2 Economics: The Framework for Business

LEARNING OBJECTIVES

After studying this chapter, you will be able to:

- 2-1 Define economics and discuss the evolving global economic crisis
- 2-2 Analyze the impact of fiscal and monetary policy on the economy
- 2-3 Explain and evaluate the free market system and supply and demand
- 2-4 Explain and evaluate planned market systems
- 2-5 Describe the trend toward mixed market systems
- 2-6 Discuss key terms and tools to evaluate economic performance

Remember to visit **PAGE 37** for additional **STUDY TOOLS**

2-1 ECONOMICS: NAVIGATING A CRISIS

In September 2008, the United States plunged into a deep economic crisis. The banking system hovered on the edge of collapse. Property values plummeted, and home foreclosure rates soared. Massive layoffs put more than a million Americans out of work. By the end of the year, the stock market had lost more than a third of its value, and financial turmoil in the United States had sparked sequential economic shocks from Europe, to South America, to Asia, and beyond. The outlook was grim.

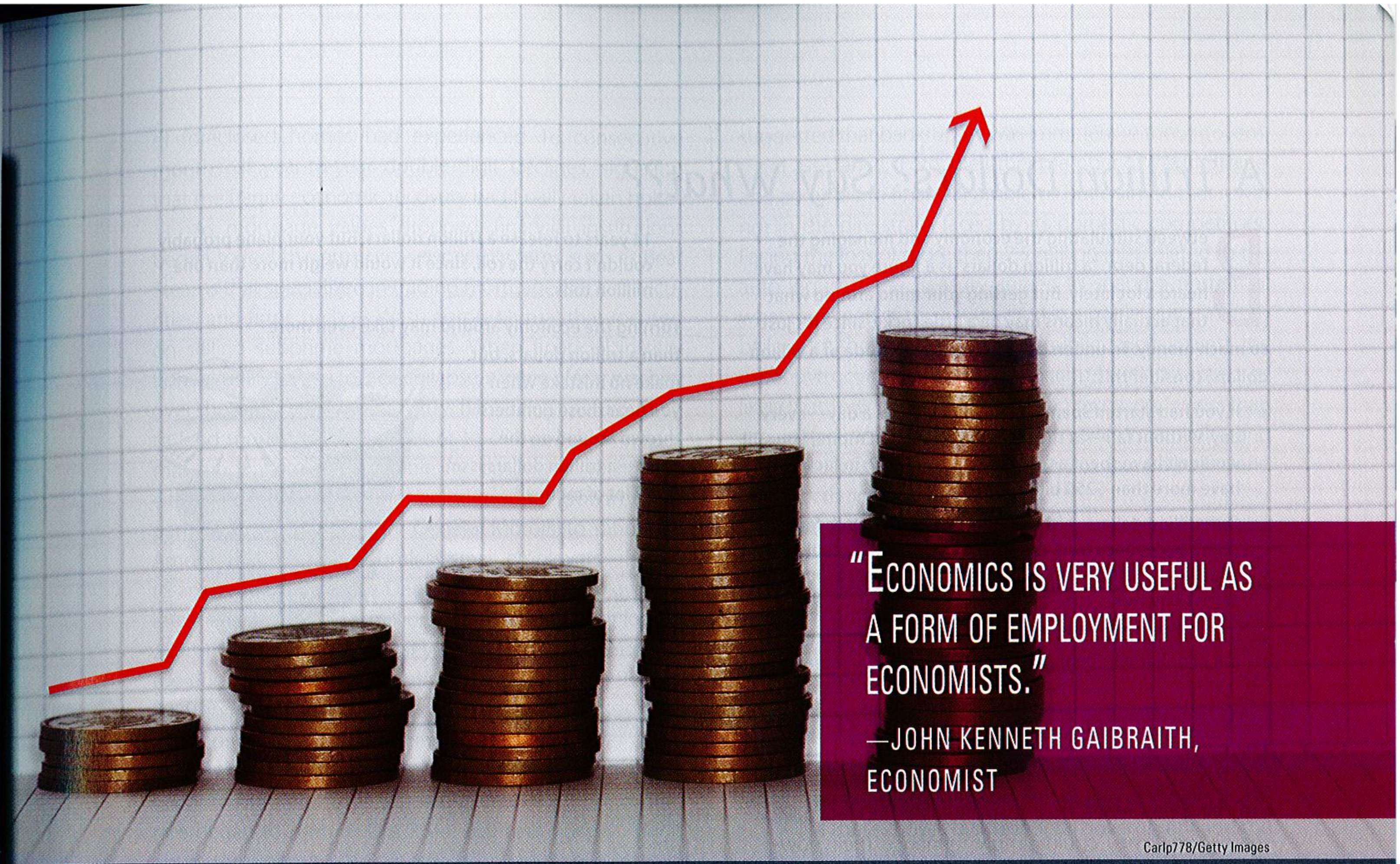
economy A financial and social system of how resources flow through society, from production, to distribution, to consumption.

economics The study of the choices that people, companies, and governments make in allocating society's resources.

macroeconomics The study of a country's overall economic dynamics, such as the employment rate, the gross domestic product, and taxation policies.

How did this happen? Why? How could the economy get back on track?

Understanding these issues—and how the government, businesses, and individuals responded to them—requires understanding some basic definitions: The **economy** is essentially a financial and social system. It represents the flow of resources through society, from production, to distribution, to consumption. **Economics** is the study of the choices that people, companies, and governments make in allocating those resources. The field of economics falls into two core categories: macroeconomics and microeconomics. **Macroeconomics** is the study of a country's overall economic dynamics, such as the employment rate, the gross domestic product, and taxation policies. While macroeconomic issues may seem abstract, they directly affect your day-to-day life, influencing key variables such as what jobs will be available for you, how much cash you'll actually take home after taxes, or how much you can buy with that cash in any given month. **Microeconomics** focuses on smaller economic units such as individual consumers, families, and individual businesses. Both macroeconomics and microeconomics have played an integral role in the global economic crisis.



"ECONOMICS IS VERY USEFUL AS A FORM OF EMPLOYMENT FOR ECONOMISTS."

—JOHN KENNETH GAIBRAITH, ECONOMIST

Carlp778/Getty Images

2-1a Global Economic Crisis: How Did This Happen?

The seeds of the crisis were planted more than a decade ago, during a time of prosperity. Through the last half of the 1990s, America enjoyed unprecedented growth. Unemployment was low, productivity was high, inflation was low, and the real standard of living for the average American rose significantly. The American economy grew by more than \$2.4 trillion, a jump of nearly 33% in just five years. But the scene changed for the worse when the dot-com bubble burst in 2000, followed by the 9/11 terrorist attacks in 2001. As the stock market dropped and unemployment rose, economic experts feared that the country was hovering on the brink of a full-blown recession.[1]

In an effort to avert recession by increasing the money supply and encouraging investment, the Federal Reserve—the nation's central bank—decreased interest rates from 6.5% in mid-2000 to 1.25% by the end of 2002. As a result, the economy was awash with money, but opportunities to invest yielded paltry returns. This is when *subprime mortgage loans* came into play. Most experts define subprime mortgages as loans to borrowers with low credit scores, high debt-to-income ratios, or other signs of a reduced ability to repay the money they borrow.

These subprime mortgage loans were attractive to borrowers and lenders alike. For the borrowers, getting a loan suddenly became a cinch, and for the first time ever, hundreds of thousands of people could afford homes. The lenders were all too willing to give them mortgage loans, sometimes with little or no documentation (such as proof of income), and sometimes with little or no money down. As demand for homes skyrocketed, prices continued to rise year after year. Borrowers took on adjustable-rate loans

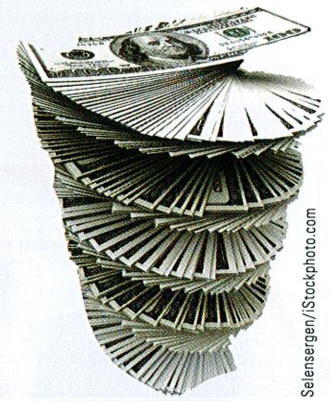
microeconomics The study of smaller economic units such as individual consumers, families, and individual businesses.

A Trillion Dollars? Say What??

Between stimulating the economy and managing the federal debt, "a trillion dollars" is a figure you may have heard a lot lately. But getting your mind around what that actually means may be a little tricky, since it's just so much money. To understand the true magnitude of a trillion dollars, consider this:

- If you had started spending a million dollars a day—every day, without fail—at the start of the Roman Empire, you still wouldn't have spent a trillion dollars by 2012; in fact, you'd have more than $250 billion left over.
- One trillion dollars, laid end-to-end, would stretch farther than the distance from the earth to the sun. You could also wrap your chain of bills more than 12,000 times around the earth's equator.
- If you were to fly a jet at the speed of sound, spooling out a roll of dollar bills behind you, it would take you more than 14 years to release a trillion dollars. But your plane probably couldn't carry the roll, since it would weigh more than one million tons.

