



UNIT
4

Macroeconomics: Performance and Stabilization

CHAPTER 12

Macroeconomic Performance

CHAPTER 13

Economic Instability

CHAPTER 14

Money, Banking, and the Fed

CHAPTER 15

Economic Stabilization Policies

Economists like to monitor all ► economic activity, including the productivity of the workers and the output of this aircraft engine plant.





Stewart Cohen/Getty Images



CHAPTER

12

Macroeconomic Performance

Why It Matters

Have you ever thought about what it means when someone is described as “successful”? Is the person wealthy, happy, or well known? Work with a partner and develop a list of the qualities or characteristics for your definition of *successful*. Share your list with the class and listen carefully to what the other students think. Is there a consensus among your classmates? Read Chapter 12 to learn more about how economists assess the success of a nation’s economy by measuring its growth and performance.

The BIG Idea

Economists look at a variety of factors to assess the growth and performance of a nation’s economy.

Busy factories such as this car manufacturing plant are indicators of economic growth.



Economics ONLINE

Chapter Overview Visit the *Economics: Principles and Practices* Web site at glencoe.com and click on *Chapter 12—Chapter Overviews* to preview chapter information.



SECTION

1

Measuring the Nation's Output and Income

GUIDE TO READING

Section Preview

In this section, you will learn how we measure the output and income of a nation.

Content Vocabulary

- macroeconomics (p. 319)
- gross domestic product (GDP) (p. 320)
- intermediate products (p. 321)
- secondhand sales (p. 321)
- nonmarket transactions (p. 321)
- underground economy (p. 321)
- base year (p. 321)
- real GDP (p. 322)
- current GDP (p. 322)
- GDP per capita (p. 322)
- gross national product (GNP) (p. 324)
- net national product (NNP) (p. 324)
- national income (NI) (p. 324)
- personal income (PI) (p. 324)
- disposable personal income (DPI) (p. 324)

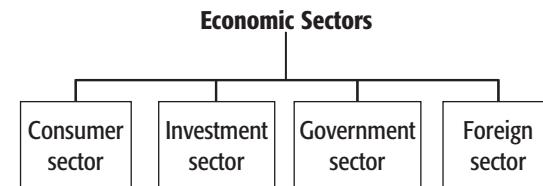
- household (p. 325)
- unrelated individual (p. 326)
- family (p. 326)
- output-expenditure model (p. 327)
- net exports of goods and services (p. 327)

Academic Vocabulary

- excluded (p. 321)
- components (p. 325)

Reading Strategy

Describing As you read the section, complete a graphic organizer like the one below by describing how the different economic sectors contribute to the nation's economic activity.



ISSUES IN THE NEWS

GDP posts smallest gain in 3 years

The nation's economy grew at its slowest pace in three years in the fourth quarter, according to the government's gross domestic product report Friday, which came in far weaker than economists' forecasts.

The broad measure of the nation's economic activity showed an annual growth rate of 1.1 percent in the fourth quarter, down from the 4.1 percent growth rate in the final reading of third-quarter growth. ■

—CNNMoney.com



The report in the news story above may be of little interest to many people, but it was worrisome for economists. When the nation's economic growth rate drops to a meager 1.1 percent, the news is not good. Welcome to **macroeconomics**, the branch of economics that deals with the economy as a whole, using aggregate measures of output, income, prices, and employment.

Gross Domestic Product is one of our most important macro measures and the most important statistic in the National Income and Product Accounts (NIPA). The NIPA keeps track of the nation's production, consumption, saving, and investment. Other key measures exist, and collectively they tell us a great deal about the economic health and performance of our country.

macroeconomics
part of economics that deals with the economy as a whole and uses aggregate measures of output, income, prices, and employment



gross domestic product (GDP)
the dollar value of all final goods, services, and structures produced within a country's national borders during a one-year period (*also see page 9*)

GDP—The Measure of National Output

MAIN Idea GDP measures national output.

Economics and You Did you know that your work may be counted in our GDP? Read on to find out how we measure output.

Gross domestic product (GDP) is our most comprehensive measure of national output. This means that Japanese automobiles produced in Kentucky, Ohio, and Indiana count in GDP even if the owners of the plants live outside the United States. On the other hand, production in U.S.-owned plants located in Mexico, Canada, or other countries is not counted in GDP.

Measuring Current GDP

The measurement of GDP is fairly easy to understand. Conceptually, all we have to do is to multiply all of the final goods

and services produced in a 12-month period by their prices, and then add them up to get the total dollar value of production.

Figure 12.1 provides an example. The first column contains three product categories—goods, services, and structures—used in the NIPA. The third of these categories, structures, includes residential housing, apartments, and buildings for commercial purposes. The total number of final goods and services produced in the year is in the quantity column, and the price column shows the average price of each product. To get GDP, we simply multiply the quantity of each good by its price and then add the results, as is done in the last column of the table.

Of course it is not possible to record every single good and service produced during the year, so government statisticians instead use scientific sampling techniques to estimate the quantities and prices

Figure 12.1 ► Estimating Total Annual Output

ESTIMATING GROSS DOMESTIC PRODUCT				
Product		Quantity (millions)	Price (per 1 unit)	Dollar value (millions)
Goods	Automobiles	6	\$25,000	\$150,000
	Replacement tires	10	\$60	\$600
	Shoes	55	\$50	\$2,700
	...*	...*	...*	...*
Services	Haircuts	150	\$8	\$1,200
	Income tax filings	30	\$150	\$4,500
	Legal advice	45	\$200	\$9,000
	...*	...*	...*	...*
Structures	Single family	3	\$175,600	\$525,000
	Multifamily	5	\$300,000	\$1,500,000
	Commercial	1	\$1,000,000	\$1,000,000
	...*	...*	...*	...*

Note: * ... other goods, services, and structures

Total GDP = \$13.5 trillion

- Gross domestic product is the total dollar value of production within a country's borders in a 12-month period. It can be found by multiplying all of the goods and services produced by their prices, and then adding them up.

Economic Analysis How is the dollar value for each of the products on the table calculated?



of the individual products. To keep the report as current as possible, they estimate GDP quarterly, or every three months, and then revise the numbers for months after that. As a result, it takes several months to discover how the economy actually performed.

Some Things Are Excluded

GDP is a measure of final output. This means that **intermediate products**—goods used to make other products already counted in GDP—are **excluded**. If you buy new replacement tires for your automobile, for example, the tires are counted in GDP because they were intended for final use by the customer and not combined with other parts to make a new product. However, tires on a new car are *not* counted separately because their value is already built into the price of the vehicle. Other goods such as flour and sugar are part of GDP if they are bought for final use by the consumer. However, if a baker buys them to make bread for sale, only the value of the bread is counted.

Secondhand sales—the sales of used goods—are also excluded from GDP because no new production is created when products already in existence are transferred from one owner to another. Although the sale of a used car, house, or compact disc player may give others cash that they can use on new purchases, only the original sale is included in GDP.

Nonmarket transactions—economic activities that do not generate expenditures in the market—also are excluded. For example, GDP does not take into account the value of your services when you mow your own lawn or do your own home repairs. Instead, these activities are counted only when they are done for pay outside



CORNED © 2004 Mike Baldwin. Reprinted with permission of UNIVERSAL PRESS SYNDICATE. All rights reserved.

Underground Economy

Although there is no consensus on the size of the underground economy, estimates suggest that it is between 5 and 15 percent of the recorded GDP.

What activities make up the underground economy?

the home. For this reason, services that homemakers provide are excluded from GDP even though they would amount to billions of dollars annually if actually purchased in the market.

Finally, transactions that occur in the **underground economy**—economic activities that are not reported for legal or tax collection purposes—are not counted in GDP. Some of these activities are illegal, such as those found in gambling, smuggling, prostitution, and the drug trade. Other activities are legal, such as those in flea markets, farmers' markets, garage sales, or bake sales, but they involve cash payments, which are difficult to trace.

Current GDP vs. Real GDP

Because of the way it is computed, GDP can appear to increase whenever prices go up. For example, if the number of automobiles, replacement tires, and other products in Figure 12.1 stays the same from one year to the next while prices go up, GDP will go up every year. Therefore, in order to make accurate comparisons over time, GDP must be adjusted for inflation.

To do so, economists use a set of constant prices in a **base year**—a year that serves as the basis of comparison for all

intermediate products products that are components of other final products included in GDP

secondhand sales sales of used goods not included in GDP

nonmarket transaction economic activity not taking place in the market and, therefore, not included in GDP

underground economy unreported legal and illegal activities that do not show up in GDP statistics

base year year serving as point of comparison for other years in a price index or other statistical measure



real GDP gross domestic product after adjustments for inflation

current GDP gross domestic product measured in current prices, unadjusted for inflation

GDP per capita gross domestic product on a per person basis; can be expressed in current or constant dollars

Skills Handbook

See page R56 to learn about **Understanding Nominal and Real Values.**

other years. For example, if we compute GDP over a period of time using only prices that existed in 2000, then any increases in GDP must be due to changes in the quantity column and cannot be caused by changes in the price column.

This measure is called **real GDP**, or GDP measured with a set of constant base year prices. In contrast, the terms *GDP*, *current dollar GDP*, *nominal GDP*, and **current GDP** all mean that the output in any given year was measured using the prices that existed in those years. Because these prices change from one year to the next, nominal or current GDP is not adjusted for inflation.

When the two series are plotted together, as in **Figure 12.2**, you can see that real GDP grows more slowly than current GDP. The difference in growth rates occurs because current GDP reflects the distortions of inflation. The U.S. Department of Commerce uses 2000 as the base year, so the two series are equal in that year. The U.S. Department of

Commerce updates the base year in four-year increments and will eventually switch to 2004, but only after a substantial lag. Any other year would work just as well.

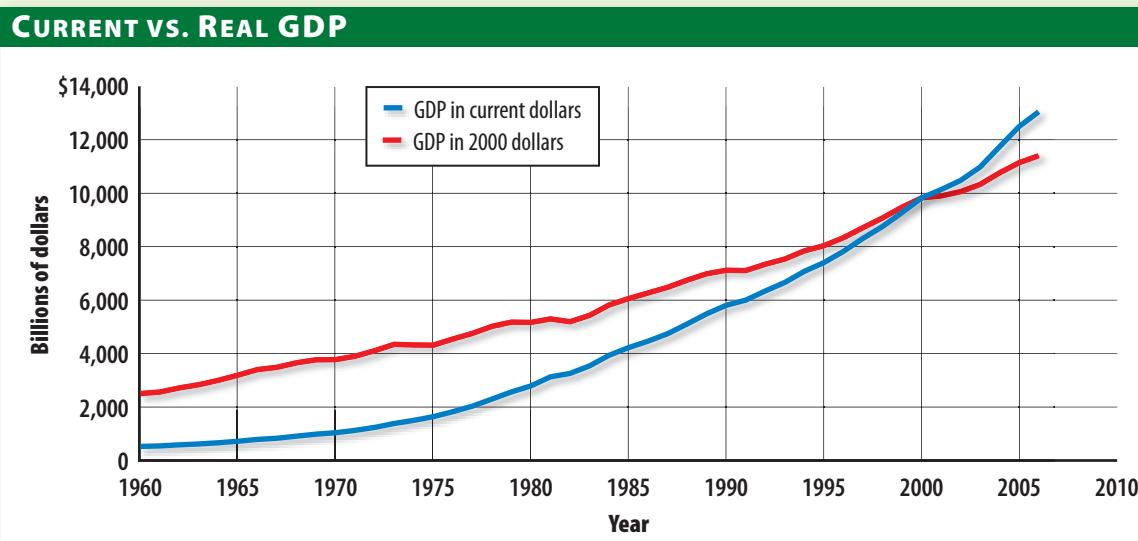
GDP per Capita

There may be times when we want to adjust GDP for population. For example, we may want to see how the economy of a country is growing over time, or how the output of one country compares to that of another. If so, we use **GDP per capita**, or GDP divided by the population, to get the amount of output on a per person basis. Per capita GDP can be computed on a current or constant basis.

