# Chapter 11

# Government and the Economy

***How should the U.S. government carry out its economic roles?***

## 11.1 Introduction

When you woke up this morning, did you think to yourself, "What is the government going to do for me today?" Probably not. If you are like most high school students, you probably did not think about the government at all this morning. But the government was there. The time log that follows will give you an idea of just how involved the government is in our everyday lives.

**6:30 A.M.** The clock radio comes on—too early, as always. As you slowly wake up, a song ends and you hear the news begin. "The government has just announced new regulations," the reporter says, "to protect investors against phishing, a form of e-mail fraud."

**6:45 A.M.** By the time you are up and dressed, the news is over and the radio is back to music. The music comes through loud and clear, thanks largely to a government agency that assigns a separate frequency to each radio station. Otherwise a competing broadcaster using the exact same spot on the radio dial might drown out your station.

**6:50 A.M.** Still bleary eyed, you stumble into the kitchen to fix breakfast. You put water on to boil while you scramble a couple of eggs. The government is right beside you as you cook. The water that flows from the tap has been analyzed by your local water department to be sure it is safe to drink. Government inspectors made

Government is involved in many aspects of our everyday lives.

### Speaking of Economics

**regulation**
The establishment, by the government, of rules aimed at influencing the behavior of firms and individuals. Regulation can involve setting prices, establishing product and workplace standards, and limiting entry into an industry.

**eminent domain**
The power of a government to take an individual's property for public use if the owner is fairly compensated.

**regulatory agency**
A unit of government created to set and enforce standards for a particular industry or area of economic activity.

**merger**
The combining of two or more separately owned firms into a single firm.

**deregulation**
The process of removing government restrictions on firms in order to promote competition or encourage economic activity.

**common resource**
A resource that everyone has access to and that can easily be overused or destroyed. Examples include the atmosphere and the oceans.

**government failure**
Inefficient allocation of resources caused by government intervention in the economy.

**poverty rate**
The percentage of the population that has a family income below a government-defined threshold, or poverty line.

sure the eggs were produced and packaged in a way designed to minimize the presence of harmful bacteria.

**7:00 A.M.** Your grandmother joins you at the kitchen table with the morning paper. She shows you an article announcing an increase in Social Security benefits due to rising living costs. Her pension from the federal government will go up starting next month.

**7:06 A.M.** As you wait for the school bus, you notice that some potholes in the road have been filled. A paving company hired by the state government has been busy making street repairs.

**7:10 A.M.** Your bus finally arrives. It is very quiet, and it does not smell of diesel fumes. Your local school district has invested in several battery-powered school buses, and you are lucky enough to ride in one.

**7:30 A.M.** You reach your destination, a public high school funded by your national, state, and local governments. Governments support public education in part because an educated workforce is key to a productive economy.

Your morning has barely begun, and yet government at every level has already provided you with a multitude of services. In this chapter, you will learn more about the widely accepted roles that the government plays in our market-based economy. You will also explore how the government's intervention affects your life and the lives of all Americans.

## 11.2 How Does the Government Protect Property Rights?

Government clearly plays a big role in our economic lives. Is this role too big? Many Americans would say it is. But Charles Wheelan disagrees.

> *Good government makes a market economy possible. Period. And bad government, or no government, dashes capitalism against the rocks, which is one reason that billions of people live in dire poverty around the globe.*
>
> —Charles Wheelan, *Naked Economics: Undressing the Dismal Science*, 2002

Without a doubt, capitalism is alive and well in the United States. But is that because of government involvement or in spite of it?

### The Constitutional Basis for Government Involvement in the Economy

The power of the federal government to intervene in the economy comes straight out of Article I of the U.S. Constitution. Among the economic powers that this article grants to Congress are

- to lay and collect taxes.
- to provide for the general welfare.
- to borrow money.
- to regulate interstate and foreign commerce.
- to establish uniform bankruptcy laws.
- to coin money and regulate its value.
- to fix the standard of weights and measures.
- to protect the writings and discoveries of authors and inventors.

Exercising its constitutional powers, the federal government establishes laws and rules designed to influence economic behavior in desirable ways. This process is called **regulation**. All modern government regulation is ultimately based on the powers granted in the Constitution.

### Government's Role in Protecting Property Rights

The Constitution lays the foundation for a legal system that protects property rights. We often think of property as land, personal possessions, and other physical assets. However, property can also refer to inventions and various forms of expression, also known as intellectual property. No matter what form property takes, property rights entitle the owner to determine how it is used.

Economists argue that protecting property rights is essential for our free enterprise system to flourish. Why? Because incentives matter. Ownership of property creates a number of incentives that promote economic progress, including the three listed here.

***Private ownership encourages people to take care of their property.*** If private owners fail to maintain their property, they are the people who suffer. For example, if you own a house, you have a strong incentive to fix the roof if it leaks. Otherwise the value of your house will decrease.

***Private ownership encourages people to make the most productive use of their property.*** It is in the best interest of owners to use their property in the most productive ways possible. The owner of a farm,

As the incentives-matter principle reminds us, people are motivated to act in ways that promote their well-being. This homeowner has a strong incentive to keep her house in good repair. The value of her home, which may be her most valuable asset, depends in part on how well it has been maintained.

for example, has every incentive to plant crops that make the best use of local soil and climate conditions.

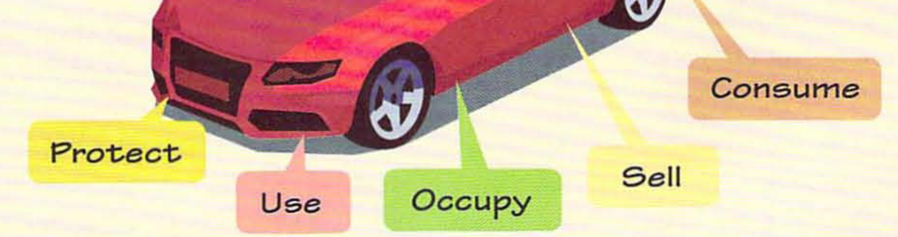
***Private ownership encourages people to develop their property in ways that benefit others.*** Under the law, owners can do whatever they want with their property, but they have the potential to gain by making what they own useful to others. Consider the owners of a health club. Personally, they may have no interest in anything but weight training. Nonetheless, they might decide to offer childcare, nutrition counseling, and spa services to attract more members. By enhancing their health club in ways that benefit others, the owners stand to benefit by increasing the property's value.

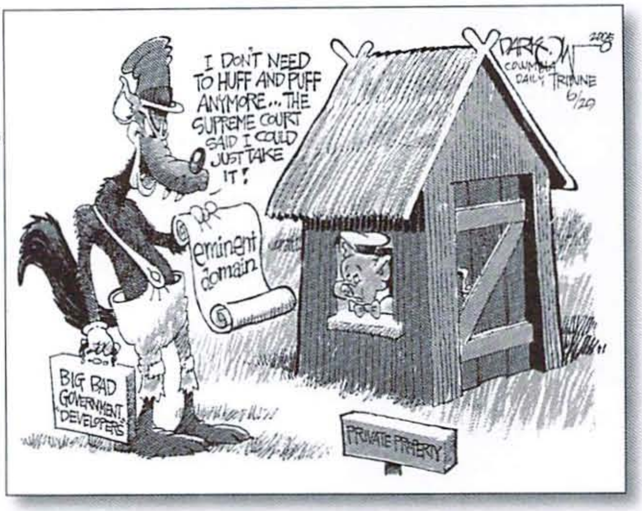
Property rights are so basic to our free enterprise system that the government is empowered by the Constitution to protect them. One institution that protects property rights is the court system, sometimes assisted by police forces. Another is the U.S. Patent and Trademark Office (USPTO). This federal government agency protects intellectual property, or property in the form of ideas that have commercial value. It does so by issuing patents, copyrights, and trademarks.

Key Concept

**Property Rights**

Owners of private property enjoy a number of rights. The three most important are (1) the right to exclusive use of their property, (2) the right to legal protection against trespassers or abusers of their property, and (3) the right to sell or trade their property. These rights give property owners a wide range of options regarding the care and use of their property.




I DON'T NEED TO HUFF AND PUFF ANYMORE... THE SUPREME COURT SAID I COULD JUST TAKE IT!
eminent domain
BIG BAD GOVERNMENT DEVELOPERS
PRIVATE PROPERTY
DARKOW 2005 COLUMBIA DAILY TRIBUNE 6/29

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Eminent domain is the government's right to take private property for public use. In 2005, the Supreme Court ruled that private developers could obtain land through eminent domain as long as their redevelopment projects had public benefits. But do such projects qualify as a public use? Not according to this cartoonist.

### An Exception to Property Rights: Eminent Domain

Our nation's founders took property rights seriously. During the Constitutional Convention in 1787, Gouverneur Morris of New York echoed the sentiments of most delegates when he described property as "the main object of Society." Still, the delegates recognized that at times, the government must take private property for a public use, such as the building of a road or courthouse. The government does this through the power of eminent domain.

**Eminent domain** is the power to force the transfer of property from a private owner to the government for a public purpose. This power existed long before the United States was founded. But the Fifth Amendment to the Constitution added a new element—paying the private owner for property taken under eminent domain. The **Takings Clause** of the Fifth Amendment states,

> *No person shall be . . . deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.*

In 2005, the meaning of *public use* was called into question by a controversial Supreme Court decision. The case before the Court was *Kelo v. City of New London,* which pitted residents of a run-down section of New London, Connecticut, against the city government. The city wanted to use its power of eminent domain to take the residents' property, including land, homes, and businesses, for economic redevelopment.

New London's taking of private property for redevelopment was not unprecedented. In earlier decisions, the Supreme Court had decided that the redevelopment of depressed areas had public benefits that justified a government's use of eminent domain. However, New London did not plan to use the land it had acquired for public projects, such as schools or a civic center. Instead, it intended to turn the land over to private developers who planned to build a hotel, offices, and condominiums on the site for profit.

