The Economic Way of Thinking

Economics is about how people choose. The choices we make influence our lives and those of others. Your future will be influenced by the choices you make with regard to education, job opportunities, savings, and investment. Furthermore, changes in technology, demographics, communications, and transportation are constantly altering the attractiveness of various options and the opportunities available to us. The economic way of thinking is all about how incentives alter the choices people make. It can help you make better choices and enhance your understanding of our dynamic world.
The Economic Approach

CHAPTER FOCUS

• What is scarcity, and why is it important even in relatively wealthy economies?
• How does scarcity differ from poverty? Why does scarcity necessitate rationing and cause competition?
• What is the economic way of thinking? What is different about the way economists look at choices and human decision-making?
• What is the difference between positive and normative economics?

Economist, n.—A scoundrel whose faulty vision sees things as they really are, not as they ought to be.

—Daniel K. Benjamin, after Ambrose Bierce
Welcome to the world of economics. Lately there has been a lot about the economy in the news. The recent recession and high rates of unemployment have affected us all. The lives of many Americans were turned upside down by the boom and bust in housing prices and the soaring foreclosure rates that followed. Unrest in the Middle East; soaring prices of commodities like corn, wheat, and gasoline; and the rising cost of higher education: Economics will enhance your understanding of all of these topics and many more. You will soon see that economics is about much more than just financial markets and economic policy. In fact, a field trip to the fruits and vegetables section at your local grocery store could well be filled with more economics lessons than a trip to the New York Stock Exchange.

In a nutshell, economics is the study of human behavior, with a particular focus on human decision-making. It will introduce you to a new and powerful way of thinking that will both help you make better decisions and enhance your understanding of how the world works.

You may have heard some of the following statements: The federal government’s debt is growing rapidly, and we need to get it under control. Without additional government stimulus, recovery from the recession will be slow. Gas prices are so high that the government should regulate them. Americans would be better off if we did not buy so many things from foreigners. A higher minimum wage will help the poor. Health care should be freely available to everyone. Are these statements true? This course will provide you with knowledge that will enhance your understanding of issues like these and numerous others. It may even alter the way you think about them.

The origins of economics date back to Adam Smith, a Scottish moral philosopher, who expressed the first economic ideas in his breakthrough book, An Inquiry into the Nature and Causes of the Wealth of Nations, published in 1776. As the title of his book suggests, Smith sought to explain why people in some nations were wealthier than those in others. This very question is still a central issue in economics. It is so important that throughout this book we will use a special “Keys to Economic Prosperity” symbol in the margin to highlight sections that focus on this topic. A listing of the major keys to prosperity is presented inside the front cover of the book. These keys and accompanying discussions will help you understand what factors enable economies, and their citizens, to grow wealthier and prosper.

OUTSTANDING ECONOMIST

The Importance of Adam Smith, the Father of Economic Science

Economics is a relatively young science. The foundation of economics was laid in 1776, when Adam Smith (1723–1790) published An Inquiry into the Nature and Causes of the Wealth of Nations.

Smith was a lecturer at the University of Glasgow, in his native Scotland. Before economics, morals and ethics were actually his concern. His first book was The Theory of Moral Sentiments. For Smith, self-interest and sympathy for others were complementary. However, he did not believe that charity alone would provide the essentials for a good life.

Smith stressed that free exchange and competitive markets would harness self-interest as a creative force. He believed that individuals pursuing their own interests would be directed by the “invisible hand” of market prices toward the production of those goods that were most advantageous to society. He argued that the wealth of a nation does not lie in gold and silver, but rather in the goods and services produced and consumed by people. According to Smith, competitive markets would lead to coordination, order, and efficiency without the direction of a central authority.

These were revolutionary ideas at the time, but they had consequences. Smith’s ideas greatly influenced not only Europeans but also those who developed the political economy structure of the United States. Further, Smith’s notion of the “invisible hand” of the market continues to enhance our understanding of why some nations prosper while others stagnate.1

WHAT IS ECONOMICS ABOUT?

Economics is about scarcity and the choices we have to make because our desire for goods and services is far greater than their availability from nature. Would you like some new clothes, a nicer car, and a larger apartment? How about better grades and more time to watch television, go skiing, and travel? Do you dream of driving your brand-new Porsche into the driveway of your oceanfront house? As individuals, we have a desire for goods that is virtually unlimited. We may want all of these things. Unfortunately, both as individuals and as a society we face a constraint called scarcity that prevents us from being able to completely fulfill our desires.

Scarcity is present whenever there is less of a good or resource freely available from nature than people would like. There are some things that are not scarce—seawater comes to mind; nature has provided as much of it as people want. But almost everything else you can think of—even your time—is scarce. In economics, the word scarce has a very specific meaning that differs slightly from the way it is commonly used. Even if large amounts of a good have been produced, it is still scarce as long as there is not as much of it freely available from nature as we would all like. For example, even though goods like apples and automobiles are relatively abundant in the United States, they are still scarce because we would like to have more of them than nature has freely provided. In economics, we generally wish to determine only if a good is scarce or not, and refrain from using the term to refer to the relative availability or abundance of a good or resource.

Because of scarcity, we have to make choices. Should I spend the next hour studying or watching TV? Should I spend my last $20 on a new CD or on a shirt? Should this factory be used to produce clothing or furniture? Choice, the act of selecting among alternatives, is the logical consequence of scarcity. When we make choices, we constantly face trade-offs between meeting one desire or another. To meet one need, we must let another go unmet. The basic ideas of scarcity and choice, along with the trade-offs we face, provide the foundation for economic analysis.

