

Chapter 3


Economic Understandings

Chapter Preview

Terms

needs, wants, goods, services, consumer, producer, factors of production, natural resources, renewable, nonrenewable, capital goods, human resources, specialization, entrepreneurship, profit, income, expenses, scarcity, choice, resource allocation, price, vote, sharing, contest, force, authority, lottery, first-come/first-served, personal characteristic, opportunity cost, trade-off, supply, demand, economist, traditional economy, command economy, market economy, economic continuum, Gross Domestic Product (GDP), Consumer Price Index (CPI), inflation, unemployment, trade, tariff, quota, embargo, subsidy, standard, currency, exchange rate

Above: People have a *need* for food, but the purchase of a restaurant-made pizza is a *want*.

A photograph of three people sitting on a light-colored carpeted floor, eating pizza. On the left, a woman with glasses and a yellow shirt is smiling. In the middle, a woman with long blonde hair wearing a denim vest over a pink shirt is also smiling. On the right, a man with short brown hair wearing a light blue striped polo shirt is smiling. They are all looking towards the right. There are two pizza boxes in front of them, one open and one partially open. The background is a bright, out-of-focus indoor setting.

In a family, everyone seems to have wants: new clothes, a new app, new tennis shoes, a new cell phone, a new car! The list goes on and on. Families also have needs. For instance, you need food for dinner. You need a place to sleep at night. You need clothes to wear to school. These are things that are required in order to live. However, there are lots of things family members might like to have that are not required for living. For instance, you *need* food for dinner, but you *want* to go out to eat at a great pizza restaurant.

The concepts of wants and needs are a part of the study of economics. This branch of social studies looks to how people manage their resources to meet their needs and wants. A single household has an economy. Cities, states, and nations also have economies. Because modern nations interact with each other through trade, there is also a global economy. Looking at an example like a family explains how a small (micro) economy works. This will help you understand the larger (macro) economies around the world.

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The ultimate purpose of economics, of course, is to understand and promote the enhancement of well-being.

-Ben Bernanke,
former chair,
Federal Reserve
Bank Board
of Governors

Section 1

Economic Fundamentals


 Setting a Purpose


As you read, look for

- ▶ the difference between wants and needs, goods and services;
- ▶ how people are both consumers and producers;
- ▶ the importance of resources to a country's economy;
- ▶ **terms: needs, wants, goods, services, consumer, producer, factors of production, natural resources, renewable, nonrenewable, capital goods, human resources, specialization, entrepreneurship, profit, income, expenses.**

Needs and Wants

All humans have the same basic **needs**: air to breathe, food to eat, water to drink, and clothing and shelter to protect us. Beyond these basic needs, the things we desire are called **wants**. People's wants—things that would make their lives more comfortable or enjoyable—are almost unlimited.

Humans satisfy their needs and wants by acquiring, or buying, goods and services. **Goods** include *tangible items* (things you can touch) such as food, clothing, houses, and furniture. **Services** are the work or activities people perform, often for a fee. Examples of a service include a doctor's appointment, a haircut from a salon or barber shop, or a chef's activities in the restaurant kitchen. The food purchased at the restaurant is a *good*, but the chef who makes it is providing a *service*. Part of the money used to pay a restaurant bill is paying for goods and part is paying for services.



Bottom: When this chef prepares fresh vegetables, he is providing a service for his customers.

The person who buys the restaurant meal is a **consumer**—a person who satisfies a need or want by buying a good or service. A **producer** is the person or group of people who use resources to make goods or provide services. The farmer who grows the food for the meal is an example of a producer.

Factors of Production

Societies have created many ways to provide goods and services for their people. To do so, a society must have resources. Resources are the building blocks of an economy. They are the things needed to produce goods and services, the **factors of production** or productive resources. The factors of production are natural resources, capital goods, human resources, and entrepreneurship. Individuals, businesses, and governments use the factors of production to produce goods and provide services.

Natural resources are products of Earth and its atmosphere that are useful to humans. For example, plants and animals are biological resources. These resources are **renewable**; they can replenish themselves over time. Because biological resources are often farmed, harvested, or hunted, humans have to play a role in the renewal process. Forests are a renewable natural resource. A forest is an area rich in plants and animals where trees are the main plant. These plants and animals can be used to produce goods that people want and need. Mineral resources are natural substances found inside Earth. They are formed by slow geological processes. Minerals become a resource when they exist in enough quantity that they can be extracted, or removed, from Earth for economic gain. Unlike biological resources, mineral resources are **nonrenewable**. Once taken from Earth, they are not replaced by nature. Examples of mineral resources include coal, oil, gold, and diamonds.

Capital goods are the tools used in the production of goods and services. In general, it takes some kind of capital resource to transform a natural resource into a product. Capital resources, also known as capital tools, can include textile mills, furniture factories, printing shops, and chemical plants. The machines and equipment inside these processing facilities are also capital resources.

Below: Diamonds and other gemstones are examples of a nonrenewable natural resource.

Bottom: Trees are a renewable natural resource. The machinery that turns trees into furniture is considered a capital resource.





The term **human resources** describes the people who produce goods or services. A human can transform a natural resource into a good through effort and activity. Human beings are an economic resource when they supply the labor—whether physical or mental—that transforms a resource into a good or service. In an economic system, laborers (workers) are paid for the work they perform. The interconnected state, national, and global economies of today require new skills and **specialization** (becoming expert in one part of a larger business or market). People who want good jobs need to have education and specialized training to make them attractive to employers.