Limitations of GDP

Despite GDP's advantages, there are several limitations to keep in mind. First, by itself GDP tells us nothing about the composition of output. If GDP increases

Figure 12.2 ▶ Current GDP and Real GDP



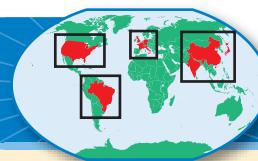
Source: Bureau of Economic Analysis, U.S. Department of Commerce

- ▶ Because prices tend to rise over time, current GDP rises faster than real GDP, which uses a constant set of prices to value the output in every year.

Economic Analysis Which series is distorted by inflation?



The Global Economy & YOU



World GDP

Why should you be concerned about the size of the U.S. economy or that of other countries? A healthy U.S. economy means manufacturing and employment increase, tax revenues go up, and the standard of living improves. When the economies of other countries also do well, they are better able to purchase products that American firms export, which further improves the U.S. economy.

How big is the U.S. economy, and how big is the world economy? One way to find out is to look at GDP. According to economists at the Central Intelligence Agency (CIA), the United States accounted for one out of every five dollars of output produced worldwide in 2005. The 25 countries in the European Union had a GDP only slightly lower. China, the world's third-largest economy, produced 13.7 percent, or more than one-eighth, of total

Country	GDP (in billions)	Percentage of World GDP
United States	\$12,410	20.8%
China	\$8,182	13.7%
Japan	\$3,914	6.6%
India	\$3,699	6.2%
Germany	\$2,454	4.1%
United Kingdom	\$1,869	3.1%
France	\$1,822	3.0%
Italy	\$1,651	2.8%
Brazil	\$1,568	2.6%
European Union	\$12,180	20.4%
World	\$59,590	100.0%

Source: www.cia.gov/cia/publication/factbook/rankorder

world output. This means that GDP for the remaining countries in the world was less than half of world GDP.

by \$10 billion, for example, we know that production is growing and that jobs and income are generated, so we are likely to view the growth as a good thing. However, we might feel differently if we discovered that the extra output consisted of military nerve gas stockpiles rather than new libraries and parks.

Second, GDP also tells little about the impact of production on the quality of life. The construction of 10,000 new homes may appear to be good for the economy. However, if the homes threaten a wildlife refuge, the value of the homes may be viewed differently. In practice, GDP does not take into account quality of life issues, so it is helpful to be aware of such matters to gain a better understanding of GDP.

Finally, some GDP is produced to control activities that give us little utility or satisfaction, thus making GDP even larger. The money spent to fight crime is one example. If we had less crime, our GDP might actually be smaller because of lower government spending to control it—leaving us better off as well.

A Measure of Economic Performance and Well-Being

Even with these minor limitations, GDP is still our best measure of overall economic performance and well-being, because it is a measure of the voluntary transactions that take place in the market. Voluntary transactions occur only when both parties in a transaction think they are better off after they have made it than before. This is one reason why GDP is considered an indicator of our overall economic health.

Changes in GDP even influence national elections. Whenever the economy is growing slowly or contracting, the political party in power usually does not fare as well as it would have during a time of economic growth. Economic growth, as measured by increases in real GDP, means that jobs are plentiful and that incomes are rising. Such economic trends often influence the decisions of voters. As a result, GDP is the single most important economic statistic compiled today.

Reading Check Explaining What does GDP measure, and why is it important?



gross national product (GNP)

total dollar value of all final goods, services, and structures produced in one year with labor and property supplied by a country's residents, regardless of where the production takes place

net national product (NNP)

GNP less depreciation charges for wear and tear on capital equipment

national income (NI)

net national product less indirect business taxes

personal income (PI)

total amount of income going to the consumer sector before individual income taxes are paid

disposable personal income (DPI)

personal income less individual income taxes

GNP—The Measure of National Income

MAIN Idea National income can be measured in a number of different ways

Economics and You Have you ever wondered about the deductions on your pay stub? Read on to find out how your net pay is part of an economic measure.

Whenever business activity creates output, it generates jobs and income for someone. GDP, then, is like a two-sided coin, where one side represents output and the other side an equal amount of income. If we want to see how much output is produced, we look at one side of the coin. If we want to see how much income is generated, we look at the other side of the coin. Economists recognize one major category and several subcategories of national income.

Gross National Product

When economists focus on total income rather than output, they measure it with **gross national product (GNP)**—the dollar value of all final goods, services, and structures produced in one year with labor and property owned by a country's residents. While GDP measures the value of all the final goods and services produced within U.S. borders, GNP measures the income of all Americans, whether the goods and services are produced in the United States or in other countries.

To go from GDP to GNP, we add all payments that Americans receive from outside the United States, then subtract the payments made to all foreign-owned businesses located in the United States. The result, GNP, is the most comprehensive measure of our nation's income.

Net National Product

The second measure of national income is **net national product (NNP)**, or GNP less depreciation. Depreciation is also called

capital consumption allowances. It represents the capital equipment that wore out or became obsolete during the year.

National Income

The third measure in the NIPA is **national income (NI)**. National income is the income that is left after all taxes except the corporate profits tax are subtracted from NNP. Examples of these taxes, also known as indirect business taxes, are excise taxes, property taxes, licensing fees, customs duties, and general sales taxes.

Personal Income

The fourth measure of the nation's total income is **personal income (PI)**—the total amount of income going to consumers before individual income taxes are subtracted. To go from national to personal income, several adjustments must be made. For example, personal income would not include payments into the Social Security fund that working people make. It would include Social Security checks that retired individuals receive.

Disposable Personal Income

The fifth measure of income in the NIPA is **disposable personal income (DPI)**—the total income the consumer sector has at its disposal after personal income taxes. Although it is the smallest measure of income, it is important because it reflects the actual amount of money consumers are able to spend.

At the individual level, a person's disposable income is equal to the amount of money received from an employer after taxes and Social Security have been taken out. When you look at the pay stub that is illustrated in Figure 9.6 on page 248, the disposable personal income consists of the \$586.89 net pay on the check plus the \$3.20 of deductions which the individual chose to make.

Reading Check Summarizing What are the different measures of national income?



Economic Sectors and Circular Flows

MAIN Idea The production of output generates income which flows through different sectors of the economy.

Economics and You Have you ever thought about your role as a consumer? Read on to find out how consumers are part of an economic model.

It helps to think of the economy as consisting of several different parts, or sectors. These sectors receive various **components** of the national income, which they then use

to purchase the total output. These sectors are part of the circular flow of economic activity illustrated in **Figure 12.3**.

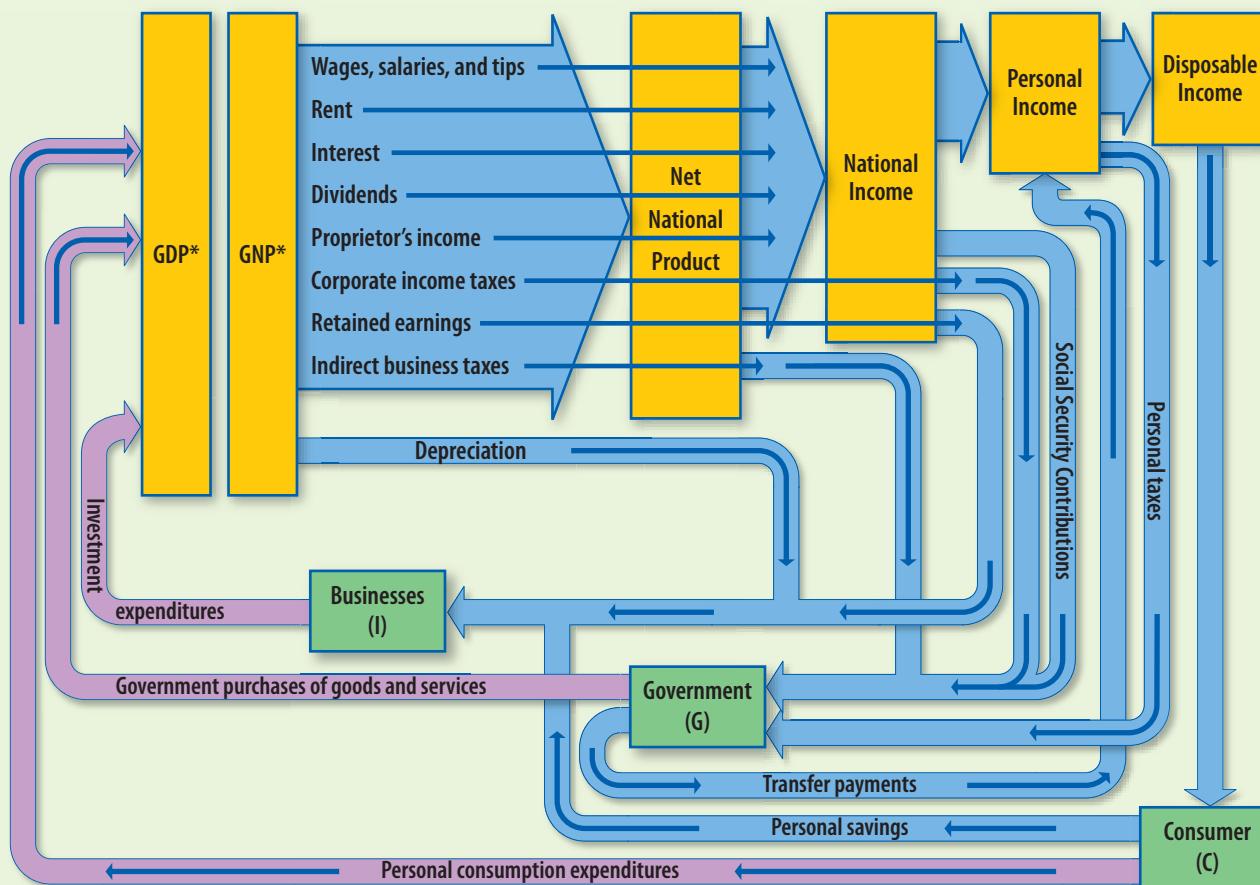
Income generated by production flows to the business, government, and consumer sectors. These sectors then use the income to purchase the nation's output.

household basic unit of consumer sector consisting of all persons who occupy a house, apartment, or separate living quarters

Consumer Sector

The largest sector in the economy is the consumer, or household, sector. Its basic unit, the **household**, consists of all persons who occupy a house, apartment, or room that constitutes separate living quarters.

