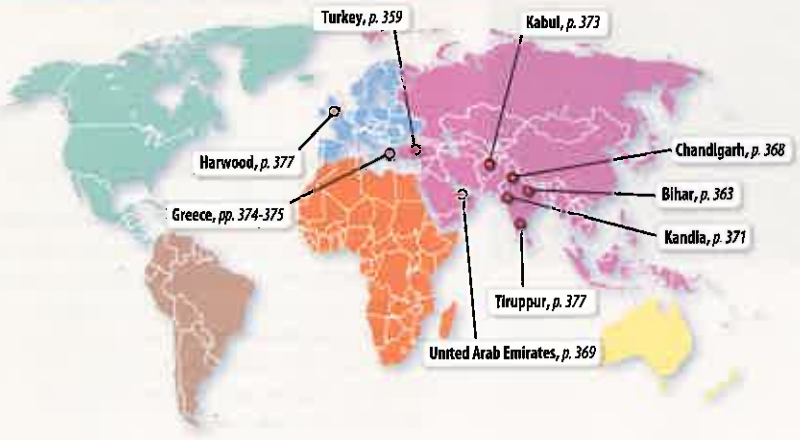
10

Development

The average person in the world is better off today than three decades ago. The average person possesses more wealth, has had more education, and will live longer than someone 30 years ago. But not everyone is better off. Development is a process of improving a person's prospects of leading a long and healthy life, acquiring knowledge, and obtaining adequate resources.

An important element of development: Road construction, Kenya.

LOCATIONS IN THIS CHAPTER



KEY ISSUES

1 Why Does Development Vary Among Countries?

Geographers divide the world into nine ***regions***, according to their level of development. Developed countries cluster in some ***spaces*** and developing countries in other spaces, based on their level of development.

2 Where Are Inequalities in Development Found?

Development varies by gender and economic groups. The ***scale*** of inequality between men and women and between rich and poor are important elements of a country's level of development.

3 Why Do Countries Face Challenges to Development?

A country may pursue development through isolation policies, but most countries in recent years have adopted policies that require them to have increased ***connections*** with other countries.

4 Why Are Countries Making Progress in Development?

Most countries have made considerable progress in overall indicators of development. Increased consideration is now being given to making connections between ***places*** more fair and equitable, especially for producers and workers in developing countries, as well as for consumers in developed countries.

KEY ISSUE 1

Why Does Development Vary Among Countries?

- Introducing Development
- A Decent Standard of Living
- Access to Knowledge
- Health and Wealth

LEARNING OUTCOME 10.1.1

Understand the Human Development Index.

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

Introducing Development

Because many countries cluster at the high and low ends of the continuum of development, they can be divided into two groups:

- A **developed country,** also known as a more developed country (MDC) and referred to by the U.N. as a very high 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 U.N. divides them into high, medium, and low developing.

HUMAN DEVELOPMENT INDEX

To measure the level of development of every country, the U.N. created the **Human Development Index (HDI).** The U.N. 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.

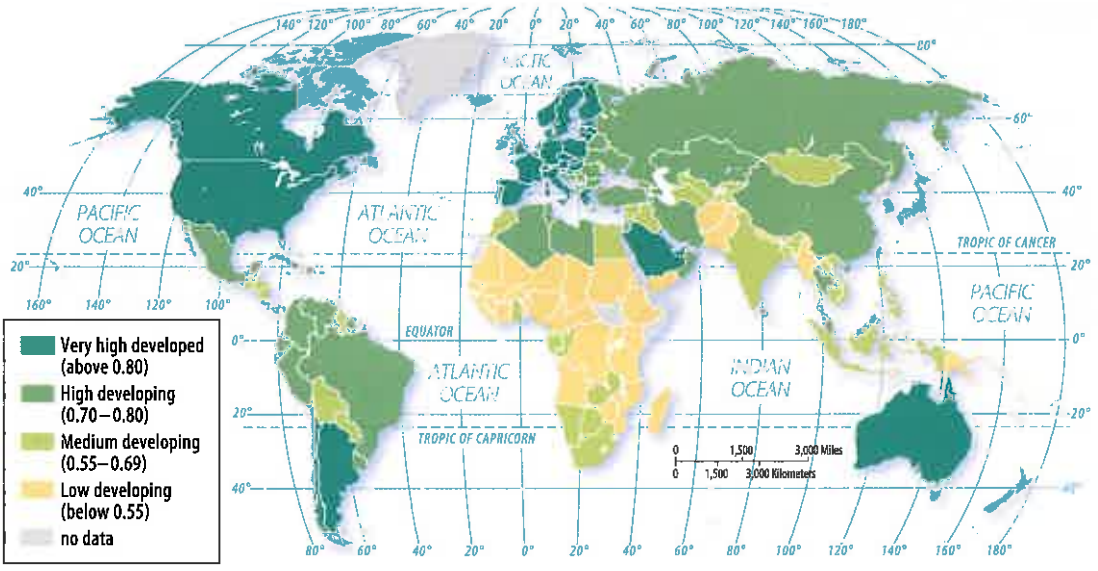
The U.N.'s HDI considers development to be a function of three factors. Each country gets an overall HDI score based on these three factors (Figure 10-1):

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

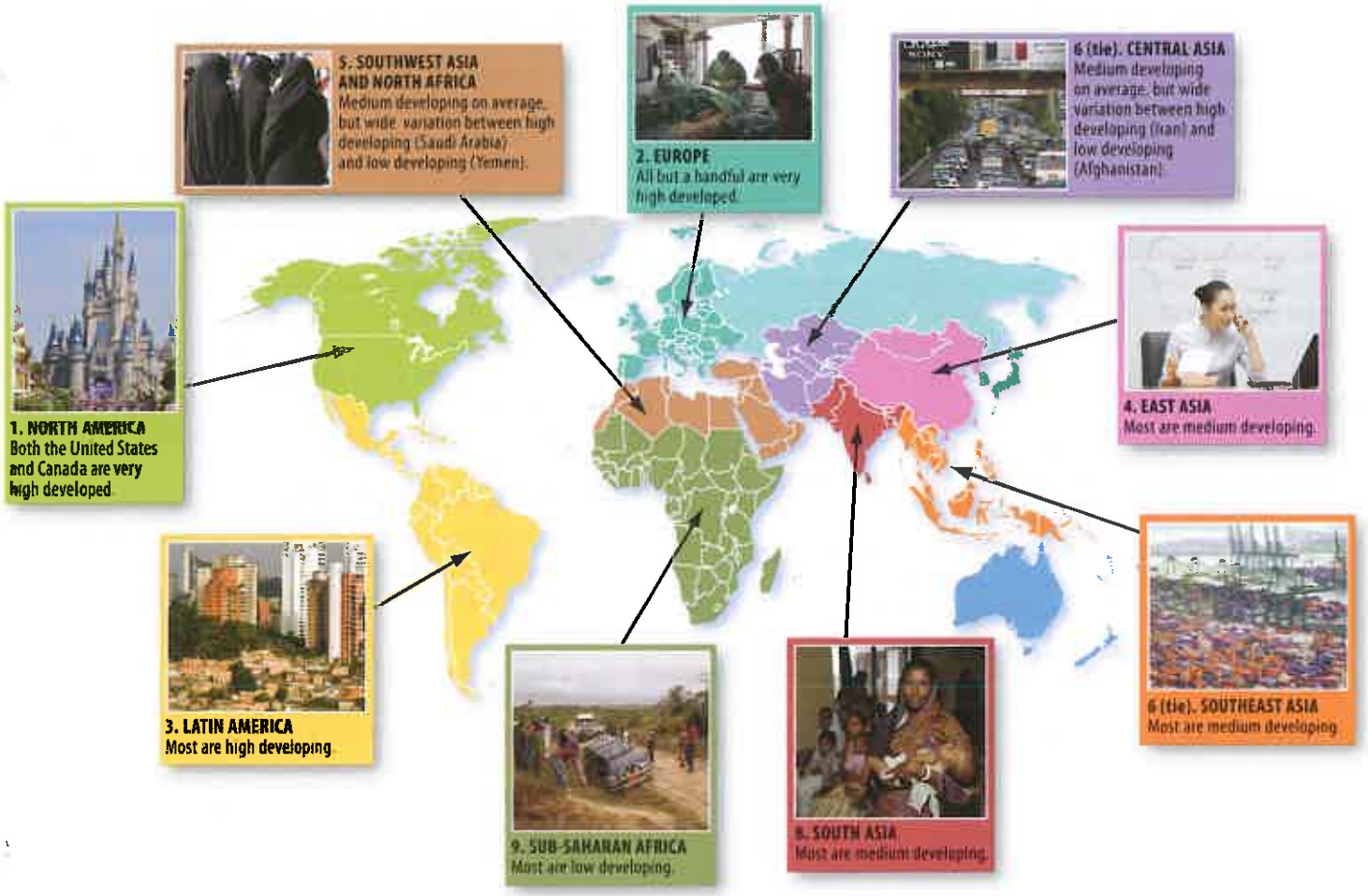
Development is a process of enlarging people's ability to lead a long and healthy life, to acquire knowledge, and to have access to resources needed for a decent standard of living. With access to these three dimensions, people have greater opportunities to be creative and productive and to enjoy personal self-respect and guaranteed human rights.

DEVELOPMENT REGIONS

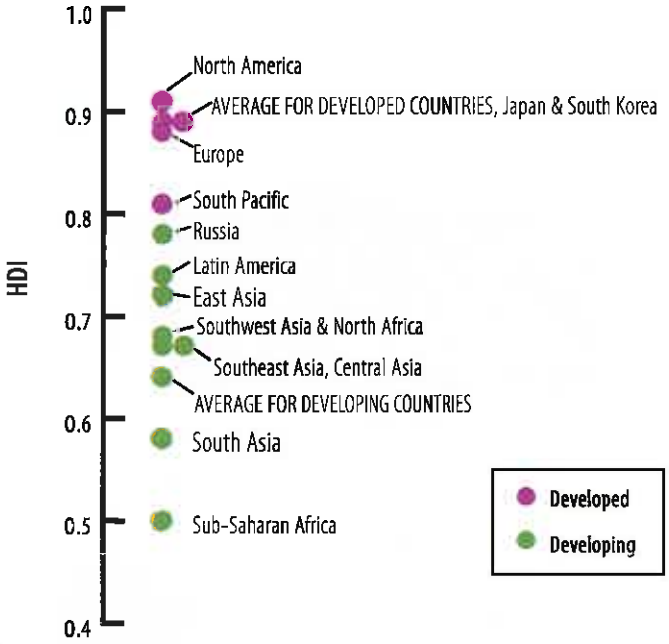
Geographers divide the world into two developed regions and seven developing regions (Figure 10-2). Each region has



▲ **FIGURE 10-1 HUMAN DEVELOPMENT INDEX (HDI)** Developed countries are those with very high HDI scores. The other three classes are for developing countries.



▲ **FIGURE 10-2 DEVELOPMENT REGIONS** The nine regions are ranked from highest (1) to lowest (9) level of development, according to the UN's HDI.



▲ **FIGURE 10-3 HDI BY REGION**

an overall HDI score (Figure 10-3). Sub-Saharan Africa and South Asia are the regions with the two lowest HDI scores.

In addition to the nine regions, three other distinctive areas can be identified. Japan and South Korea are classified separately rather than included with the rest of East Asia because their level of development is much higher than that of their neighbors. The South Pacific is a much less populous area than the nine development regions; Australia (its most populous country) and New Zealand are developed, but the area's other countries are developing. The U.N. previously classified Russia as a developed country, but because of its limited progress in development both under and since communism, the U.N. now classifies Russia as a high developing country.

PAUSE & REFLECT 10.1.1

Which developing regions appear to have relatively high diversity in the HDIs of individual countries?

A Decent Standard of Living

LEARNING OUTCOME 10.1.2

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 U.N. 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 $17.8 trillion in 2014, and the population was approximately 319 million, so GNI per capita was approximately $55,860. In 2014, per capita GNI was approximately $40,000 in developed countries compared to approximately $10,000 in developing countries (Figure 10-4).

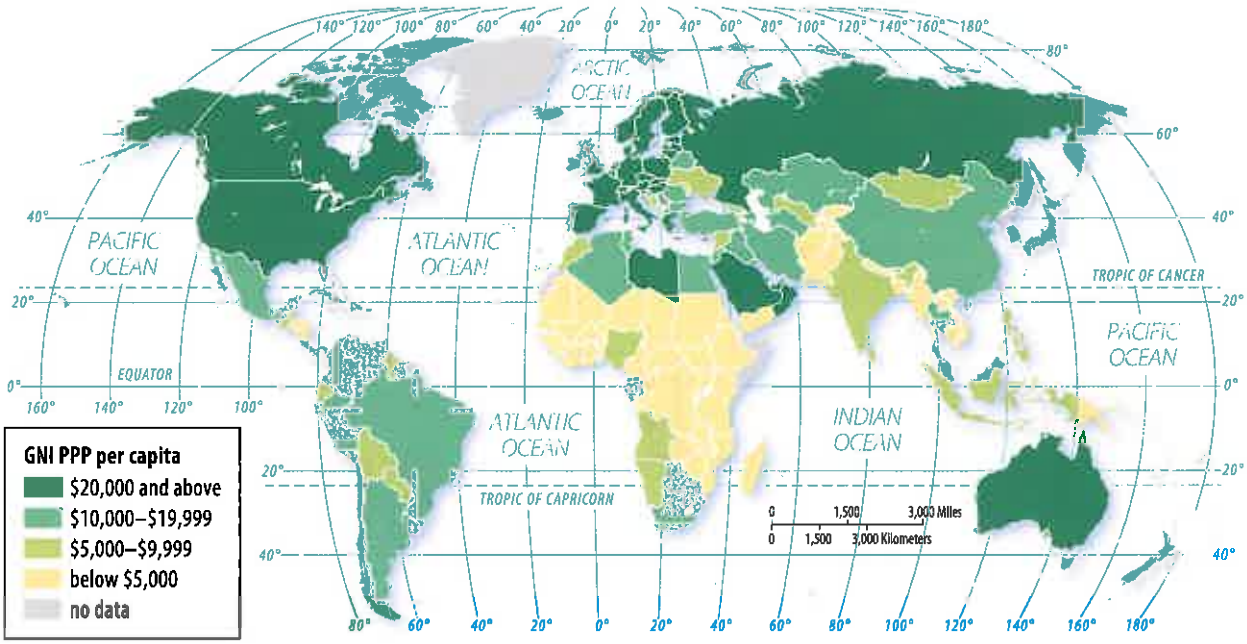
Some studies refer to **gross domestic product (GDP)**, which is also the value of the output of goods and services produced in a country in a year. GDP does not account for money that leaves and enters the country.

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.

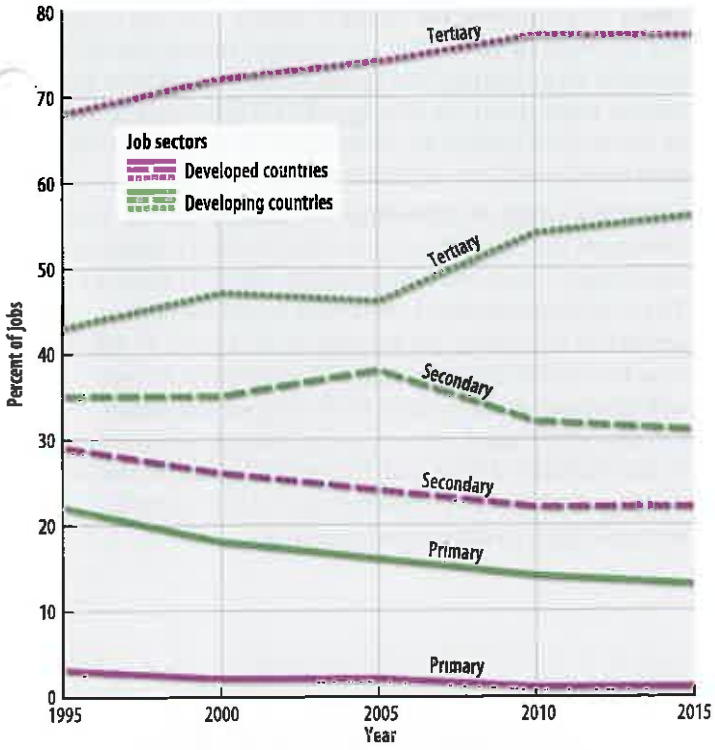
ECONOMIC STRUCTURE

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 (as discussed in Chapter 9) 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 (discussed in Chapter 11).
- The **tertiary sector** involves the provision of goods and services to people in exchange for payment, such as retailing, banking, law, education, and government (discussed in Chapters 12 and 13).