Turning the economy around may take even more than a trillion dollars, but make no mistake when you hear those numbers thrown around on the news—a trillion dollars is an awful lot of money![2]



Selensergen/iStockphoto.com

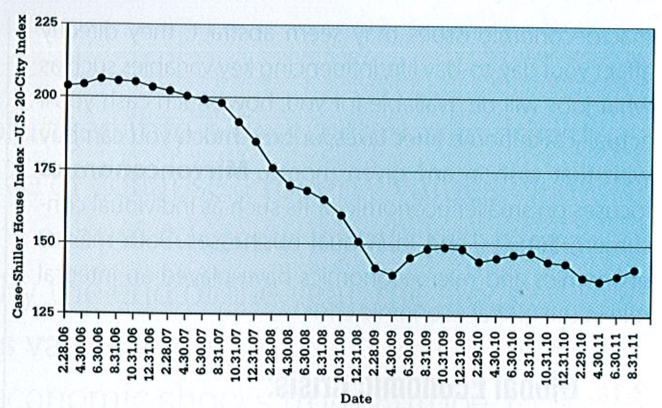
assuming that when their loans adjusted up—usually sharply up—they could simply refinance their now-more-valuable homes for a new low starter rate and maybe even pull out some cash.

Subprime loans were attractive to lenders because they provided a higher return than many other investments, and—given the growth in housing prices—they seemed relatively low risk. Banks and investment houses invented a range of stunningly complex financial instruments to slice up and resell the mortgages as specialized securities. Hedge funds swapped the new securities, convinced that they were virtually risk-free. With a lack of regulation—or any other government oversight—financial institutions did *not* maintain sufficient reserves in case those mortgage-backed funds lost value.

And they did indeed lose value. In 2006, housing prices peaked, and in the months that followed, prices began falling precipitously (see Exhibit 2.1), dropping nearly 35% from the market peak in 2006 through the market trough in 2009. Increasing numbers of subprime borrowers found themselves "upside down"—they owed their lenders more than the value of their homes. Once this happened, they couldn't refinance to lower their payments. Foreclosure rates climbed at an increasing pace. RealtyTrac, a leading online marketplace for foreclosure properties, reported that foreclosure rates were 33% higher in 2010 than they were in all of 2009. In 2011, the foreclosure rate dropped to the lowest level since 2007, when the recession began. And by January 2014, the inventory of foreclosed homes had experienced 16 consecutive months of year-to-year double-digit declines, signaling that the fragile economic recovery had finally taken hold.[3]

Exhibit 2.1

House Price Index



Source: Housing's Rise and Fall in 20 Cities, December 27, 2011, *The New York Times* website, http://www.nytimes.com/interactive/2011/05/31/business/economy/case-shiller-index.html#city/IND20, accessed January 25, 2012.

> "A BILLION HERE AND A BILLION THERE, AND PRETTY SOON YOU'RE TALKING REAL MONEY."
>
> —U.S. SENATOR EVERETT DIRKSEN

As mortgage values dropped, financial institutions began to feel the pressure—especially firms such as Bear Stearns that specialized in trading mortgage-backed securities, and firms such as Washington Mutual that focused on selling subprime mortgages. When financial institutions actually began to face collapse, a wave of fear washed over the entire banking industry. Banks became unwilling to lend money to each other or to clients, which meant that funds were not available for businesses to finance either day-to-day operations or longer-term growth. Company after company—from General Motors, to Yahoo!, to American Express, to countless small employers—began to announce layoffs. The December 2008 unemployment rate hit 7.2%. About 2.6 million Americans lost their jobs in 2008, making 2008 the worst year for jobs since 1945. And the unemployment rate continued to rise, hitting 9.3% in 2009 and 9.6% in 2010, leading to total Great Recession job losses of nearly 8 million, many of which will never come back as the economy continues to change and old skills become obsolete.[4] The national average unemployment rate began to drop in late 2011 and continued to trend down throughout 2014, another sign that the economic recovery has taken hold.

2-1b Moving in a Better Direction

Although the benefits were not immediately obvious in the face of a downward trend, the federal government and the Federal Reserve—known as "the Fed"—intervened in the economy at an unprecedented level to prevent total financial disaster. In March 2008, the Fed staved off bankruptcy at Bear Stearns. In early September 2008, the U.S. Department of the Treasury seized Fannie Mae and Freddie Mac, which owned about half of the U.S. mortgage market. A week later, the Fed bailed out tottering global insurance giant AIG with an $85 billion loan. But the bleeding continued.

The negative spiral spurred Congress to pass a controversial $700 billion economic bailout plan in early October 2008, called TARP (the Troubled Assets Relief Program). By the end of the year, the Treasury had spent the first half of that money investing in banks, although early results were imperceptible for the economy. Just as the Treasury began to release funds to the banks, GM and Chrysler, two of the Big Three U.S. automakers, announced they also desperately needed a bailout. Both firms suggested that bankruptcy was imminent without government assistance. (Ford, the other member of the Big Three, also admitted to financial problems but claimed that it was not in the dire straits faced by its domestic competitors.) Facing the loss of more than 2.5 million jobs related to the auto industry, the Treasury agreed to spend a portion of what remained of the $700 billion in a partial auto industry bailout.[5] Although much of the public railed against the expensive government bailout program, by 2010 it appeared likely that TARP could end up costing taxpayers far less than anticipated, or even nothing, as insurance companies and banks began to break even, or in many cases earn profits, and pay back their government loans.[6]

> "GOVERNMENT DOES NOT SOLVE PROBLEMS; IT SUBSIDIZES THEM."
>
> —U.S. PRESIDENT RONALD REAGAN

As the new administration began, President Obama proposed, and Congress passed, an $825 billion economic stimulus package called the American Recovery and Reinvestment Act, designed to turn the economy around over the next two years. The plan included cutting taxes, building infrastructure, and investing $150 billion in green energy. By late 2011, the economy had begun to turn around at a very slow pace, although unemployment remained high, and economists predicted that the jobless rate would remain painfully high through the middle of the decade.[7]

All of these moves by the federal government and the Federal Reserve are part of fiscal and monetary policy.

2-2 MANAGING THE ECONOMY THROUGH FISCAL AND MONETARY POLICY

While the free market drives performance in the American economy, the federal government and the Federal Reserve can help *shape* performance. During the recent crisis, both the government and the Fed have taken proactive—some say heavy-handed—roles to mitigate this economic contraction. The overarching goal is controlled, sustained growth, and both fiscal and monetary policy can help achieve this objective.

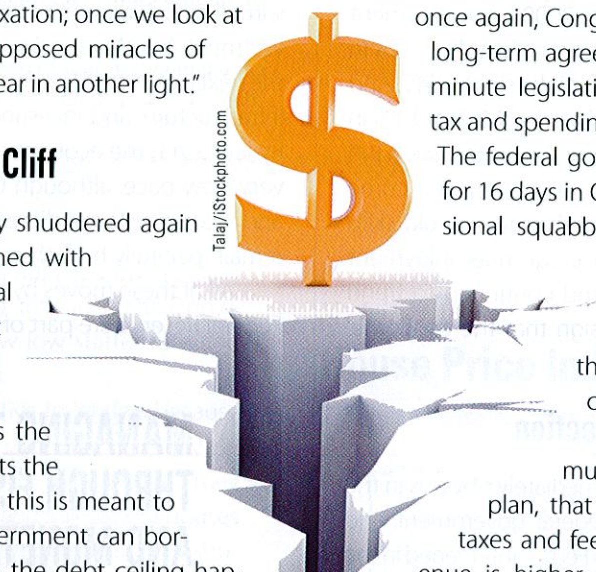
2-2a Fiscal Policy

Fiscal policy refers to government efforts to influence the economy through taxation and spending

fiscal policy Government efforts to influence the economy through taxation and spending.

decisions that are designed to encourage growth, boost employment, and curb inflation. Clearly, fiscal strategies are closely tied to political philosophy. But regardless of politics, most economists agree that lower taxes can boost the economy by leaving more money in people's pockets for them to spend or invest. Most also agree that government spending can boost the economy in the short term by providing jobs, such as mail carrier, bridge repairer, or park ranger; and in the long term by investing in critical public assets, such as a national renewable energy grid. Done well, both taxation and spending can offer economic benefits. The tricky part is finding the right balance between the two approaches. As American economist Henry Hazlitt pointed out, it's important to keep in mind that "Either immediately or ultimately, every dollar of government spending must be raised through a dollar of taxation; once we look at the matter in this way, the supposed miracles of government spending will appear in another light."