Figure 12.3 ► Circular Flow of Economic Activity



* GNP equals GDP in a closed economy.

- Income generated by production flows to the business, government, and consumer sectors. These sectors then use the income to purchase the nation's output.

Economic Analysis *What is the difference between national income and personal income?*

Charts In MOTion

See StudentWorks™ Plus
or glencoe.com.



Investment Sector

Businesses such as this auto manufacturer that produce the nation's output are included in the investment sector.

What other sectors are part of the circular flow of economic activity?



unrelated individual

person living alone even though that person may have relatives living elsewhere

family

two or more persons living together who are related by blood, marriage, or adoption

Households include related family members and all others—such as lodgers, foster children, and employees—who share the living quarters.

A household also can consist of an **unrelated individual**—a person who lives alone even though he or she may have family living elsewhere. Finally, we have the **family**—a group of two or more persons related by blood, marriage, or adoption who are living together in a household.

The consumer sector, shown as C in Figure 12.3, receives its income in the form of disposable personal income. This is the income that is left over after all of the depreciation, business and income taxes, and FICA payments are taken out, and after any income received in transfer payments is added back in.

Investment Sector

The next sector of the macro economy is the business, or investment, sector, which is labeled I in Figure 12.3. This sector is made up of proprietorships, partnerships, and corporations that are responsible for producing the nation's output. The income of this sector comes from the retained earnings—the profits not paid out to owners—

that are subtracted from NI and the depreciation or capital consumption allowances that are subtracted from GNP.

Government Sector

The third sector is the public sector, which includes all local, state, and federal levels of government. Shown as G in Figure 12.3, this sector receives its income from indirect business taxes, corporate income taxes, Social Security contributions, and individual income taxes.

Foreign Sector

The fourth sector of the macro economy is the foreign sector. Although not shown in Figure 12.3, it includes all consumers and producers outside the United States.

This sector does not have a specific source of income. Instead, it represents the difference between the dollar value of goods sent abroad and that of goods purchased from abroad, identified as $(X - M)$. If the two are reasonably close, the foreign sector appears to be small, even when large numbers of goods and services are traded.

Reading Check **Contrasting** How do households and families differ?



The Output-Expenditure Model

MAIN Idea The output-expenditure model is used to explain aggregate economic activity.

Economics and You Have you learned in math class how to write a problem as an equation? Read on to learn how this can be done in economics.

The circular flow can be represented by the **output-expenditure model**. This macroeconomic model shows how GDP is equal to the sum of aggregate demand by the consumer, investment, government, and foreign sectors. When written as

$$GDP = C + I + G + (X - M)$$

the equation becomes a formal output-expenditure model used to explain and analyze the economy's performance.

According to this model, the consumer sector spends its income on the goods and services used by households. These personal consumption expenditures include groceries, rent, and almost anything else people buy. Income that is not spent appears as personal saving, which is borrowed by the business and government sectors.

The investment, or business, sector spends its income on labor, factories, equipment, inventories, and other investment goods. These expenditures include the total value of capital goods created in the economy during the year.

The government sector spends its income on many categories, including national defense, income security, interest on the national debt, health care, and roads. The only major government expenditure not included in total output is transfer payments, because this money is diverted for use by others to buy goods and services.

The foreign sector also buys many U.S. goods—such as tractors, airplanes, and agricultural products—and services—such as insurance—that make up our GDP. In return, it supplies products—such as Japanese cars, Korean steel, and Brazilian shoes—to U.S. consumers. For this reason, the foreign sector's purchases are called **net exports of goods and services**. They are abbreviated as $(X - M)$ to reflect the difference between exports and imports.

output-expenditure model

macroeconomic model describing aggregate demand by the consumer, investment, government, and foreign sectors

net exports of goods and services

net expenditures by the foreign sector; equal to total exports less total imports

SECTION

1

Review

Vocabulary

1. **Explain** the significance of macroeconomics, gross domestic product, intermediate products, secondhand sales, nonmarket transactions, underground economy, base year, real GDP, current GDP, GDP per capita, gross national product, net national product, national income, personal income, disposable personal income, household, unrelated individual, family, output-expenditure model, and net exports of goods and services.

Main Ideas

2. **Comparing** Use a graphic organizer like the one below to compare GDP and GNP.



3. **Stating** What is the circular flow of economic activity?

Critical Thinking

4. **The BIG Ideas** Explain why GDP is important to economists.

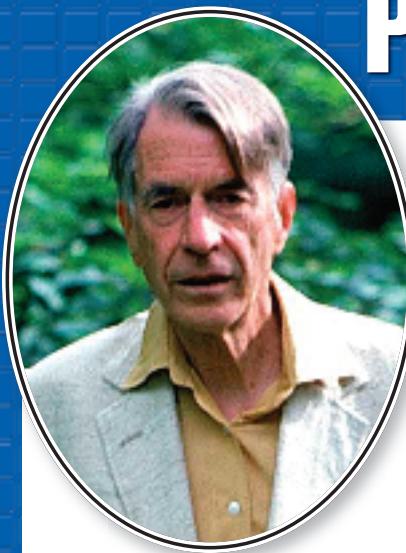
5. **Synthesizing Information** Describe the limitations of GDP.

6. **Analyzing Visuals** Use Figure 12.3 on page 325 to describe how your personal spending and saving contribute to the circular flow of economic activity.

7. **Drawing Conclusions** What would be the effects of a decline in GDP?

Applying Economics

8. **Gross Domestic Product** What effect do you think the computer industry has had on GDP? Use examples.



Profiles in Economics

John Kenneth Galbraith (1908–2006)

- advocated public works funding in *The Affluent Society*
- served as economic adviser to five presidents

Iconoclast Economist

Shaped by his experiences during the Great Depression, John Kenneth Galbraith believed in the government's ability to solve problems. Early in his career, he also developed a love of writing and an engaging, witty style. This turned the Harvard professor of economics into the most widely read American economist of his generation and turned his books into bestsellers.

Galbraith developed a reputation as an iconoclast—a person willing to challenge accepted belief. Other economists objected to the liberal ideas Galbraith promoted. For example, in his classic *The Affluent Society*, Galbraith argued that Americans needed to reconsider their values. The U.S. economy had resulted in individual wealth, while public projects such as education and highways were neglected or underfunded. According to Galbraith, Americans were "artificially affluent" because corporations convinced people to buy goods they did not want or need. Government regulation of prices on certain goods would steer Americans away from spending and help them refocus on more important matters, such as attaining an education or appreciating culture.

Presidential Influence

Unlike most other economists, Galbraith was able to apply his economic theories in the social and political arenas. As an adviser to presidents Franklin Roosevelt, Harry Truman, John Kennedy, Lyndon Johnson, and Bill Clinton, Galbraith was a major force in directing the Democratic Party's economic platform. Under President Roosevelt, he administered wage and price controls in the Office of Price Administration. His most direct influence, though, is reflected in President Johnson's "war on poverty," which incorporated many of Galbraith's ideas, and increased funding for public works projects.

Examining the Profile

- 1. Making Inferences** Which viewpoint made Galbraith an iconoclast to other economists?
- 2. Drawing Conclusions** How might living through the Great Depression lead to liberal economic thought?

SECTION
2

Population and Economic Growth

GUIDE TO READING

Section Preview

We are interested in population because it makes up the economy's largest sector, the consumer sector, and affects the economic performance of a nation.

Content Vocabulary

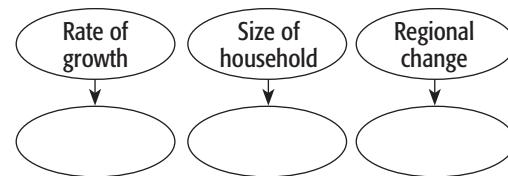
- census (*p. 329*)
- urban population (*p. 330*)
- rural population (*p. 330*)
- center of population (*p. 331*)
- infrastructure (*p. 332*)
- baby boom (*p. 332*)
- population pyramid (*p. 333*)
- dependency ratio (*p. 333*)
- demographers (*p. 334*)
- fertility rate (*p. 334*)
- life expectancy (*p. 334*)
- net immigration (*p. 334*)

Academic Vocabulary

- residence (*p. 329*)
- projected (*p. 334*)

Reading Strategy

Identifying As you read the section, complete a graphic organizer like the one below by identifying changes in the United States in the listed categories.



ISSUES IN THE NEWS

—U.S. Census Bureau

Census Bureau Selects Sites for Census Dress Rehearsal

San Joaquin County, Calif., and the city of Fayetteville, N.C., and surrounding area . . . have been selected by the U.S. Census Bureau to serve in 2008 as the dress rehearsal sites for the 2010 Census. . . .

San Joaquin County [is] an urban location with a multilingual population and an assortment of group quarters housing such as hospitals, college residence halls, nursing homes, prisons and facilities for the homeless. . . .

The Fayetteville site [has] a mix of . . . urban, suburban and rural areas and has two military bases (Fort Bragg and Pope Air Force Base). ■



Population is important for a number of reasons. First, a country's population is the source of its labor, one of the four factors of production. Second, the population is the primary consumer of the nation's output and has a direct effect on how much is produced. Because of this, the size, composition, and rate of growth of a country's population has an impact on macroeconomic performance.

The Constitution of the United States requires the government to periodically take a **census**, an official count of all people living in the United States, including their place of **residence**. Because the official census occurs every 10 years, it is called the decennial census. As you can see in the news story, the U.S. Census Bureau begins making plans for the decennial census several years ahead of time.

census complete count of population, including place of residence



urban population

those persons living in incorporated cities, towns, and villages with 2,500 or more inhabitants

rural population

those persons not living in urban areas

Population in the United States

MAIN Idea The country's population has shifted from a fast-growing, mostly rural population to a slower-growing, mostly urban one.

Economics and You Have you ever wondered how we know the size of the U.S. population? Read on to learn how it is measured.

One of the original uses of the census was to apportion the number of representatives that each state elects to Congress. Ever since, the census has given us a wealth of data about our nation, and we even use it to make projections into the future.

Census Some census workers interview a select group of people in person. **How are census data used?**



to do the counting. In 1902, Congress permanently established the U.S. Census Bureau. Today, the Bureau works year-round, conducting monthly surveys relating to the size and other characteristics of the population.

When the Census Bureau conducted the last decennial census, it used the household as its primary survey unit. In this census, about five in every six households received a "short form," which took just a few minutes to fill out. The remaining households received a "long form," which included more questions and served to generate a more detailed profile of the population. Bureau employees also used different methods to count special groups, such as homeless persons, who do not normally conform to the household survey unit.

The Census Bureau tabulates and presents its data in a number of ways. One such classification considers the size of the **urban population**—people living in incorporated cities, villages, or towns with 2,500 or more inhabitants. The **rural population** makes up the remainder of the total, including those persons who live in sparsely populated areas along the fringes of cities.

Historical Growth

The population of the United States has grown considerably since colonial times. The rate of growth, however, has slowly declined. Between 1790 and 1860, the population grew at a compounded rate of about 3.0 percent a year. From the beginning of the Civil War until 1900, the average fell to 2.2 percent. From 1900 to the beginning of World War II, the rate dropped to 1.4 percent. The rate of increase declined slowly but steadily after that, and today the rate of population growth is less than 1.0 percent annually.

