CHAPTER 3

Economic Decision Makers

Learning Outcomes

LO1 Explain the role of the household in an economic system

LO2 Identify the different types of firms and describe their roles in the economy

LO3 Outline the ways governments affect their economies

LO4 Outline the international influences on an economy
If we live in the age of specialization, then why haven’t specialists taken over all production? For example, why do most of us still do our own laundry and perform dozens of other tasks for ourselves? In what sense has production moved from the household to the firm and then back to the household? If the “invisible hand” of competitive markets is so efficient, why does government get into the act? Answers to these and other questions are addressed in this chapter, which discusses the four economic decision makers: households, firms, governments, and the rest of the world.

To develop a better feel for how the economy works, you must get more acquainted with the key players. You already know more about them than you may realize. You grew up in a household. You have dealt with firms all your life, from Sony to Subway. You know much about governments, from taxes to public schools. And you have a growing awareness of the rest of the world, from online sites, to imports, to foreign travel. This chapter draws on your abundant personal experience with economic decision makers to consider their makeup and objectives.

"What happens to personal income once it comes into the household?"

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The Evolution of the Household

In earlier times, when the economy was primarily agricultural, a farm household was largely self-sufficient. Each family member specialized in a specific farm task—cooking meals, making clothes, tending livestock, planting crops, and so on. These early households produced what they consumed and consumed what they produced. With the introduction of new seed varieties, better fertilizers, and laborsaving machinery, farm productivity increased sharply. Fewer farmers were needed to grow enough food to feed a nation. At the same time, the growth of urban factories increased the demand for factory labor. As a result, workers moved from farms to cities, where they became more specialized but less self-sufficient.

Households evolved in other ways. For example, in 1950, only about 15 percent of married women with young children were in the labor force. Since then, higher levels of education among women and a growing demand for their labor increased women’s earnings, thus raising their opportunity cost of working in the home. This higher opportunity cost contributed to their growing labor force participation. Today 70 percent of women with children under 18 are in the labor force.

The rise of two-earner households has affected the family as an economic unit.

Households Maximize Utility

There are more than 115 million U.S. households. All those who live together under one roof are considered part of the same household. What exactly do households attempt to accomplish in making decisions? Economists assume that people try to maximize their level of satisfaction, sense of well-being, happiness, and overall welfare. In short, households attempt to maximize utility. Households, like other economic decision makers, are viewed as rational, meaning that they try to act in their best interests and do not deliberately make themselves less happy. Utility maximization depends on each household’s subjective goals, not on some objective standard. For example, some households maintain neat homes with well-groomed lawns; others pay little attention to their homes and use their lawns as junkyards.

utility: the satisfaction received from consumption; sense of well-being

70% of women with children under 18 are in the labor force.
Households as Resource Suppliers

Households use their limited resources—labor, capital, natural resources, and entrepreneurial ability—in an attempt to satisfy their unlimited wants. They can use these resources to produce goods and services in their homes. For example, they can prepare meals, mow the lawn, and fix a leaky faucet. They can also sell these resources in the resource market and use the income to buy goods and services in the product market. The most valuable resource sold by most households is labor.

Panel (a) of Exhibit 1 shows the sources of personal income received by U.S. households in 2006, when personal income totaled $10.9 trillion. As you can see, 61 percent of personal income came from wages and salaries. A distant second was transfer payments (to be discussed next), at 14 percent of personal income, followed by personal interest at 9 percent, and proprietors’ income also at 9 percent. Proprietors are people who work for themselves rather than for employers; farmers, plumbers, and doctors are often self-employed. Proprietors’ income should also be considered a form of labor income. Over two-thirds of personal income in the United States comes from labor earnings rather than from the ownership of other resources such as capital or natural resources.

Because of a poor education, disability, discrimination, time demands of caring for small children, or bad luck, some households have few resources that are valued in the market. Society has made the political decision that individuals in such circumstances should receive short-term public assistance. Consequently, the government gives some households transfer payments, which are outright grants. Cash transfers are monetary payments, such as welfare benefits, Social Security, unemployment compensation, and disability benefits. In-kind transfers provide for specific goods and services, such as food stamps, health care, and housing.