The final factor of production is **entrepreneurship**. When people start their own businesses, they are called entrepreneurs. They risk their money and time in the hopes of creating a successful business. To be successful, the business must earn a **profit** (the amount left after costs are subtracted from the price). The business must sell goods or services to generate **income**. It will also have costs related to the business called **expenses**. The company is successful if its income is greater than its expenses. The difference is called profit. Entrepreneurs are people who have two characteristics that make them special. First, they are creative, innovative thinkers who come up with ideas for new or improved goods and services that other people would like to have. Second, they are willing to risk their limited natural, human, and capital goods to produce these goods and services. Some examples of entrepreneurs are Steve Jobs from Apple Computer, Bill Gates from Microsoft, and Truett Cathy from Chick-fil-A. There are small business owners in every town who are entrepreneurs as well.

Reviewing the Section

1. What is the difference between needs and wants? Give two examples of each.
2. What is the difference between goods and services? Give two examples of each.
3. Why are resources important to a country's economy?
4. Copy the chart below and complete it with information from the reading.

Factor of Production	Definition	3 Examples
Natural Resources		
Capital Goods		
Human Resource		
Entrepreneurship		

5. Why is it important for countries to invest in the four factors of production? What happens to countries that do not invest in them?

Top: An Asian potter manages his business using a modern tablet device. **Above:** This Arab entrepreneur operates her trading company with the assistance of managers and other employees.

Section 2

Decision Making in Economics

As you read, look for

- ▶ how scarcity forces people to make choices about what they want most;
- ▶ the difference between opportunity costs and trade-offs;
- ▶ why producers sometimes turn out a low supply of their good;
- ▶ the role profit plays in production;
- ▶ **terms: scarcity, choice, resource allocation, price, vote, sharing, contest, force, authority, lottery, first-come/first-served, personal characteristic, opportunity cost, trade-off, supply, demand.**



Scarcity Requires Choices

There are unlimited needs and wants in the world, but there are limits to the resources to meet those needs and wants. Because of these limits, people have to make decisions about how to use their resources and how to meet their needs and wants. Some resources may be abundant (in large amounts) in a given place or society, but all resources are limited. This makes them scarce. Scarcity is a basic economic concept. **Scarcity** exists when people and societies try to satisfy unlimited wants with limited resources. In other words, scarcity happens when there are a lot of people who want something but there is only a limited amount available. For example, when the newest game system or smartphone is released, it is usually scarce because so many people want to buy it and there is only a limited supply available.

Scarcity requires consumers and producers to make **choices** with their limited resources. The limits of a person's or community's resources force them to put limits on the amount of goods and services they obtain. Producers also have to make choices about the kinds of goods they produce or the level of services they provide based on available resources. An economic system is created by the choices producers and consumers make with the limited resources they have at their disposal.

Above: Teenagers' demand for technology can cause shortages of goods if demand is greater than supply.

Below: This family has gathered for lunch. Family members who choose to spend time together have also made a choice not to do some other activity.

Resource Allocation Strategies

Because resources are limited, there needs to be a way to decide who gets those resources. Different economic systems make these decisions in different ways. Economists identify many ways in which the **resource allocation** decision could be made. These include **price** (goes to the highest bidder, or trade or barter for the resource), **vote** (majority rule decides who gets the resource), **sharing** (dividing the resource), **contests** (resource goes to the winner), **force** (the strongest gets the resource), **authority** (directed or ordered by another person), **lottery** (resource goes to the luckiest; random), **first-come/first-served** (the first person in line gets the resource), and/or **personal characteristic** (resource goes to the person who is oldest, has the longest hair, is most experienced, etc.).

While all nine allocation strategies may be used in all different types of economic systems, in traditional economies, sharing, personal characteristics, lottery, and contests might be used most frequently. In command economies, the decisions about who gets the limited resources are typically made by an authority, through force, or based on first-come/first-served. In market economies, price and vote usually determine who receives limited resources.

Cost/Benefit Analysis

Individuals, families, businesses, and governments all have to make economic choices. Each choice offers an opportunity that has a *cost* and a *benefit*. The **opportunity cost** in any kind of decision is the value of the next best alternative a person *does not* choose.

Opportunity costs and benefits affect decisions about the use of many kinds of resources, including time. For example, a person might have the opportunity to attend a Falcons football game one Sunday. However, the person normally goes to a favorite aunt's house on Sunday for a big family lunch. If the person chooses to go to the football game, this is the opportunity benefit. The opportunity cost is missing out on the family fun and food.





Trade-Offs

When an individual, a business, or a government makes a choice to have less of one thing to get more of something else, the result is called a **trade-off**. Evaluating trade-offs requires comparing the costs and benefits of each of the available alternatives with the other. Choosing between a hamburger and a chicken sandwich at a fast food restaurant is an either/or decision that does not involve a trade-off.

Not all decisions are either/or decisions. By making small changes, a person can trade off a little more of one thing for a little less of the other. For example, choosing between the family lunch and the Falcons football game could involve a trade-off. The football fan could arrive earlier at the aunt's house, skip dessert, and leave in time to arrive at the game shortly after kickoff. The trade-off would have allowed the person to have a smaller amount of both opportunities.

Supply and Demand

Supply is the quantity of a good or service available for sale. Supply can affect both purchasing decisions and prices. Consumers want to pay as little as they can for something. In general, when the supply of something is high, the price for it is low. Producers want to earn as much as they can for the goods or services they produce. If they keep the supply small, they can charge more for the scarce item. However, it might make sense for them to produce a lot of an item, sell more items at a lower price, and make more profit overall.