The census also shows a steady trend toward smaller households. During colonial times, household size averaged about 5.8 people. By 1960, the average had fallen to 3.3 and today is about 2.6 people. The figures reflect a worldwide trend toward



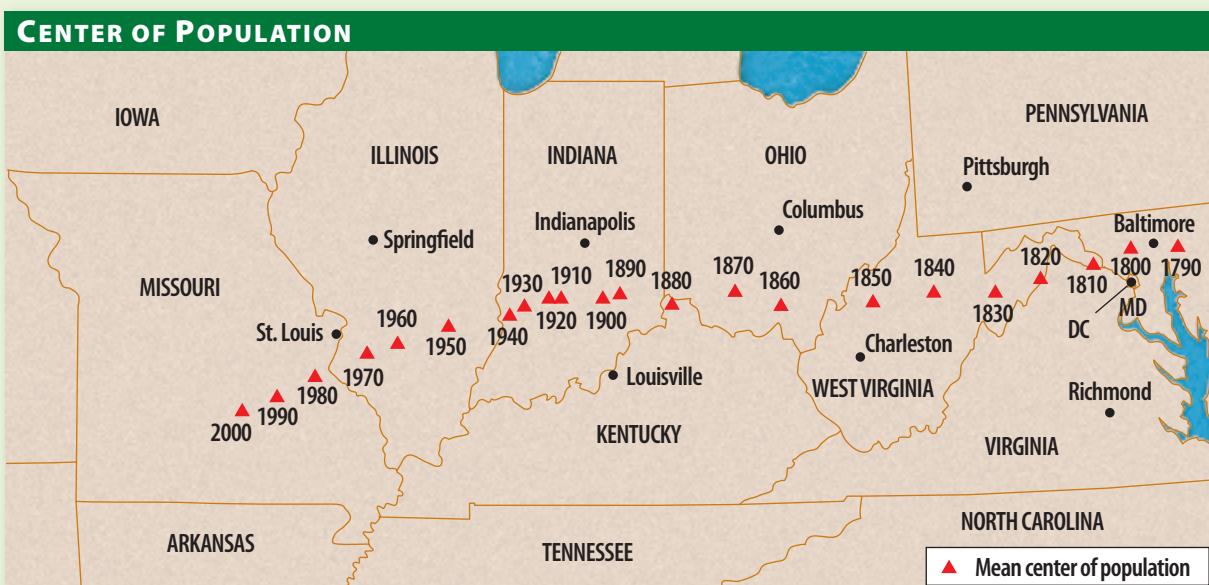
Figure 12.4 ▶ Center of Population, 1790–2000

Maps In Motion

See StudentWorks™ Plus or glencoe.com.

- The center of population is the point where the country would balance if the map were flat and every person weighed the same.

Economic Analysis *Why has the center moved since the first census was conducted in 1790?*



Source: U.S. Census Bureau

smaller families in industrialized countries. The figures also show that more individuals are living alone today than ever before.

Regional Change

An important population shift began in the 1970s with a migration to the western and southern parts of the United States. These regions have grown quite rapidly, while most of the older industrial areas in the North and East have grown more slowly or even lost population. As people have left the crowded, industrial Northeast for warmer, more spacious parts of the country, the population in states such as Nevada, Arizona, Colorado, Utah, Idaho, Georgia, and Florida has been increasing steadily.

Another indicator of population shift is the **center of population**—the point where the country would balance if it could be laid flat and everyone weighed the same.

In 1790, the center was 23 miles east of Baltimore, Maryland. Since then, as you can see in **Figure 12.4**, it has moved farther west. By the 2000 decennial census, the center of population had reached a point about 2.8 miles east of Edgar Springs, Missouri.

center of population point where the country would balance if it were flat and everyone weighed the same

Consequences of Growth

Changes in population can distort some macroeconomic measures like GDP and GNP. As a result, both measures are often expressed on a per capita, or per person, basis. One result is GDP per capita, which is determined by dividing GDP by the population. GDP per capita is especially useful when making comparisons between countries.

Population growth can have several consequences. If a nation's population grows faster than its output, per capita output grows more slowly, and the country could



Urban Sprawl

When the population grows, it results in heavier traffic. **What are other effects of population growth?**



Economics ONLINE

Student Web Activity Visit the *Economics: Principles and Practices* Web site at glencoe.com and click on *Chapter 12—Student Web Activities* for an activity about population trends.

infrastructure

the highways, mass transit, communications, power, water, sewerage, and other public goods needed to support a population

baby boom

historically high birthrate years in the United States from 1946 to 1964

end up with more mouths than it can feed. On the other hand, if a nation's population grows too slowly, there may not be enough workers to sustain economic growth. In addition, a growing population puts more demand on resources.

When a growing population shifts toward certain areas, such as cities or suburbs, it puts different pressures on existing resources. In Atlanta, Georgia, for example, urban sprawl and traffic congestion have become major problems. In heavily populated areas of Arizona, Nevada, and southern California, adequate supplies of fresh water have become concerns.

Because it takes a long time to plan and construct a country's **infrastructure**—the highways, levees, mass transit, communications systems, electricity, water, sewer, and other public goods needed to support a population—we need to pay attention to future population trends. If we neglect them, even modest shifts in the population can cause enormous problems in the future.

Reading Check Explaining What have been the major population changes since the first census in 1790?

Projected Population Trends

MAIN Idea Fertility, life expectancy, and net immigration influence population trends.

Economics and You Have you considered how immigration affects population growth? Read on to learn how the U.S. population is expected to change.

Population trends are important to many groups. Political leaders watch population shifts to see how voting patterns may change. Community leaders are interested because changes in local population affect services such as sanitation, education, and fire protection. Businesses use census data to help determine markets for products and sales territories.

Age and Gender

When making its projections, the Census Bureau assumes that the aging generation of baby boomers will drive many characteristics of the population. People born during the **baby boom**, the high birthrate years from 1946 to 1964, make up a sizable portion of the current population. As



shown in **Figure 12.5**, people born during this time span created a significant bulge in the **population pyramid**, a type of bar graph that shows the breakdown of population by age and gender.

The bulge in the middle of the pyramid represents the baby boomers. A second, minor bulge represents the children born to the baby boom generation. As years pass, more births add to the bottom of the pyramid and push earlier groups upward into higher age brackets.

Eventually, the baby boomers will reach their retirement years and want to collect pensions, Social Security, and Medicare benefits. Because most of these payments are transfer payments, they will place a heavy burden on the younger and relatively smaller working population. The burden becomes evident with changes in the **dependency ratio**—the number of children and elderly people in the population for every 100 persons in the working-

age bracket of ages 18 through 64. The dependency ratio was 63.9 in 1998, but according to Census Bureau projections, it will rise to 67.5 by 2020, to 77.5 by 2030, and to 78.0 by 2040.

Finally, if you compare the left side of the population pyramid with the right, you will see that women tend to outlive men. Separate population pyramids can also be created for any racial or ethnic group.

Race and Ethnicity

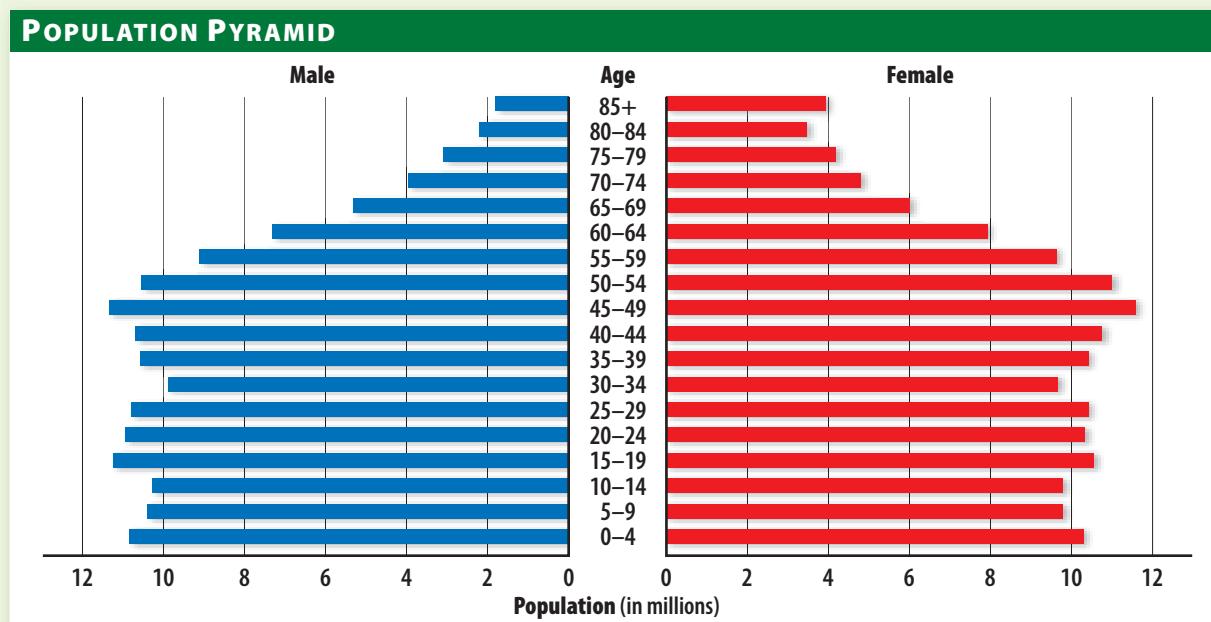
The Census Bureau also makes projections for racial and ethnic groups. In 2000, whites were the largest component of the total population. The numbers of African Americans, Hispanic Americans, Asian Americans, and Native Americans followed in that order.

Differences in fertility rates, life expectancies, and immigration rates will change the racial statistics dramatically in the future. By 2050, the Asian and Hispanic

population pyramid diagram showing the breakdown of population by age and gender

dependency ratio number of children and elderly people in the population for every 100 persons in the 18 to 64 working-age bracket

Figure 12.5 ▶ Projected Distribution of the Population by Age and Gender, 2010



Source: U.S. Census Bureau, International Data Base.

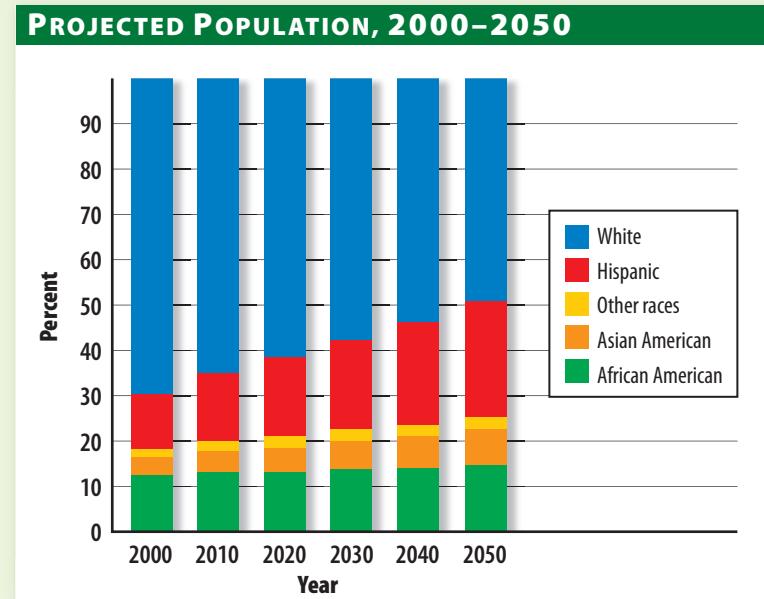
- ▶ Population pyramids are one way to show the distribution of population. In this pyramid, the population is divided by age and gender.