2-2b Debt Ceiling/Fiscal Cliff


Talaj/iStockphoto.com

In mid-2011, the U.S. economy shuddered again as the news headlines screamed with dire warnings about a national or even international economic meltdown when we hit the federal *debt ceiling*. What did this mean? The debt ceiling is the maximum amount Congress lets the government borrow. In theory, this is meant to limit the amount that the government can borrow, but in practice, voting on the debt ceiling happens separately from voting on taxes and spending, so the debt ceiling ends up being mostly about whether or not the federal government can pay for debts that it has already incurred. Typically, debt ceiling hikes are fairly routine; in fact, Congress has raised the debt ceiling 74 times since 1962, and 10 times since 2001, all with little or no notice. But as federal debt began to nudge the ceiling in 2011, it garnered unprecedented political and journalistic attention because various political groups saw the issue as an opportunity to further their political agenda. Those who wanted to raise the debt ceiling portrayed others as irresponsible buffoons who were willing to shut down the government simply to make a point without any real long-term change in spending. Those who did not want to raise the debt ceiling argued that the others are spendthrift bureaucrats who must learn to live within their means like the Americans who elected them.

After weeks of high-profile wrangling, Congress finally agreed to raise the debt ceiling, which temporarily averted a shutdown crisis, but the deal they reached to do so created the fiscal cliff. The *fiscal cliff* was a package of draconian across-the-board spending cuts and sharp tax hikes scheduled to hit at the same time that could dramatically decrease the U.S. budget deficit. Going over the *fiscal cliff* could potentially cripple the U.S. economy, and possibly even cause the United States to default on some of its debt, which could send world markets into a tailspin. But once again, Congress could not reach a reasonable long-term agreement, so they simply passed last-minute legislation that pushed the really tough tax and spending decisions farther down the road. The federal government actually did shut down for 16 days in October 2013 after much Congressional squabbling failed to produce a budget agreement. The government reopened with passage of another temporary agreement that again delayed the tough fiscal choices.[8]

Every year, the government must create a budget, or a financial plan, that outlines expected revenue from taxes and fees, and expected spending. If revenue is higher than spending, the government incurs a **budget surplus** (rare in recent years, but usually quite welcome!). If spending is higher than revenue, the government incurs a **budget deficit** and must borrow money to cover the shortfall. The sum of all the money borrowed over the years and not yet repaid is the total **federal debt**. Exhibit 2.2 shows key sources of revenue and key expenses for the federal government in 2011. Note that spending significantly outstrips receipts, creating a one-year budget deficit of more than a trillion dollars. Clearly, any additional spending without corresponding tax increases could dramatically increase the shortfall.

As of January, 2014, the total U.S. federal debt stood at more than $18 trillion, a staggering $56,660.91 for every U.S. citizen (see an online national debt clock at http://brillig.com/debt_clock/ for the latest figures).

The debt has only grown bigger every year since 1957, and the pace of growth will likely increase further in the wake of the economic crisis. This matters to each taxpayer because as the government repays the debt—not to mention paying the skyrocketing interest to finance this debt—less and less money will be available for other uses; services may be eliminated (e.g., student loans, veterans' benefits, housing subsidies), or taxes will soar, or perhaps even both.

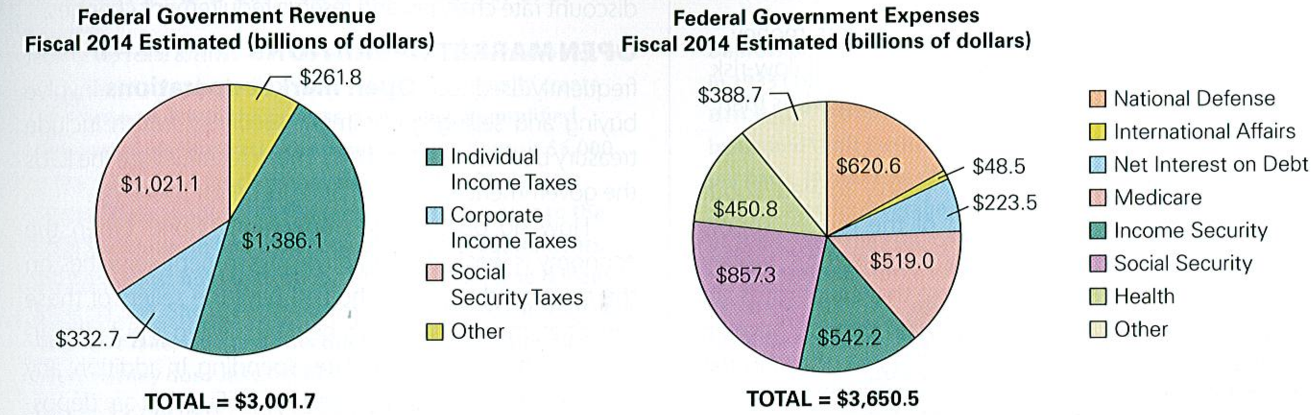
budget surplus Overage that occurs when revenue is higher than expenses over a given period of time.

budget deficit Shortfall that occurs when expenses are higher than revenue over a given period of time.

federal debt The sum of all the money that the federal government has borrowed over the years and not yet repaid.

Exhibit 2.2

Federal Government Revenue and Expenses



Economic Report of the president, 2014, Table B-21. Federal receipts and outlays, by major category, and surplus or deficit, fiscal years 1947-2015, http://www.gpo.gov/fdsys/pkg/ERP-2014/html/ERP-2014-table21.htm, accessed June 2015.

2-2c Monetary Policy

Monetary policy refers to actions that shape the economy by influencing interest rates and the supply of money. The Federal Reserve—essentially the central bank of the United States—manages U.S. monetary policy. For the first time in its history, the Fed has also taken an activist role in bailing out and propping up shaky financial firms during the economic crisis. Other Fed functions include banking services for member banks and the federal government.

The Fed is headed by a seven-member Board of Governors. The president appoints each member of the Board to serve a single 14-year term—though a member can also complete a former member's unexpired term and still be appointed to a full term of his or her own. These terms are staggered, with one expiring every two years, so that no single president can appoint all of the members. This structure helps ensure that the Fed can act independently of political pressure.

In addition to setting monetary policy, the Board of Governors oversees the operation of the 12 Federal Reserve Banks that carry out Fed policies and perform banking services for **commercial banks** in their districts. Interestingly, the federal government does not own these Federal Reserve Banks. Instead, they're owned by the member commercial banks in their individual districts.

The president appoints one of the seven members of the Board of Governors to serve as its chair—a position so powerful that many consider him or her the second most powerful person on earth. For nearly 19 years, the chair was Alan Greenspan. When Greenspan retired in early 2006, President Bush appointed economist Ben Bernanke to the chair role. Bernanke led the Fed's proactive efforts to turn the ailing economy around. In early 2014, the Senate confirmed economist Janet Yellen as new chair of the Fed. Yellen is the first female chair, and in light of her track record, most experts anticipate that she will continue to focus primarily on fighting unemployment by encouraging economic expansion.

The core purpose of the Fed is to influence the size of the **money supply**—or the total amount of money within the overall economy. Clearly, you know what money is. But the formal definition of **money** is anything generally accepted as a medium of exchange, a measure of value, or a means of payment. The two most

monetary policy Federal Reserve decisions that shape the economy by influencing interest rates and the supply of money.

commercial banks Privately owned financial institutions that accept demand deposits and make loans and provide other services for the public.

money supply The total amount of money within the overall economy.

money Anything generally accepted as a medium of exchange, a measure of value, or a means of payment.

commonly used definitions of the money supply are M1 and M2:

- **M1:** All currency—paper bills and metal coins—plus checking accounts and traveler's checks.
- **M2:** All of M1 plus most savings accounts, money market accounts, and certificates of deposit (low-risk savings vehicles with a fixed term, typically less than one year).

By mid-2014, the M1 money supply totaled about $2.84 billion, and the M2 version of the money supply totaled about $11.6 billion. In practice, the term "money supply" most often refers to M2. (Note that credit cards are not part of the money supply, although they do have an unmistakable impact on the flow of money through the economy.)[9]

M1 money supply Includes all currency plus checking accounts and traveler's checks.

M2 money supply Includes all of M1 money supply plus most savings accounts, money market accounts, and certificates of deposit.

open market operations The Federal Reserve function of buying and selling government securities, which include treasury bonds, notes, and bills.

When the economy contracts, the Fed typically increases the money supply. If more money is available, interest rates usually drop, encouraging businesses to expand and consumers to spend. But when prices begin to rise, the Fed attempts to reduce the money supply. Ideally, if less money is available, interest rates will rise. This will reduce spending, which should bring inflation under control. Specifically, the Fed uses three key tools to expand and contract the money supply: open market operations, discount rate changes, and reserve requirement changes.

