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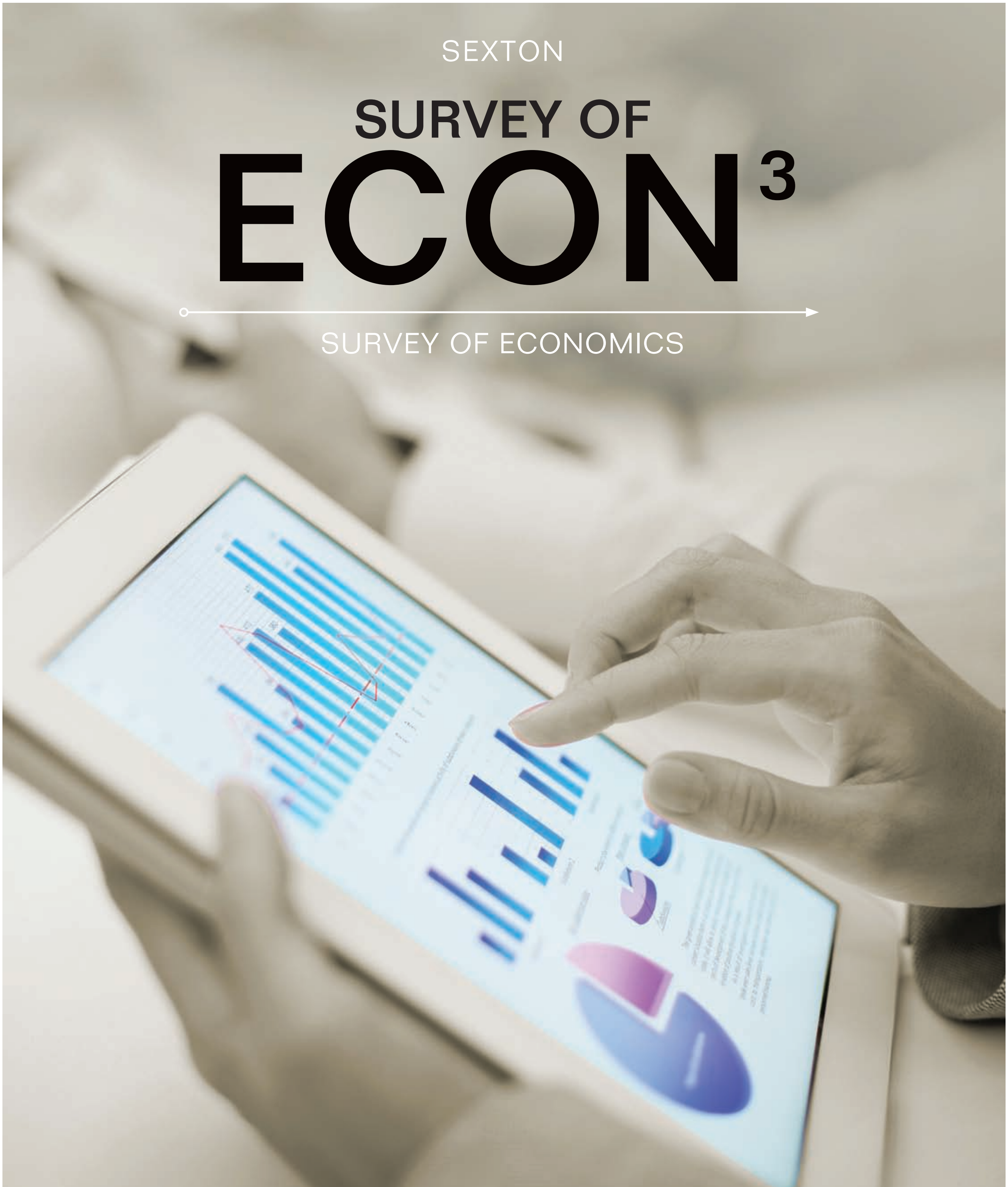