Economic Analysis *To which age bracket do most males belong? Most females?*



Figure 12.6 ▶

Projected Change in U.S. Population by Race and Ethnic Origin, 2000–2050



Source: U.S. Census Bureau.

demographer

person who studies growth, density, and other characteristics of the population

fertility rate

number of births that 1,000 women are expected to undergo in their lifetime

life expectancy

average remaining life span in years for persons who attain a given age

net immigration

net population change after accounting for those who leave as well as enter a country

portions of the population are expected to nearly double. The number of African Americans will also increase. The white non-Hispanic population is expected to remain a majority of the total population at just over 50 percent. **Figure 12.6** shows how the Census Bureau projects the ethnic makeup of the U.S. population to change over the next few decades.

Population Growth

According to **demographers**—people who study the growth, density, and other characteristics of population—three major factors affect population growth. These factors are fertility, life expectancy, and net immigration levels.

The **fertility rate** is the number of births that 1,000 women are expected to undergo in their lifetime. A fertility rate of 2,119, for example, translates to 2.119 births per woman. According to the Bureau of the Census, this rate is **projected** as the most likely fertility rate for the United States. That rate is barely above the replacement

population rate—the rate at which the number of births in a population offsets the number of deaths and the size of the population neither increases nor decreases.

This was not always the case. In the late 1800s and early 1900s, Americans tended to have large families. In the days before modern machines and appliances, the work of maintaining a home and family and earning a living was difficult and time-consuming. Children were needed to do household chores, work on family farms, and bring in additional money from outside jobs. Later, as life became mechanized and fewer people lived on farms, having large families became less important. As a result, the nation's birthrate dropped steadily throughout the last century.

The second factor, **life expectancy**, is the average remaining life span of a person who has reached a given age. The Bureau of the Census predicts that life expectancy at birth will go from about 75.9 years today to 82.1 years by 2050.

The third factor is **net immigration**—the overall change in population caused by



people moving into and out of the country. The Census Bureau recently estimated a constant net immigration of about 880,000 per year. This figure is based on 1,040,000 immigrants—those entering the country—and 160,000 emigrants—those leaving the country—in the future.

Taking into account these three factors, analysts expect the rate of population growth in the United States to continue to decline. The growth rate, already below 1 percent today, is likely to decrease further until the year 2050. At that time, the resident United States population is expected to be about 420 million people.

Future Population Growth

Most of the demographic factors examined in this section point to a population that is likely to grow more slowly in the future. While this may seem like a matter for concern, it is important to note that increases in productivity can easily offset the negative effects of declining population

growth. If slightly fewer people produce significantly more on average, then total output will continue to grow.

The larger concern is the age composition of the future population. As the population matures, a greater percentage of people reach retirement age. This will cause an increase in the demand for medicines, medical facilities, retirement homes, and other products that are needed for the retired and the elderly. At the same time, there may be a declining need for schools, playgrounds, and other facilities as the young become a smaller percentage of the population.

These changes tend to be gradual, and their impact on the economy can be anticipated with some degree of certainty. As you learned in Chapter 2, one of the major advantages of a market economy is that it accommodates change with the least amount of disruption of daily life.

✓ **Reading Check Summarizing** Why is the rate of population growth declining?

Skills Handbook

See page R47 to learn about **Making Predictions**.

SECTION

2

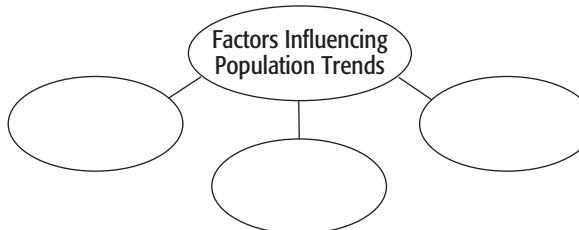
Review

Vocabulary

1. **Explain** the significance of census, urban population, rural population, center of population, infrastructure, baby boom, population pyramid, dependency ratio, demographers, fertility rate, life expectancy, and net immigration.

Main Ideas

2. **Explaining** How does the rate of population growth affect economic growth?
3. **Listing** Use a graphic organizer like the one below to list the three most important factors that determine future population.

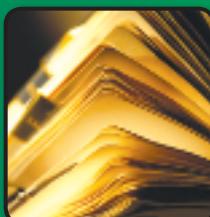


Critical Thinking

4. **The BIG Idea** How can the projection of population trends help determine the direction of economic development?
5. **Drawing Conclusions** How will the retirement of baby boomers affect your generation? How do you think the baby boomers will feel about this?
6. **Determining Cause and Effect** What special demands does a high birthrate put on a nation's economy?
7. **Analyzing Visuals** Look at the photograph of traffic congestion on page 332. What effect does urban sprawl have on the city of Atlanta? What could the city do to alleviate the problem?

Applying Economics

8. **Population Growth** Search your local newspaper for articles related to population issues. Summarize the population-related problems affecting your community, and assess the local or state government's solutions.



CASE STUDY

Falabella Flourishes

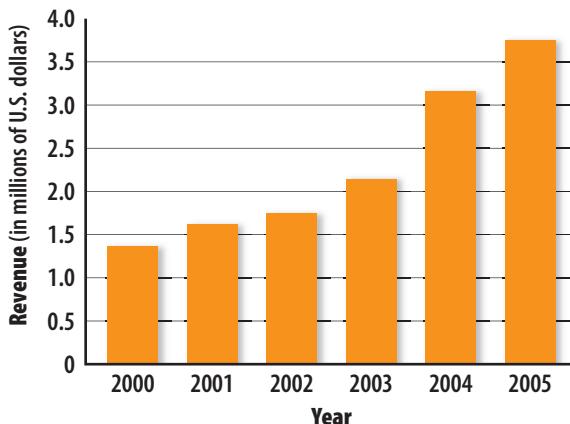
Chilean Retail Giant

Latin American countries have experienced tremendous population growth. Yet this alone does not guarantee business success, because it is hard to get people to buy your products when they have very little money to spend. Big-name foreign companies, such as Sears and J.C. Penney, have called it quits in Chile because of this roadblock. A domestic retail company, however, has found a highly successful way around it.

Tailored to Consumers

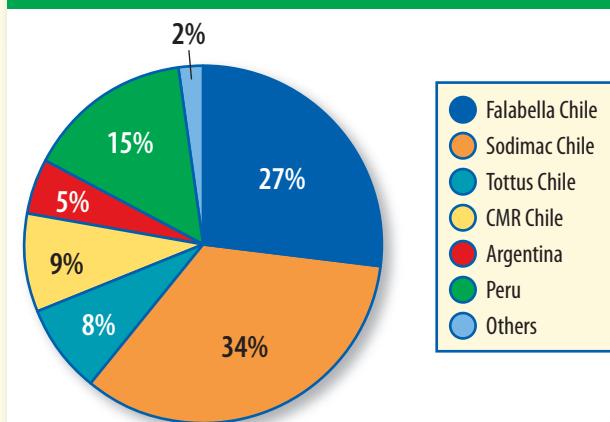
Chile's S.A.C.I. Falabella began in 1889 as a small tailor shop and has since grown to become the largest department store chain in Chile and one of the largest in South America. Falabella's strategy for growth is simple: find a way to satisfy consumers' needs. In 1980, Falabella created CMR—its own credit card. Today, the CMR card, issued to more than 4 million people in Chile, Peru, Argentina, and Colombia, is the most widely used credit card in Chile. As an added incentive for frequent CMR users, Falabella offers rewards in the form of cellular phone minutes. Customers can even charge a cellular account directly to their card.

FALABELLA REVENUE



Source: Falabella

REVENUE COMPOSITION



Source: Falabella

Diversify, Diversify

Despite great success with the CMR card, the department store did not realize its potential for growth until it expanded and diversified. Falabella opened stores in neighboring Argentina and Peru, acquired a large share of ownership in The Home Depot Chile, and purchased the home improvement chain Sodimac. Building on these successes, it created a travel agency and an insurance brokerage, then built a chain of Tottus super stores called hypermarkets.

To help all financial aspects of the company work together smoothly, the company added a financial division with the new Banco Falabella (Falabella Bank). This explosive growth has nearly tripled the number of Falabella-owned stores, and they all accept the CMR card.

Analyzing the Impact

- 1. Summarizing** What services does Falabella provide?
- 2. Making Inferences** Why has Falabella succeeded where others have failed?



**SECTION
3**

Poverty and the Distribution of Income

GUIDE TO READING

Section Preview

In this section, you will learn about the factors that contribute to income inequality and the programs that have been implemented to reduce poverty.

Content Vocabulary

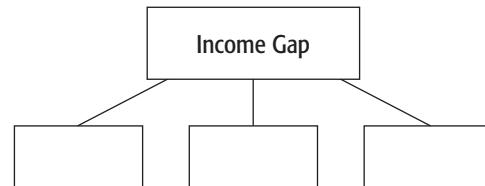
- poverty threshold (p. 338)
- poverty guidelines (p. 338)
- Lorenz curve (p. 339)
- welfare (p. 342)
- food stamps (p. 342)
- Medicaid (p. 343)
- Earned Income Tax Credit (EITC) (p. 343)
- enterprise zone (p. 344)
- workfare (p. 344)
- negative income tax (p. 344)

Academic Vocabulary

- impact (p. 340)
- uniform (p. 342)

Reading Strategy

Outlining As you read the section, complete a graphic organizer similar to the one below by outlining three explanations for a growing income gap.



ISSUES IN THE NEWS

—Toledo Blade

Need for Food Help Is Growing

Once believed to affect only the homeless or unemployed, hunger in America has taken on a new face: the working poor. According to a new nationwide study, more than 25 million Americans seek emergency food assistance each year. In the Toledo area, nearly 297,000 visits were made by people seeking help from a local food distribution agency last year.

Nearly 26 percent of those local clients had at least one adult working in the family.

The study, called "Hunger in America 2006," shows hunger has become an issue for even those with jobs. "What is really telling about this study is that such a large number of clients we're serving have at least one adult working," said Maura Daly, director of the study. "It's difficult to imagine that people who have a job are coming home at the end of the day and have to make choices between food and other basic necessities like rent, utilities, or medicine." ■



In the world today, poverty can be viewed as an indicator of macroeconomic performance. Unfortunately, about one person in eight in the United States lives in poverty despite several years of solid economic growth. As you can read in the news story, this number includes people who hold jobs

but do not earn enough money to fully support their families.

Governments on all levels have initiated programs to reduce poverty. Before we discuss these programs, however, we must first understand how poverty is defined and measured.



poverty threshold

annual dollar income used to determine the number of people in poverty

poverty guidelines

administrative guidelines used to determine eligibility for certain federal programs

Poverty

MAIN Idea A portion of the U.S. population lives in poverty, and the gap in the distribution of income is widening every year.

