

Louisiana's Economy

Louisiana's first French settlers eagerly traded with nearby groups of Native Americans for food and other items of value. In exchange for corn—and, later, deerskins—the first colonists offered the native people French-made goods including axes, knives, blankets, shirts, mirrors, and needles.

The French used the first deerskins they received to make shoes. Once their basic needs were met, they sent many of the deerskins back to France to be processed into soft leather goods like hats or gloves, or stretched into thin sheets that could be made into book *bindings* (covers).

Chapter Preview

People

Andrew Higgins, Caroline Dormon

Places

Jennings, Haynesville, Sulphur, Port Sulphur

Terms

economy, goods, services, consumer, producer, natural resource, human resource, capital resource, scarcity, supply, demand, profit, economist, traditional economy, command economy, market economy, commerce, mercantilism, smuggling, biological resource, reforestation, habitat, mineral resource, corporation, right-to-work laws, tariff, Gross Domestic Product (GDP), Consumer Price Index (CPI)



Vocabulary Scramble



Internet Activity

Soybeans have become Louisiana's most valuable food crop.





The French had big plans for developing an economic system in Louisiana that would benefit France. They hoped to ship raw materials from the colony and process them into more valuable finished goods at home. Timber and deerskins were among the most consistent exports in Louisiana's early history.

The French had to find a way to manage the deerskin trade that was satisfactory to them and to the Native Americans. In 1721, the French agreed to the following trade terms:

- A yard of woolen cloth or one ax for four dressed deerskins,
- one blanket or tomahawk for two dressed deerskins,
- two-thirds of a pound of gunpowder or twenty gun flints for one dressed deerskin.

Trading the resource of deerskins with the natives and then shipping them to France for processing is an example of economic activity in Louisiana's early years.

In this chapter, you will be introduced to basic economic concepts and learn how Louisiana's resources have shaped its economy and economic history. You will also consider how Louisiana's modern economy functions, how economic progress is measured, and how the state and the nation fit into today's global economy.

Background: A soybean field. **Top Left:** An oil refinery where gasoline is produced. **Above Right:** The Mississippi River is an important water highway for ships and cargo.

Signs of the Times



Agriculture and Food Products

The state's largest agricultural cash crop in 2012 was soybeans, followed by corn, sugarcane, and rice. The largest category of food products the state produces is poultry and eggs. Profits from that category outpaced profits from soybeans by more than \$250 million in 2012.

Film Industry

In 2002, Louisiana adopted tax incentives that encouraged film production. The results have been impressive. Between 2006 and 2012, more than 300 films were made in Louisiana, and the number of skilled film industry employees quadrupled. As of 2013, the state had ten state-of-the-art production and postproduction facilities located in or near Baton Rouge, New Orleans, and Shreveport.

Oil

Our state's petroleum refineries produce enough gasoline each year (15 billion gallons) to fill up 800 million automobile gas tanks, making Louisiana the third-leading refiner in the country. In addition to producing gasoline, Louisiana refineries produce jet fuels, lubricants, and over 600 other petroleum products.

Shipping

Louisiana's five major ports handle about 400 million tons of cargo a year, including more than 40 percent of the grain exported from the U.S. More than 25 percent of the nation's waterborne exports pass through the state. More than 5,000 oceangoing ships call at Louisiana ports each year, along with a steady stream of barge tows. Some of these tows carry more than 40,000 tons of cargo, more than many seagoing ships.

Tourism

Tourism is a major Louisiana industry. Favorite tourist attractions include the New Orleans French Quarter, Cajun Country, antebellum plantation homes, jazz, distinctive food, fishing, hunting, Mardi Gras and other festivals, swampland tours, hiking and camping, canoeing, and Mississippi River boat rides.

Section 1

Basic Economic Concepts

As you read, look for

- ▶ how people satisfy needs and wants by acquiring goods and services;
- ▶ the kinds of resources that help us satisfy needs and wants;
- ▶ the opportunity benefits, opportunity costs, and trade-offs involved in economic choices;
- ▶ how supply and demand determine the price for a good or service;
- ▶ differences among the three economic system models;
- ▶ **terms: economy, goods, services, consumer, producer, natural resource, human resource, capital resource, scarcity, supply, demand, profit, economist, traditional economy, command economy, market economy.**

a-z

GLOSSARY

The term **economy** refers to how people manage material resources in a community or other organized body. A single household can have an economy. Larger units of social organization—like cities, states, and nations—do too. Because the economies of modern nations routinely interact with those of other nations, we can also talk about the existence of a global economy. There are several basic concepts you must understand in order to comprehend how economies work at both the smallest (*micro*) levels and the largest (*macro*) levels of social organization.



Goods and Services;
Needs and Wants

Left: The port at New Orleans is the fourth-largest port in the United States based on volume of cargo handled.

Below: Carefully organized products may only stay in warehouses a couple of hours before being transferred to other destinations.





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 from nature's extremes. Beyond these basic needs, the things we desire are called *wants*. People's wants—things they would like to have to make their lives more comfortable or enjoyable—are almost unlimited.

Humans satisfy their needs and wants by acquiring goods and services. **Goods** include *tangible items* (things you can touch) such as food, clothing, cars, and houses. **Services** are the work or activities people perform, often for a fee. Examples of a service include a musician's concert, a mechanic's oil change, or a waitress's meal service. The meal is a good, but the person who takes your order and brings your food is providing a service.

When you buy a meal in a restaurant, you are 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.



Resources

Resources and Scarcity

Resources are the building blocks of an economy. They help us to satisfy needs and wants. There are different kinds of resources. **Natural resources** come from Earth or nature and are useful to humans. They include water, trees and their fruits, or precious metals mined from Earth like copper, gold, and silver. The term **human resources** describes the persons who produce goods or services. A human can transform a natural resource into a good through effort and activity. **Capital resources** are the tools used in the production of goods and services. Examples of capital resources include machinery and factories.

Above: These consumers are planning to fill a *want* by purchasing a new car.

Right: Trees are an important natural resource in Louisiana. Pine trees like these are sometimes used as building materials, but most are shredded into pulp to make paper and cardboard.

Resources may be abundant 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.

Scarcity requires consumers and producers to make choices with their limited resources. The limits of people's or communities' 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.



Costs and Benefits

Individuals, families, businesses, and governments all have to make economic choices. Each choice offers an opportunity that has a benefit *and* a cost. In the example about the exchange rates for deerskins, a Native American hunter with two dressed deerskins could choose a blanket or a tomahawk in exchange. If he chose the blanket, that is the *opportunity benefit* he received in the exchange. The item he did not choose, the tomahawk, is the *opportunity cost*. Opportunity cost is the value of your second choice, or the thing you decide not to acquire.

There are also costs and benefits in decisions about how you use other kinds of resources, including your time. The opportunity cost in any kind of decision is the value of the alternative you do not choose.

Say you have the opportunity to attend a New Orleans Saints football game one Sunday. Normally you go to your grandparents' house on Sunday for a big family lunch. If you choose to go to the football game, this is your opportunity benefit. Your opportunity cost is missing out on family time and great food.

Below: The bread this mother chooses is the *opportunity benefit*. The variety she does not choose is the *opportunity cost*.





Below: When the supply of gasoline is low, the price to fill your tank rises.



Figure 3.1

Supply and Demand

This economic model suggests that the price for a good will settle at a point where the quantity demanded by consumers (at a certain price) equals the quantity supplied by producers (at a certain price). What happens when demand goes up but the supply remains unchanged?

Trade-Offs

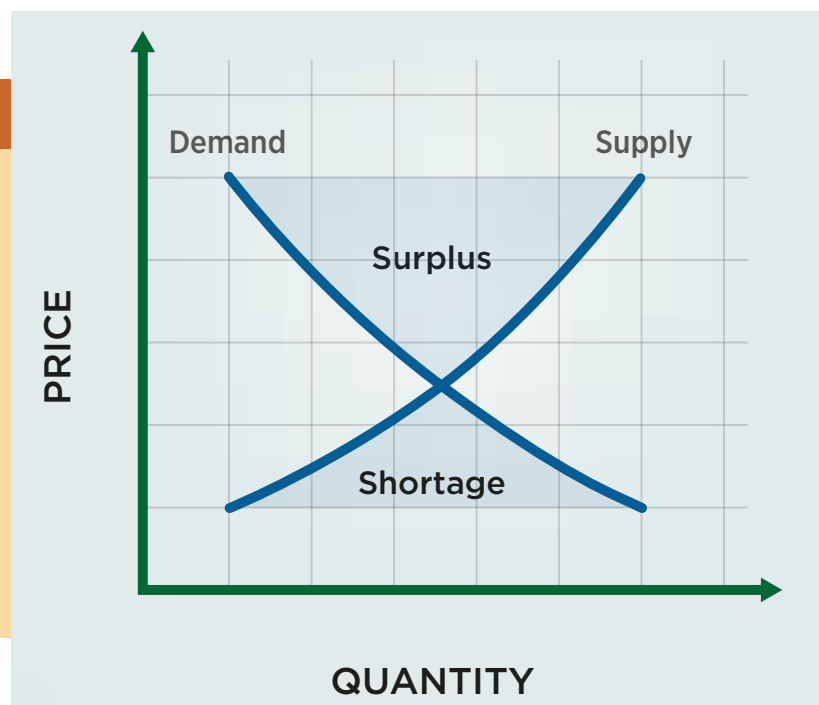
Whenever an individual, a business, or a government makes a choice to have less of one thing to get more of something else, the results are called trade-offs. Evaluating trade-offs requires comparing the costs and benefits of each of the available alternatives with the other. Choosing between a blanket or a tomahawk is an either/or decision and the trade-off being made is clear.