OPEN MARKET OPERATIONS This is the Fed's most frequently used tool. **Open market operations** involve buying and selling government securities, which include treasury bonds, notes, and bills. These securities are the IOUs the government issues to finance its deficit spending.

How do open market operations work? When the economy is weak, the Fed *buys* government securities on the open market. When the Fed pays the sellers of these securities, money previously held by the Fed is put into circulation. This directly stimulates spending. In addition, any of the additional funds supplied by the Fed that are deposited in banks will allow banks to make more loans, making credit more readily available. This encourages even more spending and further stimulates the economy.

When inflation is a concern, the Fed *sells* securities. Buyers of the securities write checks to the Fed to pay for securities they bought, and the Fed withdraws these funds from banks. With fewer funds, banks must cut back on the loans they make, credit becomes tighter, and the money supply shrinks. This reduces spending and cools off the inflationary pressures in the economy.

Open market operations are set by the aptly named Federal Open Market Committee, which consists of the seven members of the Board of Governors and five of the twelve presidents of the Federal Reserve district banks. Each year, the Federal Open Market Committee holds eight regularly scheduled meetings to make decisions about open market operations, although they do hold additional meetings when the need arises. Both businesses and markets closely watch Open Market Committee rate setting and outlook statements in order to guide decision making.

Are Bad Roads Driving you Around the Bend?

Few other nations in the world are as dependent on their cars as the United States, yet across the United States, many roads are downright shoddy. One reason is that public spending on roads got stuck in a pothole after the interstate highway system was built in the 1950s and 1960s. It's not just roads—other elements of our infrastructure are suffering, too. According to the Federal Highway Administration, there are more deficient bridges in the 102 largest U.S. metropolitan regions than there are McDonald's restaurants in the entire country. And anyone who has traveled by air lately knows that everything about America's major airports is too small. Frighteningly, according to *Economist* magazine, most air traffic control systems are less advanced than the technology found in the average smartphone. The solution to these infrastructure shortfalls is unclear. Some experts maintain that the problems are so big that big government must be involved. Others have argued that the best solutions will come from local governments raising local taxes to solve local problems. And many believe that now is the time for private firms to step up and join with government to solve civic infrastructure issues in mutually beneficial partnerships. One way or the other let's hope that the problem gets fixed before an infrastructure disaster costs lives and forces action.[10]

Patti Sapone/The Star-Ledger/The Image Works

Looking to Multiply Your Money? Look No Further Than Your Local Bank!

Everyone knows that banks help people save money, but most people don't realize that banks actually create money. While the process is complex, a simplified example illustrates the point. Say you deposit $5,000 in the bank. How much money do you have? Obviously, $5,000. Now imagine that your neighbor Anne goes to the bank for a loan. In line with Federal Reserve requirements, the bank must hold onto about 10% of its funds, so it loans Anne $4,500. She uses the money to buy a used car from your neighbor Jake, who deposits the $4,500 in the bank. How much money does Jake have? Clearly, $4,500. How much money do you have? Still, $5,000. Thanks to the banking system, our "money supply" has increased from $5,000 to $9,500. Multiply this phenomenon times millions of banking transactions, and you can see why cold, hard cash accounts for only about 10% of the total U.S. M2 money supply.

But what happens if everyone goes to the bank at once to withdraw their money? The banking system would clearly collapse. And in fact, in 1930 and 1931, a run on the banks caused wave after wave of devastating bank failures. Panicked customers lost all their savings, ushering in the worst years of the Great Depression. To restore public confidence in the banking system, in 1933 Congress established the Federal Deposit Insurance Corporation (FDIC). The FDIC insures deposits in banks and thrift institutions for up to $100,000 per customer, per bank. In the wake of the banking crisis, the FDIC temporarily increased its coverage to $250,000 per depositor at the end of 2008. Since the FDIC began operations on January 1, 1934, no depositor has lost a single cent of insured funds as a result of a bank failure.

Keith Brofsky/Photodisc/Getty Images

DISCOUNT RATE CHANGES Just as you can borrow money from your bank, your bank can borrow funds from the Fed. And, just as you must pay interest on your loan, your bank must pay interest on loans from the Fed. The **discount rate** is the interest rate the Fed charges on its loans to commercial banks. When the Fed reduces the discount rate, banks can obtain funds at a lower cost and use these funds to make more loans to their own customers. With the cost of acquiring funds from the Fed lower, interest rates on bank loans also tend to fall. The result: businesses and individuals are more likely to borrow money and spend it, which stimulates the economy. Clearly, the Fed is most likely to reduce the discount rate during recessions. In fact, during the early months of the financial crisis, the Fed cut the rate to less than 1%. But in response to inflation—usually a sign of a rapidly expanding economy—the Fed usually increases the discount rate. In response, banks raise the interest rates they charge their customers. Fewer businesses and individuals are willing to take loans, which ultimately slows down the economy and reduces inflation.[11]

RESERVE REQUIREMENT CHANGES The Fed requires that all of its member banks hold funds called "reserves," equal to a stated percentage of the deposits held by their customers. This percentage is called the **reserve requirement** (or required reserve ratio). The reserve requirement helps protect depositors who may want to withdraw their money without notice. Currently, the reserve requirement stands at about 10%,

Federal Deposit Insurance Corporation (FDIC) A federal agency that insures deposits in banks and thrift institutions for up to $250,000 per customer, per bank.

discount rate The rate of interest that the Federal Reserve charges when it loans funds to banks.

reserve requirement A rule set by the Fed, which specifies the minimum amount of reserves (or funds) a bank must hold, expressed as a percentage of the bank's deposits.

depending on the size and type of a bank's deposits. If the Fed increases the reserve requirement, banks must hold more funds, meaning they will have fewer funds available to make loans. This makes credit tighter and causes interest rates to rise. If the Fed decreases the reserve requirement, some of the funds that banks were required to hold become available for loans. This increases the availability of credit and causes interest rates to drop. Since changes in the reserve requirement can have a dramatic impact on both the economy and the financial health of individual banks, the Fed uses this tool quite infrequently.

OTHER FED FUNCTIONS In addition to monetary policy, the Fed has several other core functions, including regulating financial institutions and providing banking services both for the government and for banks. In its role as a regulator, the Fed sets and enforces rules of conduct for banks and oversees mergers and acquisitions to ensure fairness and compliance with government policy. The Fed will likely become even more proactive regarding regulation in the wake of the financial crisis. In its role as a banker for banks, the Fed coordinates the check-clearing process for checks on behalf of any banks that are willing to pay its fees. And as the government's bank, the Fed maintains the federal government's checking account and keeps the U.S. currency supply in good condition.

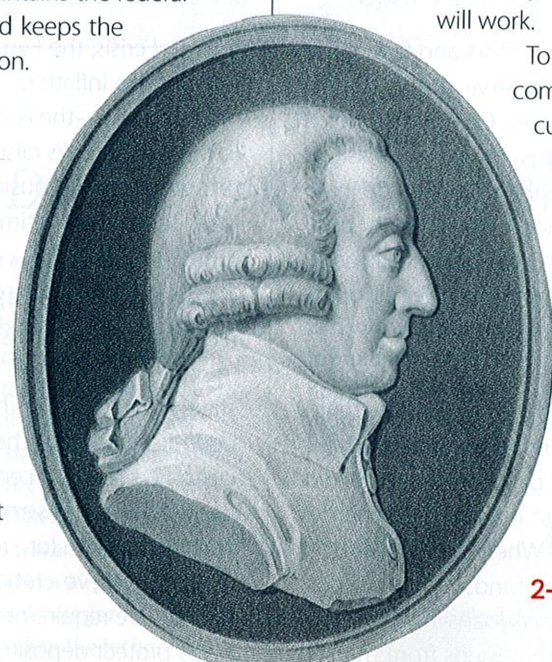
> THE U.S. ECONOMY IS 70% BASED ON CONSUMER SPENDING.
>
> —*TIME* MAGAZINE

2-3 CAPITALISM: THE FREE MARKET SYSTEM

It's a simple fact—more clear now than ever before—no one can get everything they want all of the time. We live in a world of finite resources, which means that societies must determine how to distribute resources among their members. An **economic system** is a structure for allocating limited resources. Over time and around the globe, nations have instituted different economic systems. But a careful analysis suggests that no system is perfect, which may explain why there isn't one standard approach. The next sections of this chapter examine each basic type of economic system and explore the trend toward mixed economies.

The economic system of the United States is called **capitalism**, also known as a "private enterprise system" or a "free market system." Brought to prominence by Adam Smith in the 1700s, capitalism is based on private ownership, economic freedom, and fair competition. One core capitalist principle is the paramount importance of individuals, innovation, and hard work. In a capitalist economy, individuals, businesses, or nonprofit organizations privately own the vast majority of enterprises (with only a small fraction owned by the government). These private-sector businesses are free to make their own choices regarding everything from what they will produce, to how much they will charge, to whom they will hire and fire. Correspondingly, individuals are free to choose what they will buy, how much they are willing to pay, and where they will work.