Above: This South African with his vuvuzela enjoys a soccer match between South Africa and the Netherlands. Choosing to attend a sporting event involves a trade-off because there are choices about how people spend their time and money.



Demand describes the quantity of a good or service consumers are willing to buy. Demand is based on three things. A buyer must (1) want something, (2) have the ability to pay for it, and (3) be willing to pay for it. If those conditions are in place, a consumer will still pay attention to the price. In general, demand goes down for an item as its price rises. As the price of an item goes down, the demand for it tends to go up.

Supply and demand are separate concepts, but when considered together, they help us understand why goods have certain costs, and why people are or are not willing to pay those costs. The price of something is the result of an ongoing negotiation between producers and consumers based on supply and demand.

The prices of goods and services are important because they help shape economic decisions. If the supply of an item is low but buyers want it badly enough, they will pay a higher price for it. Think about the newest model of a smartphone. People are willing to pay a lot of money to buy it now instead of waiting for it to get cheaper. If sellers want to sell large quantities of an item, they will often be willing to lower their price to an acceptable level. A producer will try to maximize profit but will not make prices so high that buyers reduce their demand.

Reviewing the Section

1. Why does scarcity force people to make choices?
2. How do the choices of producers and consumers lead to an economy?
3. Which of the nine resource allocation strategies is best? Explain your thinking.
4. Which resource allocation is used in a traditional economy, command economy, and market economy?
5. Why do producers sometimes produce a low supply of their good?
6. What are three things that affect demand?
7. Putting It All Together: What is the relationship between supply and demand?

Above: This Japanese youth has a phone that costs over \$700 when new. As with many technology devices, it may have almost no value in just a few years.

Section 3

Economic Systems

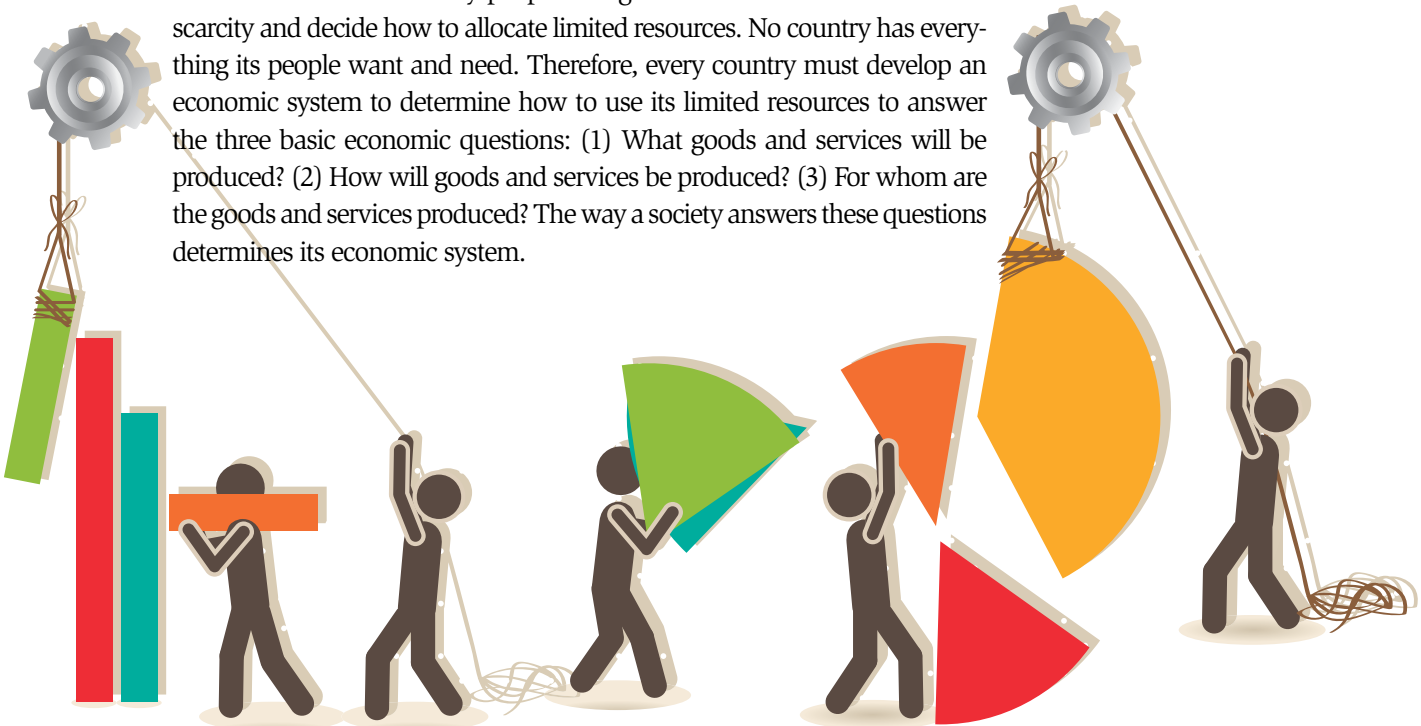
As you read, look for



- ▶ the job of an economist;
- ▶ the three basic economic questions that every country must answer;
- ▶ the three types of economies and their strengths and weaknesses;
- ▶ how economies are measured;
- ▶ reasons for specialization and trade;
- ▶ barriers to trade;
- ▶ how people buy goods from other countries by exchanging currency;
- ▶ terms: **economist, traditional economy, command economy, market economy, economic continuum, Gross Domestic Product (GDP), Consumer Price Index (CPI), inflation, unemployment, trade, tariff, quota, embargo, subsidy, standard, currency, exchange rate.**

Economic Models

A person who studies the economy is called an **economist**. Economists seek to understand the way people and governments address the issue of scarcity and decide how to allocate limited resources. No country has everything its people want and need. Therefore, every country must develop an economic system to determine how to use its limited resources to answer the three basic economic questions: (1) What goods and services will be produced? (2) How will goods and services be produced? (3) For whom are the goods and services produced? The way a society answers these questions determines its economic system.