The city argued that the economic growth that this private development would bring to New London was a public benefit. Some residents who faced the loss of their property disagreed. They argued that the government's taking of their homes and businesses for the benefit of a private developer was not a public use.

In its decision on *Kelo,* the Supreme Court sided with the city. A 5-to-4 majority held that the benefits of economic redevelopment do qualify as public use within the meaning of the Fifth Amendment. Justice Sandra Day O'Connor was one of the four justices who did not agree with the majority. In her dissenting opinion, she wrote that the effect of this decision was "to wash out any distinction between private and public use of property—and thereby effectively to delete the words 'for public use' from the Takings Clause of the Fifth Amendment."

The Supreme Court's decision in *Kelo* provoked a nationwide storm of protest. In response, many states passed laws designed to protect property rights by limiting the use of eminent domain for economic development.

## 11.3 What Regulatory Roles Does Government Play in Our Economy?

Securing property rights is an important role for government in our economy, but it is not the only role. The federal government is involved in many aspects of the economy by setting and enforcing standards for dozens of industries. Through this regulation, the government seeks to protect the interests of all participants in the economy. One way government does this is by ensuring that markets are competitive.

### Government's Role in Maintaining Competition

Like property rights, competition is essential if markets are going to work the way they are supposed to work. The pressures of competition force producers to use resources efficiently, to develop new or better products, and to keep products and services affordable. Because competition is vital to the economy, the government acts to maintain competition when markets fail to do so.

The government's main guardian of competition is the Justice Department. This cabinet-level department, through its Antitrust Division, enforces the antitrust laws that Congress has enacted over the years. It often works closely with the Federal Trade Commission. The FTC is a **regulatory agency**—a unit of government that makes and enforces standards for an industry or area of economic activity.

As modern-day trustbusters, the Justice Department and the FTC prohibit practices that restrict competition. When they uncover such practices, they take the offending companies to court. Successful prosecution can lead to fines and jail sentences for the guilty parties. These illegal practices include the following:

*Price fixing.* The illegal practice of **price fixing** occurs when competitors agree on a price for a good or service. Price fixing can take many forms, from adopting a formula for computing prices to setting a minimum fee for services.

*Bid rigging.* Purchasers—including federal, state, and local governments—often acquire goods and services by seeking bids from competing firms. **Bid rigging** occurs when competitors agree in advance who will submit the winning bid. That bid, which is the lowest bid, will still be higher than it would have been in a competitive market. Firms that engage in bid rigging may take turns being the low bidder on a series of contracts.

*Market division.* The tactic known as **market division** occurs when competitors agree to divide a market among themselves. In one type of scheme, each competitor sells to only certain customers. In another, each competitor sells in only certain geographic areas.

The Justice Department and the FTC also monitor **mergers,** in which two separately owned firms combine into one firm. A merger is illegal if it will substantially lessen competition or tend to create a monopoly.

The government does allow some natural monopolies to exist. A natural monopoly arises when a single firm can supply a product more efficiently than multiple competing firms can. The American Telephone and Telegraph Company, better known as AT&T, was once a natural monopoly. In the mid-1900s, it controlled the vast majority of the nation's telephone services.

INTRODUCING
SIRIUS S50
SIRIUS
SATELLITE RADIO
DELPHI
XM

XM and Sirius satellite radios are shown side by side in this 2005 display. After much study, the Justice Department approved the merger of the former competitors in 2008. The merger was criticized by many who argued that it gave the new company, Sirius XM Radio, Inc., a monopoly over satellite radio programming. "There are other alternatives out there," answered a Justice Department spokesperson. "We just simply found that the evidence didn't indicate that it would harm consumers."

In the 1970s, however, the Justice Department took action to break up AT&T's monopoly. After a lengthy lawsuit, the company agreed to spin off seven separate regional phone companies, which became known as Baby Bells. AT&T continued to provide long-distance telephone services. Figure 11.3A shows how the Baby Bells later merged into three much larger telecommunication companies.

### Government's Role in Protecting Consumers, Savers, and Investors

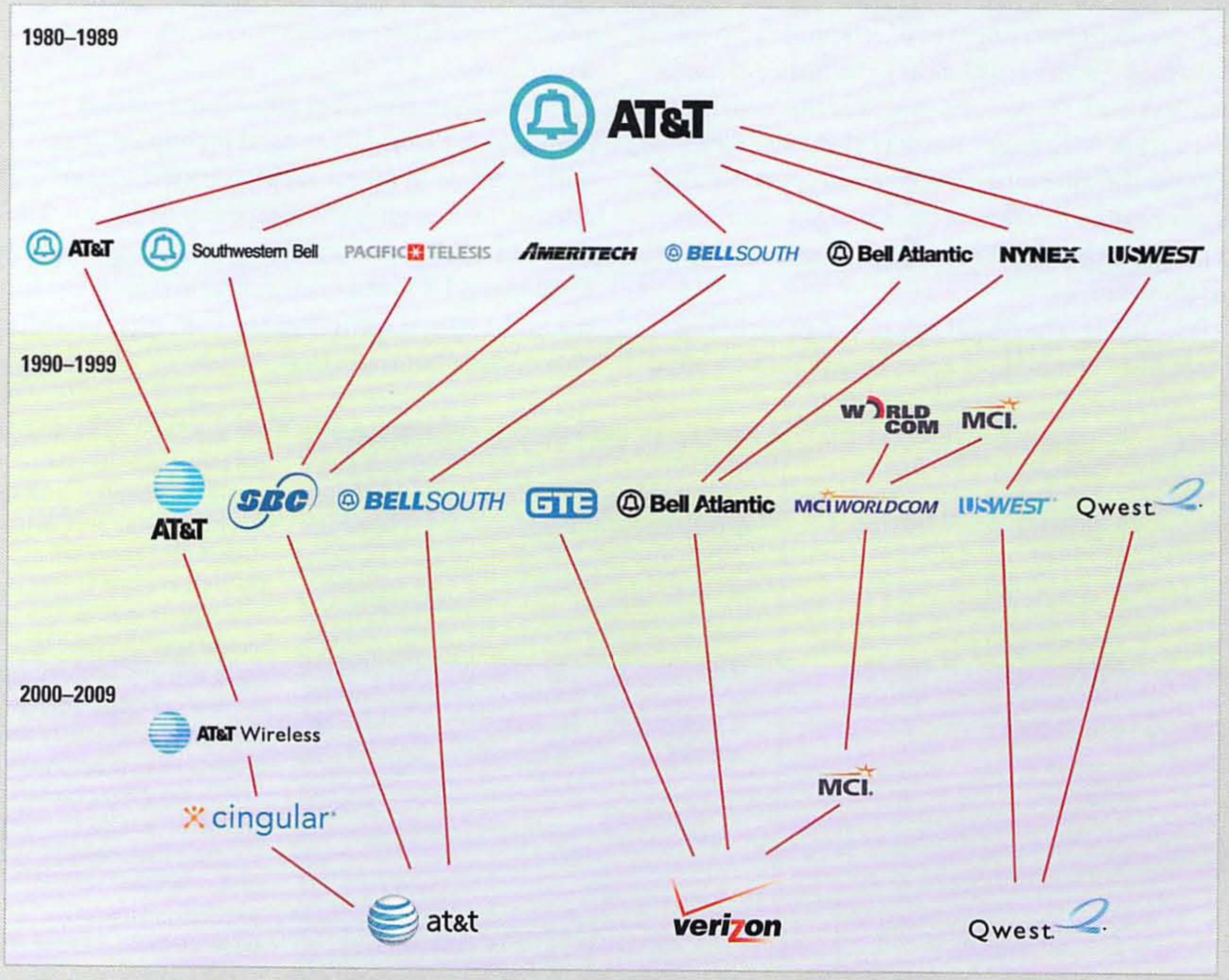
*Caveat emptor.* This long-standing rule of the marketplace is Latin for "Let the buyer beware." It serves as a warning to buyers that they purchase goods and services at their own risk. But in today's complex market, buyers may not have all the information they need to make sound judgments about products. Instead, they have come to rely on regulatory agencies to provide such information. Consumers, savers, and investors also look to such agencies to ensure that products are safe and dependable.

***Protecting consumers.*** Regulation to protect consumers began in the early 1900s. One of the first targets of government regulators was the meatpacking industry. Upton Sinclair, in his novel *The Jungle,* described what went on in meatpacking plants.

**Figure 11.3A**

**Analyzing the Breakup of AT&T**

AT&T held a natural monopoly on telephone service until it was broken up into AT&T and seven regional "Baby Bells" in 1984. Over time, the remnants of that breakup pieced themselves back together. By 2006, two companies—Verizon and the "new AT&T"—dominated the telecommunications industry.