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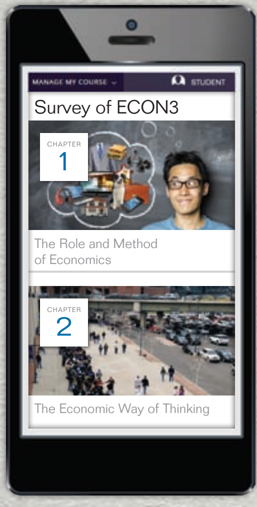

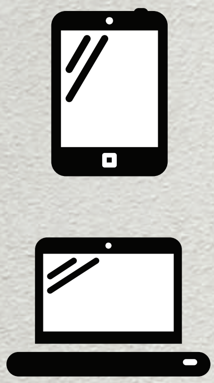

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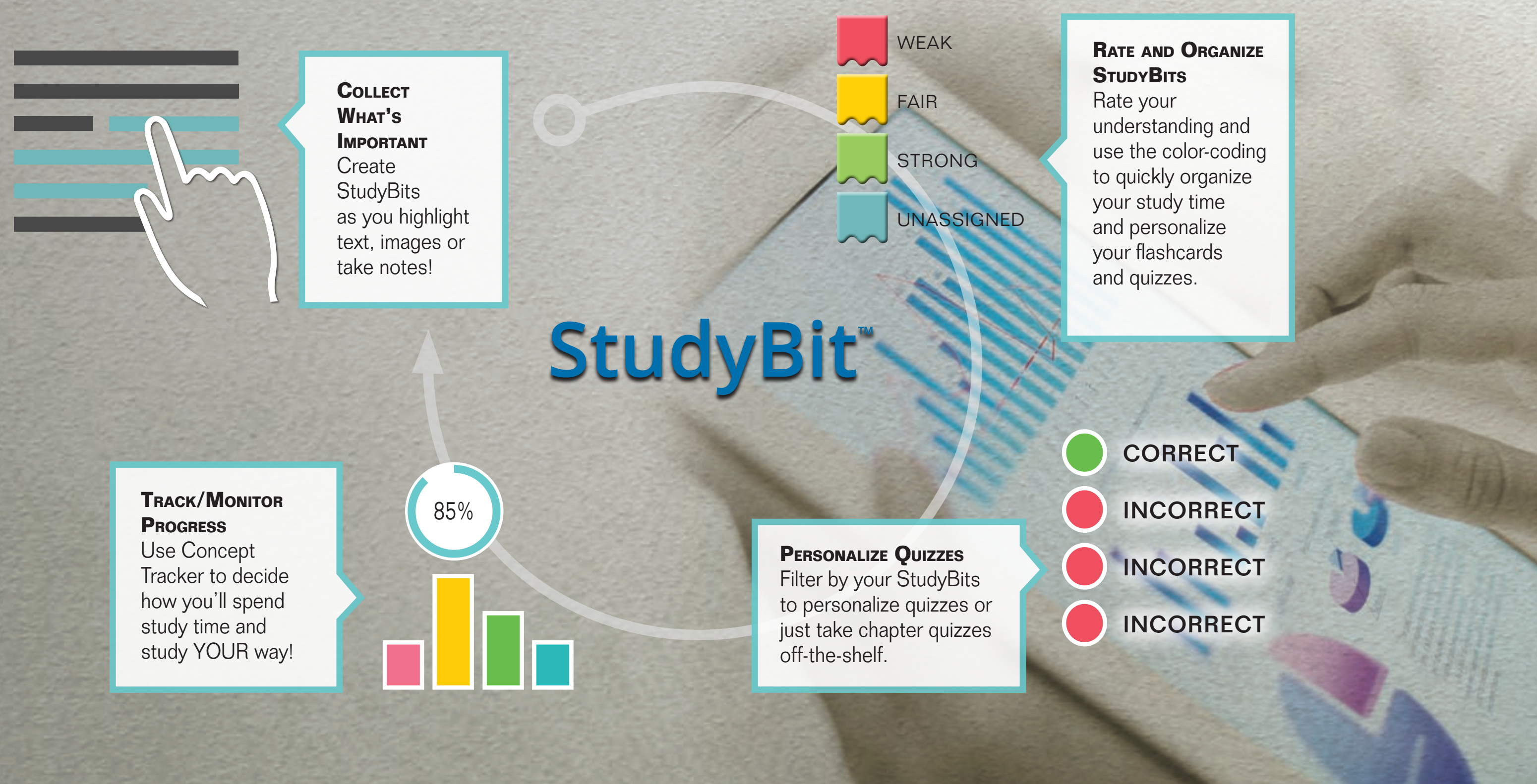