Resources are the ingredients, or inputs, that people use to produce goods and services. Our ability to produce goods and services is limited precisely because of the limited nature of our resources.

Exhibit 1 lists a number of scarce goods and the limited resources that might be used to produce them. There are three general categories of resources. First, there are human resources—the productive knowledge, skill, and strength of human beings. Second, there are physical resources—things like tools, machines, and buildings that enhance our ability to produce goods. Economists often use the term capital when referring to these human-made resources. Third, there are natural resources—things like land, mineral deposits,
oceans, and rivers. The ingenuity of humans is often required to make these natural resources useful in production. For example, until recently, the yew tree was considered a “trash tree,” having no economic value. Then, scientists discovered that the tree produces taxol, a substance that could be used to fight cancer. Human knowledge and ingenuity made yew trees a valuable resource. As you can see, natural resources are important, but knowing how to use them productively is just as important.

As economist Thomas Sowell points out, cavemen had the same natural resources at their disposal that we do today. The huge difference between their standard of living and ours reflects the difference in the knowledge they could bring to bear on those resources versus what we can. Over time, human ingenuity, discovery, improved knowledge, and better technology have enabled us to produce more goods and services from the available resources. Nonetheless, our desire for goods and services is still far greater than our ability to produce them. Thus, scarcity is a fact of life today, and in the foreseeable future. As a result, we confront trade-offs and have to make choices. This is what economics is about.

SCARCITY AND POVERTY ARE NOT THE SAME

Think for a moment about what life was like in 1750. People all over the world struggled 50, 60, and 70 hours a week to obtain the basic necessities of life—food, clothing, and shelter. Manual labor was the major source of income. Animals provided the means of transportation. Tools and machines were primitive by today’s standards. As the English philosopher Thomas Hobbes stated in the seventeenth century, life was “solitary, poor, nasty, brutish, and short.”

Throughout much of South America, Africa, and Asia, economic conditions today continue to make life difficult. In North America, Western Europe, Oceania, and some parts of Asia, however, economic progress has substantially reduced physical hardship and human drudgery. In these regions, the typical family is more likely to worry about financing its summer vacation than about obtaining food and shelter. As anyone who has watched the TV reality show Survivor knows, we take for granted many of the items that modern technological advances have allowed us to produce at unbelievably low prices. Contestants on Survivor struggle with even basic things like starting a fire, finding shelter, and catching

The degree to which modern technology and knowledge allow us to fulfill our desires and ease the grip of scarcity is often taken for granted—as the castaways on the CBS reality series Survivor quickly find out when they have to struggle to meet even basic needs, such as food, shelter, and cleaning their bodies and clothes.

Some people consider the activity of competitive bidding as a fun sport. During one episode, a contestant eagerly paid over $125 for a small chocolate bar and spoonful of peanut butter at an auction—and she considered it a great bargain! It is important to note that scarcity and poverty are not the same thing. Scarcity is an objective concept that describes a factual situation in which the limited nature of our resources keeps us from being able to completely fulfill our desires for goods and services. In contrast, poverty is a subjective concept that refers to a personal opinion of whether someone meets an arbitrarily defined level of income. This distinction is made even clearer when you realize that different people have vastly different ideas of what it means to be poor. The average family in the United States that meets the federal government’s definition of being “in poverty” would be considered wealthy in most any country in Africa. A family in the United States in the 1950s would have been considered fairly wealthy if it had air conditioning, an automatic dishwasher or clothes dryer, or a television set. Today, the majority of U.S. families officially classified as poor have many items that would have been viewed as symbols of great wealth just 60 years ago.

People always want more and better goods for themselves and others about whom they care. Scarcity is the constraint that prevents us from having as much of all goods as we would like, but it is not the same as poverty. Even if every individual were rich, scarcity would still be present.

SCARCITY NECESSITATES RATIONING

Scarcity makes rationing a necessity. When a good or resource is scarce, some criterion must be used to determine who will receive it and who will go without. The choice of which method is used will, however, have an influence on human behavior. When rationing is done through the government sector, a person’s political status and ability to manipulate the political process are the key factors. Powerful interest groups and those in good favor with influential politicians will be the ones who obtain goods and resources. When this method of rationing is used, people will devote time and resources to lobbying and favor seeking with those who have political power, rather than to productive activities.

When the criterion is first-come, first-served, goods are allocated to those who are fastest at getting in line or willing to spend the longest time waiting in line. Many colleges use this method to ration tickets to sporting events, and the result is students waiting in long lines. Sometimes, as at Duke University during basketball season, they even camp out for multiple nights to get good tickets! Imagine how the behavior of students would change if tickets were instead given out to the students with the highest grade point average.

In a market economy, price is generally used to ration goods and resources only to those who are willing and able to pay the prevailing market price. Because only those goods that are scarce require rationing, in a market economy, one easy way to determine whether a good or resource is scarce is to ask if it sells for a price. If you have to pay for something, it is scarce.

THE METHOD OF RATIONING INFLUENCES THE NATURE OF COMPETITION

Competition is a natural outgrowth of scarcity and the desire of human beings to improve their conditions. Competition exists in every economy and every society. But the criteria used to ration scarce goods and resources will influence the competitive techniques employed. When the rationing criterion is price, individuals will engage in income-generating activities that enhance their ability to pay the price needed to buy the goods and services they want. Thus, one benefit of using price as a rationing mechanism is that it encourages individuals to engage in the production of goods and services to generate income. In contrast, rationing on the basis of first-come, first-served encourages individuals to waste a substantial amount of time waiting in line, while rationing through the political process encourages individuals to waste time and other resources in competing with others to influence the political process.
Within a market setting, the competition that results from scarcity is an important ingredient in economic progress. Competition among business firms for customers results in newer, better, and less expensive goods and services. Competition between employers for workers results in higher wages, benefits, and better working conditions. Further, competition encourages discovery and innovation, two important sources of growth and higher living standards.