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, if you think that family lunch is really important, you could arrive earlier, skip dessert, and leave in time to arrive at the football game shortly after kickoff. You would have made a trade-off that allowed you 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.

Demand describes the quantity of a good or service consumers are willing to buy. Demand is based on three things. A buyer must want something, have the ability to pay for it, and be willing to pay for it. If those conditions are in place, a consumer will still be conscious about 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. 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** (the amount left after costs are subtracted from the price), but will not make prices so high that buyers reduce their demand.

Basic Economic Questions and Economic Systems

A person who studies the economy is called an **economist**. Economists seek to understand the way communities or societies address the issue of scarcity and decide how to allocate limited resources. Although economists have developed numerous theories about how economies work, in their simplest form, there are four basic questions that decision makers in an economy must answer. These are the questions:

1. What will be produced?
2. How will it be produced?
3. For whom will it be produced?
4. How much will be produced?

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.



Left: The value of a nation's money rises and falls compared to the currency of other nations. Here the U.S. Dollar (USD) is shown to be about 78 percent as valuable as the European Union's currency, which is called the Euro (EUR).

The three economic system models we will consider are a traditional economy, a command economy, and a market economy.



Economic Systems

Figure 3.2

Continuum of Economic Systems



A *continuum* is the range that exists between two different possibilities. This Continuum of Economic Systems is useful for comparing the economic freedom of various countries. Where would you expect the United States to be located on the continuum? What factors would you consider in making this placement?

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 that his or her ancestors did.

Before the French settled Louisiana, the Native American groups had a traditional economy. They hunted and engaged in agriculture. They also traded items of value with other groups. Customs, beliefs, and repeated patterns of behavior helped guide decisions about what had value and what was fair in the course of an economic exchange.

Command Economy

In a **command economy**, the government directs the economic system and tries to control how producers answer the four basic economic questions. The government makes rules and regulations that control what is produced and how and where it is produced. Government-mandated controls also affect people's access to economic goods.

At the time Louisiana was established, a king ruled France. This kind of government is called a *monarchy*. Beginning in 1700, the French king and his advisers made detailed plans for how they wanted Louisiana's economy to develop so that it would enrich France. Their schemes were not successful, but their plans provide an example of how a command economy functions.

Market Economy

In a **market economy**, economic decisions are made at an individual, rather than a government, level. The four basic economic questions are answered by producers based on their beliefs about how consumers will respond to what they produce. In turn, supply and demand influence what is produced and how it is produced. Producers hope they make the right decisions about consumer demand. A lack of demand for a product can doom a business.

Reviewing the Section

1. Define in sentence form: economy, services, producer.
2. Describe the three kinds of resources that help consumers satisfy their needs and wants.
3. Define the three economic system models.

Section 2

Louisiana's Economic History

As you read, look for

- ▶ the transition from the Native American traditional economy to the European command economy;
- ▶ why the failure of mercantilism led to smuggling;
- ▶ the rise of the market economy after Louisiana was acquired by the United States;
- ▶ how the discovery of oil boosted an economy devastated by the Civil War;
- ▶ present-day attempts to diversify the state's economy;
- ▶ terms: **commerce**, **mercantilism**, **smuggling**.



Louisiana's Economic History

a-z
GLOSSARY

Before the arrival of the French, Native Americans who lived in the area that became Louisiana had traditional economies. They fed themselves by hunting and farming. When they needed goods they could not provide on their own, they traded with other groups that had access to different resources.

When the Europeans arrived, they introduced an economy based on **commerce** (buying and selling goods). They bartered with nearby tribes, but they also brought commerce and the use of money with them. The French

king established a command economy in Louisiana. He hoped to create wealth through a plan called **mercantilism** (the idea that colonies existed to contribute to the wealth and power of the mother nation).



Above: This painting by Claude Lorraine shows a busy European seaport in the era of mercantilism.



The Failure of Mercantilism

Mercantilist nations established colonies so they could use the colonies' resources for their own benefit. The French government wanted colonists to provide raw materials like timber, tobacco, or deerskins for shipment back to France. Colonists were also required by law to buy or sell goods only with the French.

Both the French and later the Spanish had high hopes for Louisiana's economy. They hoped to find gold or silver. This did not happen. Their other economic schemes also failed to generate wealth in their home countries.

Mercantilism was also a failure for the early colonists. By law, they were required to trade only with the power in charge, but neither France nor Spain could ever provide enough trade goods to meet the colonists' needs and wants. In response, the colonists made economic decisions designed to meet their own needs. They developed a frontier exchange economy. People made their own goods, grew their own crops, and traded with their nearby neighbors. This is part of how the trade in deerskins developed.

Colonists also traded with people from nations besides France and Spain. They did so as a matter of necessity, but the colonial powers considered this to be **smuggling** (secret and illegal trade). It was proof that France and Spain were not successful in establishing mercantilist command economies in Louisiana.

Louisiana's Market Economy

By the time the United States acquired Louisiana in 1803, a different kind of economy had begun to take shape. As the production of sugar and cotton became more profitable, Louisiana developed a market economy based on the export of these two important cash crops.

Above: This French ship is under attack by Barbary pirates. Pirates were a constant threat in the age of mercantilism. **Below:** A 1913 photograph of the American Sugar Refinery in Arabi.



People from other states used the Mississippi River to transport their own crops to places where they could be sold for a profit. The port at New Orleans became one of the nation's largest and busiest. Before 1860, only New York City's port could compete with it.

The port at New Orleans played an important role in the nation's economic system until 1860. The Civil War and its aftermath devastated Louisiana's economy. It would remain *stagnant* (not advancing or developing) for decades. Much of the economic change that occurred in those years came from or benefited people from outside the state. Farmers came from as far away as Iowa to establish rice farms in this productive area. In the early 1900s, companies from other states cut much of the timber from Louisiana's forests. They tended to ship it elsewhere for processing, and the profits also flowed out of state.

Lagniappe

In 1909, a boll weevil infestation had devastated the local cotton crops, so the Baton Rouge area welcomed the new oil refining industry. The Standard Oil refinery began processing oil just seven months after construction began.