Those economic questions are answered by different people in different ways depending on the kind of economic system a society has in place. Economists have come up with a variety of models to explain the kinds of economic systems societies have developed. These models do not describe every economic system perfectly. All societies have an economy that blends more than one economic system model. Although the models are imperfect, they help us determine the broad characteristics that shape an economic system. The three economic systems are a traditional economy, a command economy, and a market economy.

Traditional Economy

Three aspects help to define a **traditional economy**. First, it tends to be heavily dependent on agriculture. Second, people tend to *barter* (use items of value rather than money or precious metals for exchange). Third, economic decisions are often made on the basis of long-held customs (traditions), beliefs, or habits. Because of this, change comes slowly and a person is likely to do the same kind of work his or her ancestors did.

In a traditional economy, the customs and habits of the past are used to decide what and how goods will be produced, distributed, and consumed. In this system, each member of the society knows early in life what her or his role in the larger group will be. Because jobs are handed down from generation to generation, there is very little change in the system over the generations. In a traditional economy, people are depended upon to fulfill their traditional roles. If some people are not there to do their part, the system can break down. Farming, hunting and gathering, and cattle herding are often part of a traditional economy.



Above: Agriculture, as seen on this farm in Madagascar, is often part of a traditional economy. **Right:** Men barter for sheep at the weekly Kashgar, China, livestock market.



Command Economy

In a **command economy**, government planning groups make the basic economic decisions to answer the three basic economic questions. They determine such things as which goods and services to produce, the prices, and wage rates. Individuals and corporations generally do not own businesses or farms themselves. These are owned by the government. Workers at a factory are told what to produce and how much to produce in a given time. The government assigns production goals to all workers. The expectation is that, when all workers meet all goals, everyone in the country will be able to have the goods they need when they need them.

There are problems and benefits of this type of economy. One problem with the system is trying to predict exactly what goods people will need. For example, the government may think that building tractors is important. More tractors could mean farmers can grow more crops. More crops mean more people have the food they need. However, if factories are busy making tractors, they might not be making enough delivery trucks. The people may end up with plenty of food but no trucks to ship it to consumers. A benefit of this economy is that prices are controlled and people know exactly how much everything will cost. For example, food prices are always kept low because food is a basic need of all people. The cost of clothing and housing is kept low as well. Health care and education are provided by the government at no cost. The cost of things that are considered luxuries, such as televisions or computers, may be very high because these are not considered basic needs. Wages for different jobs are also set by the government.

Market Economy

In a **market economy**, economic decisions are made at an individual, rather than a government, level. The three basic economic questions are answered by producers based on their beliefs about how consumers will respond to what they produce.

Above: This oil refinery in Izmit is the largest refinery in Turkey. It produces about one-third of the country's petroleum output. The global demand for oil affects the profit that can be made in this business.


In Other Words

The term *laissez-faire* comes from French words *laissez* (let) and *faire* (do). The term indicates that you should “let people do as they choose” without interference from the government or other authorities.

Production decisions are guided by changes in prices that occur between individual buyers and sellers in the marketplace. Other names for market systems are free enterprise, capitalism, and *laissez-faire*. In a market economy, businesses and farms are generally owned by individuals or corporations. Each business or farm decides what it wants to produce. Market economies have benefits and problems. A benefit is that consumers can usually find the goods they want. They are free to earn as much money as they can in order to buy the goods and services they want. Businesses are free to find new ways to make better products and lower prices. A problem is that, if a company does not manage its money well, it can go out of business and the workers can lose their jobs and incomes.

All Economies Are Mixed

There are no countries today that have pure command or pure market economies. The economies of all countries today have characteristics of both systems and are often referred to as mixed economies. However, most economies are closer to one type of economic system than another. In a truly free market economy, for example, the government would not be involved at all. There would be no laws to protect workers from unfair bosses. There would be no rules to make sure credit cards were properly protected. Many societies have chosen to have some rules to protect consumers, workers, and businesses. These rules reduce the freedoms that businesses have, but they also protect the workers and consumers. Mixed economies come in many forms. In the United States, the government makes laws to govern businesses. However, the government rarely owns businesses or controls production or prices.



Right: Governments make laws about how credit cards are used in order to protect consumers and businesses.

In order to understand where a country falls between command and market economies, we use an **economic continuum**. On one end, at 0, is a pure command economy. At the other end, at 100, is a pure market economy. Countries move back and forth on the continuum based on the actions of the government—whether they are more active or less active in the economy. A government can be viewed as “active” by adding rules, regulations, tariffs, and quotas to the businesses in the country. When these are removed, the government is considered “less active.”

Measuring the Economy

Economists gather information to measure an economy’s strength by using a variety of economic indicators. In turn, businesses, individuals, and the government use the information from economic indicators to make better economic decisions. One of the most important economic indicators is the **Gross Domestic Product (GDP)**. It measures the total value of the final goods and services produced within the borders of a country in one year.