To thrive in a free enterprise system, companies must offer value to their customers—otherwise, their customers will choose to go elsewhere. Businesses must also offer value to their employees and suppliers in order to attract top-quality talent and supplies. As companies compete to attract the best resources and offer the best values, quality goes up, prices remain reasonable, and choices proliferate, raising the standard of living in the economy as a whole.



Georgios Kollidas/Shutterstock.com

Adam Smith (1723–1790) has often been called the "father of modern economics."

economic system A structure for allocating limited resources.

capitalism An economic system—also known as the private enterprise or free market system—based on private ownership, economic freedom, and fair competition.

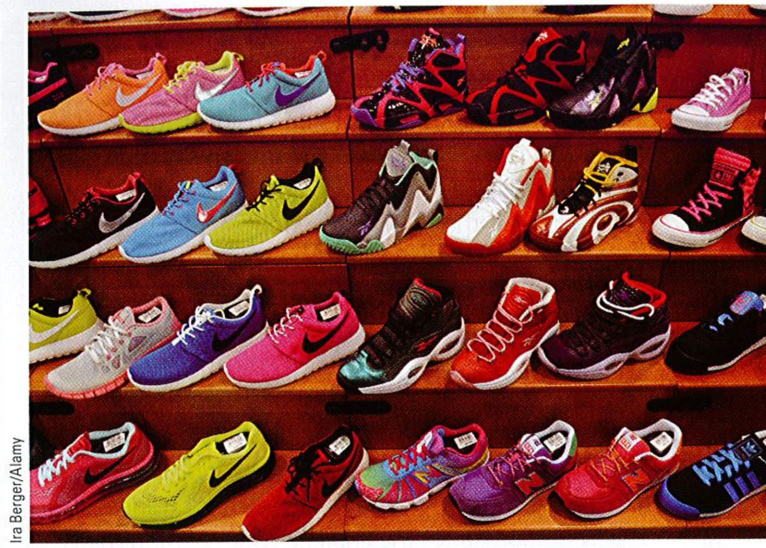
2-3a The Fundamental Rights of Capitalism

For capitalism to succeed, the system must ensure some fundamental rights—or freedoms—to all of the people who live within the economy.

- *The right to own a business and keep after-tax profits:* Remember that capitalism doesn't guarantee that anyone will actually *earn* profits. Nor does it promise that there won't be taxes. But if you do earn profits, you get to keep your after-tax income and spend it however you see fit (within the limits of the law, of course). This right acts as a powerful motivator for business owners in a capitalist economy; the lower the tax rate, the higher the motivation. The U.S. government strives to maintain low tax rates to preserve the after-tax profit incentive that plays such a pivotal role in the free enterprise system.
- *The right to private property:* This means that individuals and private businesses can buy, sell, and use property—which includes land, machines, and buildings—in any way that makes sense to them. This right also includes the right to will property to family members. The only exceptions to private property rights are minimal government restrictions designed to protect the greater good. You can't, for instance, use your home or business to produce cocaine, abuse children, or spew toxic smoke into the air.
- *The right to free choice:* Capitalism relies on economic freedom. People and businesses must be free to buy (or not buy) according to their wishes. They must be free to choose where to work (or not work) and where to live (or not live). Freedom of choice directly feeds competition, creating a compelling incentive for business owners to offer the best goods and services at the lowest prices. U.S. government trade policies boost freedom of choice by encouraging a wide array of both domestic and foreign producers to compete freely for our dollars.
- *The right to fair competition:* A capitalist system depends on fair competition among businesses to drive higher quality, lower prices, and more choices. Capitalism can't achieve its potential if unfair practices—such as deceptive advertising, predatory pricing, and broken contracts—mar the free competitive environment. The government's role is to create a level playing field by establishing regulations and monitoring the competition to ensure compliance.

2-3b Four Degrees of Competition

Although competition is essential for the free market system to function, not all competition works the same. Different industries experience different degrees of competition, ranging from pure competition to monopolies.



Ira Berger/Alamy

- **Pure competition** is a market structure with many competitors selling virtually identical products. Since customers can't (or won't) distinguish one product from another, no single producer has any control over the price. And new producers can easily enter and leave purely competitive markets. In today's U.S. economy, examples of pure competition have virtually disappeared. Agriculture probably comes closest—corn is basically corn, for example—but with the dramatic growth of huge corporate farms and the success of major agricultural cooperatives such as Sunkist and Sun-Maid, the number of competitors in agriculture has dwindled, and new farmers have trouble entering the market. Not only that, segments of the agriculture market—such as organic farms and hormone-free dairies—have emerged with hit products that command much higher prices than the competition.
- **Monopolistic competition** is a market structure with many competitors selling differentiated products. (Caution! Monopolistic competition is quite different from a *monopoly*, which we will cover shortly.) Producers have some control over the price of their wares, depending on the value that they offer their customers. And new producers can fairly easily enter categories marked by monopolistic competition. In fact, in monopolistic competition, a successful product

pure competition A market structure with many competitors selling virtually identical products. Barriers to entry are quite low.

monopolistic competition A market structure with many competitors selling differentiated products. Barriers to entry are low.

usually attracts new suppliers quite quickly. Examples of monopolistic competition include the clothing industry and the restaurant business.

Think about the clothing business, for a moment, in local terms. How many firms do you know that sell tee shirts? You could probably think of at least 50 without too much trouble. And the quality and price are all over the board: designer tee shirts can sell for well over $100, but plenty of options go for less than $10. How hard would it be to start your own tee shirt business? Probably not hard at all. In fact, chances are strong that you know at least one person who sells tee shirts on the side. In terms of product and price variation, number of firms, and ease of entry, the tee shirt business clearly demonstrates the characteristics of monopolistic competition.

- **Oligopoly** is a market structure with only a handful of competitors selling products that can be similar or different. The retail gasoline business and the car manufacturing industry, for instance, are both oligopolies, even though gas stations offer very similar products, and car companies offer quite different models and features. Other examples of oligopoly include the soft drink industry, the computer business, and network television. Breaking into a market characterized by oligopoly can be tough because it typically requires a huge upfront investment.

Comstock Images/Jupiter Images

You could start making tee shirts in your kitchen, for instance, but you'd need a pretty expensive facility to start manufacturing cars. Oligopolies typically avoid intense price competition, since they have nothing to gain—every competitor simply makes less money. When price wars do flare up, the results can be devastating for entire industries.

oligopoly A market structure with only a handful of competitors selling products that can be similar or different. Barriers to entry are typically high.

monopoly A market structure with one producer completely dominating the industry, leaving no room for any significant competitors. Barriers to entry tend to be virtually insurmountable.

natural monopoly A market structure with one company as the supplier of a product because the nature of that product makes a single supplier more efficient than multiple, competing ones. Most natural monopolies are government sanctioned and regulated.

- **Monopoly** is a market structure with just a single producer completely dominating the industry, leaving no room for any significant competitors. Monopolies usually aren't good for anyone but the company that has control since without competition there isn't any incentive to hold down prices or increase quality and choices. Because monopolies can harm the economy, most are illegal according to federal legislation, such as the Sherman Antitrust Act of 1890 and the Clayton Antitrust Act of 1914. Microsoft is the latest example of an industry giant that ran afoul of antimonopoly laws due to its position and policies in the software business. Even though Microsoft is not an actual monopoly, it was convicted of "monopolistic practices" that undermined fair competition.

However, in a few instances, the government not only allows monopolies but actually encourages them. This usually occurs when it would be too inefficient for each competitor to build its own infrastructure to serve the public. A **natural monopoly** arises. Public utilities offer a clear example. Would it really make sense for even a handful of competitors to pipe neighborhoods separately for water? Clearly, that's not practical. Just imagine the chaos! Instead, the government has granted exclusive rights—or monopolies—to individual companies for limited geographic areas and then regulated them (with mixed results) to ensure that they don't abuse the privilege. In addition to natural monopolies, the government grants patents and copyrights, which create artificial monopoly situations (at least temporarily) to encourage innovation.

2-3c Supply and Demand: Fundamental Principles of a Free Market System

In a free market system, the continual interplay between buyers and sellers determines the selection of products and prices available in the economy. If a business makes something that few people actually want, sales will be low, and the firm will typically yank the product from the market. Similarly, if the price of a product is too high, low sales will dictate a price cut. But if a new good or service becomes a hit, you can bet that similar offerings from other firms will pop up almost immediately (unless barriers—such as government-granted patents—prevent new entrants). The concepts of supply and demand explain how the dynamic interaction between buyers and sellers directly affects the range of products and prices in the free market.