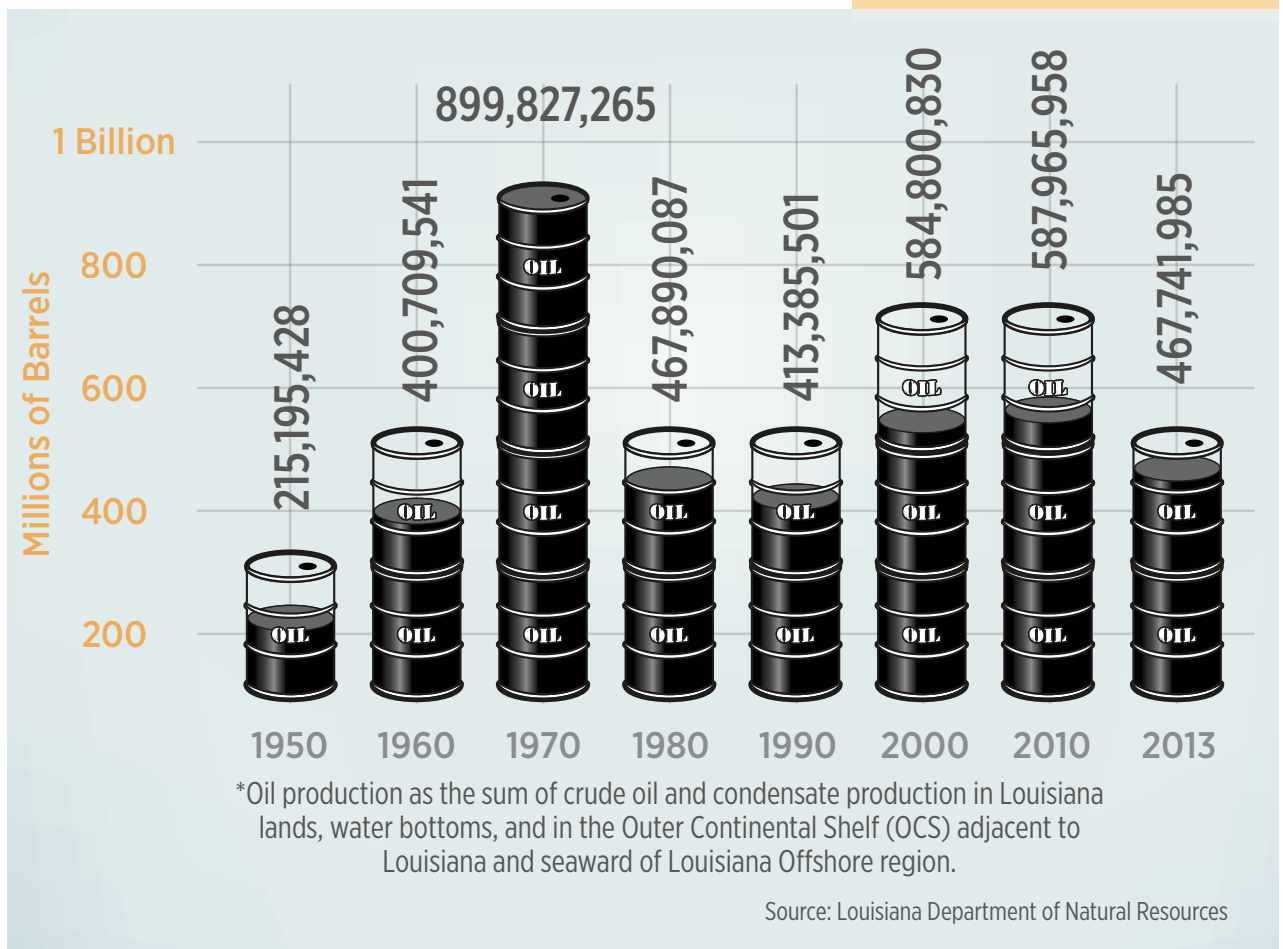
Oil and Manufacturing

The discovery of oil in Louisiana in 1901 created new job opportunities and brought new kinds of businesses to our state. Large corporations like Standard Oil came to Louisiana. That company built a major refinery in Baton Rouge that began to process oil in 1909. With this development, many people in the state gained new jobs and a new way of life beyond the field and farm.

Figure 3.3

Louisiana Oil Production (in Barrels)

Louisiana oil production rises and falls from year to year. Why do you think oil production was so much lower in 1980 than in 1970?



Right: The Higgins Boat was a landing craft used to transport troops from ships to the shoreline.



Manufacturing came slowly to Louisiana. Much of the industry that developed initially focused on local needs. For example, Andrew Higgins developed a boat designed for use in the state's shallow lakes and bayous. During World War II, the Higgins Boat became important to the U.S. war effort. His manufacturing facility grew rapidly and prospered as a result. Higgins Industries is one of the most successful examples of mass production in the state's history.

Since the 1950s, Louisiana's economy has been dependent on the oil industry and *petrochemical companies* (companies that use oil products to create a variety of chemicals and products). Today, Louisiana's goal is to diversify its economy and attract new kinds of businesses, thus finding multiple ways to profit. This is important because the price of oil can rise and fall dramatically.

While oil is generally very profitable for the state, when the worldwide supply rises, prices drop. The international Organization of Petroleum Exporting Countries (OPEC) can make decisions about the oil supply that affect both demand and price. Natural disasters, like hurricanes in the Gulf of Mexico, can also shut down oil rigs and affect the price of oil.

These man-made and natural occurrences affect global oil markets. They also affect Louisiana's economy because so many people work in the oil industry, and because the state relies on the taxes this industry pays. When oil prices go down, the amount of tax dollars collected by the state falls significantly.

Reviewing the Section

1. Define in sentence form: commerce, mercantilism, smuggling.
2. Why did economic changes after the Civil War benefit people from other states more than Louisiana citizens?
3. What did Andrew Higgins design, and when did his design gain wider use?

Section 3

Louisiana's Resources

As you read, look for

- ▶ the different kinds of biological and mineral resources found in Louisiana;
- ▶ types of capital resources used to produce Louisiana's goods and services;
- ▶ the connection between education and human resources in the modern technological world;
- ▶ terms: **biological resource, reforestation, habitat, mineral resource.**



Louisiana's
Agricultural Products/
Natural Resources

a-z
GLOSSARY

Resources are the building blocks of an economy. An economic system uses natural, human, and capital resources to produce goods and services. Louisiana's natural resources have played an important part in the state's economic development. However, businesses also need human and capital resources in order to grow and prosper.

Natural Resources

Natural resources like air, water, and soil are products of Earth and its atmosphere. These natural resources have provided the foundation for the development of Louisiana's economy.

Louisiana's rich soil has long supported agriculture. Small farms and large plantations dominated agriculture in the state until about 1900, when they gave way to *agribusiness* (farming thought of as a large business) companies. Although fewer individuals farm for a living, production still remains high.

In 2012, soybeans and corn were the state's two largest food crops. Their harvests were valued at \$700 million and \$600 million respectively. Sugarcane and rice were the third and fourth most valuable crops. Sugar brought more than \$586 million to the state. The value of rice followed at \$371 million. Cotton produced a value of over \$231 million.

Lagniappe

Soybeans are used for livestock feed and are found in things we eat—like soy milk, soy sauce, and tofu. Soybean oil is an ingredient in foods like mayonnaise, tuna packed in oil, baked goods, and margarine. Soy biodiesel is cleaner burning than petroleum-based diesel oil; and soy crayons, ink, and candles are preferred because they are nontoxic.



Left to right: A typical cotton field just before harvesting; shrimp after being caught; sugarcane fields; cane sugar after refinement.

MAP 3.1

Louisiana's Natural Resources

Map Skill: In what section of the state is most of the rice grown?

Animals and animal products used for food are also an important part of the state's agricultural economy. Louisiana's soil, climate, and abundant water resources support cattle and dairy farming. Cattle ranching generated \$498 million in 2012. Dairy farming is a smaller concern, generating \$48 million in that same year. Poultry and eggs were the most valuable agricultural food commodity, generating \$958 million. Egg and poultry production tend to be done in agribusiness settings, where chickens are raised in large numbers and processed in nearby plants.



Biological Resources

Plants and animals are **biological resources**. Biological resources are renewable; they can replenish themselves over time. Because biological resources are often farmed or hunted intensively, humans sometimes have to play a role in the renewal process.

Forests

A forest is an area rich in plants and animals where trees are the predominant plant. Trees are one of the state's top cash crops. Timber is harvested in fifty-nine of the state's sixty-four parishes. As of 2010, forests covered more than 13 million acres—nearly 48 percent of the state's land area. That same year, the owners of those forested lands sold timber worth more than \$824 million. Once processed, products generated from that raw timber had an economic impact in excess of \$3 billion. Forestry, or the harvesting of trees, also provided more than 26,000 jobs.