THE ECONOMIC WAY OF THINKING

One does not have to spend much time around economists to recognize that there is an “economic way of thinking.” Admittedly, economists, like others, differ widely in their ideological views. A news commentator once remarked that “any half-dozen economists will normally come up with about six different policy prescriptions.” Yet, in spite of their philosophical differences, the approaches of economists reflect common ground.

That common ground is economic theory, developed from basic principles of human behavior. Economic researchers are constantly involved in testing and seeking to verify their theories. When the evidence from the testing is consistent with a theory, eventually that theory will become widely accepted among economists. Economic theory, like a road map or a guidebook, establishes reference points indicating what to look for and how economic issues are interrelated. To a large degree, the basic economic principles are merely common sense. When applied consistently, however, these commonsense concepts can provide powerful and sometimes surprising insights.

EIGHT GUIDEPOSTS TO ECONOMIC THINKING

The economic way of thinking requires incorporating certain guidelines—some would say the building blocks of basic economic theory—into your own thought process. Once you incorporate these guidelines, economics can be a relatively easy subject to master. Students who have difficulty with economics have almost always failed to assimilate one or more of these principles. The following are eight principles that characterize the economic way of thinking. We will discuss each of these principles in more depth throughout the book so that you will be sure to understand how and when to apply them.

1. The use of scarce resources is costly, so decision-makers must make trade-offs.

Economists sometimes refer to this as the “there is no such thing as a free lunch” principle. Because resources are scarce, the use of resources to produce one good diverts those resources from the production of other goods. A parcel of undeveloped land could be used for a new hospital or a parking lot, or it could simply be left undeveloped. No option is free of cost—there is always a trade-off. A decision to pursue any one of these options means that the decision-maker must sacrifice the others. The highest valued alternative that is sacrificed is the opportunity cost of the option chosen. For example, if you use one hour of your scarce time to study economics, you will have one hour less time to watch television, read magazines, sleep, work at a job, or study other subjects. Whichever one of these options you would have chosen had you not spent the hour studying economics is your highest valued option forgone. If you would have slept, then the opportunity cost of this hour spent studying economics is a forgone hour of sleep. In economics, the opportunity cost of an action is the highest valued option given up when a choice is made.

It is important to recognize that the use of scarce resources to produce a good is always costly, regardless of who pays for the good or service produced. In many countries, various kinds of schooling are provided free of charge to students. However, provision...
of the schooling is not free to the community as a whole. The scarce resources used to produce the schooling—to construct the building, hire teachers, buy equipment, and so on—could have been used instead to produce more recreation, entertainment, housing, medical care, or other goods. The opportunity cost of the schooling is the highest valued option that must now be given up because the required resources were used to produce the schooling.

By now, the central point should be obvious. As we make choices, we always face trade-offs. Using resources to do one thing leaves fewer resources to do another.

Consider one final example. Mandatory air bags in automobiles save an estimated 400 lives each year. Economic thinking, however, forces us to ask ourselves if the $50 billion spent on air bags could have been used in a better way—perhaps say, for cancer research that could have saved more than 400 lives per year. Most people don’t like to think of air bags and cancer research as an “either/or” proposition. It’s more convenient to ignore these trade-offs. But if we want to get the most out of our resources, we have to consider all of our alternatives. In this case, the appropriate analysis is not simply the lives saved with air bags versus dollars spent on them, but also the number of lives that could have been saved (or other things that could have been accomplished) if the $50 billion had been used differently. A candid consideration of hard trade-offs like this is essential to using our resources wisely.

2. Individuals choose purposefully—they try to get the most from their limited resources. People try not to squander their valuable resources deliberately. Instead, they try to choose the options that best advance their personal desires and goals at the least possible cost. This is called economizing behavior. Economizing behavior is the result of purposeful, or rational, decision-making. When choosing among things of equal benefit, an economizer will select the cheapest option. For example, if a pizza, a lobster dinner, and a sirloin steak are expected to yield identical benefits for Mary (including the enjoyment of eating them), economizing behavior implies that Mary will select the cheapest of the three alternatives, probably the pizza. Similarly, when choosing among alternatives of equal cost, economizing decision-makers will select the option that yields the greatest benefit. If the prices of several dinner specials are equal, for example, economizers will choose the one they like the best. Because of economizing behavior, the desires or preferences of individuals are revealed by the choices they make.

Purposeful choosing implies that decision-makers have some basis for their evaluation of alternatives. Economists refer to this evaluation as utility—the benefit or satisfaction that an individual expects from the choice of a specific alternative. Utility is highly subjective, often differing widely from person to person. The steak dinner that delights one person may be repulsive to another (a vegetarian, for example).

The idea that people behave rationally to get the greatest benefit at the least possible cost is a powerful tool. It can help us understand their choices. However, we need to realize that a rational choice is not the same thing as a “right” choice. If we want to understand people’s choices, we need to understand their own subjective evaluations of their options as they see them. As we have said, different people have different preferences. If Joan prefers $50 worth of chocolate to $50 worth of vegetables, buying the chocolate would be the
rational choice for her, even though some outside observer might say that Joan is making a “bad” decision. Similarly, some motorcycle riders choose to ride without a helmet because they believe the enjoyment they get from riding without one is greater than the cost (the risk of injury). When people weigh the benefits they receive from an activity against its cost, they are making a rational choice—even though it might not be the choice you or I would make in the same situation.