1980–1989
AT&T
AT&T
Southwestern Bell
PACIFIC TELESIS
AMERITECH
BELLSOUTH
Bell Atlantic
NYNEX
USWEST
1990–1999
WORLD COM
MCI
AT&T
SBC
BELLSOUTH
GTE
Bell Atlantic
MCI WORLDCOM
USWEST
Qwest
2000–2009
AT&T Wireless
cingular
MCI
at&t
verizon
Qwest

> *There would be meat that had tumbled out on the floor, in the dirt and sawdust, where the workers had tramped and spit . . . meat stored in great piles in rooms; and the water from leaky roofs would drip over it, and thousands of rats would race about on it . . . These rats were nuisances, and the packers would put poisoned bread out for them; they would die, and then rats, bread, and meat would go into the hoppers together.*
>
> —Upton Sinclair, *The Jungle*, 1906

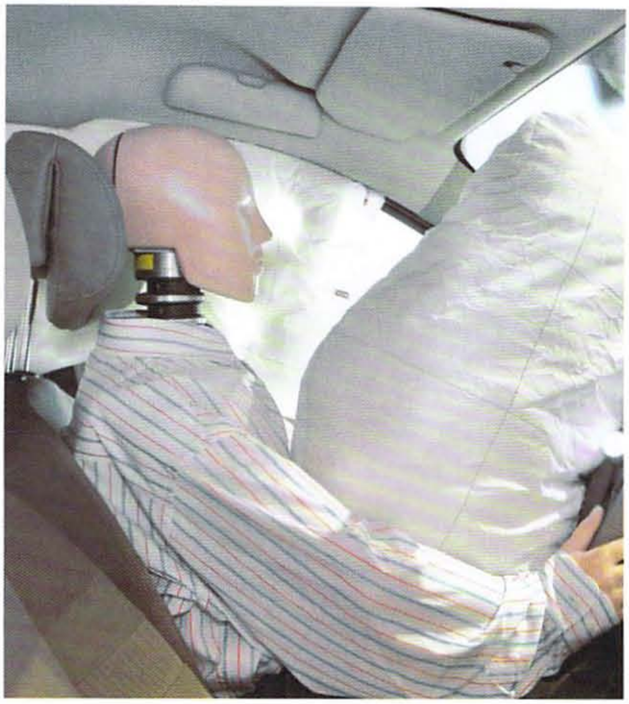
Thanks in part to Sinclair's stomach-turning prose, Congress passed both the Meat Inspection Act and the Pure Food and Drug Act in 1906. This legislation paved the way for a new regulatory agency, now known as the Food and Drug Administration. The FDA oversees the testing and approval of drugs before they go on the market.

Another wave of consumer regulation began in 1965, triggered by Ralph Nader's book *Unsafe at Any Speed*. Nader claimed that automobiles were unsafe and that the auto industry resisted making cars safer because of the added cost. The next year, Congress passed legislation requiring automakers to install seat belts in all cars. This law led to the creation of an agency to set safety standards for automobiles, the National Highway Traffic Safety Administration.

In 1972, Congress created the Consumer Product Safety Commission to protect Americans against undue risks associated with consumer products. This agency now sets standards for more than 15,000 products, from toys to lawn mowers.

During President Obama's first term, a new agency was created to protect consumers in markets for financial products. The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 established the Consumer Financial Protection Bureau. This agency's basic function is to establish and enforce rules that allow consumers to make well-informed decisions regarding financial products, including mortgages or credit cards.

***Protecting savers and investors.*** Of the many banking-related agencies, the Federal Deposit Insurance Corporation may have the most direct role in protecting savers. The FDIC insures nearly all bank deposits for up to $100,000 per depositor.

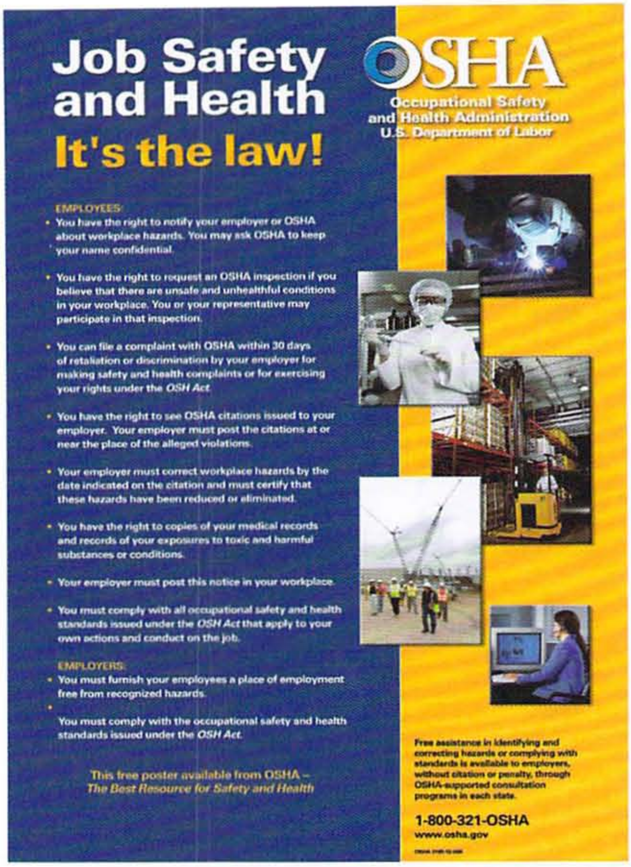


In 1965, Ralph Nader's book *Unsafe at Any Speed* spurred Congress to enact safety standards for cars and other vehicles and to establish the National Highway Traffic Safety Administration. Air bags later became a standard safety feature in cars.

The Securities and Exchange Commission protects investors by making sure they have the information they need to judge whether to buy, sell, or hold a particular security. The SEC establishes and enforces rules to ensure that companies provide that information in a timely and accurate manner.

Such regulatory agencies allow Americans to feel confident when transacting business with total strangers. As the president of a Federal Reserve Bank once observed,

> *It seems remarkable, when you think about it, that we often take substantial amounts of money to our bank and hand it over to people we have never met before. . . . We trust that . . . the person at the bank who takes our money doesn't just pocket it. Or that when we use our credit cards to buy a new CD or tennis racquet over the Internet, from a business that is located in some other state or country, we are confident we will get our merchandise, and they are confident they will get paid.*
>
> —Jerry Jordan, 2000



Job Safety and Health

It's the law!

OSHA

Occupational Safety and Health Administration U.S. Department of Labor

EMPLOYEES:

- You have the right to notify your employer or OSHA about workplace hazards. You may ask OSHA to keep your name confidential.
- You have the right to request an OSHA inspection if you believe that there are unsafe and unhealthful conditions in your workplace. You or your representative may participate in that inspection.
- You can file a complaint with OSHA within 30 days of retaliation or discrimination by your employer for making safety and health complaints or for exercising your rights under the *OSH Act*.
- You have the right to see OSHA citations issued to your employer. Your employer must post the citations at or near the place of the alleged violations.
- Your employer must correct workplace hazards by the date indicated on the citation and must certify that these hazards have been reduced or eliminated.
- You have the right to copies of your medical records and records of your exposures to toxic and harmful substances or conditions.
- Your employer must post this notice in your workplace.
- You must comply with all occupational safety and health standards issued under the *OSH Act* that apply to your own actions and conduct on the job.

EMPLOYERS:

- You must furnish your employees a place of employment free from recognized hazards.
- You must comply with the occupational safety and health standards issued under the *OSH Act*.

This free poster available from OSHA –
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Free assistance in identifying and correcting hazards or complying with standards is available to employers, without citation or penalty, through OSHA-supported consultation programs in each state.

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www.osha.gov

The Occupational Safety and Heath Administration monitors workplaces to protect workers from accidents and injuries. According to OSHA, since its founding in 1971, the administration has helped to cut fatal accidents in the workplace by more than 60 percent. OSHA has also been instrumental in reducing workplace illnesses and accidents by 40 percent.

### Government's Role in Protecting Workers

The federal government safeguards the interests of workers through the Department of Labor. One of DOL's primary aims is to protect workers' economic rights. It does this by making sure workers get the wages due to them, fostering workplaces that are free of discrimination, and providing unemployment insurance.

Another goal of DOL is protecting workers' physical well-being. To ensure safe and secure workplaces, DOL relies mainly on the Occupational Safety and Health Administration. OSHA sets safety and health standards for industries. When you see construction workers wearing hard hats or highway workers wearing reflective vests, you can be sure OSHA standards are involved. Since OSHA was established in 1971, workplace fatalities have decreased by more than 60 percent and injury rates by 40 percent.

### The Perils of Government Regulation

Regulatory agencies are a little like referees. Their role is to make sure that firms play by the rules and that individuals are protected. But referees sometimes make mistakes, and so do government regulators. Economists cite several problems associated with government regulation, including the three described here.

***Overregulation.*** Regulation can be very expensive, both for the regulatory agencies and for the businesses that must comply with the rulings of those agencies. Sometimes regulations are so detailed and complex that they actually discourage economic activity. For example, consider this requirement from an early OSHA standard on ladder safety:

> *The general slope of grain in flat steps of minimum dimension shall not be steeper than 1 in 12, except that for ladders under 10 feet in length the slope shall not be steeper than 1 in 10 . . . Local deviations of grain associated with otherwise permissible irregularities are permitted.*

A building contractor faced with page after page of such regulations might well decide to simply abandon jobs that require ladders.

***Balancing costs and benefits.*** Most people would agree that regulation has benefited society. Everyone wants clean water, for example, and standards enforced by the Environmental Protection Agency (EPA) have done a great deal to address water pollution. But how clean does water have to be? And at what cost?

Consider a lake that was once so polluted that fish could not survive in it. Through regulation, water quality improves and the fish come back. After more regulation and expense, the water becomes swimmable. The water is eventually deemed to be nearly drinkable. But some impurities remain. To remove them would cost as much as has already gone into removing all the other pollutants. Is drinkable lake water a reasonable goal for regulators? Or are the costs of such a level of purity too great to justify?

***Regulatory capture.*** Employees of a regulatory agency need to be familiar with the industry they are regulating. Where better to find qualified employees for an agency than in the industry itself? And when those agency employees leave government service, who will hire them? The same industry that they formerly regulated, of course.

This "revolving door" between government and industry can lead to what economists call **regulatory capture.** This occurs when regulatory agencies are dominated, or captured, by the industries they regulate. Captured agencies act in the best interests of the industry, rather than in the public interest.

One way to address the problems created by regulation is through deregulation. **Deregulation** is the process of removing government restrictions on firms' economic activity. Since the 1970s, Congress has deregulated the banking, airline, cable television, electric power, and interstate trucking industries, among others.