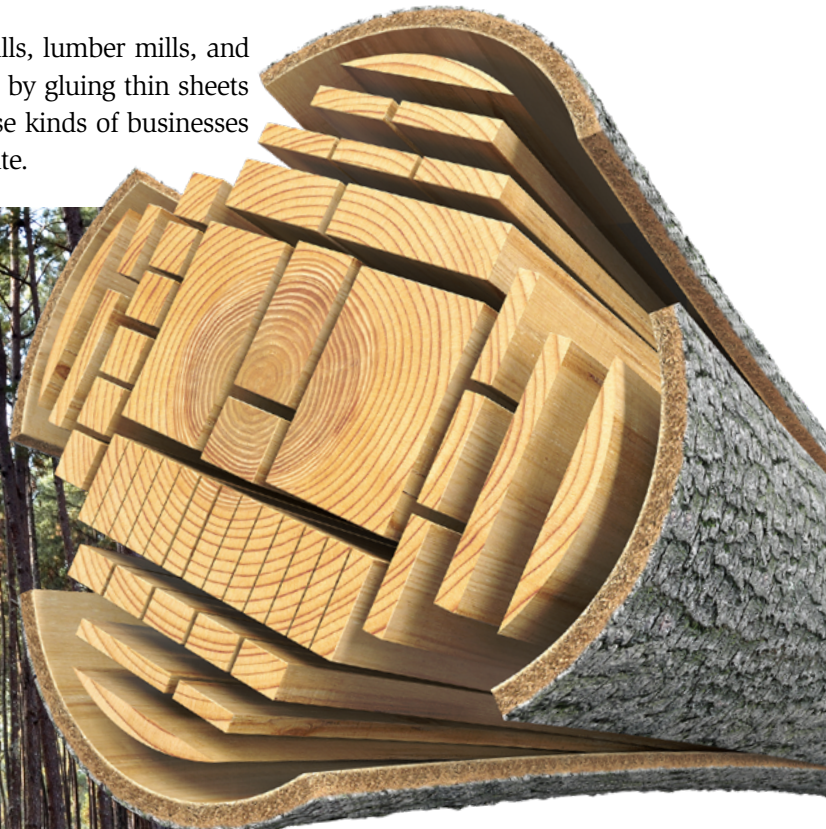
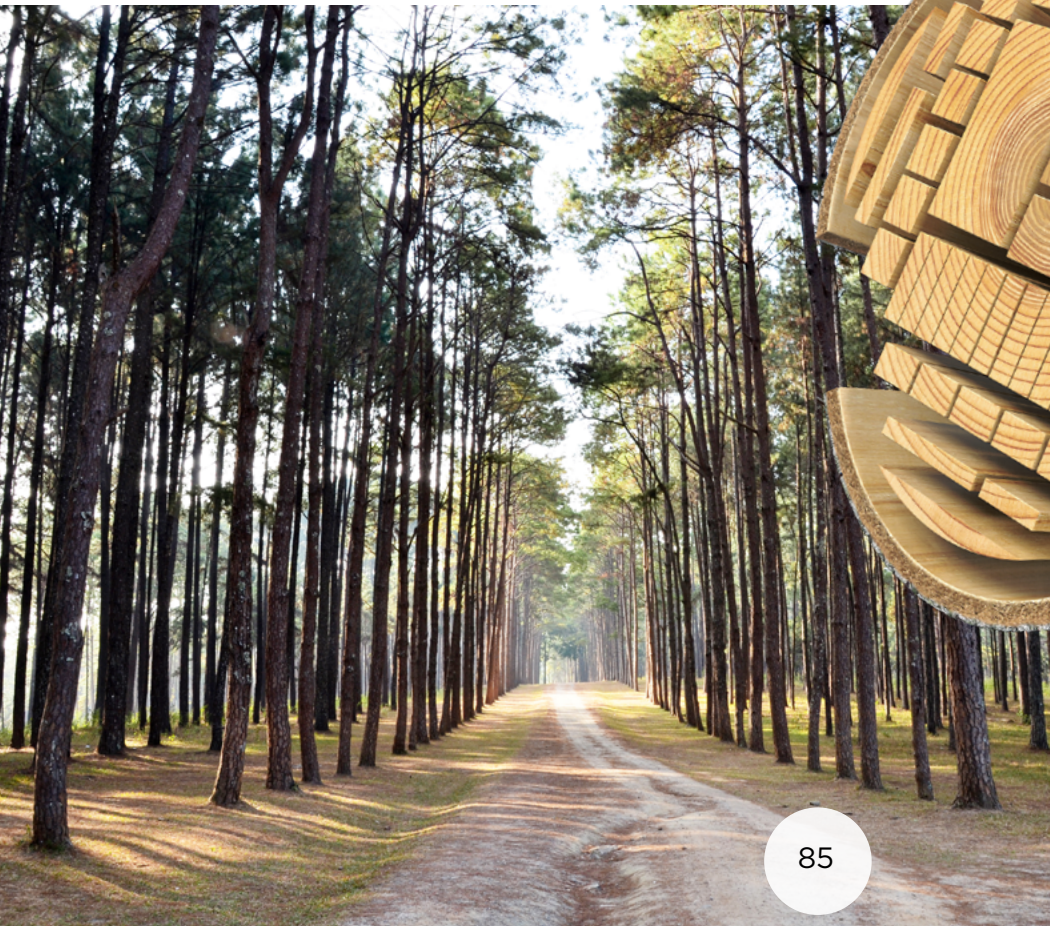
Although the cypress is the state's official tree, the pine is the major tree species harvested in Louisiana. More than 75 percent of the pine cut is referred to as pulpwood because it is shredded into a pulp that is used to make products like paper and cardboard boxes.

Trees cut for their lumber are called sawtimber. Most of the sawtimber is pine, but some also comes from hardwood trees like oak. Hardwood sawtimber is used in construction and is processed into furniture, flooring, and kitchen cabinets.

Industries related to forestry include paper mills, lumber mills, and plants for making *plywood* (a strong board made by gluing thin sheets of wood together under heat and pressure). These kinds of businesses are important manufacturing employers in the state.



The scientific name for plants is flora, and the name for animals is fauna.



Left: Pine tree plantations (farms) typically have a thirty-five-year crop cycle. **Above:** Multiple types of lumber come from one tree.

Some of the earliest companies that cut Louisiana's trees engaged in a practice called clear-cutting, where all the trees were taken and the land was left bare. In 1921, a woman named Caroline Dormon was named the state's instructor of forestry. She and others led the way toward making **reforestation** (replanting trees in areas that have been cut) a standard part of the tree-harvesting process. By the early 1960s, Louisiana forests were growing at twice the rate they were being harvested. In 1998, for example, more than 100 million tree seedlings were planted around the state to replace trees that had been harvested for profit. In this case, humans aided the biological resource renewal process.

MAP 3.2

Louisiana's Forest Industries

Map Skill: Near which body of water is white paper produced?



Wildlife

Wildlife is the term used to describe the animals that live in the state's diverse natural environments. At the beginning of the twentieth century, timber cutting and clearing land for farming reduced the state's wildlife **habitats** (places where plants or animals normally or naturally grow). As habitats shrank, so did wildlife numbers. In recent decades, more careful management of the state's habitats and wildlife has led to population growth in many species. The white-tailed deer was once endangered. In response, the state decreased the number of hunting permits issued until its numbers recovered. Today, with the deer population estimated at 1,000,000, and with hunters licensed to harvest about 200,000 of them, the deer population can renew itself.

Alligators may be the wildlife species most associated with Louisiana, but they too were overhunted and became endangered. In 1962, Louisiana outlawed alligator hunting. For the next ten years, the species was left alone to recover. In 1972, hunting resumed under strict controls. Only limited numbers of alligators can be hunted each year, and most wild alligators are harvested during September, when females are most likely guarding their eggs. This means mostly male alligators are harvested, protecting the future of the species. Alligators can also be hatched from eggs and raised in captivity on alligator farms.

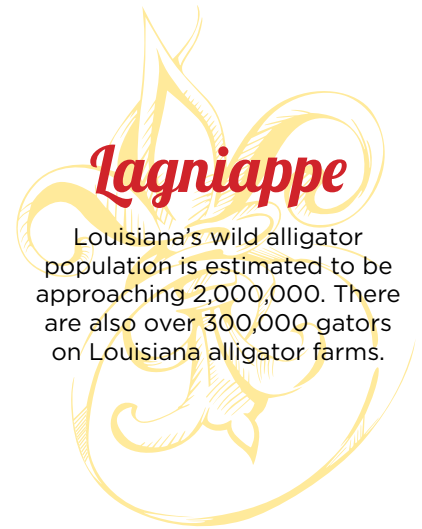
Due to strict controls, the alligator population has recovered and currently thrives in the wild. There is a demand for their meat, and a higher demand for their skins for use in luxury goods like shoes, watchbands, and purses. The sales of all alligator meat and skins harvested in Louisiana yields more than \$40 million each year.

Fish and Fisheries

Louisiana's many kinds of water habitat support a diverse population of fish. A mixture of brackish and saltwater environments dominates in the state's coastal areas. The interior features freshwater lakes, bayous, and man-made canals. All these bodies of water are home to a variety of fish and other *aquatic* (existing on or near water) species.

More than 700,000 Louisianians enjoy recreational fishing. In freshwater areas, they catch bream, catfish, crappie, and several types of bass. Many people also use nets or traps to catch crawfish and use grabs (also called gigs) to catch frogs.

In coastal areas, fishermen catch flounder, mackerel, redfish, and speckled trout. Further offshore, common catches include bluefish, cobia, grouper, jackfish, snapper, and tuna.



Left: Live crawfish captured to go to market. **Above:** Mackerel is one of the many species of fish found in the Gulf of Mexico.

Lagniappe

Many offshore fishermen like to anchor near oil rigs, where underwater reefs form on the rigs and attract fish.

Lagniappe

Oil is measured in barrels, and a barrel of oil contains 42 gallons. When oil was first discovered in Pennsylvania in 1859, it was shipped by wagon to railheads and docks. The most practical container was a 42-gallon watertight barrel that had been used for shipping things like fish, molasses, and soap. When filled with crude oil, the barrel weighed 300 pounds, which was as much as a man could handle. So the 42-gallon barrel became the standard measure for crude oil.

Below: Oil is used to lubricate mechanical gears. **Bottom:** Oil platforms like this one are a common sight in the Gulf waters off Louisiana's coast.



Commercial fishing is one of the state's most important economic activities and accounts for about 25 percent of the entire commercial catch in the United States each year. Louisiana seafood—including crabs, oysters, and shrimp—are enjoyed here, but are also shipped all over the country. Each year, between 10 and 15 million pounds of oysters are harvested from Louisiana's waters. The annual harvest of white and brown shrimp is even higher. It averages more than 100 million pounds. Annual crab harvests vary widely, but the average harvest is about 48 million pounds.

Mineral Resources

Mineral resources are natural substances found inside Earth. They are formed by slow geological processes. Minerals can be solid, like gold or silver, or fossilized substances, like oil. They become a resource when they exist in enough quantity that they can be extracted from Earth for economic gain. Unlike biological resources, mineral resources are non-renewable. Once extracted from Earth, they are not replaced by nature.

