

# Chapter 9 Development



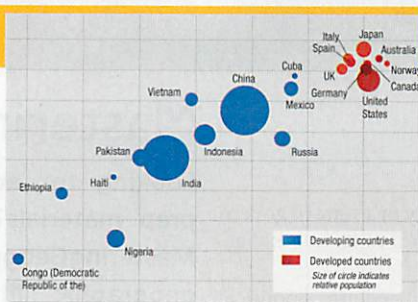
Why does India have so many bureaucrats? Page 328



Why is this coffee special? Page 336

## KEY ISSUE 1

Why Does Development Vary among Countries?



Developed and Developing Countries p. 301

Every country is at some level of development.

## KEY ISSUE 2

Why Does Development Vary by Gender?

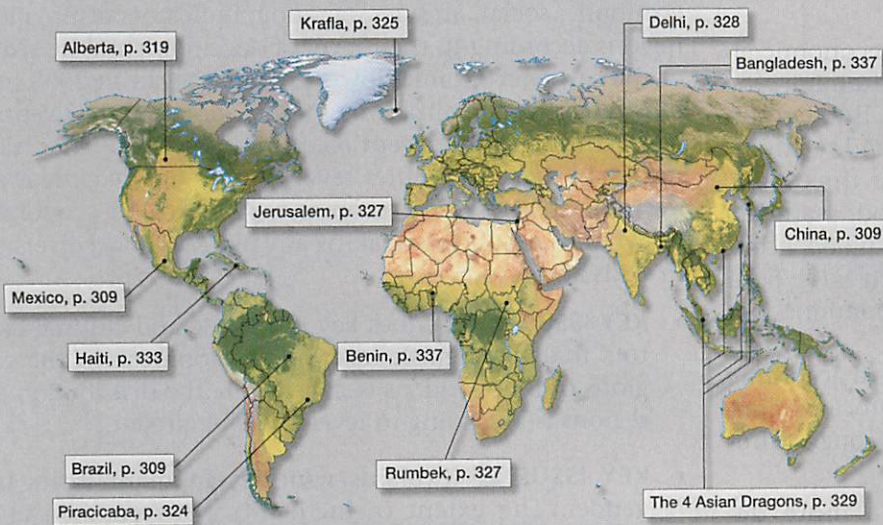


Gender Inequality p. 310

The UN says that men are treated better than women everywhere.

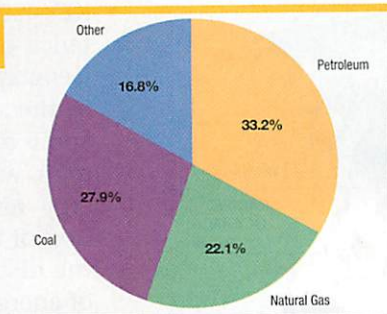


▲ This truck is traveling Trans-African Highway 8, which is the principal east–west road across Africa, 6,259 kilometers (3,890 miles) between Mombasa, Kenya, and Lagos, Nigeria. Aid from the United Nations and other international organizations has funded construction of the road. The eastern and western sections of the route are paved, but the central portion, through the Democratic Republic of Congo, is unpaved. The absence of good roads is one of many obstacles to development in sub-Saharan Africa.



### KEY ISSUE 3

**Why Are Energy Resources Important for Development?**



### It Takes a Lot of Energy p. 314

Development needs abundant energy, but some sources are being depleted.

### KEY ISSUE 4

**Why Do Countries Face Obstacles to Development?**



### Trade or Stand Alone? p. 328

Countries choose paths to development and look for money to finance it.

# Introducing Development

Previous chapters examined global demographic and cultural patterns. Birth, death, and natural increase rates vary among regions of the world, and people in different regions also have different social customs, languages, religions, and ethnic identities. Political problems arise when the distribution of cultural characteristics does not match the boundaries between states. Chapter 8 pointed out that in the contemporary world, global military confrontation and alliances have been replaced by global economic competition and cooperation.

The remainder of this book concentrates on economic elements of human geography. This chapter examines the most fundamental global economic pattern: the division of the world into relatively wealthy regions and relatively poor ones. Subsequent chapters look at the three basic ways that humans earn a living: growing food, manufacturing products, and providing services. In a global economy, geographers are increasingly concerned with both the similarities and the differences in the economic patterns of the various regions.

Earth's nearly 200 countries can be classified according to their level of **development**, which is the process of improving the material conditions of people through diffusion of knowledge and technology:

- A developed country, also known as a **more developed country (MDC)** or **relatively developed**

country, has progressed further along the development continuum.

- A **developing country**, also frequently called a **less developed country (LDC)**, has made some progress toward development, though less than the developed countries. Recognizing that progress has varied widely among developing countries, the UN divides them into high, medium, and low development.

The first geographic task is to identify where countries are located, based on their level of development. Geographers observe that developed countries cluster in some *spaces* and developing countries in other spaces, based on their level of development.

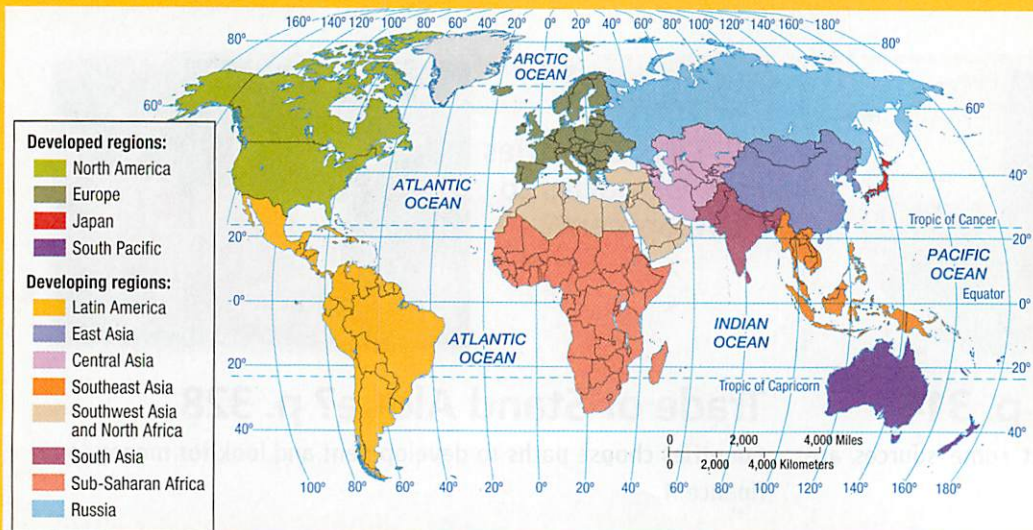
Geographers divide the world into nine *regions*, plus several other areas, according to their level of development, as well as other physical and cultural features (Figure 9-1). Each *place* has distinctive demographic and cultural characteristics that have been discussed in earlier chapters. Substantial variations in development also occur within regions and within individual countries, especially larger ones.