Economics and You Have you ever thought about what it would be like to be either very rich or very poor? Read on to find out how income is distributed in the United States.

Poverty is a relative measure that depends on prices, the standard of living, and the incomes that others earn. What may seem like poverty to one person may seem like riches to another, so we first need to understand how poverty is defined.

Defining Poverty

People are classified as living in poverty if their incomes fall below a predetermined level, or threshold. The **poverty threshold** is the benchmark used to evaluate the income that people receive. If they have incomes below the threshold, they are considered to be in poverty even if they have supplements such as food stamps, subsidized housing, and Medicaid.

The Social Security Administration developed the thresholds in 1964 using two studies done by the U.S. Department of Agriculture in the 1950s. The first study developed four alternative but nutritionally adequate food plans for individuals and families of different sizes. The least expensive food plan was then selected as the food budget that would keep people out of poverty.

The second study found that families typically spend one-third of their total income on food. To obtain the threshold, the Social Security Administration simply took the least expensive food budget of the four food plans and multiplied it by three. Today the thresholds are adjusted upward every year by an amount just enough to offset increases in inflation.

For administrative purposes, the poverty thresholds are then simplified to appear as **poverty guidelines**, or administrative guides used to determine eligibility for certain federal programs such as the Food Stamps Program and Head Start. **Figure 12.7** shows the guidelines that had been established for two recent years.

Figure 12.7 ►

Poverty Guidelines

- The table lists the poverty guidelines for families of different sizes for two recent years. Families and households with incomes below the official poverty guidelines are eligible for certain federal programs.

Economic Analysis *How are the poverty guidelines used today?*

Persons in Family or Household	2005	2006
1	\$9,570	\$9,800
2	12,830	13,200
3	16,090	16,600
4	19,350	20,000
5	22,610	23,400
6	25,870	26,800
7	29,130	30,200
8	32,390	33,600
For each additional person, add	3,260	3,400

Source: *Federal Register*



Figure 12.8 ▶ The Distribution of Income

► Panel A shows the rankings of all household income for two separate years. When the 2004 data are plotted in Panel B, the curve shows the cumulative income from the lowest to the highest quintiles. Because incomes are not distributed evenly among households, the Lorenz curve is not a diagonal line.

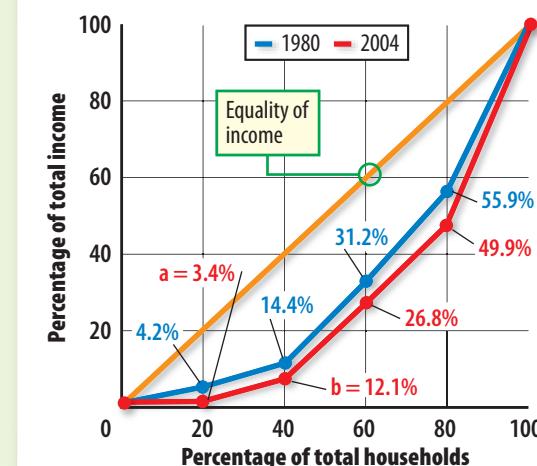
Economic Analysis *What percentage of income is received by the richest quintile in 1980? In 2004?*

A HOUSEHOLD INCOME RANKED BY QUINTILES			
	1980	2004	
	Quintiles	Quintiles	Cumulative
Lowest fifth	4.2%	3.4%	3.4%
Second fifth	10.2%	8.7%	12.1%
Third fifth	16.8%	14.7%	26.8%
Fourth fifth	24.7%	23.1%	49.9%
Highest fifth	44.1%	50.1%	100.0%
Top 5 percent	16.5%	21.8%	

Graphs In Motion

See StudentWorks™ Plus or glencoe.com.

B THE LORENZ CURVE



Source: U.S. Census Bureau.

Distribution of Income

In addition to determining the actual number of people in poverty, economists are interested in finding out how income is distributed among households. To do so, the incomes of all households are ranked from highest to lowest, and the ranking is then divided into quintiles, or fifths, for examination. Then the total amount of the nation's income earned by each quintile is calculated.

The table in **Panel A** of **Figure 12.8** shows household income quintiles for two different years. As before, only money income is counted, while other aid such as Medicaid, food stamps, or subsidized housing is excluded. Using the most recent year in the figure as our example, the percentage of income earned by each quintile is added to the other quintiles. These incomes are plotted as a Lorenz curve. The **Lorenz curve**, which shows how the actual distribution of income varies from an equal distribution, appears in **Panel B**.

To illustrate, in 2004 the 3.4 percent of total income received by the lowest quintile is plotted in Panel B as point **a**. This amount is added to the 8.7 percent the next quintile earns and plotted as point **b**. This process continues until the cumulative amounts of all quintiles are plotted.

If all households received exactly the same income—so that 40 percent of the households earn 40 percent of the total income and so on—the Lorenz curve would appear as a diagonal line running from one corner of the graph to the other. Because all households do not receive the same income, however, the Lorenz curve is not a diagonal. As you can see in the figure, the distribution of income recently has become more unequal than it was in 1980.

A Lorenz curve can also be shown for groups other than households. These would include Lorenz curves for individuals, families, or occupations.

Lorenz curve
graph showing how the actual distribution of income differs from an equal distribution

✓ **Reading Check** **Describing** How were poverty thresholds developed?



Personal Finance Handbook

See pages R16–R19
for information on
getting an
education.

Reasons for Income Inequality

MAIN Idea Lack of education and uneven distribution of wealth are among the reasons for poverty.

Economics and You Have you ever considered how your education could affect your income? Read on to find out about the way income is distributed in the United States.

There are at least eight, if not more, reasons why incomes vary. Education and wealth are among the most important of these reasons.

Education

One of the most important reasons for income inequality is the difference in individuals' educational levels. People's income normally goes up as they get more education. However, in the last 30 years, the gap between well-educated and poorly educated workers has widened. This has caused wages for highly skilled workers to soar, while wages for the less skilled have remained about the same.

Inequality of Income Some Americans live in mansions, while others cannot afford to pay rent and are homeless. **What are the major reasons for varying incomes?**

You saw proof of the importance of education earlier in Figure 1.4 on page 16. This figure shows that someone who has earned a college degree makes about three times more on average than someone without a high school diploma. Likewise, someone with a college degree makes nearly twice as much as someone with a high school diploma.

Wealth

Income also varies because some people hold more wealth than others, and the distribution of wealth is even more unequal than the distribution of income. When wealth holders are ranked from highest to lowest, the top fifth holds about 75 percent of all the wealth in the country. The bottom two-fifths, or 40 percent of the people in the country, have less than 2 percent of the total wealth.

This inequality has a dramatic **impact** on people's ability to earn income. Wealthy families can send their children to expensive colleges and universities. The wealthy also can afford to set their children up in businesses where they can earn a better





income. Even if the very wealthy choose not to work, they can make investments that will earn additional income.

Tax Law Changes

In recent years, Congress has changed many tax laws, reducing taxes for almost all Americans. Marginal tax rates on high incomes, however, have been reduced more than rates on lower incomes, thereby adding to the growing inequality of income.

The 15 percent tax rate that applies to corporate dividend payments and capital gains, for example, is the same as the second-lowest rates that apply to the poorest Americans. This means that a millionaire who receives tens of thousands of dollars in corporate dividends pays the same percentage rate on those dividends as someone who only earns \$20,000 a year.

Decline of Unions

As heavy manufacturing has declined in the United States, union membership has fallen, especially among less-skilled workers, adding to the growing income gap. High school graduates who once followed their parents into high-paying factory jobs can no longer do so. This leaves them to find other work, often for much less pay.

More Service Jobs

A structural change in the U.S. economy saw industry convert from goods production to service production. This event widened the income differential. Because wages are typically lower in service industries such as restaurants, movie theaters, and clothing stores, annual incomes also tend to be lower.

Monopoly Power

Another factor is the degree of monopoly power that some groups have. You learned in Chapter 8 that unions have been able to obtain higher wages for their members. Some white-collar workers—clerical,

Did You Know?

→ **Income Gap** The rising inequality of income is a worldwide phenomenon, especially for the developing countries of Asia. A major reason for this trend is the lack of jobs for the growing population. The widening income gaps have troubling results. More and more countries experience public complaints, protests, and political crises. In one year alone, China was faced with tens of thousands of protests, often in rural areas where people's earnings are a small fraction of the average income their fellow citizens in cities and coastal regions receive.

business, or professional workers who generally are salaried—also hold a degree of monopoly power. The American Medical Association, for example, has successfully limited the number of people entering the profession by restricting medical school certifications. This has been a major factor in driving up the incomes of doctors.

Discrimination

Discrimination also affects the distribution of income. Women may not be promoted to executive positions because male executives simply are not accustomed to women in roles of power. Some unions may deny membership to immigrants or ethnic minorities.

Although workplace discrimination is illegal, it still occurs. When it does, it causes women and minority groups to be crowded into other labor markets where oversupply drives wages down.

Changing Family Structure

A final reason for the growing income gap concerns the changing structure of the American family. The shift from two-parent families to single-parent families and other household living arrangements tends to decrease the average family income. This and the other factors mentioned above contribute to the trend of the rich getting richer and the poor getting poorer.

✓ **Reading Check** **Synthesizing** Which factors are most important in unequal income distribution? Why?



welfare

government or private agency programs that provide general economic and social assistance to needy individuals

food stamps

government-issued coupons that can be exchanged for food

Skills Handbook

See page R48 to learn about **Problems and Solutions.**

Antipoverty Programs

MAIN Idea Since the 1960s, the government has experienced modest success with a number of anti-poverty programs.

Economics and You Did you know there are programs designed to help people escape or avoid poverty? Read on to find out about these programs.

Over the years, the federal government has tried a number of programs to help the needy. Most come under the general heading of **welfare**—economic and social assistance from the government or private agencies because of need.

Reducing poverty has been difficult. As **Figure 12.9** shows, even the record economic expansions of the 1980s and 1990s failed to make a significant dent in the percentage of Americans living in poverty. In fact, the proportion of the population living in poverty today is about the same as it was in the 1970s—and it might have been worse without some of the following programs.

Income Assistance

Programs that provide direct cash assistance to those in need fall into the category of income assistance. One such program is

the Temporary Assistance for Needy Families (TANF), which began in 1997. Although provisions and benefits vary from state to state, many families qualify for modest cash payments because of the death, continuous absence, or permanent disability of a parent. More recently, Congress voted to tighten provisions of the law and toughen work standards for two-parent households.

Another income assistance program is the Supplemental Security Income (SSI), which makes cash payments to blind or disabled persons or to people age 65 and older. Originally, the states administered the program, but because benefits varied so much from state to state, the federal government took it over to assure more **uniform** coverage.

General Assistance

Programs that assist poor people but do not provide direct cash assistance fall into the category of general assistance. One example is the food stamp program that serves millions of Americans. **Food stamps** are government-issued coupons that can be redeemed for food. They may be given or sold to eligible low-income persons.