In Louisiana, the most important mineral resource is oil. Other important mineral resources include natural gas, sulphur, and salt.

Oil

Plants that decayed millions of years ago created the oil we use today. Louisiana contains at least 10 percent of the known oil reserves in the United States. There are also large quantities of oil beneath the waters of the Gulf of Mexico. Land and aquatic sources of oil have made Louisiana one of the top oil-producing and refining states in the nation.

Louisiana's first oil in commercial quantities came in at a well near Jennings in 1901. This is considered the start of the oil industry in our state. Soon thereafter, more oil fields came in and were developed in Caddo and Claiborne Parishes. The first overwater drilling in the United States took place on Caddo Lake in 1910.

The first offshore oil well began production in 1937. This is considered the start of Louisiana's offshore oil and gas industry. Since that time, thousands of wells have been drilled in the Gulf of Mexico. The explosion of the Deepwater Horizon rig in 2010 and the oil spill that followed reminded Americans that deepwater drilling can be risky even though it is considered necessary to meet current energy needs.

Despite its risks, our current economic system is dependent on oil and other petroleum products. The most common product refined from oil is gasoline. Hundreds of other products are manufactured from the chemicals created when oil is refined.



Special FEATURE



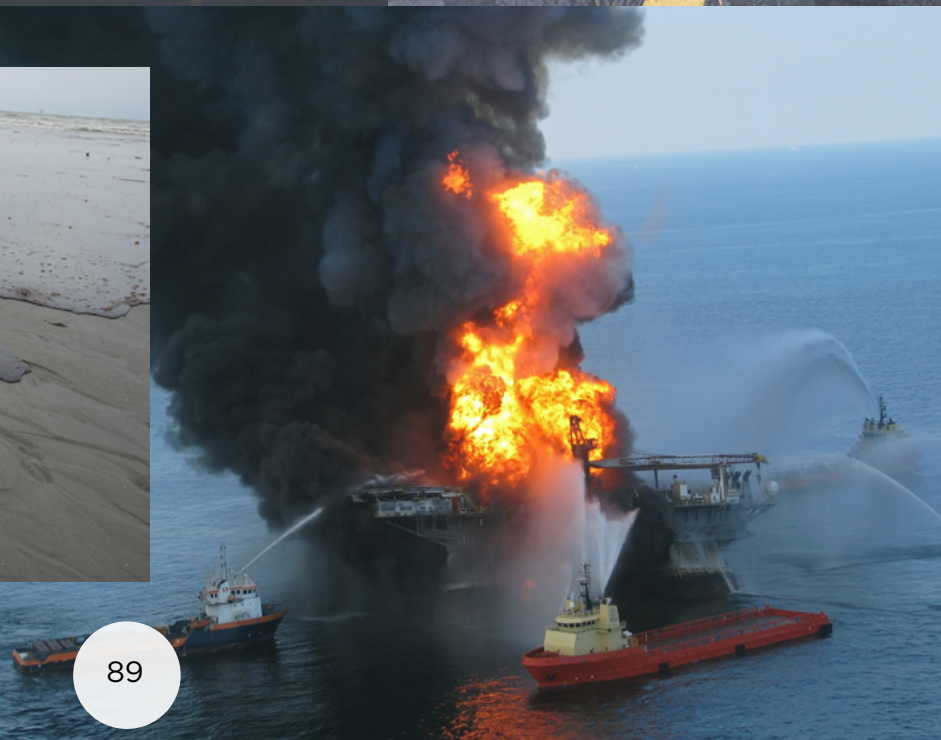
Disaster in the Gulf of Mexico

On April 20, 2010, the Macondo exploration well for BP's Deepwater Horizon oil rig, located in the Gulf of Mexico, exploded. Before the explosion, the Deepwater Horizon oil rig, located just 50 miles from Louisiana's coast, produced up to 336,000 gallons of oil every day! The explosion killed 11 of the 126 workers who were on the rig at the time. After burning for 36 hours, the rig finally sank into the Gulf of Mexico.

Despite safety features, an estimated 62,000 barrels of oil leaked into the Gulf of Mexico each day after the accident. Weeks went by and BP was unable to stop the leak. The oil began to kill sea life and drift toward the shores of the Gulf states. Louisiana's shore was threatened. The leak was finally sealed on July 15, 2010, after nearly three months of oozing toxic oil into the sea.

The value of the oil that was spilled is estimated at nearly \$400 million. The cleanup has been even more costly, and recovery from the oil spill continues. Five states, including Louisiana, were affected by the oil spill, which contaminated 665 miles of coastline. Oil damaged the bayous in Louisiana, and some oil was even found in Lake Pontchartrain. Fishermen all along the coast were not allowed to fish because of the oil spill. BP pledged over \$20 billion to help victims of the spill. The Deepwater Horizon disaster created a debate across the country about continuing to drill for oil offshore. What do you think the government should decide about offshore oil drilling?

Above: The Deepwater Horizon oil platform before the accident. **Below:** An explosion on the rig killed eleven crewmen and ignited a fireball visible from thirty-five miles away. **Lower Left:** Over a period of eighty-seven days, the damaged wellhead leaked an estimated 4.9 million barrels of oil into the Gulf of Mexico, making it the largest accidental ocean spill in history.





Natural Gas

Louisiana's natural gas deposits are even larger than its oil deposits. More than a quarter of the nation's supply of natural gas comes from Louisiana. In 1908, the state's first natural gas pipeline began transporting oil from the Caddo field to nearby Shreveport.

Today, natural gas is used to heat the majority of homes and businesses in the state. It is considered a cleaner fuel than gasoline and is sometimes used to power vehicles like public buses. The hope is that using natural gas in this way can help reduce air pollution.



Spotlight Haynesville Shale

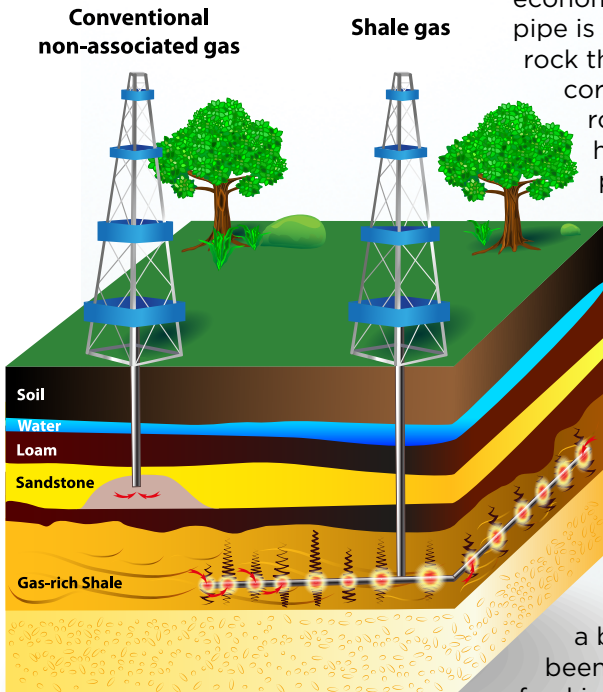
Beginning in 2007, a huge new source of natural gas was developed in northwestern Louisiana. This gas was trapped in shale rock more than 10,000 feet below Earth's surface. Its name, Haynesville Shale, comes from the Claiborne Parish town where it was discovered more than sixty years ago. At that time, drilling for gas in those deep pockets of rock would have been too expensive.

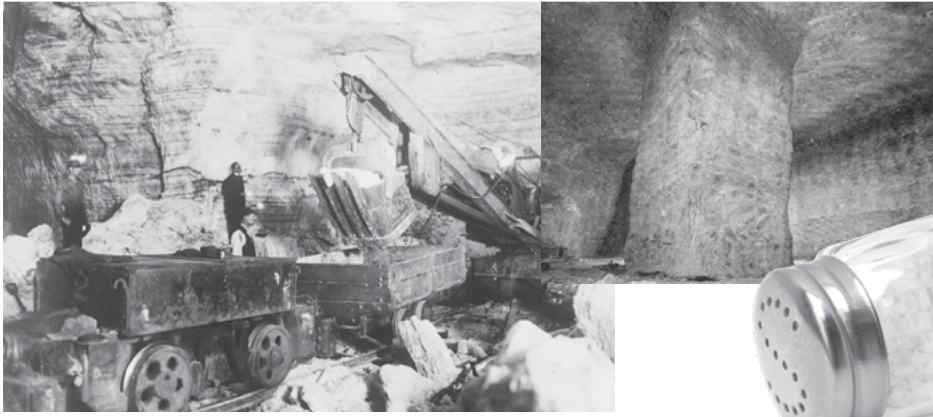
New horizontal drilling techniques and a method of obtaining gas called hydraulic fracturing, which were developed in the late 1990s, made drilling in the Haynesville Shale economically practical. In the horizontal drilling technique, pipe is drilled straight down 10,000 feet or more to a layer of rock that contains natural gas. Then the pipe actually turns a corner and runs horizontally through the gas-rich layer of rock. Explosives punch holes in different sections of the horizontal pipe so that gas can be extracted from multiple places using only one well pad on the surface.