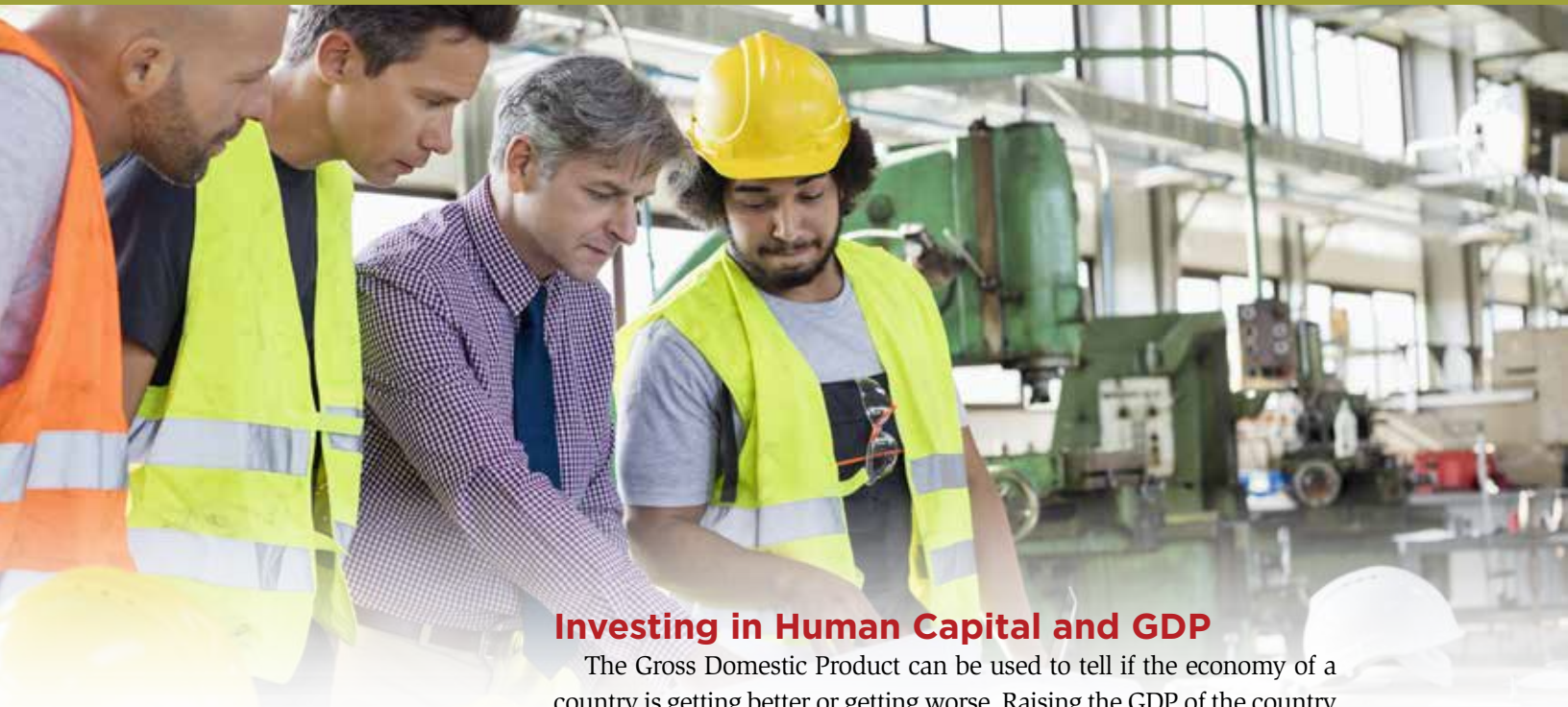


The GDP *per capita*, or per person, is also used to measure an economy’s strength. The GDP per capita is the GDP divided by the number of people in a country. The GDP per capita is more useful when comparing two countries’ economies. For example, in 2016, the GDP of India was about \$2.3 trillion while the GDP of South Korea was \$1.4 trillion. These numbers seem to show that India has a stronger economy than South Korea. However, India has many more people than South Korea. The population of India in 2016 was about 1.3 billion, while the population of South Korea was about 51 million. Dividing the GDP of these countries by their population numbers gives the GDP per capita: about \$6,700 for India; about \$37,900 for South Korea. This comparison shows that South Korea has a stronger economy than India because it takes into account the difference in population size between the two countries.

In Other Words

One definition of *gross* is “total.” The word *domestic* means “within a country.” So *gross domestic product* is the total value of products produced in a country.

Left: The United States, China, and the European Union have the highest Gross Domestic Product values.



Investing in Human Capital and GDP

The Gross Domestic Product can be used to tell if the economy of a country is getting better or getting worse. Raising the GDP of the country can mean a higher standard of living for the country's people. To increase the GDP, countries must invest in human capital. This includes education, training, skills, and health of the workers in a business or country. If the workers in a country are uneducated or untrained, they will be limited in the kind of work they can do. An unskilled workforce limits the types of industry that can develop. If workers are unhealthy, they cannot produce the goods and services that are needed. Businesses and countries that want to be successful must pay attention to investing in human capital. Successful businesses help to increase the GDP of a country and improve the standard of living for all.



Investing in Capital Goods and GDP

To increase the GDP, countries must also invest in capital goods. These include the factories, machines, technologies, buildings, and property needed for a business to operate. If a business is to be successful, it cannot let its equipment break down or allow its buildings to fall apart. New technology can help a business produce more goods at a lower cost.