Next, geographers are concerned with why some development varies among and within regions. A number of economic, social, and demographic indicators distinguish regions according to their level of development. The *scale* of the severe economic downturn that began in 2008 has illustrated the globalization of the economy in the twenty-first century. In the recent recession, individual countries have had their economies severely buffeted by close *connections* to the global economy. A return to economic growth has necessitated taking advantage of local diversity in skills and resources.

- **KEY ISSUE 1** describes key economic and cultural factors that distinguish level of development in the regions of the world, as well as *where* the distribution of regions is according to level of development.
- **KEY ISSUE 2** explains *why* development varies by gender. The extent of inequality between men and women is an important element of a country's level of development.

- **KEY ISSUE 3** looks at the importance of energy for development. Geographers observe *local diversity* in the supply of energy resources. Some regions have abundant supplies, whereas others have few energy resources, and the distribution of the supply does not match the distribution of the consumers of energy.

- **KEY ISSUE 4** looks at alternative strategies for promoting development. With *globalization* of the world's economy, most countries pursue development through interaction with other places.



▲ **FIGURE 9-1 DEVELOPMENT REGIONS** Geographers divide the world into two developed and seven developing regions. Russia, the world's largest country, is classified by itself. Japan is classified separately, because its level of development is much higher than that of its neighbors. The South Pacific is a much less populous area than the nine development regions.

# KEY ISSUE 1

## Why Does Development Vary among Countries?

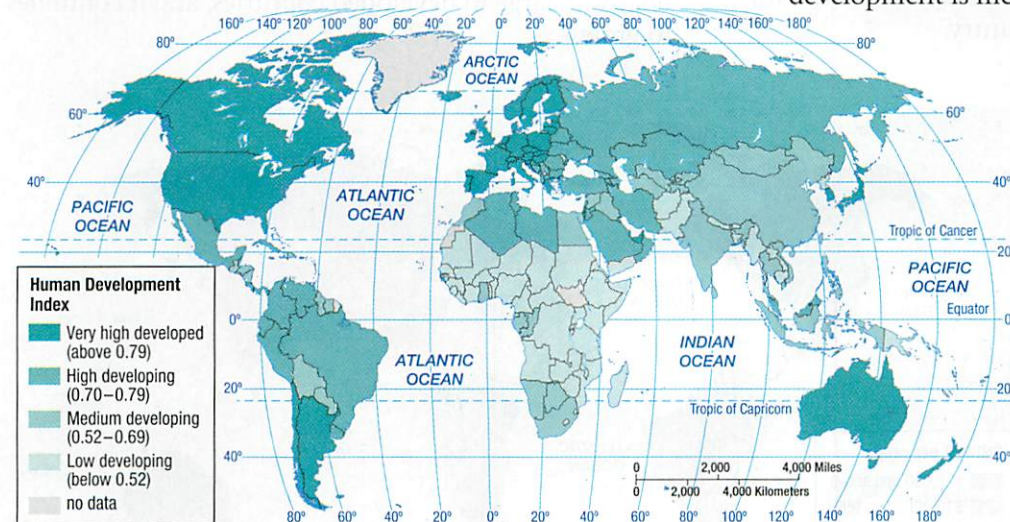
- A Decent Standard of Living
- A Long and Healthy Life
- Access to Knowledge

Every place lies at some point along a continuum of development. The development process is continuous, involving never-ending actions to constantly improve the health and prosperity of the people. Because many countries cluster at the high or low end of the continuum of development, they can be divided into two groups.

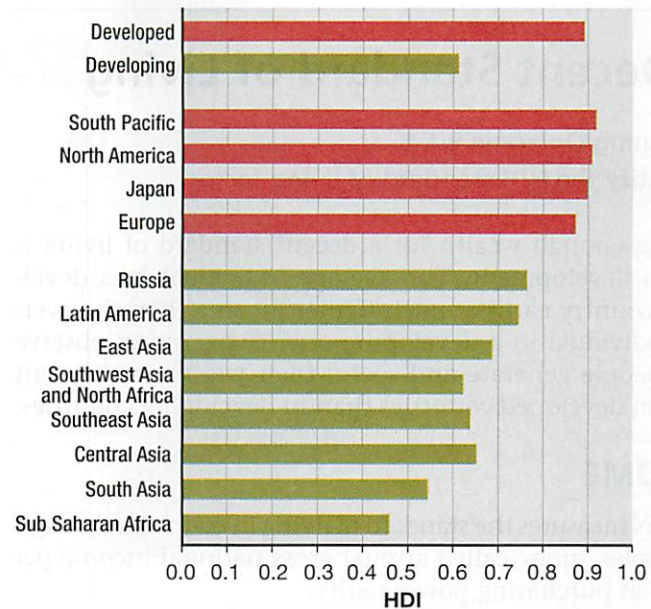
To measure the level of development of every country, the UN created the **Human Development Index (HDI)**. The UN has computed HDIs for countries every year since 1980, although it has occasionally modified the method of computation. The highest HDI possible is 1.0, or 100 percent (Figure 9-2). The HDI considers development to be a function of three factors:

- A decent standard of living.
- A long and healthy life.
- Access to knowledge.

Each country gets an overall HDI score based on these three factors, and countries are grouped into four classes according to HDI: very high, developed, and high, medium, and low. developing (Figure 9-3). The nine regions shown in Figure 9-1, in order of their HDI, are:



▲ **FIGURE 9-2 HUMAN DEVELOPMENT INDEX (HDI)** Developed countries are those with very high developed scores in 2011. The other classes are for developing countries.



▲ **FIGURE 9-3 HDI BY REGION** Regions and other areas are shown in order of level of development. Developed regions are in red, and developing regions in green. Similar patterns will be used for a number of charts in this chapter.

- **North America.** Both the United States and Canada are in the very high developed category.
- **Europe.** All but a handful of countries in Eastern Europe are in the very high developed category.
- **Latin America.** Most HDIs are in the high developing category.
- **East Asia.** Most HDIs are in the medium developing category.
- **Central Asia.** On average, the level of development is medium, but development varies widely among countries, from high (such as Iran) to low (such as Afghanistan).
- **Southeast Asia.** Most HDIs are in the medium developing category.
- **Southwest Asia & North Africa.** On average, the level of development is medium, but development varies widely among countries, from high (such as Saudi Arabia) to low (such as Yemen).
- **South Asia.** Most HDIs are in the medium developing category.
- **Sub-Saharan Africa.** Most HDIs are in the low developing category.

