that by its cultivation he incurs loss. ... Things [including money] ... can be wealth for the person who knows how to use ... them, but not wealth for one who does not know. ... enemies ... are wealth to anyone who can benefit from enemies. ... knowing how to use enemies so as to derive benefit from them is a characteristic of a good estate manager.*

Source: Excerpts from *Xenophon, Oeconomicus: A Social and Historical Commentary* by Sarah B. Pomeroy (Oxford: Clarendon Press, 1995). Reprinted by permission of the author.

### QUESTIONS

1. Why was a steady supply of cheap labour available to Greek estate owners?
2. According to Xenophon, how should the landowner class view marriage?
3. What relationship existed between agriculture and the arts in Greek society?
4. According to Xenophon, what is the ultimate proof that an estate is properly managed?
5. How can enemies be considered an economic asset?

economic decisions are to the well-being of an entire nation or group of nations. We can also see how complicated economics becomes when we try to balance the needs of one group with those of another. For example,

loggers may seek to harvest a forest, while environmentalists may seek to preserve it.

Human behaviour and value systems greatly complicate studies in the social sciences. This is one difference that separates the social sciences



from the “pure” sciences such as physics and chemistry. An apple falling from a tree today behaves exactly as it did for Isaac Newton in 1665. The natural laws of physics remain unchanged, although human understanding of these laws has increased. On the other hand, human behaviour has changed significantly since 1665 and continues to change as society evolves. Refinements in economic theory, changes in social conditions, and evolving political systems (and priorities) all mean that there are considerable differences among economists on any given question. Hence the cynical conclusion, illustrated in Figure 1.1, that the one thing economists know how to do best is disagree!

### Predicting human behaviour

Since people for the most part are both rational and social beings, their behaviour can often be explained by reference to the values and belief systems they share with the other

members of society. The question of predictability, however, is a difficult one for social scientists. Although people as a group are certainly influenced by the society in which they live, the behaviour of an individual person within that group is not always predictable. To understand this idea better, consider an example. In the summer, more people go to public swimming pools as the temperature rises. We can safely predict that, over the summer, more people will visit a given pool on a day when the temperature is 30°C than on a day when the temperature is 20°C. However, we cannot predict whether an individual person will visit the pool on the day the thermometer hits 30°C. Therefore, the behaviour of the group is often predictable, while the behaviour of the individual person is not. Knowledge of group behaviour and general tendencies can be useful information for decision makers.

### Why Study Economics?

Today, students in large numbers make the deliberate decision to study economics, and they do this for a number of reasons. First, it is difficult to read a newspaper or turn on a TV newscast without encountering a multitude of economic issues and interpretations. To make



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**Figure 1.1** Since economics is a social science, its theories and applications are often hotly debated. Can you explain why this is so?

### An economy ...

- is a very complex or intricate system.
- is dynamic or subject to movements and exchanges.
- consists of interdependent people, groups, and institutions, each performing specialized roles.
- involves a series of independent transactions motivated by economic goals.
- involves numerous transactions that create two circular flows (money moves in one direction while goods and services move in the opposite direction).

**Figure 1.2** What is an economy? An **economy** can best be described as a self-sustaining system in which many independent transactions (often triggered by self-interest) create distinct flows of money and products.



sense of all this information, you need a practical understanding of economic concepts and principles. You also need to understand the ways in which both the Canadian and the global economies work and the ways people, businesses, and government institutions function within them.

Second, since students have to make daily choices regarding the use of scarce resources (will I spend my entire paycheque or allowance this week, or will I put a part of it in my savings account?), they come to value the skills of economic reasoning. This textbook profiles these skills in features (such as Thinking Like an Economist) and provides many opportunities for you to develop and apply decision-making and problem-solving strategies. These are lifelong skills that will always be useful and marketable.

Third, economic knowledge and skills can lead to more effective civic participation. If students are to vote wisely for the politicians who will make important decisions for them, they should be able to understand the interrelatedness of economic factors such as interest rates, foreign exchange rates, taxes, public debt, and laws protecting competition. Otherwise, how will they know whom to believe?

### Economics, Materialism, and Opportunity Cost

Some critics dismiss economics on the grounds that it is preoccupied with studying material things and does not show enough concern for human values. It is true that economics is concerned mostly with such things as resources and products, but at no time does it recognize these things as ends in themselves. Remember that material things can be used for noble purposes, such as saving lives, eliminating poverty and illiteracy, preserving peace, upholding justice, and protecting the environment. Most people will not take great satisfaction in merely building up piles of material goods; they will also use them to achieve other ends—ends that are determined by personal or societal value systems. So economics does not try to establish goals for the people who study it; rather, it gives them the tools they will need to achieve their goals more efficiently, that is, by wasting fewer resources.

In this respect, it is important to realize that the economic perspective distinguishes between the **effective** and the **efficient** use of resources. If we consume a certain amount of resources and, in the end, achieve the desired result then our use of those resources can be called *effective*. However, if we use the bare minimum of resources necessary to achieve the desired end then our use of these resources can also be considered *efficient*. Economic decisions must be both effective and efficient. Efficiency enables us to use the saved resources in achieving other goals—goals that we may not have been able to achieve unless we had economized. We can see, then, that although economics studies the material world, it does not urge us to place undue importance on material things and on maximizing consumption. Given the scarcity of most things in our world, the economic imperative is to conserve and put these things to wise use, that is, to achieve the right goals (effectiveness) in the right way (efficiency).

The idea of efficiency becomes even more important when we realize that any time we use material goods to achieve one end, we have to do without something else. This is what economists call the opportunity cost of our actions. We can define **opportunity cost** as the sum of all that is lost from taking one course of action over another. This is a fundamental concept in economics; in making any economic decision, we must always consider not just what we are gaining but also what we stand to lose (see Figure 1.3).

To make the concept of opportunity cost clearer, let's look at an example. Suppose you find yourself with \$2000 that's burning a hole in your pocket. There are three things you would like to do, each of which will cost exactly \$2000:

1. Take a two-week winter vacation on the Caribbean island of Cuba.
2. Buy a DVD player and a home-theatre system.
3. Finance yourself to spend a summer working in Africa for a volunteer organization affiliated with the Canadian International Development Agency (CIDA).

Whichever one of these alternatives you choose, you will have to do without the other



Steps	Details and Example(s)
1. Define the problem.	At the heart of every decision is a choice that has to be made—the selection of one alternative over others. State the problem in a clearly focused question. <ul style="list-style-type: none"> <li>• What should Lani do over the weekend?</li> </ul>
2. Clarify goals and priorities.	Identify the most important issues involved in the problem. Establish goals and priorities in response to these issues. <ul style="list-style-type: none"> <li>• Lani wants to go to university.</li> <li>• She needs to maintain good marks to be accepted at the school of her choice.</li> <li>• She needs to save money to cover tuition and other expenses.</li> <li>• She enjoys spending time with her friends and listening to music.</li> </ul>
3. List the possible alternatives.	Identify all choices available to decision makers. <ul style="list-style-type: none"> <li>• Lani's alternatives include <ul style="list-style-type: none"> <li>– attending the concert with her friends,</li> <li>– working extra hours to make more money, or</li> <li>– producing a more thorough research paper.</li> </ul> </li> </ul>
4. Establish the criteria used to judge the alternatives.	Identify three or four standards that can be used to evaluate each alternative. <ul style="list-style-type: none"> <li>• Lani's weekend can be spent in the pursuit of income, marks, fun, or preparation for post-secondary education. Each alternative includes positive and negative considerations. These considerations represent the criteria to be used in making a sound decision.</li> </ul>
5. Weight each criterion based on goals and priorities.	Use <i>goals and priorities</i> to determine the relative importance of each criterion. Make value judgements. <ul style="list-style-type: none"> <li>• Because of the importance of the research paper in determining her final mark and of effective research and writing skills in post-secondary education, Lani gives these two criteria more weight in making her decision. On this particular weekend, she gives income moderate weight and fun with friends a lower priority. Next weekend these values could change.</li> </ul>
6. Evaluate each alternative.	Use the weighted criteria to evaluate each alternative. Produce a decision-making matrix to weigh all options relative to established criteria. <ul style="list-style-type: none"> <li>• In completing the matrix shown in Figure 1.4 (page 10), Lani must consider the positive and negative aspects of each alternative and weight them according to her goals and priorities. She gives important criteria triple weight in the decision, moderate criteria double weight, and lesser criteria single weight. By tabulating the results of this weighted analysis, Lani can determine her best alternative.</li> </ul>
7. Make a decision.	Select the best alternative based on the results of the weighted evaluation. <ul style="list-style-type: none"> <li>• The decision matrix clearly identifies the third alternative as the best. It provides the most benefits (or positive aspects) while limiting the costs or negative aspects. Lani will spend her weekend working on the research paper.</li> </ul>
8. Act on the decision.	Implement the selected alternative. <ul style="list-style-type: none"> <li>• Lani invests extra time at the library and on the computer to acquire additional data, conduct a more thorough analysis of her findings, and produce a more polished written report.</li> </ul>
9. Assess effectiveness.	Assess the effectiveness of the action plan and revise it as needed. <ul style="list-style-type: none"> <li>• Lani is pleased with the mark she receives on the major assignment because it improves her course grade. The concert she missed was described by friends as "the best of the year!"</li> </ul>

**Figure 1.3** A decision-making model. The issue is, What should Lani do this weekend? Although we apply the model to Lani's problem, it can also serve as a general model for deciding what to do with scarce resources. What scarce resource is Lani dealing with?



Alternatives		Criteria (rank in order of importance—most important first)			
Priority/Weight	Marks	Preparation for Post-Secondary Studies	Income	Fun with Friends	TOTAL WEIGHTED VALUE
	High (3X)	High (3X)	Moderate (2X)	Low (1X)	
1. Attend the concert.	---	---	--	+	1+ 8-
2. Work extra hours.	---	---	++	-	2+ 7-
3. Produce a better research paper.	+++	+++	--	-	6+ 3-

Figure 1.4 A decision-making matrix like this can help you establish your priorities.

two. The opportunity cost of your vacation in the Caribbean is based on the satisfaction lost from the “next best” alternative use of the money. In other words, the opportunity cost of your vacation is either the satisfaction obtained from the home-theatre system or from helping a less developed community, but not both since you can do only one or the other. The opportunity cost of the vacation also includes any earnings you will lose while you are on vacation.

Any time you have to decide among several possibilities, a well-thought-out decision-making model can make it easier for you to choose. For example, Lani is in her final year of high school. She has to hand in a major research paper on Monday morning. She also has an opportunity to work extended weekend hours at the ice cream parlour and a chance to go with friends to a rock concert featuring her favourite band. What should Lani do? Figures 1.3 and 1.4 illustrate the decision making in this example.

## Facts and Values

Traditionally, the science of economics has attempted to explain human behaviour and assist in rational decision making by using both fact- and value-based considerations. Facts and values have been described as the two sides of the economic coin. Let’s explore the distinction

between them to get an idea of the way they work together in economic decision making.

### Analytical economics

The branch of economics that deals with facts and direct observation of the world around us is called **analytical (or positive) economics**. This branch is concerned with two types of statements: *descriptive* and *conditional*. Descriptive statements portray things as they are in the present or have been in the past. The following is a descriptive statement: “Automobile sales in Canada in this quarter are 7 per cent higher than in the last quarter.” This is a statement of fact that can be verified statistically.

Conditional statements, on the other hand, are forecasts based on the careful analysis of economic behaviour. Often these statements take the form “If  $x$  occurs then  $y$  will follow.” This forecast can be either confirmed or refuted by referring to known facts and by observing the accuracy of the prediction. For example, consider this conditional statement: “If the price of cigarettes decreases, the quantity purchased will increase.” This forecast was confirmed in the early 1990s when the federal and provincial governments lowered taxes on cigarettes to combat organized smuggling operations that were bringing large quantities of American cigarettes into Canada. The tax cut lowered the price of Canadian cigarettes, and consumers did indeed purchase more of them as a result.





## Using Graphs to Understand Relationships

Given their visual nature, graphs are an effective way to show the relationships that exist between two different variables. By plotting data along two axis lines, we can clearly see the relationship between the two sets of data. Let's look at a specific example to understand how economists use graphs. We'll assume that the data table below (Figure 1.5) reports changes in ice cream sales in your community as the selling price per cone fluctuates between \$1 and \$3.

While the table does indicate a pattern, we can better understand the relationship between price and ice cream cone sales by graphing the data. Our graph will require an axis for both variables: price and quantity sold. The two axes are plotted to create a  $90^\circ$  angle. The point where the two lines intersect is called the **origin**. The vertical line is called the **y-axis**, and the horizontal line is the **x-axis**. Traditionally, in economics, price is plotted along the **y-axis**, with quantity along the **x-axis**. Each square along each axis must be assigned a constant value to maintain accuracy.

After examining the graph in Figure 1.6, answer the following questions:

- What is the value of each grid square along the **y-axis**?
- What is the value of each square along the **x-axis**?
- What would happen to your graph if you were to use one square to represent 1000 cones along the **x-axis**?

Price per Cone	Number of Cones Sold	Point on Graph
\$1	60 000	A
\$2	40 000	B
\$3	20 000	C

Figure 1.5 Ice cream cone sales relative to price.

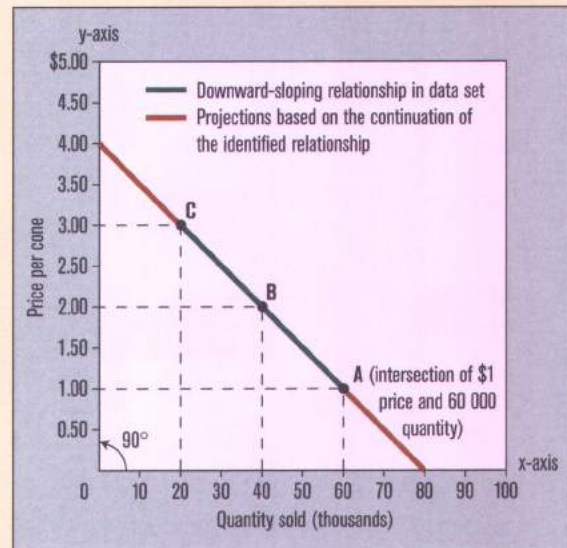


Figure 1.6 Ice cream cone sales relative to price.

The data are plotted on the graph consistent with both axis scales. For example, the placement of point A on the graph represents a price of \$1 and a quantity of 60 000 cones sold. No other placement on the grid would accurately represent both variables. A line is drawn to connect the three data points. This line illustrates the relationship between the two variables. Since the line moves downward (from left to right), it is said to have a downward slope. This represents an *inverse*, or opposite, relationship between price and sales. As price increases, the quantity sold decreases. The two variables therefore change in opposite directions. Having shown the relationship between price and ice cream sales, the graph can now be used to determine additional information about this relationship:

- If the selling price is \$1.50, how many cones will most probably be sold?
- If the price is increased to \$2.50, how many cones will most probably be sold?



- If the price is increased to \$3.50, how many cones will most probably be sold?
- Why can the price of an ice cream cone never be increased to \$5 in this community?

The value of this graph as an economic tool is becoming clear! Now let's consider a case in which the relationship between variables is *direct*, or positive. The table in Figure 1.7 presents data comparing ice cream cone sales to outdoor temperatures. When temperature increases, so do ice cream cone sales, reflecting a direct relationship.

Temperature	Number of Cones Sold	Point on Graph
12°C	20 000	X
24°C	50 000	Y
32°C	70 000	Z

**Figure 1.7** Ice cream cone sales relative to temperature.

## QUESTIONS

Draw a graph of the economic relationship between temperature and ice cream sales using the graph in Figure 1.6 as a model. Replace price with temperature on the *y*-axis of your graph, but use the same scale for the sales axis. Decide on an appropriate scale for the temperature axis. Use your new graph to answer the following questions.

1. If the temperature climbs to 38°C, how many ice cream cones will be sold in your community? Mark this as point A on your graph.
2. How many cones will be sold when the temperature drops to 8°C? Mark this as point B on your graph.
3. What temperature would generate sales of 35 000 cones? Mark this as point C on your graph.
4. At what temperature would ice cream sales stop completely in your community? Explain.
5. How does the slope of the curve help explain the kind of relationship that exists between temperature and ice cream sales and between price and sales? Explain.

## Normative economics

The other branch of economics is called **normative (or policy) economics**; it deals primarily with statements that contain value judgements. Normative statements express what a particular economist or group of economists thinks should be the case, based on their value judgements. These statements cannot be confirmed or refuted solely by reference to facts. Goals and policy statements of governments, firms, institutions, and interest groups are often based on value judgements and, therefore, are normative statements. The following is an example of a normative statement: "Municipal governments should provide more housing for homeless people." Clearly, this is an expression of opinion reflecting a value judgement. It is not a statement of fact and is therefore open to debate.

As we enter this new millennium and participate more actively in the global economy, we find it more and more necessary to use both facts and values in making wise economic

decisions. One reason for this is that, in a global economy, local decisions often have far-reaching consequences. Consider, for example, the financial crisis that rocked South Korea, Indonesia, Japan, and Russia in 1998. Not our problem, you say? Think again: these events contributed to a weaker Canadian dollar, instability on Canadian stock markets, and increased prices for imported goods. In other words, they scored a direct hit on your wallet. Similarly, the terrorist attack of 11 September 2001 hastened the slide toward a global economic downturn.

Value judgements play a major role in some decisions made by the Canadian government on international trade. In 1999, relations between Canada and its long-time trading partner Cuba cooled when the Cuban government jailed four journalists who were protesting against restrictions on free speech in that country. Value judgements concerning human rights were an important enough issue to affect relations between these two trading partners.



Key Steps	Economic Examples
<p><b>Observation</b></p> <ul style="list-style-type: none"> <li>The noting of an interesting occurrence that triggers human curiosity.</li> <li>Formulating a question to focus the search for an answer. (Usually, we want to know why something happens or what the relationship is between two things.)</li> </ul>	<p>During a recent heat wave, three local stores ran out of your favourite ice cream. This prompted you to inquire "What effect does temperature have on ice cream sales?"</p>
<p><b>Data Collection</b></p> <ul style="list-style-type: none"> <li>The collection of evidence about what is being observed.</li> <li>The recording of data. (Verbal information constitutes <i>qualitative</i> data, while numerical information constitutes <i>quantitative</i> data.)</li> </ul>	<p>Interviews with store managers reveal that ice cream orders increase during the summer months. Clerks confirm they have to restock freezers more frequently during heat waves. Customer surveys indicate that ice cream is a preferred summer dessert. Monthly production data from major manufacturers indicate an increase in the quantity of ice cream produced and sold from June to August.</p>
<p><b>Explanation</b></p> <ul style="list-style-type: none"> <li>The organization of data in a logical way to formulate a possible answer to the original question.</li> <li>The reaching of a tentative conclusion in order to find a basis for explaining observations and measurements. (The tentative explanation is called a <i>hypothesis</i>.)</li> </ul>	<p>You organize the collected data by season as well as by source (manufacturer, retailer, consumer) to determine a consistent pattern. Then you formulate the following tentative hypothesis: Ice cream sales appear to increase as outdoor temperatures increase.</p>
<p><b>Verification</b></p> <ul style="list-style-type: none"> <li>The testing of the hypothesis to account satisfactorily for known facts, to explain new data, and to forecast future events.</li> <li>The rejecting, modifying, or accepting of the hypothesis as an accurate generalization of reality (a general rule, theory, law, principle, or model that can be validly used as a simplified picture of a more complex reality). Note that an hypothesis cannot be proven true. The best verdict is that we have failed to reject it.</li> </ul>	<p>You test your hypothesis by examining new data from other communities. You also use the hypothesis to forecast sales patterns for subsequent summers and winters. Once the hypothesis has been proven accurate through testing, it becomes the General Theory of Ice Cream, which states: "The volume of ice cream sales is directly related to seasonal changes in temperature." (In economics, the words <i>theory</i>, <i>rule</i>, <i>law</i>, and <i>principle</i> are used interchangeably to identify accurate models of reality. Therefore, our discovery could have just as easily been called the Law of Ice Cream Sales.)</p>

**Figure 1.8** Applying the scientific method to a sample economic discovery.

## The Scientific Method and Mathematics in Economics

When we defined economics as a social science earlier in this chapter, we looked mainly at its social rather than its scientific aspect. Now, let's consider what it is about economics that makes it a science. A discipline, or field of study, is called a science based not on what it studies but on how it studies it, that is, based not on its subject matter but on its method. Economics, like all other natural and social sci-

ences, uses a common investigative approach called the scientific method. The four basic components of the **scientific method**, as first outlined by the English scientist Francis Bacon (1561–1626), are

- observation,
- data collection,
- explanation, and
- verification.

Even though scientists today use many different processes to make their discoveries, the four steps outlined by Bacon are almost always



involved. The table in Figure 1.8 (page 13) explains the scientific method and illustrates each step with an economic example.

By the time you reach the end of this first chapter, you will have noticed that mathematics is often used in the study of economics. Math is used principally to help us recognize

and explain number patterns and statistical relationships. Since this is applied (rather than theoretical) mathematics, students who are not math majors have no cause for alarm. In fact, many students welcome the opportunity that economics provides to explore the practical applications of mathematics.

## Check Your

### Understanding

1. Why is scarcity a constant, even in a resource-rich country such as Canada?
2. Explain the difference between a social science and a natural science. Why is economics a social science?
3. Explain the importance of the concept of opportunity cost in economic reasoning.
4. Draw a flow-chart note or complete a summary table to explain the difference between positive and normative economics and to help clarify the different terms used.
5. Use examples to explain the difference between a direct and an inverse economic relationship.

## Basic Fallacies, Laws, and Theories of Economics

Earlier, we examined the scientific method and saw that it is used in economics to prove hypotheses or to validate generalizations that attempt to explain economic realities. After they have been validated or proven, these generalizations become economic principles, laws, or theories. First, though, we must examine the three most common economic fallacies. A **fallacy** is a hypothesis that has been proven false but is still accepted by many people because it appears, at first glance, to make sense.

### The Fallacy of Composition

In economics, there are several things that may be true from an individual perspective but become false when examined in light of the economy as a whole. For example, an individual farmer may decide to clear more land and plant more corn in an attempt to earn extra income. There is no question that this could be a profitable venture for this particular farmer. However, suppose that every farmer in Canada attempts the same strategy simultaneously. The

result would be an overproduction of corn that would drive its market price much lower. If the new price is so low that it does not allow the farmers to recover their operating expenses, many of them may go bankrupt. It would take several years for the Canadian corn market to recover from this type of collapse. We can see, then, that what is good for the individual is not automatically good for society as a whole. This mistaken belief that individual benefit automatically translates into social benefit is called the **fallacy of composition**.

This fallacy can also work the other way—with the idea that what is good for society as a whole must be good for its individual members. Free trade can generally benefit Canadian society by resulting in lower prices for certain manufactured goods. This does not mean that everyone in Canada has benefited from free trade. In fact, some Canadians have lost their jobs because cheaper foreign goods are now available to compete with the more expensive goods produced in Canada.

### The Post Hoc Fallacy

The **post hoc fallacy** is derived from the Latin phrase *post hoc ergo propter hoc*, which



means, literally, “after this therefore because of this.” Sometimes people assume that, because it took place after event A, event B must have been caused by event A. We can use another agricultural example to illustrate this fallacy. A rooster wakes up every morning before dawn and instinctively crows. Moments later the sun rises. Would it not be ridiculous to assume that the rooster’s crowing (and not the rotation of the Earth) causes the sun to rise? By the same token, when a newly elected government takes credit for improving the economy, this, too, demonstrates post hoc thinking. Since the economy improved after the election, so the reasoning goes, the election result must have been responsible. Has the new government had time to implement new economic policies? Have the new policies had sufficient time to bring about economic improvement? Unfortunately, many people do not ask these critical questions, preferring instead the apparent logic of the post hoc argument.

This fallacy is also known as the **cause-and-effect fallacy** because of the false assumption that what comes before automatically causes what follows. Some prior events are obviously not connected to later events in any meaningful way. As with our rooster crowing just before dawn, sometimes the relationship between two events is more a matter of coincidence than cause and effect.

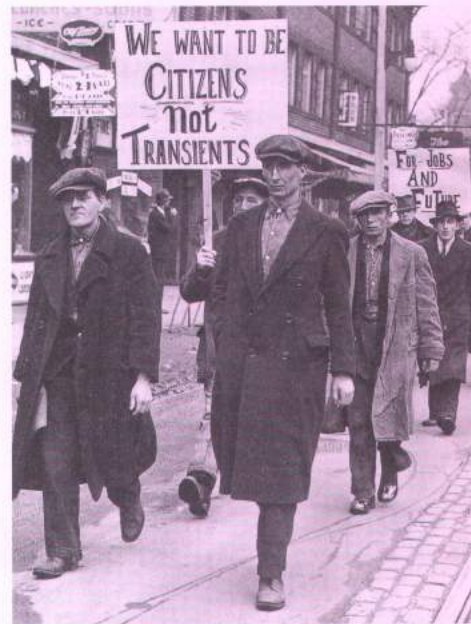
### The Fallacy of Single Causation

Closely related to the post hoc fallacy, the **fallacy of single causation** is based on the premise that a single factor or person caused a particular event to occur. For example, a historian might argue that the stock market crash of 1929 caused the Great Depression of the 1930s. This, like other examples of the single causation fallacy, is an oversimplification. In reality, the stock market crash was a symptom of economic illness rather than a direct cause of the Great Depression. When the stock market did crash in October 1929, investors’ confidence was devastated, which contributed, in turn, to the Great Depression. However, it was by no means the single cause. Reduced gov-

ernment and investment spending, as well as a marked decline in the rate of technological advancements, greatly contributed to the Depression. Had there been no meaningful connection between the crash of 1929 and the Depression of the 1930s, the argument would have been a good example of the post hoc fallacy. Since there was a meaningful connection but other factors were also involved, this oversimplification best illustrates the fallacy of single causation.

### Economic Laws Affecting Production Possibilities

In order to improve your ability to think like an economist, let’s now look at some of the most important generalizations economists make. Economists use graphs of the **production possibilities curve** to illustrate the fundamental problem of scarcity. Since wants will always exceed available resources, people living in a given economy must make production choices.



**Figure 1.9** Unemployed people march during the Great Depression. To claim that the Depression was caused by a single event is an example of the fallacy of single causation.



The production possibilities curve provides a visual model of the production choices faced by people in a simple economy. Before examining a graph of this curve, we must understand the assumptions on which this model is based:

- *Only two products can be produced by this simple economy.*

In an economy capable of producing hundreds of thousands of different products, decision making is extremely complex. In order to reduce economic decision making to its most basic form, the model assumes that only two products can be produced by this economy. This assumption makes the classic economic **trade-off** very clear: the increased production of one good can be achieved only by sacrificing a sufficient quantity of the alternative product.

In our model, we shall assume that the two goods that can be produced are bread and ploughs. Bread represents the production of **consumer goods**—those products and services that directly satisfy human wants. Ploughs, important agricultural tools, represent the production of **capital goods**—those goods used in the production of other goods. For example, ploughs are needed to prepare the soil for planting. The ploughs in operation today contribute to a successful wheat harvest tomorrow and, therefore, to the future production of bread.

- *The economy has fixed technology and resources.* Since it is examining the economy over a short period of time, the model assumes that no technological innovations will be introduced to improve the rate of production. It also assumes that the amount of productive resources available does not change. Existing resources can be shifted, as desired, between the production of bread and ploughs, but no additional resources can be imported into the economy. For this reason, the only way to make more bread is to produce fewer ploughs, and vice versa.
- *The economy is at full employment.* The model assumes that all productive resources, including labour, are fully employed and that they are being used effectively and

efficiently to produce the maximum output of goods and services.

What combination of ploughs and bread should our simple economy choose to produce? This question involves the concept of opportunity cost. Since the way we answer it will clearly reflect the values of our society, it is also a question that involves normative, or policy, economics.

### The law of increasing relative cost

We can see by examining the production possibilities schedule in Figure 1.10 that the opportunity cost of increasing plough production is clearly reflected in the simultaneous decline in the production of bread. For example, in moving from alternative A to alternative B, the opportunity cost of producing one plough is the 1000 loaves of bread that must be sacrificed. The production managers in the economy have effectively transformed the 1000 loaves of bread into one new plough by shifting their resources out of bread production and into plough production. The economic cost of one plough relative to bread is not given in dollars but in the number of loaves, that is, 1000 loaves. This is referred to as the plough's **relative cost** and is directly proportional to the opportunity costs of increased plough production.