Here is an example. The Hóng Lóng Company makes T-shirts. They are using the same equipment they have used for 30 years. The company makes good shirts and employs about 100 workers. Customers are satisfied with the quality and price. A new company, Kuài Hóuzi, opens. This company has invested in new technology that reduces the cost of T-shirts. Machines do much of the labor, so the cost of paying workers is lower. The new company has about 20 workers. Customers are satisfied with the quality of the new shirts, and they like the lower price. Hóng Lóng Company has a problem. It is losing customers to the new company. Its owners decide to buy newer and better equipment so they can make more shirts for a cheaper price. They are investing in capital goods.

Top: Training employees improves the quality of work they can do. **Above:** This machine knits socks in a textile factory. Investing in new equipment benefits a business.

The **Consumer Price Index (CPI)** is an economic indicator that measures prices. Each month, the prices of goods and services are checked to see if they rose or fell in comparison to previous months.

When the CPI shows that prices are rising steadily, this indicates **inflation** (a continual increase in the price of goods and services). In this situation, increases in price mean a buyer can afford less with the same amount of money. If wages do not increase at a level to keep up with inflation, a consumer's spending power goes down even further.

The **unemployment** rate is another very important economic number. A person is described as unemployed if he or she does not have a job but has been actively looking for work in the previous four weeks and is currently available for work. Each month, a government report shows the percentage of people who are out of work and are looking for jobs. If the supply of jobs is low, workers are often willing to accept lower pay in order to have a job. If unemployment rates are low, businesses will have to pay a higher wage because the supply of available workers is smaller.

Specialization and Trade

Another important economic idea is specialization. Here is an example. Mrs. Park works at a shoe factory. In this factory, she runs a machine that sews the leather parts of the shoes together. She has done this job for a long time, and she is an expert at it. Because she is an expert, she has found ways to improve the machine that she uses. She has also learned skills that help her do her job faster. She knows exactly what to do if there is a problem of any kind. We can say that Mrs. Park is “specialized” in her work. She does not work on gathering, processing, or cutting the leather for the shoes. She does not work on manufacturing the soles of the shoes. She does not make laces. Mrs. Park does her part of the process very well, and that helps the business run better. Because the people in Mrs. Park's shoe factory have specialized in their part of the shoemaking process, the entire company works better. The factory has a “division of labor.” The work is divided into different parts, and each worker is allowed to become an expert in her or his part of the work. More shoes are made when each specialized worker finds ways to improve the process and learns how to do the job more quickly. The shoe factory is specialized, too. It is not trying to also make belts, purses, or some other goods. The owners are focusing their business on trying to produce more shoes in less time for less cost.



DID YOU KNOW ?

To calculate the Consumer Price Index, workers from the US Bureau of Labor Statistics visit or call thousands of retail stores, service establishments, rental units, and doctors' offices to record the prices of about 80,000 items each month.



Above: In assembling shoes, one worker may specialize in cutting the leather. **Left:** A worker in a shoe factory specializes in sewing the soles of the shoes to the leather.


Countries may specialize in the production of certain goods just as the people in the shoe factory were specialized. Most countries do not produce all that they consume. Instead, they focus on producing certain goods based on their resources. They then trade those goods for goods they need from other countries.

Trade is the voluntary exchange of goods and services among people and countries. Trade and voluntary exchange occur when buyers and sellers freely and willingly engage in market transactions. When trade is voluntary and nonfraudulent, both parties benefit and are better off after the trade than they were before the trade.

Barriers to Trade

Sometimes people complain about trade. They say that too much trade with other countries causes their own workers to lose jobs. Countries sometimes try to limit trade by creating trade barriers. The most common types of trade barriers are tariffs and quotas. A **tariff** is a tax on imports. Imports are goods purchased from other countries; exports are goods sold to other countries. A **quota** is a specific limit placed on the number of imports that may enter a country. Another kind of trade barrier is an embargo. An **embargo** is a government order stopping trade with another country. An embargo might be enacted to put pressure on another country. Subsidies are yet another kind of trade barrier. A **subsidy** is when the government of a country gives money to certain businesses so they can continue to compete with imports from other countries. For example, the United States provides subsidies to farmers so they can continue to grow their products and be competitive with other countries that use cheaper labor on their farms. The final type of trade barrier is a standard. **Standards** are when the government sets limits and rules in regards to imports and domestic goods.

Should countries create trade barriers that limit trade? It is true that some workers in certain industries may be hurt by trade. For example, some US clothing workers have had to change jobs during the past 30 years because many clothes now are imported from other countries. However, this trade allows people in the United States as a whole to buy clothing at lower prices. Many believe this results in a higher standard of living for people in the United States and its trading partners.



Below: The United States provides subsidies to farmers such as this rural farm in Georgia.



Trade and Exchanging Currencies

Currency is the money people use to make trade easier. People in the United States use dollars (USD or \$) to buy goods and services. Workers in the United States are paid in US dollars. In other countries, different currencies are used. Usually, trading in another country requires the use of that country's currency instead of US dollars. Trading with other countries, then, requires trading for different currencies.

For example, a Georgia farmer may choose to sell cotton to a manufacturing company in India. The Indians use rupees as currency, but the Georgians want US dollars. Somewhere along the way, rupees have to be exchanged for dollars. Foreign exchange markets buy and sell international currencies. An **exchange rate** is the price of one nation's currency in terms of another nation's currency. Foreign exchange markets help individuals and companies by making it easier to trade around the world. The Indians in this example will have to sell their rupees for US dollars in order to trade with the Georgia farmers.