Then begins the hydraulic fracturing, often called "fracking." Sand, water, and chemicals are pumped into the horizontal pipe under high pressure. The mixture surges through the holes in the pipe and fractures (breaks up) the rock around it, releasing the trapped gas. The sand mixture is then removed, and the natural gas is sucked into the pipe and rises to the surface.

In the boom years between 2007 and 2012, a total of 2,250 wells were completed in the Haynesville Shale. Louisiana's most active areas have been Caddo, Bienville, Bossier, DeSoto, Red River, and Webster Parishes. As the supply of natural gas increased, the price of natural gas began to fall, and the steadily rising drilling activity fell as well. The gas boom became, if not a bust, then at least a severe slow-down. There have also been environmental concerns about the chemicals used in fracking.

The future of Haynesville Shale is uncertain. The expensive drilling process will once again be economical if the price of natural gas rises. Two other potential areas of growth are proposed petrochemical plants in South Louisiana and the conversion of gas into liquefied natural gas (LNG) for export. Haynesville Shale will no doubt continue to make news for years to come.





Salt

Native Americans were the first to use the state's salt deposits as a mineral resource. They located salt that had made its way to Earth's surface and used it as a trade good with other tribes.

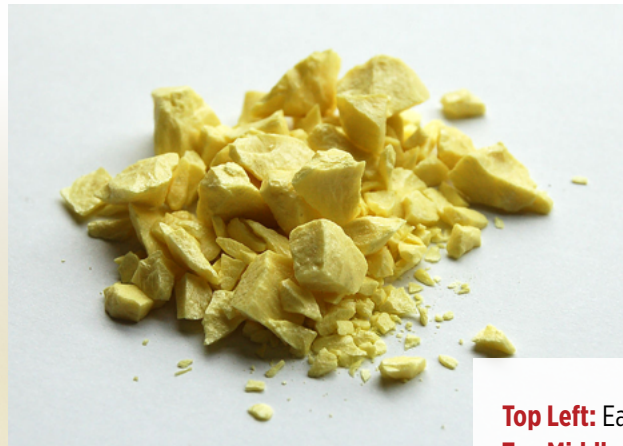
During the Civil War, a massive underground salt deposit was discovered on Avery Island. Midway through the war, federal troops invaded the island and destroyed the salt works. After 1865, mining returned, and today the salt dome at Avery Island still produces salt in large industrial quantities.

Most people think of salt as a flavoring for food, but it can be refined into other chemicals that form the basis for hundreds of products. Polyvinyl chloride (PVC) is a common plastic made in a process that begins with salt. The plumbing in your home very likely contains some PVC pipe.

Sulphur

The first major discovery of Louisiana sulphur took place in 1869. The town of Sulphur in Calcasieu Parish is named for this discovery and the industry that grew up around it. This is also how Port Sulphur in Plaquemines Parish got its name. Sulphur is used to make matches, gunpowder, medicine, and plastics.

In recent years, the price of sulphur has dropped because the international supply of the mineral is very high. There is so much cheap sulphur available worldwide that it has become unprofitable to mine it in Louisiana.



Top Left: Early salt mining process.
Top Middle: Avery Island salt mine.
Left: Sulphur is one of the minerals that causes a match to burn.

Figure 3.4**Economic Factors of Production**

An entrepreneur is a person who organizes, manages, and assumes the risks of a business or enterprise. Do you know any entrepreneurs? If so, what is the nature of their business?



Resources

Lagniappe

The Domino Refinery in Chalmette, built in 1909, is the largest sugar refinery in the Western Hemisphere and the oldest in existence. Hurricane Katrina in 2005 flooded the building with nine feet of water, turning eight million pounds of raw sugar into a gooey mess! But the refinery was repaired, and it reopened ahead of schedule ninety-eight days later.

Capital Resources

In general, it takes some kind of capital resource to transform a natural resource into a product. In Louisiana, capital resources include lumber mills, sugar refineries, oil refineries, cotton gins, and rice mills. The machines and equipment used inside these processing facilities are also capital resources.

Human Resources

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 are paid for the work they perform.

Today's diverse and interconnected state, national, and global economies require new skills and specialization. People who want good jobs need to have education and specialized training to make them attractive to employers. Each of you is being educated in part to give you the opportunity to become a human resource in the economic system where you choose to live and work.

Reviewing the Section

1. Define in sentence form: biological resources, reforestation, habitat.
2. Why is commercial fishing such an important factor in Louisiana's economy?
3. What do people need in the modern world to make them a desired human resource?

Section 4

Louisiana's Modern Economy

As you read, look for

- ▶ the manufacturing plants, service industries, and economic institutions that provide jobs in Louisiana;
- ▶ the U.S. trade policies that affect Louisiana's place in the global economy;
- ▶ economic indicators that measure an economy's strength;
- ▶ **terms: corporation, right-to-work laws, tariff, Gross Domestic Product (GDP), Consumer Price Index (CPI).**

a-z
GLOSSARY

As we have learned, an economic system uses natural, capital, and human resources to produce goods and provide services. Louisiana's economy generates a wide variety of goods and services. Many of the state's economic activities are shaped by its abundant natural resources and by its distinctive cultural assets.



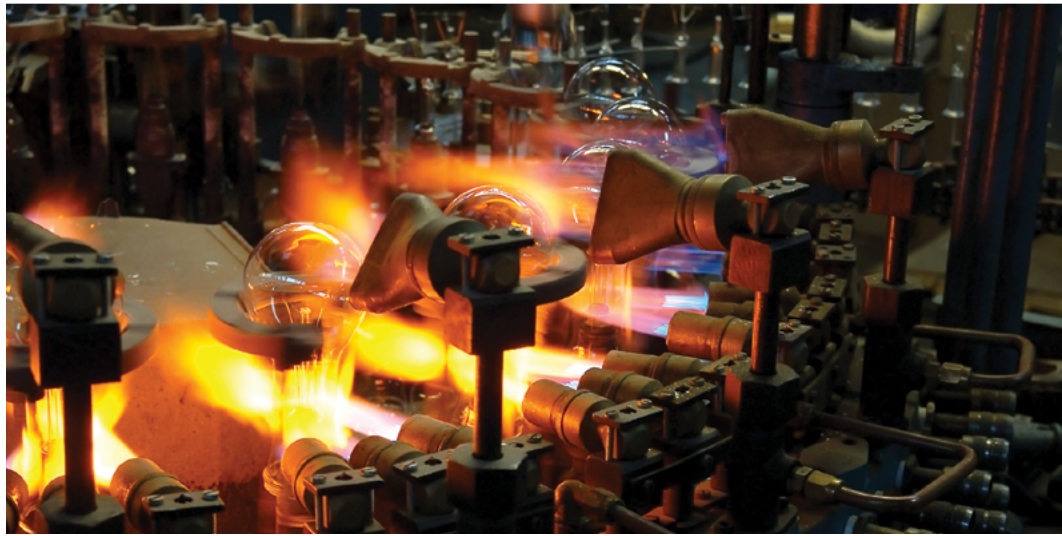
Above: Tabasco Sauce is one of Louisiana's best-known products.

Left: Aerial view of a Louisiana oil refinery repaired since Katrina.

Right: Glass is one of many products manufactured in Louisiana. **Below:** Service workers come in many forms.

Lagniappe

The Motion Picture Association of America estimates that film and television productions provide more than 8,000 jobs and generate more than \$375 million in wages in Louisiana each year.



Manufacturing

Several hundred products are manufactured in Louisiana. They include ships, trucks, electrical equipment, glass products, and mobile homes. Some of these goods are shipped out of state and sold throughout the world.

Petroleum refineries process oil and produce billions of gallons of gasoline each year. Other chemicals are created in the refining process, and those are used to make hundreds of other products including fertilizers and plastics. Louisiana ranks second in the United States in the production of petrochemicals.

Service Industries

Tourism is a major service industry in Louisiana. Tour guides and taxi drivers are two kinds of service workers. Tourists visit Louisiana each year to enjoy the culture that makes the state special. While here, they sightsee, eat, shop, fish, hunt, and join the crowds at one of our many festivals. The economic activities of these travelers add billions of dollars to the state's economy each year.

Even when people do not visit, they might see parts of Louisiana in one of the many films made in the state each year. Because of its beauty, and with help from tax credits designed to attract the film industry, Louisiana has become a very popular place for film and television production.



Special FEATURE

Louisiana: The Hollywood of the South

Lights! Camera! Action! Louisiana is becoming a star, at least as a location for movies and television shows. In 2002, when the government of Louisiana began offering tax credits to movie and television companies, many of them decided to film in Louisiana. The tax credits mean that the production company can save money if they choose to work in the state. When producers choose Louisiana, they buy goods and services from our businesses. They also hire citizens as workers, which helps the state's economy.