Figure 1.10, then, clearly reflects the existence of an important economic rule, known as the **law of increasing relative cost**. This law comes into play whenever a society, in order to get greater amounts of one product, sacrifices an ever-increasing amount of other products. It is reflected in the graph in Figure 1.11 (page 18) by the bowed-out, or concave, line of the production possibilities curve. If the opportunity cost of each extra plough were constant at 1000 loaves, the production possibilities curve would be a straight line. To confirm this, create a production possibilities schedule that reflects a constant trade-off between bread and ploughs (that is, 1000 loaves of bread for each new plough) and then graph the production possibilities curve.

The law of increasing relative cost causes this concave curvature of the production possibilities curve because, although plough production



Production Possibilities (alternatives)	Ploughs	Loaves of Bread	Opportunity Cost of Additional Plough Production (quantity of bread that must be given up)	Relative Cost to Society
A	0	15 000		
B	1	14 000	1000	1 plough = 1000 loaves*
C	2	12 000	2000	1 plough = 2000 loaves
D	3	9000	3000	1 plough = 3000 loaves
E	4	5000	4000	1 plough = 4000 loaves
F	5	0	5000	1 plough = 5000 loaves

\*since the production of one more plough will cost society 1000 loaves of bread

**Figure 1.10** A production possibilities schedule and the relative costs of producing ploughs and bread.

(the horizontal movement) changes by a constant amount each time, the quantity of bread production (the vertical movement) changes by an increasingly larger amount each time. (Look again at Figure 1.11.) In other words, the slope of the curve becomes steeper as a result of this ever-increasing vertical change.

In order to understand this economic phenomenon, we must take into account the nature of the goods being produced and the difference in the productive resources that each one requires. Our first product, bread, is an agricultural product made primarily from wheat. The principal resource required to grow wheat is fertile land. Labour is also involved but is not as important.

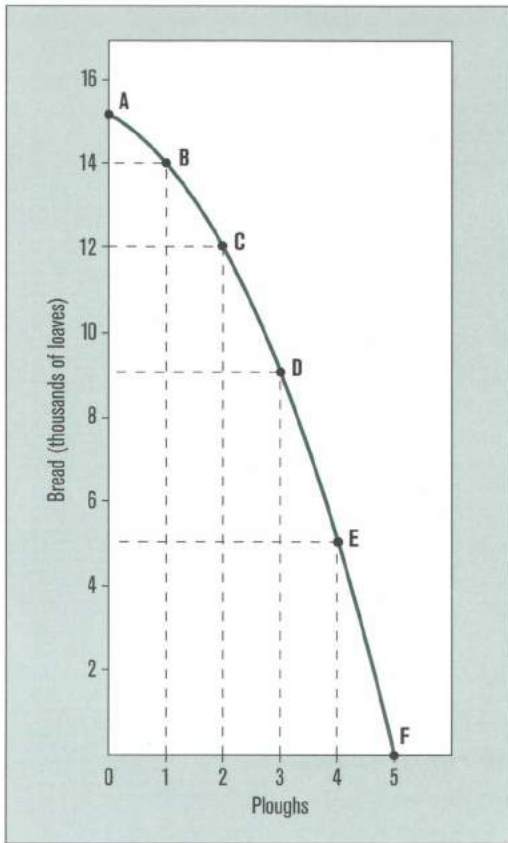
Our second product, the plough, is a farm tool. The principal resource required to manufacture ploughs is human labour. Land, which provides the natural resources required (such as wood and iron), is also necessary but not as important. Therefore, the production of bread and ploughs uses resources in different proportions. As we move from production alternative A to alternatives B and C, those resources more suited to producing ploughs and less suited to producing bread (such as carpenters and blacksmiths) will be shifted from making bread to making ploughs.

As society moves from alternative C to alternatives D, E, and F, however, resources more suited to producing bread are put to use producing additional ploughs. The use of our limited resources has become less efficient and less effective. For instance, some farmland is being converted to woodlots, and some bakers are being retrained as blacksmiths. This inefficient use of resources is evident in the large amount of bread that must be sacrificed in order to produce the last two ploughs.

### The production possibilities curve as a frontier

The production possibility schedule contains the *maximum potential output* that can be produced for each of the two products. The resulting curve, therefore, represents the outer limit, or **frontier**, of production possibility. This frontier is attainable only if all productive resources are fully employed. In reality, however, we know that resources are not always fully employed. For example, part of the labour force may be unemployed, some land may be left uncultivated, or some machines and factories may be idle. In addition, as a result of human error, some resources may be used ineffectively.

These realities will cause the economy to perform below the level of maximum potential

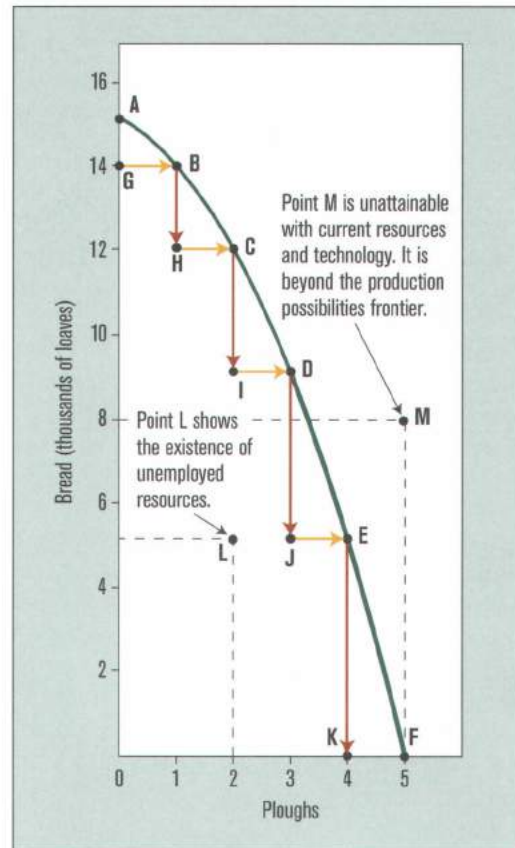


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**Figure 1.11** The production possibilities curve for ploughs and bread. This graph gives us a clear picture of the way opportunity cost works. Note that at point A, the economy produces no ploughs and 15 000 loaves of bread. At point B, the economy has shifted some of its productive resources to producing ploughs, with the result that only 14 000 loaves are produced. It is easy to see that, from A to B, the opportunity cost of producing one plough is 1000 loaves of bread. From B to F, as the production of ploughs increases, the production of bread falls off at a very rapid rate. The result is that, from E to F, the opportunity cost of one more plough has grown drastically to 5000 loaves of bread.

output. In Figure 1.12, point L (inside and therefore below the frontier of maximum production) illustrates this situation. Most economies will achieve production levels inside or below the frontier. Nevertheless, each society sets for itself economic goals that aim to reach the production possibility frontier in the short term and to force the frontier to grow outward in the long term.

Point M on our graph is clearly beyond the production possibility frontier and so is unattainable at this time. An economy's capacity to produce can be increased over the long term by such changes as population growth (which expands the labour force) and technological advances (such as the development of more efficient machinery). This kind of structural change will allow the economy to produce, simultaneously, more bread and ploughs in the long run, thereby shifting the production possibilities frontier outward as the productive capacity of the whole economy expands. In time, this expansion will make M an attainable point on the expanded production possibilities frontier.



Source: Adapted from *Economics: A Canadian Perspective* by James D. Thexton. Copyright © Oxford University Press Canada 1992. Reprinted by permission.

**Figure 1.12** The production possibilities curve as a frontier. The curve is concave, or bowed out, because (moving to the right) the opportunity cost of producing one extra plough increases constantly in terms of the quantity of bread that must be sacrificed each time.



**Economists use models and graphs . . .**

- to simplify and explain complex patterns, relationships, and behaviours.
- to outline and highlight the elements at work in an economic system or process.
- to make supportable generalizations about economic behaviours.
- to apply economic reasoning to issue analysis and decision making.
- to identify general trends and tendencies in order to support forecasts and predictions.

**Figure 1.13** Economists use models to simplify complex economic realities and to support forecasts.

**The law of diminishing returns**

While the law of increasing relative cost deals with the relationship between two **outputs**, or products (in our case, bread and ploughs), the **law of diminishing returns** deals with the relationship between an **input** (a productive resource such as labour) and the resulting output. More specifically, the law of diminishing returns states that outputs will increase when a particular input is increased, but only to a point. After this point has been reached, increasing inputs will not have an appreciable effect on the production of outputs. Another agricultural example will give us a better idea of the way this law operates.

Suppose a farmer is working, without the use of machinery or hired help, a farm that is 10 hectares (ha). There are only two productive resources, or inputs, involved in this enterprise: land and the farmer's own labour. For the sake of our demonstration, we shall assume that no additional land is available to the farmer. Let's further assume that the farmer is able to hire additional workers as needed. Therefore, the operation of this farm requires one input that is variable (labour) and one that is constant (land). Our farmer wants to increase the crop yieldage as a way of making the enterprise more profitable. For seven growing seasons in a row, the farmer experiments by hiring one additional person each year to help work the farm. The workforce therefore expands from one worker (the farmer alone) to seven (the farmer plus six hired hands). Figure 1.14 outlines the results of this experiment.

At first, the additional workers contribute to a sizable increase in yieldage. In later years, however, further increases in the labour force result in less and less extra production. Finally, there is no more increase in what 10 ha of soil can produce, no matter how many workers are added. This is a good illustration of the law of diminishing returns, which states:

*For any productive enterprise, when at least one input is held constant [in our example, land] while other inputs are increased [in our*

Year	Cultivated Land (ha)	Labour Force (workers)	Total Production (bushels of corn)	Increase in Yieldage (extra bushels)
1	10	1	1000	1000
2	10	2	2000	800
3	10	3	2800	600
4	10	4	3400	400
5	10	5	3800	100
6	10	6	3900	0
7	10	7	3900	0

**Figure 1.14** A farmer's attempt to increase output (Experiment A), which illustrates the law of diminishing returns.

example, labour], *there will be an eventual decline in the rate of extra output or yieldage.*

This decline may not be as immediate as in our example. Often, diminishing returns will appear only after several more increases in the variable resource have occurred.

### The law of increasing returns to scale

Examining another economic principle will help us to understand the law of diminishing returns even better. The **law of increasing returns to scale** tells us what happens when all productive resources are increased simultaneously. To see how this works, let's return to our cornfield and conduct a slightly different experiment. This time, as the farmer hires additional workers, additional parcels of land are being cultivated as well. Just as in our last example, we assume that all work is done manually. Figure 1.15 outlines the results of this second experiment.

In this experiment, the outcome is very different from that of the first experiment. Why? Have we refuted the law of diminishing returns? Not at all. In this second experiment, the farmer has increased *all* productive resources at the same time and in the same quantity. Every time a new worker is added, another 10 ha of cultivated land are also added. The farmer has therefore increased the *scale* of operations. An operation that began as a single farmer working on a small parcel of land has

grown into a large farm employing seven full-time workers. The net result of this conversion to larger-scale operations is a steady increase in the rate of extra output.

When the farmer doubled the amount of all productive resources used, total production also doubled. When the farmer doubled resource input again (from year 2 to year 4), output more than doubled (2000 bushels of corn became 4600 bushels). By the end of the experiment, a sevenfold increase in inputs has led to a tenfold increase in production. Clearly, there are increased returns to show for this systematic increase in the amount of productive resources the farmer puts to use. Through effective teamwork and specialization, economies of scale make the farmer's operations more efficient. In the real world, increased returns to scale (also referred to as economies of scale) help to explain why so many of the products we buy are produced by large companies. Even in agriculture, the large corporate enterprise is increasingly replacing the small family farm. In later chapters of this text, we shall explore various applications of the theory of increased returns to scale.

Since in the real world productive resources are limited, it is not always possible for an enterprise to increase all resource inputs indefinitely. Ultimately, therefore, the availability of some productive resources will end, and the law of diminishing returns will once again prevail.

Year	Cultivated Land (ha)	Labour Force (workers)	Total Production (bushels of corn)	Increase in Yieldage (extra bushels)
1	10	1	1000	1000
2	20	2	2000	1200
3	30	3	3200	1400
4	40	4	4600	1600
5	50	5	6200	1800
6	60	6	8000	2000
7	70	7	10 000	

Figure 1.15 A farmer's attempt to increase output (Experiment B), which illustrates the law of increasing returns to scale.



# CASE Study

## Career Opportunities

Throughout this chapter, we have been considering what the study of economics involves, but we haven't yet looked seriously at what economists actually do. Perhaps the most practical way to do this is to research the career

opportunities available to people who have a background in economics and in the related fields of accounting, business administration, commerce and finance, computer sciences, marketing, political sciences, and sociology.

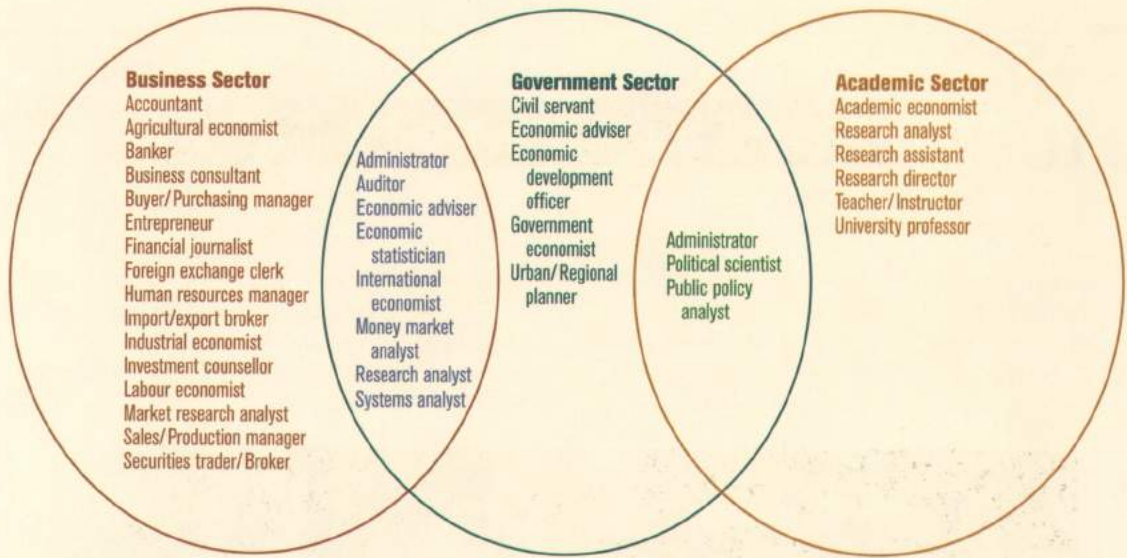


**Figure 1.16** Stock exchanges are well-known for providing career opportunities related to economics. On the trading floor, a variety of professionals buy and sell stocks using "high-tech" computer links.

Since the study of economics develops problem-solving, analytical, and critical-thinking skills, successful students enjoy a wide variety of potential career paths in business, government, and education. Figure 1.17 (page

22) outlines the range of job opportunities available to people trained in economics and related fields. You may be able to add to these lists of careers by consulting the "Careers" section of different newspapers.





**Figure 1.17** Career opportunities related to economics are listed for the business, government, and academic sectors of the economy.

**QUESTIONS**

1. Using Figure 1.17 as a guide, collect job advertisements from your local newspaper to further your analysis of employment opportunities.

Based on your research, what roles would you say economists play in our society?

2. Create a chart similar to the one below to compare jobs available to people who have trained in economics. What job opportunities related to economics most interest you? Why?

Company	Job Title	Salary	Education Required	Skills Required	Background Required	Nature of Work

**Check Your**

**Understanding**

- How does the fallacy of composition help to shed light on the tension that exists between individual self-interest and the common good? Explain one specific application of the fallacy of composition that you have experienced.
- Develop a strategy that you can use to distinguish between single-causation fallacies and cause-and-effect fallacies. Explain your strategy.
- What is meant by the relative cost of a product? Explain how increased relative costs are

related to opportunity costs and diminishing returns.

- In order to experience increased returns, what economic conditions must be available to producers? What effect does the relative scarcity of resources eventually have on outputs or returns?
- Why are so many of the products we buy manufactured by large-scale producers?



## CHAPTER SUMMARY

- Economics is the social science of scarcity and choice. Economists attempt to allocate scarce resources wisely in order to satisfy the most wants possible while using up the smallest amount of resources possible.
- Opportunity cost is the sum of all that is lost from taking one course of action over another. In making any economic decision, we must always consider not just what we are gaining but also what we stand to lose in choosing one alternative over another.
- Group behaviour is often predictable, but individual behaviour is harder to predict.
- Economists use models to explain complex patterns, processes, and relationships and to support forecasts and predictions.
- Analytical (or positive) economics deals with the analysis of economic facts and the development of economic theories based on direct observation. It represents the factual side of economics.
- The normative (or policy) side of economics deals with statements that contain value judgments and cannot, therefore, be confirmed or denied solely by reference to facts. This is the controversial side of economics.
- Economists apply a method of inquiry called the scientific method. This investigative approach includes the steps of observation, data collection, explanation, and verification.
- A fallacy is a hypothesis that has been proven false but is still accepted by many people because, at first glance, it appears to make sense.
- The fallacy of composition is based on the faulty premise that what is good for the individual is automatically good for society as a whole.
- The post hoc fallacy is based on the mistaken assumption that what comes before automatically causes what follows.
- The fallacy of single causation is based on the faulty premise that a single factor or person caused a particular event to occur.
- The production possibilities curve is an excellent model to demonstrate how a simple economy can produce additional quantities of a desired product by shifting productive resources out of another industry.
- The concave curvature of the production possibilities curve demonstrates the effect of the law of increasing relative cost. As society attempts to produce increased amounts of one product, increasingly larger amounts of other products must be sacrificed because of the inefficiencies created. Relative cost is directly proportional to changes in opportunity cost.
- For any productive enterprise, when at least one input is held constant while other inputs are increased, there will be an eventual decline in the rate of extra output, or yieldage. This is known as the law of diminishing returns.
- The law of increased returns to scale states that when all productive resources (inputs) are simultaneously increased, there is an even greater increase in yieldage (outputs). This increased yieldage is the outcome of the improved efficiency resulting from specialization and mass production technology. This explains why most of the goods we buy are produced by large enterprises.
- There are many career opportunities for people who have trained in economics.



## Key Terms

economize  
 economics  
 social science  
*oikos*  
 economy  
 effective  
 efficient  
 opportunity cost  
 analytical (or positive) economics  
 origin  
 normative (or policy) economics  
 scientific method  
 fallacy  
 fallacy of composition  
 post hoc fallacy (or cause-and-effect fallacy)  
 fallacy of single causation  
 production possibilities curve  
 trade-off  
 consumer goods  
 capital goods  
 relative cost  
 law of increasing relative cost  
 frontier  
 output  
 law of diminishing returns  
 input  
 law of increasing returns to scale

## Activities

### Thinking/Inquiry

1. Are all personal goals achievable at the same time? Use the decision-making matrix in Figure 1.4 (page 10) to explain how complicated, conflicting, and less important goals can be addressed in a systematic manner.
2. "In decision-making situations, the key role of economists should not be to dictate values to others. Economists serve best by focusing attention on the opportunity costs of a prospective decision and the potential benefits of each major alternative." Do you agree or disagree with this statement? Use examples to justify your answer.

3. Explain the difference between analytical and normative economics. In a daily newspaper, find three examples of analytical statements and three examples of normative statements.

### Communication

4. Assume you are writing an email to a friend about your economics class. In your own words, explain to your friend what economics is and why it is considered a social science.
5. If you were the parent of a teenager, how would you explain to him or her what it means to economize and why it is important?
6. Working in small groups, discuss the following statements. Through group consensus, identify the type of reasoning error each statement contains: the fallacy of composition, the post hoc fallacy, or the fallacy of single causation. In order to keep you on your toes, one statement is fallacy free.
  - a) An economic crisis in Japan caused the 1998 decline of the Canadian dollar in international money markets.
  - b) What is good for General Motors is good for the Canadian economy.
  - c) Victoria, British Columbia, has one of the highest death rates in the country, therefore, it must be unhealthy to live there.
  - d) Jasna found the work experience she got through her school's co-operative education program to be of great personal benefit. Co-operative education should be a compulsory requirement for all secondary-school students.
  - e) A multi-car accident on the Trans-Canada Highway was caused by bad weather.
  - f) If every Canadian worker received a 10 per cent pay increase, the nation as a whole would be better off.
  - g) The four components of the scientific method first outlined by Francis Bacon are observation, data collection, explanation, and verification. Although scientists today use many different processes to make their discoveries, they almost always make use of the four steps outlined by Bacon.



- h) Former prime minister Brian Mulroney was responsible for the economic recession of 1990.
- i) Ali's marks improved after she broke up with Evan. He was not a good influence.

### Application

- After graduation, do you plan to continue your education, get a job, or travel? What are the opportunity costs for each alternative?
  - Give three examples of economic decisions you had to make this week. Explain why each was an economic decision. What was the opportunity cost of each decision?
  - Analyze the sales pitch of a televised infomercial to identify the use of suspect economic reasoning and other strategies intended to sell the viewer on the product. Identify specific examples of analytical and normative statements or claims.
10. Examine Figure 1.18.

Production Possibility	Bicycles	Cheese (kg)	Opportunity Cost of Each Bicycle
A	0	170	
B	1	160	
C	2	140	
D	3	110	
E	4	60	
F	5	0	

**Figure 1.18** Production possibilities for country X.

- Calculate the opportunity cost for each additional bicycle being produced.
- Use the data in the table to graph a production possibilities curve.
- Mark a point H on the graph that indicates widespread unemployment in country X.
- Mark a point J that represents a production level that cannot be reached by X's economy. Explain why this point is unattainable

under present conditions. How might this production level be reached in the future?

- Explain why this production possibility curve has a concave (bowed-out) curvature. What economic law is responsible for this curvature?
11. Figure 1.19 outlines some combinations of corn and beef that can be produced annually from a given parcel of farmland.

Production Possibility	Corn (bushels)	Beef (kg)
A	16 000	0
B	8000	900
C	6000	1200
D	4000	1400
E	2000	1450
F	0	1500

**Figure 1.19** Production possibilities for an agricultural enterprise.

- Draw a production possibilities curve for this agricultural enterprise.
- Can this farmland produce 6000 bushels of corn and 1500 kg of beef during the same year? Mark this production level as point H on your graph. Explain what must happen in order for this agricultural enterprise to reach this level of production.
- What is the opportunity cost of expanding beef production from 900 kg to 1200 kg annually?
- What is the opportunity cost of expanding corn production from Level B to Level A annually?
- If a decision is made to produce 5000 bushels of corn, how much beef can be produced on this farm at the same time? Mark this production level as point K on your graph.
- Given this set of production possibilities, should this enterprise specialize (in either corn or beef production) or produce ample quantities of both products? Justify your decision.



# CHAPTER 2

## PRODUCTIVE RESOURCES AND ECONOMIC SYSTEMS

### Make As Much Money As You Can

Welcome to the widget business! Divide the class into six competing companies. Each company of investors will produce identical imaginary products called widgets. Each widget produced will cost your company \$2 in raw materials, labour, and equipment. You will be able to sell your widgets based on the following formula:  $P = \$100 - Q$ . In other words, for each round of production, the market price for widgets will be \$100 minus the total quantity of widgets produced by all companies.

Clearly, the market price of widgets is adversely affected by the total quantity produced. During each of the six production rounds, you will meet with your associate investors to decide how many widgets your company will produce. You are not free to consult with competitors in making your production decisions because this kind of consultation can constitute illegal collusion. At the end of round three, you will be permitted to send one representative to meet with rival companies in order to discuss business conditions and to suggest improvements. No other communication with rivals is allowed. Good luck, and may the best business managers win!

### QUESTIONS

1. Explain the production strategy that your company used. To what degree were the following skills used effectively: understanding the marketplace, anticipating the actions of others, willingness to take risks, leadership and persuasiveness, and diplomacy (the ability to negotiate and compromise).
2. Which management skills seemed to help the successful companies most?
3. What would be the effect—on both consumers and producers—of a government regulation requiring each company to produce 16 widgets each round? Explain the economic reasons that a government would have for making this decision.
4. What would your company's reaction be to government regulation of the widget industry?

### Chapter Goals

**By the end of this chapter, you will be able to**

- recognize tangible and intangible productive resources as a nation's real wealth,
- classify political economies and compare the different decision-making processes used to set and achieve economic goals,
- identify the principal goals of the Canadian economy and examine the links and trade-offs that exist among them.

Round	Quantity Produced (Q)	Market Price (P) ( $P = \$100 - Q$ )	Sales Revenue (R) ( $R = Q \times P$ )	Production Costs (C) ( $C = Q \times \$2$ )	Profit (F) ( $F = R - C$ )
1					
2					
3					
4					
5					
6					
<b>TOTAL PROFIT EARNED</b>					

**Figure 2.1** Widget game worksheet. Reproduce it to track the effectiveness of your management decisions.



## Decisions About Productive Resources

In Chapter 1, we examined the importance of productive resources in determining an economy's production possibilities frontier. In this chapter, we shall look more closely at the concept of productive resources to better understand the basic production questions that every economic system has to answer. We'll also examine the way different types of economic systems attempt to answer these production questions.

By **productive resources**, economists mean anything that can be used to create or manufacture valuable goods or services. These resources are also known as **factors of production**. Originally, economists recognized only three types of productive resources: land, labour, and capital. Over time, the definitions of these three types have been broadened to include other resources.

The resource of **land** includes not only the fertile soil found on the surface of the Earth but also all natural resources found on or below the surface. Resources such as mineral deposits, groundwater, fossil fuels, and forest reserves are extremely useful in providing the **raw materials** needed to produce the goods and services that people want.

The resource of **labour** now includes not just physical labour provided by the workforce but also mental effort and other elements human beings contribute to the production process. In an Ipsos-Reid national survey of business leaders in 2001, 60 per cent of the 300 chief executive officers interviewed identified attracting high-calibre employees as a major priority, while 80 per cent identified retaining employees as a major priority. Economists now recognize the resources of entrepreneurship and knowledge as important factors of production that allow for the more efficient use of land, raw materials, labour, and capital. Economists also recognize the importance of labour resources, whether they constitute a paid service (such as the work carried out on an automobile assembly line) or a volunteer service (such as the homemaking work done by a stay-at-home parent).

**Entrepreneurship** refers to the ability to organize economic activity, assume risks, and achieve effective results. This is the contribution that an owner, a manager, or an innovator makes to the production process. The entrepreneur organizes and directs the other factors of production and seeks to develop new products, production processes, and marketing strategies. For example, the accidental development of a low-grade adhesive, the result of a failed experiment to create an inexpensive high-grade adhesive, led to the creation of Post-it® Notes by the 3M Corporation. What seemed, at first glance, to be a useless material was transformed by 3M into a marketable product that grew into one of the greatest success stories in the company's history. Although less tangible than physical labour, entrepreneurship and knowledge are today recognized as important factors of production.

The resource of **capital** refers to the goods that aid in the production of other goods and services, such as factories, warehouses, machin-



**Figure 2.2** Should labour that does not directly earn a wage be considered a valuable productive resource? Explain.



ery, and equipment. Since we also use the term *capital* to mean the money available in an enterprise to acquire these necessary goods, we must be more precise in our terminology. For this reason, the facilities, machinery, and equipment are often referred to as **real capital**, while the funds to acquire them are called **money capital**. Real capital is extremely important to a growing economy. An economy's investment in capital goods today will allow it to expand its total production and improve its **productivity** and efficiency in the future. The large amounts of tax dollars spent annually on public education in Canada represent a sizable investment in what is sometimes described as "human capital."

### Tangible and Intangible Resources

Figure 2.3 summarizes and classifies productive resources by identifying them as either tangible or intangible resources. **Tangible resources** have physical properties that can be seen and touched and are therefore easily quantified. Examples include a hundred tonnes of nickel, a thousand people in the labour force, or six punch presses on an industrial assembly line.