▶ FIGURE 10-4 INCOME GNI per capita PPP is highest in developed countries. The lowest figures are in sub-Saharan Africa and South Asia.



▲ **FIGURE 10-5 ECONOMIC STRUCTURE** The graph shows the changing contribution to GNI by the three sectors of jobs.

The contribution to GNI among primary, secondary, and tertiary sectors varies between developed and developing countries (Figure 10-5):

- The share of GNI accounted for by the primary sector has decreased in developing countries, but it remains higher than in developed countries. The low share in developed countries indicates that a handful of farmers produce enough food for the rest of society.
- 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 high in developed countries, and is now growing in developing countries.

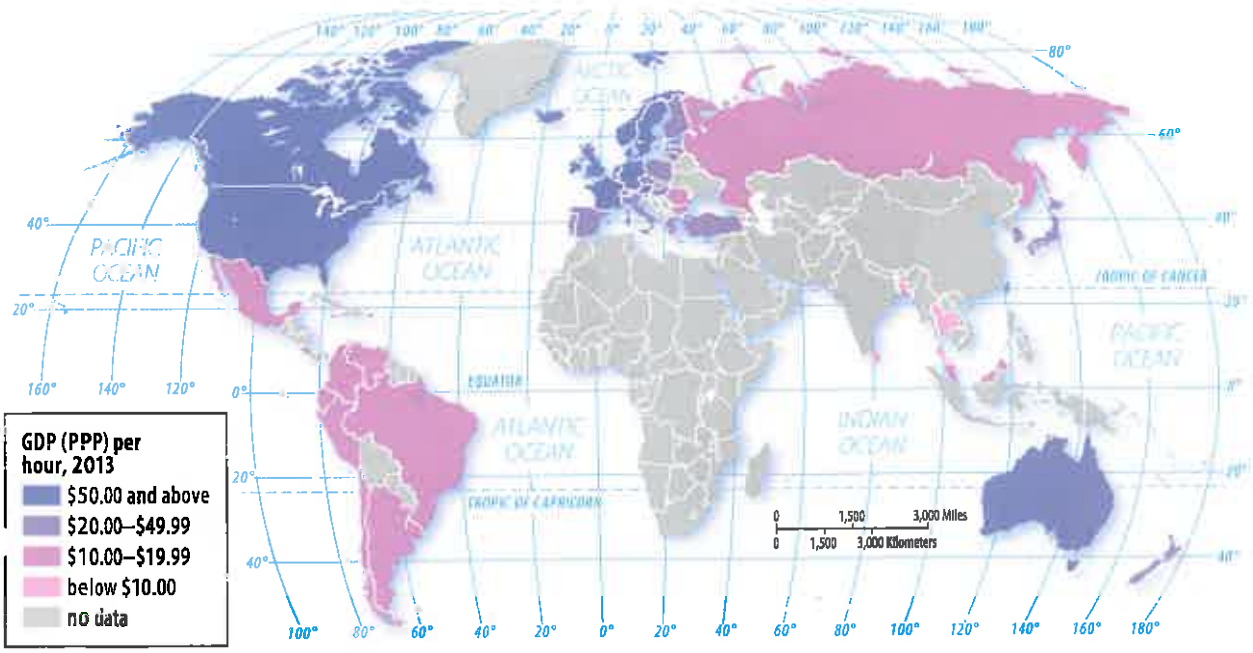
PAUSE & REFLECT 10.1.2

Figure 9-3 shows the percentage of workers engaged in agriculture. Does a country with a high percentage of agricultural workers, as shown in Figure 9-3, typically have a high HDI or low HDI?

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 is around $67 per hour in the United States compared to around $16 in Mexico (Figure 10-6).

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.



◀ **FIGURE 10-6 PRODUCTIVITY** Workers in developed countries are more productive than in developing countries because they have a higher value added.

Access to Knowledge

LEARNING OUTCOME 10.1.3

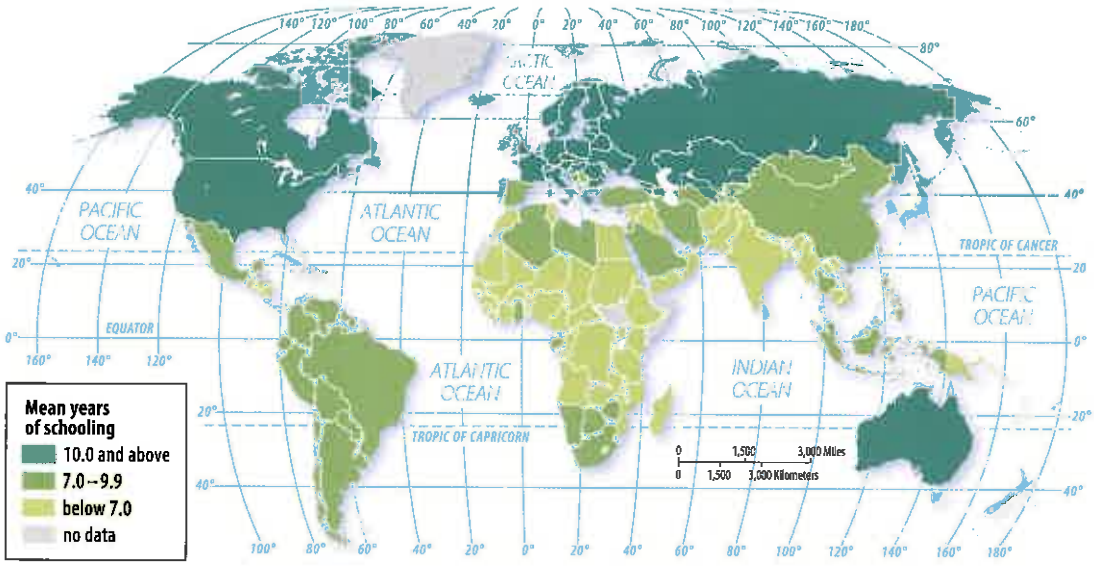
Identify the HDI education factors.

Development is about more than wealth. The U.N. believes that development is about people becoming healthier and wiser, not just wealthier.

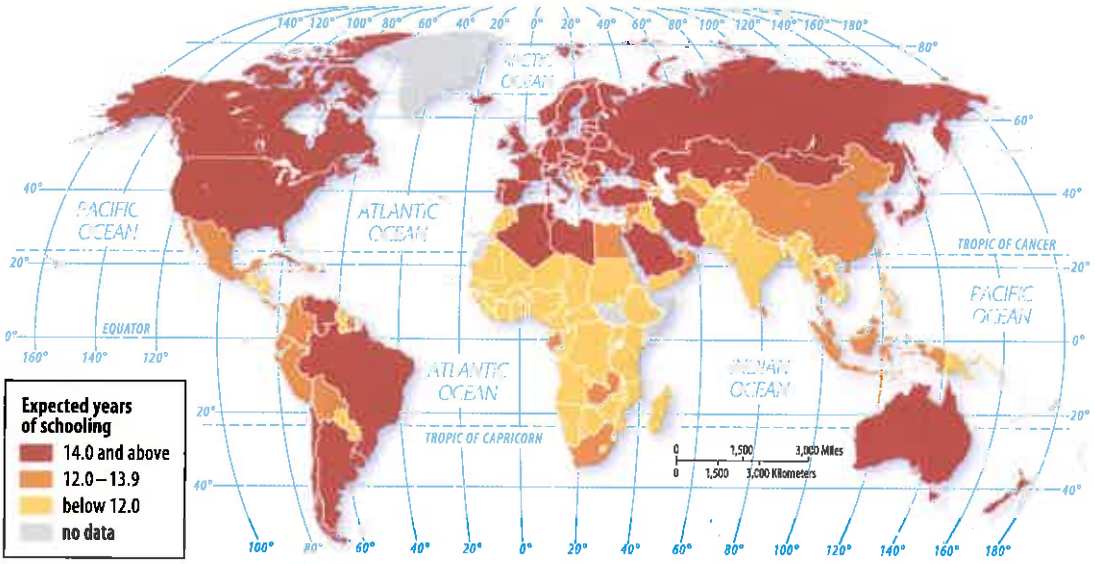
The U.N. considers years of schooling to be the most critical measure of the ability of an individual to gain access to knowledge needed for development. The assumption is that no matter how poor the school, the longer the pupils attend, the more likely they are to learn something.

To form the access to knowledge component of HDI, the U.N. combines two measures of years of schooling:

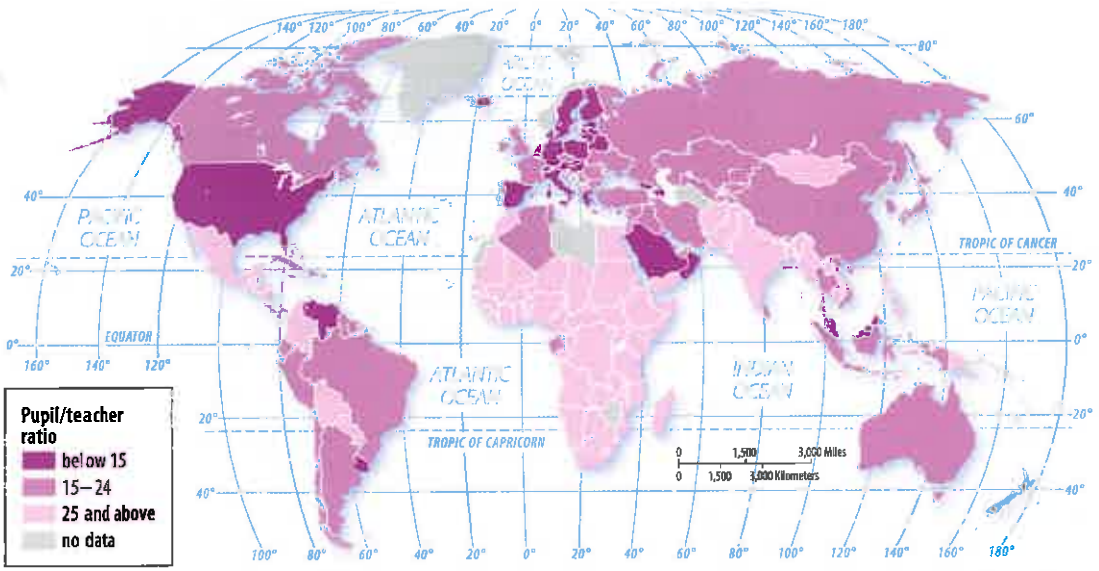
- **Years of schooling for today's adults.** This measures the number of years that the average person aged 25 or older in a country has spent in school (Figure 10-7) Adults have spent an average of 11.5 years in school in developed countries, compared to only 4.7 years in South Asia and sub-Saharan Africa.
- **Expected years of schooling for today's youth.** This measures the number of years that the U.N. forecasts an average 5-year-old will spend in school (Figure 10-8). The U.N. expects that 5-year-olds in developed countries will spend an average of 16.3 years in school; in other words, roughly half of today's 5-year-olds will graduate from college in developed countries. On the other hand, the expected average is 9.3 years in sub-Saharan Africa and 10.2 years in South Asia—an improvement over current figures but a smaller increase than in developed countries.



▶ **FIGURE 10-7 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 10-8 EXPECTED YEARS OF SCHOOLING** The highest number of expected years of schooling are in North America and Europe, and the lowest numbers are in South Asia and sub-Saharan Africa.



◀ FIGURE 10-9 PUPIL/TEACHER RATIO The lowest pupil/teacher ratio is in North America, and the highest is in sub-Saharan Africa.

Other indicators can measure regional variations in access to knowledge:

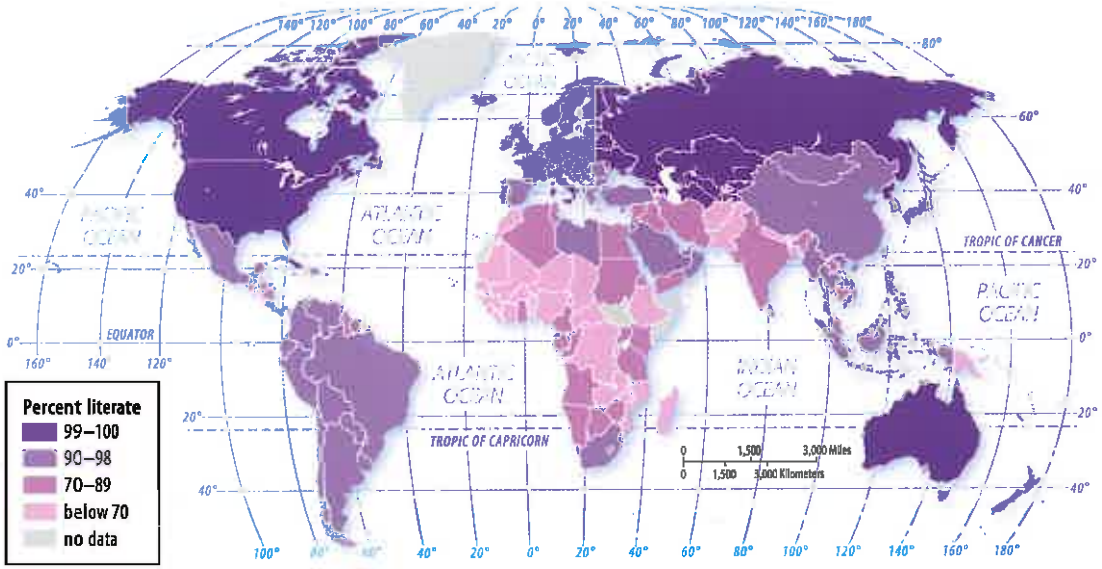
- **Pupil/teacher ratio.** The **pupil/teacher ratio** is the number of enrolled students divided by the number of teachers. The fewer pupils a teacher has, the more likely that each student will receive effective instruction (Figure 10-9).
- **Literacy rate.** The **literacy rate** is the percentage of a country's people who can read and write (Figure 10-10).

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.

Adding to the challenge of teaching and learning in developing countries, most books, newspapers, and magazines are published in developed countries, in part because more of their citizens can read and write and can afford to buy them. 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.

PAUSE & REFLECT 10.1.3

The United States has a lower pupil/teacher ratio than Canada. Does that mean that the pupil/teacher ratio in the United States is more favorable or less favorable than in Canada?



◀ FIGURE 10-10 LITERACY RATE Literacy is nearly 100 percent in developed countries. The lowest rates are in sub-Saharan Africa and South Asia.

Health and Wealth

LEARNING OUTCOME 10.1.4

Identify the HDI health factors.

The U.N. considers good health to be as an important a measure of development as wealth and knowledge. A goal of development is to provide the nutrition and medical services needed for people to lead long and healthy lives. Chapter 2 discussed in detail the many differences worldwide in health and medical services.