As a result of the tax credits, Louisiana is quickly becoming one of the most popular places to produce movies, earning it the nickname "Hollywood of the South." Over \$2 billion in revenue has been generated by the tax credits since 2002. In 2008 alone, over 80 major film and television projects were produced in Louisiana and over \$500 million was spent within the state. New Orleans, Baton Rouge, and Shreveport are becoming popular filming locations.

The first movie to be made in Louisiana was a silent film called *Tarzan of the Apes*, which was filmed in 1918. Since then, almost 500 movies have been filmed in Louisiana including *Interview with the Vampire* (1994), *A Streetcar Named Desire* (1951), *Steel Magnolias* (1989), and *The Curious Case of Benjamin Button* (2008). Famous television shows filmed in Louisiana include *Swamp People*, *True Blood*, *Cajun Pawn Stars*, and *Duck Dynasty*. In addition to creating revenue for the government of Louisiana, many famous Hollywood stars are involved with charities dedicated to helping the people of our state. Some of these celebrities include Morgan Freeman, Jonah Hill, 50 Cent, Sylvester Stallone, Brad Pitt, and Channing Tatum. What is your favorite movie or television show connected with Louisiana?



Hollywood South



DUCK DYNASTY

Far Left: Some filming for the movie *The Curious Case of Benjamin Button* was conducted in the Garden District of New Orleans. **Left:** *Duck Dynasty* is filmed in the Monroe area of northeast Louisiana. **Above:** The 1918 silent film *Tarzan of the Apes* used the swamps around Morgan City to represent African jungles.

Lagniappe

In 2015, there were twenty-five right-to-work states and twenty-five union states.



Louisiana's Largest Private Employers

Figure 3.5

Louisiana's Largest Private Sector Employers

Some of Louisiana's employers have thousands of employees. What patterns can you see in the list of the state's largest employers?

#	Employer	City	# of Employees
1	Northrop Grumman Ship Systems	Avondale	6000
2	GM Shreveport Assembly Plant	Shreveport	2290
3	NASA Michoud	New Orleans	2000
4	Foster Poultry Farms	Farmerville	1800
5	Dow Chemical Co	Hahnville	1700
6	Exxon Mobil Chemical Co	Baton Rouge	1700
7	US National Finance Center	New Orleans	1700
8	PPG Industries Inc	Westlake	1658
9	Stuller Inc	Lafayette	1600
10	Boh Bros Construction Co LLC	New Orleans	1500
11	Chevron Production	Covington	1500
12	Citgo Petroleum Corp	Sulphur	1500
13	Guard Gate-Lube Plant	Sulphur	1500
14	Shaw Environmental Infrastructure	Baton Rouge	1500
15	Tidewater Marine LLC	Amelia	1500

Source: Mississippi State College of Business.

Economic Institutions

An institution is an organization founded by people who come together for a specific purpose. An economic institution focuses on economic activities like the production of goods or the provision of services. Common examples of economic institutions include banks, small businesses, corporations, and labor unions.

Banks are central institutions in modern economies. They hold money for customers and provide ways to access it when it is needed. Banks also loan money to individuals and many kinds of businesses. These loans help businesses grow and prosper.

Small businesses tend to be owned by an individual or a few partners. They often have fifty employees or fewer. Larger businesses often become corporations. A **corporation** is a large, complex business enterprise that has many investors (called shareholders). No matter their size, all businesses have the goal of making a profit while producing goods or providing services.

People who work for similar kinds of businesses sometimes form an economic institution called a labor union. Union members work together to negotiate for good wages and safe working conditions. Labor unions were very influential in the first half of the twentieth century. In the decades that followed, many states passed **right-to-work laws** (laws that make it clear that no one can be forced to join a union to get a certain kind of job). Louisiana passed a right-to-work law in 1976. Unions say these laws take away their ability to improve wages and protect workers. Many business owners believe right-to-work laws keep unions from pushing wages so high they cannot make a profit.



Left: This marine terminal is part of the Louisiana Offshore Oil Port (LOOP), which is the single-largest point of entry for crude oil coming into the United States by water. LOOP has offloaded over 11 billion barrels of foreign and domestic crude oil since it was built in the 1970s. **Below:** Canada, the United States, and Mexico are linked through the North American Free Trade Agreement (NAFTA).

Louisiana in the U.S. and Global Economies

From the time of its founding, Louisiana's economy has had international aspects. The Mississippi River and its access to the Gulf of Mexico helped Louisiana become an important location for *exporting* and *importing* (sending and receiving) goods. Advances in transportation and communication have created an interconnected international economy. Both the United States and Louisiana play important roles in the international economy.

The state's ports provide evidence of how Louisiana plays its role. New Orleans and Baton Rouge have two of the nation's top five deepwater ports. The state has four additional deep-draft ports that import and export raw materials and manufactured goods. These six ports combined handle more than 270 million tons of cargo each year.

Louisiana also has a massive port twenty miles off the coast of Lafourche Parish. It is dedicated solely to transporting oil and gas from ships so large they cannot come into regular ports. That is why the facility is called a superport. Once transferred from large ships called supertankers, the oil and gas travel inland through underwater pipelines. This facility is the only one of its kind. It handles more than 10 percent of all the crude oil imported into the United States.

Trade Policies

The United States has developed new policies and agreements that reflect its role in the global economy. The North American Free Trade Agreement (NAFTA) removed trade restrictions with our geographic neighbors, Canada and Mexico, to make business across these international borders easier. Many businesses moved their manufacturing facilities to Mexico where labor was cheaper. Louisiana lost some textile factories and jobs as a result. While there are downsides, NAFTA has also made it more efficient for Canada to send its abundant oil resources into the United States through a system of pipelines.

Lagniappe

Louisiana had three "Fortune 500" companies in 2013, meaning they were on *Fortune* magazine's list of the highest-grossing companies in the U.S. The companies were CenturyLink, the communications company based in Monroe; Entergy, the electric power company based in New Orleans; and the Shaw Group in Baton Rouge. (The Shaw Group has since been acquired by a larger company.) The top three companies in the U.S. were Wal-Mart, ExxonMobil, and Chevron.



Lagniappe

The United States has the largest Gross Domestic Product of any country. China, Japan, Germany, and France round out the top five nations in terms of GDP.

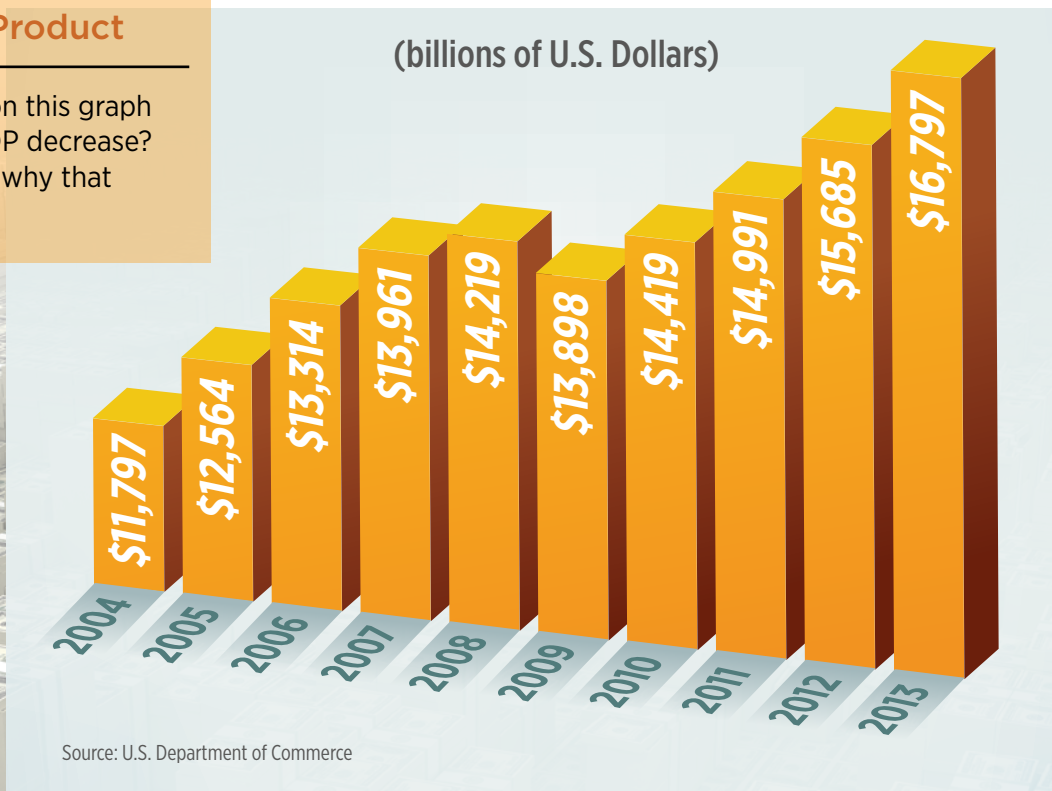


GDP

Figure 3.6

U.S. Annual Gross Domestic Product

In which year on this graph did the U.S. GDP decrease? Can you guess why that happened?