**Intangible resources** lack the physical properties that make them easy to quantify. Although economists cannot see or weigh something like entrepreneurship, they know it is important to the economy because of the positive effect that certain risk-taking and organizational activities have on production levels and on a company's ability to operate efficiently. Economists have concluded that, although it is difficult to quantify, entrepreneurship directly affects national productivity and is therefore an important intangible factor of production. Knowledge is becoming an increasingly important resource as well, given Canada's transformation from a manufacturing economy to an information economy. Information that is accurate and timely increases business productivity.

Economists also recognize a third, and even more intangible, factor as important in the production of goods and services—an economy's

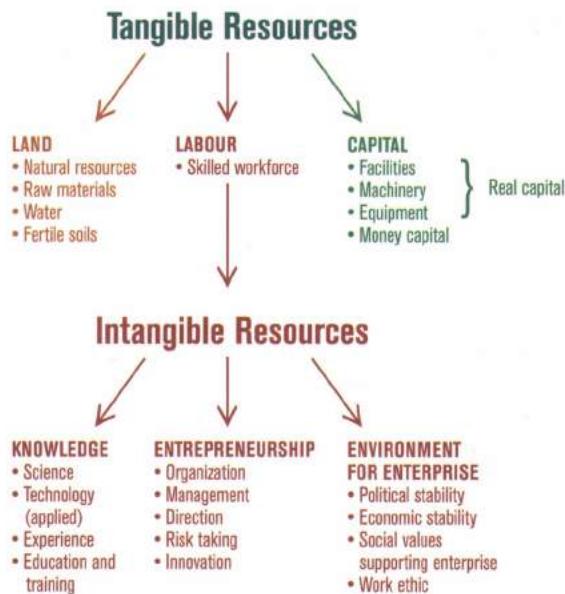


Figure 2.3 A summary of productive resources.

**environment for enterprise.** This involves examining a country's social and cultural values and its political and economic institutions to see if they are conducive to doing business. For example, a stable government gives people and firms the security they need to make sound planning and production decisions. It also bolsters both investor and consumer confidence, thereby creating a climate favourable to increased economic activity. As Figure 2.3 shows, most intangible resources involve productive human contributions—contributions that go beyond the physical or tangible form of labour.

In the final analysis, tangible and intangible resources work together to form the real source of a nation's wealth and prosperity. The nation's treasury can always print more money, but without goods and services to buy and sell, money means very little. An economy's capacity to produce goods and services in response to the wants and needs of its citizens—in other words, the sum total of its tangible and intangible productive resources—is a clear indicator of economic wealth and the cornerstone of long-term growth and prosperity.





## Valuing Productive Resources

*Not everything that counts can be counted and not everything that can be counted counts.*

—Albert Einstein

Figure 2.4 follows one particular wheat harvest through four production stages. *Market value* represents the dollar value that a product will fetch in the marketplace. **Value added** represents the increase in market value resulting from the additional processing or refinement of the product. Operating expenses represent all costs of processing incurred by a contributor. For example, the operating expenses of the farmer include land rental or property taxes, equipment rental or purchase, the cost of hired help, and the cost of technical expertise to improve soil quality, seed variety, and crop harvest.

Study the data to identify the relationships that exist between market value, value added, and profit.

## QUESTIONS

1. Apply Einstein's principle by providing two examples of things you value highly even though their economic benefit to you cannot be measured directly.
2. How can the value of the economic contribution made at each production stage be measured?
3. Why is bread worth more to consumers on the supermarket shelf than on a baker's rack? What is the price of a loaf of bread on the store shelf?
4. Explain the relationship between value added and profit.

Stage	Contributor	Product	Market Value of Product	Value Added by Contributor	Operating Expenses	Profit
1	farmer	tonnes of wheat	\$10 000	\$10 000	\$8000	\$2000
2	miller	bags of flour	\$14 000	\$4000	\$2000	\$2000
3	baker	loaves of bread (20 000)	\$20 000	\$6000	\$3000	\$3000
4	retailer	packaged bread on store shelf (20 000 bags)	\$28 000	\$8000	\$3500	\$4500

**Figure 2.4** Determining the economic value of different contributors to the production process.

## Check Your

### Understanding

1. Outline the difference between tangible and intangible productive resources, and explain why they are the real source of a nation's wealth.
2. Explain the difference between real capital and money capital.
3. Explain why political stability is an important productive resource for any economy.
4. Although they are difficult to measure directly, how do economists know that entrepreneurship and technology are valuable productive resources?

## Economic Systems and Production Questions

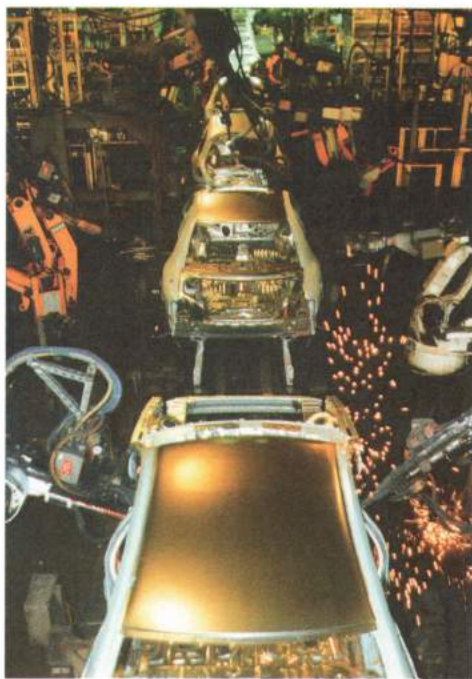
Throughout history, economic systems have been established to answer the three fundamental questions of production outlined in Figure 2.6. These questions are:

*What to produce?*

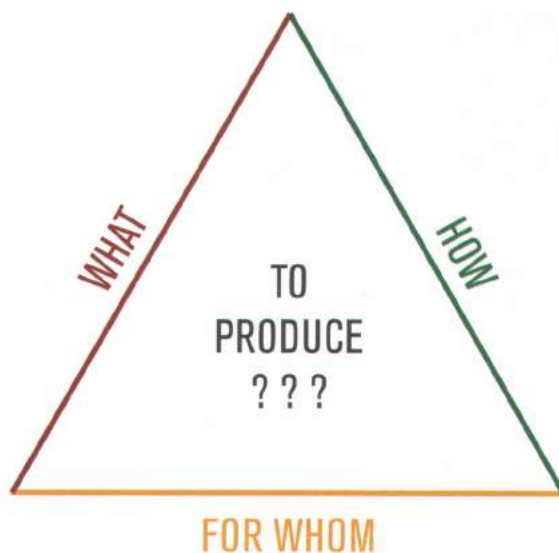
- What goods and services should our society produce, and in what quantities?
- What is worth producing and what is not?
- What are we giving up in order to produce these goods and services?

*How to produce?*

- By whom, with what resources, and in what way should goods be produced?
- How can our limited resources be used most efficiently?
- Should products be made in small, privately owned factories or in large, state-owned corporations?
- How much automation should be used? How much manual labour?



**Figure 2.5** How has this manufacturer chosen to deal with precision on a tedious assembly line?



**Figure 2.6** The triangle of basic production questions.

*For whom to produce?*

- How will total output be shared among the different members of society?
- Who will get which goods and services? Will products be shared equally?
- On what basis should decisions concerning distribution be made?

Although every economy attempts to answer these questions effectively, the way each question is answered will help identify the type of economic system that operates in a specific society or state. Economists define an **economic system** as the set of laws, institutions, and common practices that help a nation determine how to use its scarce resources to satisfy as many of its people's needs and wants as possible. Over time, three distinctly different ways of answering the basic production questions have emerged; that is, the questions can be answered

- by tradition,
- by command, and
- by market forces.

The following sections examine each of these economic systems in its pure, or theoretical, form and explore how each appears in the real world today. Then you'll have the opportunity to compare these three economic systems by reviewing Figure 2.7 (page 33).



## The Traditional Economy

In a pure **traditional economy**, the practices of the past determine the answers to the three production questions. The goods and services produced today are the same as those produced in the past, and the manner of production has not changed. Traditional practices and skills are passed on from generation to generation, usually within the same family. The quantity of total output does not vary greatly from year to year. This type of economy is usually found in a relatively static subsistence society in which people engage in little long-term planning and focus primarily on surviving the challenges of each day.

In a traditional economy, each family's economic strategy is to be as self-sufficient as possible; therefore, the question of *what* to produce is determined by the needs of the family, whose members produce goods *for their own use*. Any surplus goods are usually traded to other families for essential items. This trading of goods and services without the use of a monetary system is known as **barter**. In terms of *how* these goods are produced, parents teach their children the necessary skills so that they will be able to assume their parents' roles and responsibilities. As a result, throughout their entire lives, people remain part of the same social class into which they were born.

Centuries ago, this was the most common economic system throughout most of the world. People lived in small rural communities. They had modest needs, most of which could be met by using the natural resources provided by the local environment. They grew much of their own food, built their own homes, and made their own clothing and tools. Over time, population growth, as well as industrial, scientific, and technological advances, have transformed most traditional economies. Those that remain today are found in relatively isolated environments where traditional practices have not been affected by outside contacts. Today, traditional economies (with varying degrees of modification) are found within the societies of

- the Bedouin of the Sahara Desert,
- the Bushmen of the Kalahari Desert,
- the Mongols of the Gobi Desert,

- the Lapps of the Scandinavian tundra,
- the Masai of the African savannah,
- the Waura and Yanomami of the Amazon rain forest,
- the Mbuti of the African rain forest,
- the Senoi and Negrito peoples of Malayasia, and
- other indigenous peoples.

With the arrival of modern communications technology, indigenous peoples have been exposed to more ideas and information, which means their economies are no longer totally isolated. As a result, the pure traditional economy is becoming more difficult to find. For example, the traditional societies of the Inuit and other First Nations of Canada and of the Aboriginal peoples of the Australian outback have been greatly influenced by the technological advances and practices of the people and economic systems with which they have come in contact.

## The Command Economy

In a pure **command economy**, all production decisions are made by a small group of political leaders who have the power to enforce their decisions throughout the entire economy. In other words, the pure command economy is centrally planned. The questions of *what* to produce, *how* to produce, and *for whom* to produce are all answered by the central authority based on what is in the best interest of the state. Productive resources are owned by the state and efficiently allocated by the central authority on behalf of the state. The individual person has the obligation of serving the state. In turn, state authorities draw up plans to meet individual needs such as food, housing, medicine, and education.

The central authority rewards people who contribute to the betterment of the state by giving them a share of goods and services and, sometimes, special privileges (such as comfortable living quarters and trips abroad). People who do not contribute are penalized for their lack of productivity, and their special privileges are either denied or taken away. In this way, command economies rely on a system of reward and punishment to promote increased



productivity. The central planning authority determines the products and quantities to be produced, who will work where, what machinery will be available to assist production, and how much each worker will be paid. With many of their needs already covered by the state's central plan, workers usually spend their modest wages on consumer goods, such as food, clothing, and shelter. The state plan emphasizes the production of capital goods over consumer goods because capital goods increase the economy's ability to produce more in the future. Consequently, consumer goods are generally in short supply.

Very few pure command economies exist today. Perhaps the two best examples are found in Cuba and China. Until recently, the former Soviet Union and the countries of Eastern Europe operated centrally planned economies under communist rule. Prior to 1991 (the year the Soviet Union was divided into separate countries), one-third of the world's people lived under some version of a command economy.

## The Market Economy

In a pure **market economy**, economic activity is co-ordinated by many individuals who make independent decisions in a free marketplace. Since people are acting for themselves, often out of self-interest, this system is also called *free enterprise*; since resources are privately owned, the system is sometimes called **private enterprise**.

The actions of individual buyers and sellers in the marketplace answer the three production questions. *What* will be produced is ultimately determined by consumer demand. Businesses will clear out their unwanted goods at discounted prices and then will no longer produce them. Instead, they will produce "in-demand" goods and services because these will fetch the highest prices and probably generate the highest profits.

The quest for profit also plays a key role in determining *how* goods and services will be produced. Consumers prefer low prices. Producers can maximize their profits by using the least costly and most efficient methods of

production. Inefficient producers will not be able to compete in the long run and will be forced to improve their productivity or go out of business.

Distribution in a market economy is determined by the income people receive for their contributions (mostly labour) to the production process. Income levels, therefore, answer the question of *for whom* the economy's goods and services are produced. Since they can afford to pay for it, people with high incomes are entitled to more of the national output than are those with low incomes.

The basic elements of a market economy are private property, freedom of enterprise, profit maximization, and competition. The government's role is only to provide law and order and to assist economic development. Very few pure market economies exist today. Perhaps the closest examples are Hong Kong and the United States. When Hong Kong was under British rule, it was recognized as the most liberal of market economies. In the US, the federal government has expanded its role in the nation's economic life, especially since the Great Depression.

## Canada: A Mixed Market Economy

By now, it should be obvious that very few "pure" economic systems exist today. There are two important reasons for this. First, no single type of economic system has achieved perfection. To date, not one of the three types has managed to meet all the needs and wants of its members. In other words, no system holds a monopoly on effectiveness and efficiency. Second, given the free flow of ideas and knowledge in the Information Age, political leaders and economic decision makers will attempt to integrate the best elements of each type of economy into their own system.

The Canadian economy is a classic example of this cross-pollination of economic models. Although, at present, the Canadian economy contains elements of traditional and command economies, it most clearly shows the characteristics of a modified market economy. For this reason, economists classify the Canadian econ-



	Traditional Economy	Command Economy	Market Economy
<b>Economic decision making</b>			
What to produce?	<ul style="list-style-type: none"> <li>• what is needed now by a family or group</li> </ul>	<ul style="list-style-type: none"> <li>• determined by central authority</li> </ul>	<ul style="list-style-type: none"> <li>• what will sell for the most favourable price</li> </ul>
How?	<ul style="list-style-type: none"> <li>• according to production methods taught by parents/elders</li> </ul>	<ul style="list-style-type: none"> <li>• determined by central authority in the state's best interests</li> </ul>	<ul style="list-style-type: none"> <li>• as efficiently as possible to keep production costs low</li> </ul>
For whom?	<ul style="list-style-type: none"> <li>• for use by immediate family; surpluses are traded</li> </ul>	<ul style="list-style-type: none"> <li>• determined by central authority</li> </ul>	<ul style="list-style-type: none"> <li>• for consumers willing and able to pay a favourable price</li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• minimal change</li> <li>• decisions made as a family unit</li> <li>• little damage to environment</li> <li>• consumption and waste minimized</li> <li>• focus on self-reliance and simplicity</li> </ul>	<ul style="list-style-type: none"> <li>• planning promotes growth (capital goods production favoured over consumer goods)</li> <li>• planning helps reduce waste</li> <li>• equitable distribution of income and wealth</li> <li>• planning provides stability (business cycles eliminated)</li> <li>• individuals serve the state; the state provides for their needs</li> </ul>	<ul style="list-style-type: none"> <li>• maximum freedom of individual choice</li> <li>• variety of goods and services available to consumers</li> <li>• competition helps keep quality high and prices low</li> <li>• profit motive provides incentive to be efficient</li> <li>• flexibility to revise decisions as market conditions change</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• little opportunity for social improvement</li> <li>• no monetary system (goods are exchanged)</li> <li>• little long-term planning (most decisions day-to-day)</li> <li>• limited quality, quantity, and variety of goods</li> <li>• individualism is discouraged</li> </ul>	<ul style="list-style-type: none"> <li>• bureaucratic and inflexible</li> <li>• limits individual choice, incentive, and initiative</li> <li>• forced to meet production quotas, managers will favour quantity over quality</li> <li>• limited availability of consumer goods</li> <li>• little incentive to innovate</li> </ul>	<ul style="list-style-type: none"> <li>• manipulation of consumer wants by advertising</li> <li>• business cycles of growth and slow-down</li> <li>• income and wealth unevenly distributed</li> <li>• large producers can influence price</li> <li>• over-consumption can cause resources to run out</li> </ul>

Figure 2.7 A comparison of economic systems.

omy, like many other complex societies today, as a **mixed economy**. Our country's economy includes both private enterprise and state-owned enterprise. For example, in the television industry, the Canadian Broadcasting Corporation (CBC) is state-owned while the Canadian Television Network (CTV) is privately owned. Although the non-profit, public service mandate of the CBC is somewhat different from that of the commercially motivated CTV, at times these two corporations are in direct competition with each other. A good example of this competition is the bidding wars in which the two networks engage for broadcast rights to the Olympic Games or other major sporting events.

The Canadian system tries to integrate the best features of all three economic types. For instance, in the matter of land ownership, Canada allows for state-owned or **crown land**, which is a feature of command economies. But it also permits private ownership of land, which is a feature of market economies, and has recognized many reserve lands for Aboriginal peoples.

Although there is a great amount of free enterprise in Canada's economy, there are also many government regulations that businesses have to heed. In addition, over the years, the Canadian government has established a "social safety net" for the welfare of its most needy citizens. These social programs, which might be ignored in a pure market economy, include guaranteed income supplements, government-funded medical care, employment insurance for workers, and social security for senior citizens.

Partly because of this elaborate safety net, the United Nations Human Development Report has several times identified Canada as the best country in the world in which to live.

As a final example of the mixed nature of the Canadian economy, we need look no further than the growing practice of bartering one service for another. This return to the traditional exchange of services without the exchange of money is said to be growing rapidly. For example, a cabinetmaker may strike a deal with a bricklayer to exchange services. The bricklayer agrees to repair the cabinetmaker's chimney if, in exchange, the cabinetmaker builds a set of cupboards for the bricklayer. Since these services are being carried on at the personal level and in a reciprocal manner, the quality of work is virtually guaranteed. Furthermore, since no written contract is required and no money actually changes hands, this transaction might not be reported when both parties file their tax returns at the end of the year, providing an additional benefit to both parties. On the other hand, government revenues and, consequently, spending programs are adversely affected when individuals do not pay their legal share of taxes. This is one illustration of what has come to be known as the *underground economy*, or **hidden economy**. Whether the motive may be to avoid taxes (a crime under the Income Tax Act) or to ensure a more personal level of service, the result has been the reintroduction of an element of traditional economic systems to the mainstream of Canadian economic activity.

## Check Your

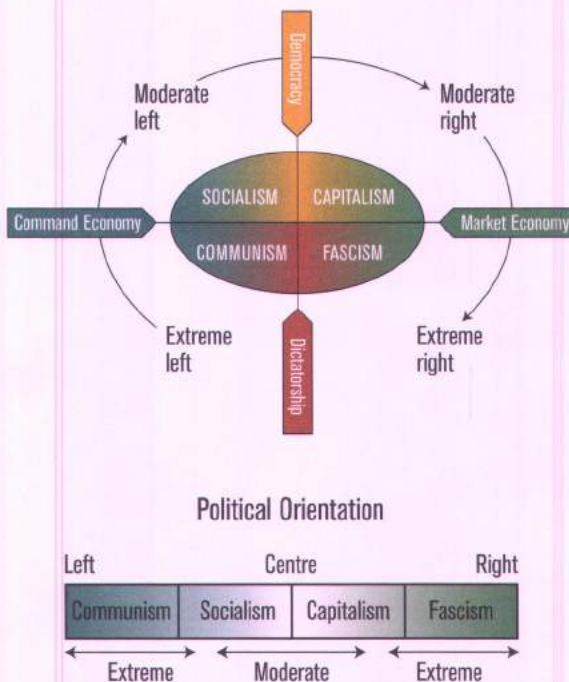
### Understanding

1. What is an economic system, and what are the three fundamental questions of production that all economic systems must answer?
2. Prepare a summary note to explain the main features of a traditional economy.
3. Explain the importance of central planning in a command economy.
4. Outline the basic elements of a market economy.
5. Explain why the Canadian economy can be accurately identified as a mixed market economy.



## Understanding Political Economies

Economic systems rarely exist today outside a government framework, which means that political and economic decision making are closely connected. No study of economic systems would be complete without an investigation of the major political models outlined in Figure 2.8. These models can be broadly classified as either democracies or dictatorships. A **democracy** is a political system characterized by a freely elected government that represents, for a set term of office, the majority of citizens. It is open to many parties or political views. A **dictatorship** is a political system in which a single person or party exercises absolute authority over an entire nation. There are no free elections to allow the people to change their leadership.



**Figure 2.8** An overview of politico-economic models. At the bottom of this chart is a representation of the political spectrum—the range of political models that proceed from communism on the extreme left to fascism on the extreme right. Fascism and communism are considered “extreme” models because of their tendency to use force to establish authority.

## Communism

**Communism** is a political model based on the theories of Karl Marx, Friedrich Engels, and Vladimir Ilyich Lenin. It calls for government or community ownership of all means of production and wealth. Under communism, private property and free enterprise are abolished. Ideally, individuals produce according to their ability and consume according to their need. The communist ideology calls for a strong central government with complete authority to plan for maximum economic growth. To safeguard the common good, opposing political parties and special-interest groups, such as labour unions, are denied any part in the decision-making process. Since, historically, communists have been willing to use force to achieve their goals, they are seen as occupying the extreme left wing of the political spectrum.

Under communist rule, the Soviet Union developed from a war-shattered society in the early stages of industrialization in 1917 into a military superpower 50 years later. By 1991, however, the Communist Party had lost its absolute power, the Soviet economy had suffered a series of major setbacks, and the Soviet Union itself was dismantled. Today, the Russian economy continues the painful transition to a market economy. Communist systems are still in place in China, Cuba, North Korea, and Vietnam.

## Socialism

**Socialism**, too, is based on public ownership or control of the principal means of production. However, unlike communists, socialists favour democratic and peaceful methods to achieve their goals. Once they’ve been elected, they do not ban opposition parties. For this reason, they are often called social democrats and are considered to occupy the moderate left position on the political spectrum. Socialists try to allow for fair and equal distribution of available goods and services through a democratic decision-making process. They claim that free enterprise is inefficient, wasteful, and prone to conflicts between workers and capitalists.



Under socialism, co-operation and worker solidarity theoretically replace the capitalistic ideals of self-interest and competition. Experiments in Britain and France in the 1970s and 1980s produced a measurable decline in national productivity. Some critics use such results to question whether human self-interest makes socialism ultimately unworkable.

The politico-economic systems in Scandinavian countries (Norway, Sweden, Denmark, and Finland) are often categorized as “free-enterprise socialism,” the most moderate of socialist philosophies. In these countries, the focus is no longer on increasing state ownership (the **nationalization** of enterprise) but rather on private enterprise balanced by socialist government policies that address collective needs. National production levels and living standards in countries like Norway and Sweden continue to grow under free-enterprise socialism. Today, living standards in these countries are among the highest in the world.

## Capitalism

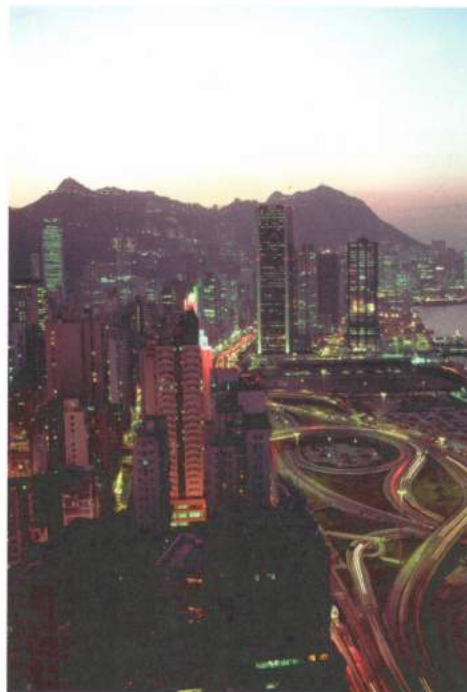
When Karl Marx called the free-enterprise system **capitalism**, he meant to criticize its tendency to stress the accumulation of capital resources as a means to greater individual wealth and power. Capitalism requires a democratically elected government to maintain public order and to keep competition free and fair. The private ownership of industry operating under free-market conditions is one of the essentials of capitalism. Producers are motivated to produce by the desire for profit. A business can maximize profits by making products that consumers are willing and able to buy. The opportunity for profit and the threat of loss, therefore, play the same role in capitalism that a dictator’s edicts play in a command economy. Adam Smith (1723–1790), often known as the father of capitalism, used the term *natural order* to describe this politico-economic system because he thought it was based on natural laws.

As you can see in Figure 2.8, capitalism occupies the moderate right position on the political spectrum. Capitalist systems operate today in such areas as Hong Kong, Singapore,

the United States, and New Zealand. Since assuming control in 1997, the communist government of China has allowed Hong Kong’s healthy free-market system to continue to operate. Countries like Canada, Germany, France, Great Britain, and Italy have primarily capitalist systems blended with some socialist characteristics, such as welfare programs and government-owned enterprises. Economists often categorize these mixed systems as “welfare capitalism.”

## Fascism

**Fascism**, occupying the extreme right position on the political spectrum, combines a free-market economy with a non-democratic, or authoritarian, form of government. Fascist governments use force as a means of political and social control. As with the politics of the extreme left, fascist governments do not usually



**Figure 2.9** Hong Kong continues to be one of the busiest commercial centres in the world today. How might business investment be affected by the transition from British capitalist to Chinese communist rule?



tolerate political opposition. Citizens are free to own property and businesses as long as they comply with all government dictates. There are clear restrictions on individual freedom. Military dictatorships that allow private ownership

and enterprise can be categorized as fascist systems. Italy (1922–1945), Nazi Germany (1933–1945), Spain (1939–1975), and Argentina (1946–1983) are four historical examples of this ideology.

## Check Your

### Understanding

1. What two factors are used to classify political economies? Explain how they help to differentiate political economies.
2. Explain the difference between an extreme and a moderate political orientation. Why has fascism historically been a bitter rival of communism?
3. a) What is the fundamental difference between free-enterprise socialism and communism?  
b) Where has socialism been most successfully practised to date?
4. Why is the Canadian system often referred to as "welfare capitalism"?

## Setting Economic Goals: A Canadian Model

Every politico-economic system attempts to establish economic goals as targets in order to focus the use of productive resources. Some of the goals are *complementary*; that is, reaching one goal makes another goal easier to achieve. For example, in order to reach employment targets, interest rates on business loans are lowered to promote new job creation. In turn, new job creation will automatically help improve income levels in an economy and encourage consumer spending.

Unfortunately, some economic goals are *conflicting*, so that reaching one goal actually makes another goal more difficult to achieve. Strategies to keep prices stable often have an adverse effect on employment rates and national production. Governments can promote price stability by raising interest rates in order to control the amount of money in circulation; as it becomes more expensive to borrow money for investment, businesses hire fewer workers and production levels either remain constant or begin to decline. We can identify increases in employment and production as the opportunity cost of stable prices.

Government policy makers have to recognize this trade-off and decide whether their priority is to achieve price stability or to put more

people to work. They can't count on being able to have both. The setting of economic goals, therefore, is a matter of normative, or policy, economics. In other words, governments must make value judgements before they can set priorities for conflicting goals. On the whole, the economic goals that nations strive for are often similar. However, the way each nation prioritizes its conflicting goals will determine how it distributes its productive resources.

Since the 1960s, a number of goals have emerged as priorities in the Canadian economy. The following sections list and explain each of them. The order of their appearance in the text does not indicate their order of priority. Each successive government has re-examined these goals and set its own priorities. In later chapters, we will examine these goals in greater detail.

### Political Stability

A stable government can help long-term planning and investment to flourish. Consistency in policy making promotes investor confidence and provides a climate conducive to economic growth. Each time we approach a sovereignty referendum in Quebec, confidence (both foreign and domestic) is shaken, and the Canadian





### Differentiating between Production and Productivity

In order to understand what is meant by productivity, or “maximizing the output from the resources used,” let’s look at two competing manufacturers of quality shoes: Acme FootWare Company and ComfortMax Shoe Company. Figure 2.10 outlines weekly production figures for both firms.

As we can see in Figure 2.10, the total weekly production of shoes is identical for both firms; therefore, production levels are equal. Now let’s

consider the production efficiency of each firm. ComfortMax workers are more efficient because they are able to produce 2600 pairs of shoes by employing a workforce of 36 shoemakers. On average, each worker produces 72 pairs of shoes per week. By comparison, each shoemaker at Acme Company produces an average of 52 pairs of shoes each week. If we were to calculate the productivity of capital goods (such as sewing machines), the position of the two competitors would be reversed. Acme Company is able to get more production out of each sewing machine.