Japan and the South Pacific are grouped with the developed regions. The UN has traditionally classified Russia as a developed country, but because of its limited progress in development both under and since communism, the UN now classifies Russia as a developing country.

## A Decent Standard of Living

### Learning Outcome 9.1.1

#### Identify the HDI standard of living factor.

Having enough wealth for a decent standard of living is key to development. The average individual in a developed country earns a much higher income than the average individual in a developing one. Geographers observe that people generate and spend their wealth in different ways in developed countries than in developing countries.

### INCOME

The UN measures the standard of living in countries through a complex index called annual gross national income per capita at purchasing power parity:

- **Gross national income (GNI)** is the value of the output of goods and services produced in a country in a year, including money that leaves and enters the country.
- **Purchasing power parity (PPP)** is an adjustment made to the GNI to account for differences among countries in the cost of goods. For example, if a resident of country A has the same income as a resident of country B but must pay more for a Big Mac or a Starbucks latte, the resident of country B is better off.

By dividing GNI by total population, it is possible to measure the contribution made by the average individual toward generating a country's wealth in a year. For example, GNI in the United States was approximately \$15 trillion in 2011, and its population was approximately 312 million, so GNI per capita was approximately \$47,000. In 2011, per capita GNI was approximately \$34,000 in developed countries compared to approximately \$7,000 in developing countries (Figure 9-4).

Some studies refer to **gross domestic product (GDP)**, which is also the value of the output of goods and services produced in a country in a year, but it does not account for money that leaves and enters the country.

Per capita GNI—or, for that matter, any other single indicator—cannot measure perfectly the level of a country's development. Few people may be starving in a developing country with per capita GNI of a few thousand dollars. And not everyone is wealthy in a developed country with per capita GNI of \$40,000. Per capita GNI measures average (mean) wealth, not the distribution of wealth. If only a few people receive much of the GNI, then the standard of living for the majority may be lower than the average figure implies. The higher the per capita GNI, the greater the potential for ensuring that all citizens can enjoy a comfortable life.

### ECONOMIC STRUCTURE

Average per capita income is higher in developed countries because people typically earn their living by different means than in developing countries. Jobs fall into three categories:

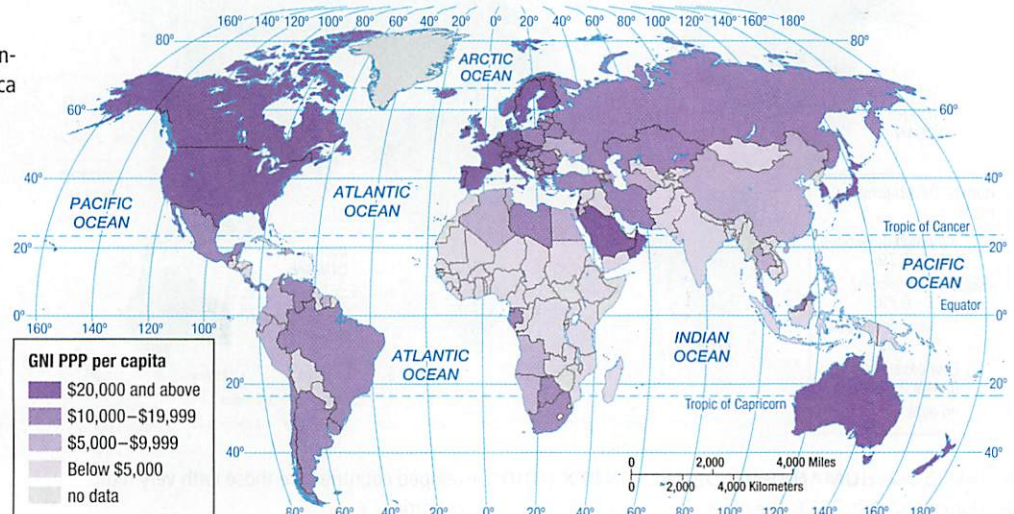
- The **primary sector** includes activities that directly extract materials from Earth through agriculture and sometimes by mining, fishing, and forestry.
- The **secondary sector** includes manufacturers that process, transform, and assemble raw materials into useful products, as well as industries that fabricate manufactured goods into finished consumer goods.
- The **tertiary sector** involves the provision of goods and services to people in exchange for payment, such as retailing, banking, law, education, and government.

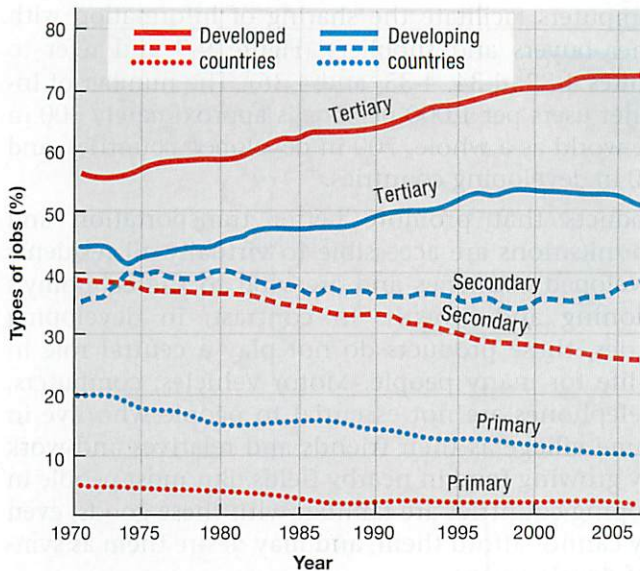
The contribution to GNI among primary, secondary, and tertiary sectors varies between developed and developing countries (Figure 9-5):

- The share of GNI accounted for by the primary sector has decreased in developing countries, but it remains higher than in developed countries.
- The share of GNI accounted for by the secondary sector has decreased sharply in developed countries and is now less than in developing countries.
- The share of GNI accounted for by the tertiary sector is relatively large in developed countries, and it continues to grow.

► FIGURE 9-4 INCOME

GNI per capita PPP is highest in developed countries. The lowest figures are in sub-Saharan Africa and South Asia.





▲ FIGURE 9-5 ECONOMIC STRUCTURE The percentage of GNI contributed, by type of job.