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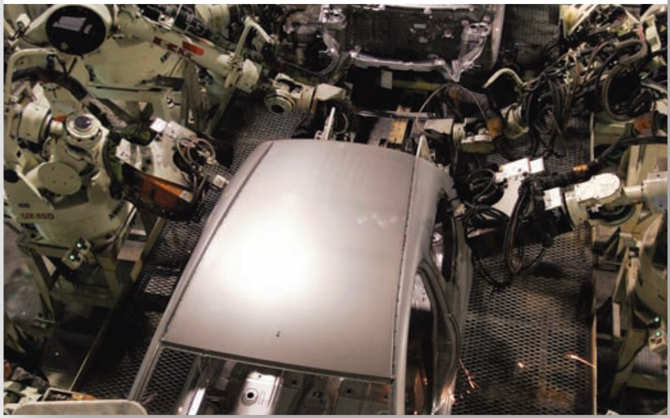
Part 2
MICROECONOMICS



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1 The Role and Method of Economics

LEARNING OUTCOMES

After reading this chapter you should be able to:

- **1-1** Explain what is meant by the term economics.
- **1-2** Describe what economists mean when the say that people engage in rational behavior and respond to incentives.
- **1-3** Define economic theories and models.
- **1-4** Describe the difference between positive and normative economics.
- **1-5** Describe the difference between correlation and causation.
- **1-6** Explain what is meant by the terms positive and normative statements.
- **1-7** List some of the reasons why we would study economics.

After finishing this chapter go to **PAGE 21** for **STUDY TOOLS**.

As you begin your first course in economics, you may be asking yourself why you're here. What does economics have to do with your life?

Although we can list many good reasons to study economics, perhaps the best reason is that many issues in our lives are at least partly economic in character. A good understanding of economics would allow you to answer such questions as, Why do 10:00 a.m. classes fill up more quickly than 8:00 a.m. classes during registration? Why is it so hard to find an apartment in cities such as San Francisco, Berkeley, and New York? Why is teenage unemployment higher than adult unemployment? Why is the price of your prescription drugs so high? Will higher taxes on cigarettes reduce the number of teenagers smoking? If so, by how much? Why do male basketball stars in the NBA make more than female basketball stars in the WNBA? Do houses with views necessarily sell faster than houses without views? Why do people buy houses near noisy airports? Why do U.S. auto producers like tariffs (taxes) on imported cars? Is globalization good for the economy? The study of economics improves your understanding of these and many other concerns.

Economics is a unique way of analyzing many areas of human behavior. Indeed, the range of topics to which economic analysis can be applied is broad. Many researchers discover that the economic approach to human behavior sheds light on social problems that have been with us for a long time: discrimination, education, crime, divorce, political favoritism, and more. In fact, your daily newspaper is filled with economics. You can find economics on the domestic page, the international page, the business page, the sports page, the entertainment page, and even the weather page—economics is all around us.

However, before we delve into the details and models of economics, it is important that we present an overview of how economists approach problems—their methodology. How does an economist apply the logic of science to approach a problem? And what are the pitfalls that economists should avoid in economic thinking? We also discuss why economists disagree.

1-1 ECONOMICS: A BRIEF INTRODUCTION

SECTION CHECK 1

Keep the following questions in mind as you read through this section.

1. What is economics?
2. What is scarcity?
3. What are goods and services?

The study of economics is concerned with the choices we make when confronted with resource scarcity.