Reviewing the Section

1. What are the three basic economic questions every country must answer?
2. Copy the chart below and complete it with information from the reading.

Type of Economy	How Are the 3 Questions Answered?	Benefits of This System	Problems with This System
Traditional Economy			
Command Economy			
Market Economy			

3. Why do you think traditional economies are only found in rural areas today?
4. Why do all countries have a mixed economy?
5. Why is Gross Domestic Product per capita a better measure of a country's economy than Gross Domestic Product?
6. Why is unemployment a useful number to know when studying a country's economy?
7. Why is it important for countries to trade?

Above: Banknotes from one country can be exchanged for banknotes from another country.

special Feature

The Industrial Revolution

In Europe, between 1300 and 1750, families tended to live on small plots of land, growing crops mostly for their own use. They used hand tools that had hardly changed over time. Most people had little money and struggled to meet their basic needs. There was little emphasis on education for children. The population during that time grew slowly because of poverty, war, plagues, and poor hygiene.

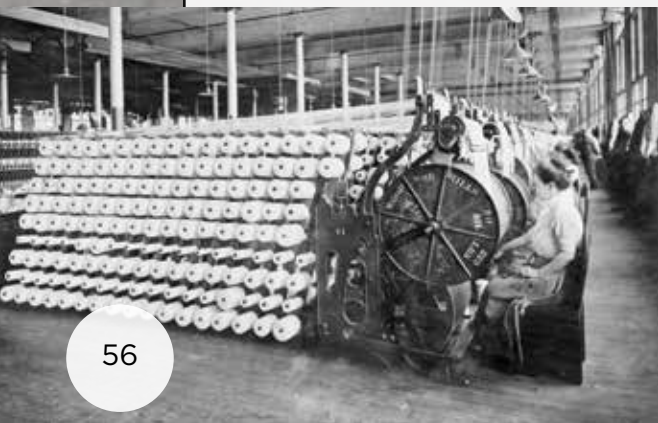
Several things happened that caused dramatic changes in the way people lived. First, some cities became thriving markets for crafts and agricultural goods. Other cities began to focus on learning, which led to innovations and inventions. Improvements in navigation, such as use of the compass, allowed Europeans to sail across the ocean in the late 15th century. As trade among nations grew, England began to use credit in banking by using money that people deposited and loaning it out for a fee to businessmen who needed the money to create and expand businesses. The climate for invention and the availability of money to support new ideas brought about changes in the lives of people throughout Europe. The first wave of change came in the period known as the Agricultural Revolution. Invention of mechanical tools such as seed drills, reapers, and threshers increased production.

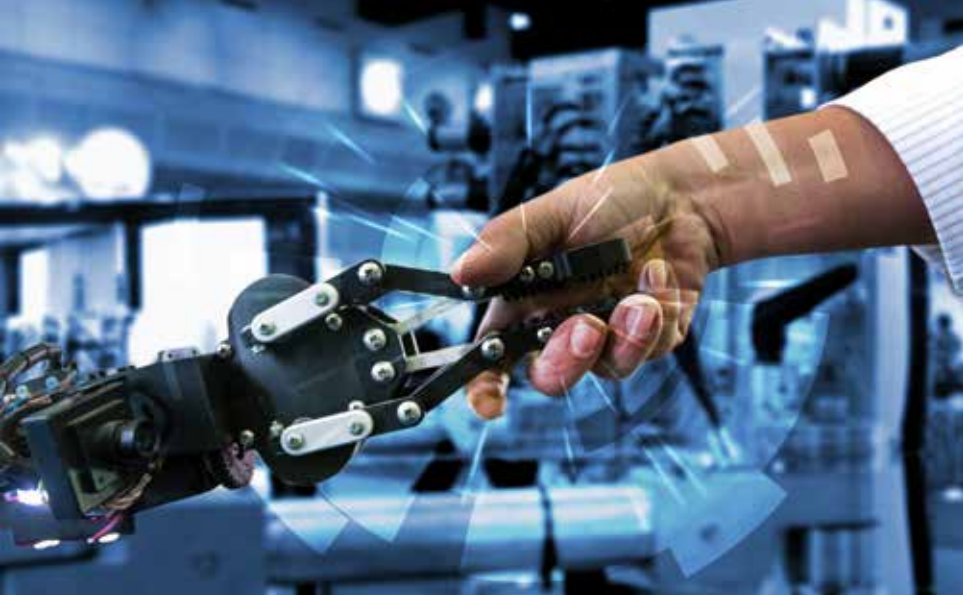
The changes in farming created the climate for the next wave of change, the Industrial Revolution. The Industrial Revolution began in Great Britain because it had a stable economic and political environment. British factories took cotton from the New World and made cloth to trade in global markets. New inventions increased the production of cloth. The size and number of machines created the need for special buildings, called factories, to house the machines. The textile industry became the largest employer in Great Britain, and cotton cloth became the most valued commodity

in Britain's export trade. After the invention of the steam engine in 1781, many factories were built beside streams of water. This allowed the new machines to be powered first by water and later by steam.



Top: Nineteenth-century life was changed by steam power and electricity that powered the steam press, electric telegraph, locomotive, and steamboat. **Left:** Women worked at the textile machines of the American Woolen Company, Boston, Massachusetts.