3. Incentives matter—changes in incentives influence human choices in a predictable way. Both monetary and nonmonetary incentives matter. If the personal cost of an option increases, people will be less likely to choose it. Correspondingly, when an option becomes more attractive, people will be more likely to choose it. This vitally important guidepost, sometimes called the basic postulate of economics, is a powerful tool because it applies to almost everything that we do.

Think about the implications of this proposition. When late for an appointment, a person will be less likely to take time to stop and visit with a friend. Fewer people will go picnicking on a cold and rainy day. Higher prices will reduce the number of units sold. Attendance in college classes will be below normal the day before spring break. In each case, the explanation is the same: As the option becomes more costly, less is chosen.

Similarly, when the payoff derived from a choice increases, people will be more likely to choose it. A person will be more likely to bend over and pick up a quarter than a penny. Students will attend and pay more attention in class when the material is covered extensively on exams. Customers will buy more from stores that offer low prices, high-quality service, and a convenient location. Senior voters will be more likely to support candidates who favor higher Social Security benefits. All of these outcomes are highly predictable, and they merely reflect the “incentives matter” postulate of economics.

Noneconomists sometimes argue that people respond to incentives only because they are selfish and greedy. This view is false. People are motivated by a variety of goals, some humanitarian and some selfish, and incentives matter equally in both. Even an unselfish individual would be more likely to attempt to rescue a drowning child from a three-foot swimming pool than the rapid currents approaching Niagara Falls. Similarly, people are more likely to give a needy person their hand-me-downs rather than their favorite new clothes.

Just how far can we push the idea that incentives matter? If asked what would happen to the number of funerals performed in your town if the price of funerals rose, how would you respond? The “incentives matter” postulate predicts that the higher cost would reduce the number of funerals. While the same number of people will still die each year, the number of funerals performed will still fall as more people choose to be cremated or buried in cemeteries in other towns. Substitutes are everywhere—even for funerals. Individuals also respond to incentives when committing crimes—precisely the reason why people put signs in their yard saying “This house protected by XYZ security.”

4. Individuals make decisions at the margin. When making a choice between two alternatives, individuals generally focus on the difference in the costs and benefits between alternatives. Economists describe this process as marginal decision-making, or “thinking at the margin.” The last time you went to eat fast food, you probably faced a decision that highlights this type of thinking. Will you get the $1.50 cheeseburger and the $1.00 medium drink, or instead get the $3.00 value meal that has the cheeseburger and drink and also comes with a medium order of fries? Naturally, individual decision-making focuses on the difference between the alternatives. The value meal costs 50 cents more (its marginal cost) but will give you one extra food item—the fries (its marginal benefit). Your marginal decision is whether it is worth the extra 50 cents to have the fries. If you pay attention, you’ll notice yourself frequently thinking at the margin. Next time you find yourself asking a salesclerk, “How much more is this one?” when you are choosing between two items, you are doing a marginal analysis.

Marginal choices always involve the effects of net additions to or subtractions from current conditions. In fact, the word additional is often used as a substitute for marginal.
For example, a business decision-maker might ask, “What is the additional (or marginal) cost of producing one more unit?” Marginal decisions may involve large or small changes. The “one more unit” could be a new factory or a new stapler. It is marginal because it involves additional costs and additional benefits. Given the current situation, what marginal benefits (additional sales revenues, for example) can be expected from the new factory, and what will be the marginal cost of constructing it? What is the marginal benefit versus marginal cost of purchasing a new stapler? The answers to these questions will determine whether building the new factory or buying the new stapler is a good decision.

It is important to distinguish between average and marginal. A manufacturer’s average cost of producing automobiles (which would be the total cost of production divided by the total number of cars the manufacturer produces) may be $25,000, but the marginal cost of producing an additional automobile (or an additional 1,000 automobiles) might be much lower, say, $10,000 per car. Costs associated with research, testing, design, molds, heavy equipment, and similar factors of production must be incurred whether the manufacturer is going to produce 1,000 units, 10,000 units, or 100,000 units. Such costs will clearly contribute to the average cost of an automobile, but they will change very little as additional units are produced. Thus, the marginal cost of additional units may be substantially less than the average cost. Should production be expanded or reduced? That choice should be based on marginal costs, which indicate the change in total cost due to the decision.

People commonly ignore the implications of marginal thinking in their comments, but seldom in their actions. Thus, the concept is far better at explaining how people act than what they say. Students are often overheard telling other students that they shouldn’t skip class because they have paid to enroll in it. Of course, the tuition is not a factor relevant at the margin—it will be the same whether or not the student attends class on that particular day. The only real marginal considerations are what the student will miss that day (a quiz, information for the exam, etc.) versus what he or she could do with the extra time by skipping class. This explains why even students who tell others they paid too much for the class to skip it will ignore the tuition costs when they themselves decide to skip class.

Decisions are made at the margin. That means that they almost always involve additions to, or subtractions from, current conditions. If we are going to get the most out of our resources, activities that generate more benefits than costs should be undertaken, while those that are more costly than they are worth should not be undertaken. This principle of sound decision-making applies to individuals, businesses, governments, and for society as a whole.