NAFTA provides evidence that the U.S. is moving away from an economy with protective tariffs to one that relies more on free trade. A **tariff** is a tax placed on a good imported into the United States. The purpose of a tariff is to protect a U.S. producer from the cheaper goods made by its international competitors.

Many believe free trade is good because it has made many foreign consumer goods more affordable. Some sugar and rice farmers are not so sure. For decades they have relied on tariffs to protect their share of the U.S. market from foreign competitors who can produce sugar and rice more cheaply.

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 in the United States in a certain time period, usually one year.

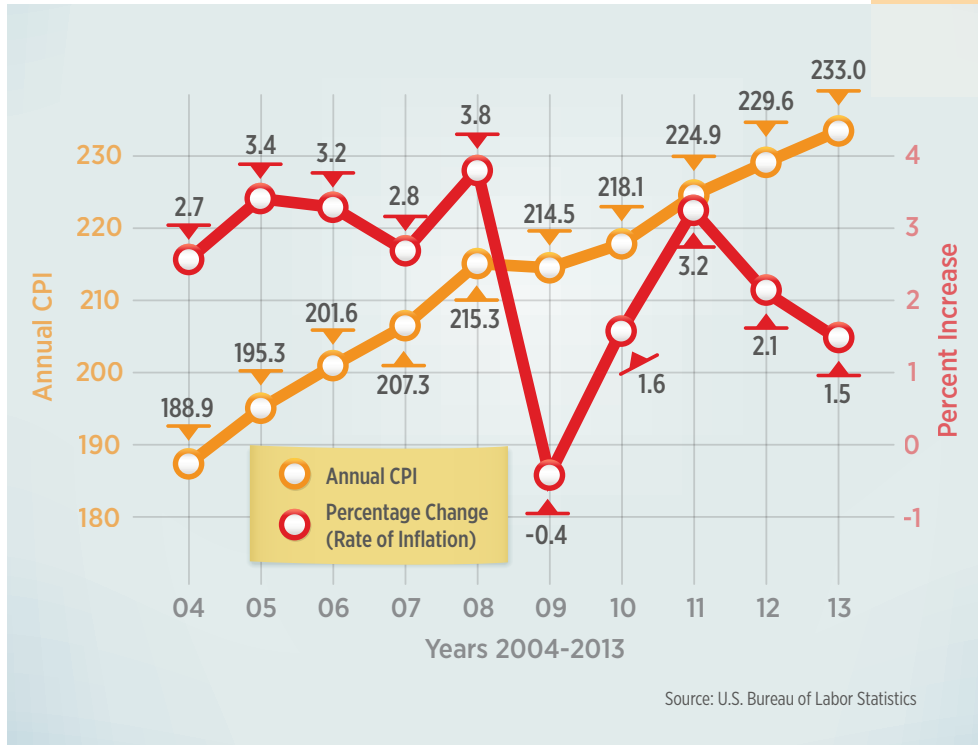
The **Consumer Price Index (CPI)** is an economic indicator that measures prices. Each month, the prices of goods and services are checked to see if they rose or fell in comparison to previous months.

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, price increases 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.

Figure 3.7

U.S. Annual Consumer Price Index

In what year was there a negative rate of inflation? Do you think that has any connection with the same year on the graph in Figure 3.6?



The unemployment rate is another very important economic indicator. 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.

Reviewing the Section

1. Define in sentence form: corporation, tariff, Gross Domestic Product (GDP).
2. Which Louisiana facility handles more than 10 percent of all the crude oil imported into the United States? How is the oil transported to shore?
3. Why are sugar and rice farmers not happy with free trade agreements like NAFTA?



Louisiana's Modern Economy

Lagniappe

To calculate the consumer price index, "economic assistants" from the U.S. Bureau of Labor Statistics visit or call thousands of retail stores, service establishments, rental units, and doctors' offices all over the country and record the prices of about 80,000 items each month.

Chapter Review



Self Check Quiz

Chapter Summary

Section 1: Basic Economic Concepts

- The term *economy* refers to how people manage material resources in a household, city, state, or nation.
- Human beings have needs and wants, which are often satisfied through the acquisition of goods and services. *Consumers* are people who acquire goods and services; *producers* use resources to provide these goods and services.
- There are three types of economic resources: natural, human, and capital. Natural resources come from Earth; human resources are the persons who produce goods and services; and capital resources are the tools used in the production of goods and services.
- Scarcity is an economic concept referring to the choices consumers and producers make regarding limited resources.
- In a market economy, the price of a good or service is determined by the law of supply and demand.
- An economy may be a traditional economy, a command economy, or a market economy. The type of economy depends on the answers to four basic questions: what to produce, how to produce, for whom to produce, and how much to produce.

Section 2: Louisiana's Economic History

- Prior to the arrival of Europeans, Native Americans had a traditional economy involving hunting, farming, and trading.
- Mercantilism is a command economy intended to enrich the mother country (e.g., France) through trade with its colonies.
- By the time the United States acquired Louisiana in 1803, a market economy was emerging. Sugar and cotton were very profitable cash crops grown in Louisiana.
- The discovery of oil in Louisiana has enriched the state, but the economy has suffered from its dependence on petroleum, especially when the price of oil drops.

Section 3: Louisiana's Resources

- An economic system uses natural, human, and capital resources to produce goods and services.
- Natural resources are products of Earth and its atmosphere. Louisiana's climate, soil, and abundant water resources support a variety of goods and products in agriculture, forestry, and fisheries.
- Capital resources, such as processing facilities, machines, and equipment, transform natural resources to products.
- Human resources provide the physical and/or mental labor to transform a resource into a good or service.

Section 4: Louisiana's Modern Economy

- Hundreds of products are manufactured in Louisiana including ships, trucks, electrical equipment, glass products, and mobile homes.
- Louisiana is the second-leading producer of petrochemicals in the United States.
- For more than a decade, there has been a rapid growth in the motion picture and television industry in Louisiana.
- The North American Free Trade Agreement (NAFTA) removed trade restrictions with our geographic neighbors. While many businesses moved their manufacturing facilities to Mexico where the labor was cheaper, this agreement has made consumer goods more affordable by the removal of protective tariffs.
- An important economic indicator is the Gross Domestic Product (GDP), which is the total value of the final goods and services produced in a certain time period.
- The Consumer Price Index (CPI) is an economic indicator that measures prices. Each month, the prices of goods and services are checked and compared with the prices of previous months to see if they rose or fell.



Activities for Learning

Understanding the Facts

1. What is the study of economics called at the smallest level? the largest level?
2. In a market economy, what are the two factors that influence the price of a good or service?
3. What are the three types of economic systems discussed in this chapter?
4. How did mercantilism limit colonial trade?
5. Historically, what were Louisiana's two most important cash crops?
6. Which company built Louisiana's first oil refinery? When?
7. Today, what are Louisiana's four most profitable food crops?
8. In Louisiana, what is the most common sawtimber?
9. What types of Louisiana seafood are harvested by commercial fisherman and shipped all over the country?
10. How much of the nation's natural gas deposits are in Louisiana?
11. What is Louisiana's rank in the United States in the production of petrochemicals?
12. What type of industry is tourism?
13. What term refers to a tax placed on an imported good?
14. Which index places an annual value on the final goods and services produced in a country?

Developing Critical Thinking

How has the growth of the movie and television industry brought economic benefits to Louisiana?

Exploring Louisiana on the Internet

Go to www.nytimes.com/interactive/2010/05/01/us/20100501-oil-spill-tracker.html. Watch the animated map on the BP oil spill. According to this map, how many Louisiana Gulf Coast locations were directly affected by the spill?

Building 21st-Century Skills: Creating a Pie Chart

A pie chart is a circular graph divided into sections with each section showing the relative size of the quantities represented. The purpose of a pie chart is to show how much a category contributes to the whole. To create this chart, you need colored pencils, paper, a compass, and a ruler.

The first step in creating a pie chart is to create a title for your chart based on the categories of data (or facts) you are comparing. In this chart, you are going to use the crop data found in the last paragraph of page 83, so select a title with this in mind. The second step is to determine the whole. (Add the total dollar value of the four major crops grown in Louisiana—soybeans, corn, sugarcane, and rice.) The third step is to determine what percentage each category (or crop) is of the whole. For example, divide the value of soybeans (in millions) by the total dollar value of the four crops (in millions) and multiply by 100 ($700 \div 2,257 \times 100 = 38\%$). Repeat this step for the other three crops. The fourth step is to draw a circle on your paper using a compass; this represents the whole dollar value (100%) of the four major crops. Then divide your circle into sections corresponding to the percentage of the whole that each crop represents. Finally, shade each section a different color and label them.



Chapter Review