SUPPLY **Supply** refers to the quantity of products that producers are willing to offer for sale at different market prices. Since businesses seek to make as much profit as possible, they are likely to produce more of a product that commands a higher market price and less of a product that commands a lower price. Think about it in terms of pizza. Assume it costs a local restaurant about $5 to make a pizza. If the market price for pizza hits, say, $20, you can bet that restaurant will start cranking out pizza. But if the price drops to $6, the restaurant has much less incentive to focus on pizza and will probably invest its limited resources in cooking other, more pricy, dishes.

The relationship between price and quantity from a supplier standpoint can be shown on a graph called the **supply curve**. The supply curve maps quantity on the x-axis (or horizontal axis) and price on the y-axis (or vertical axis). In most categories, as the price rises, the quantity produced rises correspondingly, yielding a graph that curves up as it moves to the right. Exhibit 2.3 shows a possible supply curve for pizza.

DEMAND **Demand** refers to the quantity of products that consumers are willing to buy at different market prices. Since consumers generally seek to get the products they need (or want) at the lowest possible prices, they tend to buy more products with lower prices and fewer products with higher prices. Pizza and tacos, for instance, are both popular meals. But if pizza costs a lot less than tacos, most people will get pizza more often than tacos. Likewise, if the price of pizza were out of hand, people would probably order tacos (or some other option) more often, reserving their pizza-eating for special occasions.

The relationship between price and quantity from a demand standpoint can be shown on a graph called the **demand curve**. Like the supply curve, the demand curve maps quantity on the x-axis and price on the y-axis. But different from the supply curve, the demand curve for most goods and services slopes downward as it moves to the right, since the quantity demanded tends to drop as prices rise. Exhibit 2.4 shows how a demand curve for pizza could look.

EQUILIBRIUM PRICE It's important to remember that supply and demand don't operate in a vacuum. The constant interaction between the two forces helps determine the market price in any given category. In theory, market prices

Exhibit 2.3

Supply Curve

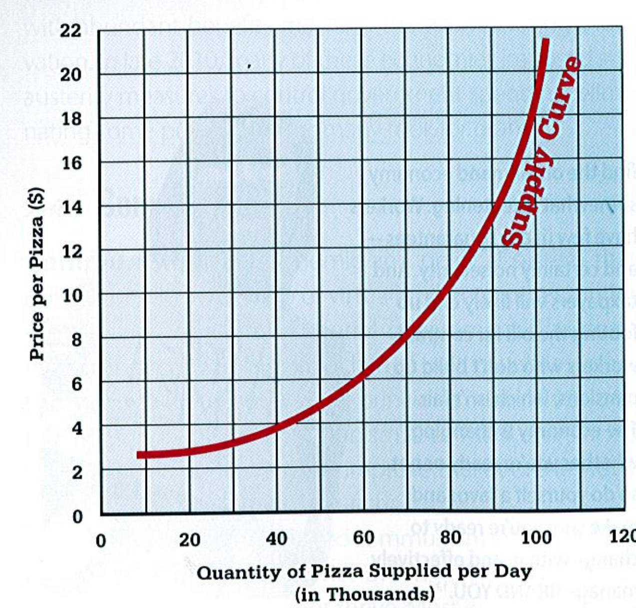


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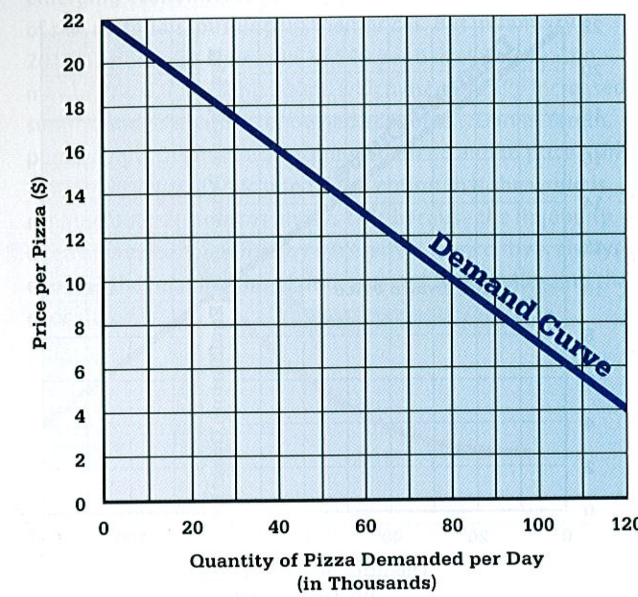
Exhibit 2.4

Demand Curve



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supply The quantity of products that producers are willing to offer for sale at different market prices.

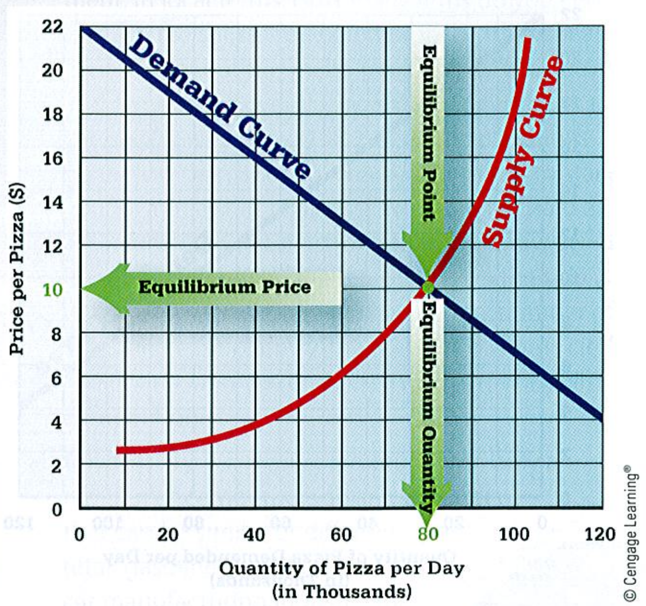
supply curve The graphed relationship between price and quantity from a supplier standpoint.

demand The quantity of products that consumers are willing to buy at different market prices.

demand curve The graphed relationship between price and quantity from a customer demand standpoint.

Exhibit 2.5

Equilibrium



equilibrium price The price associated with the point at which the quantity demanded of a product equals the quantity supplied.

socialism An economic system based on the principle that the government should own and operate key enterprises that directly affect public welfare.

adjust toward the point where the supply curve and the demand curve intersect (see Exhibit 2.5). The price associated with this point of intersection—the point where the quantity demanded equals the quantity supplied—is called the **equilibrium price**, and the quantity associated with this point is called the "equilibrium quantity."

2-4 PLANNED ECONOMIES: SOCIALISM AND COMMUNISM

In capitalist economies, private ownership is paramount. Individuals own businesses, and their personal fortunes depend on their success in the free market. But in planned economies, the government plays a more heavy-handed role in controlling the economy. The two key categories of planned economies are socialism and communism.

2-4a Socialism

Socialism is an economic system based on the principle that the government should own and operate key enterprises that directly affect public welfare, such as utilities, telecommunications, and healthcare. Although the official government goal is to run these enterprises in the best interest of the overall public, inefficiencies and corruption often interfere with effectiveness. Socialist economies also tend to have higher taxes, which are designed to distribute wealth more evenly through society. Tax revenues typically fund services that citizens in free enterprise systems would have to pay for themselves in countries with lower tax rates. Examples range from free childcare to free university education to free public healthcare systems. Critics of the recent government intervention in the U.S. economy believe that the new moves have pushed us too far in a socialist direction.

Most Western European countries—from Sweden, to Germany, to the United Kingdom—developed powerful socialist economies in the decades after World War II. But more recently, growth in these countries has languished. Although many factors have contributed to the slowdown, the impact of high taxes on the profit incentive and lavish social programs on the work incentive has clearly played a role. Potential entrepreneurs may migrate to countries that let them keep more of their profits, and workers with abundant benefits may find themselves losing motivation. In late 2010, many of these economies imposed stiff austerity measures to control government spending, eliminating some public benefits many took for granted.

2-4b Communism

Communism is an economic and political system that calls for public ownership of virtually all enterprises, under the direction of a strong central government. The communist concept was the brainchild of political philosopher Karl Marx, who outlined its core principles in his 1848 *Communist Manifesto*. The communism that Marx envisioned was supposed to dramatically improve the lot of the worker at the expense of the super-rich.

But countries that adopted communism in the 1900s—most notably the former Soviet Union, China, Cuba, North Korea, and Vietnam—did not thrive. Most imposed authoritarian governments that suspended individual rights and choices. People were unable to make even basic choices such as where to work or what to buy. Without the free market to establish what to produce, crippling shortages and surpluses developed. Corruption infected every level of government. Under enormous pressure from their own people and the rest of the world, communism began to collapse across the Soviet Union and its satellite nations. At the end of the 1980s, it was replaced with democracy and the free market. Over the past two decades, China has also introduced significant free market reforms across much of the country, fueling its torrid growth rate. And in the 1990s, Vietnam launched free market reforms, stimulating rapid, sustained growth. The remaining communist economic systems—North Korea and Cuba—continue to falter, their people facing drastic shortages and even starvation.