Households as Demanders of Goods and Services

What happens to personal income once it comes into the household? Most goes to personal consumption, which sorts into three broad spending categories: (1) durable goods—that is, goods expected to last three or more years—such as an automobile or a refrigerator; (2) nondurable goods, such as food, clothing, and gasoline; and (3) services, such as haircuts, air travel, and medical care. As you can see from panel (b) of Exhibit 1, spending on durable goods in 2006 claimed 10 percent of U.S. personal income; nondurables, 25 percent; and services, 50 percent. Taxes claimed 10 percent, and all

Exhibit 1
Where U.S. Personal Income Comes From and Where It Goes

(a) Over two-thirds of personal income in 2006 was from wages, salaries, and proprietors’ income
(b) Half of U.S. personal income in 2006 was spent on services

SOURCE: Based on figures from Survey of Current Business, Bureau of Economic Analysis, February 2007, Tables 1.5.5 and 2.1. For the latest figures, go to http://www.bea.gov/scb/index.htm.
other categories, including savings, claimed just 5 percent. So half of all personal income went for services—the fastest growing sector, because many services, such as child care, are shifting from do-it-yourself home production to market production.

**LO² The Firm**

Households members once built their own homes, made their own clothes and furniture, grew their own food, and amused themselves with books, games, and hobbies. Over time, however, the efficiency arising from comparative advantage resulted in a greater specialization among resource suppliers. This section takes a look at firms, beginning with their evolution.

### The Evolution of the Firm

Specialization and comparative advantage explain why households are no longer self-sufficient. But why is a firm the natural result? For example, rather than make a woolen sweater from scratch, couldn’t a consumer take advantage of specialization by negotiating with someone who produced the wool, another who spun the wool into yarn, and a third who knitted the yarn into a sweater? Here’s the problem with that model: If the consumer had to visit each of these specialists and strike an agreement, the resulting transaction costs could easily erase the gains from specialization.

Instead of visiting and bargaining with each specialist, the consumer can pay someone to do the bargaining—an entrepreneur, who hires all the resources necessary to make the sweater. An entrepreneur, by contracting for many sweaters rather than just one, is able to reduce the transaction costs per sweater.

For about two hundred years, profit-seeking entrepreneurs relied on “putting out” raw material, like wool and cotton, to rural households that turned it into finished products, like woolen goods made from yarn. The system developed in the British Isles, where workers’ cottages served as tiny factories, especially during winter months, when farming chores were light (so the opportunity cost was low). This approach, which came to be known as the cottage industry system, still exists in some parts of the world. You might think of this system as part way between household self-sufficiency and the modern firm.

As the British economy expanded in the 18th century, entrepreneurs began organizing the stages of production under one roof. Technological developments, such as waterpower and later steam power, increased the productivity of each worker and contributed to the shift of employment from rural areas to urban factories. Work, therefore, became organized in large, centrally powered factories that (1) promoted a more efficient division of labor, (2) allowed for the direct supervision of production, (3) reduced transportation costs, and (4) facilitated the use of machines far bigger than anything used in the home. The development of large-scale factory production, known as the Industrial Revolution, began in Great Britain around 1750 and spread to the rest of Europe, North America, and Australia. Production, then, evolved from self-sufficient rural households to the cottage industry system, where specialized production occurred in the household, to production in a firm. Today, entrepreneurs combine resources in firms such as factories, mills, offices, stores, and restaurants. Firms are economic units formed by profit-seeking entrepreneurs who combine labor, capital, and natural resources to produce goods and services. Just as we assume that households try to maximize utility, we assume that firms try to maximize profit. Profit, the entrepreneur’s reward, equals sales revenue minus the cost of production.

### Types of Firms

There are about 30 million for-profit businesses in the United States. Two-thirds are small retail businesses, small service operations, part-time home-based businesses, and small farms. Each year more than a million new businesses start up and many fail. Firms are organized in one of three ways: as a sole proprietorship, as a partnership, or as a corporation.