The relatively low percentage of primary-sector workers in developed countries indicates that a handful of farmers produce enough food for the rest of society. Freed from the task of growing their own food, most people in a developed country can contribute to increasing the national wealth by working in the secondary and tertiary sectors.

## PRODUCTIVITY

Workers in developed countries are more productive than those in developing countries. **Productivity** is the value of a particular product compared to the amount of labor needed to make it. Productivity can be measured by the value added per capita. The **value added** in manufacturing is the gross value of a product minus the costs of raw materials and energy. The value added per capita in 2010 was

around \$5,900 in the United States and \$6,700 in Japan, compared to around \$800 in China and \$100 in India.

Workers in developed countries produce more with less effort because they have access to more machines, tools, and equipment to perform much of the work. On the other hand, production in developing countries relies more on human and animal power. The larger per capita GNI in developed countries in part pays for the manufacture and purchase of machinery, which in turn makes workers more productive and generates more wealth.

## INEQUALITY-ADJUSTED HDI

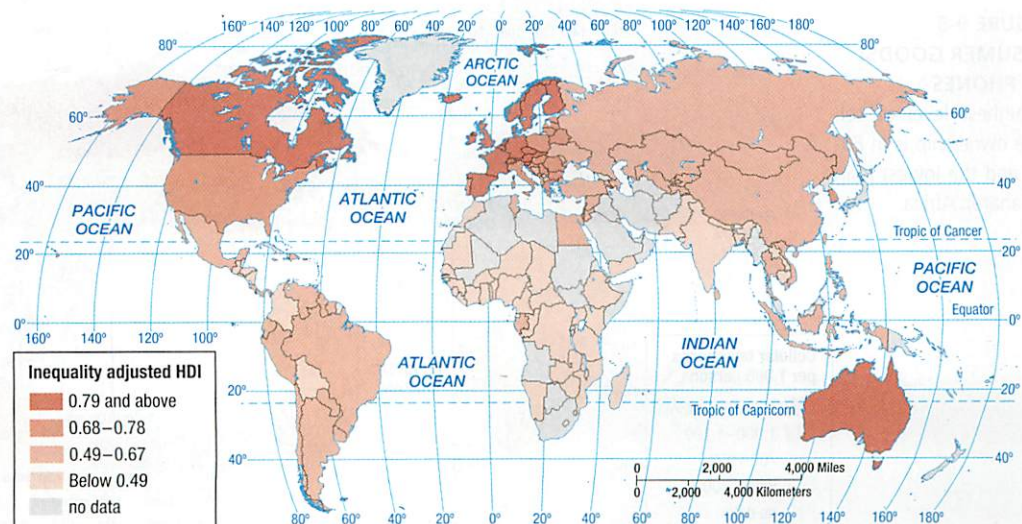
The UN believes that every person should have access to decent standards of living, knowledge, and health. The **inequality-adjusted HDI (IHDI)** is an indicator of development that modifies the HDI to account for inequality within a country. Under perfect equality, the HDI and the IHDI are the same. If the IHDI is lower than the HDI, the country has some inequality; the greater the difference in the two measures, the greater the inequality. A country where only a few people have high incomes, college degrees, and good health care would have a lower IHDI than a country where differences in income, level of education, and access to health care are minimal.

The lowest scores (highest inequality) are in sub-Saharan Africa and South Asia. The score may be low in Southwest Asia & North Africa, but the UN lacks data from a number of the region's countries (Figure 9-6).

### Pause and Reflect 9.1.1

The IHDI is 0.77 in the United States and 0.83 in Canada. Which country has greater inequality?

► FIGURE 9-6 INEQUALITY-ADJUSTED HDI The lower the score, the greater the inequality.



## CONSUMER GOODS

### Learning Outcome 9.1.2

Identify the HDI health factor.

Part of the wealth generated in developed countries is used to purchase goods and services. Especially important are goods and services related to transportation and communications, including motor vehicles, telephones, and computers:

- Motor vehicles provide individuals with access to jobs and services and permit businesses to distribute their products (Figure 9-7). The number of motor vehicles per 1,000 persons is approximately 170 in the world as a whole, 630 in developed countries, and 80 in developing countries.
- Telephones enhance interaction with providers of raw materials and customers for goods and services (Figure 9-8). The number of cell phones per 1,000 persons is approximately 800 in the world as a whole, 1,100 in developed countries, and 700 in developing countries.

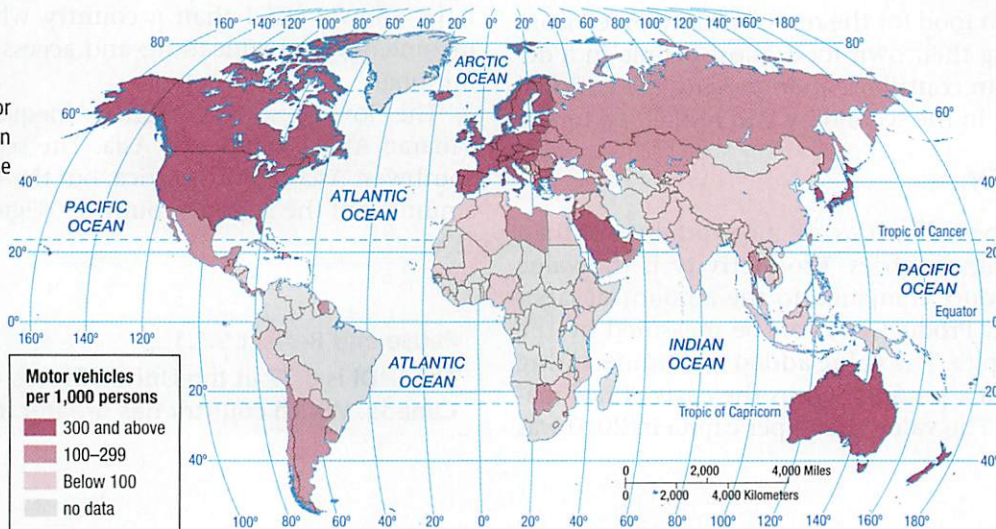
- Computers facilitate the sharing of information with other buyers and suppliers (Figure 9-9 and refer to Figures 4-32, 4-34, 4-35, and 4-36). The number of Internet users per 1,000 persons is approximately 300 in the world as a whole, 700 in developed countries, and 200 in developing countries.

Products that promote better transportation and communications are accessible to virtually all residents in developed countries and are vital to the economy's functioning and growth. In contrast, in developing countries, these products do not play a central role in daily life for many people. Motor vehicles, computers, and telephones are not essential to people who live in the same village as their friends and relatives and work all day growing food in nearby fields. But most people in developing countries are familiar with these goods, even if they cannot afford them, and may desire them as symbols of development.