Figure 12.9 ► Poverty in the United States: Total Number and Rate

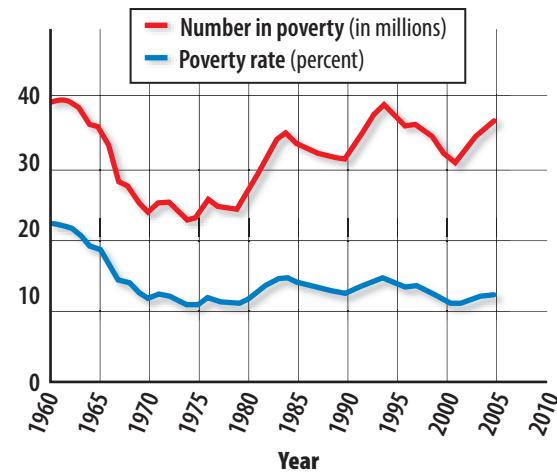
- Since the mid-1960s, the poverty rate has hovered between 10 and 15 percent of the population. In that same time span, the number of people in poverty has increased.

Economic Analysis *When was the poverty rate lowest? When did it reach the highest numbers?*

Graphs in Motion

See StudentWorks™ Plus or glencoe.com.

POVERTY IN THE UNITED STATES



Source: U.S. Census Bureau



Job Training

Many states have introduced job training, such as this computer class, to help people out of poverty. **How are such programs usually funded?**

For example, if a person pays 40 cents for a \$1 food stamp, that person can get a dollar's worth of food for a fraction of its cost. The program, which became law in 1964, is different from other programs because eligibility is based solely on income.

Another general assistance program is **Medicaid**—a joint federal-state medical insurance program for low-income people. Under the program, the federal government pays a majority of health-care costs, and the state governments cover the rest of the cost. Medicaid serves millions of Americans, including children, the visually impaired, and the disabled.

Social Service Programs

Over the years, individual states have developed a variety of social service programs to help the needy. These include such areas as child abuse prevention, foster care, family planning, job training, child welfare, and day care.

Although states control the kinds of services the programs provide, the federal

government may match part of the cost. To be eligible for matching funds, a state must file an annual service plan with the federal government. If the plan is approved, the state is free to select social issues it wishes to address, set the eligibility requirements for the programs, and decide how the programs are to be carried out. As a result, the range of services and the level of support may vary from state to state.

Tax Credits

Many working Americans qualify for special tax credits. The most popular is the **Earned Income Tax Credit (EITC)** which provides federal tax credits and even cash to low-income workers. The credit was created to partially offset the payroll tax burden on working families. The credit is applied first to federal income taxes. Low-income workers can take the remainder of the credit in cash if the credit is larger than the taxes owed. The credit has proved to be popular, with millions of working families receiving benefits annually.

Medicaid joint federal-state medical insurance program for low-income people
(also see page 271)

Earned Income Tax Credit (EITC) federal tax credits and cash payments for low-income workers



enterprise zone

area free of tax laws and other operating restrictions

workfare

program requiring welfare recipients to work in exchange for benefits

negative income tax

tax system that would make cash payments to individuals with incomes below certain levels

Enterprise Zones

Special **enterprise zones** are areas where companies can locate free of some local, state, and federal tax laws and other operating restrictions. Many enterprise zones are established in run-down or depressed areas. This benefits area residents because they can find work without worrying about transportation. Enterprise zones thus help depressed areas to grow again in several different ways.

Nearly everyone agrees that a healthy and growing economy helps alleviate poverty.

The enterprise zone concept is an attempt to focus some of that growth directly in the areas that need it most by making more employment opportunities available.

Workfare Programs

Because of rising welfare costs, many state and local governments require individuals who receive welfare to provide labor in exchange for benefits. **Workfare** is a program in which welfare recipients work for their benefits. People on workfare often assist law enforcement officials or sanitation and highway crews, work in schools or hospitals, or perform other types of community service work.

Most states that have workfare programs require almost everyone except for the disabled, the elderly, and those with very young children to work. If the workfare assignments are well designed, then recipients have a valuable opportunity to learn new skills that will eventually help them get other jobs.

Many welfare-to-work programs have had promising results. In some cases, companies can even earn federal tax credits when they hire workers directly from the welfare rolls. Under these circumstances, the employment is a win-win situation for both employer and employee.



CAREERS

Actuary

The Work

- * Help businesses assess risks and formulate policies
- * Gather and analyze statistics on death, sickness, injury, disability, retirement, and property loss
- * Design insurance and pension plans and calculate premium rates that are high enough to cover any claims and expenses

Qualifications

- * Strong background in mathematics, statistics, probability, finance, and business
- * Knowledge of economic, social, health, and legislative trends
- * Ability to develop and use spreadsheets, databases, and statistical analysis software
- * Bachelor's degree in mathematics or statistics
- * Must pass a series of actuarial examinations

Earnings

- * Median annual earnings: \$76,340

Job Growth Outlook

- * Faster than average

Source: *Occupational Outlook Handbook, 2006–2007 Edition*

Negative Income Tax

The **negative income tax** is a proposed type of tax that would make cash payments to certain groups below the poverty line. While the program is not in use today, the proposal is attractive because cash payments would take the place of existing welfare programs rather than supplementing them. Also, everyone would qualify for the program, not just working people as with the EITC.

Under the negative income tax, the federal government would set an income level below which people would not have to pay taxes. Then the government would pay a certain amount of money to anyone who earned less than that amount.



For example, suppose that an individual's tax liability was computed using the following formula:

$$\text{taxes} = (25\% \text{ of income}) - \$8,000$$

Under this formula, a person with no income would have a tax of minus \$8,000—which is another way of saying that the person will receive \$8,000 from the government. If the person earned exactly \$12,000, then the taxes would be \$3,000 minus \$8,000, so they would receive \$5,000 for a total of \$17,000 (or \$5,000 from the tax formula plus the \$12,000 in earned income). Under this formula, a person would have to make \$32,000 before he or she actually paid any taxes.

The negative income tax differs from other antipoverty programs in two respects. First, it is a market-based program designed to encourage people to work. The objective is to make the minimum payment large enough to be of some assistance, yet small enough so that people are better off working. Then, when people do go to work, the taxes they pay need to be low enough to not discourage them from working.

Second, the negative income tax would be cost-effective because it would take the place of other, more costly, welfare programs. In addition, government would save on administrative costs.

A Difficult Problem

We might ask how the U.S. economy has done as a result of all these programs with the strong economic growth since the 1980s. The answer, unfortunately, is that poverty has been a remarkably difficult problem to solve. Economic growth is important, of course, but by itself it is not sufficient to reduce poverty.

Even so, there are sound reasons to try to improve the problem of poverty. Not only would millions of Americans be better off, but everyone else in the economy would be better off as well. After all, if too many people find themselves without the capacity to earn and spend, there will be fewer people to purchase the products that our economy produces.

Reading Check Summarizing What are the benefits of the EITC to a working person?

SECTION

3

Review

Vocabulary

- Explain** the significance of poverty threshold, poverty guidelines, Lorenz curve, welfare, food stamps, Medicaid, Earned Income Tax Credit (EITC), enterprise zone, workfare, and negative income tax.

Main Ideas

- Defining** How is poverty defined?
- Describing** What are reasons for income inequality?
- Identifying** Use a graphic organizer like the one below to identify the major programs and proposals designed to alleviate the problem of poverty

Alleviating the problem of poverty

- 1.
- 2.

Critical Thinking

- The BIG Idea** Which of the factors that contribute to income inequality do you feel has the most impact? Explain your answer.
- Drawing Conclusions** Do you think that a workfare program is the best way to address income inequalities within our economy? Explain your answers.
- Analyzing Visuals** Look at Figure 12.9 on page 342. How do the lines for the number of people in poverty and the poverty rate compare? Why are the lines not more similar?

Applying Economics

- Distribution of Income** What would happen to the Lorenz curve if nonfinancial aid such as food stamps and Medicaid were treated as income? Explain why this would occur.



BusinessWeek NEWSCLIP

A gap in income between high- and low-paid workers has always existed. Some people argue that income inequality today is as high as before the Great Depression.

The Rich Get (Much) Richer

Shame on . . . us, passive witnesses to the emergence of a second Gilded Age, another Roaring Twenties, in which the fruits of economic success have gone not to the broad populace but to a slim sliver at the top. For this handful, life is a sweet mélange [mix] of megafortunes, grand houses, and massive yachts. Meanwhile, the bottom 80% endures economic stagnation. . . .

Much of the recent commentary has focused on class mobility, the opportunity for individuals to move up the ladder. But trumpeting mobility as a reason for ignoring growing income inequality is a chimera [illusion]. Even if mobility is high—a questionable assertion—it is hardly a consolation for those who remain at the bottom, gazing across a growing distance at the more successful.

We can debate a lot of economic data but not income inequality. Every serious study shows that the U.S. income gap has become a chasm [gulf]. Over the past 30 years, the share of income going to the highest-earning Americans has risen steadily

to levels not seen since shortly before the Great Depression. . . .

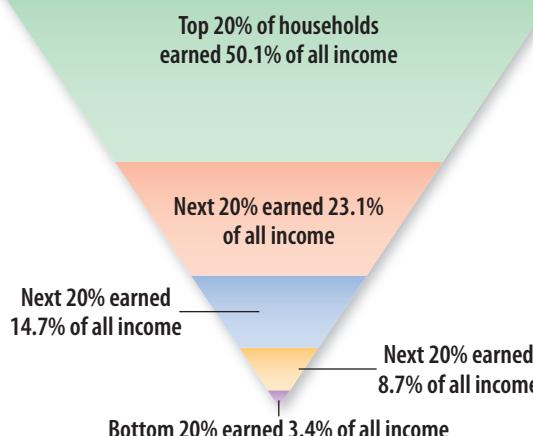
What's to blame for this sorry situation? Certainly globalization has taken its toll. Cheaper labor in emerging markets means relentless wage pressure on U.S. workers. Meanwhile, the fruits of American success in fast-growing services and technology remain available only to the slice of our workforce with the necessary skills. Other factors, such as an increasingly regressive tax code, have also played a role.

Growing inequality helps explain why so many Americans feel so vulnerable even as the overall economy continues to expand. Moods understandably darken when many have to take second jobs and go into debt to improve their living standards. . . .

Sadly, there is no magic bullet. We need to provide more education and training to fix our problem of too many low-skilled workers. We don't need to become tax-code Robin Hoods, but we can be vigilant about tax plans . . . that widen the gulf between haves and have-nots. Finally, we can provide more protection for those at risk, such as better wage insurance to cushion the effects of globalization.

—Reprinted from *BusinessWeek*

SHARE OF HOUSEHOLD INCOME



Examining the Newsclip

- 1. Identifying Points of View** What words and phrases can you identify in the article that help reveal the author's point of view?
- 2. Detecting Bias** Does the author state opinions or facts? What bias might be evident in these statements?



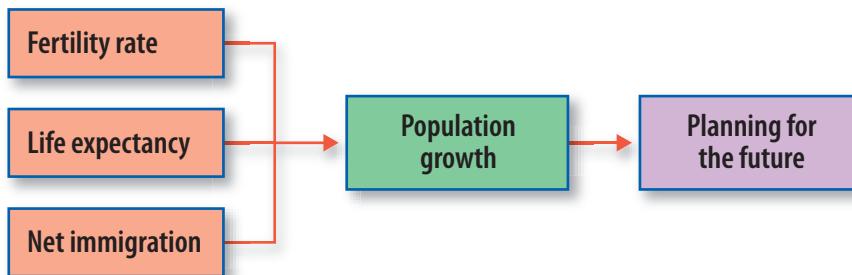
Study anywhere, anytime!