1-1a ECONOMICS—A WORD WITH MANY DIFFERENT MEANINGS

Some people think economics involves the study of the stock market and corporate finance, and it does—in part. Others think that economics is concerned with the wise use of money and other matters of personal finance, and it is—in part. Still others think that economics involves predicting what business conditions will be like in the future, and again, it does—in part. The word *economics* is, after all, derived from the Greek word *okionomia*, which referred to the management of household affairs.

Precisely defined, **economics** is the study of the choices we make among our many wants and desires given our limited resources. What are resources? **Resources** are inputs—land, human effort and skills, and machines and factories, for instance—used to produce goods and services. The problem is that our unlimited wants exceed our limited resources, a fact that we call **scarcity**. That is, scarcity exists because human wants for goods and services exceed the amount of goods and services that can be produced using all of our available resources. So scarcity forces us to decide how best to use our limited resources. This is **the economic problem**: Scarcity forces us to choose, and choices are costly because we must give up other opportunities that we value. Consumers must make choices on what to buy, how much to save, and how much to invest of their limited incomes. Workers must decide what types of jobs they want, when to enter the workforce, where they will work, and the number of hours they wish to work. Firms must decide what kinds of goods and services to produce, how much to produce, and how to produce those goods and services at the lowest cost. Local governments may have to decide between building a new park or a school. Consumers, workers, firms, and the government all face choices because of scarcity, which is why economics is sometimes called the study of choice.

economics the study of choices we make among our many wants and desires given our limited resources

resources inputs used to produce goods and services

scarcity exists when human wants (material and nonmaterial) exceed available resources

the economic problem scarcity forces us to choose, and choices are costly because we must give up other opportunities that we value

1-1b SCARCITY AND UNLIMITED HUMAN WANTS

We may want or need "essential" items such as food, clothing, schooling, and health care. We may want many other items, such as vacations, cars, computers, and concert tickets. We may want more friendship, love, knowledge, and so on. We also may have many goals—perhaps an A in this class, a college education, and a great job. Unfortunately, people are not able to fulfill all their wants and desires, material and nonmaterial. As long as human wants exceed available resources, scarcity will exist.

1-1c SCARCITY AND LIMITED RESOURCES

The scarce resources used in the production of goods and services can be grouped into four categories: labor, land, capital, and entrepreneurship.

Labor is the total of both physical and mental effort expended by people in the production of goods and services. The services of a teacher, nurse, cosmetic surgeon, professional golfer, and electrician all fall under the general category of labor.

Land includes the "gifts of nature," or the natural resources, used in the production of goods and services. Economists consider land to include trees, animals, water, minerals, and so on, along with the physical space we normally think of as land.

Capital is the equipment and structures used to produce goods and services. Office buildings, tools, machines, and factories are all considered capital goods.

Entrepreneurship is a special human resource that is distinct from labor. The entrepreneur combines the resources of labor, land, and capital to produce goods and services. Entrepreneurs make the tough and risky decisions about what and how to produce goods and services. Entrepreneurs are always looking for new ways to improve production techniques or to create new products. They are lured by the chance of making a profit. It is this opportunity to make a profit that leads entrepreneurs to take risks.

Profits provide the financial incentive and income for entrepreneurs for their effort and risk if they are successful. Losses provide the financial incentive to let entrepreneurs know that resources are not being used efficiently.

Entrepreneurship is not just about new technology. It's also about the introduction of new goods, new production methods, new markets, new sources of raw materials, and new organizational structures.

However, not every entrepreneur is a Bill Gates (Microsoft) or a Henry Ford (Ford Motor Company). In some sense, we are all entrepreneurs when we try new products or when we find better ways to manage our households or our study time. Rather than money, then, our profits might take the form of greater enjoyment, additional time for recreation, or better grades.

labor the physical and human effort used in the production of goods and services

land the natural resources used in the production of goods and services

capital the equipment and structures used to produce goods and services

entrepreneurship the process of combining labor, land, and capital to produce goods and services

goods items we value or desire

tangible goods items we value or desire that we can reach out and touch

intangible goods goods that we cannot reach out and touch, such as friendship and knowledge

services intangible items of value provided to consumers, such as education

economic goods scarce goods created from scarce resources—goods that are desirable but limited in supply

1-1d WHAT ARE GOODS AND SERVICES?