**Sole Proprietorships**

The simplest form of business organization is the sole proprietorship, a single-owner firm. Examples are self-employed plumbers, farmers, and dentists.
Most sole proprietorships consist of just the self-employed proprietor—there are no hired employees. To organize a sole proprietorship, the owner simply opens for business by, for example, taking out a classified ad announcing availability for plumbing or whatever. The owner is in complete control. But he or she faces unlimited liability and could lose everything, including a home and other personal assets, to settle business debts or other claims against the business. Also, since the sole proprietor has no partners or other financial backers, raising enough money to get the business going can be a challenge. One final disadvantage is that a sole proprietorship usually goes out of business when the proprietor dies or leaves the business. Still, a sole proprietorship is the most common type of business, accounting most recently for 72 percent of all U.S. businesses. Nonetheless, because this type of firm is typically small, proprietorships generate just a tiny portion of all U.S. business sales—only 4 percent.

**Partnerships**

A more complicated form of business is the partnership, which involves two or more individuals who agree to combine their funds and efforts in return for a share of the profit or loss. Law, accounting, and medical partnerships typify this business form. Partners have strength in numbers and often find it easier than sole proprietors to raise enough funds to get the business going. But partners may not always agree. Also, each partner usually faces unlimited liability for any debts or claims against the partnership, so one partner could lose everything because of another’s mistake. Finally, the death or departure of one partner can disrupt the firm’s continuity and require a complete reorganization. The partnership is the least common form of U.S. business, making up only 10 percent of all firms and 12 percent of all business sales.

**Corporations**

By far the most influential form of business is the corporation. A corporation is a legal entity established through articles of incorporation. Shares of stock confer corporate ownership, thereby entitling stockholders to a claim on any profit. A major advantage of the corporate form is that many investors—hundreds, thousands, even millions—can pool their funds, so incorporating represents the easiest way to amass large sums to finance the business. Also, stockholder liability for any loss is limited to the value of their stock, meaning stockholders enjoy limited liability. A final advantage of this form of organization is that the corporation has a life apart from its owners. The corporation survives even if ownership changes hands, and it can be taxed, sued, and even charged with a crime as if it were a person.

The corporate form has some disadvantages as well. A stockholder’s ability to influence corporate policy is limited to voting for a board of directors, which oversees the operation of the firm. Each share of stock usually carries with it one vote. The typical stockholder of a large corporation owns only a tiny fraction of the shares and thus has little say. Whereas the income from sole proprietorships and partnerships is taxed only once, corporate income gets whacked twice—first as corporate profits and second as stockholder income, either as corporate dividends or as realized capital gains. A realized capital gain is any increase in the market price of a share that occurs between the time the share is purchased and the time it is sold.

A hybrid type of corporation has evolved to take advantage of the limited liability feature of the corporate structure while reducing the impact of double taxation. The S corporation provides owners with limited liability, but profits are taxed only once—as income on each shareholder’s personal income tax return. To qualify as an S corporation, a firm must have no more than 100 stockholders and no foreign stockholders. Corporations make up only 18 percent of all U.S. businesses, but because they tend to be much larger than the other two business forms, corporations account for 84 percent of all business sales. Exhibit 2 shows, by business type, the percentages of U.S. firms and the percentages of U.S. sales. The sole proprietorship is the most important in sheer numbers, but the corporation is the most important in terms of total sales.

**Cooperatives**

A cooperative, or “co-op” for short, is a group of people who cooperate by pooling their resources to buy and sell more efficiently than they could individually.
they could independently. Cooperatives try to minimize costs and operate with limited liability of members. The government grants most cooperatives tax-exempt status. There are two types: consumer cooperatives and producer cooperatives.

**Consumer Cooperatives**

A consumer cooperative is a retail business owned and operated by some or all of its customers in order to reduce costs. Some cooperatives require members to pay an annual fee and others require them to work a certain number of hours each year. Members sometimes pay lower prices than other customers or may share in any revenues that exceed costs. In the United States, consumer cooperatives operate credit unions, electric-power facilities, health plans, apartment buildings, and grocery stores, among other businesses. Many college bookstores are cooperatives. For example, the UConn Co-op is owned by about 30,000 students, faculty, and staff. These members receive discounts on their purchases.