The effects of deregulation have been mixed. In the airline industry, for example, the Civil Aeronautics Board controlled both airline routes and ticket prices until deregulation began in 1978. The result of deregulation, as Figure 11.3B shows, was a dramatic rise in the number of Americans flying as airfares dropped and new routes opened up. At the same time, however, deregulation led to greater crowding at some airports. And as air travel became more competitive, weaker airlines had to shut down or merge with stronger airlines to survive.

## 11.4 How Should Government Address Externalities and Public Goods?

Government's involvement in the economy takes many forms, from filling potholes to regulating alcohol to enforcing business contracts to inspecting oceangoing vessels. But most of what government does, it does for two basic reasons. The first is to protect individuals in the economy. The second is to make markets—and thus the economy—work better. This second reason is why government intervenes to correct two forms of market failure: externalities and public goods.

### The Government's Role in Dealing with Externalities

Externalities are spillover effects resulting from production or consumption. They are costs or benefits that affect someone other than the producer or consumer of a good or service.

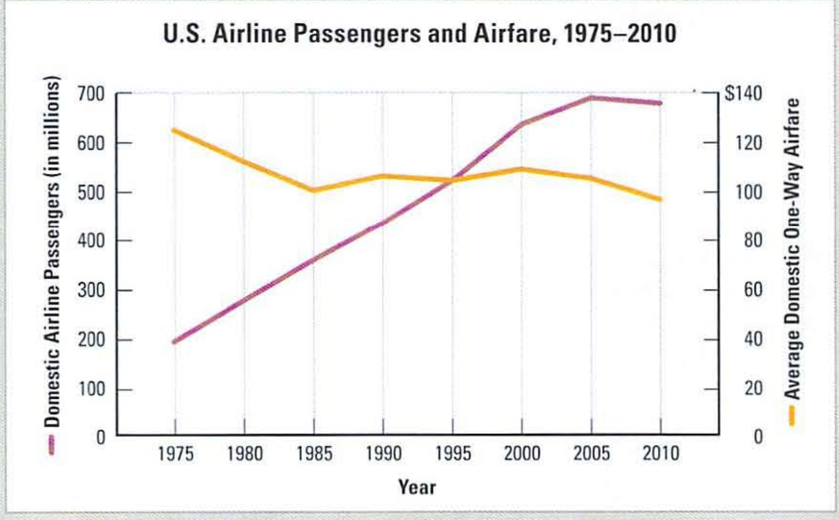
Externalities can be negative or positive. Air pollution and secondhand smoke, for example, are negative externalities associated with driving and smoking. Without government intervention, such negative externalities can cause great, even if unintended, harm.

**Figure 11.3B**

**Graphing Gains from Airline Deregulation**

Before 1978, the Civil Aeronautics Board controlled both domestic airline routes and fares. After the deregulation that year, any domestic airline judged "fit, willing, and able," was allowed to fly any U.S. route at any price.

- Note the drop in average fares, as calculated in 2005 dollars.
- With lower fares, the number of Americans flying increased between 1975 and 2010.



Source: U.S. Department of Transportation.

Governments can be equally helpful in promoting activities that have positive externalities. Immunizations, for example, prevent individuals from getting harmful diseases. They also prevent individuals from spreading those diseases to others—a positive externality. To encourage immunization, state governments require children to receive vaccinations against common diseases before enrolling in public school.

### Supporting Positive Externalities: Subsidies and Public Provision

Goods and services that generate positive externalities tend to be underproduced relative to their benefits. Higher education is a prime example. People who graduate from college gain the benefit of greater earnings. However, education also benefits society by creating a more productive workforce. To support this positive externality, federal and state governments allocate resources to education. They do this through subsidies and **public provision,** which means providing the education itself.

***Subsidies.*** The government subsidizes both the consumers and the producers of education. It gives subsidies to college students in the form of grants, which do not have to be repaid, and low-interest loans. It also gives grants to schools, colleges, and universities.

Vouchers are another form of subsidy. A **voucher** is a coupon to be used to purchase a specific good or service. Some state and local governments provide school vouchers to low-income families to help them send their children to private schools.

***Public provision.*** If a positive externality is large enough, the government may choose to finance the production of a good or service itself. In the field of higher education, federal and state governments provide most of the revenue needed to support public colleges and universities. Other examples of public provision are the U.S. Postal Service and federal air-traffic control systems.

### Limiting Negative Externalities: Command-and-Control versus Market-Based Policies

One of the most widespread and troubling side effects of both production and consumption is environmental pollution. Governments can seek to limit this externality in two ways—through command-and-control policies and through market-based policies.

**Figure 11.4A**

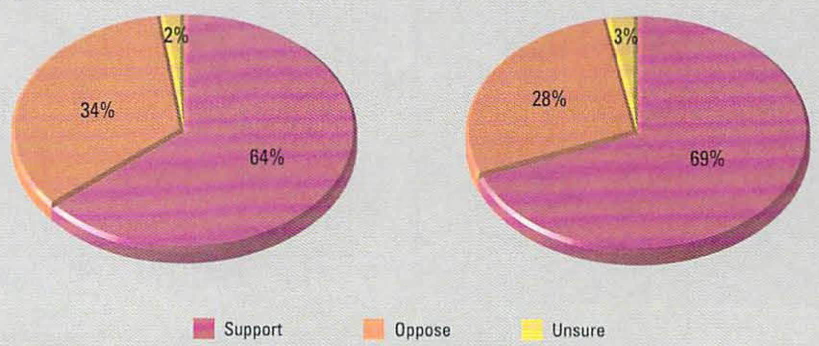
**Analyzing Public Opinion on Education**

Funding student loans and preschools are ways for governments to promote the positive externalities created by an educated citizenry. The survey results here show public opinion on some of these issues.

- The left-side graph shows support for a subsidy, providing low-interest loans. The right-side graph shows support for a public provision, providing preschools.
- Why do you think many Americans approve of the government supporting positive externalities?

As you may know, under the current federal program to help pay for college, students get loans from banks and other financial institutions, with the government guaranteeing those loans. Would you favor or oppose a proposal to have the government provide loans to college students directly, which would increase the amount of money available for college loans?

Suppose that on Election Day you could vote on key issues as well as candidates. Would you vote for or against a law that would spend government money to establish federal and state programs making high-quality preschools available to every child in America?



CNN/Opinion Research Corporation Poll, 2010 and Gallup Poll, 2013.

ADOPT A HIGHWAY
LITTER CONTROL
NEXT 2 MILES
DIRTY DOZEN
Keep
Pennsylvania
Beautiful

The litter you see lining many highways is a negative externality. The companies that produce the plastic bags, soda cans, and other items that litter roads do not bear the cost of cleaning them up. Nor do the consumers who buy and use these items before throwing them away. In many places, cleanup is done by volunteers who adopt a section of highway and work to keep it litter free.

***Command-and-control policies.*** The term *command and control* comes from the military and refers to the use of authority by a commanding officer to accomplish a mission. The commander exercises authority by issuing orders that others are expected to obey. As one writer puts it, "the idea is that people do what you tell them to do, and if they don't, you yell at them until they do, and if they still don't, you throw them in the brig for a while." Regulatory agencies that adopt **command-and-control policies** follow a similar approach, issuing rules that others are expected to follow.

The Environmental Protection Agency has used command-and-control policies to reduce air pollution. The EPA sets standards for air quality and requires states and cities to meet them. There are problems with this approach, however. As economist Robert W. Crandall observed,

> *The Congress or the EPA may decide to control the wrong substances or to control some discharges too strictly. Congress's own Office of Technology Assessment concluded, for example, that attempting to reach the EPA's goal for urban smog reduction could cost more than $13 billion per year, but result in less than $3.5 billion in improved health, agricultural, and amenity benefits.*
> —Robert W. Crandall, "Pollution Controls," *The Concise Encyclopedia of Economics*, 2008

***Market-based policies.*** Economists generally prefer the use of **market-based policies** to deal with negative externalities. Such policies use incentives, rather than rules and enforcement, to change producers' behaviors.

One market-based policy is a corrective tax, which the government levies on producers of pollution. Corrective taxes give producers an incentive to reduce their harmful waste products because the tax acts as a penalty. These taxes also have the benefit of raising revenue.

Corrective taxes have been used by local governments in an attempt to reduce the amount of trash that households produce. Under these "pay as you throw" tax schemes, households are charged for each bag of garbage they put out for collection. In response to the trash tax, most households try to find ways to reduce their output of garbage. The effect has been to reduce the amount of waste that ends up in local landfills.

Another market-based policy is known as **cap and trade**. When using this approach, the government sets a limit, or cap, on the total amount of a pollutant that businesses can emit each year. The government then issues a limited number of **pollution permits** to every firm that emits that type of pollution. The permit gives the holder the right to pollute a certain amount.

As illustrated in Figure 11.4B, this scheme allows firms to sell their pollution permits to one another. Firms that can easily cut their emissions below their caps have an incentive to do so because they can sell their leftover permits. Firms that are unable to cut emissions enough to reach their caps may buy those extra permits to avoid pollution penalties. At the same time, the added cost of buying permits gives heavy polluters an incentive to decrease their emissions as much as possible.

