ESSENTIAL QUESTION

In what ways do people cope with the problem of scarcity?

Reading HELPDESK

Academic Vocabulary
transform to change the nature of something

Content Vocabulary
factors of production productive resources needed to produce goods; the four factors are land, capital, labor, and entrepreneurship
land natural resources or “gifts of nature” not created by human effort; one of the four factors of production
capital tools, equipment, and factories used in the production of goods and services; one of the four factors of production; does not include the entrepreneur
labor people with all their abilities and efforts; one of the four factors of production; does not include the entrepreneur
entrepreneurs risk-taking individuals who introduce new products or services in search of profits; one of the four factors of production
production possibilities curve diagram representing all possible combinations of goods and/or services an economy can produce when all productive resources are fully employed
opportunity cost cost of the next best alternative use of money, time, or resources, when one choice is made rather than another
trade-off alternative that must be given up when one choice is made rather than another
consumerism a social movement that was aimed at promoting the interests of consumers

TAKING NOTES: Key Ideas and Details

As you read the section, use a graphic organizer like the one below to identify ways that choices can be made to cope with the problem of scarcity.

Our Economic Choices

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The Choices Producers Make

Guiding Question  Why must producers make production choices?

It helps to think of our economy as being made up of two broad groups—producers and consumers. Of course we also have government, but more on that later; let’s turn our attention to producers first.

Producers include all kinds of businesses, from individual artists who sell their creations at art shows to giant corporations whose annual revenue is billions of dollars. All these producers have one thing in common. They all use what economists call “factors of production.” Factors of production are the resources needed to produce the things we would like to have. They include land, capital, labor, and entrepreneurs. As shown in Figure 1.2, all four are required to produce goods and services.

Land

In economics, land refers to the “gifts of nature,” or natural resources not created by people. “Land” includes deserts, fertile fields, forests, mineral deposits, livestock, sunshine, and the right climate to grow crops. Because a limited amount of natural resources are available at any given time, economists tend to think of land as being fixed, or in limited supply. Changing world events can easily affect the prices of limited natural resources, such as oil and metals.

Sometimes newer methods of production can be used to extract more resources out of the ground. For example, relatively new “fracking” techniques are used to recover natural gas locked in underground shale deposits. The natural gas was already there before the new mining methods were developed.

Capital

A second factor of production is capital, sometimes called capital goods. This includes the tools, equipment, machinery, and factories that are used to produce goods and services. Capital is unique because it is the result of production. A bulldozer, for example, is a capital good used in construction. When it was built in a factory, it was the result of production involving other capital goods. The computers in your school that are used to provide the service of education also are capital goods.

Labor

A third factor of production is labor. This is people with all their efforts, abilities, and skills. This category includes all people except a unique group of individuals called entrepreneurs. These we single out because of their special role in the economy. Historically, factors such as birthrates, immigration, famine, war, and disease have had a dramatic impact on the quantity and quality of labor.

Entrepreneurs

A fourth factor of production is the people responsible for much of the change and progress in our economy. These individuals are entrepreneurs. They are risk-takers in search of profits who do something new with existing resources. Entrepreneurs are often thought of as the driving force in an economy. This is because they are the people who start new businesses or bring new products to market.

Henry Ford is one example of an entrepreneur. His introduction of the moving assembly line in 1913 forever changed the way cars were produced. Steve Jobs was another entrepreneur who transformed, or dramatically changed, the personal computer, cell phone, and music-sales industries.
Production Possibilities

Guiding Question  How does a production possibilities curve illustrate the decisions made in an economy?

Everything we make requires the four factors of production. For example, the individual artist may require materials that come from nature. These can include the minerals (land) used to give paints their pigments. The artist uses paintbrushes and easels (capital). He or she spends many hours creating the art (labor) and makes the effort to sell the finished products (entrepreneurship). Giant corporations do the same, only on a much larger scale.