5. Although information can help us make better choices, its acquisition is costly. Information that helps us make better choices is valuable. However, the time needed to gather it is scarce, making information costly to acquire. As a result, people economize on their search for information just like they do anything else. For example, when you purchase a pair of jeans, you might evaluate the quality and prices of jeans at several different stores. At some point, though, you will decide that additional comparison-shopping is simply not worth the trouble. You will make a choice based on the limited information you already have.

The process is similar when individuals search for a restaurant, a new car, or a roommate. They will seek to acquire some information, but at some point, they will decide that the expected benefit derived from gathering still more information is simply not worth the cost. When differences among the alternatives are important to decision-makers, they will spend more time and effort gathering information. People are much more likely to read a consumer ratings magazine before purchasing a new automobile than they are before purchasing a new can opener. Because information is costly for people to acquire, limited knowledge and uncertainty about the outcome generally characterize the decision-making process.

6. Beware of the secondary effects: economic actions often generate indirect as well as direct effects. In addition to direct effects that are quickly visible, people’s decisions often generate indirect, or “secondary,” effects that may be observable only with
time. Failure to consider secondary effects is one of the most common economic errors because these effects are often quite different from initial, or direct, effects. Frédéric Bastiat, a nineteenth-century French economist, stated that the difference between a good and a bad economist is that the bad economist considers only the immediate, visible effects, whereas the good economist is also aware of the secondary effects. The true cause of these secondary effects might not be seen, even later, except by those using the logic of good economics.

Perhaps a few simple examples that involve both immediate (direct) and secondary (indirect) effects will help illustrate the point. The immediate effect of an aspirin is a bitter taste in one’s mouth. The secondary effect, which is not immediately observable, is relief from a headache. The short-term direct effect of drinking twelve cans of beer might be a warm, jolly feeling. In contrast, the secondary effect is likely to be a sluggish feeling the next morning, and perhaps a pounding headache.

Sometimes, as in the case of the aspirin, the secondary effect—headache relief—is actually an intended consequence of the action. In other cases, however, the secondary effects are unintended. Changes in government policy often alter incentives, indirectly affecting how much people work, earn, invest, consume, and conserve for the future. When a change alters incentives, unintended consequences that are quite different from the intended consequences may occur.

Let’s consider a couple of examples that illustrate the potential importance of unintended consequences. In an effort to reduce gasoline consumption, the federal government mandates that automobiles be more fuel efficient. Is this regulation a sound policy? It may be, but when evaluating the policy’s overall impact, one should not overlook its secondary effects. To achieve the higher fuel efficiency, auto manufacturers reduced the size and weight of vehicles. As a result, there are more highway deaths—about 2,500 more per year—than would otherwise occur because these lighter cars do not offer as much protection for occupants. Furthermore, because the higher mileage standards for cars and light trucks make driving cheaper, people tend to drive more than they otherwise would. This increases congestion and results in a smaller reduction in gasoline consumption than was intended by the regulation. Once you consider the secondary effects, the fuel efficiency regulations are much less beneficial than they might first appear.

Trade restrictions between nations have important secondary effects as well. The proponents of tariffs and quotas on foreign goods almost always ignore the secondary effects of their policies. Import quotas restricting the sale of foreign-produced sugar in the U.S. market, for example, have resulted in domestic sugar prices that have often been two or three times the price in the rest of the world. The proponents of this policy—primarily sugar producers—argue that the quotas “save jobs” and increase employment. No doubt, the employment of sugar growers in the United States is higher than it otherwise would be. But what about the secondary effects? The higher sugar prices mean it’s more expensive for U.S. firms to produce candy and other products that use a lot of sugar. As a result, many candy producers, including the makers of Life Savers, Jaw Breakers, Red Hots, and Fannie May and Fanny Farmer chocolates, have moved to countries like Canada and Mexico, where sugar can be purchased at its true market price. Thus, employment among sugar-using firms in the United States is reduced. Further, because foreigners sell less sugar in the United States, they have less purchasing power with which to buy products we export to them. This, too, reduces U.S. employment.

Once the secondary effects of trade restrictions like the sugar quota program are taken into consideration, we have no reason to expect that U.S. employment will increase as a result. There may be more jobs in favored industries, but there will be less employment in others. Trade restrictions reshuffle employment rather than increase it. But those who unwittingly fail to consider the secondary effects will miss this point. Clearly, consideration of the secondary effects is an important ingredient of the economic way of thinking.
7. The value of a good or service is subjective. Preferences differ, sometimes dramatically, between individuals. How much is a ticket to see a performance of the Bolshoi Ballet worth? Some people would be willing to pay a very high price, while others might prefer to stay home, even if tickets were free! Circumstances can change from day to day, even for a given individual. Alice, a ballet fan who usually would value the ticket at more than its price of $100, is invited to a party and suddenly becomes uninterested in attending the ballet. Now what is the ticket worth? If she knows a friend who would give her $40 for the ticket, it is worth at least that much. If she advertises the ticket on eBay and gets $60 for it, a higher value is created. But if someone who doesn’t know of the ticket would have been willing to pay even more, then a potential trade creating even more value is missed. If that particular performance is sold out, perhaps someone in town would be willing to pay $120. One thing is certain: The value of the ticket depends on several things, including who uses it and under what circumstances.