**Producer Cooperatives**

In a producer cooperative, producers join forces to buy supplies and equipment and to market their output. Each producer’s objective is to reduce costs and increase profits. Federal legislation allows farmers to cooperate without violating antitrust laws. Firms in other industries could not do this legally. Farmers pool their funds to purchase machinery and supplies, provide storage and processing facilities, and transport goods to market. Sunkist, for example, is a farm cooperative.

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*Ocean Spray is one of the best known producer cooperatives in the United States. Through product development (think Craisins), Ocean Spray has been able to increase the price it pays its farmers 100 percent over a three year period.*
cooperative owned and operated by 6,500 citrus growers in California and Arizona.

**Not-for-Profit Organizations**

So far, you have learned about organizations that try to maximize profits or, in the case of cooperatives, to minimize costs. Some organizations have neither as a goal. Not-for-profit organizations engage in charitable, educational, humanitarian, cultural, professional, and other activities, often with a social purpose. Government agencies do not have profit as a goal either, but governments are not included in this definition of not-for-profit organizations.

Like businesses, not-for-profit organizations evolved to help people accomplish their goals. Examples include nonprofit hospitals, private schools and colleges, religious organizations, the Red Cross, Greenpeace, charitable foundations, soup kitchens, orchestras, museums, labor unions, and professional organizations. There are about two million not-for-profit organizations in the United States. They employ about 10 million workers, with not-for-profit hospitals being the biggest employer. But even not-for-profit organizations must somehow pay the bills. Revenues typically include some combination of voluntary contributions and service charges, such as college tuition and hospital charges. In the United States, not-for-profit organizations are usually exempt from taxes.

**Why Does Household Production Still Exist?**

If firms are so efficient at reducing transaction and production costs, why don’t they make everything? Why do households still perform some tasks, such as cooking and cleaning? If a household’s opportunity cost of performing a task is below the market price, then the household usually performs that task. People with a lower opportunity cost of time do more for themselves. For example, janitors are more likely to mow their lawns than are physicians. Let’s look at some reasons for household production.

**No Skills or Special Resources Are Required**

Some activities require so few skills or special resources that householders find it cheaper to do the jobs themselves. Sweeping the kitchen floor requires only a broom and some time, so it’s usually performed by household members. Sanding a wooden floor, however, involves special machinery and expertise, so this service is usually left to professionals. Similarly, although you wouldn’t hire someone to brush your teeth, dental work is not for amateurs. Households usually perform domestic chores that demand neither expertise nor special machinery.

**Household Production Avoids Taxes**

Suppose you are deciding whether to pay someone $3,000 to paint your house or to do it yourself. If the income tax rate is one-third, you must earn $4,500 before taxes to have the $3,000 after taxes to pay for the job. And the painter who charges you $3,000 nets only $2,000 after paying $1,000 in taxes. Thus, you must earn $4,500 so that the painter can take

> "Although you wouldn’t hire someone to brush your teeth, dental work is not for amateurs."
Establishing and Enforcing the Rules of the Game

Market efficiency depends on people like you using your resources to maximize your utility. But what if you were repeatedly robbed of your paycheck on your way home from work? Or what if, after you worked two weeks in a new job, your boss called you a sucker and said you wouldn’t get paid? Why bother working? The market system would break down if you could not safeguard your private property or if you could not enforce contracts. Governments safeguard private property through police protection and enforce contracts through a judicial system. More generally, governments try to make sure that market participants abide by the rules of the game. These rules are established through government laws and regulations and also through the customs and conventions of the marketplace.

Promoting Competition

Although the “invisible hand” of competition usually promotes an efficient allocation of resources, some firms try to avoid competition through collusion, which is an agreement among firms to divide the market and fix the price. Or an individual firm may try to eliminate the competition by using unfair business practices. For example, to drive out local competitors, a large firm may temporarily sell at a price below cost. Government antitrust laws try to promote competition by prohibiting collusion and other anticompetitive practices.