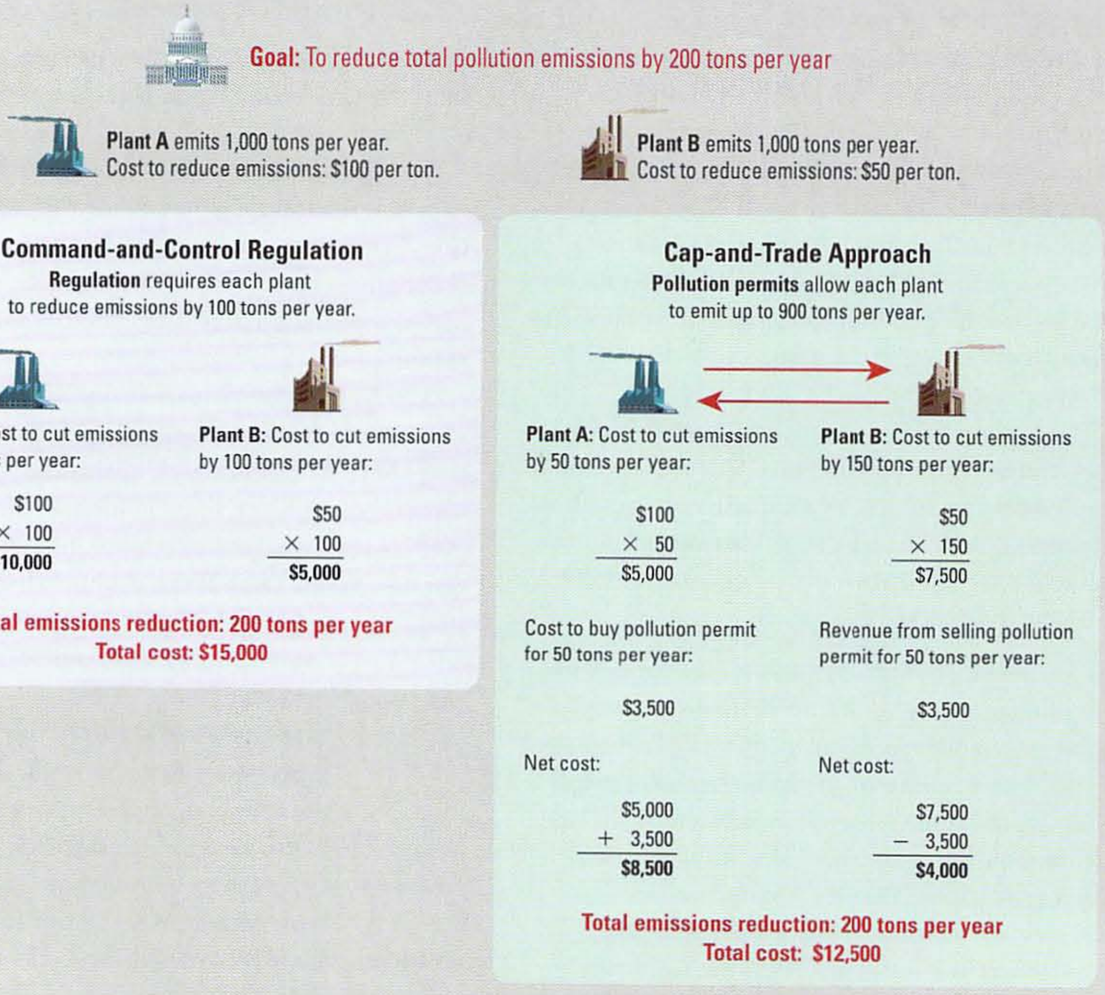
The EPA used a cap-and-trade policy in the 1990s to reduce the output of sulfur dioxide—a major cause of acid rain—emitted from coal-burning power plants. Coal-fired power plants throughout the United States were directed to reduce their sulfur emissions by 50 percent over a fixed period. They were allowed to meet this target in any way they chose, including by buying permits from plants that came in under target early. The approach resulted in sulfur dioxide emissions being reduced more rapidly than anticipated.

**Figure 11.4B**

### Comparing Command-and-Control Regulation with the Cap-and-Trade Approach

This diagram illustrates the cost of reducing emissions from an older and a newer factory, using two regulatory approaches.

- Using a command-and-control policy, each factory is required to make the same reductions, no matter what the cost might be.
- Using a cap-and-trade approach, the two factories are issued pollution permits. The factories have the flexibility to buy and sell permits, thus achieving the same total reduction at a lower cost.



**Goal:** To reduce total pollution emissions by 200 tons per year

**Plant A** emits 1,000 tons per year.
Cost to reduce emissions: $100 per ton.

**Plant B** emits 1,000 tons per year.
Cost to reduce emissions: $50 per ton.

**Command-and-Control Regulation**

**Regulation** requires each plant to reduce emissions by 100 tons per year.

**Plant A:** Cost to cut emissions by 100 tons per year:

$100
× 100
**$10,000**

**Plant B:** Cost to cut emissions by 100 tons per year:

$50
× 100
**$5,000**

**Total emissions reduction: 200 tons per year**
**Total cost: $15,000**

**Cap-and-Trade Approach**

**Pollution permits** allow each plant to emit up to 900 tons per year.

**Plant A:** Cost to cut emissions by 50 tons per year:

$100
× 50
$5,000

Cost to buy pollution permit for 50 tons per year:

$3,500

Net cost:

$5,000
+ 3,500
**$8,500**

**Plant B:** Cost to cut emissions by 150 tons per year:

$50
× 150
$7,500

Revenue from selling pollution permit for 50 tons per year:

$3,500

Net cost:

$7,500
− 3,500
**$4,000**

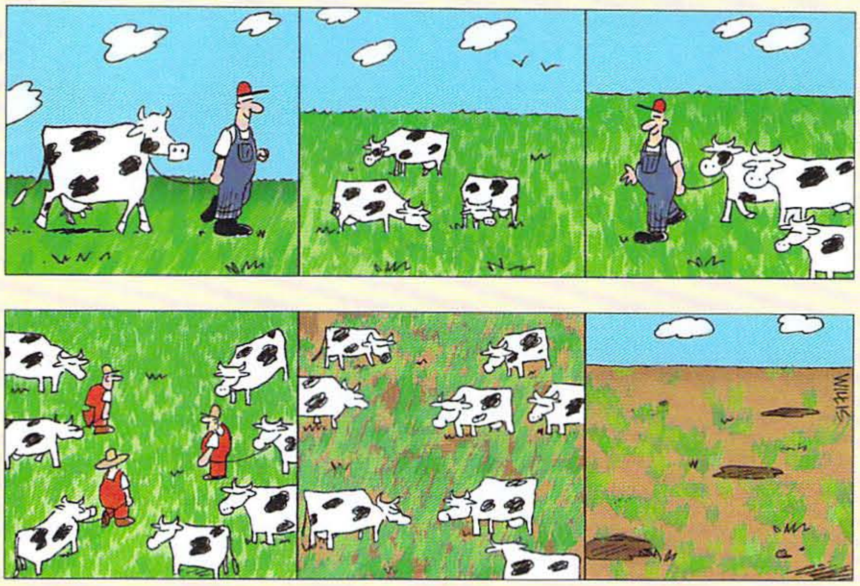
**Total emissions reduction: 200 tons per year**
**Total cost: $12,500**

**Key Concept**

### The Tragedy of the Commons

These cartoons illustrate the tragedy of the commons, which occurs when a common resource is destroyed through overuse.

- The first cartoon shows a private field, which the owner preserves by limiting the number of cattle that graze there.
- The second cartoon shows a common field, where various farmers take advantage of the free grass to graze as many cattle as possible. Overgrazing turns the once-healthy field into a wasteland.



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### Negative Externalities and the Tragedy of the Commons

Negative externalities often arise when property rights are not well defined. The air, for example, is what economists call a **common resource**. Everyone has access to a common resource. For this reason, it can easily be overused and even destroyed. Economists call this problem the **tragedy of the commons**. Ecologist Garrett Hardin coined this term.

> *The tragedy of the commons develops in this way. Picture a pasture open to all. It is to be expected that each herdsman will try to keep as many cattle as possible on the commons . . . [One herdsman] asks, "What is the utility to me of adding one more animal to my herd?" . . . The rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another . . . But this is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit—in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest.*
>
> —Garrett Hardin, "The Tragedy of the Commons," *Science*, 1968

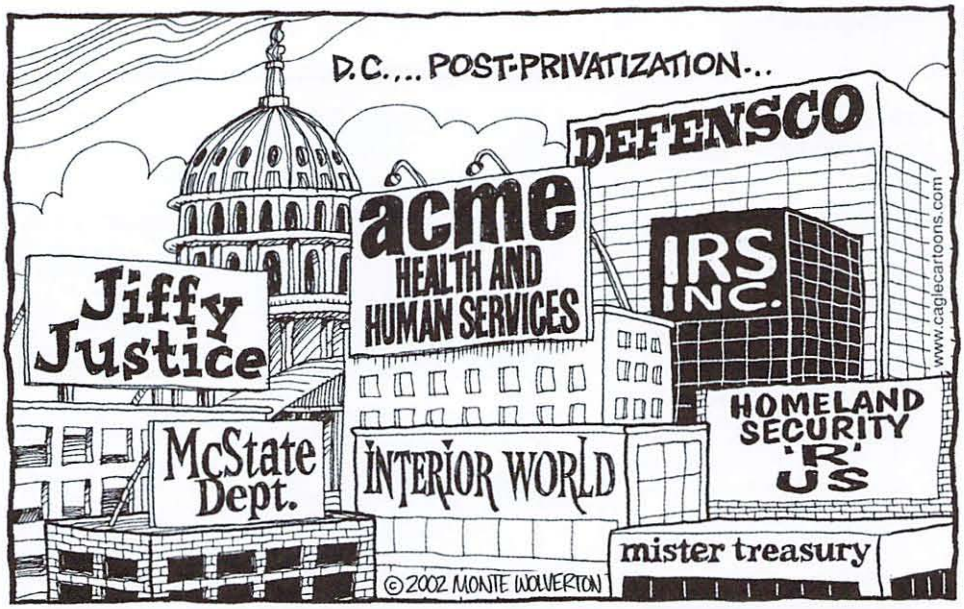
Economists apply the tragedy of the commons to a variety of common resources, including Earth's atmosphere and oceans. Pollution and other negative externalities, they argue, result from poorly defined property rights. Without such rights, people lack the incentive to care for common resources and to ensure that those resources are preserved for future use.