A LONG AND HEALTHY LIFE

From the many health and medical indicators, the U.N. has selected life expectancy at birth as the contributor to the HDI (Figure 10-11). Life expectancy at birth was defined in Chapter 2 as the average number of years a newborn infant can expect to live at current mortality levels. A baby born this year is expected to live on average to age 71 worldwide, to 80 in developed countries, and to only 57 in sub-Saharan Africa (refer to Figure 2-11).

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.

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. 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.

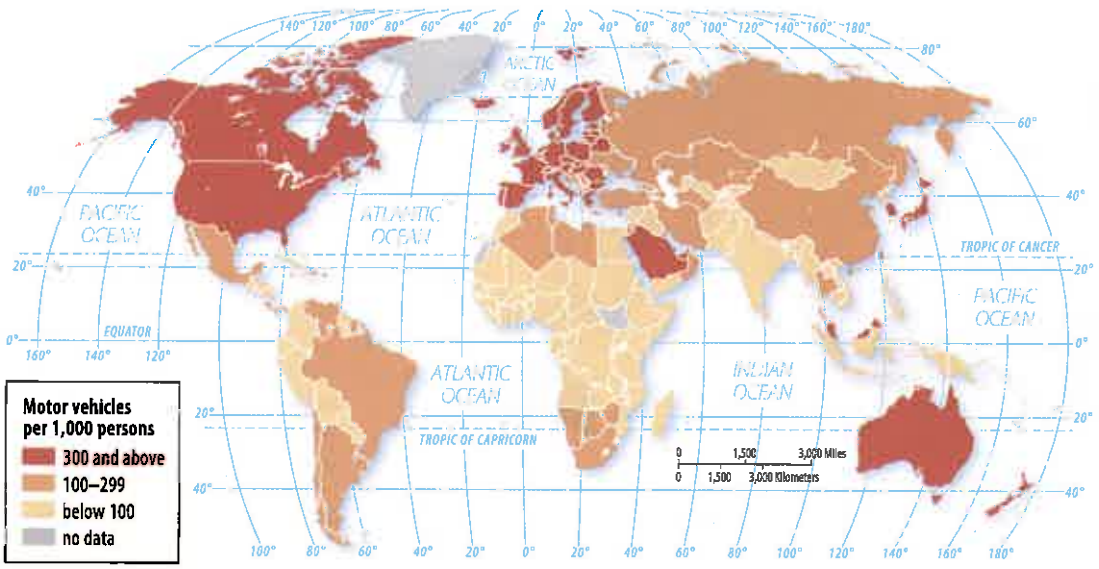
▲ **FIGURE 10-11 LIFE EXPECTANCY AT BIRTH** The highest life expectancy among the nine development regions is in North America, and the lowest is in sub-Saharan Africa.

Better health and welfare also permit 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. 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 and diarrhea. They may also die from poor medical practices that arise from lack of education.

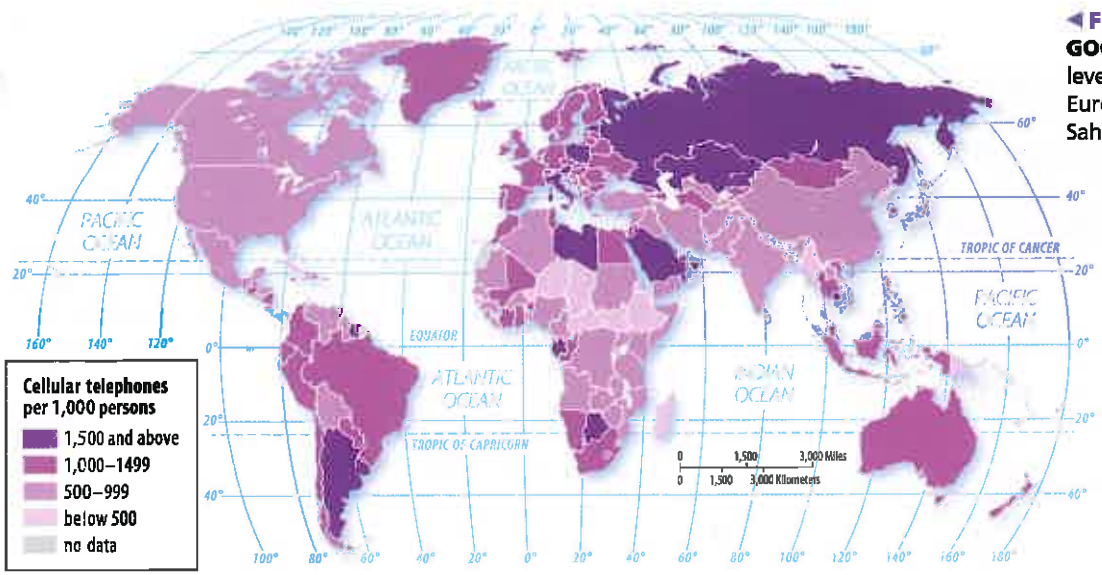
CONSUMER GOODS

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 10-12). 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.



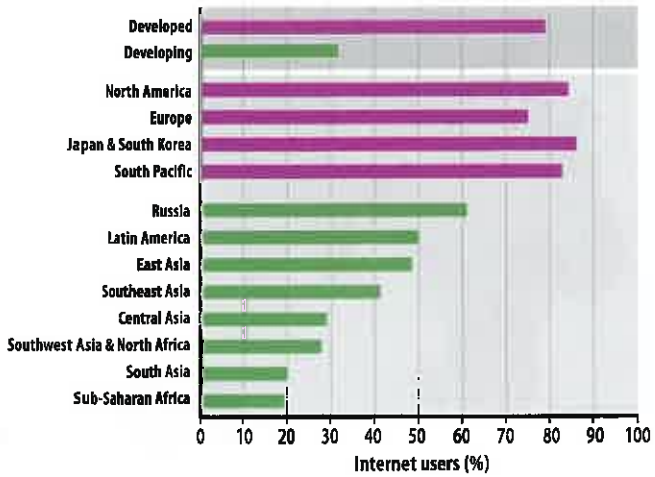
◀ **FIGURE 10-12 CONSUMER GOODS: MOTOR VEHICLES** The highest level of motor vehicle ownership is in North America, and the lowest is in South Asia.



◀ **FIGURE 10-13 CONSUMER GOODS: CELL PHONES** The highest level of cell phone ownership is in Europe, and the lowest is in sub-Saharan Africa.

- Telephones enhance interaction with providers of raw materials and customers for goods and services (Figure 10-13). 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 10-14). 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.



▲ **FIGURE 10-14 CONSUMER GOODS: INTERNET USERS** The highest level of Internet users is in North America, and the lowest is in South Asia.

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 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.

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 more individuals can obtain service from a single tower or satellite.

PAUSE & REFLECT 10.1.4

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 costly infrastructure?

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.**

KEY ISSUE 2

Where Are Inequalities in Development Found?

- Unequal and Uneven Development
- Gender Inequality
- Gender Empowerment and Employment
- Reproductive Health
- HDI and Gender Inequality

LEARNING OUTCOME 10.2.1

Describe the U.N.'s measures of inequality.

The U.N. believes that every person should have access to decent standards of living, knowledge, and health. At least some degree of inequality is found in every country.

Unequal and Uneven Development

Inequality within countries can exist in terms of income, gender, and region. Inequality also exists between countries in the core and periphery of development.

INEQUALITY-ADJUSTED HDI

To measure the extent of inequality, the U.N. has created the **Inequality-adjusted Human Development Index (IHDI).** The IHDI 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 between the two measures, the greater the inequality. For example, 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. Developed countries have the lowest gap between HDI and IHDI, indicating a relatively modest level of inequality by worldwide standards (Figure 10-15).

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.

PAUSE & REFLECT 10.2.1

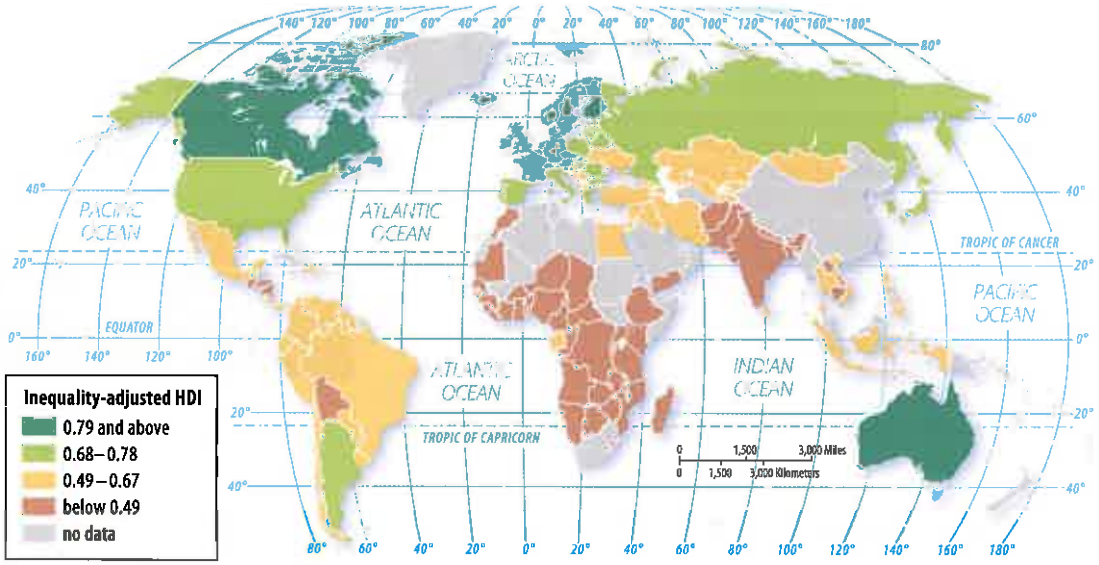
In the United States, the HDI is .914 and the IHDI is .755. In Canada, the HDI is .902 and the IHDI is .833. Which country has greater inequality?

INEQUALITY WITHIN DEVELOPING COUNTRIES

Brazil and Turkey are among the world's largest and most populous countries. At the national scale, the two countries fall somewhere in the middle of the pack in terms of HDI. Among the 186 countries with HDI scores, Turkey ranks 69th and Brazil ranks 79th.

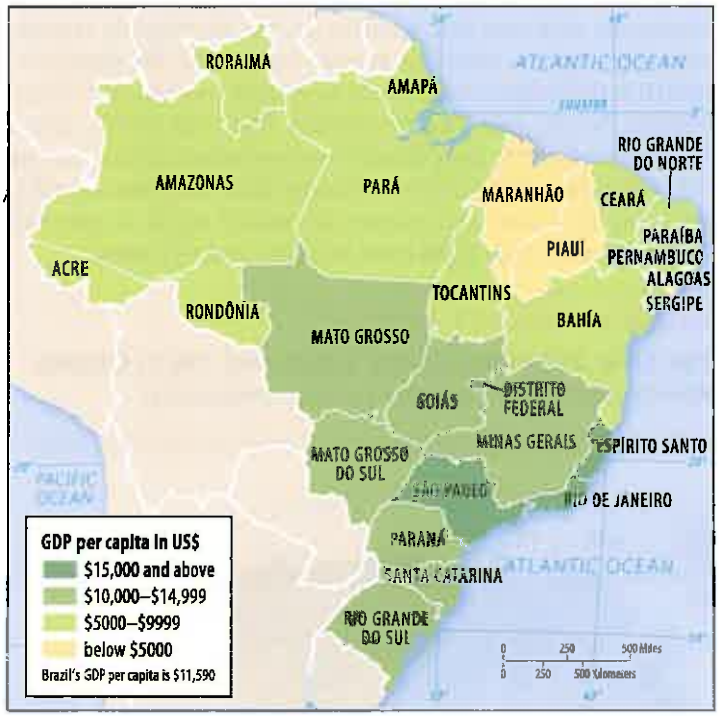
The extent of inequality within these countries can be seen in two ways. First is the difference between the HDI and IHDI. The two countries have similar HDI scores, but Brazil has a lower IHDI, indicating more inequality in Turkey.

Inequality can also be seen through differences in GNI per capita among states or provinces within the countries.



▶ **FIGURE 10-15 INEQUALITY-ADJUSTED HDI (IHDI)** The lower the score, the greater the inequality. Europe has the highest score, hence the least inequality. South Asia and sub-Saharan Africa have the lowest scores and therefore the greatest degree of inequality.

◀ **FIGURE 10-16 INEQUALITY AMONG REGIONS WITHIN TURKEY**



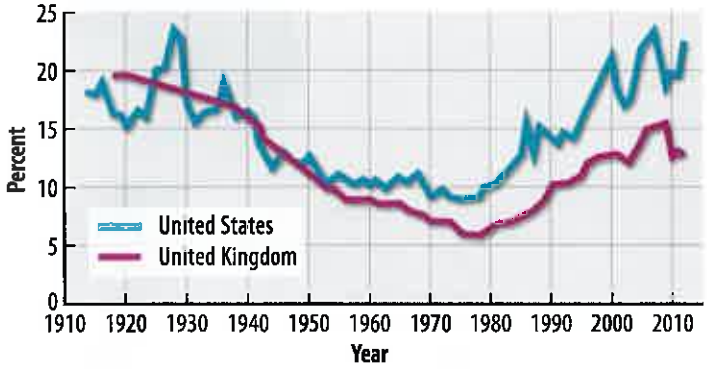
◀ **FIGURE 10-17 INEQUALITY AMONG REGIONS WITHIN BRAZIL**

In Turkey, wealth is much higher in the western part of the country, closest to Europe (Figure 10-16). Wealth is much lower in the east, home to Kurds, many of whom seek independence (see Chapter 7). In Brazil, wealth is highest along the east coast, especially in the country's largest city, São Paulo (Figure 10-17).

INEQUALITY WITHIN DEVELOPED COUNTRIES

Developed countries have regional internal variations in GNI per capita that are less extreme than in developing countries. In the United States, for example, the GNI 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).

Through most of the twentieth century, the gap between rich and poor narrowed in developed countries. Inequality was reduced because developed countries used some of their wealth to extend health care and education to more people and to provide some financial assistance to poorer people. Since 1980, however, inequality has increased in most developed countries, including the United States and the United Kingdom (Figure 10-18).



▲ **FIGURE 10-18 WIDENING INEQUALITY** The share of the national wealth held by the richest 1 percent declined in the United States and the United Kingdom for most of the twentieth century but has increased in recent decades.

Gender Inequality

LEARNING OUTCOME 10.2.2

Describe the U.N.'s measures of gender inequality.

A country's overall level of development can mask inequalities in the status of men and women. The quest for an improved standard of living, access to knowledge, health, and a sustainable future are aspirations of people in all countries. Yet long-standing cultural and legal obstacles can limit women's participation in development and access to its benefits.

The U.N. uses two indexes to measure gender inequality: the Gender Inequality Index (GII) and the Gender-related Development Index (GDI). The U.N. has not found a single country in the world where the women are treated as well as the men according to the GII and only a handful according to the GDI. At best, women have achieved near-equality with men in some countries, but in other countries, the level of development for women lags far behind the level for men. The U.N. argues that inequality between men and women is a major factor that keeps a country from achieving a higher level of development.

GENDER-RELATED DEVELOPMENT INDEX

The **Gender-related Development Index (GDI)** measures the gender gap in the level of achievement for the three dimensions of the Human Development Index: income, education, and life expectancy. The GDI uses the same methodology as the HDI, described in the previous section. Countries are ranked based on their deviation from gender parity in the three dimensions of the HDI.

If females and males had precisely the same HDI scores, the GDI would be 1.000. In fact, the overall GDI in the world is .920, which means that the average HDI for all females in the world (.655) is .920, or 92 percent of the average HDI for all males (.712). The average in developed regions is .975, indicating close to parity, whereas the average in developing countries is .904. The lowest scores are in South Asia, sub-Saharan Africa, and Southwest Asia & North Africa (Figure 10-19).