Goods are the items that we value or desire. Goods tend to be **tangible**—objects that can be seen, held, tasted, or smelled such as shirts, pizzas, or perfume. However, other goods that we cannot reach out and touch are called **intangible goods**. Intangible goods include equality, friendship, leisure, knowledge, security, prestige, respect, and health.

Services are intangible acts for which people are willing to pay, such as haircuts, dental cleanings, legal counsel, medical care, and education. Services are intangible because they are less overtly visible, but they are certainly no less valuable than goods.

All goods and services, whether tangible or intangible, are produced from scarce resources and can be subjected to economic analysis. Scarce goods created from scarce resources are called **economic goods**. These goods are *desirable but limited* in amount.

Oxygen to breathe is not scarce because it is desirable and abundant. Garbage is not scarce because it is abundant but not desirable. However, freedom, books, vacations, computers, cell phones, cars, houses, drinkable water, clean air, health, and even sunlight in December in Anchorage, Alaska, are all scarce. That is, for most people, all of these things are desirable but limited in amount—that is, scarce.

Without enough economic goods for all of us, we are forced to compete. Scarcity ultimately leads to competition for the available goods and services, a subject we will return to often in this text.

What Are Bads?

In contrast to goods, **bads** are those items that we do not desire or want. For most people, garbage, pollution, weeds, and crime are bads. People tend to eliminate or minimize bads, so they will often pay to have bads, such as garbage, removed. The elimination of the bad—garbage removal, for example—is a good. A good to one person though may be a bad to another. For example, the sound of a Harley-Davidson with its pipes revving might be a good to its owner, but a bad to the neighbors—especially at 5:00 on Saturday morning.

1-1e DOES EVERYONE FACE SCARCITY?

We all face scarcity because we cannot have all the goods and services we desire. However, because we all have different wants and desires, scarcity affects everyone differently. For example, a child in a developing country may face a scarcity of food and clean drinking water, while a rich man in Beverly Hills may face a scarcity of garage space for his growing antique car collection. Likewise, a harried middle-class working mother may find time for exercise particularly scarce, while a pharmaceutical company may be concerned with the scarcity of the natural resources it uses in its production process. Its effects may vary, but no one can escape scarcity.

We often hear it said of rich people that "he has everything" or "she can buy anything she wants." Actually, even the richest person must live with scarcity and must, at some point, choose one want or desire over another. And of course, we all have only 24 hours in a day! The problem is that as we become more affluent, we learn of new luxuries to provide us with satisfaction. Wealth, then, creates a new set of wants to be satisfied. No evidence indicates that people would not find a valuable use for additional income, no matter how rich they became. Even the wealthy individual who decides to donate all her money to charity faces the constraints of scarcity. If she had greater resources, she could do still more for others.

Juda Ngwenya/Reuters

Scarcity even exists for billionaires Bill and Melinda Gates. If they had more resources at their disposal, they could do even more for others.

1-1f WILL SCARCITY EVER BE ERADICATED?

It is probably clear by now that scarcity never has and never will be eradicated. The same creativity that develops new methods to produce goods and services in greater quantities also reveals new wants. Fashions are always changing. Clothes and shoes that are "in" one year will likely be "out" the next. New wants quickly replace old ones. It is also quite possible that over a period of time, a rising quantity of goods and services will not increase human happiness. Why? Because our wants may grow as fast as—if not faster than—our ability to meet those wants.

bads items that we do not desire or want, where less is preferred to more, such as terrorism, smog, or poison oak

Section Check 1 Answers

1. Economics is the study of the choices we make among our many wants and desires, given our limited resources. It is a problem-solving science that concerns itself with the choices we make in the face of scarcity.
2. Scarcity is the fact that our unlimited wants exceed our limited resources, so we must make choices.
3. Goods and services are things we value. They can be tangible (e.g., food, shelter) or intangible (e.g., love, compassion, intelligence).

1-2 ECONOMIC BEHAVIOR

SECTION CHECK 2

Keep the following questions in mind as you read through this section.