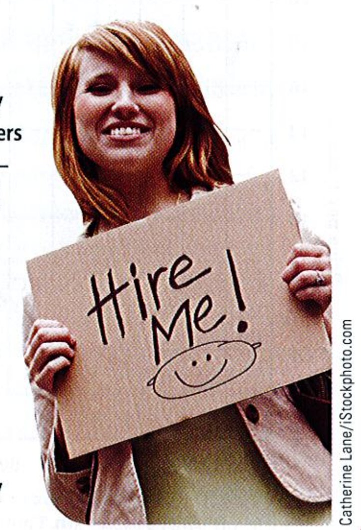
2-5 MIXED ECONOMIES: THE STORY OF THE FUTURE

In today's world, pure economies—market or planned—are practically nonexistent, since each would fall far short of meeting the needs of its citizens. A pure market economy would make insufficient provision for the old, the young, the sick, and the environment. A pure planned economy would not create

communism An economic and political system that calls for public ownership of virtually all enterprises, under the direction of a strong central government.

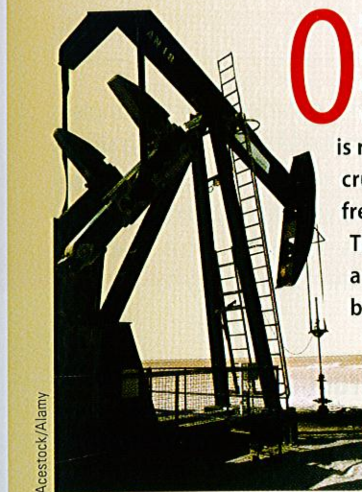
Waste Not, Want Not

Parents and grandparents across the years have counseled their children with this sage advice. Yet somewhat ironically, this same age old wisdom applies to the cutting edge of the on-demand economy, which puts idle resources to work for the benefit of society. If your car just sits in the garage all day, you can put it to use and make some money as an Uber driver, a Lyft driver, or both. If you are lucky enough to own more than one home—rent the extras on Abnb. And if you have spare brain cells, rent them out to do project work in your area of expertise. The options are limitless. The growing on-demand economy is very exciting for workers who value flexibility over security, workers who are ready and able to master multiple skill sets (and keep them updated), and workers who are savvy and skilled about selling themselves via networking and social media. But many others find the on-demand economy somewhat threatening. Workers have few (if any) guarantees—and certainly no security. And taxpayers will likely end up footing the bill for contract workers who don't build up pensions, which isn't fair. The economy is changing, whether you're ready or not, so do yourself a favor and make sure you're ready to change with it, and effectively manage BRAND YOU.[12]



Catherine Lane/iStockphoto.com

"The Sky is Falling! The Sky is Falling!"



Acestock/Alamy

Or is it? Every few years, the popular press and social media reverberate with dire warnings that the world is running out of something crucial—soybeans, chocolate, fresh water, space, oil…yikes! The doomsday warnings create a temporary panic, and then blow over. Take oil, for instance. In 2010, economist Paul Krugman declared, "Peak oil has arrived." We're living in a finite world, in which the rapid growth of emerging economies is placing pressure on limited supplies of raw materials, pushing up their prices. But in January 2015 oil prices hit a new low of $49 per barrel. One reason may be the U.S. fracking boom, which dramatically increased supply. And as another renowned economist, Daniel Yergin, pointed out, "Technology responds to need and to price." *The Wall Street Journal* concluded, "The notion that the world is running out of resources always fails because the ingenuity of entrepreneurs, spurred by necessity and incentive, always exceeds the imagination of doomsayers." So stop hording that chocolate![13]

enough value to support its people over the long term. Instead, most of today's nations have **mixed economies**, falling somewhere along a spectrum that ranges from pure planned at one extreme to pure market at the other.

Even the United States—one of the most market-oriented economies in the world—does not have a *pure* market economy. The various departments of the government own a number of major enterprises, including the postal service, schools, parks, libraries, entire systems of universities, and the military. In fact, the federal government is the nation's largest employer, providing jobs for more than 4 million Americans. And—although the government does not directly *operate* firms in the financial sector—the federal government has become part owner in a number of financial institutions as part of the recent bailouts. The government also intervenes extensively in the free market by creating regulations that stimulate competition and protect both consumers and workers. Regulations are likely to become stronger in the wake of the economic crisis.[14]

Over the past 30 years, most economies of the world have begun moving toward the market end of the spectrum. Government-owned businesses have converted to private ownership via a process called **privatization**. Socialist governments have reduced red tape, cracked down on corruption, and created new laws to protect economic rights. Extravagant human services—from free healthcare to education subsidies—have shrunk. And far-reaching tax reform has created new incentives for both domestic and foreign investment in once-stagnant planned economies.[15]

Unfortunately, the price of economic restructuring has been a fair amount of social turmoil in many nations undergoing market reforms. Countries from France to China have experienced sometimes violent demonstrations in response to social and employment program cutbacks. Change is challenging, especially when it redefines economic winners and losers. But countries that have taken strides toward the market end of the spectrum—from small players such as the Czech Republic, to large players such as China—have seen the payoff in rejuvenated growth rates that have raised the standard of living for millions of people.

mixed economies Economies that embody elements of both planned and market-based economic systems.

privatization The process of converting government-owned businesses to private ownership.

gross domestic product (GDP) The total value of all final goods and services produced within a nation's physical boundaries over a given period of time.

unemployment rate The percentage of people in the labor force over age 16 who do not have jobs and are actively seeking employment.

2-6 EVALUATING ECONOMIC PERFORMANCE: WHAT'S WORKING?

Clearly, economic systems are complex—very complex. So you probably won't be surprised to learn that no single measure captures all the dimensions of economic performance. To get the full picture, you need to understand a range of terms and measures, including gross domestic product, employment level, the business cycle, inflation rate, and productivity.

2-6a Gross Domestic Product

Real **gross domestic product**, or GDP, measures the total value of all final goods and services produced within a nation's physical boundaries over a given period of time, adjusted for inflation. (Nominal GDP does not include an inflation adjustment.) All domestic production is included in the GDP, even when the producer is foreign-owned. The U.S. GDP, for instance, includes the value of Hyundai Sonatas built in Alabama, even though Hyundai is a Korean firm. Likewise, the Indonesian GDP includes the value of Gap clothing manufactured in Indonesian factories, even though Gap is an American firm.

GDP is a vital measure of economic health. Business people, economists, and political leaders use GDP to measure the economic performance of individual nations and to compare the growth among nations. Interestingly, GDP levels tend to be somewhat understated, since they don't include any illegal activities—such as paying undocumented nannies and gardeners, or selling illegal drugs—which can represent a significant portion of some countries' production. The GDP also ignores legal goods that are not reported to avoid taxation, plus output produced within households. In 2014, the GDP of the United states was about $17.42 trillion, reflecting an encouraging +2.4% growth rate versus 2013.[16] Check out Chapter 3 for a survey of the world's key economies according to total GDP and GDP growth rate.

2-6b Employment Level

The overall level of employment is another key element of economic health. When people have jobs, they have money, which allows them to spend and invest, fueling economic growth. Most nations track employment levels largely through the **unemployment rate**, which includes everyone age 16 and older who doesn't have a job and is actively seeking one. The U.S. unemployment rate climbed precipitously through the Great Recession, rising from 5.8% in 2008 to 9.3% in 2009, to then dropping to 8.1% in 2012, as the economy began its glacially slow turnaround. Unemployment didn't move below 8% until September of 2012, and then it dropped slowly throughout 2013 to end the year at an annual average of 7.4% as the recovery began to take hold. Unemployment continued dropping, hitting a low of 5.6% by December 2014. But unfortunately, about half of the 8 million jobs lost during the recession were middle-income jobs, and about half of the new jobs created since have been in low-wage sectors of the economy, leading to stagnant household incomes.[17]

RAISING A CHILD BORN IN 2013 FROM BIRTH TO AGE 17 COSTS ABOUT $245,340 (NOT INCLUDING COLLEGE!)—$304,480 IF YOU INCLUDE PROJECTED INFLATION.