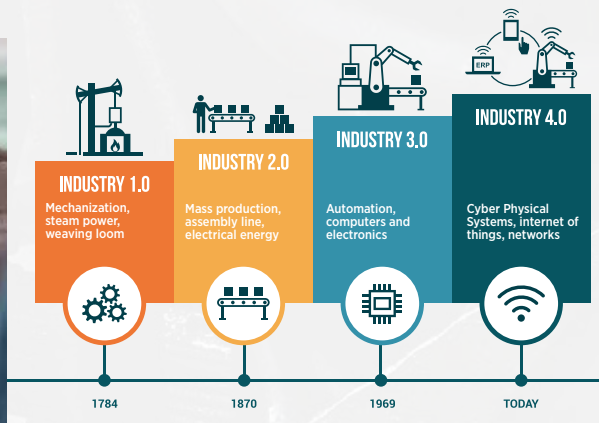
As global trade grew, there was a demand for better transportation. Again, the steam engine revolutionized how people traveled and traded. Steam engines propelled ships and later railroads. Britain's coal fueled the engines, and its iron was used to manufacture locomotives, railroad cars, and track.

Better transportation resulted in expanded trade. New trade routes brought industrial nations in contact

with new trading partners, which led to the rise of imperialism (empire building or the act of one country extending its power by gaining new territories). As the most industrialized nations began looking for new sources of labor, raw materials, and goods to trade, they turned their attention to less developed areas, especially Africa and Asia. Britain's influence in India and China meant that English wool and Indian cotton could be traded for Chinese tea and textiles. Besides Great Britain, the countries of France, Portugal, Spain, the Netherlands, Germany, and Italy began to expand trade by imperialism.

The Industrial Revolution improved the lives of people in many ways; however, it also had some negative effects. In industrial countries, working conditions in factories were often poor. Men, women, and children worked long hours for very low wages in dangerous conditions. The countries that were taken over by the industrial nations often lost not only their resources but their independence. Some were forced to change their lives and culture to accommodate the new ideas brought to them by colonists from the European nations.

Today, some say we are in a digital revolution. What evidence is there that you are living in a time of digital revolution?



Cyber Physical Systems (**top**) and the Internet of Things (**bottom left**) are part of a new industrial revolution called Industry 4.0. **Center:** This engineer is working at a thermal power plant.

Chapter Review

Chapter Summary

Section 1: Economic Fundamentals

- Humans have needs, which are necessary to live, and wants, which are not necessary but make life more comfortable and enjoyable.
- Wants and needs are satisfied when producers provide goods and services and then consumers buy them.
- There are four factors of production: natural resources, capital goods, human resources, and entrepreneurship.
- Capital goods are the tools and equipment used to transform natural resources, or products of Earth, into goods for sale.
- Human resources are people who are paid for their labor to create products or provide services. Entrepreneurship is when people invest money and labor in their own innovative businesses instead of working for others.

Section 2: Decision Making in Economics

- Scarcity occurs when we try to satisfy unlimited wants with limited resources or, put simply, when people want more than is available.
- Because of limited resources, producers choose how much and what to make, and consumers choose what is most important to buy.
- Resource allocation refers to the many ways societies decide how to distribute these limited resources.
- Trade-offs and opportunity cost show that economic decisions are also about loss and thinking creatively to get the most from your resources.
- Prices are determined by the supply (the quantity of goods) and the demand (how much the consumer is willing to pay for a good).

Section 3: Economic Systems

- Economists study the economy by understanding how different governments address the issue of scarcity.
- Countries must answer three basic questions that define their economic system: What will we produce? How much will we produce? For whom will we produce?
- In a traditional economy, past customs and roles are passed down, dictating what is produced and how it is distributed and consumed.
- In a command economy, government planning groups make economic decisions and own the businesses and farms that produce goods.
- In a market economy, privately owned businesses make economic decisions based on what they think consumers can afford and want.
- Voluntary trade benefits all parties by helping countries combat scarcity and encourage specialization for an efficient and strong economy.
- Gross Domestic Product (GDP) measures the total value of the final goods and services produced in a country over one year. It is important for measuring a country's economic strength.
- Sometimes countries try to limit their trade by placing tariffs and quotas on imports, subsidizing their own country's producers, and even ordering embargoes.

Activities for Learning

Reviewing People, Places, and Things



Create a crossword puzzle with the following words. Create clues for each of the words.

wants
consumer
currency
needs
goods
producer
embargo
scarcity

Understanding the Facts



1. What are the four factors of production?
2. What is the difference between goods and services?
3. Give an example of a trade-off.
4. How does scarcity encourage trade?
5. How does a producer calculate profit?
6. What is one benefit of a command economy?
7. What two investments can a country make to improve its GDP?
8. What are four common barriers to trade?
9. Why are exchange rates important?

Developing Critical Thinking



1. Why do you think the market continuum is important to economists? What could an economist infer about a country based on its rating?
2. How does the use of renewable resources, instead of nonrenewable resources, benefit both the producer and consumer?

Writing across the Curriculum



Write two short stories where you act as a consumer. The first story should be about satisfying a need. The second story should concern satisfying a want. Be sure to include these terms: goods, services, and producer.

Applying Your Skills



Think of five goods to purchase, and create a table with the goods listed as the first column. Be sure to choose goods that have been available since at least 1915. Then add the years 1915, 1945, 1965, 1995, 2005, and 2017 at the top of each column. List each good's current price in the last column. To track inflation, go to www.bls.gov/data/inflation_calculator.htm and calculate the equivalent price for the other years.

Exploring Technology



Use the Internet to research current exchange rates. How strong is the US dollar compared to the Saudi Arabian riyal, South African rand, or Indian rupee? How could these exchange rates affect trade with the United States?