### Preserving Common Resources: Tolls, Quotas, and Privatization

A number of government policies are aimed at preserving common resources. One policy is to require everyone who uses a common resource to pay a **toll,** or fee. Highway tolls, for example, provide revenue that can be used to maintain roads. They also function as a corrective tax. To avoid paying tolls, some drivers will seek other routes, join carpools, or take public transportation. By providing an incentive to limit use of certain roads, tolls help reduce congestion.

A second way to preserve a common resource is to establish a **quota,** or maximum amount of a resource that a person can use or consume in a given period of time. The ocean, for example, is a common resource, as are the fish that live in it. Like the herders in Hardin's example, people who fish for a living have little incentive to limit their catch. If they do, someone else will come along and take the fish they left behind.

Turning common property into private property is one way to deal with a tragedy of the commons. This cartoonist takes privatization to a new level, suggesting how units of government might be converted into private enterprises.



The predictable result has been overfishing, which threatens to destroy several fisheries in U.S. coastal waters. By setting and enforcing fish-catch quotas, however, the government can control the percentage of the fish stock harvested each year. These quotas will help preserve this common resource.

A third way to deal with a tragedy of the commons is to turn the common resource into a private resource —that is, to **privatize** it. Private ownership restores the incentive to preserve the resource. Consider the problem of overfishing. The government might assign a group of fisheries the property rights to one stock of fish in a particular area. Their "ownership" of these fish gives them an incentive to preserve the resource by limiting the amount they catch each year.

### Government's Role in Providing Public Goods

The government plays another widely accepted role in the economy as a provider of public goods. Abraham Lincoln encouraged this form of government engagement when he wrote,

> *The legitimate object of government, is to do for a community of people, whatever they need to have done, but can not do,* at all, *or can not,* so well do, *for themselves—in their separate, and individual capacities.*
>
> —Abraham Lincoln, 1854

Consider a good that could be produced by a private firm, such as a dam to control the flooding of a river. Some people in the river's floodplain might be willing to pay for the protection the dam provides, but the firm would not be able to provide that protection only to those people and withhold it from others. Anyone living in the floodplain would be able to enjoy that protection free of charge.

No profit-seeking firm can be expected to provide a good that consumers do not have to pay for. A government, by contrast, does not seek to make a profit. Rather, it can pay for public goods with tax dollars, thus ensuring that all taxpayers contribute to the cost.

### Analyzing the Costs and Benefits of Providing Public Goods

Most people want government to provide public goods, such as national defense and streetlights. But as the scarcity-forces-tradeoffs principle reminds us, no government has the resources to provide everything that people might want. It has to make choices, but how? One way is to analyze the costs and benefits of producing that good.

Consider a proposal before a city council to widen a road in order to relieve congestion. City planners provide the council with detailed estimates of the costs of buying the needed land and hiring a construction company. Estimating the benefits is more challenging. If the road is widened, commuters are likely to spend less time and use less gas stalled in heavy traffic. How much less is uncertain. Nonetheless, estimates of these benefits are made and assigned a dollar value.

At this point, political considerations may also play a part in the council's decisions. If enough voters want a wider road, the council members might decide to approve the project even if the costs seem likely to out-weigh the benefits. The result would be an inefficient use of the city's scarce resources. The funds used to widen the road might well have provided more benefits to more people had they been used differently.

Economists describe situations in which government intervention leads to an inefficient use of resources as **government failures**. Such failures arise for several reasons. Politicians who want to stay in office may support legislation that pleases voters but is not cost effective. Or they may engage in **logrolling** —agreeing to vote for another lawmaker's legislation if that lawmaker agrees to vote for their own legislation. Such compromises often lead to wasteful spending and economic inefficiency.

Politicians may also be influenced by interest groups when making decisions. Interest groups are organizations dedicated to getting certain policies enacted into law. Although such policies have high utility for a specific group, they may not benefit the economy as a whole.

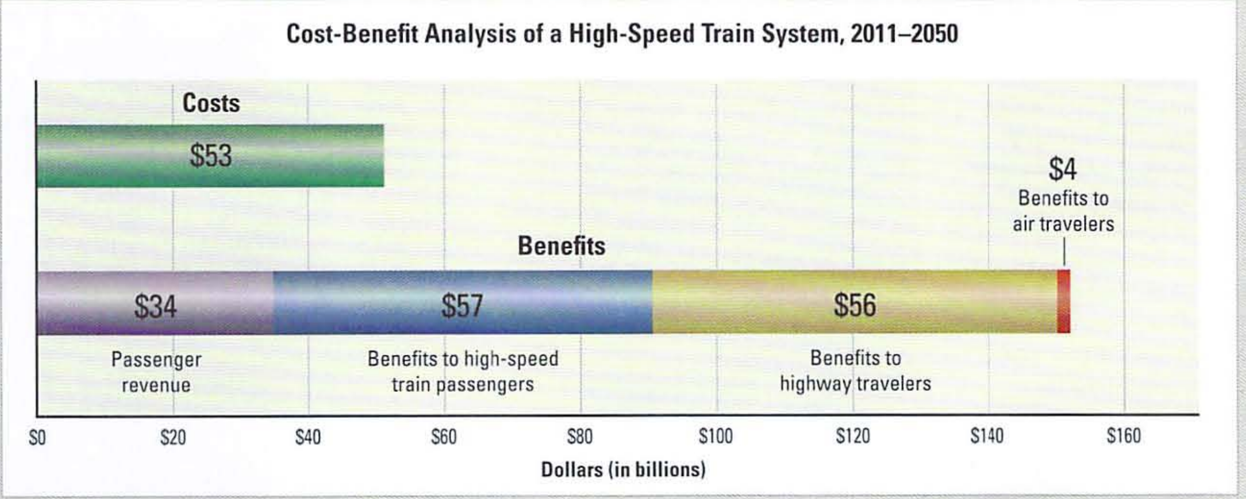
People who work for regulatory agencies may also contribute to government failure. Staying employed is an incentive for them to find new problems to solve.

**Figure 11.4C**

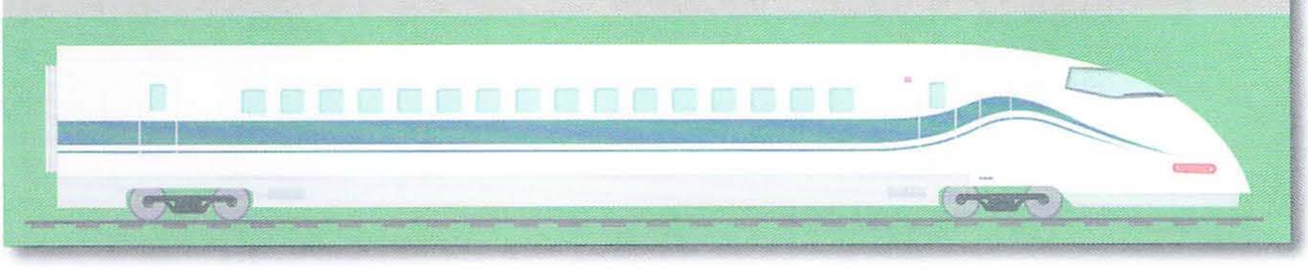
**Analyzing Costs and Benefits of a Public Provision**

This graph summarizes the cost-benefit analysis of a proposal to build a high-speed train system in California. The main costs were construction, operation, and maintenance of the train system. The main benefits were estimated to come in four areas.

- *Passenger revenue:* People riding the train will have to purchase tickets.
- *Benefits to high-speed train passengers:* Passengers riding the trains will save time and money.
- *Benefits to highway travelers:* The high-speed rail will save time and money for highway travelers by reducing congestion, pollution, and accidents.
- *Benefits to air travelers:* The high speed rail will help reduce air travel delays by providing an alternative form of transportation.



Source: California High-Speed Rail Authority.



Government employees may press for more regulation even if it is not the most efficient solution to a problem.

## 11.5 What Does Government Do to Promote Economic Well-Being?

Before the onset of the Great Depression in the 1930s, the federal government generally followed a hands-off policy toward the economy. Except for times of national emergency, such as the Civil War and World War I, the role of the government in the lives of ordinary people remained small. Then came the stock market crash of 1929, which plunged the nation into the worst economic crisis in its history.