Because possession of consumer goods is not universal in developing countries, a gap can emerge between the "haves" and the "have-nots." The minority of people who have these goods may include government officials, business owners, and other elites, whereas their lack among

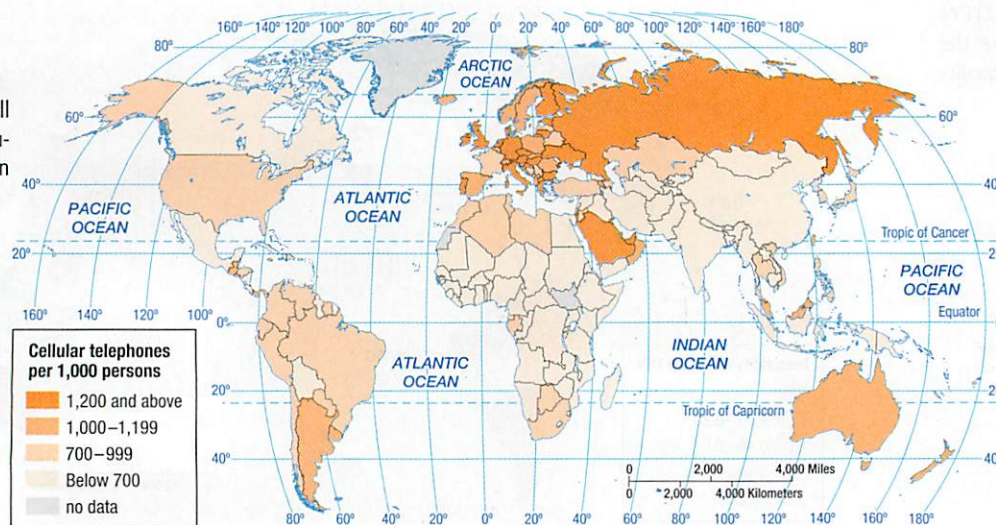
► **FIGURE 9-7**  
**CONSUMER GOODS:**  
**MOTOR VEHICLES**

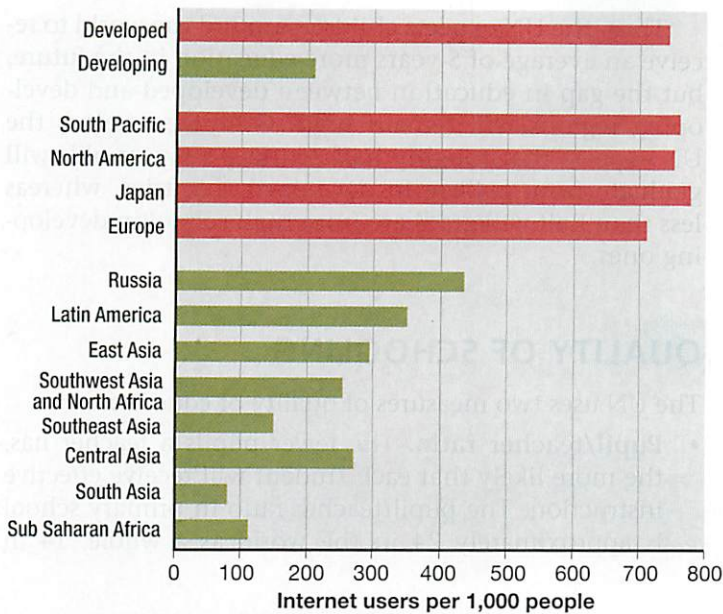
The highest level of motor vehicle ownership is in North America, and the lowest is in South Asia.



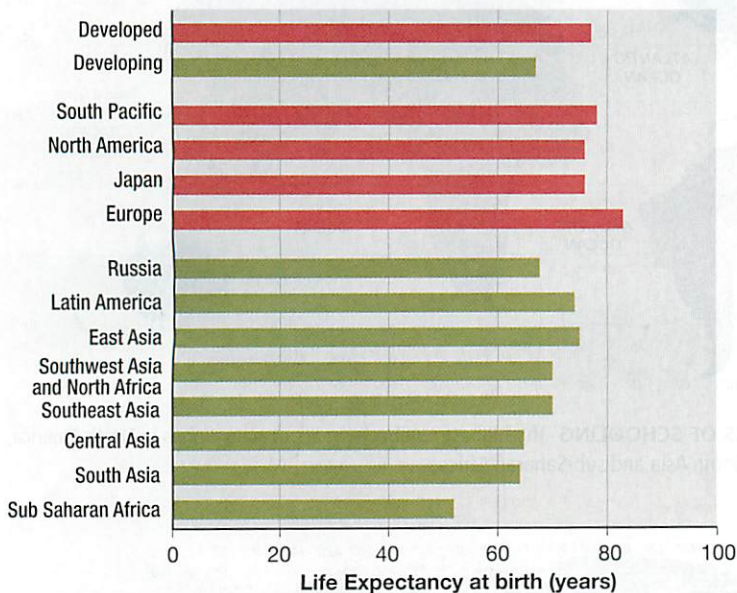
► **FIGURE 9-8**  
**CONSUMER GOODS:**  
**CELL PHONES**

The highest level of cell phone ownership is in Europe, and the lowest is in sub-Saharan Africa.





▲ **FIGURE 9-9 CONSUMER GOODS: INTERNET USERS** The highest level of Internet users is in North America, and the lowest is in South Asia.



▲ **FIGURE 9-10 LIFE EXPECTANCY AT BIRTH** The highest life expectancy is in Europe, and the lowest is in sub-Saharan Africa.

the majority who are denied access may provoke political unrest. In many developing countries, those who have these products are concentrated in urban areas; those who do not live in the countryside. Technological innovations tend to diffuse from urban to rural areas. Access to these goods is more important in urban areas because of the dispersion of homes, factories, offices, and shops.

Developed countries also use some of their wealth to provide infrastructure, such as roads, bridges, airports, electricity, and water. The image of the trans-African Highway on page 299 illustrates the challenges that regions with low levels of development face in providing infrastructure that can help promote development.

Technological change is helping to reduce the gap between developed and developing countries in access to communications. Cell phone ownership, for example, is expanding rapidly in developing countries because these phones do not require the costly investment of connecting wires to each individual building, and many individuals can obtain service from a single tower or satellite.

### Pause and Reflect 9.1.2

In addition to cell phones, what other electronic devices might diffuse rapidly to developing countries because of low cost of equipment and lack of need for expensive infrastructure?