Regulating Natural Monopolies

Competition usually keeps the product price below what it would be without competition—that is, below the price charged by a monopoly, a sole supplier to the market. In rare instances, however, a monopoly can produce and sell the product for less than could competing firms. For example, electricity is delivered more efficiently by a single firm that wires the community than by competing firms each stringing its own wires. When it is cheaper for one firm to serve the market than for two or more firms to do so, that one firm is called a natural monopoly. Since a natural monopoly faces no competition, it maximizes profit by charging a higher price than would be optimal from society’s point of view. A lower price and greater output would improve social welfare. Therefore, the government usually regulates the natural monopoly, forcing it to lower its price and increase output.

Providing Public Goods

So far this book has been talking about private goods, which have two important features. First, private goods are rival in consumption, meaning that

market failure
a condition that arises when the unregulated operation of markets yields socially undesirable results

monopoly
a sole supplier of a product with no close substitutes

natural monopoly
one firm that can supply the entire market at a lower per-unit cost than could two or more firms

The Role of Government

Sometimes the unrestrained operation of markets yields undesirable results. Too many of some goods and too few of other goods get produced. This section discusses the sources of market failure and how society’s overall welfare may be improved through government intervention.

Household Production Reduces Transaction Costs

Getting estimates, hiring a contractor, negotiating terms, and monitoring job performance all take time and require information. Doing the job yourself reduces these transaction costs. Household production also allows for more personal control over the final product than is usually available through the market. For example, some people prefer home-cooked meals, because they can season home-cooked meals to individual tastes.

Technological Advances Increase Household Productivity

Technological breakthroughs are not confined to market production. Vacuum cleaners, washers and dryers, dishwashers, microwave ovens, and other modern appliances reduce the time and often the skill required to perform household tasks. Also, new technologies such as DVD players, HDTV, broadband downloads, and computer games enhance home entertainment. Indeed, microchip-based technologies have shifted some production from the firm back to the household.

The Government

You might think that production by households and firms could satisfy all consumer wants. Why must yet another economic decision maker get into the act? After all, governments play some role in every nation on Earth.
The supplier of a private good can easily exclude those who fail to pay. For example, when you and some friends share a pizza, each slice they eat is one less available for you. Second, the supplier of a private good can easily exclude those who fail to pay. Only paying customers get pizza. Thus, private goods are said to be exclusive. So private goods, such as pizza, are both rival in consumption and exclusive. In contrast, public goods are nonrival in consumption. For example, your family’s benefit from a safer neighborhood does not reduce your neighbor’s benefit. What’s more, once produced, public goods are available to all. Suppliers cannot easily prevent consumption by those who fail to pay. For example, reducing terrorism is nonexclusive. It benefits all in the community, regardless of who pays for it and who doesn’t. Because public goods are nonrival and nonexclusive, private firms cannot sell them profitably. The government, however, has the authority to enforce tax collections for public goods. Thus, the government provides public goods and funds them with taxes.

Dealing with Externalities

Market prices reflect the private costs and private benefits of producers and consumers. But sometimes production or consumption imposes costs or benefits on third parties—on those who are neither suppliers nor demanders in a market transaction. For example, a paper mill fouls the air breathed by nearby residents, but the price of paper fails to reflect such costs. Because these pollution costs are outside, or external to, the market, they are called externalities. An externality is a cost or a benefit that falls on a third party. A negative externality imposes an external cost, such as factory pollution or auto emissions. A positive externality confers an external benefit, such as getting a good education or driving carefully. Because market prices do not reflect externalities, governments often use taxes, subsidies, and regulations to discourage negative externalities and encourage positive externalities. For example, a polluting factory often faces taxes and regulations aimed at curbing that pollution. And because more educated people can read road signs and have better-paying options other than crime, governments try to encourage education with free public schools and subsidized higher education and by keeping people in school until their 16th birthdays.