1. How is self-interest relevant to economics?
2. What is rational behavior?
3. Can we predict how people will respond to changes in incentives?

Economic behavior is usually determined by self-interest and rational behavior, which can help in predicting how people will react to changes in incentives.

1-2a SELF-INTEREST

Economists assume that individuals act *as if* they are motivated by self-interest and respond in predictable ways to changing circumstances. In other words, self-interest is a good predictor of human behavior in most situations. For example, to a worker, self-interest means pursuing a higher-paying job and/or better working conditions. To a consumer, it means gaining a higher level of satisfaction from limited income and time.

We seldom observe employees asking employers to cut their wages and increase their workload to increase a company's profits. And how often do customers walk into a supermarket demanding to pay more for their groceries? In short, a great deal of human behavior can be explained and predicted by assuming that most people act as if they are motivated by their own self-interest in an effort to increase their expected personal satisfaction. When people make choices, they often do not know with certainty which choice is best. But they expect the best outcome from that decision—the one that will yield the greatest satisfaction. Critics will say people don't think that way, and the critics might be right. But economists are arguing that people act that way. Economists are observing and studying what people do—their actions. We largely leave what people think to psychologists and sociologists.

Furthermore, when economists use the term self-interest they are not implying that people only seek to maximize their material consumption. Many acts of selfless behavior may be self-interested. For example, people may be kind to others in hopes that behavior will be returned. By establishing a reputation of honesty, it may send a signal of a willingness of commitment. This may make society a better place. So is it love, or self-interest, that keeps society together?

rational behavior people do the best they can, based on their values and information, under current and anticipated future circumstances

There is no question that self-interest is a powerful force that motivates people to produce goods and services. But self-interest can include benevolence. Think of the late Mother Teresa, who spent her life caring for others. One could say that her work was in her self-interest, but who would consider her actions selfish? Similarly, workers may be acting in self-interest when they choose to work harder and longer to increase their charitable giving or saving for their children's education. That is, self-interest to an economist is not a narrow monetary self-interest. The enormous amount of money and time donated to victims of Hurricane Katrina is an example of self-interest too—the self-interest was to help others in need. However, our charitable actions for others are influenced by cost. We would predict that most people would be more charitable when the tax deductions are greater or that you may be more likely to offer a friend a ride to the airport when the freeway was less congested. In short, the lower the cost of helping others, the more help we would expect to be offered.

In the United States, individuals typically give more than $250 billion annually to charities. They also pay more money for environmentally friendly goods, "giving" a cleaner world to the future. Consumers can derive utility or satisfaction from these choices. It is clearly not selfish—it is in their best interest to care about the environment and those who are less fortunate than themselves.

1-2b DO PEOPLE ACTUALLY ENGAGE IN RATIONAL BEHAVIOR?

Economists assume that people, for the most part, engage in rational behavior. Now, you might think that could not possibly apply to your brother, sister, or roommates. But the key is in the definition. To an economist, **rational behavior** merely means that people do the best they can, based on their values and information, under current and anticipated future circumstances. Economists assume that while people may not know with complete certainty which decisions will yield the most satisfaction they will select the one that they *expect* to give them the best results among the alternatives. Most people act purposefully. They make decisions with some *expected* outcome in mind. Their actions are rational and purposeful, not random and chaotic.

Frank Vetere/Alamy

Enormous amounts of resources (time and money) were donated to the Hurricane Katrina victims. If individuals are acting to promote the things that interest them, are these self-interested acts necessarily selfish?

Consumers and producers all take purposeful actions when they decide what to buy or produce. They make mistakes and are impacted by emotion, but the point is that they make their decisions with some expected results in mind. In short, rational self-interest means that individuals try to weigh the expected benefits and costs of their decisions, a topic we will return to in Chapter 2.