Weekly Production Data (based on five 8-h work days)	Acme FootWare Co.	ComfortMax Shoe Co.
Number of shoemakers employed	50	36
Number of sewing machines used	14	20
Number of leather-stamping machines used	7	10
Number of pairs of shoes manufactured	2600	2600

**Figure 2.10** Weekly production figures for competing shoe manufacturers.

### QUESTIONS

- In your own words, explain the difference between production and productivity. Why would shoemakers at ComfortMax Shoe be more productive than shoemakers at Acme FootWare?
- Calculate the average productivity of stamping machines for both firms.
- These two competitors use the same productive resources (shoemakers and machines), but in different proportions. Calculate the ratio of workers to sewing machines in each firm in order to identify the firm that uses a more *labour-intensive* production process.
- Which firm uses the most *capital-intensive* production process? Explain your reasoning.
- Suggest what ComfortMax Shoe might do to use its capital equipment more efficiently.
- Often, productivity has negative connotations for labour. In order to increase productivity, workers may be forced to work longer hours or for lower wages. Some factories in developing countries are more productive because they are “sweatshops”—their employees must work long hours for little pay. How might labour productivity be increased by Acme FootWare? Suggest three changes that the firm might make to improve worker efficiency without resorting to sweatshop tactics.



economy suffers. Similarly, a political crisis in the White House usually upsets US stock markets. The economic rule of thumb seems to be that political uncertainty has an adverse effect on a country's economy.

### Reduced Public Debt

From 1970 to 1996, government spending in Canada increased at a faster rate than the revenues being collected through taxes. This meant that Canada's **public debt** (and the interest payments to service it) grew larger year after year. Just as individuals cannot continue to incur large personal debt without suffering for it economically, governments cannot continue to add to the public debt without adversely affecting the economy. Interest rates inevitably climb higher, as do prices for consumer goods. As well, there is the moral issue involved in running up a debt that future generations of Canadians will someday be forced to pay. Today, Canadians have begun to demand more balanced budgets from their elected governments.

### Economic Growth

**Economic growth** is defined as an increase in the economy's total production of goods and services. Theoretically, it represents an outward shift in the economy's production possibilities frontier. This growth can result from the discovery of new natural resources, an increase in the skilled labour force, technological innovations, and more efficient production processes. As economic production expands, Canadians will have more goods and services at their disposal, thereby increasing the average living standard. As a result of the periods of substantial growth that the Canadian economy has enjoyed since the Second World War, Canadian workers can now command three times as many goods and services as they could in 1945. In addition, as the economy expands, the public debt (if held in check) becomes less significant and easier to manage.

### Increased Productivity and Efficiency

Maximizing productivity means that scarce productive resources are put to efficient or

wise use in order to get as much as possible out of them. Economic efficiency is often the result of healthy competition. As Canadian firms struggle to be competitive in both local and global markets, they must make their production processes more efficient. The companies with the most efficient practices will maximize profits, prevail in the marketplace, and set new standards for others. Increased productivity will allow these firms to get more out of existing resources.

### Equitable Distribution of Income

The equitable, or fair, distribution of income may be the most value-laden of all economic goals; it is certainly the most controversial. When it comes to dividing up total national output, there can be as many interpretations of what makes for a fair division of wealth as there are people. Is it fair that the annual income of a corporate executive in North America is many times higher than that of the average salaried worker in the same company? How much income should be taken away in taxes from someone who earns \$10 million a year and redistributed among families whose gross annual income is less than \$10 000?

In Canada, the issue of income equity is further complicated by regional differences. As Figure 2.11 (page 40) indicates, average employment incomes for residents of Ontario are statistically higher than for people who live in the Atlantic provinces, a situation that has existed for years. Through **transfer payments** (using revenues from one province to make additional social program payments in another), the federal government attempts to redistribute national wealth.

Socialists advocate a more equal distribution of wealth. Others argue that income equalization will only reward inefficiency and remove the personal incentive to work harder and take risks. As the debate continues, more and more Canadians are forced to use food banks, and this in a country that, between 1992 and 2000, topped the United Nations Human Development Index as the best country in the world in which to live. Canada is not alone in this regard, however; no country, not even the most affluent, has completely solved the problem of poverty.



Province	Unemployment Rate, 2000 (%)	Average Weekly Earnings, 2000
Alberta	5.0	\$665.05
New Brunswick	10.0	\$584.59
Newfoundland	16.7	\$595.07
Nova Scotia	9.1	\$559.94
Ontario	5.7	\$697.92
Quebec	8.4	\$612.91
Canada	6.8	\$653.55

Source: Statistics Canada, *Canadian Economic Observer*, Catalogue 11-210-XPB, Vol. 15, 2001.

**Figure 2.11** Average weekly earnings and unemployment rates for selected provinces, 2000.

### Price Stability

Stable prices generally indicate that an economy is healthy. Fluctuating prices complicate planning and discourage investment. Both **inflation**, a general rise in prices, and **deflation**, a general fall in prices, are symptoms of an unhealthy economy. Periods of price inflation erode the dollar's purchasing power and raise the cost of living for Canadians on fixed incomes. Deflation, though rare in Canada, is commonly associated with periods of great economic crisis, such as the Great Depression of the 1930s. It should come as no surprise, then, that government policy attempts to promote and maintain stable price levels.

### Full Employment

In an attempt to reach their optimal production targets, governments try to promote the full employment of the labour force. Unemployed workers result in total output levels well below the national production possibilities curve. An unemployed labour force also represents a waste of human potential and can cause economic hardships for unemployed workers and their families. Sustained periods of high unemployment usually indicate a country in poor economic health. During the Great Depression, Canadian unemployment rates

approached 20 per cent, and during economic downturns in the 1980s and 1990s, rates were more than 10 per cent.

"Full employment" is usually defined as between 6 and 7 per cent of the labour force being out of work. As machines continue to replace people on production assembly lines, full employment becomes increasingly difficult to achieve. In the late 1990s, unemployment rates in Canada remained around 8 per cent, despite sustained economic growth.

### Viable Balance of Payments and Stable Currency

In a global economy, the international flow of goods and currency in transactions such as importing, exporting, borrowing, and lending has become increasingly more important. The annual dollar value of trade per person is higher in Canada than in any other country in the world. The **balance of payments accounts** summarize all currency transactions between Canadian and foreign economies. If Canadians import significantly more than we export, there will be a negative effect on employment rates in Canada as well as the foreign exchange value of the Canadian dollar. It is important, therefore, that imports and exports roughly balance one another. Similarly, money flows in and out of the country need to





*The economic goal of equitable distribution of income conflicts with the goal of reduced public debt. Recent governments have reduced spending on social assistance programs to help balance their operating deficits. Those most affected by these policy decisions are the Canadians least able to care for themselves economically. The rise in food bank*

*use, described in the following article, is one indicator that the gap between wealthy and poor Canadians is widening. The market system does not appear capable of balancing disparities in income without government intervention.*

### Hunger a Fear for 3 Million Canadians

About 3 million Canadians—one in every ten—live in a household where getting enough food is a constant worry. Almost 2.5 million of them had to compromise what or how much they ate in 1998–99 because of a lack of money, Statistics Canada said in its first report on the problem yesterday. Another 500 000 worried they would not have enough to eat because they were short of cash.

Together, these families have “limited or uncertain access to enough food for a healthy active life,” the National Population Health Survey of almost 50 000 Canadians found. About a fifth of them resorted to food banks, soup kitchens or other charitable agencies for emergency supplies. But the survey could be significantly underestimating the number going hungry in Canada because so many poor people don’t have phones and would not have been included in the survey, said Sue Cox, executive director of the Daily Bread Food Bank in Toronto. . . .

Close to 1 million Canadians use a food bank at least once a month, according to the food bank, and in some areas they aren’t allowed to use it that often. There are many others in need who just won’t go to a food bank, Cox said. “For a lot of people, the point when they would go to a food bank would be after going days without food,” she said. “It’s an act of desperation.”

Yesterday morning, Laura, 44, and her 20-year-old daughter Lisa spread their spare change on the kitchen table to see if there was enough to buy bread and milk for the family, which also includes two boys: Matt, 13, and Andrew, 15. They ended up driving in a friend’s car to . . . the Daily Bread

Food Bank. Since January, it’s been a monthly trip. “You don’t want to be here but what else can you do?” Laura asked. “It’s non-stop; it just keeps getting worse and worse.”

Laura—who is diabetic and depressed—was evicted from her \$900 a month apartment after 21 years in December. She found a sympathetic landlord and a townhouse on a nearby street for nearly \$1200 plus hydro. She can pay the rent through her \$700 social assistance cheque and \$500 in child support. But she’s been neglecting her hydro, and that may be turned off today.

A \$300 child tax benefit goes to pay for everything else, while Lisa, who had kidney cancer as a toddler and currently suffers from kidney infections, has moved back home. The foursome is somehow getting by, procuring food from Laura’s mother and the food bank. This week it’s pasta—no meat—for Laura and her daughter. The boys will get, as usual, the 12 burgers for \$3.40 Laura bought at Food Basics . . . .

A total of 420 000 children lived in so-called “food insecure” households, making up the largest proportion of any age group. . . . The fact that 40 per cent of food bank users are kids can lead to “significant health problems,” Cox said. . . . Hunger should not be a problem in Canada . . . but the number of food banks continues to grow “and their substantial presence suggests that food insecurity not only exists, but persists.”

More than a third of people living in households earning less than \$20 000 a year reported some sort of food insecurity in 1998–99 and 30 per cent said they had to compromise their diet. But getting enough food was a problem even for middle-



income households, where 14 per cent of residents had problems getting a decent diet, the report said.

That could be because a layoff or job loss at some point in the year left the family vulnerable even though their income for the whole year was higher, it said. That shows “how vulnerable Canadians are in a crisis,” said Alan Mirabelli, executive director of the Vanier Institute of the Family. “If you look at how much debt has gone up and savings have gone down, there’s probably no margin to draw on in a crisis.”

More than half of welfare families didn’t have enough food to eat, as did many families relying

on other government programs, the report says. A third of all families headed by single mothers were food insecure and 28 per cent had to compromise their diet.

The new president of the Canadian Medical Association says the level of poverty in the country is disgraceful. “About 1.5 million Canadian children go to school with their stomachs empty every morning,” Dr. Henry Haddad declared . . . “That’s awful and it’s not acceptable. Physicians have to be concerned with those who are less well off.”

Source: Excerpts from “Hunger a fear for 3 million Canadians” by Elaine Carey, *The Toronto Star*, 16 August 2001. Reprinted with permission—The Toronto Star Syndicate.

### Food Bank Facts

- An estimated 3 million Canadians used food banks in 2000—more than twice the number of people who used the service in 1989.
- Close to 1 million Canadians use a food bank at least once a month.
- Some 40 per cent of those being helped are under 18 years of age.
- About 75 per cent of food bank users receive income from social assistance. Only 10 per cent of those using food banks reported earning money from working.
- Food banks operate in 488 Canadian communities, some serving more than one community through branch sites.
- In 2000, food banks in Quebec and Ontario served the largest number of people, but Newfoundland had the highest rate of food bank use as a percentage of provincial population—5.9 per cent.
- Food banks were never meant to be a permanent mechanism for dealing with poverty and hunger.
- Cuts in social assistance programs by government, as well as unemployment, are main causes of increased food bank use.

Source: Surveys conducted by the Canadian Association of Food Banks

## QUESTIONS

1. The dictionary defines *paradox* as a seemingly absurd though actually well-founded statement. Identify an economic paradox exposed by this news story.
2. Identify the economic goals that are complementary to and those that are conflicting with the goal of reducing hunger and poverty in Canada.
3. Do you agree with the following statements? Present a reasoned economic argument to support your position on each statement.
  - a) “If wealth were more evenly distributed, hunger would be eliminated in Canada.”
  - b) “The existence of food banks takes pressure off government to address poverty and hunger issues through public policy.”
  - c) “It is not the government’s responsibility to help Canadians find well-paying jobs, affordable housing, and affordable daycare.”
4. During an election, one political party promises to limit spending on social assistance programs in order to reduce the public debt. A second party advocates increased spending on social assistance programs to fight poverty and hunger. Which party would you support? Explain the economic reasoning involved in your decision.



be balanced in order to foster a stable Canadian dollar in foreign money markets.

## Economic Freedom

Economic freedom refers to the freedom of choice available to workers, consumers, and investors in the economy. Canadian workers who want to improve their working conditions and income should be free to find and take another job. In a market economy, consumers should be free not only to purchase the goods and services of their choice but also, through their purchasing decisions, to determine what goods and services are actually produced. This is known as the principle of **consumer sovereignty**. In a market economy, people should be free to choose when and how to consume, save, or invest their money. Canadian public policy generally promotes economic freedom.

## Environmental Stewardship

Economic activity must be carried out without significantly harming the natural environment. We have come to realize that the pollution of

our air and water, the depletion of our natural resources, the destruction of the ozone layer that protects us from ultraviolet light, and the gradual warming of the global climate are all additional costs of the decisions we make about economic development. If we wish to be more responsible stewards of our planet and protect it for future generations, we have to adjust the way we carry out our economic activities. Even if this means higher prices for consumers and lower profits for producers, we must find a way to reduce the negative effects we are having on the natural environment.

Potential problems can arise if Canada enacts environmental laws that make its products more expensive and its trading partners do not follow suit. This situation can result in making Canadian goods less competitive in world markets. It also raises a moral issue: If Canada trades with a country that has low environmental standards, does this mean that our government is condoning the other country's policy? Clearly, on the normative side of economics, there is more to consider than just price!

## Check Your

### Understanding

- Explain why each of the following pairs represents either complementary or conflicting goals:
  - full employment and price stability
  - increased productivity and stable currency
  - stable currency and a viable balance of payments
  - economic growth and reduced public debt
  - increased productivity and environmental stewardship
  - reduced public debt and equitable distribution of income
  - political stability and economic freedom
- What effect do regional differences have on the equitable distribution of income in Canada?
- Explain how both inflation and deflation are generally bad news for the Canadian economy.
- Explain why the principle of consumer sovereignty is important in a market economy.



## CHAPTER SUMMARY

- The productive resources (both tangible and intangible) used to manufacture valuable goods and services can be grouped into the general categories of land, labour, and capital.
- All economic systems must address three basic production questions: what to produce, how, and for whom. In traditional economies, families ensure their self-sufficiency by producing their own goods. They trade their surplus goods with other families through barter. In command economies, all productive resources are owned collectively by the state. A central planning authority answers all production questions and allocates resources in the best interests of the state. In market economies, the actions of individual buyers and sellers in the marketplace answer the three production questions. The basic elements are private property, free enterprise, profit maximization, and competition.
- The Canadian economy is often classified as a mixed market economy.
- Political systems range from democratic models, characterized by freely elected governments with set terms of office, to dictatorships, characterized by the exercising of absolute power by a single person or party.
- Democratic systems today range from free-enterprise capitalism as practised in the United States to more socialistic applications found in Scandinavian countries.
- Dictatorships range from fascism, in which the central authority allows private ownership and enterprise, to communism, in which all means of production and wealth are owned collectively by the state. China and the former Soviet Union are two large-scale examples of applied communism. At various times during the 20th century, fascist governments were in power in Italy, Germany, Spain, and Argentina.
- Every political system establishes economic goals. Some goals are complementary because reaching one goal makes another goal easier to achieve. Other goals are conflicting because reaching one goal makes another more difficult to achieve.
- Over the past four decades, the following ten goals have emerged as the economic goals of the Canadian economy: political stability, reduced public debt, economic growth, increased productivity, equitable distribution of income, price stability, full employment, stable currency and balanced foreign trade, economic freedom, and environmental stewardship. Each successive government re-examines these goals and sets its own priorities.



## Key Terms

productive resources  
 factors of production  
 land  
 raw materials  
 labour  
 entrepreneurship  
 capital  
 real capital  
 money capital  
 productivity  
 tangible resources  
 intangible resources  
 environment for enterprise  
 value added  
 economic system  
 traditional economy  
 barter  
 command economy  
 market economy  
 private enterprise  
 mixed economy  
 crown land  
 hidden economy  
 democracy  
 dictatorship  
 communism  
 socialism  
 nationalization  
 capitalism  
 fascism  
 public debt  
 economic growth  
 transfer payments  
 inflation  
 deflation  
 balance of payments accounts  
 consumer sovereignty

## Activities

### Thinking/Inquiry

1. Research one group from the list of indigenous peoples that appears on page 31.
  - a) Make a list of important details in the economic system of your chosen group

to explain how production decisions are made.

- b) Explain what role the natural environment plays in the economic activities of this group.
  - c) List the advantages and disadvantages of the traditional economy used by this group. Maintain objectivity and avoid cultural judgements in your considerations. Make sure to spend as much time reflecting on the advantages as you do on the disadvantages.
  - d) As a class, discuss these advantages and disadvantages, and extend your list based on the discussion.
2. Survey working Canadians to identify specific examples of “hidden,” or unreported, economic activity in Canada today. Explain why each of these activities developed.
  3. Compare and assess the ability of capitalism, socialism, and communism to satisfy needs and achieve economic goals.
  4. Research the problems Russia has encountered in the transition from a command economy to a market economy, and prepare a brief report.
  5. Using information obtained through an Internet search, prepare a summary of two conflicting viewpoints (one positive and one negative) regarding the effectiveness of democratic socialism as practised in Sweden today. Assess the merits of the two viewpoints. If you wish, select a different Scandinavian country as your case study.

## Communication

6. Create a comparison chart to show how different types of political economies make basic production decisions.
7. Complete a summary chart titled “Canada’s Mixed Economy” to explain why Canada is considered to be a mixed economy. Use these headings: Market Characteristics, Command Characteristics, Traditional Characteristics.
8. Use the concept of the production possibilities frontier to explain why central planning in command economies traditionally favours the production of capital goods over consumer goods. Draw a graph to illustrate your answer.



## Application

9. In a book published in 1958, the economist Kenneth E. Boulding said the four principal objectives of economic policy are:

- stability,
- growth,
- justice, and
- freedom.

How do these categories relate to the list of ten goals we are considering over 40 years later? What similarities and differences do you detect?

10. Collect several (five to ten) articles from newspapers and magazines that reflect normative (or policy) decisions that the Canadian government has made. Using the list of ten goals we considered at the end of this chapter, identify the economic goals with which each article deals. A sample article has been included in this chapter starting on page 41.

a) Arrange the ten economic goals in what you think is their order of importance, 1

being the most important and 10 being the least important. Justify your priorities by referring to the articles you have collected.

b) In the list of goals, identify those that conflict with each other. For each conflicting goal, identify the opportunity cost involved.

11. Look at the cartoon in Figure 2.12 below and read the caption beneath it.

a) What strategy is the artist using to draw attention to a serious economic problem?

b) Why does an unstable dollar create problems for the Canadian economy?

c) What are the most likely causes of a declining dollar?

d) What is the best way to achieve the economic goal of stable currency? Justify your decision.

e) How important a priority is currency stability? Explain your answer.

12. Explain the concept of environmental stewardship as it applies to three economic examples of responsible decision making.



**Figure 2.12** This cartoon appeared in the summer of 1998, when the Canadian dollar was hitting an all-time low on world currency markets.



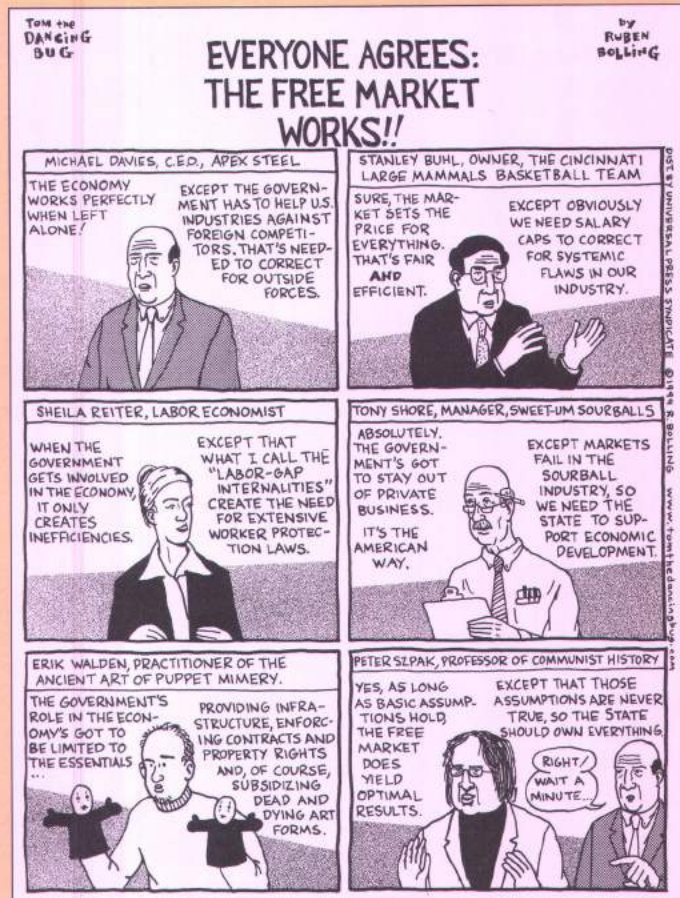
# CHAPTER 3

## THE EVOLUTION OF ECONOMIC THOUGHT

### Thinking About the Free Market

Aside from Xenophon's work in ancient Greece (see page 6), economics as a scholarly discipline is about 225 years old. Economic thinking has evolved greatly and continues to evolve. To better understand contemporary thinking, we need to trace the evolution of economic thought, the subject of this chapter.

As they do with other disciplines, cartoonists sometimes poke fun at the vagaries of economic thinking. The 1999 cartoon shown here lampoons current thinking about free enterprise. Consider its message by answering the following questions.



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### QUESTIONS

1. In the cartoon, six individuals agree that the system of free-market capitalism works best when free from government interference. However, each person identifies one exception to the rule. What do the exceptions have in common?
2. What point is the cartoonist making about US thinking, at the end of the last millennium, regarding government involvement in the marketplace? Is the cartoon effective? Explain.
3. Survey 12 adults to compare Canadian thinking about government involvement in the marketplace.

### Chapter Goals

By the end of this chapter, you will be able to

- understand the major ideas and theories of prominent economists,
- use inquiry research skills and economic concepts to identify historical trade-offs made in response to serious economic problems,
- use primary sources to study the views of individuals who greatly influenced economic thinking.



## Changing the World

Ideas that are significant enough to change the world usually emerge during times of serious trouble. Generally speaking, the more radical the idea, the more troubled the society it originates from, if only because it is during times of extreme crisis that people are most willing to listen to radically different ideas. Instead of surveying the 225-year time span of the science of economics, we will focus on seven visionaries whose ideas have greatly advanced economic thought. For each featured economist, or “worldly philosopher,” as the economic historian Robert L. Heilbroner calls them, our presentation will include

- a brief biography,
- an account of the historical context in which the ideas developed, and
- an explanation of some of the economist’s major ideas and their political and economic impacts.

## Adam Smith (1723–1790)

The Scottish philosopher Adam Smith is known today as both the “father of modern economics” and the “founder of capitalism.” He was the first thinker to outline in detail the characteristics and benefits of a complete economic system—in his case, the free-market economy. He did this in a two-volume work called *An Inquiry into the Nature and Causes of the Wealth of Nations*. Published in 1776, the same year that the American colonies declared their independence from Great Britain, this work is usually referred to as *The Wealth of Nations* and is now recognized as the foundation of modern economic theory.

### Biography

Adam Smith was born into a middle-class family in a fishing village near Edinburgh, Scotland. He entered the University of Glasgow at 14 and, at 17, won a scholarship to Oxford University.

At the age of 27, Smith was offered a position as professor of logic at the University of

Glasgow. Shortly afterwards, he earned the more prestigious position of professor of moral philosophy; in 1758, he became dean of the university. With his eccentric personality, the deep-thinking but absent-minded professor became Glasgow’s most illustrious citizen.

In 1759, Smith’s first book, *The Theory of Moral Sentiments*, made him famous throughout Great Britain. He accepted a lucrative offer in 1764 to become the private tutor of a young English aristocrat. This new position gave him the opportunity to live in France for two years. In Switzerland, he met the French philosopher Voltaire, and back in Paris he became acquainted with a new school of economic thought whose leaders were known as the **physiocrats**.

The physiocrats reasoned that if unchangeable natural laws governed the physical world then natural laws also governed human behaviour and, therefore, the social, economic, and political worlds. They argued that if all human behaviour was controlled by natural laws then all the artificial laws created by humans were unnecessary and ineffective. Since people have a natural tendency to serve their own best interests and to acquire wealth, the pursuit of self-interest would ultimately benefit all individuals if they were left alone to create more wealth. This doctrine of non-interference became known by the French term **laissez-faire**, which means literally “leave to do,” or leave things alone so that matters can work out naturally.

While travelling as a tutor, Smith began his most important project, *The Wealth of Nations*, which took him 12 years to complete and have published. Smith was greatly influenced by the American politician and writer Benjamin Franklin, who provided much information about the economic situation in the American colonies. In 1778, Smith was appointed commissioner of customs for Edinburgh, where he lived for the rest of his life.

### The Times

Adam Smith was born into a world where **mercantilism** was the prevailing economic system. This system is based on the state’s con-



trol of economic production and trade, with the goal of exporting as many goods as possible for sale abroad while, at the same time, importing as few foreign goods as possible. When this system is successful, it means that gold and silver from abroad (the money paid for the exported goods) are flowing into the country while very little money is flowing out of it. At the time, gold and silver reserves were thought to constitute the real wealth of any nation.

In order to make mercantilism work, a country's government had to adopt a **protectionist** policy to safeguard its gold and silver reserves by limiting the entry of foreign goods. In order to accomplish this, the authorities imposed stiff taxes, or **tariffs**, on imported goods to make them more expensive than the goods produced in the country. Problems arise, however, as more and more nations adopt this strategy. Trade between nations drops off, and prices of all but the most common domestic products go up. Mercantilism, a product of the Middle Ages, did not sit well with the established merchant class, the growing industrialist class, and the heavily burdened working class. All these classes were feeling increasingly handcuffed by government regulations and taxes.

Laissez-faire philosophy provided a strong argument for replacing state control of the economy with a reliance on natural laws to regulate economic activity. This idea contributed to the political ferment in France that led, in turn, to the French Revolution. Smith learned from Benjamin Franklin that the growing mood of rebellion in the American colonies was a direct reaction to interference by the British government, through various taxes and regulations, in the economic life of the colonists. This interference led to the Declaration of Independence in 1776 and the American Revolution.

Many of Smith's ideas developed in response to the rapid economic changes he observed in Great Britain. The Enclosure Movement broke up the large plots of land that towns had held in common since the Middle Ages and redistributed them in small plots to individual landholders. Owners began to run these farms for profit rather than subsistence. Inventions such as the spinning jenny, the power loom, and the

steam engine made it possible for factory owners to increase both the scale of their operations and the level of their profits. In the new factories that sprang up, workers performed increasingly more specialized tasks and used a variety of machines. This period of technological innovation and new means of production, which started during Adam Smith's lifetime, came to be known as the **Industrial Revolution**.

## Ideas That Advanced Economic Thought

### Self-interest

Adam Smith believed that human beings are motivated primarily by what he called **self-interest**, or the desire each of us has to better our condition in life. This means that the profit motive provides the major stimulus for economic growth and prosperity. When society requires greater production to satisfy its wants, it does not appeal to the generosity of producers, but rather to the desire of producers to increase their own profits.

The trick is to ensure that this desire for greater profits does not completely overwhelm a producer's sense of obligation to the rest of society. For this reason, in a free market, there is competition between many producers, none of whom can raise their prices too high without losing customers. In this way, self-interest and competition work together to advance the common good. Government regulation is not necessary to control the economy because the forces of market competition will serve, in Smith's famous phrase, as an **invisible hand**, or a natural control. To see how this works, let's consider a hypothetical situation.

Suppose an ambitious farmer decides to charge three times the going rate for a bushel of potatoes. Buyers will naturally do business with one of the many other farmers who sell their potatoes at market prices. The first farmer will have to reduce the price of his potatoes or face the economic consequence of lost sales. Even if all Ontario potato farmers conspire to sell their potatoes for exorbitant prices, entrepreneurs will bring potatoes into Ontario from other markets, such as Prince Edward Island, to realize a profit. At the same time, when local



farmers realize that growing potatoes has become more profitable, they will replace some of their other crops with potatoes. This increased supply of potatoes will naturally force the price of potatoes back down again. Smith believed that these natural “laws of the market” are at work in all openly competitive marketplaces.