A More Equal Distribution of Income

As mentioned earlier, some people, because of poor education, mental or physical disabilities, or perhaps the need to care for small children, are unable to support themselves and their families. Because resource markets do not guarantee even a minimum level of income, transfer payments reflect society’s attempt to provide a basic standard of living to all households. Most citizens agree that government should redistribute income to the poor (note the normative nature of this statement). Opinions differ about who should receive benefits, how much they should get, what form benefits should take, and how long benefits should last.

Full Employment, Price Stability, and Economic Growth

Perhaps the most important responsibility of government is fostering a healthy economy, which benefits just about everyone. The government—through its ability to tax, to spend, and to control the money supply—attempts to promote full employment, price stability, and economic growth. Pursuing these objectives by taxing and spending is called fiscal policy. Pursuing them by regulating the money supply is called monetary policy. Macroeconomics examines both policies.

Government’s Structure and Objectives

The United States has a federal system of government, meaning that responsibilities are shared across levels of government. State governments grant some powers to local governments and surrender some powers to the national, or federal, government. As the system has evolved, the federal government has primary responsibility for national security, economic stability, and market competition. State governments fund public higher education, prisons, and—with aid from the federal government—highways and welfare. Local governments

private good
a good that is both rival in consumption and exclusive, such as pizza

public good
a good, once produced, is available for all to consume, regardless of who pays and who doesn’t; such a good is nonrival and nonexclusive, such as a safer community

externality
a cost or a benefit that affects neither the buyer or seller, but instead affects people not involved in the market transaction

fiscal policy
the use of government purchases, transfer payments, taxes, and borrowing to influence economy-wide variables such as inflation, employment, and economic growth

monetary policy
regulation of the money supply to influence economy-wide variables such as inflation, employment, and economic growth
Voluntary Exchange Versus Coercion

Market exchange relies on the voluntary behavior of buyers and sellers. Don’t like tofu? No problem—don’t buy it. But in political markets, the situation is different. Any voting rule except unanimous consent must involve some government coercion. Public choices are enforced by the police power of the state. Those who fail to pay their taxes could go to jail, even though they may object to some programs those taxes support, such as the war in Iraq or capital punishment.

No Market Prices

Another distinguishing feature of governments is that public output is usually offered at either a zero price or at a price below the cost of providing it. If you now pay in-state tuition at a public college or university, your tuition probably covers only about half the state’s cost of providing your education. Because the revenue side of the government budget is usually separate from the expenditure side, there is no necessary link between the cost of a program and the benefit. In the private sector, the expected marginal benefit is at least as great as marginal cost; otherwise, market exchange would not occur.

The Size and Growth of Government

One way to track the impact of government over time is by measuring government outlays relative to the U.S. gross domestic product, or GDP, which is the total value of all final goods and services produced in the United States. In 1929, the year the Great Depression began, all government outlays, mostly by state and local governments, totaled about 10 percent of GDP. At the time, the federal government played a minor role. In fact, during the
Let’s look briefly at the composition of federal outlays. Since 1960, defense spending has declined from over half of federal outlays to about one-fifth by 2008, as shown in Exhibit 3. Redistribution—Social Security, Medicare, and welfare programs—has been the mirror image of defense spending, jumping from only about one-fifth of federal outlays in 1960 to nearly half by 2008.

Sources of Government Revenue

Taxes provide the bulk of revenue at all levels of government. The federal government relies primarily on the individual income tax, state governments rely on income and sales taxes, and local governments rely on the property tax. Other revenue sources include user charges, such as highway tolls, and borrowing. For additional revenue, some states also monopolize certain markets, such as for lottery tickets and liquor.

Exhibit 4 focuses on the composition of federal revenue since 1960. The share made up by the individual income tax has remained relatively constant, ranging from a low of 42 percent in the mid-1960s to 47 percent in 2008. The share from payroll taxes more than doubled from 15 percent in 1960 to 35 percent in 2008. Payroll taxes are deducted from paychecks to support Social Security and Medicare, which funds medical care for the elderly. Corporate taxes and revenue from other sources, such as excise (sales) taxes and user charges, have declined as a share of the total since 1960.