### How the Great Depression and World War II Changed U.S. Economic Policy

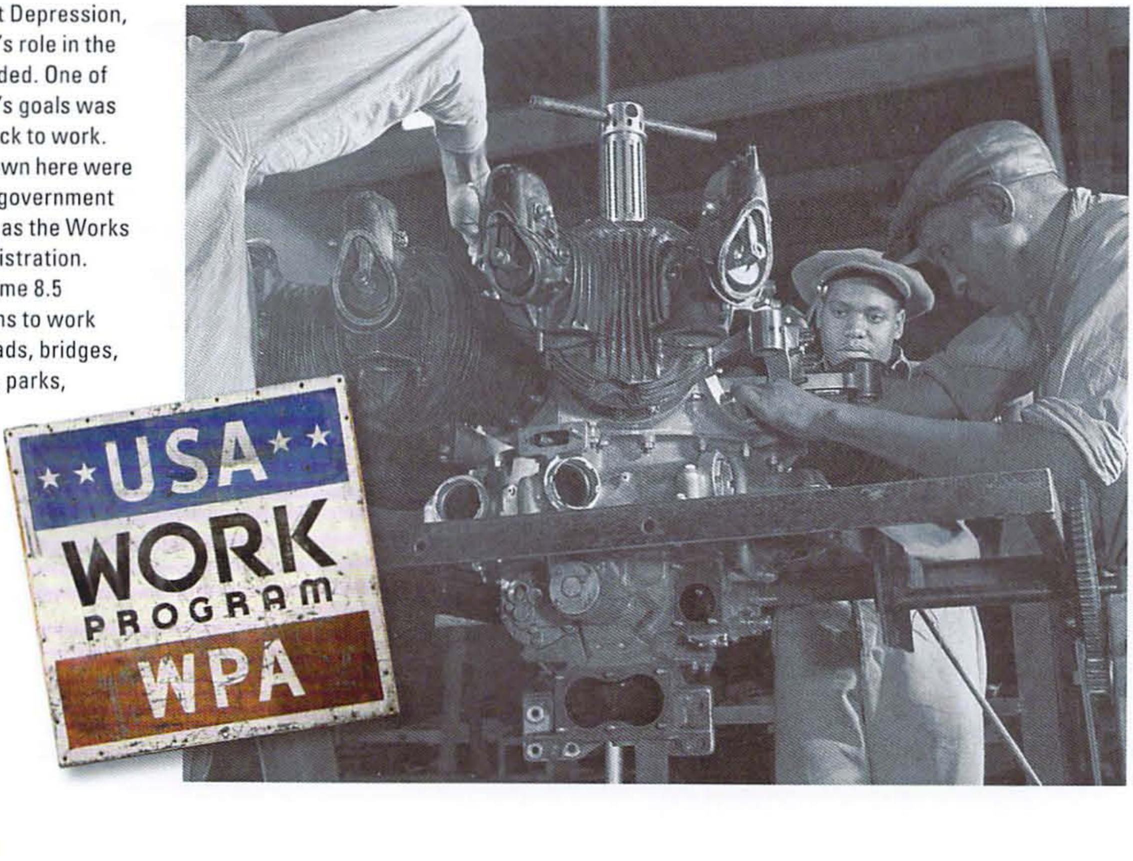
The 1929 stock market crash triggered a financial crisis that forced thousands of banks to go out of business. Millions of depositors lost their savings. Consumers slowed their spending, and firms cut back production or shut down altogether. The economy took a nosedive, and the Great Depression began.

At first the government did little, assuming that the economy would stabilize on its own. But as the economy worsened, many people looked to the government for help. In 1932, Franklin D. Roosevelt won the presidency by promising a different approach—a New Deal for the American people.

The New Deal greatly expanded the federal government's role in the economy. It created dozens of new programs and agencies aimed at reforming the banking system, helping businesses, and providing jobs. Most New Deal agencies did not outlast the Great Depression. However, the huge federal bureaucracy spawned by the New Deal lived on.

The Depression ended when World War II began. But the federal government did not return to its traditional hands-off role. Instead, it took charge of the wartime economy, overseeing industries as they converted from consumer to military production. To pay for the war effort, the government also sharply increased individual and corporate income taxes.

When the war ended, the federal government ended its supervision of industrial production. But many Americans feared a return to hard times and widespread unemployment. Congress responded to those fears by passing the Employment Act of 1946.



During the Great Depression, the government's role in the economy expanded. One of the government's goals was to put people back to work. The workers shown here were hired through a government program known as the Works Progress Administration. The WPA put some 8.5 million Americans to work constructing roads, bridges, public buildings, parks, and airports.

This act clearly stated an important role for government in stabilizing the economy:

> *The Congress hereby declares that it is the continuing policy and responsibility of the Federal Government to . . . promote maximum employment, production, and purchasing power.*
> —Employment Act of 1946

This act gave the federal government an active role in managing the nation's economy. To carry out that role, the act established the Council of Economic Advisers. This council helps the president formulate sound economic policies. The act also established a Joint Economic Committee that includes members from both houses of Congress. The committee's job is to review the state of the economy and advise Congress on economic policies.

### Government's Role in Promoting Economic Stability

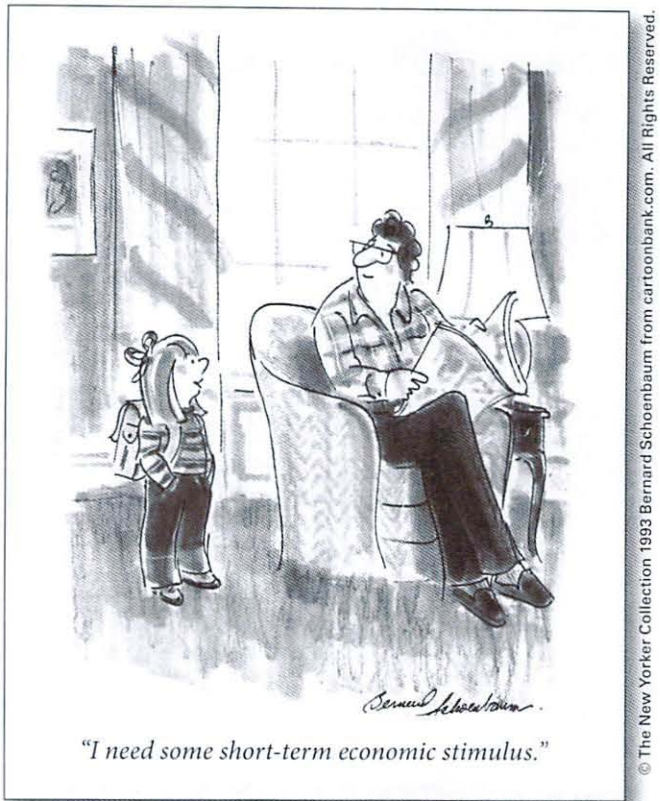
Americans clearly benefit from economic stability. In a stable economy, jobs are secure, goods and services are readily available, and prices are predictable. Producers, consumers, and investors can plan for the future without having to worry about sudden upheavals in the nation's economy.

The government promotes economic stability in part by creating a widely accepted currency—the dollar—that maintains its value. The government also promotes stability by stimulating business activity during economic slowdowns. It does this through tax incentives, which encourage businesses to invest in new capital equipment, and through tax rebates, which encourage consumers to spend more money.

In 2008, for example, difficulties in the housing market sent the economy into a tailspin. Reacting to the uncertainty, consumers cut back on spending. To generate more spending, Congress enacted an **economic stimulus** package—legislation specifically designed to stimulate business activity. The package called on the Internal Revenue Service to mail checks of $600 or more, depending on family size, to 130 million households. The nation's leaders encouraged Americans to spend their stimulus checks on consumer goods and services.

### Income Distribution and Poverty in the United States

Markets allocate resources efficiently, as Adam Smith noted when he described the invisible hand of the marketplace. But Smith did not conclude that markets allocate resources fairly. Some people, for example, end up with vastly higher incomes than others.



*"I need some short-term economic stimulus."*

© The New Yorker Collection 1993 Bernard Schoenbaum from cartoonbank.com. All Rights Reserved.

The government promotes economic stability, in part, by trying to moderate booms and busts. In 2008, with the economy sagging, the government sought to spark business activity with a stimulus package. It sent taxpayers stimulus checks, with the hope that people would spend the money on consumer goods and services.

Every year, the U.S. Census Bureau charts the distribution of income in the United States. It starts by ranking households on the basis of their incomes. Then it divides the entire list of households into five equal parts, called **quintiles**. The bottom quintile contains the lowest incomes, and the top quintile contains the highest incomes.

The Census Bureau also calculates the percent of total income each quintile received. In 2012, for example, the bottom fifth received 3.2 percent of all income, while the top fifth received 51.0 percent. Clearly, income is not distributed equally in the United States.

Another tool for measuring the distribution of income is the **poverty rate**. This rate is the percentage of households whose incomes fall below a certain

Key Concept

### Income Distribution

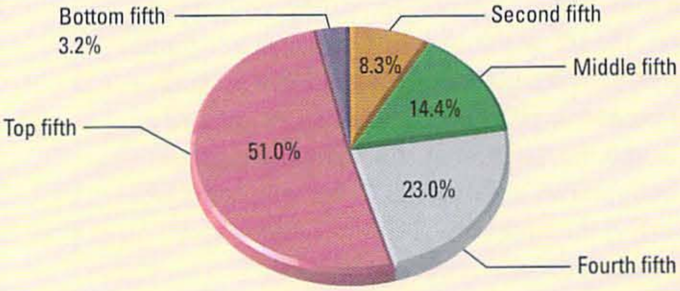
The U.S. Census Bureau measures income distribution by dividing the total number of households into five equal parts, or quintiles. The table shows the range of incomes for each quintile in 2012.

- Note that the circle graph shows the share of the nation's total income received by each quintile in 2012.
- Compare the percentage earned by the top fifth to that earned by the bottom fifth.

**Annual Household Income, 2012**

| Quintile | Income |
|---|---|
| Top fifth | $104,097 and above |
| Fourth fifth | $64,583 to $104,096 |
| Middle fifth | $39,765 to $64,582 |
| Second fifth | $20,600 to $39,764 |
| Bottom fifth | $20,599 and below |

**Income Distribution, 2012**



Source: U.S. Census Bureau.

dollar amount determined by the Census Bureau. That dollar amount, called the **poverty threshold,** is the estimated minimum income needed to support a family.

The poverty threshold varies depending on family size and composition. For example, a family with two adults and one child is expected to live on less income than a family with one adult and four children.

The government considers families to be poor if their incomes fall below their poverty threshold. In 2012, by this measure, more than one family in ten lived in poverty. Altogether, the members of those families represented 15.0 percent of the U.S. population. The poverty rate, then, was 15.0 percent in 2012.

Poverty rates vary depending on such factors as age, race, ethnicity, and family composition. It is also worth noting that the Census Bureau's rankings vary from year to year. Just because a family is in the bottom fifth this year does not mean it will stay there. A hallmark of American society is **economic mobility**. People who work hard are usually able to move up the economic ladder. As a result, relatively few families remain in poverty for the long term.

### Government's Role in Redistributing Income

For much of our nation's history, the poor relied mainly on friends, family, and private charities to provide for their basic needs. Local communities sometimes established poor houses and poor farms to house the very poor. Otherwise, the poor were left to fend for themselves as best they could.