### Ongoing progress and prosperity

After reflecting on the substantial increases in wealth that had occurred in Britain during the previous 100 years, Smith outlined three reasons for the country’s continued economic growth and increasing prosperity: the division of labour, the law of accumulation, and the law of population.

For Smith, the **division of labour**, or the specialization of workers in a complex and mechanized production process, led to increases in levels of production. These production increases provided greater profits for investors, more consumer goods for workers, and ultimately greater economic efficiency for society.

The **law of accumulation** worked naturally to fuel further rounds of growth and prosperity. The accumulated profits that industrialists invested in additional capital goods, such as

factories and machinery, permitted increases in total production and efficiency for the economy as a whole. These increases in turn led eventually to greater profits for investor industrialists. The increased profits could then be reinvested in additional capital goods, providing the stimulus for further rounds of economic growth.

According to Smith, the **law of population** also contributed to the maintenance of this steady rate of growth and prosperity. The accumulation of capital naturally increases the demand for labour to operate the additional machinery that the industrialists purchase. In order to attract more workers, competing industrialists must offer higher wages. Wage increases lead to improved living conditions for the workers, which in turn reduce mortality rates. This leads to a natural increase in the population and, therefore, in the labour force. Increases in the labour force mean that workers are competing with one another to find jobs, which tends naturally to keep wages from increasing. Thus, the industrialists continue to make healthy profits.

As a result of the emphasis he placed on the natural laws that regulated the free-market system, Smith became known over time as the “patron saint of laissez-faire capitalism.”

### Check Your

#### Understanding

1. Do you agree with Adam Smith that self-interest is the main motivator behind our economic actions? Explain.
2. Explain in your own words Adam Smith’s concept of the “invisible hand.”
3. How might self-interest be controlled in a command economy? in a traditional economy?
4. Using the law of accumulation and the law of population, explain how the division of labour might contribute to the concentration of wealth in the hands of a few.

### Thomas Robert Malthus (1766–1834)

Recognized historically as the first professional economist, Thomas Robert Malthus was a mild-mannered clergyman whose shyness was compounded by a severe speech impediment. He challenged Adam Smith’s view of a world

governed by natural laws that provided ever-increasing prosperity, and he predicted inevitable poverty and famine for the masses. Malthus first presented his pessimistic views in a book he published in 1798 called *An Essay on the Principle of Population As It Affects the Future Improvement of Society*. He revised and expanded



the text five times between 1803 and 1826. Although he softened his views slightly over the years, his pessimistic conclusions did not change. After reading Malthus, the English writer Thomas Carlyle referred to economics as “the dismal science.”

## Biography

Malthus was born into an English upper-middle-class family in 1766. He was admitted to Jesus College at Cambridge University in 1784, where he studied a wide range of subjects and took prizes in Latin and Greek before earning a Master of Arts degree in 1791. In response to a religious vocation, Malthus took holy orders in the Anglican Church in 1797 and pursued the quiet life of an English country curate.

He was named professor of history and political economy at the East India Company’s college at Haileybury, Hertfordshire, in 1805. This was the first time that the term *political economy* was used to designate an academic office, so Malthus can rightly be identified as the first professional economist.

## The Times

Malthus’s thoughts and writings were greatly influenced by the existing economic conditions in Britain. The nation was in the midst of the Industrial Revolution, a period when great numbers of workers left their farms and crowded into cities, where they hoped to find jobs in factories. They lived in congested and unsanitary quarters, struggling to survive on minimal wages. At the same time, a prolonged, expensive, and bloody war against Napoleon Bonaparte’s France added to the misery of the British working class. Poor crop yields and a simultaneous population boom further aggravated the situation. It began to look as if Britain’s once-rich farmlands could no longer feed the country’s people.

## Ideas That Advanced Economic Thought

### Population and food production

Malthus based his ideas about population and food production on what he thought were two

self-evident premises. The first is that food is necessary to sustain human life. The second premise is that human sexual instinct is constant. Starting with these two premises, Malthus built an argument that the population, if left unchecked, would double every 25 years (about one generation). This doubling effect meant that the population grew in what statisticians call a **geometrical progression**.

Food production, on the other hand, can only grow in an **arithmetical progression**. As more land is required for food production, less-fertile tracts of land will be employed out of necessity, and these less-fertile lands will yield fewer crops. At the same time, as more and more workers cultivate the lands more intensively, the productivity of the added workers also declines. Malthus used the economic principle that we examined in Chapter 1, the law of diminishing returns, to explain why growth in food production would be limited to arithmetical increases from one generation to the next. That is, each generation’s food production increases by an amount equal to the original quantity. Figure 3.1 (page 52) illustrates what became known as the “Malthusian dilemma.”

Malthus had a very pessimistic outlook. He thought that if wages went up, the workers’ improved standard of living would reduce infant mortality rates, which would have the effect of increasing the population at a faster rate than the means of subsistence. Where Adam Smith saw a world of steadily increasing prosperity, Malthus believed that wages and the standard of living should hover around the subsistence level in order to keep the population from growing out of control.

Although Malthus admitted that two types of population control existed, he did not think they would prove strong enough to check the geometric progression of the world’s population. **Positive checks**, which increase the death rate, include war, famine, disease, and epidemics. **Preventive checks**, which reduce the birth rate, include moral restraints such as late marriage and sexual abstinence.

In the end, Malthus failed to predict two developments that had major impacts on his theories of population. In the 20th century, a



## The Malthusian Dilemma

Generation	1	2	3	4	5	6	7	8	9	10
Year	1	25	50	75	100	125	150	175	200	225
Population	1	2	4	8	16	32	64	128	256	512
Food	1	2	3	4	5	6	7	8	9	10

*Note:* Each 25-year period refers to one generation. Each generation, the population doubles itself. Every 25 years, food production increases by an amount equal to the original quantity produced during the first year. To keep this table simple, constant units of population and food production are used instead of actual figures. For example, one unit of population might represent 1 million people, and one unit of food might represent enough wheat to sustain one unit of population from one harvest to the next.

**Figure 3.1** In the “Malthusian dilemma,” what begins as a balanced economic system (in which one unit of food is available for each unit of population) naturally transforms itself, if left unchecked, into an economically unbalanced situation. After ten generations, or 225 years, 512 population units must subsist on only ten units of food. Unless population growth is controlled, famine awaits the entire human race!

series of technological breakthroughs in the field of agriculture, known collectively as the Green Revolution, increased food production rates beyond anything Malthus might have imagined. Also, continued urbanization has had a negative effect on the birth rate. Whereas additional children in farm families have always been seen as assets to help with the work, this

has never been the case in urban families. Average family size in urban industrial nations continues to decline, to the point where several nations in the world today have reached zero population growth. Does this mean Malthus was wrong? Two hundred years after the publication of his ground-shaking text, the debate continues.

## Check Your

## Understanding

1. Explain the Malthusian dilemma in your own words.
2. How did the law of diminishing returns contribute to Malthus's conclusion that, eventually, population will outgrow global food production?
3. Explain two global developments that have acted against the Malthusian dilemma.

## David Ricardo (1772–1823)

Adam Smith's notion of humankind living in a harmonious world governed by natural laws was most effectively assailed by David Ricardo, the articulate son of a Dutch merchant banker who had immigrated to Britain and made a fortune on the London stock exchange.

## Biography

David Ricardo was born into a prosperous family in London in 1772. At 14, he went to work in his father's investment business, but by the time he turned 22, he had established his own business with a capital base of £800. He retired 20 years later with over £1 million.



Recognizing that most investors tend to overreact and exaggerate the importance of events, Ricardo was able to use his knowledge of different kinds of securities to make great profits. For example, in the panic following Napoleon's return to power in France—and with the increased likelihood of war—the market for British government securities declined sharply. Ricardo, however, invested heavily in government securities prior to the Battle of Waterloo. When the Duke of Wellington defeated Napoleon's armies at Waterloo, Ricardo's profits were significant.

When Ricardo retired to the country at the age of 42, he devoted his attention to the new science of political economy. His most famous book, *The Principles of Political Economy and Taxation*, exposed the bitter class conflicts at the heart of any society structured around free-enterprise capitalism. Published in 1817, it challenged the power of the aristocratic landlord class by questioning the contributions of this class to society. The book was hailed by the rising industrialist class and became an influential document of political reform.

Elected to the House of Commons in 1819, Ricardo argued on behalf of free trade and carefully outlined the complex laws of land rent that allowed the idle landlord class to exploit land, labour, and capital. In 1823, he died suddenly at the age of 51, before he could witness first-hand the full impact of his economic ideas.

## The Times

Ricardo lived during a period of great social conflict and political unrest in Britain. The British population grew rapidly, putting a strain on food supplies. The Napoleonic Wars and successive years of poor crops further drained food reserves.

Not surprisingly, where Adam Smith saw society as a family making great progress together, Ricardo saw clear divisions into conflicting groups. He identified the three main groups in British society as the working class, who lived on modest wages; the industrialist class, who made healthy profits by operating the factories they owned; and the aristocratic

landlord class, who received substantial rent from the land titles they held. One group, Ricardo argued, could prosper only at the expense of the others.

Ricardo reasoned that, given their hold on the land, landlords were best positioned to compete effectively against the other classes. The working class would always struggle to live at or near subsistence levels. The rising industrialists had new-found riches but lacked sufficient representation in Parliament. Therefore, the powerful and entrenched landed aristocracy would always prevail.

To illustrate his case, Ricardo used the example of the landlord-dominated Parliament forcing through legislation known as the **Corn Laws**. These measures imposed stiff taxes on grains imported from other countries. Since there was a shortage of grain in England at the time, this had the effect of driving up the price of grain to levels usually seen only in times of famine. By 1813, a bushel of wheat sold for twice the average worker's weekly wage. This forced the industrialists to pay higher wages (to ensure that their workers would survive), which, in turn, cut into their profits. High grain prices, however, guaranteed the payment of high rents to the landlords. When the industrialists finally succeeded in repealing the Corn Laws in the 1840s, they effectively broke the power of the landed aristocracy and slowly began replacing them as the dominant class in British society.

## Ideas That Advanced Economic Thought

### The iron law of wages

Ricardo reasoned that, because of the working class's unchecked rate of reproduction, labour's natural wages would always remain at the subsistence level. Higher wages would increase the population by ensuring lower rates of infant mortality but would not raise living standards because the higher wages would have to be distributed among larger families.

Greedy industrialists seized on this economic principle to justify keeping their workers' wages at the lowest level possible, in some cases claiming that they were thereby performing a



# PRIMARY SOURCE

## On Wages

**L**abour, like all other things which are purchased and sold, and which may be increased or diminished in quantity, has its natural and its market price. The natural price of labour is that price which is necessary to enable the labourers, one with another, to subsist and to perpetuate their race, without either increase or diminution.

The power of the labourer to support himself, and the family which may be necessary to keep up the number of labourers, does not depend on the quantity of money which he may receive for wages, but on the quality of food, necessaries, and conveniences that become essential to him from habit which that money will purchase. The natural price of labour, therefore, depends on the price of the food, necessaries, and conveniences required for the support of the labourer and his family. With a rise in the price of food and necessaries, the natural price of labour will rise; with the fall in their price, the natural price of labour will fall.

The market price of labour is the price which is really paid for it, from the natural operation of the proportion of the supply to the demand; labour is dear when it is scarce and cheap when it is plentiful. However much the market price of labour may deviate from its natural price, it has, like commodities, a tendency to conform to it.

It is when the market price of labour exceeds its natural price that the condition of the labourer is flourishing and happy, that he has it in his power to command a greater proportion of the necessaries and enjoyments of life, and therefore to rear a healthy and numerous family. When, however, by the encouragement which high wages give to the increase of population, the number of labourers is increased, wages again fall to their natural price, and indeed from a reaction sometimes fall below it.

When the market price of labour is below its natural price, the condition of the labourers is most wretched: then poverty deprives them of those comforts which custom renders absolute necessities. It is only after their privations have reduced their number, or the demand for labour has increased, that the market price of labour will rise to its natural price, and that the labourer will have the moderate comforts which the natural rate of wages will afford.



David Ricardo

Notwithstanding the tendency of wages to conform to their natural rate, their market rate may, in an improving society, for an indefinite period, be constantly above it; for no sooner may the impulse which an increased capital gives to a new demand for labour be obeyed, than another increase of capital may produce the same effect; and thus, if the increase of capital be gradual and constant, the demand for labour may give a continued stimulus to an increase of people.

Source: David Ricardo, *The Principles of Political Economy and Taxation*, in Howard D. and Natalie J. Marshall, *The History of Economic Thought: A Book of Readings* (New York: Putnam, 1968), 116–117.

### QUESTIONS

1. What is the "natural price" of labour? Why might wages depart from this natural price?
2. According to Ricardo, what effects will the demand for labour have on the growth or decline of the population?
3. In what way can industrial capitalists rationalize lower wages for their workers as performing a service to society?



public service. Low wages became the figurative leg irons that shackled the working class to their slums. This was never Ricardo's intent. He always believed that wages should be determined by free-market conditions.

### The theory of the comparative advantage of trade

It is a commonly accepted principle that when one community can produce grain more efficiently than another, while the other community can produce wool more efficiently, trade will be of obvious or **absolute advantage** to both communities. Ricardo was the first person able to recognize and explain that even when one community can produce both wheat and wool efficiently, there remains a **comparative advantage** to be shared when both communi-

ties trade the products they can each produce most efficiently. (We'll explore both concepts in Chapter 17.)

As a result of his belief in comparative advantage, Ricardo became a strong advocate of free trade at a time when Britain imposed high tariffs on many imports precisely to discourage trade with other countries. While these taxes often protected the earnings of the rich landlords, they hurt the workers and the industrialists. Once again, argued Ricardo, the interests of the landlords ran counter to the interests of the rest of the economy. From Ricardo's perspective, the landlord class grew very rich while others performed all the work and assumed all the risks. Ricardo quickly became the parliamentary champion of the previously unrepresented industrial capitalist.

### Check Your

### Understanding

1. According to Ricardo, what are the main three classes in any free-enterprise society? How does self-interest result in bitter class conflicts?
2. According to Ricardo, why did the British Parliament pass the Corn Laws during a time of food shortages?
3. Why was Ricardo an advocate of freer trade?

## Karl Marx (1818–1883)

By arguing that all of human history is governed by economic laws that perpetuate the conflicts between the different social classes, Karl Marx made clear the importance of economic theory. According to Marx, economics must come before politics, science, art, and religion in importance because it determines the course of human history.

In collaboration with his friend, the wealthy capitalist Friedrich Engels, Marx founded an international workers' movement intended to overthrow the corrupt ruling class of industrial capitalists and aristocratic landlords. These people Marx called the **bourgeoisie**. In 1848, Marx and Engels published the *Communist Manifesto*, in which they incited all exploited workers (whom they called the **proletariat**) to rise up against their oppressors: "Let the ruling

classes tremble at a Communistic revolution. The proletariat have nothing to lose but their chains. They have a world to win. Workers of all countries unite!" And so was born the international revolutionary socialist movement of communism. Several rebellions followed in European countries, but none of them succeeded until the Russian Revolution in 1917.

For his radical views, Marx has come to be known as either "the prophet of the proletariat" or "the demonic philosopher." Either way, it is undeniable that he left an indelible mark on the science of economics and on the course of human history.

### Biography

Karl Marx was born in the German Rhineland in 1818. An excellent scholar, he attended Bonn University, where he studied philosophy.



Marx became the editor of a small, middle-class liberal newspaper. One of the first editorials to get Marx into trouble with the government denounced a new law that prevented peasants from exercising their traditional right to gather dead wood in the forest. The authorities first censored and then closed down the newspaper. Marx became more and more outspoken as, one by one, the papers he edited were suppressed by the state.

As his views became more radical and even revolutionary, Marx had to flee Germany. He moved first to Paris and then to Brussels, but his troubles with the state followed him until he moved to London in 1849. Marx and his family lived in London in relative poverty for the rest of his life.

His most comprehensive work, *Capital* (*Das Kapital* in the original German text), was published in three volumes in 1867, 1885, and 1894. In this cold and complex critique of economics, Marx explained why capitalism would ultimately destroy itself. The book was completed by Engels after Marx died in 1883.

## The Times

Living in the second half of the 19th century, Marx was able to witness first-hand the ill effects of the Industrial Revolution on the working class. By the time of Marx's death, England had been transformed from an agricultural and artisan-based economy to one in which the dominant mode of production was the steam-powered factory.

Workers lived in the slums of crowded cities and worked 18-hour days in unsafe and unclean factories. Since there were no laws against child labour, working-class children had to endure these same hardships. After working long hours, children rarely had the time to acquire the education that might lift them out of such deplorable circumstances.

To Marx, the capitalist system was immoral and the people who exploited it unspeakably evil. He saw a world in which all wealth was achieved on the backs of the workers. Yet, the working class received few of the benefits of their labour. Marx believed capitalism, as an



**Figure 3.2** The Matchmakers Procession. This illustration shows an 1871 demonstration in London against factory working conditions. The protest led to reforms but also to charges of police brutality.



# P R I M A R Y S O U R C E

## On the Program of Revolutionary Socialism

**W**e have already seen the first step in the working class revolution is the raising of the proletariat to the position of ruling class, the victory of Democracy.

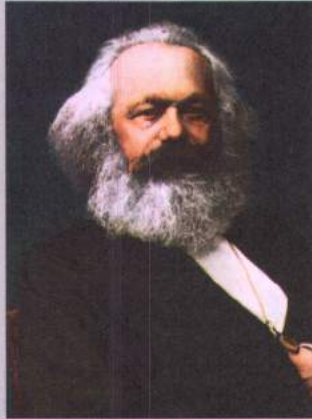
The proletariat will use its political power to wrest by degree all capital from the bourgeoisie, to centralise all instruments of production in the hands of the State, i.e., of the proletariat organised as the ruling class, and to increase as rapidly as possible the total mass of productive forces.

This, naturally, cannot be accomplished at first except by despotic inroads on the rights of property and on the bourgeois conditions of production: by measures, therefore, which appear economically insufficient and untenable, but which in the course of the movement outstrip themselves, and are indispensable as means of revolutionizing the whole mode of production.

These measures will naturally be different, in different countries.

Nevertheless, for the most advanced countries, the following will be pretty generally applicable:

1. Abolition of property in land and confiscation of ground rents to the State.
2. A heavily progressive income tax [that is, taking an increasing percentage in taxes as income increases].
3. Abolition of inheritance.
4. Confiscation of the property of emigrants and rebels.
5. Centralization of credit in the hands of the State, by means of a national bank with State capital and an exclusive monopoly.
6. Centralization of the means of transport in the hands of the State.



Karl Marx

7. Extension of national factories and instruments of production, cultivation and improvement of waste lands in accordance with a general social plan.
8. Obligation of all to labour; organization of industrial armies, especially for agriculture.
9. Combination of agricultural and industrial labour, in order to remove the distinction between town and country.
10. Free public education for all children. Abolition of factory labour for children in its present form. Combination of education with material production, etc.

In the place of the old bourgeois society, with its classes and class antagonisms, an association appears in which the free development of each is the condition for the free development of all.

Source: Karl Marx and Friedrich Engels, *The Communist Manifesto*, in Raymond Postgate, *Revolution from 1789–1906* (New York: Harper Torch Books, 1962), 154–155.

### QUESTIONS

1. What key characteristics of a command economy can you see in the Marxist program?
2. With which parts of Marx's program do you agree? With which parts do you disagree? Explain why.
3. Critics of Marx argue that the transition to communism inevitably sets the stage for dictatorship. They say that Marx's claim that "despotic inroads" are necessary only in the early stages is politically naive. Once a dictatorship is firmly in place, is a return to democracy really possible? Explain your own views and cite historical examples to illustrate your argument.



economic system, was so morally bankrupt that it would one day destroy itself.

## Ideas That Changed Economic Thought

### The economic interpretation of history

Marx thought that the laws of economics determine the course of human history. He believed history was a continuing series of class struggles between exploiters and the exploited: free citizens against slaves, patricians against plebeians, lords against serfs, guildmasters against journeymen, and industrial capitalists against workers. Whenever conditions become unbearable, the oppressed rise up in open rebellion against their oppressors. The capitalist system, based on exploitation and self-gratification, has sown the seeds of its own destruction. Capitalist exploitation will continually worsen the living standards of workers. Immersed in misery, workers will eventually unite to overthrow the corrupt ruling class.

### The international Communist revolution (revolutionary socialism)

According to Marx, this revolution would begin in the most industrialized countries of Western Europe (where capitalism was strongest and exploited the workers most severely) and then would spread throughout the world. The violent overthrow of capitalism would lead to international socialism based on the common ownership of land and capital. Socialism, once fully evolved, would be transformed into its ideal state of communism: a worker-governed society based on the guiding principle “from each according to ability, and to each according to need.”

### The labour theory of value

For Marx, the value of any item is the value of all labour used in its production (**labour value**). This includes the direct labour supplied by workers in the manufacturing process as well as the amount of indirect labour, that is, the labour embodied in the machinery and buildings used in the manufacturing process. In a capitalist system, workers receive only a portion of what their labour is worth. The difference, which Marx called **surplus value**, is stolen from the worker in the form of profit for the capitalist.

To better understand this concept, let's use a simple example. Assume that the production of a wool sweater requires \$40 worth of labour, \$5 worth of materials, and \$5 worth of wear and tear on machinery (depreciation). If the industrial capitalist can sell the sweater for \$80, then a surplus value of \$30 is created in the form of profit for the capitalist. This surplus value arises from the market's determination that the real value of each sweater is \$80. Since the value of the indirect labour is \$10, the value of the direct labour must be \$70. Since workers are only paid \$40 for knitting the sweater, \$30 represents the amount of worker *exploitation* taking place.

Worker employment in a capitalist system is based on the premise that the worker will always produce more for the employer than the employer will have to pay in the form of wages. Workers are forced to sell their labour to capitalists for less than it is truly worth because there is always what Marx identified as a “reserve army of the unemployed.” Capitalists always have the option of hiring desperate unemployed workers at lower wages, which ensures that wages will never rise above the subsistence level.

## Check Your

### Understanding

1. What did Marx predict for the future of capitalism? Outline briefly how he reached this conclusion.
2. Do you agree with Marx that all capitalists exploit workers? Explain your position.
3. Explain the relationship between surplus value and exploitation.



## John Maynard Keynes (1883–1946)

In 1936, John Maynard Keynes published *The General Theory of Employment, Interest, and Money*. In it, he defended the “revolutionary” ideas already being applied by governments in Britain, Canada, and the US to deal with the era of massive unemployment known as the Great Depression. He also provided a blueprint that explained how government intervention could save a country from widespread unemployment and the economic stagnation that accompanied it. Keynes’s book helped to rescue the capitalist system from self-destruction and the spectre of international communism. The approach we have come to call “Keynesian economics” analyzes relationships among demand, production, and unemployment, and focuses on government’s role in sustaining economic activity (also see page 228).

### Biography

John Maynard Keynes was born in Cambridge, England, in the same year that Karl Marx died. In addition to teaching economics at Cambridge University, Keynes served as an economic adviser to the British treasury during both World Wars and attended post-war international peace conferences as a representative of the British government. He was also appointed a director of the Bank of England, Britain’s central bank. The tireless Keynes served as editor of a major economics journal, chair of an insurance company, and manager of an extremely successful investment trust. Inspired by his mother, Keynes was an early supporter of the movement that eventually won British women the right to vote.

In 1944, Keynes was the chief British representative at the Bretton Woods Conference, which established the International Monetary Fund and the World Bank. His last major public service was the brilliant negotiation in 1945 of a multi-billion-dollar post-war reconstruction loan from the United States to Great Britain.

### The Times

Keynes’s career spanned the two World Wars and the period of economic upheaval between

them known as the Great Depression. At the end of the First World War, the Allies forced Germany to pay more in reparations than its economy could bear. The result was a severe and long-term depression in Germany that Nazi dictator Adolf Hitler exploited to further his own political agenda.

The Great Depression of the 1930s was a difficult time in Europe and North America. At the beginning of the Depression, most capitalist governments believed that skyrocketing unemployment rates were only temporary; they thought economic conditions would improve as their market economies reverted to a more balanced state. They called for unemployed workers to tighten their belts, make do with less, be patient, and ride out this period of badly needed correction. Making no attempts to initiate economic improvements, these governments were clearly part of the problem rather than the solution. In fact, government attempts to cut spending and pay back war debts contributed to a decline in the amount of money in circulation.

### Ideas That Advanced Economic Thought

#### War and sustainable peace

As a representative at the peace conference that followed the First World War, Keynes strongly criticized the Treaty of Versailles, which he predicted would ruin the German economy by forcing the country to pay the victorious Allies more than it could afford. He abruptly resigned from the British government.

While serving as a key economic adviser to the British government during the Second World War, Keynes recommended a daring plan that used “deferred savings” as the principal means of financing the war effort. A portion of every worker’s pay would be automatically invested in government war bonds that could not be cashed until after the war. Keynes hypothesized that, during the war, consumer spending would interfere with the war effort; after the war, consumer buying power would help to stimulate investment, permit increased production of consumer goods, and maintain employment levels.

The 1945 peace treaty and post-war reconstruction plan were greatly influenced by



Keynes, who argued that, in order to secure a lasting peace, the defeated enemy should be helped, not punished. As former enemies became business associates, economic co-operation replaced military intervention in Western Europe. With developments such as the European Union, history appears to have proven Keynes correct.

### Combating the Great Depression

In *The General Theory*, Keynes advanced an idea considered unconventional at the time: that governments bore a large part of the responsibility for the high unemployment rates (approaching 20 per cent) ushered in by the Great Depression. He believed these rates could be lowered most effectively by government intervention, especially by sponsoring public works projects that would give jobs to idle workers. By taking control of interest rates and increasing public spending, a government could stimulate consumer spending, raise the demand for consumer goods, and bring more people back into the workforce. As these previously unemployed workers spent their wages, the money would be re-spent by those receiving it. In this way, increased employment would trigger additional rounds of consumption, investment, and employment increases, as

the economy continued to put previously idle resources to work. The resulting growth in the economy would have the effect of correcting the problem of high unemployment rates.

Keynes claimed that, since consumers are limited in their spending by the size of their incomes, they are not the source of depressions or any other cyclical business shifts. Business investors and governments are the primary forces behind business cycles. To Keynes, the Great Depression (a major downward cycle) was ultimately a problem of too little investment. If investors were given a reason to invest and favourable interest rates, the economy would necessarily recover, but government intervention was required before this could happen.

Study Figure 3.3 to determine whether Canadian data from the time of the Great Depression support Keynes's theory.

Today, critics of the Keynesian school of economic thought point to his *General Theory* as the leading cause of the high inflation rates and massive public debts that Western nations accumulated over the second half of the 20th century. On the other hand, it is undeniable that national unemployment rates have never yet returned to the levels witnessed during the 1930s.

Year	Gross Investment Spending (millions)	Government Spending (millions)	Estimated Government Revenue from Taxes (millions)
1929	\$1948	\$1027	\$1085
1930	\$1608	\$1178	
1931	\$1143	\$1160	
1932	\$609	\$1041	
1933	\$462	\$842	\$548

Note: All funds are in constant 1949 Canadian dollars. This means that the values have been standardized to 1949 levels as a point of reference. In addition, all data have been rounded to the nearest whole million.

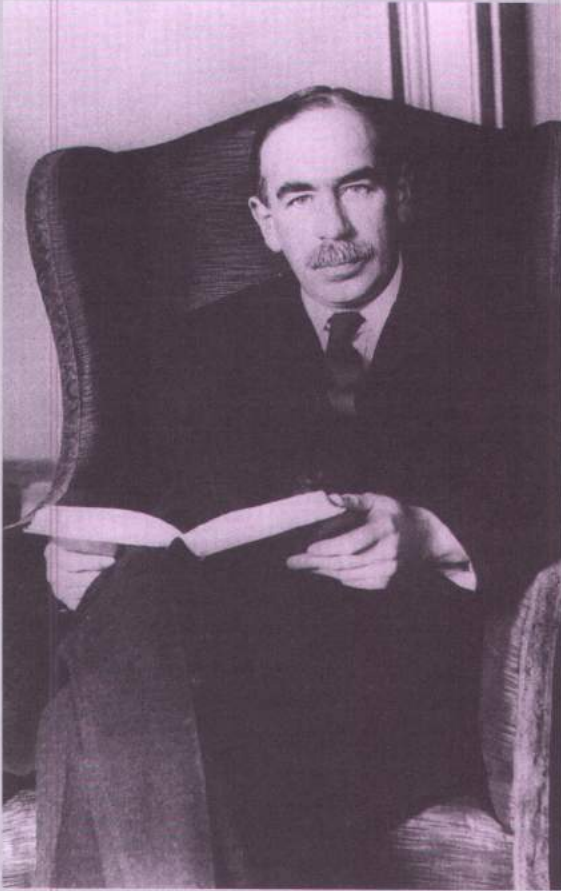
Source: Neil Swan and Henry Kaluza, *Economics: A Canadian Perspective* (Toronto: McGraw-Hill Ryerson, 1973), 74.