Tax Principles and Tax Incidence

The structure of a tax is often justified on the basis of one of two general...
principles. First, a tax could relate to the individual’s ability to pay, so those with a greater ability pay more taxes. Income or property taxes often rely on this ability-to-pay tax principle. Alternatively, the benefits-received tax principle relates taxes to the benefits taxpayers receive from the government activity funded by the tax. For example, the tax on gasoline funds highway construction and maintenance, thereby linking tax payment to road use, since those who drive more pay more gas taxes.

Tax incidence indicates who actually bears the burden of the tax. One way to evaluate tax incidence is by measuring the tax as a percentage of income. Under proportional taxation, taxpayers at all income levels pay the same percentage of their income in taxes. A proportional income tax is also called a flat tax, since the tax as a percentage of income remains constant, or flat, as income increases. Note that under proportional taxation, although taxes remain constant as a percentage of income, the dollar amount of taxes increases as income increases.

Under progressive taxation, the percentage of income paid in taxes increases as income increases. The marginal tax rate indicates the percentage of each additional dollar of income that goes to taxes. Because high marginal rates reduce the after-tax return from working or investing, high marginal rates can reduce people’s incentives to work and invest. The six marginal rates applied to the U.S. personal income tax ranged from 10 to 35 percent in 2007, down from a range of 15 to 39.6 percent in 2000.

ability-to-pay tax principle
those with a greater ability to pay, such as those earning higher incomes or those owning more property, should pay more taxes

benefits-received tax principle
those who get more benefits from the government program should pay more taxes

tax incidence
the distribution of tax burden among taxpayers; who ultimately pays the tax

proportional taxation
the tax as a percentage of income remains constant as income increases; also called a flat tax

progressive taxation
the tax as a percentage of income increases as income increases

marginal tax rate
the percentage of each additional dollar of income that goes to the tax

Exhibit 5
Top Marginal Rate on Federal Personal Income Tax Since 1913

FICA (aka Social Security) stands for Federal Insurance Contributions Act: 6.2% paid by you, 6.2% paid by your employer

FUTA (aka unemployment) stands for Federal Unemployment Tax Act: 6.2% of taxable wages, paid by your employer
The top marginal tax bracket each year during the history of the personal income tax is shown by Exhibit 5. Although the top marginal rate is now lower than it was during most other years, high income households still pay most of the federal income tax collected. For example, according to the U.S. Internal Revenue Service, the top 1 percent of tax filers, based on income, paid 36.9 percent of all income taxes collected in 2004. Their average tax rate was 23.5 percent. And the top 10 percent of tax filers paid 68.2 percent of all income taxes collected. Their average tax rate was 18.6 percent. In contrast, the bottom 50 percent of tax filers paid only 3.3 percent of all income taxes collected. Their tax rate averaged only 3.0 percent. Whether we look at marginal tax rates or average tax rates, the U.S. income tax is progressive. High-income filers pay the overwhelming share of income taxes.

Finally, under **regressive taxation**, the percentage of income paid in taxes decreases as income increases, so the marginal tax rate declines as income increases. Most U.S. payroll taxes are regressive, because they impose a flat rate up to a certain level of income, above which the marginal rate drops to zero. For example, Social Security taxes were levied on the first $97,500 of workers’ pay in 2007. Half the 12.4 percent tax is paid by employers and half by employees (the self-employed pay the entire 12.4 percent).

Taxes often do more than fund public programs. Some taxes discourage certain activity. For example, a pollution tax can help clean the air. A tax on gasoline can encourage people to work at home, carpool, or use public transportation. Some taxes have unintended consequences. For example, in Egypt a property tax is not imposed until a building is complete. To avoid such taxes, builders never finish the job; multistory dwellings are usually missing the top floor. As another example of how taxes can distort the allocation of resources, property taxes in Amsterdam and Vietnam were originally based on the width of the building. As a result, buildings there are extremely narrow.

This discussion of revenue sources brings to a close, for now, our examination of the role of government in the U.S. economy.