Then came the Great Depression. With it came an expanded role for government in the economy. New Deal programs aided millions of Americans. The Social Security Act, for example, did much to reduce poverty among disabled and older Americans. However, these programs did not lift every family out of poverty.

During the 1960s, the federal government launched a War on Poverty to help the nation's neediest families. Congress devised dozens of antipoverty programs that together created an economic safety net. Those programs had some success. The poverty rate for families dropped from 18.1 percent in 1960 to 10.1 percent in 1970.

Since the 1960s, most antipoverty programs have involved some form of **income redistribution,** a policy designed to reduce the gap between the rich and the poor. This policy works by taxing wealthier members of a society and then distributing that money to the poor to achieve greater income equality. Redistribution takes a number of forms, including those described here.

*Welfare.* When most people talk about welfare,

FRESH LARGE PERCH
MEDIUM BLACK BASS
BUTTERFISH
FOOD STAMP CARDS ACCEPTED HERE
SMELTS
LARGE FLOUNDER
SMALL RED SNAPPER
FRESH WHOLE SALMON
Maryland Oysters
Bushel Sale
AMERICAN EXPRESS
Cards Welcome
VISA

One way the government redistributes income is by issuing food stamps to people with low incomes. Food stamps are vouchers, accessed through an electronic debit card, that can be used to buy food. In addition to promoting well-being, subsidizing food for poor people benefits society as a whole by creating a healthier population. This is a positive externality.

they are referring to Temporary Assistance for Needy Families. The TANF program, funded largely by the federal government but run by the states, provides benefits, services, and work opportunities to needy families. In some states, TANF benefits come in the form of **cash transfers,** or direct payments of cash from the government to individuals.

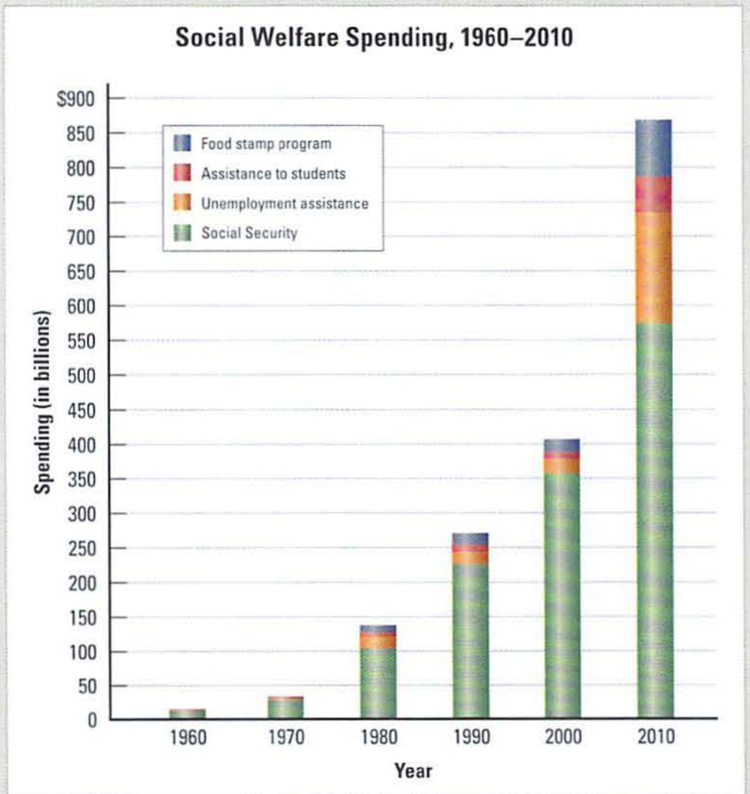
Other TANF benefits are distributed in the form of goods or vouchers, rather than cash. These **in-kind transfers** include food stamps, public housing, school lunches, and Medicaid. For example, when a person receives health services through the Medicaid program, the government pays the health care provider. No cash goes to the Medicaid recipient.

**Figure 11.5**

### Analyzing the Growth of Income-Redistribution Programs

The federal government's role in redistributing income has grown dramatically over the past 70 years. This graph shows changes in spending on four programs since 1960.

- *Social Security:* Supports people with disabilities and retirees
- *Unemployment assistance:* Assists people who are unemployed through no fault of their own
- *Assistance to students:* Provides grants to schools and scholarships and loans to students who continue their education past high school
- *Food stamp program:* Helps low-income families buy food



Source: Budget of the U.S. Government.

This welfare recipient is learning job skills by participating in a welfare-to-work program offered by Goodwill Industries International in Pittsburgh, Pennsylvania. Goodwill has been providing vocational training to the poor since it was founded in Boston in 1902. The goal of this training is to give people the skills they need to move out of welfare and into the workforce.

*Earned income tax credit.* The government also helps the working poor through the **Earned Income Tax Credit**. Low-wage workers can claim this credit when they file their federal income tax forms. The credit is applied against whatever taxes are due. Depending on a worker's family size and income, the credit can exceed those taxes. If it does, the worker receives a tax refund.

*Unemployment insurance.* Employers, through federal and state taxes, contribute to a fund that provides **unemployment insurance** for workers. If workers are laid off from their jobs, the state sends them payments—unemployment compensation—for a certain period of time or until they find another job. Each state administers its own unemployment insurance program, based on federal standards.

### The Unintended Consequences of Antipoverty Policies

Through its antipoverty policies, the government redistributes income in a way that is intended to help the poor. Yet critics charge that these policies have had unintended negative consequences for the very people they are meant to help.

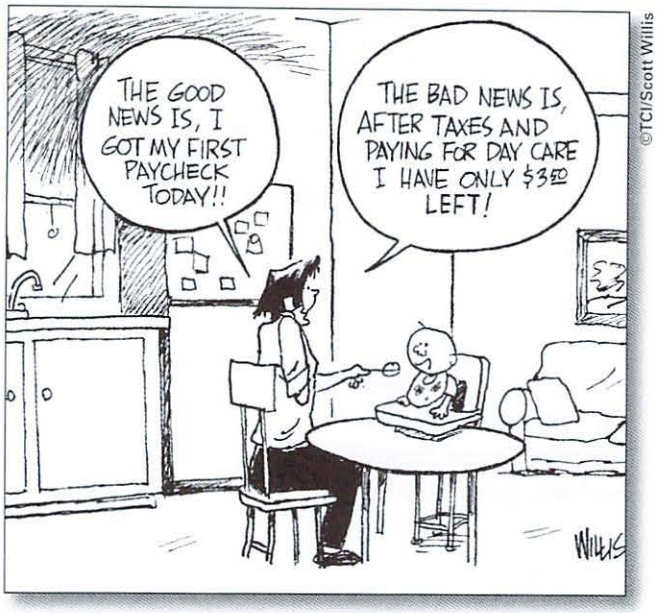
These critics worry that antipoverty programs promote dependence on the government and reduce people's incentive to become self-sufficient. TANF, food stamps, Medicaid, and the Earned Income Tax Credit are what economists call **means-tested programs**—that is, they are tied to family income. The more a family earns, the fewer benefits that family can claim. For this reason, recipients of government assistance may have little incentive to get a job and earn money. If their incomes exceed the poverty threshold, they will lose their government benefits.

For welfare recipients with minimal skills and education, getting a job may indeed make them worse off. This is because the kinds of jobs available to low-skill workers usually pay minimum wage and have no benefits. Consider a single mother with less than a high school education. She leaves welfare and takes a low-paying job with no health insurance benefits. She still must struggle to support her children on her low wages. But now, because she is working, she and her children are ineligible for government-provided health services.

Policymakers have developed a variety of proposals to address such problems. One is to provide job training and education for welfare recipients to increase their human capital and help them become self-sufficient. Another is to raise the cap on certain means-tested programs, so that benefits are gradually reduced as income rises. Both of these proposals would lead to higher costs and, most likely, higher taxes to pay for those costs.

A third possible solution is public service employment. As it did during the Great Depression, the government could pay the unemployed to perform useful work. However, this might cause a flood of workers to shift from private jobs to more secure government jobs—at great expense to taxpayers.

As always, when resources are limited, whatever choices a government makes will result in tradeoffs. You may not be aware of these tradeoffs now, but at some point you will be. Why? Because government programs are funded by tax dollars, and once you enter the world of work, you will become a taxpayer. Later on, you will learn more about taxes and how they are used to support the many roles government plays in our lives.


THE GOOD NEWS IS, I GOT MY FIRST PAYCHECK TODAY!!
THE BAD NEWS IS, AFTER TAXES AND PAYING FOR DAY CARE I HAVE ONLY $3 50 LEFT!
WILLIS

©TCI/Scott Willis

Unemployed workers who find a job get the benefits and satisfaction of earning a paycheck. But going back to work may also involve financial tradeoffs. Some workers find they have new costs that erode the value of their earnings.

## Summary

The government plays a limited but important role in the economy. It protects property rights, regulates the marketplace, corrects market failures, and promotes the economic well-being of the American people.

**How does the government protect property rights?** The government is empowered by the Constitution to protect private property rights. It does this through the court system, police forces, and the Patent and Trademark Office. The government may limit property rights through its power of eminent domain.

**What regulatory roles does government play in our economy?** The government uses its regulatory power to maintain competition; safeguard consumers, savers, and investors; and protect workers. It carries out these tasks through regulatory agencies, which create and enforce standards and regulations for industries.

**How should government address externalities and public goods?** The federal and state governments implement a variety of policies to limit negative externalities and support positive externalities. They also provide public goods that are deemed necessary or desirable.

**What does government do to promote economic well-being?** During the Great Depression, the role of the government in the economy greatly expanded. Since then the government has taken on even more responsibility for the economic well-being of its citizens. When necessary to preserve economic stability, the government stimulates the economy by spending more money. The government also redistributes income to combat poverty.