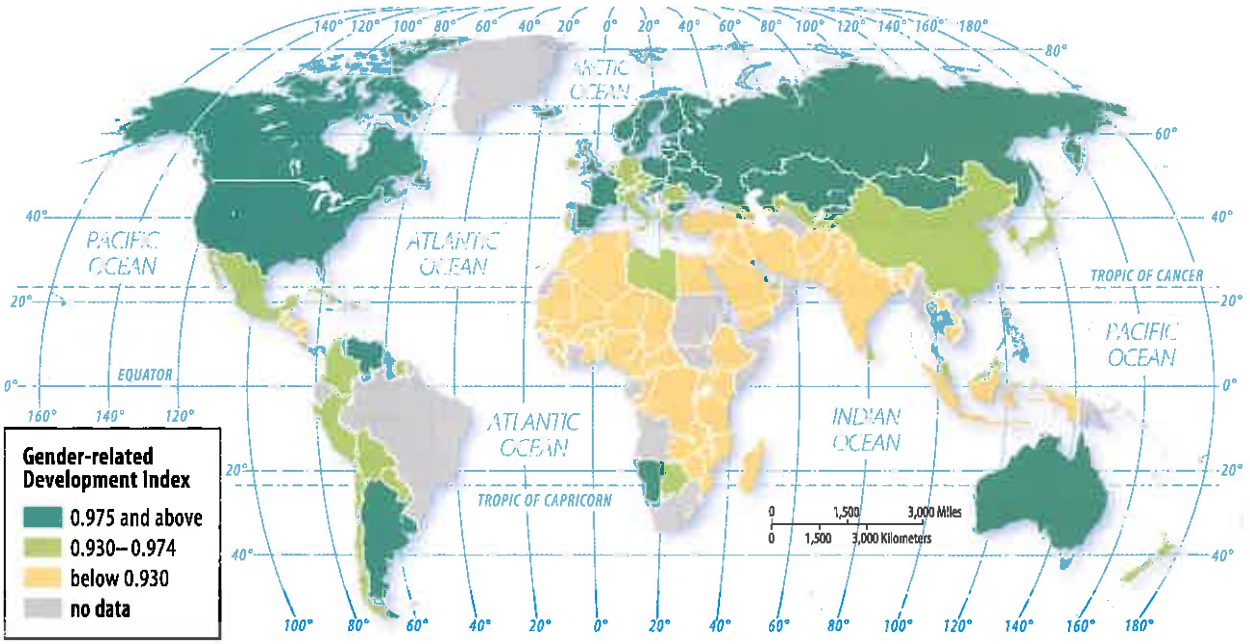
GENDER INEQUALITY INDEX

The **Gender Inequality Index (GII)** measures the gender gap in the level of achievement in three dimensions: reproductive health, empowerment, and the labor market. The GII uses similar methodology to the IHDI discussed on the previous page. The higher the GII, the greater the inequality between men and women (Figure 10-20). A score of 0 would mean that men and women fare equally, and a score of 1.0 would mean that women fare as poorly as possible in all measures.

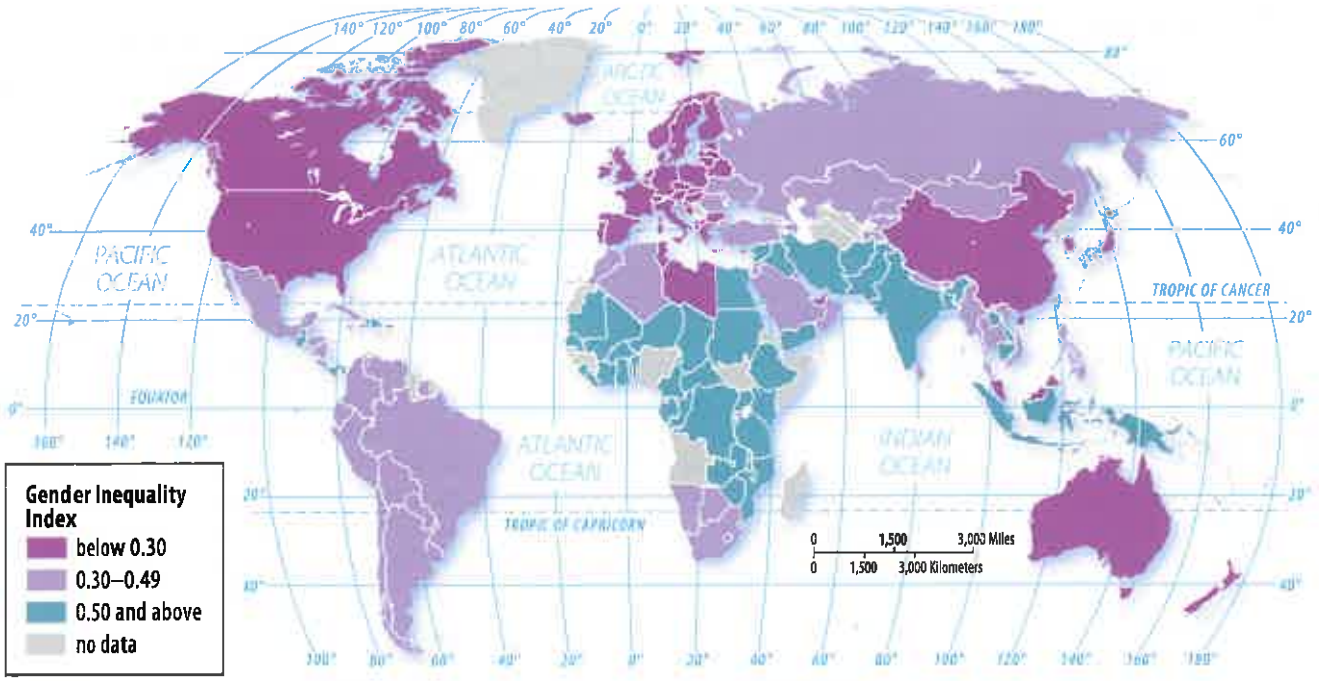
The GII is higher in developing countries than in developed ones. Sub-Saharan Africa, South Asia, Central Asia, and Southwest Asia and North Africa are the developing regions with the highest levels of gender inequality. Reproductive health is the largest contributor to gender inequality in these regions. South Asia and Southwest Asia and North Africa also have relatively poor female empowerment scores. At the other extreme, 10 countries in Europe have GIIs less than 0.1, meaning that men and women are nearly equal. In general, countries with high HDIs have low GIIs and vice versa.

PAUSE & REFLECT 10.2.2

The GII is .262 in the United States and .136 in Canada. Which country has greater gender inequality?



▶ **FIGURE 10-19 GENDER-RELATED DEVELOPMENT INDEX**



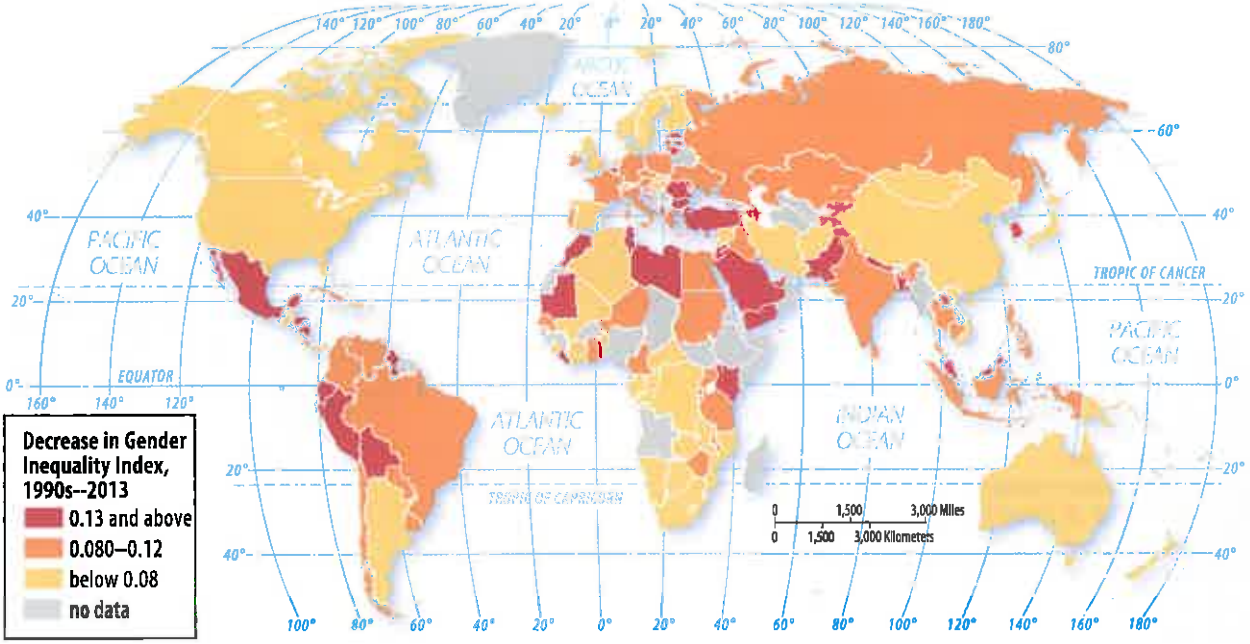
▲ **FIGURE 10-20 GENDER INEQUALITY INDEX** The lowest GII numbers and therefore the least inequality are in Europe, and the highest numbers are in sub-Saharan Africa and South Asia.

GII OVER TIME

The U.N. has found that gender inequality has declined since the 1990s in all but 4 of 138 countries for which time-series data are available (Figure 10-21). The greatest improvement has been in Southwest Asia & North Africa.

The improvement in gender inequality has been relatively modest in the United States. Furthermore, the United States has a GII rank of only 47, although it ranks fifth in the world on HDI. The U.N. points to two factors accounting for the relatively low U.S. GII ranking:

- Compared with other very high HDI countries, the United States has a much higher birth rate among teenage women and a higher mortality rate among women during childbirth.
- The percentage of women in the national legislature is lower in the United States than in other high HDI countries.



▶ **FIGURE 10-21 TREND IN GENDER INEQUALITY** The map shows the change in GII from the late 1990s to 2013. Most countries have seen an improvement in the GII.

Gender Empowerment and Employment

LEARNING OUTCOME 10.2.3

Describe empowerment-related components of gender inequality.

The GII combines three sets of measures to come up with a composite score for gender inequality. This page looks at two of the three measures: empowerment and employment. The third measure is discussed on page 364.

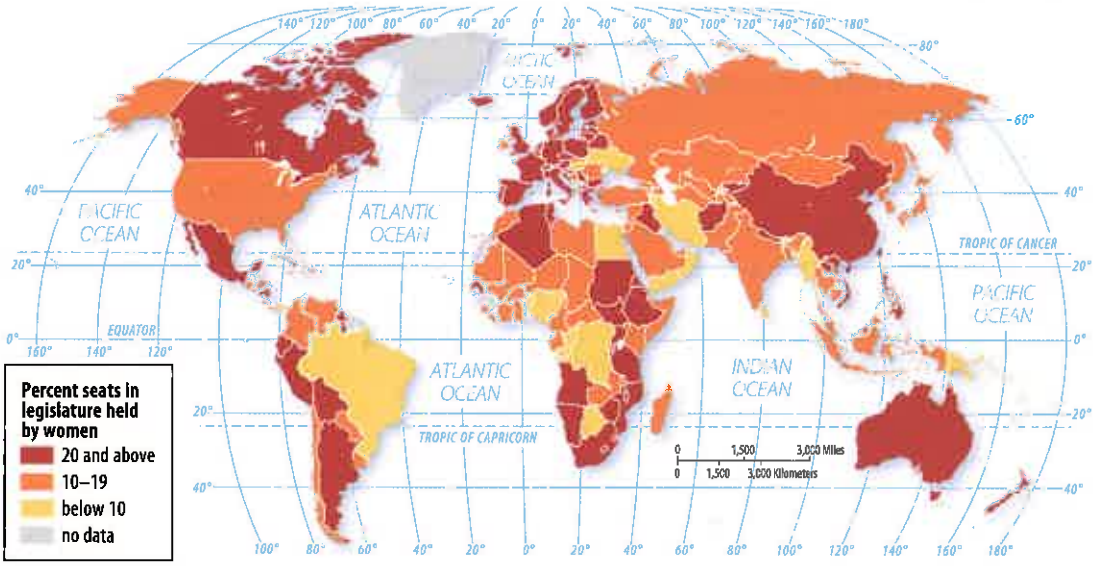
EMPOWERMENT

In the context of gender inequality, empowerment refers to the ability of women to achieve improvements in their own status—that is, to achieve economic and political power. The empowerment dimension of GII is measured by two indicators: The percentage of seats held by women in the national legislature and the percentage of women who have completed some secondary school.

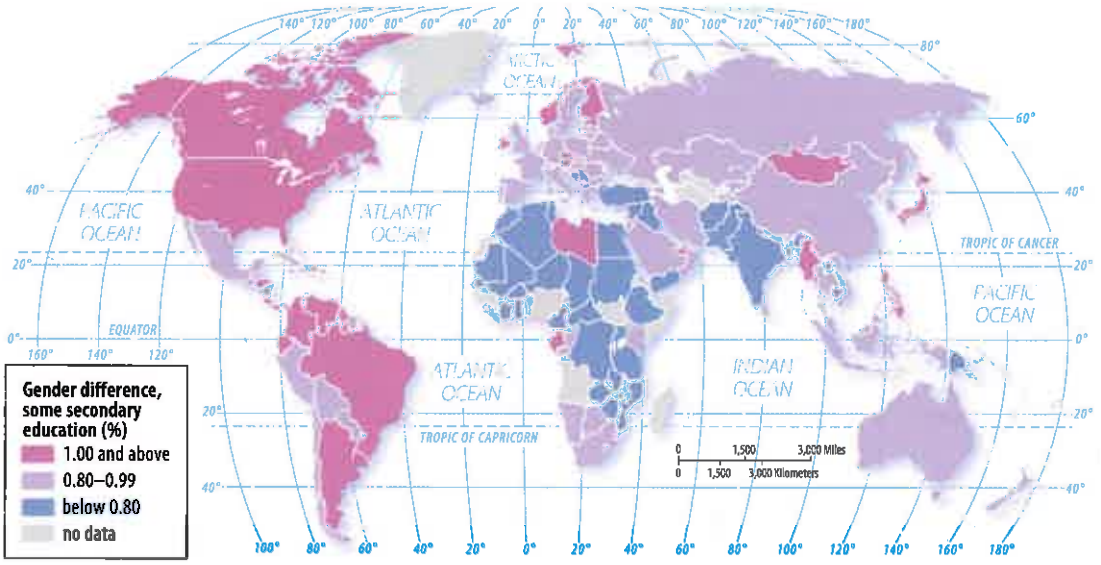
NATIONAL LEGISLATURE. No particular gender-specific skills are required to be elected as a representative and to serve effectively. But in every country of the world, both developed and developing, fewer women than men hold positions of political power (Figure 10-22).

Although more women than men vote in most places, only one country has a national parliament or congress with a majority of women: Rwanda. With a few exceptions, the highest percentages are in Europe, where women comprise approximately one-fourth of the members of national parliaments. The lowest rates are in Southwest Asia & North Africa.