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In France, a house’s property taxes used to be assessed on the basis of the number of stories of livable space in the building. Attic space was not counted as livable space, so houses designed with Mansard roofs became increasingly popular. (More usable space, less taxes.)

![Mansard roof](image)
Government has a pervasive influence on the economy, and its role is discussed throughout the book.

**LO4 The Rest of the World**

So far, the focus has been on institutions within the United States—that is, on domestic households, firms, and governments. This focus is appropriate because our primary objective is to understand the workings of the U.S. economy, by far the largest in the world. But the rest of the world affects what U.S. households consume and what U.S. firms produce. For example, Japan and China supply us with all kinds of manufactured goods, thereby affecting U.S. prices, wages, and profits. Likewise, political events in the Persian Gulf can affect what Americans pay for oil. Foreign decision makers, therefore, influence the U.S. economy—what we produce and what we consume. The rest of the world consists of the households, firms, and governments in the two hundred or so sovereign nations throughout the world.

**International Trade**

In the previous chapter, you learned about comparative advantage and the gains from specialization. These gains explain why householders stopped doing everything for themselves and began to specialize. International trade arises for the same reasons. International trade occurs because the opportunity cost of producing specific goods differs across countries. Americans import raw materials like crude oil, diamonds, and coffee beans and finished goods like cameras, DVD players, and automobiles. U.S. producers export sophisticated products like computer software, aircraft, and movies, as well as agricultural products like wheat and corn.

Trade between the United States and the rest of the world has increased in recent decades. In 1970, U.S. exports of goods and services amounted to only 6 percent of the gross domestic product. That has increased to 10 percent. The top ten destinations for U.S. exports in order of importance are Canada, Mexico, Japan, China, United Kingdom, Germany, South Korea, Netherlands, France, and Taiwan.

The **merchandise trade balance** equals the value of exported goods minus the value of imported goods. Goods in this case are distinguished from services, which show up in another trade account. For the last quarter century, the United States has imported more goods than it has exported, resulting in a merchandise trade deficit. Just as a household must pay for its spending, so too must a nation. The merchandise trade deficit must be offset by a surplus in one or more of the other **balance-of-payments** accounts. A nation’s **balance of payments** is the record of all economic transactions between its residents and residents of the rest of the world.

**Exchange Rates**

The lack of a common currency complicates trade between countries. How many U.S. dollars buy a Porsche? An American buyer cares only about the dollar cost; the German carmaker cares only about the euros received (the common currency of 13 European countries). To facilitate trade funded by different currencies, a market for foreign exchange has developed. Foreign exchange is foreign currency needed to carry out international transactions. The supply and demand for foreign exchange comes together in foreign exchange markets to determine the exchange rate. The exchange rate measures the price of one currency in terms of another. For example, the exchange rate between the euro and the dollar might indicate...
that one euro exchanges for $1.20. At that exchange rate, a Porsche selling for 100,000 euros costs $120,000. The exchange rate affects the prices of imports and exports and thus helps shape the flow of foreign trade.

**Trade Restrictions**

Despite clear gains from international specialization and exchange, nearly all nations restrict trade to some extent. These restrictions can take the form of (1) tariffs, which are taxes on imports; (2) quotas, which are limits on the quantity of a particular good that can be imported from a country; and (3) other trade restrictions. If specialization according to comparative advantage is so beneficial, why do most countries restrict trade? Restrictions benefit certain domestic producers that lobby their governments for these benefits. For example, U.S. growers of sugar cane have benefited from legislation restricting imports, thereby raising U.S. sugar prices. These higher prices hurt domestic consumers, but consumers are usually unaware of this harm. Trade restrictions interfere with the free flow of products across borders and tend to hurt the overall economy.

**Final Word**

This chapter examined the four economic decision makers: households, firms, governments, and the rest of the world. Domestic households are by far the most important, for they supply resources and demand goods and services.

If you were to stop reading right now, you would already know more economics than most people. But to understand market economies, you must learn how markets work. The next chapter introduces demand and supply.

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**Tariff**

*a tax on imports*

**Quota**

*a legal limit on the quantity of a particular product that can be imported*