**Figure 3.3** Investment, government spending, and taxation in Canada during the first five years of the Great Depression.



# PRIMARY SOURCE

## On Reducing Unemployment



John Maynard Keynes

**I**f the Treasury [government] were to fill old bottles with banknotes [money], bury them at suitable depths in disused coalmines which are then filled up to the surface with town rubbish, and leave it to private enterprise on well-tried principles of laissez-faire to dig the notes up again (the right to do so being obtained, of course, by tendering for leases of the note-bearing territory), there need be no more unemployment and, with the help of the repercussions, the real income of the community, and its capital wealth also, would probably become a good deal greater than it actually is. It would, indeed, be more sensible to build houses and the like; but if there are political and practical difficulties in the way of this, the above would be better than nothing. . . .

Source: John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (New York: Harcourt, Brace and Company, 1964), 129–131.

### QUESTIONS

1. What is the most important thing that Keynes is pointing out to political leaders in this excerpt?
2. Keynes proposes the buried treasure project as a last resort. What projects could governments finance that would be more beneficial? Give three specific examples.
3. Explain why government financing is necessary in the example described by Keynes.

### Check Your

### Understanding

1. Explain how Keynes's "deferred savings" plan would work both during and after the war.
2. According to Figure 3.3, which economic change between 1929 and 1933 most contributed to the Great Depression in Canada?
3. Draw a flow chart to explain how governments can effectively combat high unemployment rates according to Keynes.



## John Kenneth Galbraith (born 1908)

The prolific writer and gifted economist John Kenneth Galbraith has been called one of Canada's most notable exports to the United States. When Galbraith published his book *The Affluent Society* in 1958, he coined a term (affluent society) that summed up the remarkable increase in wealth that the United States and Canada had been enjoying since the end of the Second World War. At the same time, the book set out a devastating criticism of government economic policies that did not pay sufficient attention to providing and maintaining public services.

### Biography

John Kenneth Galbraith was born in Iona Station, Ontario. After graduating in agricultural economics from the University of Toronto in 1931, he earned a doctorate at the University of California at Berkeley in 1934. He taught economics at Harvard and

Princeton Universities until the United States entered the Second World War. During the war, Galbraith worked in the federal Office of Price Administration. After the war, he was appointed director of the US Strategic Bombing Survey, which studied the effects of air raids on Japan and Germany.

Galbraith served as editor of *Fortune* magazine from 1943 to 1948 then returned to Harvard in 1949 to teach economics. He stayed there until his retirement, except for a brief stint as ambassador to India under US President John F. Kennedy. In addition to *The Affluent Society*, his other noted publications include *American Capitalism*, *The New Industrial State*, *Economics and the Public Purpose*, *The Age of Uncertainty*, and *The Nature of Mass Poverty*.

### The Times

Galbraith rose to prominence during the period of economic prosperity that followed the Second World War. In spite of the Cold



**Figure 3.4** John Kenneth Galbraith castigated US policy makers for emphasizing consumerism and for neglecting the common good. How does this photograph reflect consumerism?



War (which pitted the capitalist US and its allies against the communist USSR and its allies), high levels of employment and consumer spending during this time produced an unparalleled degree of prosperity in Canada and the United States. This affluence, however, did not diminish the amount of poverty in these prosperous societies. At the same time, large international corporations were emerging as a new influence in economic decision making.

## Ideas That Advanced Economic Thought

### Social balance

In *The Affluent Society*, Galbraith argued that the post-war emphasis on private-sector pro-

duction had produced a state of private affluence and public squalor. Although consumer goods, such as automobiles and televisions, were produced in abundance, public goods such as schools, hospitals, and parks were in short supply. Galbraith argued that the real need in society was for the production of public goods serving the common good. He thought national production should be shifted to serve these public priorities.

Galbraith also popularized the view that, in the world of the international corporation, corporate managers (not shareholders or consumers) held the real decision-making power in the economy. He believed that more government involvement and regulation of the economy would help improve society.

### Check Your

### Understanding

1. Describe in your own words Galbraith's theory of social balance.
2. Do you agree with his assessment that far more attention is paid to the private good than

is paid to the public good? Give three examples from your own community to support your position.

## Milton Friedman (born 1912)

Whereas Galbraith is regarded as a leading proponent of the liberal economic perspective, Milton Friedman is acknowledged as the most articulate champion of the conservative view. He was an influential adviser to Richard Nixon and other US presidents.

### Biography

Milton Friedman was born in Brooklyn, New York, in 1912. He enrolled in his first economics course in 1930, a time when the single most important issue facing Western nations was the Great Depression. An accomplished scholar, Friedman studied at Rutgers, Chicago, and Columbia universities before being appointed a government economist during the Second World War. He joined the faculty of

the University of Chicago in 1946, where he remained until 1977.

When he received the 1976 Nobel Prize for economics, Friedman was cited for “his achievements in the field of consumption analysis, monetary history and theory, and for his demonstration of the complexity of stabilization policy.” Friedman has written many books, the best known of which are *Capitalism and Freedom* and *A Monetary History of the United States, 1867–1960*.

### The Times

A contemporary of Galbraith, Friedman was strongly influenced by the amount of unproductive government intervention in the US economy following the end of the Second World War. He believed that government attempts to induce cycles of economic growth



# PRIMARY SOURCE

## On a Monetary Rule

**H**ow can we establish a monetary system that is stable and at the same time free from irresponsible governmental tinkering, a system that will provide the necessary monetary framework for a free enterprise economy yet be incapable of being used as a source of power to threaten economic and political freedom?

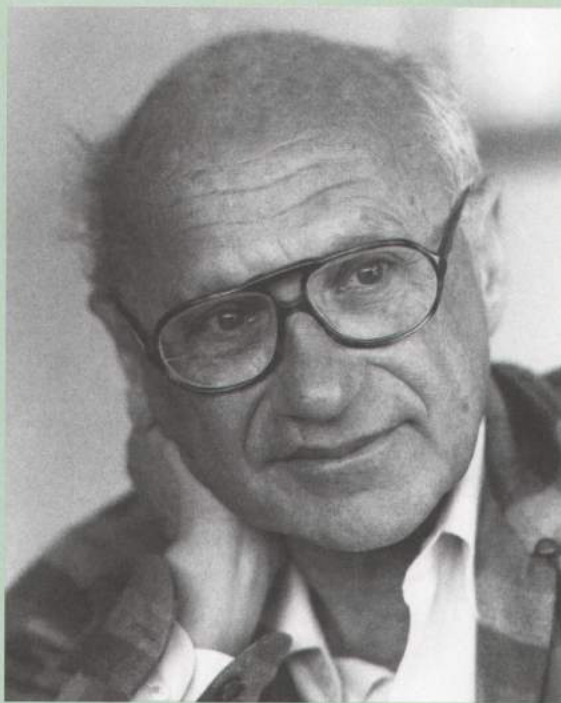
The only way that has yet been suggested that offers promise is to try to achieve a government of law instead of men by legislating rules for the conduct of monetary policy that will have the effect of enabling the public to exercise control over monetary policy through its political authorities, while at the same time it will prevent monetary policy from being subject to the day-by-day whim of political authorities. . . .

In the present state of our knowledge, it seems to me desirable to state the rule in terms of the behavior of the stock of money [or money supply]. My choice at the moment would be a legislated rule instructing the monetary authority to achieve a specified rate of growth in the stock of money. For this purpose, I would define the stock of money as including currency outside commercial banks plus all deposits of commercial banks. I would specify that the Reserve System [the central bank] shall see to it that the total stock of money so defined rises month by month, and indeed, so far as possible, day by day, at an annual rate of  $x$  percent, where  $x$  is some number between three and five. The precise definition of money adopted, or precise rate of growth chosen, makes far less difference than the definite choice of a particular definition and a particular rate of growth. . . .

I should like to emphasize that I do not regard my particular proposal as a be-all and end-all of monetary management, as a rule which is somehow to be written in tablets of stone and enshrined for all future time. It seems to me to be the rule that offers the greatest promise of achieving a reasonable degree of monetary stability in the light of our present knowledge. I would hope that as we operated with it, as we learned more about monetary matters, we might be able to devise still better rules, which would achieve still

better results. Such a rule seems to me the only feasible device currently available for converting monetary policy into a pillar of a free society rather than a threat to its foundations.

Source: From Milton Friedman, *Capitalism and Freedom* (Chicago: University of Chicago Press, 1962), 54–55. Copyright © 1962. Reprinted by permission.



Milton Friedman

### QUESTIONS

1. How does Friedman define the money supply, or "stock of money"?
2. Why does Friedman believe it is necessary to have a rule for monetary policy? What is that rule?
3. Does Friedman see this as a permanent rule? Explain.



and full employment (by increasing spending and reducing taxes) resulted in periods of significant inflation and a steady increase in the rate of public debt. In addition, Friedman thought this made both the economy and the individual citizen increasingly more dependent on government assistance and, therefore, weaker.

## Ideas That Advanced Economic Thought

### Laissez-faire capitalism

According to Friedman, free markets will largely resolve their own economic problems more effectively if they are left alone rather than subjected to government intervention. Friedman sees individual self-sufficiency and the preservation of the work ethic as important pillars of productivity and sustained economic growth. For this reason, he advocates a program of guaranteed income (or negative income tax) over centralized social welfare services and the massive, inefficient bureaucracy they require. The abolition of minimum-wage legislation is another laissez-faire strategy that Friedman recommends to free up the marketplace.

Friedman even advocates the application of the free-market principle to the supply of edu-

cation. Under his plan, parents would annually receive government vouchers equal in value to the cost of a child's education. They could spend the vouchers at the school of their choice. Schools would then be developed to meet the demands of parents (the people who best know the needs of their children). Excellent schools would have no problem attracting students. Schools that did not attract sufficient numbers would automatically close. The education market could thus take care of itself!

### The importance of money supply

Friedman is a leading member of the **monetarist** school of thought. Monetarists believe that the most effective way for governments to influence the economy is by regulating the money supply in circulation. They maintain that business cycles are determined by the money supply and interest rates, not by levels of taxation and government spending. According to Friedman, governments should raise the money supply by a fixed amount each year. This increase should be equal to the long-term growth rate of the economy, that is, between 3 and 5 per cent. Too much money in circulation causes inflation; too little money reduces investment and employment levels.

## Check Your

### Understanding

1. What is Friedman's suggestion for adding more economic freedom to public education? Compile a list of its advantages and disadvantages.
2. Explain the monetarist view of the most effective way for governments to stimulate the economy. How does this compare to the theory presented by Keynes?

## The Contemporary Scene

Well, what's wrong with this picture so far? Most readers have probably begun to wonder whether economic problems can ever really be solved. Some problems keep reappearing in cycles, and each reappearance makes them seem more complex and difficult to address.

At the same time, some new problems appear to be the direct results of theories and strategies intended to fix earlier problems. The concept of trade-offs appears to be one of the key concepts in the development of economic theory. We can address one problem, it seems, only at the expense of aggravating something else. Clearly, some of our economic goals are in



conflict with one another, and some of our theories need to be rethought in light of changing times.

Midway through this chapter, if not earlier, many readers probably began to wonder if any women have contributed to the development of economic thought. We must remember that the public, or political, world between 1750 and 1950 was essentially a male-dominated one, quite probably to the detriment of the science. As economic principles themselves con-

firm, when the thoughts of half the population are unemployed or underemployed, the production possibilities frontier can never be reached. In Canada today, many leading economists are women, and their contributions to the ongoing advancement of economic thought have been both significant and refreshing. Canadian economists who have made important contributions include Nuala Beck, Dian Cohen, Sherry Cooper, Judith Maxwell, and Sylvia Ostry.



### Hypothesis Testing

From time to time, economists are called upon to identify patterns in a set of data and to use this information to gain insight into economic reasoning or to explain and predict human economic behaviour. In this chapter, you have read a great deal about the evolution of economic thought over the past 225 years. What patterns have you noticed?

Use the information in this chapter, and any additional information that you have researched, to defend or refute one of the following hypotheses. A **hypothesis** is a speculative theory

that requires proof or verification. Using your supporting evidence, prepare a reasoned argument to either support or refute the speculative statement.

- Hypothesis A: Troubled times create great economists.
- Hypothesis B: The advancement of economic thought reinforces the pattern of economic trade-offs. Very often, the solving of one problem creates another.
- Hypothesis C: The great economic thinker is more of a reactionary than a visionary.

### Check Your

#### Understanding

1. Explain the concept of a trade-off in your own words. Provide two examples of economic trade-offs that you have had to make. Explain your reasoning for each decision.
2. Explain how, in addressing a specific problem, the ideas and theories of one economist helped create new problems for economists that followed.



## CHAPTER SUMMARY

- The science of economics is about 225 years old. Economic ideas that help transform the world often appear during times of serious trouble. The advancement of economic thought reinforces the existence of trade-offs. Very often, the solving of one problem creates another.
- Adam Smith was the first thinker to outline in detail the characteristics and benefits of free-enterprise capitalism. Smith explained how self-interest and competition work together to advance the common good. He said the role of government in a free-market economy should be limited since natural controls (the invisible hand) serve to self-regulate the marketplace.
- Writing in the midst of the Industrial Revolution, Thomas Malthus warned that growth in economic production could not keep pace with population growth. Malthus argued that unless population was held in check by natural means, global famine would be inevitable. This bleak forecast earned economics the name “the dismal science.”
- David Ricardo explained the advantages of free trade and challenged the power of the aristocratic landlord class by questioning its contribution to society. His theories exposing class conflicts were hailed by the rising industrialist and merchant classes.
- Witnessing the exploitation of workers that accompanied the Industrial Revolution, Karl Marx founded an international workers’ movement intended to overthrow the corrupt ruling class of industrial capitalists and aristocratic landlords.
- John Maynard Keynes recognized the importance of government spending as a stimulant to combat economic downturns like the Great Depression. Keynes explained the importance of investor confidence and investment spending in maintaining high employment levels.
- John Kenneth Galbraith criticized post-1950 US capitalism for neglecting the public good. By arguing in favour of shifting national production to public priorities serving the common good, he helped give capitalism a social conscience. He proposed that, in a world of international corporations, increased government involvement and regulation of the economy would help improve society.
- In contrast to Galbraith, Milton Friedman argued against government intervention in the free-market economy, believing that government intervention resulted in price inflation and increased public debt. Friedman advocated that the most effective way for government to influence the economy is by regulating the supply of money in circulation (monetarism).
- Some economic goals conflict with one another, and some theories need to be rethought in light of changing times.



## Key Terms



physiocrat  
 laissez-faire  
 mercantilism  
 protectionist  
 tariff  
 Industrial Revolution  
 self-interest  
 invisible hand  
 division of labour  
 law of accumulation  
 law of population  
 geometrical progression  
 arithmetical progression  
 positive check  
 preventive check  
 Corn Laws  
 absolute advantage  
 comparative advantage  
 bourgeoisie  
 proletariat  
 labour value  
 surplus value  
 monetarist  
 hypothesis

## Activities

### Thinking/Inquiry

1. Keynes once wrote that economic slumps and depressions were the result of “upsetting the delicate balance of spontaneous optimism.” Explain the significance of the data presented in Figure 3.3 (page 60) relative to investor, consumer, and government confidence in Canada between 1929 and 1933.
2. Use the Internet to research one of the following contemporary Canadian economists. Outline the specific contributions she has made to the advancement of economic thought.

- Nuala Beck
- Dian Cohen
- Sherry Cooper
- Judith Maxwell
- Sylvia Ostry

Organize your report to resemble one of the profiles in this chapter. Illustrate your report with relevant photos, tables, or graphs.

3. Outline the social and political implications of shifting from Galbraith’s model of capitalism to Friedman’s model. Which model do you favour? Explain your choice.
4. a) Do you think Marx would have agreed with Smith that self-interest is the major motivator in a capitalist economy? Explain.  
b) What differences are there in the way that Marx and Smith viewed self-interest?
5. Compare Ricardo’s “iron law of wages” with the “reserve army of the unemployed” described by Marx. Who did each thinker identify as the principal hero and villain in society?

## Communication

6. “Working from within, Galbraith has attempted to give capitalism a social conscience.” Prepare a reasoned argument to defend or refute this statement.
7. In order to organize what you have learned about the economic thinkers presented in this chapter, create a study guide in the form of a summary chart.

## Application

8. Compare Friedman’s view on the best way to stimulate the economy with that of Keynes. Whose views do you think are most correct? Explain why.
9. Use the theories of Malthus to prepare a reasoned argument that supports or challenges additional research into the mass production of genetically modified foods.



## Unit 1 Performance Task: Building from a Solid Foundation

*For centuries, economists have worked to clarify complex realities, explain human behaviour, and illuminate responsible decision making. Now that you have completed the foundational learning activities in this first unit of study, your challenge is to put the*

*knowledge and skills you have acquired to effective use. This performance task presents you with a realistic challenge, very much like the work presently being carried out by many Canadians with a background in economics or related fields.*

### Your Task

You are the manager of human resources for Acme Corporation, a young and growing Canadian firm specializing in the manufacture of computer parts. Acme is interested in expanding its successful operations beyond Canada. In order to achieve this goal, its board of directors has set the following performance target.

#### Performance Target

In order to position itself so that it can compete favourably in the global marketplace, Acme Corporation must generate efficiencies in all departments, leading to a 20 per cent increase in corporate productivity within three years.

The board of directors is divided with regard to the best course of action for achieving this target. The following four options have been identified: (i) requiring all employees to work ten hours longer per week while freezing wages and salaries at current levels; (ii) reinvesting a portion of corporate profits to fund ongoing employee training; (iii) paying employees in ownership shares in the company, instead of money, for all overtime work; (iv) starting a profit-sharing plan to reward all employees for reaching productivity targets and for their direct contribution to higher profits for the firm.

As manager of human resources, you are required to prepare a report to the board of directors that weighs the costs and benefits of each proposed option and makes a specific recommendation regarding the most appropriate course of action. Your report can be either a written report, documenting a thorough analysis and persuasive argument, or an oral report, visually supported by PowerPoint slides.

### Task Steps and Requirements

1. Review all the work you have done in this unit to refresh your understanding of related concepts and skills.
2. Select a decision-making process or a model that includes the analysis of costs and benefits in order to make a decision.
3. In preparing your report, be sure to include the economic concepts, principles, and theories most appropriate to your analysis and most useful in supporting your recommendation.
4. Also include the theories of the economic thinkers profiled in Chapter 3 that best support your analysis and recommendation.
5. Strive for high-quality content, thoroughness of detail, and a persuasive argument.

### Adapting the Task

Discuss the selection of a format (oral or written) for your report with your teacher. Keep the language appropriate for the intended audience. Share drafts with your teacher, classmates, and parents or guardians in order to obtain useful feedback.

### Assessment Criteria

The following criteria will be used to assess your work:

- *Knowledge*—accurately using economic concepts, principles, and theories as well as references to great economic thinkers
- *Thinking and Inquiry*—using sound economic reasoning and thorough analysis; using a decision-making model effectively
- *Communication*—presenting economic information and analysis clearly and accurately, in an appropriate format and style
- *Application*—presenting a persuasive argument to inform decision making



# UNIT 2

## MICROECONOMICS: UNDERSTANDING THE CANADIAN MARKET ECONOMY



When buying and selling goods and services, consumers and producers act in their own self-interest, yet they are interdependent in terms of the outcome of their decisions. How are the basic economic questions answered in the Canadian economy?

### Unit Overview

In Unit 1, we learned how economics is the social science that studies scarcity and how our society is forced to make choices in order to satisfy our wants and needs. We also learned about the three fundamental economic questions that must be answered by an economic system. In Unit 2, we shall explore how these questions are answered in individual markets. How are prices set? How much of a good should a producer make? Should a producer use labour-intensive or capital good-intensive methods?

Some answers seem relatively intuitive. Who hasn't wanted tickets to a popular concert or sporting event and then discovered that the event is sold out? Yet, in spite of this circumstance, why can you still buy tickets from ticket brokers (more commonly known as "scalpers"), but at much higher prices? The shortage of tickets has led to higher prices because some consumers are willing to pay much more than the face value of the ticket. Other answers are much more complex.

We'll explore the factors that influence consumer and producer decisions in individual markets. We'll also identify different types of business organization and learn how these organizations finance their operations. Finally, we'll look at the market for labour and the factors that you, as a student planning to enter the workforce in the next few years, need to consider.



## Learning Goals

### In this unit, you will

- apply the cost–benefit method of inquiry to current economic issues in order to evaluate choices,
- use the economic model of supply and demand to analyze choices, forecast economic change, and explore economic issues,
- compare the different types of business organization and markets in Canada’s economy,
- explain how the self-interest of buyers and sellers in a competitive market guides the use of scarce resources in such a way that both are satisfied,
- describe the factors that influence the labour resource market in Canada,
- evaluate the effectiveness of government legislation designed to enhance the economic security of Canadians,
- explain the nature and importance of productivity and efficiency in the economy and the methods that producers use to finance production and expansion,
- explain, using concepts of marginal analysis, how different stakeholders determine what economic choice is in their own best interest,
- illustrate how the self-interest of one group of stakeholders may conflict with that of another and prevent the achievement of economic goals,
- illustrate the interdependence of buyers and sellers in markets by describing how a change in demand or supply affects price and quantity sold in one market and how that in turn affects the self-interest and decisions of stakeholders in other markets.

## Skill Builder

### Thinking Like an Economist

In this unit, you can develop some of the skills that economists use. These include

- understanding the cause-and-effect relationship between two factors by assuming that all other factors that might affect this relationship remain constant,
- using the concept of elasticity and supply and demand curve analysis to explain the impact of events on both producers and consumers,
- detecting patterns in data to explain economic relationships,
- calculating the costs of production alternatives,
- maximizing profit in different market structures,
- analyzing a public policy issue.

## Unit Performance Task

The activity at the end of this unit provides a focused opportunity for you to

- assume the role of an in-house economist and conduct a cost–benefit analysis on a particular economic decision or proposal,
- research appropriate information related to your topic,
- apply the concepts, principles, and terminology related to microeconomics that are explored in this unit, and
- present your conclusions in a persuasively argued report.



# CHAPTER 4

## DEMAND AND SUPPLY

### The Baseball Market Game

How good a buyer or seller are you? Not only will this game give you a chance to test your bargaining skills, but it will also introduce you to the concepts of demand and supply. The commodity being bought and sold is baseballs.

Divide the class evenly into sellers and buyers. Use name tags to identify each person as a seller or a buyer.

Prepare six separate sets of cards. For each set, mark the cards with a different phrase: seller at \$15, seller at \$13, seller at \$11, buyer at \$15, buyer at \$13, buyer at \$11. (So, for example, all the cards in the first set will read “seller at \$15.”) Be sure there are extra cards in each set as there are multiple rounds.

Shuffle the cards thoroughly. Randomly distribute the cards marked “seller” among the sellers group and the cards marked “buyer” among the buyers group. Each seller/buyer receives one card.

Each buyer must try to bargain with a seller to buy a baseball for not more than the amount on the “buyer” card; each seller must try to sell a baseball for no less than the amount on the “seller” card. Each round lasts about seven minutes.

When a successful transaction has been made, both buyer and seller must individually record the exchange on a transaction sheet (see Figure 4.1) and report it to the teacher or chosen student recorder. The buyer and seller then each pick up another card.

After several rounds, all buyers and sellers total their own transactions, and the top sellers and buyers are determined.

Transaction	Price on Card	Price Paid	Gains	Losses
Buy	\$15	\$13	\$2	—

Figure 4.1 A sample transaction sheet.

### QUESTIONS

- a) Copy the chart below into your notebook, adding a row for each relevant price level.

Quantity Bought (demanded)	Price	Quantity Sold (supplied)

- b) Refer to all the buyers' and sellers' transaction sheets. On your chart, fill in the cumulative quantities bought and sold at each price. For example, if three people bought baseballs at \$15 and five people bought them at \$13, the three people who paid \$15 would willingly pay \$13 or less. Thus, the quantity demanded at \$13 is  $5 + 3 = 8$  people. Similarly, if three sellers sold baseballs at \$11, and five sellers sold them at \$13, the three sellers would willingly sell at \$13 or more. Thus, the quantity supplied at \$13 is  $5 + 3 = 8$  people.
- c) Does there appear to be one price at which most baseballs are demanded and supplied? If so, what is it?

### Chapter Goals

By the end of this chapter, you will be able to

- understand the meaning of demand and supply,
- read and construct your own demand and supply graphs,
- understand how prices are set by the forces of demand and supply,
- predict why prices for particular goods or services might change.



## The Market

If we had to choose one aspect of our economic system to identify as its most fundamental and characteristic trait, it would probably be the operation of a market. There is an important distinction to make here between an *economy* on the one hand and a *market* on the other. These terms are often confused in popular thinking. The term **market** has four distinct, but related, meanings, none of which coincide with our definition of an economy:

- A market can be a physical place where a product is bought and sold. A market in this sense can range from your corner convenience store to the Toronto Stock Exchange.
- The term *market* can also be used in a collective sense to refer to all the buyers and sellers of a particular good or service. For example, we talk about the global market for a commodity such as copper.
- A market can be the demand that exists for a particular product or service. For example, a newspaper article may describe the market for used cars as being sluggish.
- The term *market* can also describe the process by which a buyer and seller arrive at a mutually acceptable price and quantity.

A market, then, can be a location, the network of buyers and sellers for a product, the demand for a product, or a price-determination process. As we saw in Chapter 1, an economy includes all these things and more. It is important to be aware of the differences in meaning between each term.

The question that we now have to ask is this: Who determines what the *price* will be for the various goods and services in a market? The answer is that the market itself determines price by matching buyers and sellers of a particular product or service. Buyers, for the most part, want the price to be as low as possible, while sellers want it to be high. Often, they agree on a price that is somewhere in the middle, but there can be wide fluctuations in the price paid for any product or service. What accounts for the rise and fall of prices in a free market? In this chapter, we will answer this question by examining the most important

concept in economic theory: demand and supply.

## Examining Demand

We can define **demand** as the quantity of a good or service that buyers will purchase at various prices during a given period of time. It is important to understand when it can be said that a person actually has a demand for a certain product—using *demand* in its economic sense.

Picture the following scenario. While walking through a mall, you stop outside the window of a shoe store. Two different pairs of shoes grab your attention. The first is a beautiful pair, made of highly polished leather and showing every sign of craftsmanship. You like these shoes very much but are appalled at the price tag: \$300! The second pair of shoes is not as pleasing to the eye as the first. The shoes are made from a lower grade of leather and are not nearly as stylish as the first pair. Nevertheless, they are solidly constructed and comfortable, and the price of \$80 is more in line with what you can afford. This is the pair of shoes you actually buy; economists would say you have a “demand” for these shoes.

Whether or not you have a demand for a particular product depends on two factors. One is located in your head or heart, the other in your wallet. In other words, demand exists only for those goods that you both want and can afford to buy. If you have both the desire and the financial resources then it is likely you will make the purchase.

Common sense teaches us another important lesson about demand: The quantity of a product that a consumer will purchase depends on its price. Generally speaking, the higher the price of a product, the less it will be purchased; the lower the price, the more it will be purchased. The trained economist uses more formal language to express the same idea, which is referred to as the **law of demand**:

*The quantity demanded varies inversely with price, as long as other things do not change.*

But why do consumers buy more of a product when the price falls and less of it when the



price rises? There are two reasons to account for this circumstance: the substitution effect and the income effect. First, as the price of a particular good rises, we tend to *substitute* similar goods for it, if possible. If, for example, the price of a name-brand soft drink rises, many consumers will stop buying that brand and buy cheaper no-name brands instead. They will substitute one product for another when the price of the first product rises past a certain point. Conversely, if the price of the name-brand soda falls, consumers will start to substitute the name-brand for the no-name soda, thereby increasing the quantity demanded of the name-brand type.