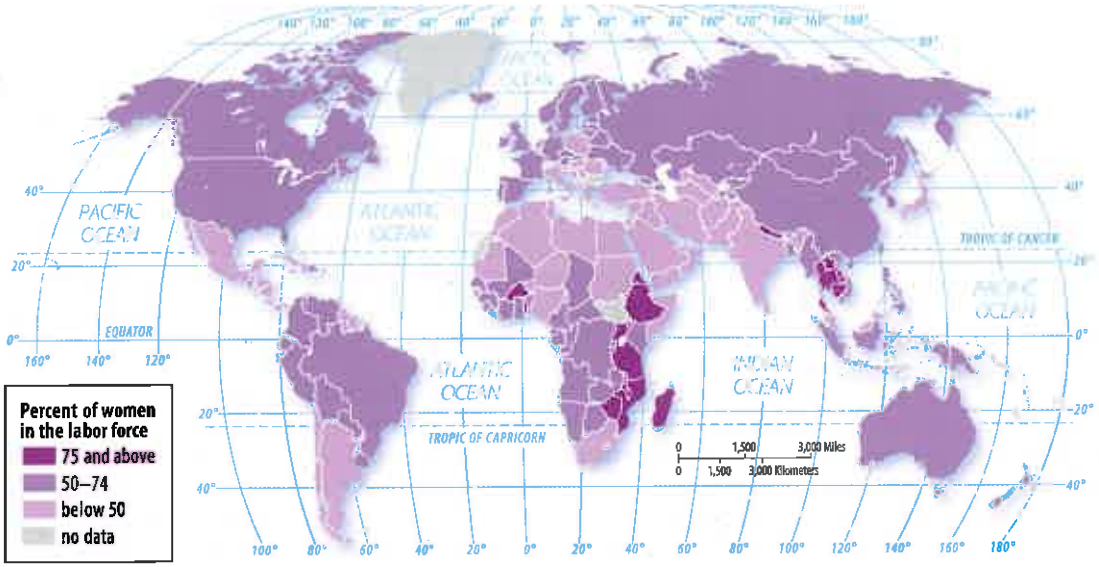
In the United States, 20 of 100 senators and 84 of 435 representatives were women in 2015. These 19–20 percent



▶ **FIGURE 10-22**
EMPOWERMENT: WOMEN IN THE NATIONAL LEGISLATURE The highest percentages are in Europe, and the lowest are in Southwest Asia & North Africa.



▶ **FIGURE 10-23**
EMPOWERMENT: GENDER DIFFERENCES IN SECONDARY SCHOOL A figure about 1 means that more girls than boys have some secondary school.



◀ **FIGURE 10-24 LABOR FORCE PARTICIPATION** A lower number means that relatively few women participate in the labor force compared with men.

figures are much lower than the average for developed countries and slightly below average for all countries in the world. In Canada, for example, 30 of 83 senators (excluding vacancies) and 88 of 338 members of parliament in the House of Commons were women in 2015.

PAUSE & REFLECT 10.2.3

What is the gender ratio on the governing body of your local community?

SECONDARY SCHOOL. Worldwide, 54 percent of women have completed some secondary (high) school, compared to 64 percent of men. In North America, girls are more likely than boys to complete some high school, and boys are slightly ahead in Europe. In developing countries, boys are much more likely than girls to be high school graduates. For every 10 boys who attend high school in developing countries, only 6 girls attend (Figure 10-23). The gap in education between girls and boys is especially high in South Asia.

EMPLOYMENT

The **female labor force participation rate** is the percentage of women holding full-time jobs outside the home. Worldwide, 51 percent of women work outside the home, compared to 77 percent of men. In general, women in developed countries are more likely than women in developing countries to hold full-time jobs outside the home. Figures vary widely among developing regions (Figure 10-24). South Asia and Southwest Asia & North Africa have substantial gaps between male and female labor participation, whereas East Asia and sub-Saharan Africa have smaller gaps (Figure 10-25). Women hold jobs in agriculture or services in sub-Saharan Africa, even while they have the world's highest fertility rates.

◀ **FIGURE 10-25 EMPLOYMENT FOR WOMEN** A representative of a bank meets with women who are receiving loans to start businesses in Bihar State, India.

Reproductive Health

LEARNING OUTCOME 10.2.4

Describe reproductive health elements of the GII.

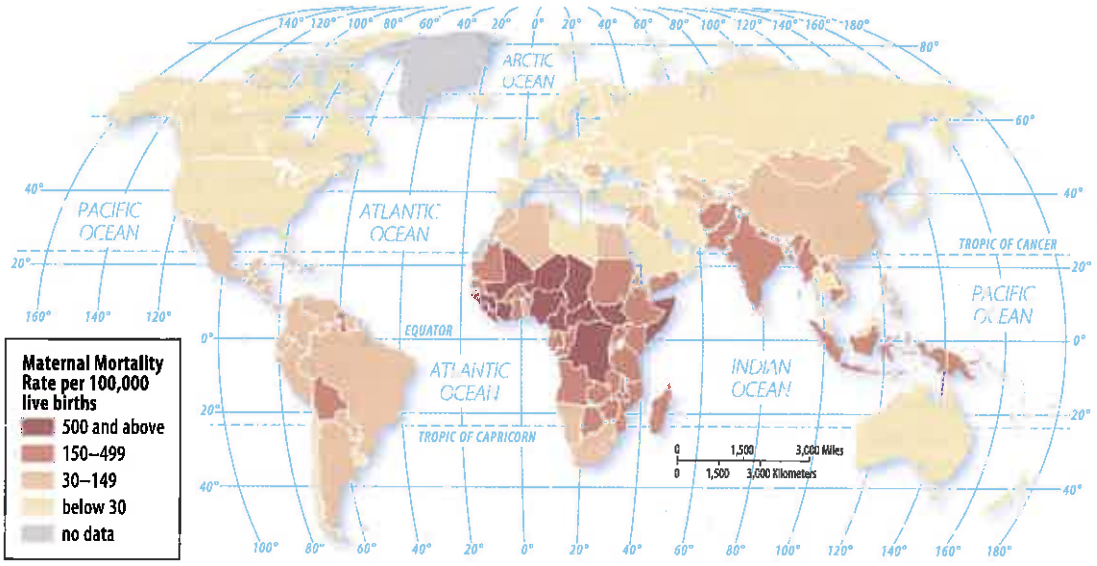
The third component of the GII is reproductive health. Poor reproductive health is a major contributor to gender inequality around the world.

REPRODUCTIVE HEALTH

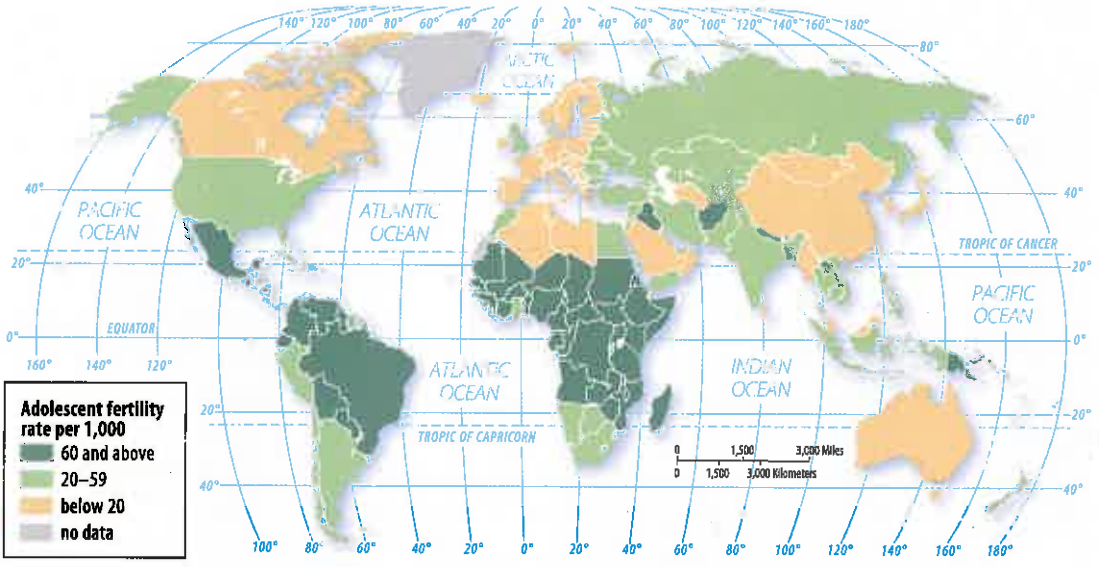
The reproductive health dimension of the GII is based on two indicators:

- The **maternal mortality rate** is the number of women who die giving birth per 100,000 births. The rate is 16 deaths of mothers per 100,000 live births in developed countries and 171 in developing countries (Figure 10-26). The highest rates (most deaths per births) are in sub-Saharan Africa. The U.N. estimates that 150,000 women and 1.6 million children die each year between the onset of labor and 48 hours after birth.
- The **adolescent fertility rate** is the number of births per 1,000 women ages 15 to 19 (Figure 10-27). The rate is 19 births per 1,000 women ages 15 to 19 in developed countries and 53 in developing countries. The teenage pregnancy rate is below 10 per 1,000 in most European countries, where most couples use some form of contraception. In sub-Saharan Africa, where gender inequality is high, contraceptive use is below 10 percent, and the teenage pregnancy rate is 110 per 1,000.

The U.N. includes reproductive health as a contributor to GII because in countries where effective control of reproduction is universal, women have fewer children, and maternal and child health are improved. Women in developing regions are more likely than women in developed regions to die in childbirth and to give birth as teenagers. Every country that offers women a full range of reproductive health options has a very low total fertility rate.



▶ **FIGURE 10-26 MATERNAL MORTALITY RATE** The maternal mortality ratio is the number of deaths of mothers in childbirth compared to the number of live births.



▶ **FIGURE 10-27 ADOLESCENT FERTILITY RATE** The adolescent fertility rate is the number of births per 1,000 women ages 15 to 19.

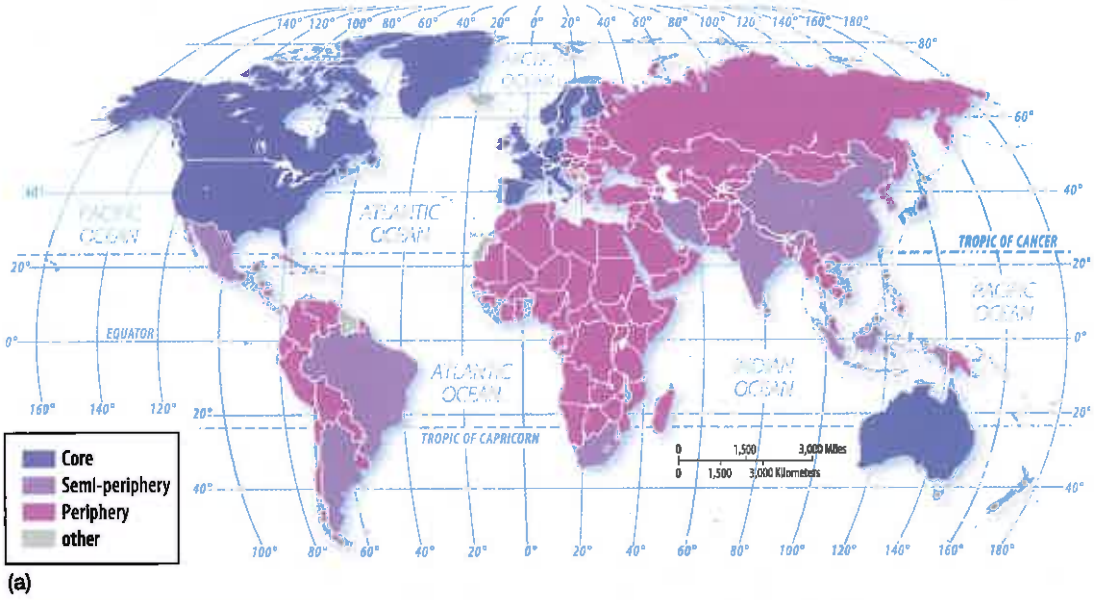
CORE AND PERIPHERY

The relationship between developed countries and developing countries is often described as a north–south split because most of the developed countries are north of the equator, whereas many developing countries are south (Figure 10-28). Immanuel Wallerstein, a U.S. social scientist, describes the relationship between developed and developing countries as one of "core" and "periphery." According to Wallerstein's world-systems analysis, in an increasingly unified world economy, developed countries form an inner core area, whereas developing countries occupy peripheral locations.

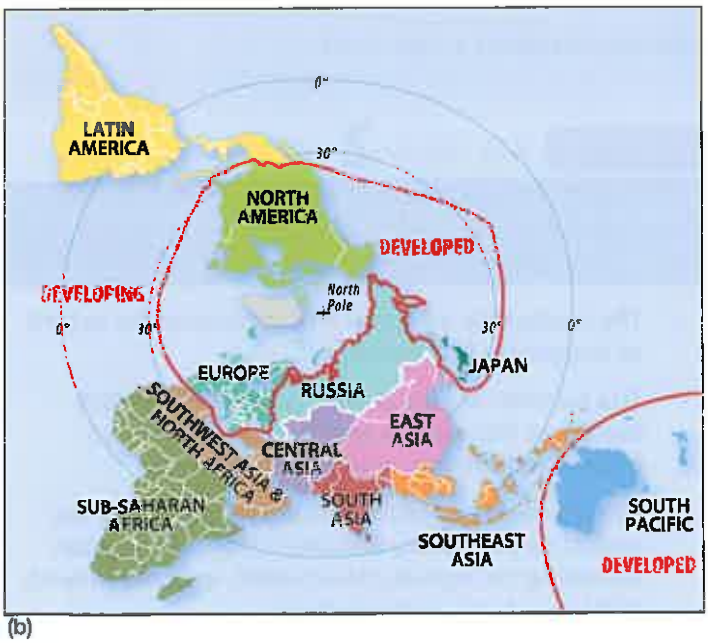
Uneven development was defined in Chapter 1 as the increasing gap in economic conditions between core and peripheral regions as a result of the globalization of the economy. North America, Europe, Japan, and South Korea account for a high percentage of the world's economic activity and wealth. Developing countries in the periphery have less access to the world centers of consumption, communications, wealth, and power, which are clustered in the core.

Since the original formulation of world systems theory, an increasingly important element has been the emergence of countries classified as semi-periphery. These are countries that are either intermediate in level of economic development or situated close to both core and periphery regions.

Particular core and periphery regions have special connections. The development prospects of Latin America are tied to governments and businesses primarily in North America, those of Africa and Eastern Europe to Western Europe, and those of Asia to Japan and to a lesser extent Europe and North America. As countries like China, India, and Brazil develop, relationships between core and periphery are changing, and the line between core and periphery may need to be redrawn.



(a)



(b)

◀ **FIGURE 10-28 CORE AND PERIPHERY** **(a)** In world systems theory, developed regions are classified as core and most developing regions as periphery. A handful of developing countries are now classified as semi-periphery. **(b)** This unorthodox world map projection emphasizes the central role that developed countries play at the core of the world economy.

PAUSE & REFLECT 10.2.4

What combination of development features might be making several countries in Latin America and Asia be considered semi-periphery instead of periphery?

HDI and Gender Inequality

LEARNING OUTCOME 10.2.5

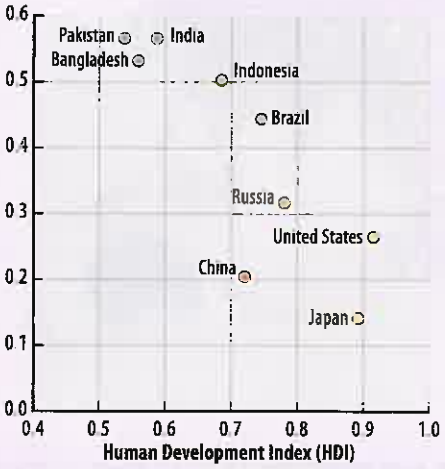
Compare HDI and GII for selected countries.

The HDI is a measure of a country's level of development, with a higher score indicating a higher level of development. The GII measures the extent of a country's gender inequality, with a higher score indicating a higher level of inequality. In general, development analysts expect that a more developed country will have less gender inequality than a developing one. The Doing Geography feature discusses the extent to which this is the case.