Economics recognizes that people can and do value goods differently. Mike may prefer to have a grass field rather than a parking lot next to his workplace and be willing to bear the cost of walking farther from his car each day. Kim, on the other hand, may prefer the parking lot and the shorter walk. As a science, economics does not place any inherent moral judgment or value on one person’s preferences over another’s—in economics, all individuals’ preferences are counted equally. Because the subjective preferences of individuals differ, it is difficult for one person to know how much another will value an item. Think about how hard it is to know what would make a good gift for even a close friend or family member. Thus, arranging trades, or otherwise moving items to higher valued users and uses, is not a simple task. The entrepreneurial individual, who knows how to locate the right buyers and arranges for goods to flow to their highest valued use, can sometimes create huge increases in value from existing resources. In fact, moving goods toward those who value them most and combining resources into goods that individuals value more highly are primary sources of economic progress.

8. The test of a theory is its ability to predict. Economic thinking is scientific thinking. The proof of the pudding is in the eating. How useful an economic theory is depends on how well it predicts the future consequences of economic action. Economists develop economic theories using scientific thinking based on basic principles. The idea is to predict how incentives will affect decision makers and compare the predictions against real-world events. If the events in the real world are consistent with a theory, we say that the theory has predictive value and is therefore valid.

If it is impossible to test the theoretical relationships of a discipline, the discipline does not qualify as a science. Because economics deals with human beings who can think and respond in a variety of ways, can economic theories really be tested? The answer to this question is yes, if, on average, human beings respond in predictable and consistent ways to changes in economic conditions. The economist believes that this is the case, even though not all individuals will respond in the specified manner. Economists usually do not try to predict the behavior of a specific individual; instead, they focus on the general behavior of a large number of individuals.

In the 1950s, economists began to do laboratory experiments to test economic theories. Individuals were brought into laboratories to see how they would act in buying and selling situations, under differing rules. For example, cash rewards were given to individuals who, when an auction was conducted, were able to sell at high prices and buy at low prices, thus approximating real-world market incentives. These experiments have verified many of the important propositions of economic theory.

Laboratory experiments, however, cannot duplicate all real economic interactions. How can we test economic theory when controlled experiments are not feasible? This is a problem, but economics is no different from astronomy in this respect. Astronomers can use theories tested in physics laboratories, but they must also deal with the world as it is. They cannot change the course of the stars or planets to see what impact the change would have on the gravitational pull of Earth. Similarly, economists cannot arbitrarily change the prices of cars or unskilled-labor services in real markets just to observe the effects
on quantities purchased or levels of employment. However, economic conditions (for example, prices, production costs, technology, and transportation costs), like the location of the planets, do change from time to time. As actual conditions change, an economic theory can be tested by comparing its predictions with real-world outcomes. Just as the universe is the main laboratory of the astronomer, the real-world economy is the primary laboratory of the economist.

**POSITIVE AND NORMATIVE ECONOMICS**

As a social science, economics is concerned with predicting or determining the impact of changes in economic variables on the actions of human beings. Scientific economics, commonly referred to as positive economics, attempts to determine “what is.” Positive economic statements involve potentially verifiable or refutable propositions. For example, “If the price of gasoline rises, people will buy less gasoline.” We can statistically investigate (and estimate) the relationship between gasoline prices and gallons sold. We can analyze the facts to determine the correctness of a positive economic statement. Remember, a positive economic statement need not be correct; it simply must be testable.

In contrast, normative economics is about “what ought to be,” given the preferences and philosophical views of the advocate. Value judgments often result in disagreement about normative economic matters. Two people may differ on a policy matter because one is from one political party and the other is from another, or because one wants cheaper food while the other favors organic farming (which is more expensive), and so on. They may even agree about the expected outcome of altering an economic variable (that is, the positive economics of an issue), but disagree as to whether that outcome is desirable.

Unlike positive economic statements, normative economic statements can neither be confirmed nor proven false by scientific testing. “Business firms should not be concerned with profits.” “We should have fewer parking lots and more green space on campus.” “The price of gasoline is too high.” These normative statements cannot be scientifically tested because their validity rests on value judgments.

Normative economic views can sometimes influence our attitude toward positive economic analysis, however. When we agree with the objectives of a policy, it’s easy to overlook the warnings of positive economics. Although positive economics does not tell us which policy is best, it can provide evidence about the likely effects of a policy. Sometimes proponents unknowingly support policies that are actually in conflict with their own goals and objectives. Positive economics, based on sound economic logic, can help overcome this potential problem.

Economics can expand our knowledge of how the real world operates, in both the private and the public (government) sectors. However, it is not always easy to isolate the impact of economic changes. Let’s now consider some pitfalls to avoid in economic thinking.

**PITFALLS TO AVOID IN ECONOMIC THINKING**

**VIOLATION OF THE CETERIS PARIBUS CONDITION CAN LEAD ONE TO DRAW THE WRONG CONCLUSION**

Economists often qualify their statements with the words *ceteris paribus*. *Ceteris paribus* is a Latin term meaning “other things constant.” An example of a ceteris paribus statement would be the following: “Ceteris paribus, an increase in the price of housing will cause buyers to reduce their purchases of housing.” Unfortunately, we live in a dynamic world, so things seldom remain constant. For example, as the price of housing rises, the income of consumers might also increase for unrelated reasons. Each of these factors—higher housing prices and increasing consumer income—will have an impact on housing purchases. In fact, we would generally expect them to have opposite effects: Higher prices are likely to reduce housing purchases, whereas higher consumer incomes are likely to increase them.

**Ceteris paribus**

A Latin term meaning "other things constant" that is used when the effect of one change is being described, recognizing that if other things changed, they also could affect the result. Economists often describe the effects of one change, knowing that in the real world, other things might change and also exert an effect.
We point out this pitfall because sometimes statistical data (or casual observations) do not support economic theories. In most of these cases, other factors have also changed. The effects observed simply reflect the combined effect of these changes.