1-2c PEOPLE RESPOND TO CHANGES IN INCENTIVES

Because most people are seeking opportunities to make themselves better off, they respond to changes in incentives. That is, they are reacting to changes in benefits and costs. In fact, much of human behavior can be explained and predicted as a response to incentives. In the words of Levitt and Dubner, the authors of *SuperFreakonomics*, "People are people and they respond to incentives. They can nearly always be manipulated for good or ill, if only you find the right levers." Almost all of economics can be reduced to incentive stories, where consumers and producers are driven by incentives that affect expected costs or benefits. An incentive induces people to respond to a reward or a punishment. We just discussed that most rational people predictably respond to changes in incentives by weighing the expected marginal benefits against the expected marginal cost. Prices, wages, profits, taxes, and subsidies are all examples of economic incentives. Incentives can be classified into two types: positive and negative. **Positive incentives** are those that either increase benefits or reduce costs and thus result in an increased level of the related activity or behavior. **Negative incentives**, on the other hand, either reduce benefits or increase costs, resulting in a decreased level of the related activity or behavior.

For example, a tax on cars that emit lots of pollution (an increase in costs) would be a negative incentive that would lead to a reduction in emitted pollution. On the other hand, a subsidy (the opposite of a tax) on hybrid cars—part electric, part internal combustion—would be a positive incentive that would encourage greater production and consumption of hybrid cars. Human behavior is influenced in predictable ways by such changes in economic incentives, and economists use this information to predict what will happen when the benefits and costs of any choice are changed.

Because most people seek opportunities that make them better off, we can predict what will happen when incentives are changed. If salaries increase for engineers and decrease for MBAs, we would predict fewer people would go to graduate school in business and more would go into engineering. A permanent change to a much higher price of gasoline would lead us to expect fewer gas-guzzling SUVs on the highway. People who work on commission tend to work harder. If the price of downtown parking increased, we would predict that commuters would look for alternative methods to get to work that would save money. If households were taxed for water consumption in an attempt to conserve water, economists would expect people to use less water, and to use substantially less water than if they were simply asked to conserve water. Some people are charitable and some people are stingy, but if you change the tax code to give even greater deductions for charitable contributions, we can predict more people will be charitable, even some of those who are stingy. Incentives matter.

positive incentive
an incentive that either reduces costs or increases benefits, resulting in an increase in the activity or behavior.

negative incentives
an incentive that either increases costs or reduces benefits, resulting in a decrease in the activity or behavior

Section Check 2 Answers

1. Economists assume that people act as if they are motivated by self-interest and respond predictably to changing circumstances.
2. Rational behavior means that people do the best they can based on their values and information, under current and future anticipated consequences.
3. People respond to incentives in predictable ways.

1-3 MARKETS

SECTION CHECK 3

Keep the following questions in mind as you read through this section.

1. How does a market economy allocate scarce resources?
2. What is a market failure?
3. What are product and factor markets?
4. What is the circular flow model?

Let us look at markets, how they allocate resources, and what happens when they fail. We will then examine a model that illustrates market activities.

Although we usually think of a market as a place where some sort of exchange occurs, a market is not really a place at all. A **market** is the process of buyers and sellers exchanging goods and services. Supermarkets, the New York Stock Exchange, drug stores, roadside stands, garage sales, Internet stores, and restaurants are all markets.

Every market is different. That is, the conditions under which the exchange between buyers and sellers takes place can vary. These differences make it difficult to precisely define a market.

1-3a HOW DOES THE MARKET WORK TO ALLOCATE SCARCE RESOURCES?

Collectively, our wants far exceed what can be produced from nature's scarce resources. So how should we allocate those scarce resources? Some methods of resource allocation might seem bad and counterproductive—for example, the "survival of the fittest" competition that takes place on the floor of the jungle. Physical violence has been used since the beginning of time, as people, regions, and countries attacked one another to gain control over resources. We could argue that governments should allocate scarce resources on the basis of equal shares or according to need. However, this approach poses problems because of diverse individual preferences, the difficulty of ascertaining needs, and the negative work and investment incentives involved. In reality, society is made up of many approaches to resource allocation. For now, we will focus on one form of allocating goods and services found in most countries—the market economy.

The market economy provides a way for millions of producers and consumers to allocate scarce resources. For the most part, markets are efficient. To an economist, **efficiency** is achieved when the economy gets the most out of its scarce resources. In short, efficiency makes the economic pie as large as possible.