DOING GEOGRAPHY Comparing HDI and GII

The extent to which the expected relationship between development and equality actually holds true can be depicted in several ways. One approach is a graph. Figure 10-29 compares the HDI and GII for 9 of the 10 most populous countries (excluding Nigeria, which does not have a GII score). The dot for each country is placed at the HDI score along the x-axis and the GII score along the y-axis.

A second way to depict the relationship between HDI and GII is in a map. Figure 10-30 shows that 7 of the 9 countries follow an expected pattern. Three countries have low HDI and high GII, 2 have medium HDI and GII, and 2 have high HDI and low GII. The outliers are Russia (which has a higher-than-expected GII) and China (which has a lower-than-expected GII).



▲ **FIGURE 10-29 HDI AND GII COMPARED** In graph format.

▲ **FIGURE 10-30 HDI AND GII COMPARED** In map format.

PAUSE & REFLECT 10.2.5

In summary, how close is the relationship between development and gender inequality?

CHECK-IN KEY ISSUE 2

Where Are Inequalities in Development Found?

- ✓ **The inequality-adjusted HDI measures the extent of inequality in a country.**
- ✓ **The Gender-related Development Index (GDI) measures the gender gap in achievement of income, education, and life expectancy.**
- ✓ **The Gender Inequality Index (GII) measures the extent of inequality between men and women according to reproductive health, empowerment, and labor force participation.**

What's Your Development Geography?

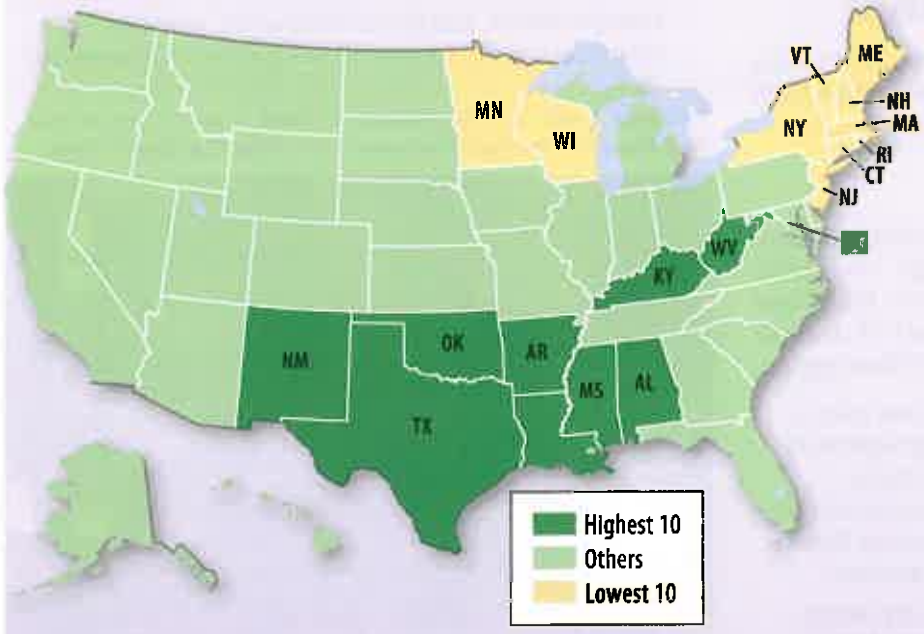
The United Nations computes development measures such as GII for entire countries rather than for individual communities within countries. How would the GII of your community rank compared with that of the United States as a whole or other countries? The GII combines measures of reproductive rights, empowerment, and labor participation. You can find indicators of all three factors for your community.

1. **Empowerment.** Women accounted for 18.2 percent of the U.S. Congress, according to the United Nations.
   a. What percentage of your state's legislature are women?
   b. What percentage of your local community's elected body are women?
   c. Are these percentages higher or lower than the national average?
   d. What might account for the variation?

2. **Labor force.** The percentage of women in the U.S. labor force is 56.8 percent. To learn the percentage of women in your community's labor force, go to American Factfinder (factfinder.census.gov). Enter the name of your community or zip code. Select Income, then Occupation by Sex and Median Earnings in the Past 12 Months. The percentage of women in your local labor force appears in the row Civilian Employed Population 16 Years and Over and the column Female Estimate.
   a. Is the figure higher or lower than the national average?
   b. What might account for the variation?
   c. Other columns in the same row show the earnings for male and female workers. Which gender has higher earnings?

3. **Reproductive rights.** The rate of teen births in the United States was 29 per 1,000 in 2013. The rate varies widely among U.S. states, from a low of 13 to a high of 46. The 10 highest and 10 lowest states are shown in Figure 10-31. Go to cdc.gov/nchs/fastats/teen-births or search online for CDC FastStats Teen Births. Select National and State Patterns of Teen Births in the United States 1940–2013. Go to Table 5 on page 20.
   a. Is your state higher or lower than the national average?
   b. What might account for the variation?

4. **Your community's GII.**
   a. Does a higher percentage of female legislators contribute to a higher GII or a lower GII? Why? Does your community have a higher or lower percentage of female legislators than the national average?
   b. Does a higher female labor force participation contribute to a higher GII or a lower GII? Why? Is the labor force participation in your community higher or lower than the national average?
   c. Does a higher teen birth rate contribute to a higher GII or a lower GII? Why? Is the teen birth rate in your state higher or lower than the national average?
   d. Putting these three measures together, do you consider your community to have a higher GII than the U.S. average or a lower GII?



◀ **FIGURE 10-31 TEEN BIRTH RATES BY U.S. STATE**

KEY ISSUE 3

Why Do Countries Face Challenges to Development?

- Two Paths to Development
- World Trade
- Financing Development
- Development Challenges During Hard Times

LEARNING OUTCOME 10.3.1

Summarize the two paths to development.

The gap between rich and poor countries is substantial. Poorer countries lack much of what people in richer countries take for granted, such as access to electricity, safe drinking water, and paved roads. To reduce disparities between rich and poor countries, developing countries must develop more rapidly. This means increasing per capita GNI more rapidly and using the additional funds to make more rapid improvements in social and economic conditions.

Developing countries face two fundamental obstacles in trying to encourage more rapid development:

- Adopting policies that successfully promote development.
- Finding funds to pay for development.

Two Paths to Development

To promote development, developing countries choose one of two models: self-sufficiency or international trade. Each has important advantages and faces serious challenges.

SELF-SUFFICIENCY PATH

In the self-sufficiency model, countries encourage domestic production of goods, discourage foreign ownership of businesses and resources, and protect their businesses from international competition. Key elements of the self-sufficiency path to development include the following:

- Barriers limit the import of goods from other places. Three widely used barriers include setting high taxes (tariffs) on imported goods to make them more expensive than domestic goods, fixing quotas to limit the quantity of imported goods, and requiring licenses in order to restrict the number of legal importers.
- Fledgling businesses are nursed to success by being isolated from competition with large international corporations. Such insulation from the potentially adverse impacts of decisions made by businesses and governments in developed countries encourages a country's fragile businesses to achieve independence.
- Investment is spread as equally as possible across all sectors of a country's economy and in all regions.
- Incomes in the countryside keep pace with those in the city, and reducing poverty takes precedence over encouraging a few people to become wealthy consumers.

CASE STUDY: INDIA. For several decades after it gained independence from Britain in 1947, India was a leading example of the self-sufficiency strategy. Policies included limiting foreign companies from importing into India and exercising strong control over companies operating in India.

Here are examples of limitations on imports:

- To import goods into India, most foreign companies had to secure a license, which was a long and cumbersome process because several dozen government agencies had to approve each request.
- A company holding an import license was severely restricted in how much it could actually import into India.
- Heavy taxes on imported goods raised the prices that consumers had to pay.
- Indian money could not be converted to other currencies.

Here are examples of controls over Indian companies:

- A business needed government permission to sell a new product, modernize a factory, expand production, set prices, hire or fire workers, and change the job classification of existing workers (Figure 10-32).
- An unprofitable business received government subsidies, such as cheap electricity, or elimination of debts.
- The government itself owned not just communications, transportation, and power companies, which is common around the world, but also owned businesses

▼ FIGURE 10-32 SELF-SUFFICIENCY: INDIA A government official signs files presented by his secretary in his office, Chandigarh, India.

▲ FIGURE 10-33 INTERNATIONAL TRADE: UNITED ARAB EMIRATES
Shopper in a supermarket featuring foods imported from Europe.

such as insurance companies and automakers, which are left to the private sector in most countries.

INTERNATIONAL TRADE PATH

In the international trade model, countries open themselves to foreign investment and international markets. For most of the twentieth century, self-sufficiency, or balanced growth, was the more popular of the development alternatives. International trade became more popular beginning in the late twentieth century.

The international trade model of development calls for a country to identify its distinctive or unique economic assets. What animal, vegetable, or mineral resources does the country have in abundance that other countries are willing to buy? What product can the country manufacture and distribute at a higher quality and a lower cost than other countries? According to the international trade approach, a country can develop economically by concentrating scarce resources on expansion of its distinctive local industries. The sale of these products in the world market brings into the country funds that can be used to finance other development.

ROSTOW MODEL. A pioneering advocate of the international trade approach was W. W. Rostow, who in the 1950s proposed a five-stage model of development. According to the international trade model, each country is in one of these five stages of development:

1. **Traditional society.** A traditional society has not yet started a process of development. It contains a very high percentage of people engaged in agriculture and a high percentage of national wealth allocated to what Rostow called "nonproductive" activities, such as the military and religion.
2. **Preconditions for takeoff.** An elite group initiates innovative economic activities. Under the influence of these well-educated leaders, the country starts to invest in new technology and infrastructure, such as water supplies and transportation systems. Support from international funding sources often emphasizes the importance of constructing new infrastructure. These projects will ultimately stimulate an increase in productivity.
3. **Takeoff.** Rapid growth is generated in a limited number of economic activities, such as textiles or food products. These few takeoff industries achieve technical advances and become productive, whereas other sectors of the economy remain dominated by traditional practices.
4. **Drive to maturity.** Modern technology, previously confined to a few takeoff industries, diffuses to a wide variety of industries, which then experience rapid growth comparable to the growth of the takeoff industries. Workers become more skilled and specialized.
5. **Age of mass consumption.** The economy shifts from production of heavy industry, such as steel and energy, to consumer goods, such as motor vehicles and refrigerators.

INTERNATIONAL TRADE EXAMPLES. When most developing countries were following the self-sufficiency approach during the twentieth century, two groups of countries chose the international trade approach:

- **The Four Asian Dragons.** Among the first places to adopt the international trade path were South Korea, Singapore, Taiwan, and Hong Kong, known as the "four dragons." Singapore and Hong Kong, British colonies until 1965 and 1997, respectively, were large cities surrounded by very small amounts of rural land and had virtually no natural resources. Lacking many natural resources, the four dragons promoted development by concentrating on producing a handful of manufactured goods, especially clothing and electronics. Low labor costs enabled these countries to sell products inexpensively in developed countries.
- **Petroleum-rich Arabian Peninsula states.** The Arabian Peninsula includes Saudi Arabia, the region's largest and most populous country, as well as Kuwait, Bahrain, Oman, and the United Arab Emirates. Once among the world's least developed countries, they were transformed overnight into some of the wealthiest countries, thanks to escalating petroleum prices beginning in the 1970s. Arabian Peninsula countries used petroleum revenues to finance large-scale projects, such as housing, highways, hospitals, airports, universities, and telecommunications networks. Their steel, aluminum, and petrochemical factories competed on world markets with the help of government subsidies. The landscape of these countries has been further changed by the diffusion of consumer goods, such as motor vehicles and electronics. Supermarkets in Arabian Peninsula countries are stocked with food imported from Europe and North America (Figure 10-33).

PAUSE & REFLECT 10.3.1

Many countries that have adopted the international trade model are relatively small states (see Chapter 8). Why might a nation's size be a factor in the early adoption of the international trade path?

World Trade

LEARNING OUTCOME 10.3.2

Analyze reasons for the triumph of the international trade approach to development.

Most countries embraced the international trade approach as the preferred alternative for stimulating development. Long-time advocates of self-sufficiency converted to international trade, especially during the 1990s.

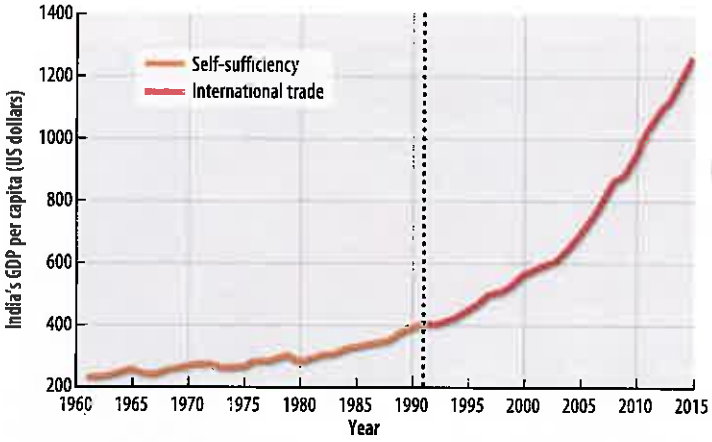
INTERNATIONAL TRADE TRIUMPHS

Trade increased more rapidly than wealth (as measured by GDP) during the late twentieth and early twenty-first centuries. This is a measure of the growing importance of the international trade approach, especially in developing countries (Figure 10-34).

Optimism about the benefits of the international trade development model was based on three observations:

- Developed countries in Europe and North America were joined by others in Southern and Eastern Europe and Japan during the second half of the twentieth century. If they could become more developed by following this model, why couldn't other countries?
- Developing countries contained an abundant supply of many raw materials sought by manufacturers and producers in developed countries. In the past, European colonial powers extracted many of these resources without paying compensation to the colonies. In a global economy, the sale of these raw materials could generate funds for developing countries with which they could promote development.
- A country that concentrates on international trade benefits from exposure to the demands, needs, and preferences of consumers in other countries. To remain competitive, the takeoff industries constantly evaluate changes in international consumer preferences, marketing strategies, production engineering, and design technologies. Concern for international competitiveness in the exporting takeoff industries can filter through other sectors of the economy.

▲ **FIGURE 10-34 WORLD TRADE AS A PERCENTAGE OF GDP**



▲ **FIGURE 10-35 GDP PER CAPITA CHANGE IN INDIA** India's per capita GDP has grown more rapidly since the country converted from the self-sufficiency path to the international trade path.

Longtime advocates of the self-sufficiency approach converted to international trade during the 1990s. India, for example, dismantled its formidable collection of barriers to international trade:

- Foreign companies were allowed to set up factories and sell in India.
- Tariffs and restrictions on the import and export of goods were reduced or eliminated.
- Monopolies in communications, insurance, and other industries were eliminated.

With increased competition, Indian companies have improved the quality of their products. For example, during the self-sufficiency era, India's auto industry was dominated by Maruti-Udyog Ltd., which was controlled by the Indian government. Nursed by import duties that rose from 15 percent in 1984 to 66 percent in 1991, Maruti captured more than 80 percent of the Indian market by selling cars that would be considered out-of-date in other countries. In the international trade era, the government sold control of Maruti to the Japanese company Suzuki, which now holds only 45 percent of India's market.

Countries like India converted from self-sufficiency to international trade during the 1990s because of overwhelming evidence at the time that international trade better promoted development (Figure 10-35). After converting to international trade, India's GNI per capita increased on average 6.5 percent per year, compared to 1.8 percent per year under self-sufficiency. Worldwide, GNI increased more than 4 percent annually in countries strongly oriented toward international trade compared with less than 1 percent in countries strongly oriented toward self-sufficiency. However, conversion to international trade has not been without controversy (see Debate It feature).