Even the service called “education” uses all four factors of production. The desks and lab equipment in schools are capital goods. Teachers and other employees provide the labor. Land includes the property where the school is located, as well as the iron ore and timber used to make the building. Finally, educational publishers are entrepreneurs. They create the materials that help teachers present the subject matter.

Identifying Possible Alternatives

Economists use the production possibilities curve, sometimes called the frontier, to show all possible combinations of output. A production possibilities curve is a diagram that shows various combinations of goods and services an economy can produce when all its resources are in use. In the example in Figure 1.3, a mythical country called Alpha produces two goods—cars and clothing.

Even though Alpha produces only two goods, the country has a number of alternatives available to it. This is why the figure is called a production “possibilities” frontier. For example, it could choose to use all of its resources to produce 70 units of cars and 300 units of clothing. That is shown as point a in Figure 1.3. Or it could take some of its resources out of car production and put them into making clothing. This moves the output to point b. Alpha could even choose to produce at point c. This point represents all clothing and no cars. Or it could produce at point e, which is inside the frontier. Choosing an option inside the frontier results in less than the maximum of production. Although Alpha has many alternatives, eventually it will have to settle on a single combination. This could be point a, point b, or any other point on or inside the curve of the frontier graph, because its resources are limited.

Fully Employed Resources

All points that lie on the curve, such as a, b, and c, represent maximum combinations of output that are possible if all resources are fully used. For example, suppose that Alpha is producing at point a. However, the people want the same number of cars, but more clothing. This is represented by point d.
But as long as all resources are fully employed at point a, there are no extra resources to produce the extra clothing. Therefore, point d cannot be reached, nor can any other point outside the curve. This is why the figure is called a production possibilities “frontier.” It shows the outer limits, or maximum combinations of goods and services, that can be produced.

Opportunity Cost
People often think of cost in terms of dollars and cents. To an economist, however, cost means more than the price tag. Instead, economists think in terms of opportunity cost. This is the value of the next-best alternative available. For example, suppose that Alpha were producing at point a. But Alpha wants to move to point b. This is clearly possible as long as point b is not outside the production possibilities frontier. In order to accomplish this, Alpha will have to give up something in order to achieve this new balance. As shown in Figure 1.4, the opportunity cost of producing 100 additional units of clothing is 30 fewer units of cars.

Opportunity cost applies to almost all activities. Also, it is not always measured in terms of dollars and cents. For example, you need to balance the time you spend doing homework with the time you spend with your friends. If you decide to spend extra hours on your homework, the opportunity cost of this action is the time that you cannot spend with your friends. You normally have a number of trade-offs available whenever you make a decision. The opportunity cost of the choice you make is the value of the next best alternative that you give up.

Using proven strategies like cost-benefit analysis to deal with common problems like this is something that will help you understand how people respond to scarcity.

The Opportunity Cost of Idle Resources
If some resources were not fully used, then it would be impossible for Alpha to reach its maximum production potential. Suppose that Alpha were producing at point b. What would happen if workers in the clothing industry were to go on strike? Clothing production would fall, causing total output to change to point e. The opportunity cost of the unemployed resources would be the 100 units of lost clothing production.

Production at point e could also be the result of other idle resources. These might include available factories or land not in use. As long as some resources are idle, the country cannot produce on its frontier. This is another way of saying that it cannot reach its full production potential.

Reading Progress Check
Synthesizing How can the production possibilities frontier be used to illustrate economic growth?

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The Choices Consumers Make

Guiding Question  Why is it important to evaluate trade-offs and opportunity costs when making choices?

In a world where “there is no such thing as a free lunch,” there are choices and costs to everything we do. Choices can be made by society as a whole, or by individuals. Either way, the choices and their opportunity costs are important, so it pays to look at these concepts closely.