The second reason involves *income*. Continuing with our example, as the price of the name-brand soda falls, say from \$5 to \$4 a case,

buyers can buy the same amount of soda for a lower price. The money they save on a case actually represents \$1 in extra income. Some buyers will choose to buy another six-pack of soda with that dollar, thus increasing the quantity demanded. Conversely, when the price of the soda rises again, buyers must pay more to receive the same amount. As a result, their real income has declined. Many of them will buy less soda, thereby decreasing the quantity demanded.

### A demand schedule

One method of portraying the relationship between price and quantity demanded for a particular product is a **demand schedule**. This is a numerical tabulation, usually organized into a table, of the quantities demanded at selected prices. Figure 4.2 shows a typical



### Ceteris Paribus

In our discussion of demand, we want to find out what happens to quantity demanded if price—and only price—changes. We do not take into account other factors, such as the number of buyers, that might affect quantity demanded. When economists want to understand the cause-and-effect relationship between two factors, they must make the assumption that all other factors that might affect this relationship remain constant. This assumption is known as *ceteris paribus*, a Latin term meaning “other things being equal” or, as we have stated it, “as long as other things do not change.”

As an example, let's suppose a retail business discovers that when the price of a certain product increases, people buy more of it, not less. This seems to contradict the law of demand. However, economists would point out that several other factors outside of price are probably responsible for the increase in sales. (It is possible the number of buyers has increased or consumer tastes for

this product have changed.) When economists examine the relationship between the price of the product and the quantity demanded, they hold constant these other external factors. Economists find that, for almost all products, price and quantity demanded are inversely related when “other things remain constant.”

### QUESTIONS

1. Consider the following comment: “It's easy to see why the bagel store is doing well; it's an attractive place, its prices are competitive, it doesn't have much competition, and there's a new office building nearby.”
  - a) How many demand factors are cited here to explain the store's success?
  - b) Which one(s) would economists want to hold constant? Which one(s) would they vary in order to determine the quantities of bagels the store could sell?



If the price of T-shirts were . . .	The consumer would buy in a given time period (quantity demanded) . . .
\$20	4 T-shirts
\$24	3 T-shirts
\$28	2 T-shirts
\$32	1 T-shirt
\$36	0 T-shirts

**Figure 4.2** An individual consumer's demand schedule for T-shirts over a six-month period.

demand schedule that calculates consumer demand for T-shirts.

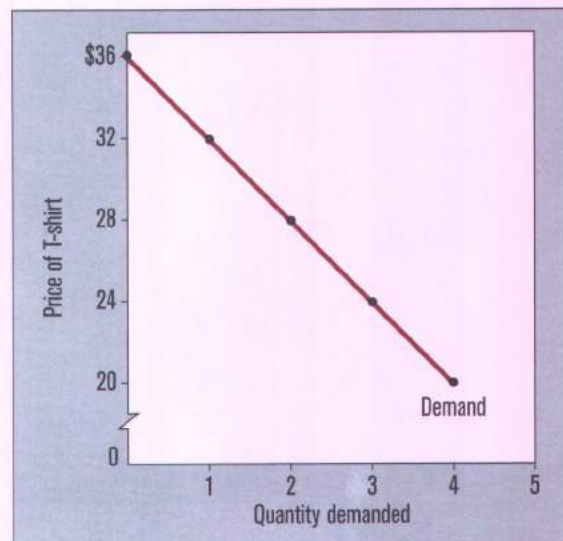
Here we should note that there is an important distinction to be made between the terms *demand* and *quantity demanded*. *Quantity demanded* refers to one relationship that is determined by price. So, if we were to compare the quantities demanded when T-shirts are \$24 to when they are \$28, we would say that the *quantity demanded* has fallen by one. We do not say that the *demand* has fallen by one because the demand for T-shirts by this consumer is represented by the entire schedule of price–quantity relationships shown in Figure 4.2.

We can see from Figure 4.3 that, on a graph, price is measured on the vertical axis, while quantity demanded is measured on the horizontal axis. (This way of constructing a graph has become a standard practice in economics.) The points are then plotted on the graph and joined together. The resulting line, called a **demand curve** even if it is a straight line, runs downward from top left to bottom right. It runs in this direction for the reason we mentioned earlier: people buy less at higher prices (top left on the graph) and more at lower prices (bottom right). This inverse relationship between price and quantity demanded holds for the majority of goods we buy.

### Market demand

Up to this point, we have discussed the demand for T-shirts by an individual consumer. This is not, however, the way the market

demand for goods is decided. It is the buying habits of thousands of consumers that decide the demand for most goods. The sum total of all the consumer demands for a product is called the **market demand schedule**. As an example, let's suppose there are four consumers with different demands for T-shirts. By examining Figure 4.4 (page 76), we can see that the market demand is the total of each of the individual demands of the four buyers at each price level. Figure 4.5 (page 76) illustrates the resulting demand curve for this T-shirt market.



**Figure 4.3** One person's demand curve for T-shirts over a six-month period.



Price of T-shirt	Buyer 1	Buyer 2	Buyer 3	Buyer 4	Total Quantity Demanded
\$20	4	3	5	4	16
\$24	3	2	4	3	12
\$28	2	1	3	2	8
\$32	1	0	2	1	4
\$36	0	0	0	0	0

Figure 4.4 The market demand schedule for T-shirts.

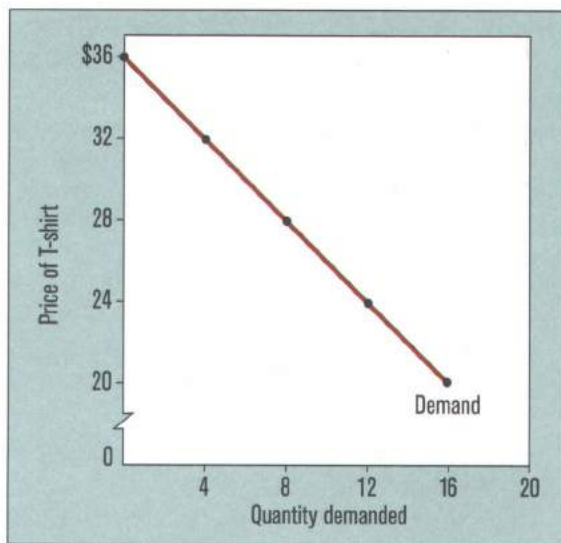


Figure 4.5 The market demand curve for T-shirts.

## Examining Supply

Now let's turn our attention away from the consumers' side of the market to the sellers', or suppliers', side. **Supply** is defined as the quantities that sellers will offer for sale at various prices during a given period of time. Like consumers, suppliers react to price changes but in a completely opposite way; that is, as price rises, they want to supply more, while consumers, as we learned, want to purchase less. Why is this so?

Sellers are in business to make a profit. If their costs of doing business remain un-

changed, their profits will increase as the price of their product rises. Consequently, they want to supply more of their product at higher prices because they can make more money this way. If prices slip, sellers prefer to supply less of their product because their profits will fall. Thus, we arrive at the **law of supply**:

*The quantity supplied will increase if price increases and fall if price falls, as long as other things do not change.*

In contrast to demand, where there is an *inverse* relationship between price and quantity demanded, quantity supplied is *directly* related to price.

## A supply schedule

We can get a better idea of the relationship between quantity supplied and price by examining the **supply schedule** for a street vendor of T-shirts displayed in Figure 4.6.

The T-shirt seller's supply schedule has been plotted on the graph in Figure 4.7. By examining this graph, we can see that the same conventions in measuring price and quantity in the demand curve graph (see Figure 4.5) apply here as well. We measure price on the vertical axis and quantity on the horizontal axis. However, the curve is quite different in this case. When the supply figures are plotted on the graph and the points are joined, the supply curve reaches from the bottom left of the graph to the top right. This type of curve illustrates our previous statement that suppliers



If the price of T-shirts were . . .	The seller would like to sell* in a given time period (quantity supplied) . . .
\$20	0 T-shirts
\$24	4 T-shirts
\$28	8 T-shirts
\$32	12 T-shirts
\$36	16 T-shirts

\*The phrase *like to sell* emphasizes the point that “quantity supplied” does not indicate the number of T-shirts the seller will actually sell; rather, it indicates the maximum number the seller is willing to sell at each price. Smaller quantities, but not larger ones, could be sold at any given price.

Figure 4.6 A supply schedule for T-shirts.

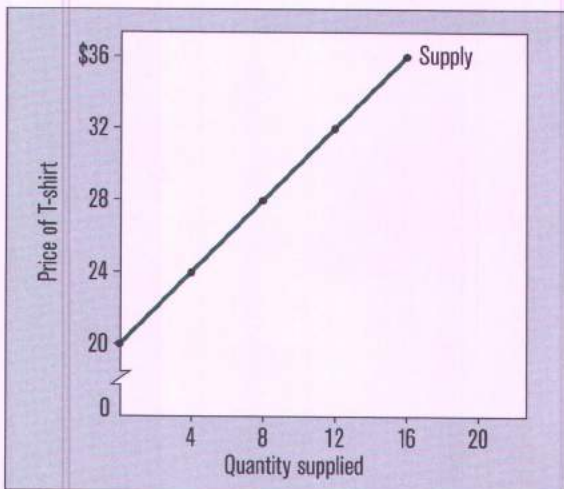


Figure 4.7 The supply curve for one seller of T-shirts.

supply less at lower prices (bottom left) and steadily increase the quantity supplied as prices increase (top right).

### Supply and quantity supplied

As with demand and quantity demanded, there is a distinction to be made between the terms *supply* and *quantity supplied*. The word *supply* refers to the whole series of price and quantity relationships, as shown in our T-shirt supply schedule. *Quantity supplied* refers to one relationship that is determined by price. Thus, if we were to compare the quantities supplied when T-shirts are \$24 to when they are \$28, we would say that *quantity supplied* rose by four T-shirts, not that *supply* increased by four.

## Check Your

### Understanding

1. What is the difference between a *market* and an *economy*?
2. According to the two criteria necessary for demand to exist, determine whether you personally have a demand for the following goods and services:
  - a luxury car      • a hammer
  - a pizza            • a post-secondary education
  - a computer
3. a) Suppose the price of milk falls. What will happen to quantity demanded? Which of the two reasons, income or substitution, do you think best explains the change in quantity demanded? Why?
  - b) Suppose the price of a brand of orange juice falls. Which of the two reasons, income or substitution, do you think best explains the change in quantity demanded? Why?
4. Explain why a supply curve normally rises from the bottom left to the top right on a graph.



## Market Equilibrium

At this point, we have all the tools we need to examine how the actual prices we pay for an item are determined. You have probably guessed by now that, in the real world, the prices that consumers pay and sellers receive are determined by the interaction of demand and supply. If we combine our two schedules for T-shirts, we can see how this occurs.

By examining Figure 4.8, we can see that only at \$28 does the quantity demanded equal the quantity supplied. When the price is set lower than \$28, the quantity demanded will exceed the quantity supplied, and a shortage will occur. For example, if the price is set at \$24, then 12 T-shirts will be demanded, but the seller will supply only four, creating a shortage of eight shirts. In this situation, the seller will then raise the price since the shirts are selling so quickly. The question is this: To what level should the price be raised? Suppose the seller raises the price to \$32. The seller wants to sell 12 shirts, but buyers are only willing to purchase four. Now there is a surplus of eight shirts, and the seller will have to lower the price to persuade consumers to buy. The price of \$28 is the only price where no shortage or surplus occurs. Economists define this price as the **equilibrium price** because there is no tendency for it to change. It is the only acceptable compromise between consumers who want the lowest prices possible and sellers who want the highest.

Price of T-shirt	Total Quantity Demanded	Quantity Supplied
\$20	16	0
\$24	12	4
\$28	8	8
\$32	4	12
\$36	0	16

Figure 4.8 The market for T-shirts.

## A Demand and Supply Graph

We can easily combine both demand and supply figures in one graph by referring to the table in Figure 4.8. In Figure 4.9a, we see that the demand curve crosses the supply curve at exactly \$28, which we have identified as our equilibrium price. Suppose we wanted to use this graph to indicate what would happen if the selling price were set above the equilibrium price. In Figure 4.9b, a horizontal dashed line is drawn across the graph from the \$32 point on the vertical axis. Then vertical lines are drawn downward from the points at which the horizontal line intersects the demand and supply curves. These vertical lines provide us with a pictorial representation of the information in Figure 4.8: at a price of \$32, there will be a demand for four T-shirts and a supply of 12 T-shirts. In other words, a price of \$32 will result in a surplus of eight T-shirts.

In Figure 4.9c, we see the opposite situation illustrated, that is, what happens when the selling price is set *below* the equilibrium price. Here, a horizontal dashed line drawn from the \$24 point on the vertical axis will intersect the demand and supply curves in such a way as to indicate a shortage of eight T-shirts. By studying these graphs, we can draw the following general conclusion:

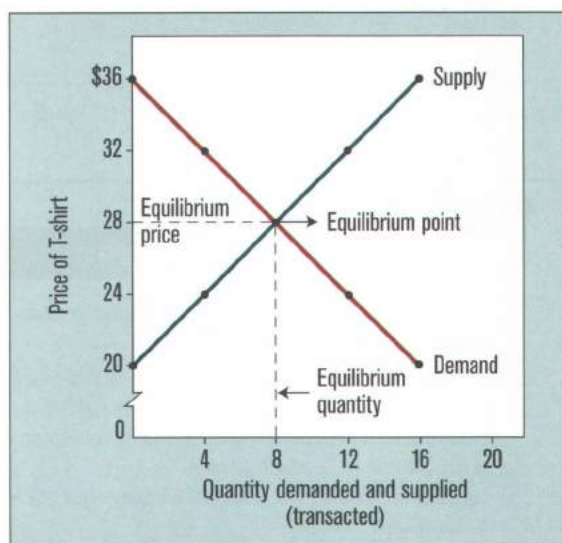


Figure 4.9a Price at equilibrium.



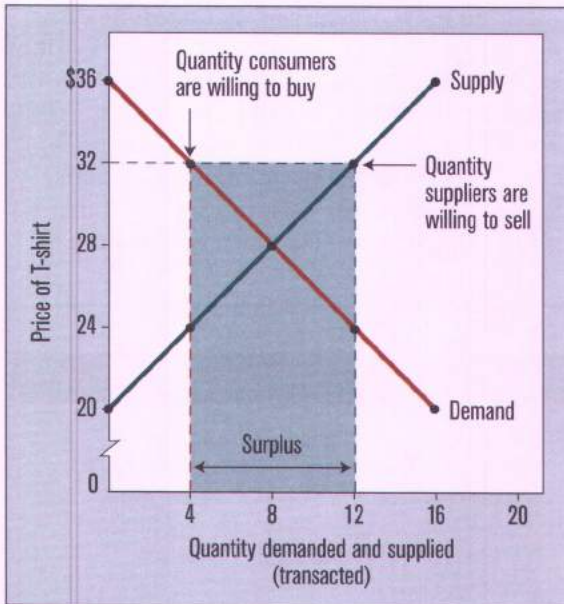


Figure 4.9b Price above equilibrium.

*A price above equilibrium will result in a surplus of goods, while a price below equilibrium will result in a shortage of goods, as long as other things do not change.*

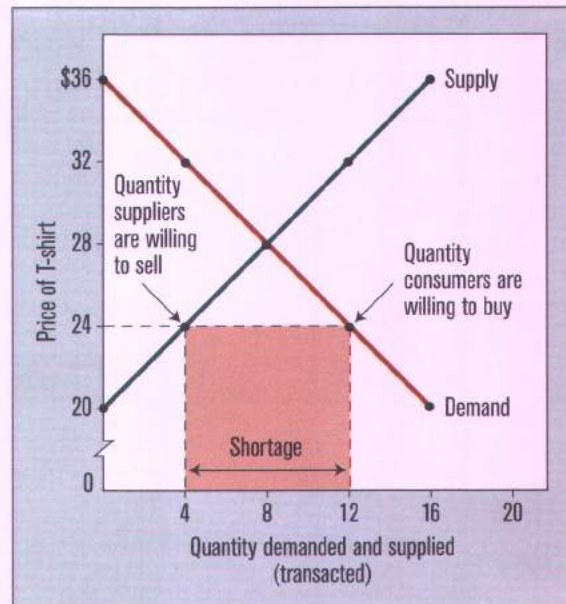


Figure 4.9c Price below equilibrium.

In our example on pages 75 and 76, we constructed a sample market of four buyers and one seller. It is worth noting that, in the real world, where markets can consist of thousands

## PRIMARY SOURCE

### Which Is More Important: Demand or Supply?

Someone once asked the 19th-century British economist Alfred Marshall whether demand or supply was more important in determining price. Can you understand his reply?

*We might as reasonably dispute whether it is the upper or the under blade of a pair of scissors that cuts a piece of paper. . . . It is true that when one blade is held still, and the cutting is effected by moving the other, we may say . . . that the cutting is done by the second; but the statement is not strictly accurate, and is to be excused only so long as it claims to be merely a popular and not strictly scientific account of what happens.*

Source: A. Marshall, *Principles of Economics* (New York: Macmillan, 1948), 102.

#### QUESTIONS

1. What do the two blades of the scissors represent?
2. Which of the two blades do you think is more active in each of the following markets?
  - a) the market for a particular musical group
  - b) the market for oranges
  - c) the market for automobiles



or millions of buyers and sellers, the laws of demand and supply operate in the same way as we have seen them operate on a small scale. A price set *below* equilibrium by the sellers will mean that there are many frustrated customers who are unable to purchase the item in question. Some of these customers will start to offer more than the stated price. As they try

to outbid each other, they will have the effect of forcing the price to rise. In contrast, a price set *above* equilibrium will result in many unsold goods. In this case, the sellers will try to undercut each other by lowering their price. This process will continue until the quantity demanded equals the quantity supplied, that is, until the market reaches price equilibrium.

## Check Your

### Understanding

- Copy Figure 4.10 (below) into your notebook and fill in the Surplus/Shortage column. What is the equilibrium price?
  - Draw a demand and supply graph for this information. Shade in the area that represents a surplus in this market and the area that represents a shortage when market prices of \$1.80 and \$1.00 are considered.
- Economists are not generally supportive of governments interfering in markets in order to set prices. Using the example in question 1, explain what undesirable results might occur if the school simply declared a price for cafeteria foods.

Price	Quantity Demanded	Quantity Supplied	Surplus/Shortage
\$2.00	100	190	
\$1.80	120	180	
\$1.60	140	170	
\$1.40	160	160	
\$1.20	180	150	
\$1.00	200	140	
\$0.80	220	130	

Figure 4.10 Demand and supply for hot dogs in a school cafeteria.

## Changes in Demand and Supply

Up to this point, we have assumed that “other things do not change” in our discussion of demand and supply. These “other things” are all various **non-price factors** that we have so far held constant in constructing our demand and supply curves. We emphasized that the *quantity demanded* and the *quantity supplied* changed

only because price changed. We saw on the graphs in Figures 4.5 and 4.7 (pages 76 and 77) that these changes are represented by movements *along* the curves. Now we shall see that changes in non-price factors cause the *whole curve to shift*, by affecting a product’s *demand* or *supply* as opposed to its quantity demanded or quantity supplied. This distinction between movements along a curve and a shift in the



Price of T-shirt	Old Quantity Demanded	New Quantity Demanded	Quantity Supplied
\$20	16	20	0
\$24	12	16	4
\$28	8	12	8
\$32	4	8	12
\$36	0	4	16

**Figure 4.11** An increase in demand for T-shirts.

whole curve is one of the most important distinctions in the entire field of economics. Before proceeding further, it is crucial that we understand this concept and the way it hinges on the distinction between demand and supply on the one hand and quantity demanded and quantity supplied on the other.

### Changes in Demand

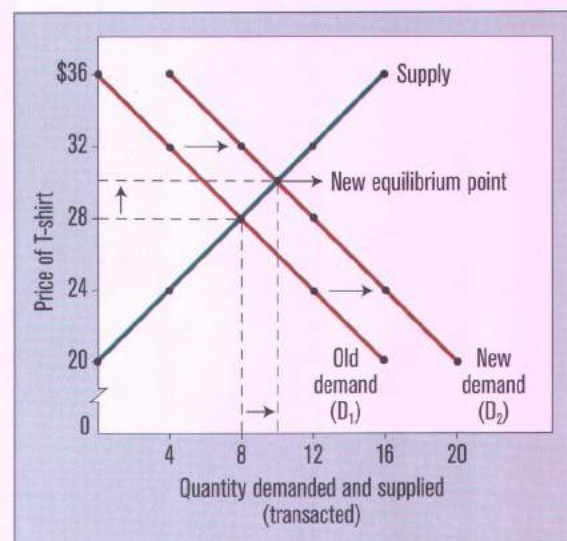
There are five basic changes that can take place in customer demand for a product. Any one of these changes can have the effect of causing the whole demand curve to shift its position on the graph. Let's consider each of these changes in turn.

#### Income

Staying with our sample T-shirt market, let's consider what would happen if the incomes of the four potential buyers increased substantially. With more income at their disposal, they might be willing to buy more T-shirts at whatever the prevailing market price is. The schedule in Figure 4.11 shows the result of this increase in buying power, and we can see that quantities demanded increase at all prices. Figure 4.12 shows the new demand curve in relation to the old one. It is easy to see that the increase in demand shifts the whole demand curve upward and to the right. Since the new quantity demanded at the old equilibrium price of \$28 now exceeds the quantity supplied (by four), the equilibrium price must shift upward. It moves to \$30, where quantity supplied is ten. This increase in income has increased the equilibrium price for T-shirts by \$2.

#### Population

Similar to an increase in incomes, an increase in the number of consumers should translate into an increase in demand, shifting the demand curve to the right with the same increase in equilibrium price. Similarly, a decrease in the number of consumers should have the opposite effect, shifting the demand curve to the left and causing equilibrium prices to fall. Many businesses carefully monitor **demographics**, population statistics that show changes in age, income, and overall numbers. In this way, they hope to determine whether or not the demand for their product is increasing.



**Figure 4.12** An increase in demand for T-shirts.



# Case Study

## The Boomers

The “baby boomers” are the best-known demographic group in North America. They belong to the generation of people who were born between 1946 to 1966—possibly your parents’ generation. Many of these individuals came from families that were considered large by contemporary standards: the average number of children per family during this 20-year period was 3.9.

In 1996, the boomers, numbering 9.8 million, comprised 33 per cent of Canada’s population. This number included immigrants of comparable age who came to Canada during that 20-year baby boom. Today, the boomers are middle-aged—moving into their 40s and 50s—and possibly thinking of retirement.

Although the boomers’ families are smaller on average, their numbers still produced a mini-baby boom between 1980 and 1995. This generation is known as the “baby boom echo,” or the “echo boomers.” You might well be one of the echo generation, whose population totalled 6.9 million in 1996.

What impact do the boomers and echo boomers have on the economy? In his book *Boom, Bust, and Echo*, David Foot, a Canadian demographer and economist, explores how demographics can shape attitudes, beliefs, and, most importantly, actions. He sets out the following scenario: In 2000, the first of the echo generation, then aged 20, started to enter the labour market, perhaps moving out of their families’ home and setting up their own households. Over the next 20 years, they will want to purchase appliances, furniture, other household items, clothing, and cars. Since money is tight for these young people, retailers must offer low prices and discounts to attract this group of consumers. Many boomers, however, are well

established; their homes are furnished, and they may have paid off their mortgages. They are now ready to upgrade their homes and other belongings, and when they go shopping, they are looking for quality and service, not so much for low prices. Boomers are willing to pay more for goods and services that meet their immediate needs.

Foot predicts that those retailers who understand which demographic segment their goods appeal to will do well. Retailers who identify baby boomers as their major customers should emphasize quality and service rather than low prices. In contrast, retailers who want to attract the echo generation will succeed by stressing competitive prices. Foot believes that a business will prosper by choosing one group—not both—on which to focus its marketing strategy.

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### QUESTIONS

1. If Foot’s predictions are correct, which stores and businesses in your area will profit from the echo generation in the future? Explain why.
  2. Which of the following goods and services appeal mostly to the boomers? the echo generation? In each case, explain why.
    - a) cruise holidays
    - b) golf equipment
    - c) in-line skates
    - d) diet soft drinks
    - e) mountain bikes
    - f) cell phones
    - g) fast food
    - h) supplementary vitamins
    - i) financial planning
-



### Tastes and preferences

Changes in taste for a product cause increases or decreases in demand for it. Several years ago, several leading T-shirt manufacturers learned through market research that consumers wanted larger-sized T-shirts for a baggier look and more comfortable feel than the snug-fitting shirt that was then the norm. By switching production to baggier T-shirts, these companies were able to increase demand for their product. Companies can also use advertising to increase demand for a product. If they mount a successful advertising campaign, the demand curve will shift to the right.

Similarly, well-publicized medical reports on the dangers of high cholesterol have increased the demand for low-fat foods and decreased the demand for such foods as high-fat milk.

### Expectations

If consumers believe that the price of a particular product is going to rise in the future, they may decide to purchase it immediately, thereby increasing the demand for the product. The price of housing is particularly sensitive to changes in **consumer expectations**. In the mid- to late 1980s, housing prices in Toronto and certain other Canadian urban centres rose rapidly. Consumer concern over the rising prices led many people to take on a heavy debt

load in order to purchase a house before prices shot up even higher. With so many people rushing to take out mortgages, the supply of houses could not keep up with the demand for them. Prices for even modest homes skyrocketed until, in 1990–1991, the combination of high interest rates and a national recession strangled the housing boom.

Thus, the demand curve for a particular product will shift to the right if consumer expectations lead people to believe that prices will increase in the future. Increased purchases by consumers create a self-fulfilling prophecy: prices start to rise almost immediately, driving the demand curve to the right. Conversely, if consumers expect the price for a product to fall in the future, they may delay purchasing that product, which will drive down the demand for it. In effect, consumers make the lower price of the future a reality in the present.

### Prices of substitute goods

Economists include price changes of **substitute goods** under the non-price factors that can cause the whole demand curve to shift. We saw earlier in this chapter that one reason quantity demanded falls for a product as its price rises (a movement along the curve) is that people tend to substitute cheaper goods



**Figure 4.13** Digital cameras and the floppy disks used to store the photos are considered complement goods. Unlike substitute goods, a change in the price of a good will inversely affect demand for its complement.



for the more expensive product. Thus, quantity demanded for a name-brand soda falls after a price hike partly because more people are switching to the cheaper no-name brand.

But what would happen if the price of the no-name brand increased for some reason? It is still cheaper than the name-brand soda but not by as wide a margin. Many consumers will reason that the smaller savings are not worth the sacrifice in taste, and they will return to buying the name-brand soda. This will have the effect of increasing demand for the name-brand soda, thereby pushing its demand curve to the right.

Many other goods have substitutes of this sort, and wherever this is the case, the same rule applies. For example, butter and margarine can be substituted for each other. A price change for margarine will affect demand for butter; and a price change for butter will have a corresponding effect on demand for margarine.

Some goods are classified not as substitute goods but as **complement goods**. These are items that are sold together with other goods. Gasoline and automobiles are complements to each other, as are country club memberships and golf equipment. A fall in the price of either complement will increase demand for the other. If car prices fall, car buyers will have more money to spend on gasoline and will tend to drive more often and take longer trips. If the price per litre of gasoline goes down, consumers will reason that owning a car is more affordable, and car sales will then increase.

In summary, a change in the price of one product that can substitute for another will directly increase or decrease the demand for

the competing product, thereby shifting its demand curve one way or the other. A change in the price of a product that complements another will inversely increase or decrease the demand for the product that it complements, also shifting its demand curve.

## Changes in Supply

A shift of the whole supply curve can be caused by a number of factors. Here we will focus on the five major factors that can cause such a shift, considering each of them in turn. A change in any of these factors will cause the supply curve to move either to the right (to indicate an increase in supply) or to the left (to indicate a decrease in supply).