The task of sorting out the effects of two or more variables that change at the same time is difficult. However, with a strong grip on economic theory, some ingenuity, and enough data, it can usually be done. This is, in fact, precisely the day-to-day work of many professional economists.

GOOD INTENTIONS DO NOT GUARANTEE DESIRABLE OUTCOMES

There is a tendency to believe that if the proponents of a policy have good intentions, their proposals must be sound. This is not necessarily the case. Proponents may be unaware of some of the adverse secondary effects of their proposals, particularly when they are indirect and observable only over time. Even if their policies would be largely ineffective, politicians may still find it advantageous to call attention to the severity of a problem and propose a program to deal with it. In other cases, proponents of a policy may actually be seeking a goal other than the one they espouse. They may tie their arguments to objectives that are widely supported by the general populace. Thus, the fact that an advocate says a program will help the economy, expand employment, help the poor, increase wages, improve health care, or achieve some other highly desirable objective does not necessarily make it so.

Let’s begin with a couple of straightforward examples. Federal legislation has been introduced that would require all children, including those under age two, to be fastened in a child safety seat when traveling by air. Proponents argue the legislation will increase the survival rate of children in the case of an airline crash and thereby save lives. Certainly, saving lives is a highly desirable objective, but will this really be the case? Some lives will probably be saved. But what about the secondary effects? The legislation would mean that a parent traveling with a small child would have to purchase an additional ticket, which will make it more expensive to fly. As a result, many families will choose to travel by auto rather than air. Because the likelihood of a serious accident per mile traveled in an automobile is several times higher than for air travel, more automobile travel will result in more injuries and fatalities. In fact, studies indicate that the increase in injuries and fatalities from additional auto travel will exceed the number of lives saved by airline safety seats. Thus, even though the intentions of the proponents may well be lofty, there is reason to believe that the net impact of their proposal will be more fatalities and injuries than would be the case in the absence of the legislation.

The stated objective of the Endangered Species Act is to protect various species that are on the verge of extinction. Certainly, this is an admirable objective, but there is nonetheless reason to question the effectiveness of the act itself. The Endangered Species Act allows the government to regulate the use of individual private property if an endangered species is found present on or near an individual’s land. To avoid losing control of their property, many landowners have taken steps to make their land less attractive as a natural habitat for these endangered species. For example, the endangered red-cockaded woodpecker nests primarily in old trees within southern pine ecosystems. Landowners have responded by cutting down trees the woodpeckers like to nest in to avoid having one nest on their land, which would result in the owner losing control of this part of their property. The end result is that the habitat for these birds has actually been disappearing more rapidly.

As you can see, good intentions are not enough. An unsound proposal will lead to undesirable outcomes, even if it is supported by proponents with good intentions. In fact, many economists believe that the recent financial crisis is a secondary effect of well-intended government regulations and policies that lowered mortgage lending standards in order to expand homeownership. Sound economic reasoning can help us better anticipate the secondary effects of policy changes and avoid the pitfall of thinking that good intentions are enough.

ASSOCIATION IS NOT CAUSATION

In economics, identifying cause-and-effect relationships is very important. But statistical association alone cannot establish this causation. Perhaps an extreme example will illustrate the point. Suppose that each November, a witch doctor performs a voodoo dance designed to summon the gods of winter, and that soon after the dance is performed, the weather in fact begins to turn cold. The witch doctor’s dance is associated with the arrival of winter, meaning that the two events appear to have happened in conjunction with one another. But is this really evidence that the witch doctor’s dance actually caused the arrival of winter? Most of us would answer no, even though the two events seemed to happen in conjunction with one another.

Those who argue that a causal relationship exists simply because of the presence of statistical association are committing a logical fallacy known as the *post hoc propter ergo hoc* fallacy. Sound economics warns against this potential source of error.

THE FALLACY OF COMPOSITION: WHAT’S TRUE FOR ONE MIGHT NOT BE TRUE FOR ALL

What is true for the individual (or subcomponent) may not be true for the group (or the whole). If you stand up for an exciting play during a football game, you will be better able to see. But what happens if everyone stands up at the same time? Will everyone be better able to see? The answer is, of course, no. Thus, what is true for a single individual does not necessarily apply to the group as a whole. When everyone stands up, the view for individual spectators fails to improve; in fact, it may even become worse.

People who mistakenly argue that what is true for the part is also true for the whole are said to be committing the fallacy of composition. What is true for the individual can be misleading and is often fallacious when applied to the entire economy. The fallacy of composition highlights the importance of considering both a micro view and a macro view in the study of economics. Microeconomics focuses on the decision-making of consumers, producers, and resource suppliers operating in a narrowly defined market, such as that for a specific good or resource. Because individual decision-makers are the moving force behind all economic action, the foundations of economics are clearly rooted in a micro view.

As we have seen, however, what is true for a small unit may not be true in the aggregate. Macroeconomics focuses on how the aggregation of individual micro-units affects our analysis. Like microeconomics, it is concerned with incentives, prices, and output. Macroeconomics, however, aggregates markets, lumping together all 115 million households in this country. Macroeconomics involves topics like total consumption spending, saving, and employment, in the economy as a whole. Similarly, the nation’s 25 million business firms are lumped together in “the business sector.” What factors determine the level of aggregate output, the rate of inflation, the amount of unemployment, and interest rates? These are macroeconomic questions. In short, macroeconomics examines the forest rather than the individual trees. As we move from the microcomponents to a macro view of the whole, it is important that we beware of the fallacy of composition.