## A Long and Healthy Life

The UN considers good health to be an important measure of development. A goal of development is to provide the nutrition and medical services needed for people to lead long and healthy lives.

The health indicator contributing to the HDI is life expectancy at birth. On average, a baby born today is expected to live to age 70. The life expectancy is 80 in developed regions and 68 in developing regions (Figure 9-10 and refer to Figure 2-40). Variation among developing regions is especially wide; life expectancy is 75 in Latin America, 65 in South Asia, and 55 in sub-Saharan Africa.

People are healthier in developed countries than in developing ones. When people in developed countries get sick, these countries possess the resources to care for them. Developed countries use part of their wealth to protect people who, for various reasons, are unable to work. In these countries, some public assistance is offered to those who are sick, elderly, poor, disabled, orphaned, veterans of wars, widows, unemployed, or single parents. Better health and welfare in developed countries permit people to live longer. (Refer to Key Issue 4 and Figures 2-42 through 2-46 in Chapter 2.)

With longer life expectancies, developed countries have a higher percentage of older people who have retired and receive public support and a lower percentage of children under age 15 who are too young to work and must also be supported by employed adults and government programs. The number of young people is six times higher than the number of older people in developing countries, whereas the two are nearly the same in developed countries.

Better health and welfare also permit more babies to survive infancy in developed countries. About 94 percent of infants survive and 6 percent die in developing countries, whereas in developed countries more than 99.5 percent survive and fewer than one-half of 1 percent perish (see Figure 2-40). The infant mortality rate is greater in developing countries for several reasons. Babies may die from malnutrition or lack of medicine needed to survive illness, such as dehydration from diarrhea. They may also die from poor medical practices that arise from lack of education.



## Access to Knowledge

### Learning Outcome 9.1.3

Identify the HDI access to knowledge factor.

Development is about more than possession of wealth. The UN believes that access to knowledge is essential for people to have the possibility of leading lives of value. In general, the higher the level of development, the greater are both the quantity and the quality of a country's education. For young people in both developed and developing countries, education is the ticket to better jobs and higher social status.

## QUANTITY OF SCHOOLING

The UN considers years of schooling to be the most critical measure of the ability of an individual to gain access to knowledge needed for development. The assumption is that no matter how poor the school, the longer the pupils attend, the more likely they are to learn something. To form the access to knowledge component of HDI, the UN combines two measures of quantity of schooling:

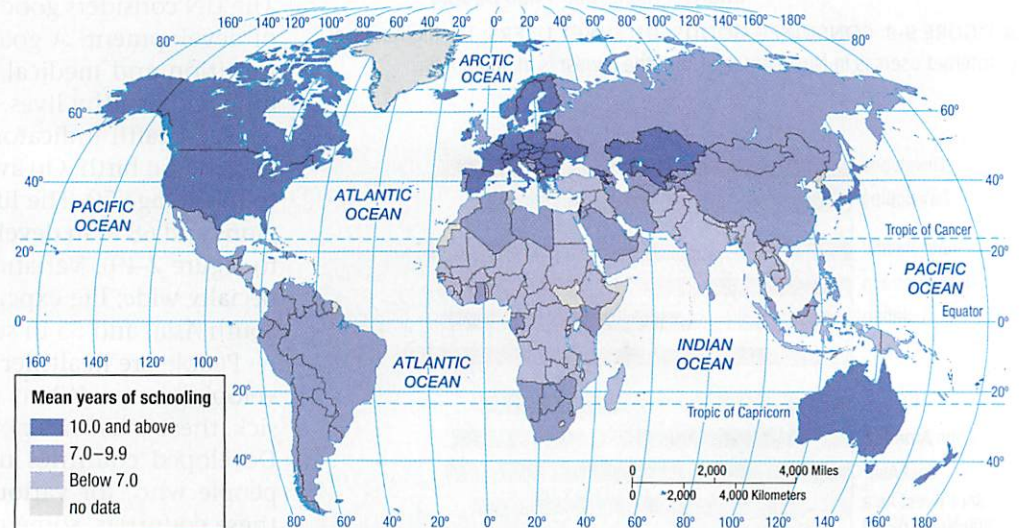
- **Years of schooling.** This is the number of years that the average person aged 25 or older in a country has spent in school. The average pupil has attended school for approximately 7 years in the world as a whole, 11 years in developed countries, and 6 years in developing countries (Figure 9-11).
- **Expected years of schooling.** This is the number of years that an average 5-year-old child is expected to spend in school. The UN expects that today's 5-year-old will attend an average of 16 years in school in developed countries and 11 years in developing ones, as well as in the world as a whole (Figure 9-12). In other words, the average child is expected to attend college in developed countries but not finish high school in developing countries.

Thus, the UN expects children around the world to receive an average of 5 years more education in the future, but the gap in education between developed and developing regions will remain high. Otherwise stated, the UN expects that roughly half of today's 5-year-olds will graduate from college in developed countries, whereas less than half will graduate from high school in developing ones.

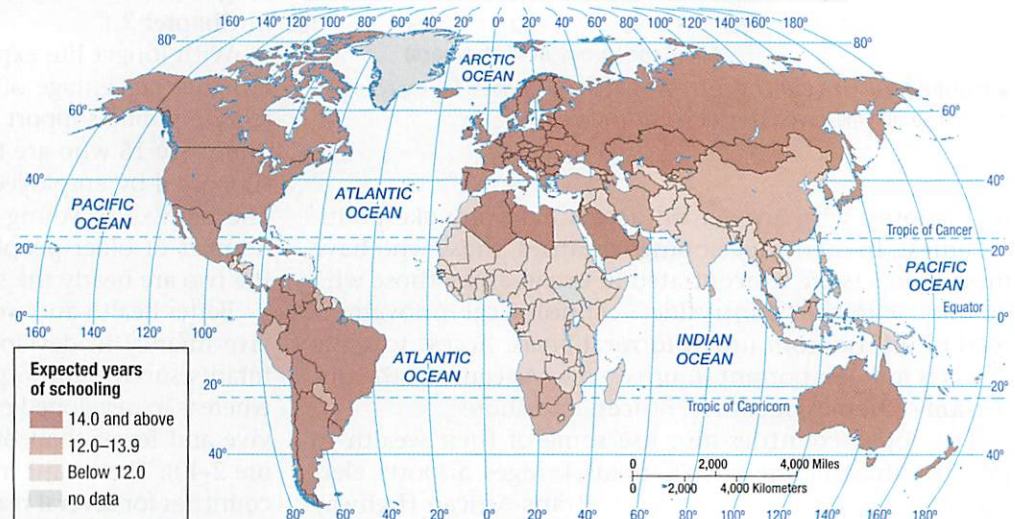
## QUALITY OF SCHOOLING

The UN uses two measures of quality of education:

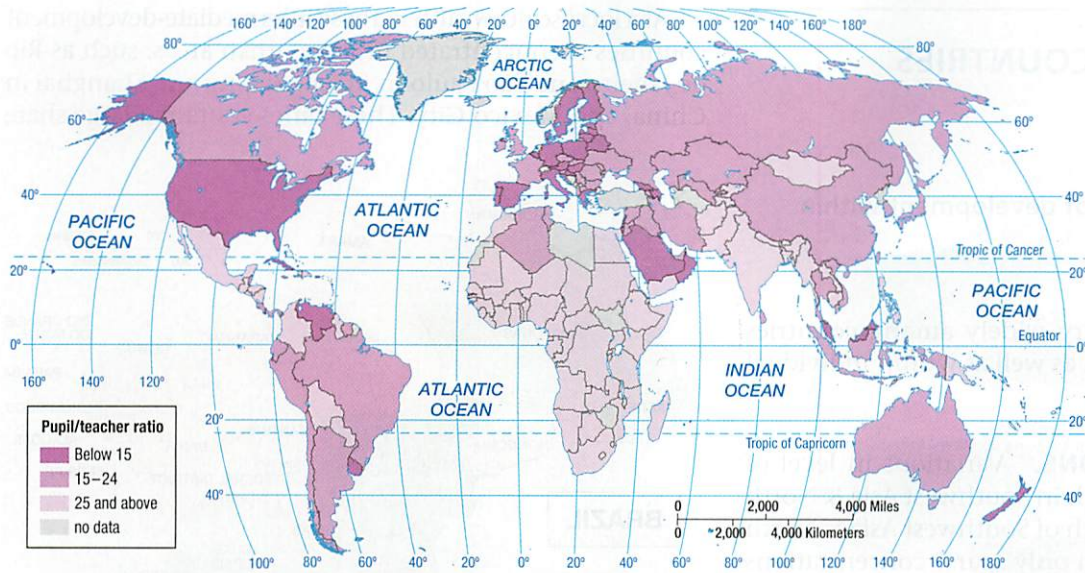
- **Pupil/teacher ratio.** The fewer pupils a teacher has, the more likely that each student will receive effective instruction. The pupil/teacher ratio in primary school is approximately 24 in the world as a whole, 14 in



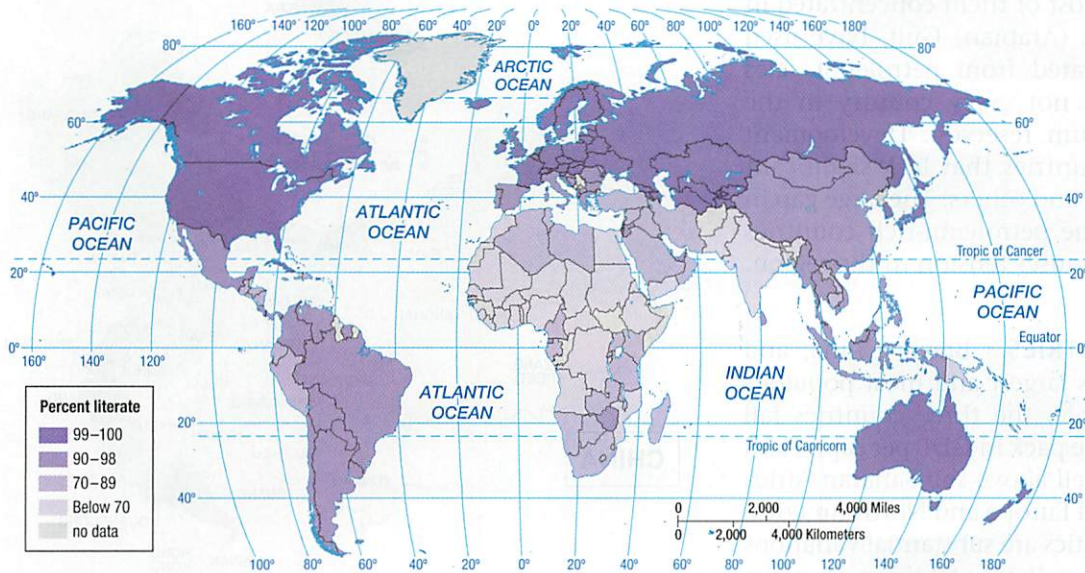
▲ **FIGURE 9-11 MEAN YEARS OF SCHOOLING** The highest number of years of schooling is in North America, and the lowest numbers are in South Asia and sub-Saharan Africa.



▲ **FIGURE 9-12 EXPECTED YEARS OF SCHOOLING** The highest numbers of expected years of schooling are in North America and Europe, and the lowest numbers are in sub-Saharan Africa and South Asia.



▲ **FIGURE 9-13 PUPIL/TEACHER RATIO, PRIMARY SCHOOL** The lowest pupil/teacher ratio is in North America, and the highest is in sub-Saharan Africa.



▲ **FIGURE 9-14 LITERACY RATE** Literacy is nearly 100 percent in developed countries. The lowest rates are in sub-Saharan Africa and South Asia.

developed countries, and 26 in developing countries (Figure 9-13). Thus, class size is nearly twice as large in developing countries as in developed ones.

- **Literacy rate.** A higher percentage of people in developed countries are able to attend school and as a result learn to read and write. The **literacy rate** is the percentage of a country's people who can read and write. It exceeds 99 percent in developed countries (Figure 9-14). Among developing regions, the literacy rate exceeds 90 percent in East Asia and Latin America but is less than 70 percent in sub-Saharan Africa and South Asia.

Most books, newspapers, and magazines are published in developed countries, in part because more of their citizens read and write. Developed countries dominate scientific and nonfiction publishing worldwide. (This

textbook is an example.) Students in developing countries must learn technical information from books that usually are not in their native language but are printed in English, German, Russian, or French.

Improved education is a major goal of many developing countries, but funds are scarce. Education may receive a higher percentage of GNI in developing countries, but those countries' GNI is far lower to begin with, so they spend far less per pupil than do developed countries.

### Pause and Reflect 9.1.3

The HDI measures the quality of schools in a country as a whole. What are ways in which differences among schools or colleges within a country might be measured?