Trade-Offs

Making the right decision, or at least the best decision, is not always easy. This is because every decision we make has its trade-offs. Trade-offs are the things that we give up in order to make another choice. Because decision making involves trade-offs, it helps to have a consistent strategy to make the best decision. For example, suppose that you decided to spend some of the money you earned last summer, but you have not decided how to spend it. One way to help make a decision is to construct a model, such as the grid in Figure 1.5. The alternatives, or choices, are listed in the first column and the criteria in the first row.

What if all the choices have the same dollar cost? Then all that is left to be done is to evaluate each one with a “+” if it satisfies the criterion, or with a “−” if it does not. These evaluations may differ from one person to the next. However, in the case of Figure 1.5, the best choice is to buy a new computer. This is because it satisfies more criteria than any other choice.

The decision-making grid is a good way to analyze an economic problem. It forces you to consider a number of choices and the criteria you will use to evaluate each one. Finally, it makes you evaluate each choice based on the criteria you selected.

Opportunity Cost for Consumers

Producers are not the only ones who face opportunity costs. These costs apply to consumers, too. The decision-making grid also shows the opportunity cost of making a decision like buying a computer. This is because the next-best use of time or money would be to buy a used motorcycle. So again, the opportunity cost of doing something is not measured in terms of dollars and cents. Instead, economists think of the next-best choice given up. In the example, this would be the purchase of a motorcycle because it is the second-best choice in terms of meeting all the criteria. In contrast to the opportunity cost, the trade-offs are all the other choices that could have been chosen.

Even time has an opportunity cost, and you cannot necessarily put a monetary value on it. The opportunity cost of reading this economics book, for example, is the history paper or math homework that you cannot do at the same time.

Consumer Rights

In a world of giant corporations, it may seem as if the consumer is the powerless “little guy.” But consumers as a group help decide WHAT producers should make. Therefore, they affect where a country will be on its production possibilities frontier. For example, suppose that consumers decide that they want more to buy more clothing and fewer cars. They will help move the economy from point a on the production possibilities curve in Figure 1.3 to point b.

Consumers were given some protection in 1962 when President John F. Kennedy sent a message to Congress outlining the first four consumer rights below. President Richard Nixon later added the fifth consumer right.
Lesson 2  Our Economic Choices,  *Continued*

- **The right to safety**—protection against goods that are dangerous to life and health
- **The right to be informed**—to receive information that can be used for reasoned choices and protection against fraud
- **The right to choose**—the right to be protected in markets where competition may not always exist
- **The right to be heard**—the guarantee that consumer interests will be considered when laws are being written
- **The right to redress**—the ability of consumers to receive fair payment from producers if they are harmed by their products

These consumer rights were part of a movement called *consumerism* that began in the 1960s. The movement was an attempt to educate buyers about purchases they make and to demand better and safer products from producers.

**Exploring the Essential Question**

*Consumers often deal with the scarcity of items. This is especially true when a new electronic gadget first comes on the market. Long lines at electronic stores form. People even camp out overnight in front of the stores to be the first to buy the new gadget. Do you agree that this is a good way to deal with the scarcity of an electronic item? Describe whether you agree or not and give your reasons.*

**Consumer Responsibilities**

*The consumer rights listed above were responsible for a number of laws that protect consumers. At the same time, lawmakers felt that consumers have responsibilities as well as rights.*

These responsibilities are listed in Figure 1.6. They require consumers to behave honestly, when dealing with producers and other merchants. For example, an ethical consumer is expected to do his or her homework before buying a product. This includes searching for the lowest price and reading any and all information about the product, including instruction manuals and other disclosures.

The availability of online shopping makes many of these steps easier. For example, it is fairly easy to search for the seller with the lowest price. Many sites even list comments by consumers who have already purchased the product. In addition, there are a number of sites that test similar products side by side to see which might be better. Some Websites even recommend preferred sellers to make purchasing even easier.

**Reading Progress Check**

*Determining Cause and Effect* How do you think our society would be different if citizens did not study economics?