—U.S. DEPARTMENT OF AGRICULTURE

Interestingly, some unemployment is actually good—it reflects your freedom to change jobs. If you have an awful boss, for instance, you may just quit. If you quit, are you unemployed? Of course you are. Are you glad? You probably are, and in normal times, the chances are good that you'll find another position that's a better fit for you. This type of job loss is called *frictional unemployment*, and it tends to be ultimately positive. *Structural unemployment*, on the other hand, is usually longer term. This category encompasses people who don't have jobs because the economy no longer needs their skills. In the United States, growing numbers of workers in the past decade have found themselves victims of structural unemployment as manufacturing jobs have moved overseas. Often their only option is expensive retraining. Two other categories of unemployment are *cyclical*, which involves layoffs during recessions, and *seasonal*, which involves job loss related to the time of year. In some areas of the country, construction and agricultural workers are seasonally unemployed, but the best example may be the department-store Santa who has a job only during the holiday season!

"IT'S A RECESSION WHEN YOUR NEIGHBOR LOSES HIS JOB; IT'S A DEPRESSION WHEN YOU LOSE YOURS."

—U.S. PRESIDENT HARRY TRUMAN

2-6c The Business Cycle

The **business cycle** is the periodic contraction and expansion that occur over time in virtually every economy. But the word "cycle" may be a little misleading, since it implies that the economy contracts and expands in a predictable pattern. In reality, the phases of the cycle are different each time they happen, and—despite the efforts of countless experts—no one can accurately predict when changes will occur or how long they will last. Those who make the best guesses stand to make fortunes, but bad bets can be financially devastating. The two key phases of the business cycle are contraction and expansion, shown in Exhibit 2.6.

- **Contraction** is a period of economic downturn, marked by rising unemployment. Businesses cut back on production, and consumers shift their buying patterns to more basic products and fewer luxuries. The economic "feel-good factor" simply disappears. Economists declare an official **recession** when GDP decreases for two consecutive quarters. A **depression** is an especially deep and long-lasting recession. Fortunately, economies seldom spiral into severe depressions, thanks in large part to proactive intervention from the government. The last depression in the United States was the Great Depression of the 1930s. Whether a downturn is mild or severe, the very bottom of the contraction is called the "trough," as shown in Exhibit 2.6.
- **Recovery** is a period of rising economic growth and increasing employment following a contraction. Businesses begin to expand. Consumers start to regain confidence, and spending begins to rise. The recovery is essentially the transition period between contraction and expansion.

business cycle The periodic contraction and expansion that occur over time in virtually every economy.

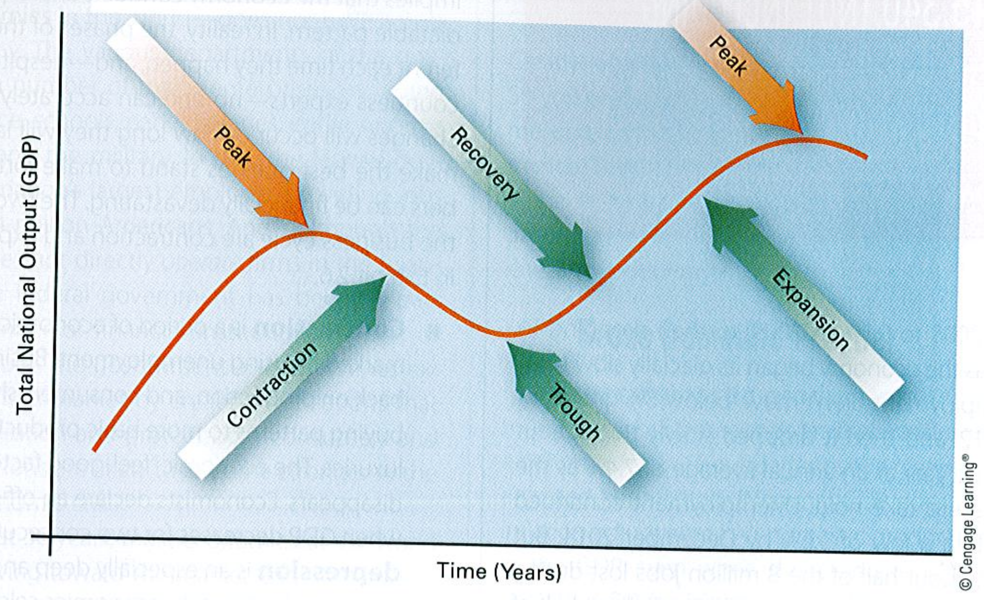
contraction A period of economic downturn, marked by rising unemployment and falling business production.

recession An economic downturn marked by a decrease in the GDP for two consecutive quarters.

depression An especially deep and long-lasting recession.

recovery A period of rising economic growth and employment.

Exhibit 2.6
The Business Cycle



- **Expansion** is a period of robust economic growth and high employment. Businesses expand to capitalize on emerging opportunities. Consumers are optimistic and confident, which fuels purchasing, which fuels production, which fuels further hiring. As Exhibit 2.6 demonstrates, the height of economic growth is called the peak of the expansion. The U.S. economy had the longest growth spurt on record during the ten-year period from 1991 to 2001. After a relatively mild slowdown in 2001–2002, the U.S. economy again expanded for several years before it plunged into a full-blown recession in 2008.[18]

expansion A period of robust economic growth and high employment.

inflation A period of rising average prices across the economy.

hyperinflation An average monthly inflation rate of more than 50%.

disinflation A period of slowing average price increases across the economy.

deflation A period of falling average prices across the economy.

2-6d Price Levels

The rate of price changes across the economy is another basic measure of economic well-being. **Inflation** means that prices, on average, are rising. Similar to unemployment, a low level of inflation is not so bad. It reflects a healthy economy—people have money, and they are willing to spend it. But when the Federal Reserve—the nation's central bank—manages the economy poorly, inflation can spiral out of control, which can lead to **hyperinflation**, when average prices increase more than 50% per month. In Hungary, for example, inflation in its unstable, post–World War II economy climbed so quickly that prices doubled every 15 hours from 1945 to 1946. More recently, prices in the war-torn former Yugoslavia doubled every 16 hours between October 1993 and January 1994.

When the rate of price increases slows down, the economy is experiencing **disinflation**, which was the situation in the United States in the mid-1990s and more recently in the second half of 2008. But when prices actually decrease, the economy is experiencing **deflation**, typically a sign of economic trouble that goes hand-in-hand with very high unemployment. People don't have money and simply won't spend unless prices drop. During the Great Depression in the 1930s, the U.S. economy experienced deflation, with prices dropping 9% in 1931 and nearly 10% in 1932. Despite some economic turmoil, inflation in the United States was relatively low from 2000 to 2007, hovering at around 3%. But inflation picked up in the first half of 2008, only


Twohumans/iStockphoto.com

Many consumers keep careful track of inflation, since it directly impacts their standard of living.

to fall during the first months of the economic crisis, remaining low throughout 2009 and 2010, picking back up to an annual average of 3.2% for 2011, and dropping yet further to an annual average of 1.5% for 2013 and 0.08% for 2014.[19]

The government uses two major price indexes to evaluate inflation: the **consumer price index (CPI)** and the **producer price index (PPI)**. The CPI measures the change in weighted-average price over time in a consumer "market basket" of goods and services that the average person buys each month. The U.S. Bureau of Labor Statistics creates the basket—which includes hundreds of items such as housing, transportation, haircuts, wine, and pet care—using data from more than 30,000 consumers. Although the market basket is meant to represent the average consumer, keep in mind that the "average" includes a lot of variation, so the CPI may not reflect your personal experience. For example, as a college student, you may be painfully sensitive to increases in tuition and the price of textbooks—a fact the authors of this particular textbook fully realize! But tuition and textbook prices aren't a big part of the "average" consumer's budget, so increases in these prices have a relatively small impact on the CPI.

The PPI measures the change over time in weighted-average wholesale prices, or the prices that businesses pay each other for goods and services. Changes in the PPI can sometimes predict changes in the CPI because producers tend to pass on price increases (and sometimes also price decreases) to consumers within a month or two of the changes.

2-6e Productivity

Productivity refers to the relationship between the goods and services that an economy produces and the resources needed to produce them. The amount of output—goods and services—divided by the amount of input (e.g., hours worked) equals productivity. The goal, of course, is to produce more goods and services, using fewer hours and other inputs. A high level of productivity typically correlates with healthy GDP growth, while low productivity tends to correlate with a more stagnant economy.

Over the past couple of decades, the United States has experienced strong productivity growth, due largely to infusions of technology that help workers produce more output, more quickly. But keep in mind that productivity doesn't measure quality. That's why it's so important to examine multiple measures of economic health rather than relying on simply one or two dimensions.

consumer price index (CPI) A measure of inflation that evaluates the change in the weighted-average price of goods and services that the average consumer buys each month.

producer price index (PPI) A measure of inflation that evaluates the change over time in the weighted-average wholesale prices.

productivity The basic relationship between the production of goods and services (output) and the resources needed to produce them (input) calculated via the following equation: output/input = productivity.