Looking Ahead

The primary purpose of this book is to encourage you to develop the economic way of thinking so that you can separate sound reasoning from economic nonsense. Once you have developed the economic way of thinking, economics will be relatively easy. Using the economic way of thinking can also be fun. Moreover, it will help you become a better citizen. It will give you a different and fascinating perspective on what motivates people, why they act the way they do, and why their actions sometimes go against the best interest of the community or nation. It will also give you valuable insight into how people’s actions can be rechanneled for the benefit of the community at large.
Part 1  The Economic Way of Thinking

KEY POINTS

• Scarcity and choice are the two essential ingredients of economic analysis. A good is scarce when the human desire for it exceeds the amount freely available from nature. Scarcity requires us to choose among available alternatives. Every choice entails a trade-off.

• Every society will have to devise some method of rationing scarce resources among competing uses. Markets generally use price as the rationing device. Competition is a natural outgrowth of the need to ration scarce goods.

• Scarcity and poverty are not the same thing. Absence of poverty implies that some basic level of need has been met. An absence of scarcity implies that our desires for goods are fully satisfied. We may someday eliminate poverty, but scarcity will always be with us.

• Economics is a way of thinking that emphasizes eight points:
  1. The use of scarce resources to produce a good always has an opportunity cost.
  2. Individuals make decisions purposefully, always seeking to choose the option they expect to be most consistent with their personal goals.
  3. Incentives matter. The likelihood of people choosing an option increases as personal benefits rise and personal costs decline.
  4. Economic reasoning focuses on the impact of marginal changes because it is the marginal benefits and marginal costs that influence choices.
  5. Because information is scarce, uncertainty is a fact of life.
  6. In addition to their direct impact, economic changes often generate secondary effects.
  7. The value of a good or service is subjective and varies with individual preferences and circumstances.
  8. The test of an economic theory is its ability to predict and explain events in the real world.

• Economic science is positive; it attempts to explain the actual consequences of economic actions or “what is.” Normative economics goes further, applying value judgments to make suggestions about what “ought to be.”

• Microeconomics focuses on narrowly defined units, while macroeconomics is concerned with highly aggregated units. When shifting focus from micro to macro, one must beware of the fallacy of composition: What’s good for the individual may not be good for the group as a whole.

• The origin of economics as a science dates to the publication of An Inquiry into the Nature and Causes of the Wealth of Nations by Adam Smith in 1776. Smith believed a market economy would generally bring individual self-interest and the public interest into harmony.

CRITICAL ANALYSIS QUESTIONS

1. Indicate how each of the following changes would influence the incentive of a decision-maker to undertake the action described.
   a. A reduction in the temperature from 80° to 50° on one’s decision to go swimming
   b. A change in the meeting time of the introductory economics course from 11:00 A.M. to 7:30 A.M. on one’s decision to attend the lectures
   c. A reduction in the number of exam questions that relate directly to the text on the student’s decision to read the text
   d. An increase in the price of beef on one’s decision to buy steak
   e. An increase in the rental rates of apartments on one’s decision to build additional rental housing units

2. **“The government should provide such goods as health care, education, and highways because it can provide them for free.” Is this statement true or false? Explain your answer.**

3. a. What method is used to ration goods in a market economy? How does this rationing method influence the incentive of individuals to supply goods, services, and resources to others?
   b. How are grades rationed in your economics class? How does this rationing method influence student behavior? Suppose the highest grades were rationed to those whom the teacher liked best. How would this method of rationing influence student behavior?

4. *In recent years, both the personal exemption and child tax credit have been increased in the United States. According to the basic principles of economics, how will the birthrate be affected by policies that reduce the taxes imposed on those with children?*

5. **“The economic way of thinking stresses that good intentions lead to sound policy.” Is this statement true or false? Explain your answer.**
6. Self-interest is a powerful motivator. Does this necessarily imply that people are selfish and greedy? Do self-interest and selfishness mean the same thing?

7. A restaurant offers an “all you can eat” lunch buffet for $10. Shawn has already eaten three servings, and is trying to decide whether to go back for a fourth. Describe how Shawn can use marginal analysis to make his decision.

8. “Individuals who economize are missing the point of life. Money is not so important that it should rule the way we live.” Evaluate this statement.

9. “Positive economics cannot tell us which agricultural policy is better, so it is useless to policy makers.” Evaluate this statement.

10. “I examined the statistics for our basketball team’s wins last year and found that, when the third team played more, the winning margin increased. If the coach played the third team more, we would win by a bigger margin.” Evaluate this statement.

11. Which of the following are positive economic statements and which are normative?
   a. The speed limit should be lowered to 55 miles per hour on interstate highways.
   b. Higher gasoline prices cause the quantity of gasoline that consumers buy to decrease.
   c. A comparison of costs and benefits should not be used to assess environmental regulations.
   d. Higher taxes on alcohol result in less drinking and driving.

12. Why can’t we consume as much of each good or service as we would like? If we become richer in the future, do you think we will eventually be able to consume as much of everything as we would like? Why or why not?

13. Suppose that in an effort to help low-skill workers the government raises the permissible minimum wage to $10 per hour. Can you think of any unintended secondary effects that will result from this action? Will all low-skill workers be helped by the minimum wage law?

14. Should the United States attempt to reduce air and water pollution to zero? Why or why not?

*Asterisk denotes questions for which answers are given in Appendix B.