## VARIATIONS WITHIN COUNTRIES AND REGIONS

### Learning Outcome 9.1.4

Describe variations in level of development within countries and regions.

Indicators of development vary widely among countries within the nine world regions, as well as within individual countries.

**VARIATIONS WITHIN REGIONS.** Variations in level of development are especially high in Southwest Asia & North Africa and in Central Asia. Much of Southwest Asia & North Africa is desert that can sustain only sparse concentrations of plant and animal life. This region possesses one major economic asset: a large percentage of the world's petroleum reserves. Saudi Arabia, the United Arab Emirates, and other oil-rich states in the region, most of them concentrated in states that border the Persian (Arabian) Gulf, have used the billions of dollars generated from petroleum sales to finance development. But not every country in the region has abundant petroleum reserves. Development possibilities are limited in countries that lack significant reserves—Egypt, Jordan, Syria, and others. The large gap in per capita income between the petroleum-rich countries and those that lack resources causes tension in the region.

**VARIATIONS WITHIN COUNTRIES.** Brazil, China, and Mexico are among the world's largest and most populous countries. At the national scale, the three countries fall somewhere in the middle of the pack in GDP per capita and most other HDI indicators—well above sub-Saharan Africa and South Asia but well behind Europe and North America.

Hidden in nationwide statistics are substantial variations within all three countries (Figure 9-15). All three countries have GDP per capita greater than 150 percent of the national average in some provinces or states and less than 75 percent of the national average in other regions. Developed countries MDCs also have regional internal variations in GDP per capita, but they are less extreme. In the United States, for example, the GDP per capita is 122 percent of the national average in the wealthiest region (New England) and 90 percent of the national average in the poorest region (Southeast).

Regional internal variations can be traced to distinctive features of each country:

- Brazil: Wealth is highest along the Atlantic coast and lowest in the interior Amazon tropical rain forest.
- China: As in Brazil, wealth is highest along the east coast and lowest in the remote and inhospitable mountain and desert environments of the interior.
- Mexico: Wealth is relatively high in the region bordering its even wealthier neighbor to the north and in the principal tourist region on the Yucatan Peninsula.

At a local scale, wealth in these intermediate-development countries is concentrated in large urban areas, such as Rio de Janeiro and São Paulo in Brazil, Beijing and Shanghai in China, and Mexico City. These cities contain a large share



▲ **FIGURE 9-15** GDP PER CAPITA AS PERCENT OF NATIONAL AVERAGE IN THREE LARGE COUNTRIES: (center) states of Brazil, (top) provinces of China, (bottom) states of Mexico.

of the national services and manufacturing sectors and are where many leaders of the public and private sectors live. They also contain extensive areas of poverty and slum conditions, as discussed in Chapter 13.

#### Pause and Reflect 9.1.4:

Russia and Canada are the world's two largest countries in land area. Which of these two countries would you expect to have regional internal variations similar to those in the United States, and which would have regional internal variations similar to those in Brazil, China, and Mexico?

### CHECK-IN: KEY ISSUE 1

#### Why Does Development Vary among Countries?

- ✓ The Human Development Index (HDI) measures the level of development of each country.
- ✓ HDI is based on three factors: a decent standard of living, a long and healthy life, and access to knowledge.

## CONTEMPORARY GEOGRAPHIC TOOLS

# Collecting and Depicting Development Data

This chapter includes two dozen world maps that show a wide variety of development indicators. The concept of development involves many economic, social, and demographic dimensions.

Obtaining timely and accurate data related to development for nearly 200 countries is challenging. The data for most of the maps of world development in this chapter come from two sources:

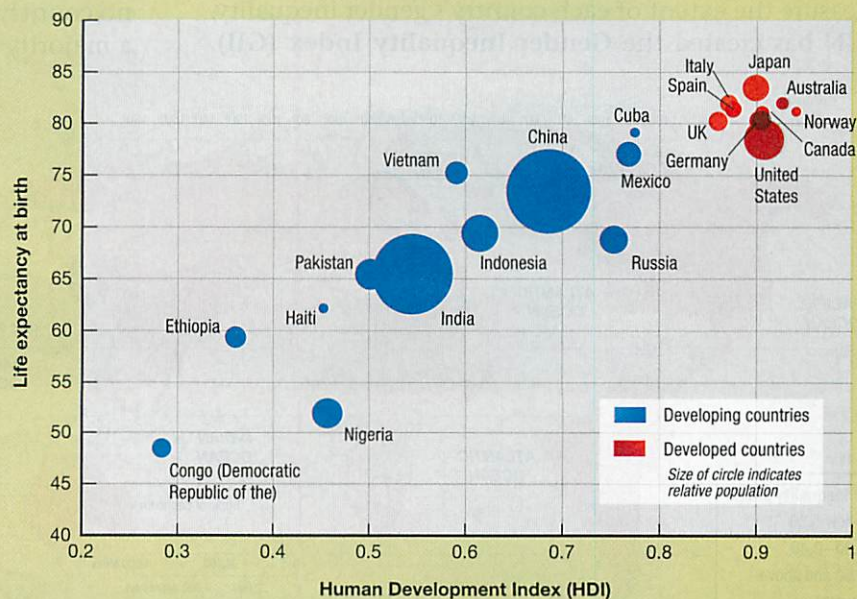
- The United Nations Development Programme prepares the annual Human Development Report and provides much of the data contained in the report at [hdr.undp.org](http://hdr.undp.org).
- The World Bank pulls together hundreds of measures of development from a variety of sources and makes them available at [data.worldbank.org](http://data.worldbank.org).

These data can be used to depict patterns of similarities and differences among countries. For example, Figure 9-10 shows that in general, life expectancy is higher in developed countries than in developing countries. Figure 9-16 shows the same data on a graph. Each country is represented by a circle. The more populous the country,

the larger the circle. The y-axis shows life expectancy, and the x-axis shows HDI level. The very high developed countries are in red, and the high, medium, and low developing countries are in yellow, green, and blue, respectively. The arc of the circles from lower left to upper right shows that countries with high HDIs have longer life expectancies.

Figure 9-16 helps to illustrate exceptions to the pattern. Circles

that are way off to the bottom have life expectancies that are less than expected by their HDI. Most of the countries with lower-than-expected life expectancy are in sub-Saharan Africa. What might explain the low figures in sub-Saharan Africa? Refer to Figure 2-37, the world map of AIDS; most of the countries with the highest rates of AIDS are in sub-Saharan Africa.



▲ FIGURE 9-16 LIFE EXPECTANCY GRAPH The higher the HDI, the longer the life expectancy.