WORLD TRADE ORGANIZATION

To promote the international trade development model, countries representing 97 percent of world trade established the World Trade Organization (WTO) in 1995. The WTO works to reduce barriers to international trade in two principal ways. First, through the WTO, countries negotiate reduction or elimination of international trade restrictions on manufactured goods, such as government subsidies for

▲ **FIGURE 10-36 WORLD TRADE ORGANIZATION PROTEST** Protestors outside the Department of Agriculture in the Philippines demonstrate during a speech delivered by the director of the World Trade Organization in 2015.

exports, quotas for imports, and tariffs on both imports and exports. Also reduced or eliminated are restrictions on the international movement of money by banks, corporations, and wealthy individuals.

The WTO also promotes international trade by enforcing agreements. One country can bring to the WTO an accusation that another country has violated a WTO agreement. The WTO is authorized to rule on the validity of the charge and order remedies. The WTO also protects intellectual property in the age of the Internet. An individual or a corporation can also bring charges to the WTO that someone in another country has violated a copyright or patent, and the WTO can order illegal actions to stop.

Critics have sharply attacked the WTO. Protesters routinely gather in the streets outside high-level meetings of the WTO (Figure 10-36). Progressive critics charge that the WTO is antidemocratic because decisions made behind closed doors promote the interests of large corporations rather than poor people. Conservatives charge that the WTO compromises the power and sovereignty of individual countries because it can order changes in taxes and laws that it considers unfair trading practices.

PAUSE & REFLECT 10.3.2

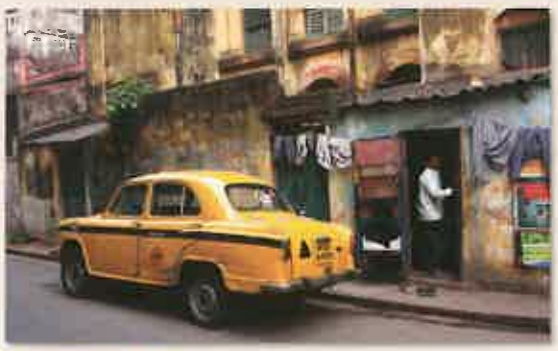
Top WTO officials meet every two years in a so-called ministerial conference. Where was the most recent conference held? Use the Internet to search for "WTO ministerial conference" to see if there were protests at the conference.

DEBATE IT! Should countries adopt the international trade approach?

The international trade approach has been embraced by most countries in recent years.

DO NOT EMBRACE INTERNATIONAL TRADE

- Some countries that are dependent on the sale of one commodity have suffered because the price of that commodity has not risen as rapidly as the cost of the products they need to buy.
- Building up a handful of takeoff industries that sell to people in developed countries has forced some developing countries to cut back on production of food, clothing, and other necessities for their own people.
- Countries that depend on selling low-cost manufactured goods have found that the world market for many products has declined in recent years.



▲ **FIGURE 10-37 SELF-SUFFICIENCY IN INDIA** Old Maruti car still in use as a taxi.

EMBRACE INTERNATIONAL TRADE

- Under self-sufficiency, businesses have little incentive to improve quality, lower production costs, reduce prices, or increase production.
- Companies protected from international competition are not pressured to keep up with rapid technological changes.
- The complex system needed to administer the controls requires many government employees and encourages inefficiency, abuse, and corruption.
- Potential entrepreneurs find that struggling to produce goods or offer services is less rewarding financially than advising others how to get around the complex government regulations.

▲ **FIGURE 10-38 INTERNATIONAL TRADE IN INDIA** Containers are loaded on a ship in Kandla, India's largest port.

Financing Development

LEARNING OUTCOME 10.3.3

Identify the main sources of financing development.

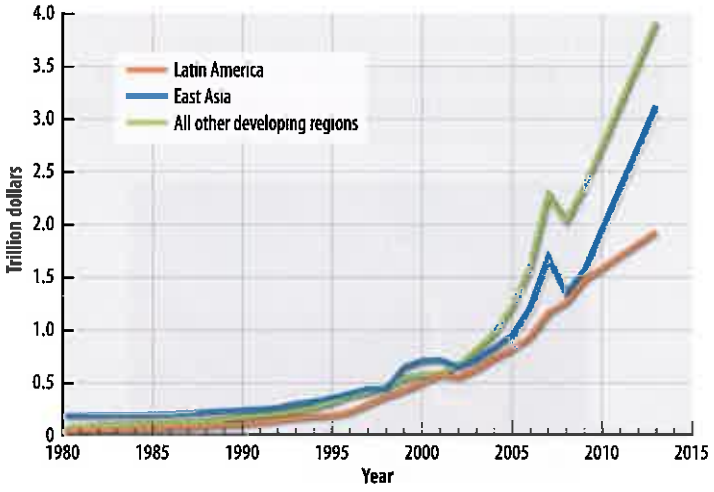
Developing countries lack money to fund development, so they obtain financial support from developed countries. Finance comes from two primary sources: direct investment by transnational corporations and loans from banks and international organizations.

FOREIGN DIRECT INVESTMENT

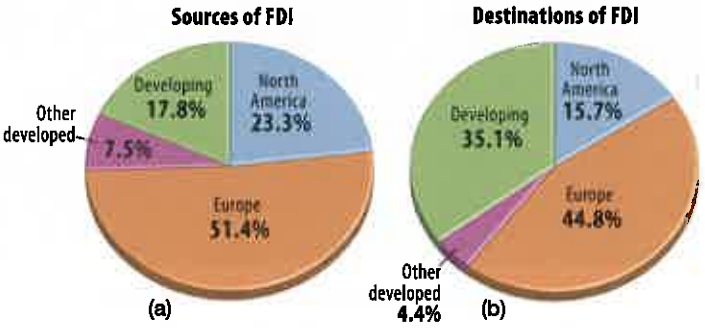
International trade requires corporations based in a particular country to invest in other countries. Investment made by a foreign company in the economy of another country is known as **foreign direct investment (FDI).** FDI has grown rapidly since the 1990s, from $130 billion in 1990 and $1.5 trillion in 2000 to $16.4 trillion in 2013 (Figure 10-39).

Investment does not flow equally around the world (Figure 10-40). Only one-third of FDI went to developing countries in 2013, while the other two-thirds went to developed countries. And FDI is not evenly distributed among developing countries. In 2013, one-third of all FDI destined for developing countries went to China, and another one-third to Singapore, Brazil, Russia, and Mexico.

The major sources of FDI are transnational corporations that invest and operate in countries other than the one in which the company headquarters are located. The United States was home to the 8 largest companies in 2014 (Apple, Exxon Mobil, Microsoft, Alphabet (Google), Berkshire Hathaway, Johnson & Johnson, Wells Fargo, and General Electric), as well as 47 of the 100 largest and 203 of the 500 largest. Another 211 of the 500 largest companies had headquarters in other developed countries. Developing countries were the location of only 86 of the 500 largest companies; 32 of them were located in China (including Hong Kong).



▲ **FIGURE 10-39 GROWTH IN FDI** East Asia and Latin America have the highest levels of FDI among developing regions.



▲ **FIGURE 10-40 SOURCES AND DESTINATIONS OF FDI** Most FDI **(a)** originates in and **(b)** is destined for developed countries.

PAUSE & REFLECT 10.3.3

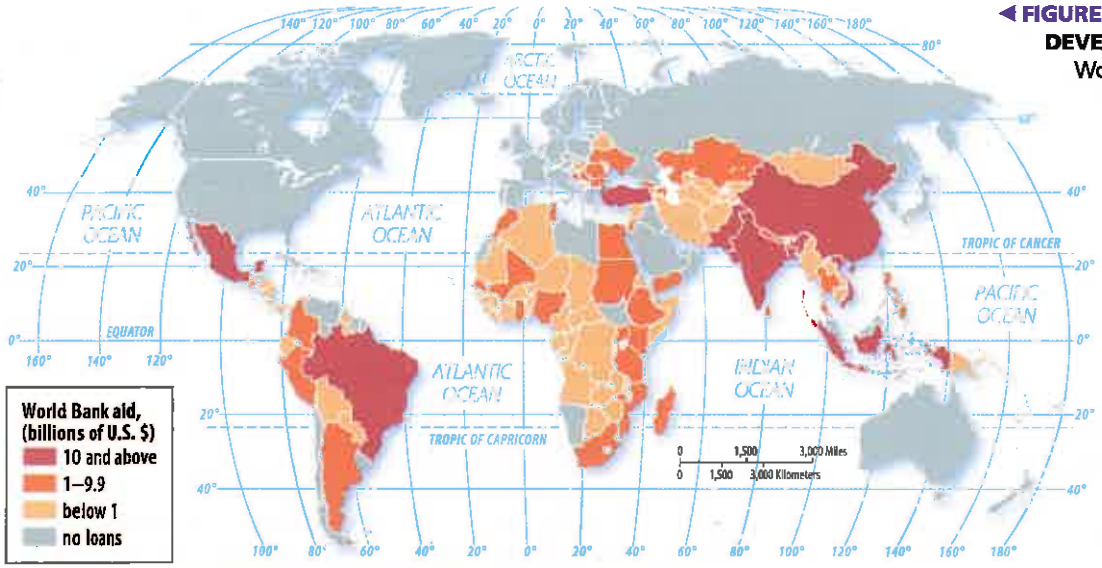
Why might Apple, Microsoft, and Alphabet rank as three of the world's largest transnational corporations?

LOANS

The two major lenders to developing countries are the World Bank and the International Monetary Fund (IMF):

- **World Bank.** The World Bank includes the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA). The IBRD provides loans to countries to reform public administration and legal institutions, develop and strengthen financial institutions, and implement transportation and social service projects. The IDA provides support to poor countries considered too risky to qualify for IBRD loans. The IBRD lends money raised from sales of bonds to private investors; the IDA lends money from government contributions. Around $270 billion worth of loans are outstanding, of which around 14 percent are to India and around 5 percent each to China, Mexico, Turkey, Brazil, Indonesia, Pakistan, Bangladesh, and Vietnam (Figure 10-41).
- **International Monetary Fund (IMF).** The IMF provides loans to countries experiencing balance-of-payments problems that threaten expansion of international trade. IMF assistance is designed to help a country rebuild international reserves, stabilize currency exchange rates, and pay for imports without the imposition of harsh trade restrictions or capital controls that could hamper the growth of world trade. Unlike development banks, the IMF does not lend for specific projects. Funding of the IMF is based on each member country's relative size in the world economy.

The World Bank and IMF were conceived at a 1944 United Nations Monetary and Financial Conference in Bretton Woods, New Hampshire, to promote economic development and stability after the devastation of World War II and to avoid a repetition of the disastrous economic policies that contributed to the Great Depression of the 1930s. The IMF and World Bank became specialized agencies of the U.N. when it was established in 1945.



◀ **FIGURE 10-41 WORLD BANK DEVELOPMENT ASSISTANCE** Most World Bank assistance goes to countries in Asia.

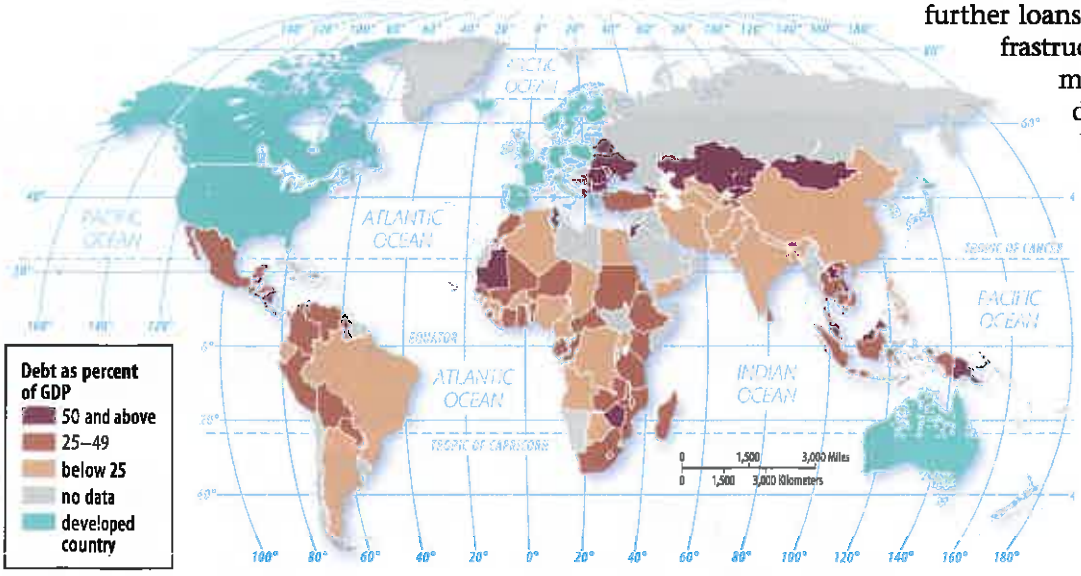
▲ **FIGURE 10-42 WORLD BANK PROJECT** A road funded with support from the World Bank is constructed in Kabul, Afghanistan. **1. Why is it important to build roads in countries with low HDIs, such as Afghanistan? 2. Why do you think a lot of people are watching the road being built? 3. Once the road is completed, few of the people watching are likely to have their own cars. What types of transport would you expect to see on the road after it is open?**

Developing countries borrow money to build new infrastructure, such as hydroelectric dams, electric transmission lines, flood-protection systems, water supplies, roads, and hotels (Figure 10-42). The theory is that new infrastructure will make conditions more favorable for domestic and foreign businesses to open or expand. After all, no business wants to be located in a place that lacks paved roads, running water, and electricity.

In principle, new or expanded businesses are attracted to an area because improved infrastructure will contribute additional taxes that the developing country will use in part to repay the loans and in part to improve its citizens' living conditions. In reality, the World Bank itself has judged half of the projects it has funded in Africa to be failures. Common reasons include the following:

- Projects don't function as intended because of faulty engineering.
- Recipient nations squander or spend aid on armaments, or the aid is stolen.
- New infrastructure does not attract other investment.

Some countries have been unable to repay the interest on their loans, let alone the principal. Debt actually exceeds annual income in a number of countries (Figure 10-43). When countries cannot repay their debts, financial institutions in developed countries refuse to make further loans, so construction of needed infrastructure stops. The inability of many countries to repay loans also damages the financial stability of banks in developed countries.



◀ **FIGURE 10-43 DEBT AS A PERCENTAGE OF GNI** Developed countries have joined developing countries in accumulating substantial debts.

Development Challenges During Hard Times

LEARNING OUTCOME 10.3.4

Explain alternate strategies for coping with economic downturns.

The lingering effects of the severe economic downturn that began in 2008 have made it difficult for many countries to make progress in development. Especially hard hit have been countries in Southern Europe.

STIMULUS OR AUSTERITY?

Political leaders and independent analysts have been sharply divided on the optimal strategy for fighting economic downturns:

- **Stimulus strategy.** Proponents of stimulus argue that during a downturn, governments should spend more money than they collect in taxes. Governments should stimulate the economy by putting people to work building bridges and other needed infrastructure projects. Once the economy recovers, they say, people and businesses will be in a position to pay more taxes and pay off the debt.
- **Austerity strategy.** Proponents of austerity argue that government should sharply reduce taxes so that people and businesses can revive the economy by spending their tax savings. Spending on government programs should be sharply cut as well in order to keep the debt from swelling and hampering the economy in the future.

In the United States, the stimulus strategy was initially employed by Presidents Bush and Obama to help the country recovery from the severe economic downtown in 2008. After the success of Tea Party candidates in 2010, more attention was paid to the austerity strategy. European countries divided between supporting stimulus and austerity. The lack of agreement has led to serious difficulties in Europe and may possibly result in the demise of the euro currency (Figure 10-44).