## Costs

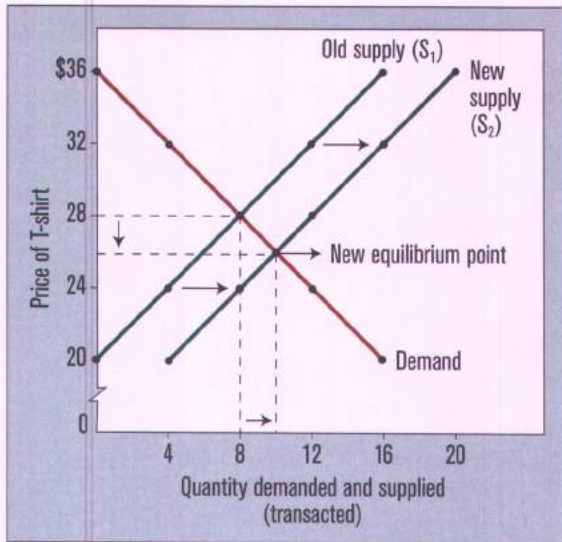
An increase or decrease in production costs will affect the quantities that sellers are willing to supply because a change in costs affects profits. Suppose the cost of cloth for shirt manufacturing falls, and the manufacturer passes on this saving to the retailer, in this case our T-shirt seller. Figure 4.14 shows how such a saving might translate into new quantities supplied at each price level, representing an overall change in supply.

The T-shirt seller's increase in supply is illustrated as a movement from  $S_1$  to  $S_2$  in Figure 4.15. Note that buyers will be happy with this increase in supply because it means that the equilibrium price will drop from \$28 to \$26 per shirt. On the other hand, note that an increase in manufacturing costs would result in a decrease in supply. This would be

Price of T-shirt	Quantity Demanded	Old Quantity Supplied	New Quantity Supplied
\$20	16	0	4
\$24	12	4	8
\$28	8	8	12
\$32	4	12	16
\$36	0	16	20

Figure 4.14 An increase in supply of T-shirts.





**Figure 4.15** An increase in supply of T-shirts.

illustrated by a movement of the curve to the left and a corresponding increase in the equilibrium price.

### Number of sellers

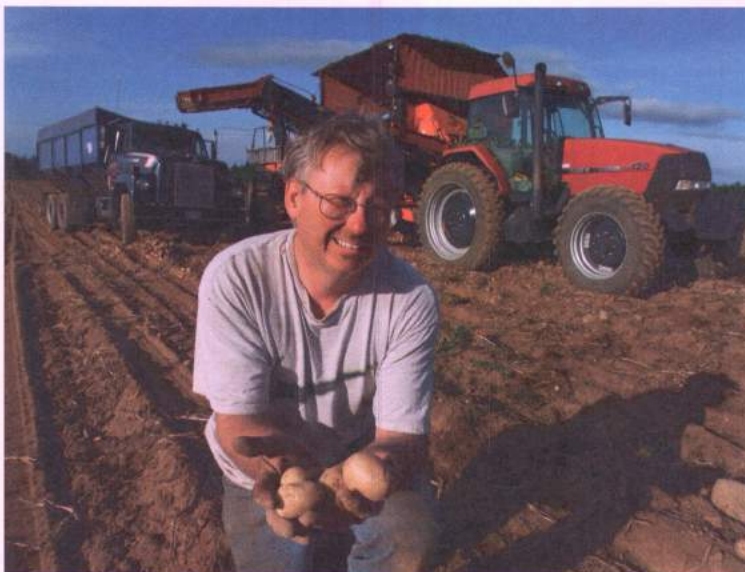
The number of sellers may have an effect on the amount of a product that is supplied in a

market. If the number of sellers declines, and if the remaining sellers do not increase their production, then the quantities supplied at any given price in that industry will decrease. This will have the effect of shifting the supply curve to the left. Alternatively, if the number of sellers increases for some reason, the quantity supplied at any given price will increase, shifting the supply curve to the right.

A good example of an increase in supply is the rental market for home videos. When videos first became available for rent in the early 1980s, there were very few suppliers. These suppliers often charged membership fees, and their rental costs were relatively high. Today, the number of rental outlets has increased enormously. In economic terms, what has happened to the supply of home videos and to the supply curve for this particular product?

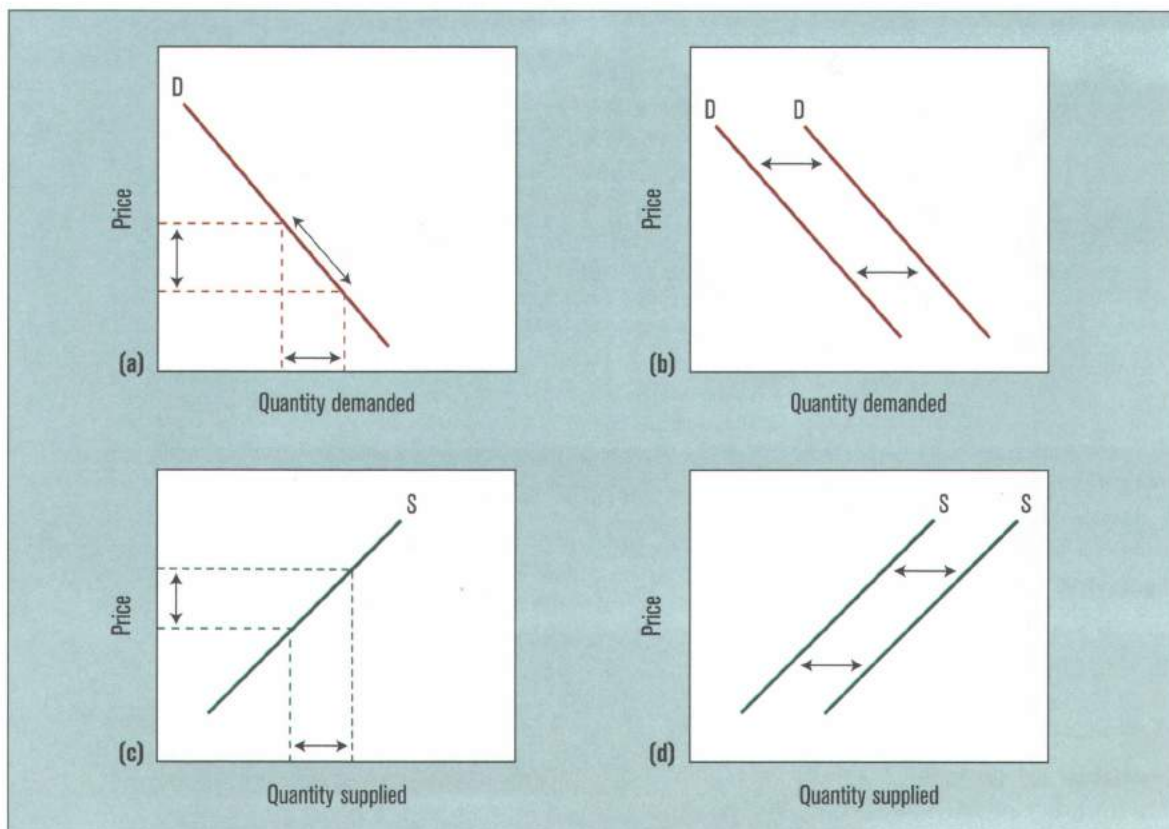
### Technology

An improvement in technology will decrease the cost of production, and this, in turn, will enable manufacturers to supply more of a product at any given price. The economic history of the 20th century is largely a story of



**Figure 4.16** Another element that can influence supply is nature and the environment. For example, a farmer displays a handful of potatoes on the fields of the family farm near Centreville, Nova Scotia. A five-year drought has forced many farmers in the Atlantic provinces to near bankruptcy.





**Figure 4.17** (a) A change in quantity demanded. A change in price causes a shift along the demand curve to show a change in the quantity demanded. (b) A change in demand. A non-price change causes the whole curve to shift. (c) A change in quantity supplied. A change in price causes a shift along the supply curve to show a change in the quantity supplied. (d) A change in supply. A non-price change causes the whole curve to shift.

technological progress of such magnitude that the manufacturing costs for almost every product we now buy has fallen. Robots, silicon chips, and improvements to the computerization of industry have all enabled manufacturers to increase the supply of their products, thereby shifting their supply curve to the right.

### Nature and the environment

Something as simple as a change in the weather can have an enormous impact on supplies of certain products. Drought, for instance, can dramatically decrease the quantities of crops that farmers can produce. Similarly, an environmental disaster such as the collapse of the Atlantic cod stock has decreased the quantity of cod supplied to fish retailers,

which, in turn, has driven up the price of this particular fish. This decrease in supply has shifted the supply curve for the Atlantic cod to the left.

### Prices of related outputs

The production of one item may affect the supply of another related item. Farmers may switch from growing oats to growing barley if the market price of barley rises. This, in turn, will reduce the supply of oats offered at any given price, shifting its supply curve to the left.

Figures 4.17a to 4.17d provide a neat, graphical summary of the way a movement along a demand or supply curve differs from a shift of the whole curve. Study these graphs carefully.



# CASE Study

## The Personal Computer

In 1984, one of the founders of Apple computers, Steve Jobs, predicted that personal computers would soon become as common a household item as toasters and coffee makers. His prediction was derided by the big computer companies, who built only large, expensive computers for business and government. Jobs, however, was proven right; today, around 50 per cent of North American households own a personal computer—a product that is continually evolving to become more powerful, easier to use, and much cheaper to purchase.

Computers have existed for more than half a century, but it was not until the development of the microprocessor chip in the 1960s that it became possible to build a small personal computer. Before the development of this chip, the transistors used in a computer had to be individually wired to each other—a system that was expensive and prone to breakdown. The chip eliminated these problems. It was a single, tiny piece of material (such as silicon) that first contained dozens, then hundreds, and, today, millions, of transistors. The need for expensive wiring was reduced, and, as a result, much smaller computers that operated more reliably were built.

Entrepreneurs immediately understood that the microprocessor chip would allow them to build a small computer for relatively little cost. Scores of small start-up personal computer companies sprang up in the 1970s. Consumers often had a bewildering range of choices in personal computers. The most successful of the new companies was started by Steve Jobs and

Steve Wozniak. Calling themselves “two guys in a garage,” they designed and marketed a personal computer called the Apple, which grew to dominate the personal computer market until 1981. That year, IBM finally launched its personal computer, along with software designed by a company outsider—Bill Gates, the founder of Microsoft.

The original IBM PC, with 16 KB of memory, was priced at US\$2495, similar to the cost of its rival Apple II. Through the 1980s and into the 1990s, the IBM PC and the Apple Macintosh competed vigorously, along with personal computers made by several other companies. Today, one can buy a personal computer for several hundred dollars. Computer technology promises even smaller, cheaper, and more powerful machines in the future.

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### QUESTIONS

1. In terms of demand and supply for personal computers, in which direction is the supply line moving? Illustrate your answer on a small free-hand graph. In a sentence or two, explain why the shift occurred and what the beneficial results are.
  2. a) As personal computers become more important in our daily lives, how is the market affected? Show this effect on the graph you drew for question 1.  
b) In the long run, which of the two curves do you believe will shift more? How will price be affected?
-



**Check Your****Understanding**

1. What effect will each of the following factors have on the demand for product X? Will demand increase or decrease in each case?
  - a) As a result of an imaginative advertising campaign, product X becomes more fashionable.
  - b) The people who buy product X find their incomes falling.
  - c) A new product Y is invented and is marketed as a cheaper substitute for product X.
  - d) Consumers of product X hear that its price will rise over the following month.
2. What effect will each of the following factors have on the supply of product X? Will supply increase or decrease in each case?
  - a) Makers of product X introduce a labour-saving technology in their factory.
  - b) As the result of a protracted strike, makers of product X find they have to pay higher wages to their workers.
  - c) The market price that makers receive for product X rises.
  - d) The federal government reduces business taxes.
  - e) Several makers of product X go bankrupt, leaving fewer companies to manufacture this product.
3. Which of the four possibilities—a change in quantity demanded, a change in quantity supplied, a shift in demand, or a shift in supply—do each of the following market situations illustrate?
  - a) The price of DVDs falls, and consumers buy more of them.
  - b) New techniques in steel manufacturing lower the costs of producing steel.
  - c) A recession lowers the disposable incomes of North American consumers, affecting consumption of high-end consumer goods.
  - d) Gold mining companies try to extract more gold from their mines as world gold prices rise.

## The Determination of Price

We are now in a position to analyze the way price is actually determined in a competitive market. By a competitive market, we mean a market that exhibits the following characteristics:

- It has many producers or sellers, with no single one large enough to dominate the market.
- It has many buyers, with no single one large enough to dictate price to sellers.
- Each seller's product is exactly the same as the others so that no seller can increase price based on having a higher-quality product than another seller.
- All sellers and buyers know what the prices and conditions are throughout the entire market, thereby eliminating the possibility of any price differences.

This kind of market is called **pure (or perfect) competition**. In a modern economy, it

is quite rare for all these conditions to be present in a particular market. Nevertheless, pure competition is an ideal or a model that economists use to compare and evaluate actual markets for the products and services bought and sold in Canada and in other countries that have free-market systems.

For purposes of instruction, let's analyze the coffee market in Canada. This comes as close as any other market to the model, and it shows us how changes in demand and supply, with their shifting curves, cause equilibrium prices to rise and fall.

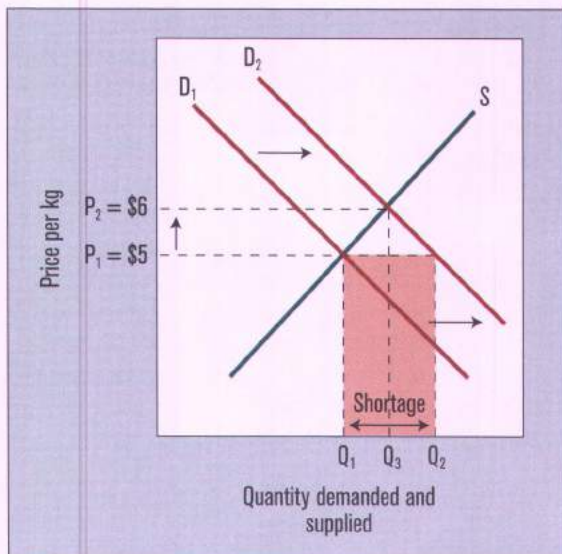
### The Coffee Market in Canada

- *An increase in demand will have the following effect:* Suppose retailers are used to paying a wholesale price of \$5 per kilogram for Colombian coffee. Then, in the 1990s, the spread of



coffee houses as social meeting places throughout North America increases the demand for Colombian coffee in Canada. In Figure 4.18a,  $D_1$  and  $S$  show coffee at the old equilibrium price of \$5 per kilogram.  $Q_1$  shows the quantities demanded and supplied at that price. The increase in demand to  $D_2$  causes an excess demand, or shortage,  $(Q_2 - Q_1)$  to occur. This excess demand will cause the price to rise to \$6 at  $P_2$ ; quantity demanded and supplied will be equal at  $Q_3$ . This new equilibrium price and quantity supplied eliminates the excess demand.

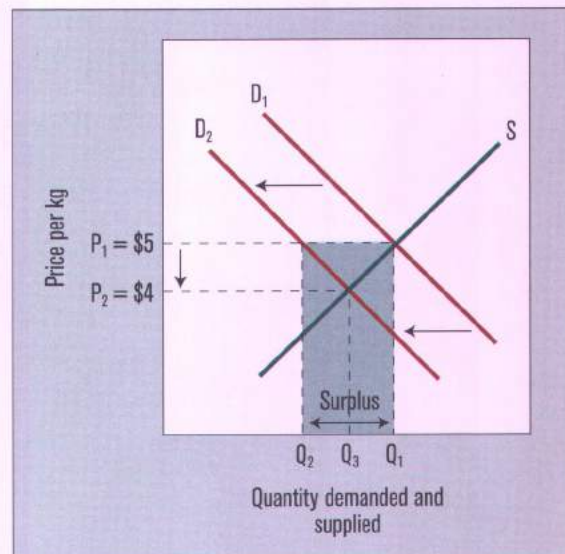
- *A decrease in demand will have the following effect:* Suppose a best-selling book raises health concerns about excessive caffeine intake. As a result, many Canadians cut back on the number of cups of coffee they drink per day and turn to other beverages. This reduces the demand for coffee in Canada. In Figure 4.18b,  $D_1$  and  $S$  show coffee at the old equilibrium price of \$5 per kilogram.  $Q_1$  indicates the quantities demanded and supplied at that price. The decrease in demand to  $D_2$  causes an excess in supply, or surplus,  $(Q_1 - Q_2)$  to



**Figure 4.18a** An increase in demand in the coffee market.

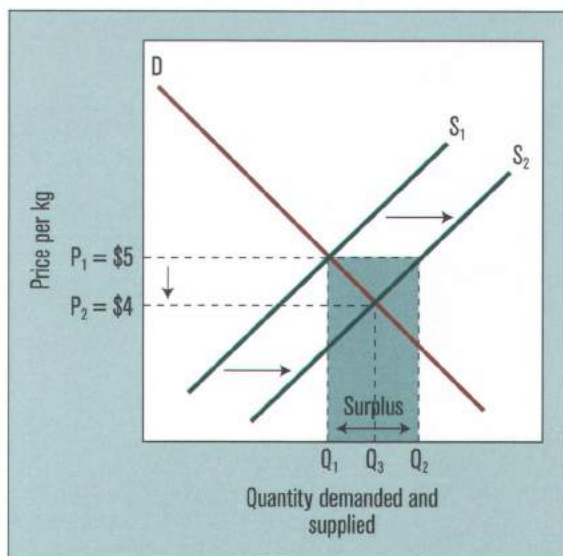
occur. This excess in supply causes the price to fall to \$4 at  $P_2$ ; quantity demanded and supplied will be equal at  $Q_3$ . This new equilibrium price and quantity supplied eliminates the excess supply.

- *An increase in supply will have the following effect:* Suppose scientists discover a way to produce a faster-growing coffee plant through genetic manipulation. In Figure 4.18c (page 90),  $D$  and  $S_1$  show coffee at the old equilibrium price of \$5 per kilogram.  $Q_1$  indicates the quantities demanded and supplied at that price. The increase in supply ( $S_2$ ) causes an excess supply, or surplus,  $(Q_2 - Q_1)$  to occur. This will cause the price to fall to \$4 at  $P_2$  and quantity demanded to rise to  $Q_3$ . This movement shifts the supply curve to the right. The new equilibrium price and quantity demanded eliminate the excess supply.
- *A decrease in supply will have the following effect:* Suppose a mildew that strikes coffee plants decimates coffee production in the mountains of Colombia. Supplies of Colombian coffee in Canada are at an all-time low. In Figure

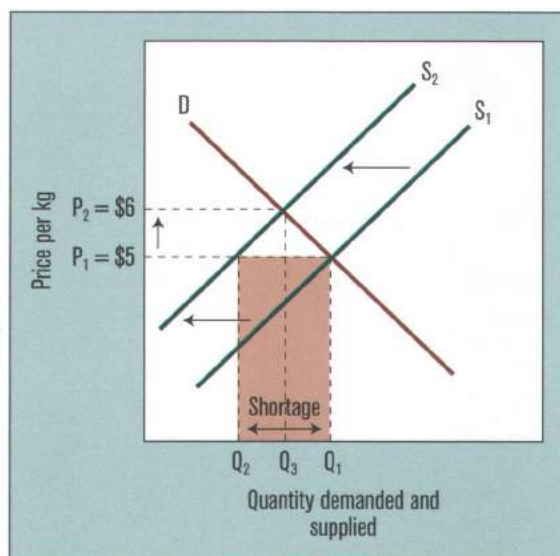


**Figure 4.18b** A decrease in demand in the coffee market.





**Figure 4.18c** An increase in supply in the coffee market.



**Figure 4.18d** A decrease in supply in the coffee market.

4.18d,  $D$  and  $S_1$  show coffee at the old equilibrium price of \$5 per kilogram;  $Q_1$  shows the quantities demanded and supplied at that price. This decrease in supply to  $S_2$  causes an excess demand, or shortage,  $(Q_1 - Q_2)$  to

occur. This will cause the price to rise to \$6 at  $P_2$ ; quantity demanded and supplied will be equal at  $Q_3$ . This new equilibrium price and quantity demanded eliminates the excess demand.

## Check Your

### Understanding

- Does the equilibrium price for a particular product rise or fall with each of the following changes? Draw small freehand graphs to illustrate your answers.
  - Demand increases and supply stays the same.
  - Supply decreases and demand stays the same.
  - Supply increases and demand stays the same.
  - Demand decreases and supply stays the same.
  - Demand increases and supply decreases.
  - Demand decreases and supply increases.
- Consider each of the following scenarios in the North American gasoline and oil market. Draw freehand demand and supply graphs to determine the changes in quantities demanded and supplied, and in market prices, in response to these scenarios.
  - The North American economy is prosperous, and automobile sales, particularly those of fuel-inefficient SUVs and vans, rise.
  - After 11 September 2001, the North American economy slips into a recession, and automobile sales plummet.
  - War in the Middle East results in a sharp fall in oil exports to North America.
  - Automobile manufacturers develop new engines that significantly improve the fuel efficiency of all models.



## CHAPTER SUMMARY

- A market can be a place where buyers and sellers meet to exchange goods and services for a price.
- In order to say that a demand for a good exists, a consumer must have both a desire for it and the income necessary to buy it.
- Demand is defined as the quantity of a good or service a buyer will purchase at various prices during a given period of time.
- The law of demand indicates that an inverse relationship exists between price and quantity demanded. The quantity demanded will increase if price decreases and will decrease if price increases, as long as other things do not change. This inverse relationship is represented graphically by a curve that runs from top left to bottom right.
- When the price of a product falls, consumers buy more of it for two reasons. First, their real income increases as the price falls, so they have more money to spend on the product. Second, as the price of a product falls, consumers tend to substitute that product for its more expensive competitors.
- A price change that causes consumers to buy more or less of a product is called a change in quantity demanded. It is represented by a movement along the demand curve.
- A change in demand (as opposed to quantity demanded) can be caused by changes in several non-price factors. These include changes in taste, income, future expectations, and the number of consumers. A change in the price of related or competing goods can also result in a change in demand.
- Changes in demand cause the whole demand curve to shift. It shifts up and to the right for increases in demand, and down and to the left for decreases in demand.
- Supply is defined as the quantities that suppliers sell at various prices during a given period of time.
- The law of supply states that a direct relationship exists between price and quantity supplied. The quantity supplied will increase if the price increases and decrease if the price falls, as long as other things do not change. This direct relationship is represented graphically by a curve that runs from bottom left to top right.
- A price change that causes suppliers to supply more or less is called a change in quantity supplied. It is represented by a movement along the supply curve.
- A change in supply (as opposed to quantity supplied) can be caused by changes in several non-price factors. These include changes in manufacturing costs, technology, the number of suppliers, and nature and the environment. A change in the prices of related or competing goods can also result in a change in supply.
- Changes in supply cause the whole supply curve to shift. It shifts down and to the right for increases in supply, and up and to the left for decreases in supply.
- The point at which the demand curve intersects the supply curve is called the equilibrium point. Only at this point does the quantity demanded equal the quantity supplied. This determines the prevailing market price.
- All prices above equilibrium create excess supply or surpluses because quantity supplied exceeds quantity demanded. All prices below equilibrium create excess demand or shortages because quantity demanded exceeds quantity supplied.
- A change in the equilibrium price is caused by a shift either in demand or supply.



## Key Terms

market  
 demand  
 law of demand  
 demand schedule  
*ceteris paribus*  
 demand curve  
 market demand schedule  
 supply  
 law of supply  
 supply schedule  
 equilibrium price  
 non-price factor  
 demographics  
 consumer expectations  
 substitute goods  
 complement goods  
 pure (or perfect) competition

## Activities

### Thinking/Inquiry

- Proponents of the market system sometimes defend it on the grounds that consumers are able to “vote” on the goods and services they want.
  - What tool do consumers use to “vote”?
  - How do they “register” their votes, and how do producers know how consumers have voted?
- It’s understandable that many of us complain when the price of a product or service rises. What might the price rise indicate about either the demand for or the supply of the product? If price were not allowed to rise, what would be the undesirable result?
- Suppose a family’s income increases. Would its demand for all goods and services rise, or would it rise for some goods and services but fall for others? Explain how a family’s demand could change in opposite ways, using two household goods or services as examples.

## Communication

- Draw freehand demand and supply graphs to illustrate each of the following scenarios. Then, in point-form notes, explain how price and quantities change for many consumer goods.
  - The incomes of people in northern Canada increase significantly as a result of the construction of a new pipeline through their land.
  - American restrictions on the import of BC lumber cause widespread layoffs in the BC lumber industry.
  - The widespread use of microprocessors lowers the costs of producing many consumer electronic items.
  - Restrictions and delays persist in cross-border transportation of goods and supplies between Canada and the United States.

## Application

- Think of an item you would like to purchase but are unable to at the moment because the price is too high. Name two things you would like to see happen
  - on the demand side to bring the price down,
  - on the supply side to bring the price down.
- How can merchants in a competitive market tell if their prices are too low? How can these same merchants tell if their prices are too high?
- Copy Figure 4.19 in your notebook.
  - Calculate the surpluses and shortages that would occur depending on the price charged. What price should be charged?
  - Draw a demand and supply graph and plot these figures.
  - On the graph, indicate the equilibrium price. Shade in the part of the graph that is the “surplus area,” and do the same for the part that is the “shortage area.”
- Refer to the information on the hot dog seller in activity 7. Determine the effect each of the following developments will have on the business. How will demand or supply change in each case? Draw a small freehand graph to



Price	Quantity of Hot Dogs Demanded per Day	Quantity of Hot Dogs Supplied per Day	Surplus/ Shortage
\$2.40	100	160	
\$2.20	110	140	
\$2.00	120	120	
\$1.80	130	100	
\$1.60	140	80	

**Figure 4.19** Demand and supply schedule for a sidewalk hot dog vendor.

illustrate each change, and determine how equilibrium price will be affected.

- a) A competing vendor on the next corner goes out of business.
  - b) The wholesale price of hot dogs falls.
  - c) The city experiences a tourist boom.
  - d) A new hamburger outlet opens for business on the same street.
  - e) The cost of a vendor's licence doubles.
9. Although economists prefer to see prices set automatically by the forces of demand and supply, can you think of goods or services whose prices probably should be controlled by governments? Explain your answer in a paragraph.
10. Review the four conditions that must exist for perfect, or pure, competition to exist.

Then hold three of them constant while you consider the effect of changing one condition. Forecast how prices would be affected, and why. A forecast is included in (a) as an example.

- a) The market has many buyers but only one seller. (The seller would have a monopoly and, with no competitors, would be able to charge a higher price.)
- b) The market has many sellers but only one buyer.
- c) Each seller's product is somewhat different from the other.
- d) Buyers are not well informed about the selling prices of the various suppliers of the product.



# CHAPTER 5

## APPLICATIONS OF DEMAND AND SUPPLY

### Going Wireless

*The mobile phone is bringing about changes to society as profound as those introduced by the automobile.*

—Timo Kopomaa, sociologist,  
Helsinki University of Technology

Some facts about cellphones as of December 2000:

- One in four Canadians has a cellphone.
- The number of users in Canada is increasing by approximately 4700 per day.
- In Finland, 70 per cent of the population owns a cellphone, in Britain, 60 per cent, and in Japan, 40 per cent.
- By 2003, global sales of cellphones are expected to triple.
- The next generation of cellphones will combine data storage, Internet access, and voice and image communication.



Source: Chris Wood, "The Cell in Your Future," *Maclean's*, 4 December 2000, 34–40; Barry Came, "Wireless Nation," *Maclean's*, 4 December 2000, 41–44.

### QUESTIONS

1. Do you own a cellphone? If so, why? If not, do you plan to buy one in the future? Why or why not?
2. How important are cellphones in our lives right now? Do you ever see them becoming a necessity? Explain.
3. If demand for cellphones is increasing so much, why aren't prices? Draw a freehand demand and supply graph to illustrate what you think may be happening in the market.
4. Do you agree with the opinion in the quotation from Timo Kopomaa? Explain.

### Chapter Goals

**By the end of this chapter, you will be able to**

- understand, calculate, and apply a concept known as elasticity to consumers and sellers,
- identify how governments interfere in markets, and explain whether or not it is beneficial,
- understand theories of consumer behaviour such as marginal utility and consumer surplus,
- analyze and debate the issues of rent controls and minimum wages.