Download quizzes and flash cards to your PDA from glencoe.com.

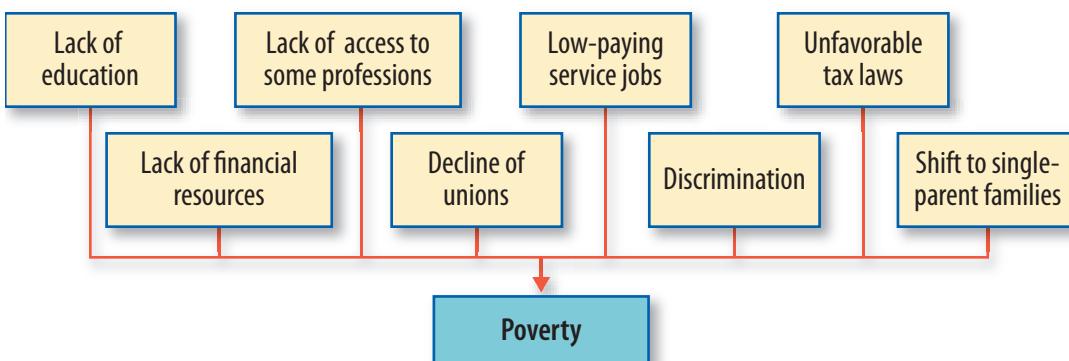
- **National Output and Income** Gross domestic product (GDP) measures the nation's output, while gross national product (GNP) measures the nation's income.

GDP	GNP
<ul style="list-style-type: none"> Market value of all final goods, services, and structures produced within a country's national borders in a year Indicator of the condition of the nation's economy Includes output of foreign-owned firms located in the United States Includes only final products 	<ul style="list-style-type: none"> Market value of all final goods, services, and structures produced in one year with labor and property supplied by a country's residents Includes all payments to citizens, regardless of where the production takes place Excludes income earned by foreign-owned resources in the country

- **Population** Governments count the population and project population trends to plan the use of resources and to prepare infrastructure.



- **Poverty** People are described as living in poverty if they live below an income level called the poverty threshold. Poverty has a number of causes, and governments have established some programs to reduce it.



Assessment & Activities

Review Content Vocabulary

Examine the pairs of words below. Then write a sentence explaining what each pair has in common.

1. food stamps, Medicaid
2. gross national product, net national product
3. household, unrelated individuals
4. intermediate products, secondhand sales
5. underground economy, nonmarket transactions
6. welfare, welfare
7. life expectancy, dependency ratio
8. demographer, center of population
9. baby boom, population pyramid

Review Academic Vocabulary

Identify which of the following terms correctly complete the sentences below.

- | | |
|---------------|--------------|
| a. excluded | d. projected |
| b. components | e. impact |
| c. residence | f. uniform |

10. The Census Bureau has ____ the most likely U.S. fertility rate as 2.119 births per woman.
11. Nonmarket transactions are ____ from GDP.
12. The federal government now administers the Supplemental Security Income program to assure more ____ coverage across the nation.
13. The unequal distribution of wealth has an enormous ____ on people's ability to earn income.
14. The sectors of our economy receive various ____ of the national income, which they then use to purchase the total output.
15. Every ten years the U.S. government takes an official count of all people, including their place of ____.

Review the Main Ideas

Section 1 (pages 319–327)

16. **Describe** what goods and services are included in the GDP.
17. **Explain** the connections between the various measures of income using a graphic organizer like the one below.

Begin with . . .	Add	Subtract	Equals
GDP			GNP
GNP			NDP
NDP			NI
NI			PI
PI			DPI

18. **Identify** the source of income for the four sectors of the economy.
19. **Identify** the components of GDP by decoding the formula $\text{GDP} = \text{C} + \text{I} + \text{G} + (\text{X} - \text{M})$.

Section 2 (pages 329–335)

20. **Describe** the historical growth of population in the United States.
21. **Identify** the political and economic importance of the census.
22. **Explain** how the age composition of the future population might impact our economy.

Section 3 (pages 337–345)

23. **Explain** what is meant by the term *distribution of income*.
24. **Identify** the major reasons for inequality in the distribution of income.
25. **Explain** how enterprise zones benefit residents of run-down or depressed areas.

Critical Thinking

- 26. The BIG Idea** How do the different measures of output and income allow us to assess the economy of a nation?
- 27. Comparing and Contrasting** Which program do you think is more effective, workfare or welfare? Why?
- 28. Determining Cause and Effect** Which of the factors affecting population growth will have the greatest impact on the United States in the next 50 years? Why?
- 29. Synthesizing** Under what circumstances might you prefer economic security to a better standard of living?
- 30. Synthesizing** Suppose you were told that you would earn \$95,000 in 2020. Explain why this information would say little about the standard of living you might enjoy. What other information would you need before you could evaluate how well you could live in 2020?

Applying Economic Concepts

- 31. Economic Sectors** Imagine you must teach a younger class the differences among the four sectors that make up our economy. Then take the following steps:
- For one week, clip articles from newspapers that refer to expenditures by one or more of the economic sectors. Log the expenditures in a graphic organizer similar to the one below.
 - Prepare a poster or computer presentation that explains how the sectors work together.

Consumer sector	Investment sector	Government sector	Foreign sector

Analyzing Visuals

- 32. Critical Thinking** Look at Figure 12.5 on page 333. How can you use this figure to help you plan expenditures for education?

Math Practice

- 33.** Based on the information in the table below, determine the percentage of total expenditures that consumers spend on durable goods, nondurable goods, and services.

Personal Consumption Expenditures	Amount (in billions)	Percentage
Total expenditures	\$9,081.7	100%
Durable goods	1,047.6	
Motor vehicles and parts	432.3	
Furniture and household equipment	397.7	
Other	217.6	
Nondurable goods	2,687.7	
Food	1,282.4	
Clothing and shoes	358.4	
Gasoline and other energy goods	327.4	
Other	719.5	
Services	\$5,346.4	
Housing	1,318.9	
Household operation	495.2	
Transportation	337.1	
Medical care	1,578.9	
Recreation	365.2	
Other	1,251.2	

Thinking Like an Economist

- 34.** In your own words, explain why greater life expectancies and declining birthrates make some entitlements like Social Security and Medicare more difficult to fund.

Writing About Economics

- 35. Expository Writing** Research the following topic: Is there an income gap between men's and women's wages? If so, is the income gap narrowing or widening? Prepare a three-page written report. Be sure to include a list of the references you used in your report.



The Global Economy & YOU



Global Fruit

Take a stroll through the produce department of your local supermarket, and you will discover an amazing variety of fresh fruits. Americans are eating more fruit—in both quantity and variety—and these fresh fruits are available not only during the summer months. Produce that was once deemed “seasonal” can now be found year-round.

Global Goodness

Fresh fruit choices at any grocery store in the United States include the standard fare of apples, oranges, and grapes. But you also find more exotic items, such as star fruit and papaya. How do tropical fruits find their way to grocery shelves in the dead of winter? And why can we purchase a gallon of orange juice when Florida and California farmers have been hit with an early frost? We have the global economy to thank for turning the produce aisle into a perpetual smorgasbord, continuously delivering fruits from around the world.

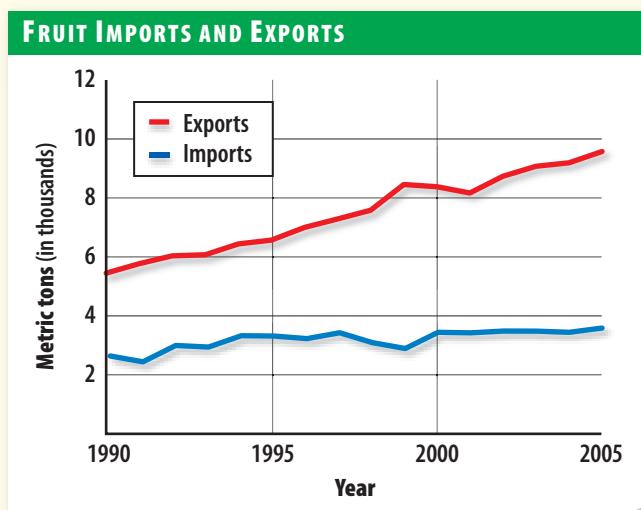
From There to Here

For many fruits, the trip from field to market involves a specific process of packing and shipping. For example, bananas leave Costa Rica and other Central and South American countries



packed in boxes weighing about 40 pounds each. Roughly 970 boxes fit into a refrigerated cargo container, which is then placed aboard a ship. The bananas must remain at a temperature of around 57°F to keep them from ripening while in transit.

Bananas take two to seven days to reach U.S. ports. There the cargo containers full of not-yet-ripe bananas are taken to different warehouse locations around the country. Before the bananas can be sent to your local supermarket, however, they must spend some time in special “ripening rooms.” Considering this lengthy journey, bananas seem like quite a bargain at less than fifty cents per pound.



Source: U.S. Department of Agriculture

From Here to There

Americans not only buy fruits—we sell them, too. The United States is the world’s fifth-largest fruit producer and the largest exporter of fresh fruit. Canada is our biggest customer, importing



SOURCES OF FRESH FRUIT

Fruit	U.S. Producers	Foreign Producers
Apples	Washington, New York, California, Michigan, Pennsylvania, Virginia	Canada, New Zealand
Bananas		Colombia, Costa Rica, Ecuador, Guatemala, Honduras, Panama, Mexico, Nicaragua
Kiwi	California	New Zealand, Chile
Mangoes	Florida	India, South America
Papaya	Florida	Jamaica, Central America
Peaches	California, South Carolina, Georgia, Michigan, Pennsylvania, New Jersey, Washington	Chile, Canada, Mexico
Pears	Washington, Oregon, California, Michigan, Pennsylvania, New York	Chile, New Zealand, Australia, Argentina, Canada
Strawberries	California, Oregon, Florida	New Zealand, Mexico

Source: Food and Agriculture Organization of the United Nations

47 percent of all U.S. fresh fruit exports. U.S. producers also export to Japan, Hong Kong, the European Union, and South Korea, among others. Yet the United States faces new competitors in the fruit trade. Mexico, China, Chile, and South Africa all impact the marketplace as they expand their reach.

What Does It Mean For You?

Global trade provides you with your favorite fruits throughout the year. While most U.S. fields and orchards lie dormant during winter, countries in the Southern Hemisphere are harvesting and shipping their summer crops. The worldwide competition also means lower prices for you and other fruit lovers. In addition, you now have more choices. The global exchange allows new and unusual fruits to make their way to U.S. stores for curious palates.

photo: unloading containers in U.S. port



Analyzing the Issue

- Identifying** What country is the largest buyer of U.S. fruit?
- Analyzing** What are concerns about shipping fresh fruit from other countries?
- Applying** Check out the fruit section of your local grocery store. What fruit is available because of global trade?