Competitive markets are powerful—they can make existing products better and/or less expensive,

market the process of buyers and sellers exchanging goods and services

efficiency when an economy gets the most out of its scarce resources

Cell Phones Improve Market Efficiency in Indian Fish Markets

Economist Robert Jensen has found that the introduction of cell phones has made markets more efficient for Indian fishermen. Prior to the introduction of the cell phones, fishermen had to guess which markets had buyers and buyers had to guess which markets had sellers. And without refrigeration, unsold fish was wasted by the end of the day. Cell phones made the market more efficient. Fishermen now call ahead to see which markets will offer the best price. Now there is a better match between buyers and sellers, and there are fewer wasted fish.

Deshakalyan Chowdhury/AFP/Getty Images

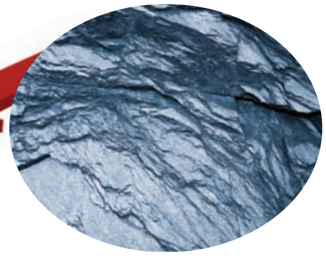
they can improve production processes, and they can create new products, from video games to life-saving drugs. Buyers and sellers indicate their wants through their action and inaction in the marketplace, and it is this collective "voice" that determines how resources are allocated. But how is this information communicated? Market prices serve as the language of the market system. By understanding what these market prices mean, you can get a better understanding of the vital function that the market economy performs.

Markets may not always lead to your desired tastes and preferences. You may think that markets produce too many pet rocks, chia pets, breast enhancements, and face-lifts. Some markets are illegal, such as the market for cocaine, the market for stolen body parts, the market for child pornography, and the market for pirated music. Markets do not come with a moral compass; they simply provide what buyers are willing and able to pay for and what sellers are willing and able to produce.

Wood—Georgia

1-3b MARKET PRICES PROVIDE IMPORTANT INFORMATION

Market prices communicate important information to both buyers and sellers. These prices communicate information about the relative availability of products to buyers, and they provide sellers with critical information about the relative value that consumers place on those products. In short, buyers look at the price and decide how much they are willing and able to demand and sellers look at the price and decide how much they are able and willing to supply. The market price reflects the value a buyer places on a good and the cost to society of producing that good. Thus, market prices provide a way for both buyers and sellers to communicate about the relative value of resources. To paraphrase Adam Smith, prices adjust like an "invisible hand" to direct buyers and sellers to an outcome that is socially desirable. We will see how this works beginning in Chapter 3.



Graphite—Michigan

The basis of a market economy is voluntary exchange and the price system that guides people's choices and produces solutions to the questions of what goods to produce and how to produce and distribute them.

Take something as simple as the production of a pencil. Where did the wood come from? Perhaps the Northwest or Georgia. The graphite may have come from the mines in Michigan and the rubber may be from Malaysia. The paint, the glue, the metal piece that holds the eraser—who knows? The point is that market forces coordinated this production activity among literally thousands of people, some of whom live in different countries and speak different languages. The market brought these people together to make a pencil that sells for 25 cents at your bookstore. It all happened because the market economy provided the incentive for people to pursue activities that benefit others. This same process produces millions of goods and services around the world, from automobiles and computers to pencils and paper clips.

The same is true of the iPod and iPhone. The entrepreneurs of Apple have learned how to combine almost 500 generic parts to make something of much greater value. The whole is greater than the sum of the parts.

Rubber—Malaysia

istockphoto.com/bluestocking, iStockphoto.com/czardases, iStockphoto.com/seraficus, iStockphoto.com/LindaJohnsonbaugh

1-3c COUNTRIES THAT DO NOT RELY ON A MARKET SYSTEM

Countries that do not rely on the market system have no clear communication between buyers and sellers. The former Soviet Union, where quality was virtually nonexistent, experienced many shortages of quality goods and surpluses of low-quality goods. For example, thousands of tractors had no spare parts and millions of pairs of shoes were left on shelves because the sizes did not match those of the population.