STRUCTURAL ADJUSTMENT PROGRAMS

Not every country gets to choose between austerity and stimulus. The IMF, World Bank, and economically healthy developed countries fear that granting, canceling, or refinancing debts without strings attached will perpetuate bad habits in economically struggling countries. Therefore, to apply for debt relief, a country is required to adopt an austerity program.

Austerity is imposed through a policy framework paper (PFP) that outlines a structural adjustment program. A **structural adjustment program** contains economic "reforms" or "adjustments," such as economic goals, strategies for achieving the objectives, and external financing requirements. Reforms required of a developing country typically include:

- Spending only what it can afford.
- Directing benefits to the poor, not just the elite.
- Diverting investment from military spending to health and education spending.
- Investing scarce resources where they will have the most impact.
- Encouraging a more productive private sector.
- Reforming the government, including making the civil service more efficient, increasing accountability in fiscal management, implementing more predictable rules and regulations, and disseminating more information to the public.

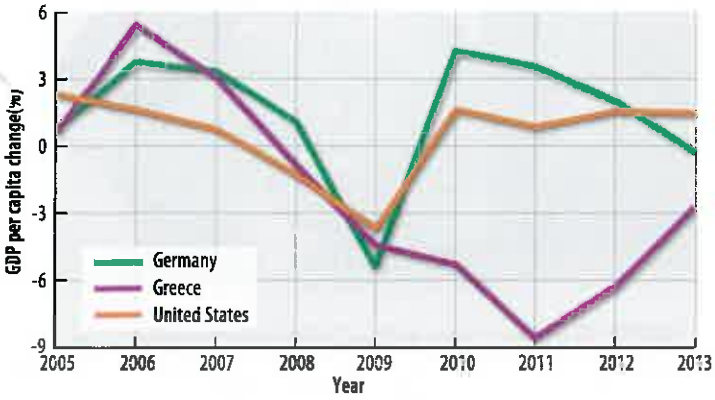
Critics charge that poverty worsens under structural adjustment programs. By placing priority on reducing government spending and inflation, structural adjustment programs may result in the following:

- Cuts in health, education, and social services that benefit the poor.
- Higher unemployment.
- Loss of jobs in state enterprises and civil service.
- Less support for those most in need, such as poor pregnant women, nursing mothers, young children, and elderly people.

In short, structural reforms allegedly punish Earth's poorest people for actions they did not commit, such as waste, corruption, misappropriation, and military buildup.

International organizations respond that the poor suffer more when a country does not undertake reforms. Economic growth is what benefits the poor the most in the long run. Nevertheless, in response to criticisms, the IMF and the World Bank now encourage innovative programs to

▶ **FIGURE 10-44 ANTI-AUSTERITY PROTEST**
Workers in Greece protest government measures to cut wages and benefits in order to comply with European Union austerity requirements.



▲ **FIGURE 10-45 GDP PER CAPITA CHANGE** Prior to the severe recession in 2008, Germany and Greece showed similar economic patterns. Under austerity, Greece's economy has contracted every year since 2008. Germany's increased at first but has fallen back to virtually no growth.

reduce poverty and corruption and consult more with average citizens. A safety net must be included to ease short-term pain experienced by poor people.

PAUSE & REFLECT 10.3.4

Do the terms of a structural adjustment program seem harsh for a country or fair? Why?

EUROPE'S SOVEREIGN DEBT CRISIS

Europe has faced an especially difficult challenge in responding to the sharp economic slowdown of the early twenty-first century. Economic difficulties call into question the region's ability to continue supporting the international trade development path.

Most European countries adopted the euro as their common currency in 1999. Europeans believed that if every country in the region operated with the same currency, trade within the region would be enhanced. In reality, once the severe economic downturn hit, having each country saddled with the same currency proved to be a burden for the countries in Europe that had weaker economies.

Consider Germany and Greece. Germany has a strong economy, with businesses producing cars, electronics, and other goods at higher quality and lower cost than can be done in Greece. The export of many of Germany's products brings additional revenue flowing into the country. If Germany and Greece had two different currencies, as in the past, Greece could lower the value of its drachma currency compared to the German mark. The result would have made German goods more expensive and Greek goods less expensive, thereby stimulating economic activity in Greece. But with both Greece and Germany using the same currency, the euro, Greece no longer has the option of devaluing its currency against Germany's currency.

The Northern European countries argue that the Southern European countries with weaker economies need to adopt austerity programs. The Southern European countries argue that Northern European countries with stronger economies should fund stimulus programs that would in the long run lead to more prosperity through Europe as a whole.

Figure 10-45 shows the impact of the north–south split in Europe. Prior to the severe recession in 2008, Germany and Greece had similar patterns of economic growth. Both suffered sharp declines in GDP per capita during the severe recession. Under austerity programs, Greece's economic condition worsened; GDP per capita has declined every year since 2008. At first Germany recovered, but then it fell back to virtually no growth. Meanwhile, the United States has displayed steady though modest economic growth since 2009.

MICROFINANCE FOR DEVELOPMENT

Many would-be business owners in developing countries are too poor to qualify for regular bank loans. An alternative source of loans is **microfinance,** which is provision of small loans and other financial services to individuals and small businesses in developing countries that are unable to obtain loans from commercial banks (refer to Figure 10-25).

A prominent example of microfinance is the Grameen Bank, which was established in 1977. Based in Bangladesh, Grameen specializes in making loans to women, who make up three-fourths of the borrowers. Approximately two-thirds of the artisans providing fair trade handcrafted products are women. Often these women are mothers and the sole wage earners in the home. Women have borrowed money to buy cows, make perfume, bind books, and sell matches, mirrors, and bananas. For founding the bank, Muhammad Yunus was awarded the Nobel Peace Prize in 2006.

The Grameen Bank has made several hundred thousand loans to women in Bangladesh and neighboring South Asian countries, and only 1 percent of the borrowers have failed to make their weekly loan repayments, an extraordinarily low percentage for a bank. Several million loans have also been provided to women by the Bangladesh Rural Advancement Committee. The average loan is about $60. The smallest loan the bank has made was $1, to a woman who wanted to sell plastic bangles door to door.

CHECK-IN KEY ISSUE 3

Why Do Countries Face Challenges to Development?

- ✔ **Two paths to development are self-sufficiency and international trade.**
- ✔ **International trade has been embraced by most countries in recent decades.**
- ✔ **Development is financed through foreign direct investment, as well as loans from international organizations.**
- ✔ **Austerity and stimulus are two strategies for fighting economic downturns. International lending agencies frequently require countries to choose austerity.**

KEY ISSUE 4

Why Are Countries Making Progress in Development?

- Fair Trade Standards
- Measuring Progress

LEARNING OUTCOME 10.4.1

Explain principles of fair trade.

Fair trade has been proposed as a variation of the international trade model of development that promotes sustainability. **Fair trade** is international trade that provides greater equity to workers, small businesses, and consumers. Fair trade products are made and traded according to standards that protect workers and small businesses in developing countries.

Fair Trade Standards

The fair trade movement focuses primarily on products exported from developing countries to developed countries. Sustainability is promoted by offering better trading and working conditions for producers and workers in developing countries. Fair trade organizations, backed by consumers, raise awareness of deficiencies in conventional international production and trade and the role of fair trade in improving economic, social, and environmental conditions for producers and workers.

Three sets of standards distinguish fair trade: One set applies to producers, a second set to workers on farms and in factories, and a third set to consumers, especially those living in developed countries.

FAIR TRADE FOR PRODUCERS

Critics of international trade charge that only a tiny percentage of the price a consumer pays for a product reaches the individuals in the developing country who are responsible for making or growing it. A Haitian sewing clothing for the U.S. market, for example, earns less than 1 percent of the retail price of the garment, according to the National Labor Committee. The rest goes to wholesalers, importers, distributors, advertisers, retailers, and others who did not actually make the item. In contrast, fair trade returns on average one-third of the price to the producer in the developing country.

▲ **FIGURE 10-46 FAIR TRADE PRODUCER STANDARDS** Equal Exchange is an example of a company that is responsible for marketing of fair trade coffee, tea, chocolate, and other food.

Fair trade is a set of business practices designed to advance a number of economic, social, and environmental goals. These include:

- Raising the incomes of small-scale farmers and artisans by eliminating some of the intermediaries.
- Distributing the profits and risks associated with production and sale of goods more fairly among producers, distributors, retailers, and financiers.
- Increasing the entrepreneurial and management skills of the producers.
- Promoting safe and sustainable farming methods as well as working conditions, such as by prohibiting the use of dangerous pesticides and herbicides and by promoting the production of certified organic crops (Figure 10-46).

International fair trade organizations set standards for implementing these principles, and they monitor, audit, and certify that practices comply with the standards.

FAIR TRADE FOR WORKERS

Protection of workers' rights is not a high priority in the international trade development approach, according to its critics. Critics charge that:

- Oversight of workers' conditions by governments and international lending agencies is minimal.
- Workers allegedly work long hours in poor conditions for low pay.
- Children or forced labor may be in the workforce.
- Health problems may result from poor sanitation and injuries from inadequate safety precautions.
- Injured, ill, or laid-off workers are not compensated.

Fair trade requires the following:

- Workers must be paid fair wages—at least enough to cover food, shelter, education, health care, and other basic needs (Figure 10-47).
- Workers must be permitted to organize a union and to have the right to collective bargaining.

▲ **FIGURE 10-47 FAIR TRADE WORKER STANDARDS** Workers in a factory in Tiruppur, India, produce fair trade clothing using organically grown cotton.

- Workers must be protected by high environmental and safety standards.

Cooperatives also enable small-scale farmers and artisans to undertake fair trade production. Producer and worker cooperatives offer several advantages:

- A cooperative can qualify for credit so that funds can be borrowed to buy equipment and invest in improving farms.
- Materials can be purchased at a lower cost.
- The people who grow or make the products democratically manage allocation of resources and assure safe and healthy working conditions.
- Profits are reinvested in the community instead of going to absentee corporate owners.

FAIR TRADE FOR CONSUMERS

Most fair trade products are food, including coffee, tea, bananas, chocolate, cocoa, juice, wine, sugar, and honey. Fair trade products reach consumers primarily through cooperatively owned groceries.

A **cooperative store** is a member-owned, member-governed business that operates for the benefit of its members according to common principles agreed upon by the international cooperative community (Figure 10-48). According to international co-op principles, a co-op business:

- Is owned by the people who shop in the store rather than by a corporation.
- Is democratically governed by a member-elected board rather than appointed by a corporation owner.

▼ **FIGURE 10-48 FAIR TRADE AND CONSUMERS** A grocery store in Harwood, United Kingdom, is cooperatively owned by local shoppers.

- Is financed primarily by investments made by the member-owners rather than by commercial lenders.
- Is controlled by people living in the community rather than by distant shareholders.
- Educates the public on the importance of sustainable development rather than hiding information about poor working conditions.
- Helps other cooperatives through sharing expertise and sharing of sources of fair trade products rather than competing with other cooperatives.
- Helps to improve the community in which the cooperative is locating rather than seeking to extract the maximum profit out of the community.

The consumer-owned cooperative movement originated in the nineteenth century, in reaction to poor working conditions and inequalities during the Industrial Revolution. During the past century, consumer-owned cooperatives have flourished in three eras. These eras coincided with periods when many people felt that traditional profit-making retailers and other service providers were not meeting their needs:

- The first era was during the Great Depression of the 1930s, when people living in desperate poverty banded together to improve their lives through self-help. Cooperatives were especially important in bringing electricity to rural areas where population density was too low for private companies to serve profitably.
- The second era came in the 1960s and 1970s, as part of the counterculture movement. Young people who felt alienated from profit-making corporations banded together to open grocery stores and craft shops.
- The third—and current—era began around 2000. Hundreds of cooperatively owned grocery stores have been opened to provide places to buy healthier food than is available in large supermarkets. Local farmers, who are typically unable to sell through the large supermarket chains, have a place to sell their locally raised and grown meat and produce, as well as national brands produced without chemicals and GMOs.

Buying fair trade products from cooperatives helps consumers connect more directly with the companies and workers responsible for the items. Fair trade products do not necessarily cost the consumer more than conventionally grown or produced alternatives. Because fair trade organizations bypass exploitative intermediaries and work directly with producers, they are able to cut costs and return a greater percentage of the retail price to the producers. The cost remains the same as for traditionally traded goods, but the distribution of the cost of the product is different because the large percentage taken by intermediaries is removed from the equation.

PAUSE & REFLECT 10.4.1

Are you aware of the availability of fair trade products in your community? Is there a co-op in your community?

Measuring Progress

LEARNING OUTCOME 10.4.2

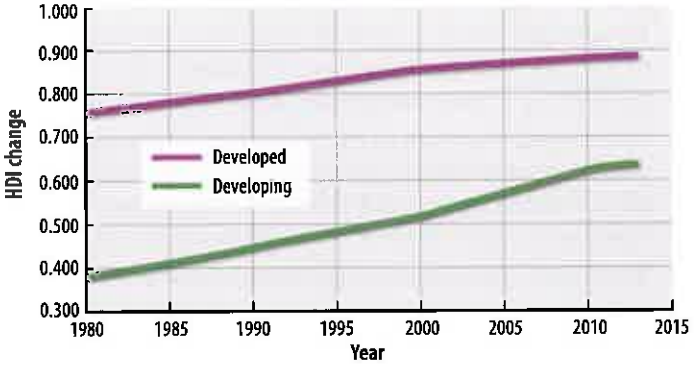
Describe ways in which differences in development have narrowed or increased.

Since the U.N. began measuring HDI in 1980, both developed and developing regions have made progress in the HDI, as well as the variables contributing to the HDI. However, progress varies among the three variables contributing to the HDI.

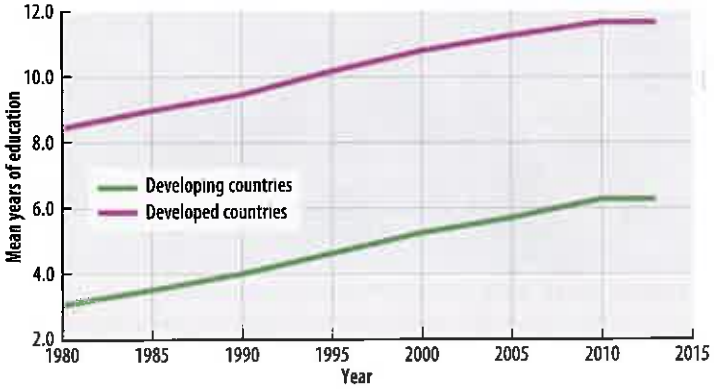
INDICATORS OF PROGRESS

Here is a summary of the progress made in the HDI and its components:

- **HDI.** The gap in HDI between developed countries and developing countries has narrowed since 1980 (Figure 10-49). The HDI has increased more rapidly in developing regions than in developed ones (Figure 10-50).
- **GNI per capita.** Since 1980, GNI per capita has increased much more rapidly in developed countries than in developing countries (refer to Figure 1-35).

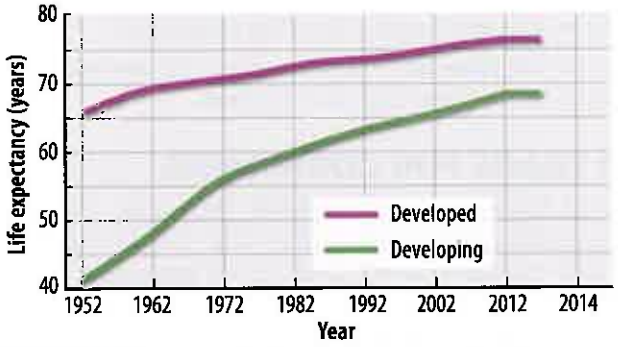


▲ **FIGURE 10-49 CHANGE IN HDI** HDI has increased in both developed and developing countries.

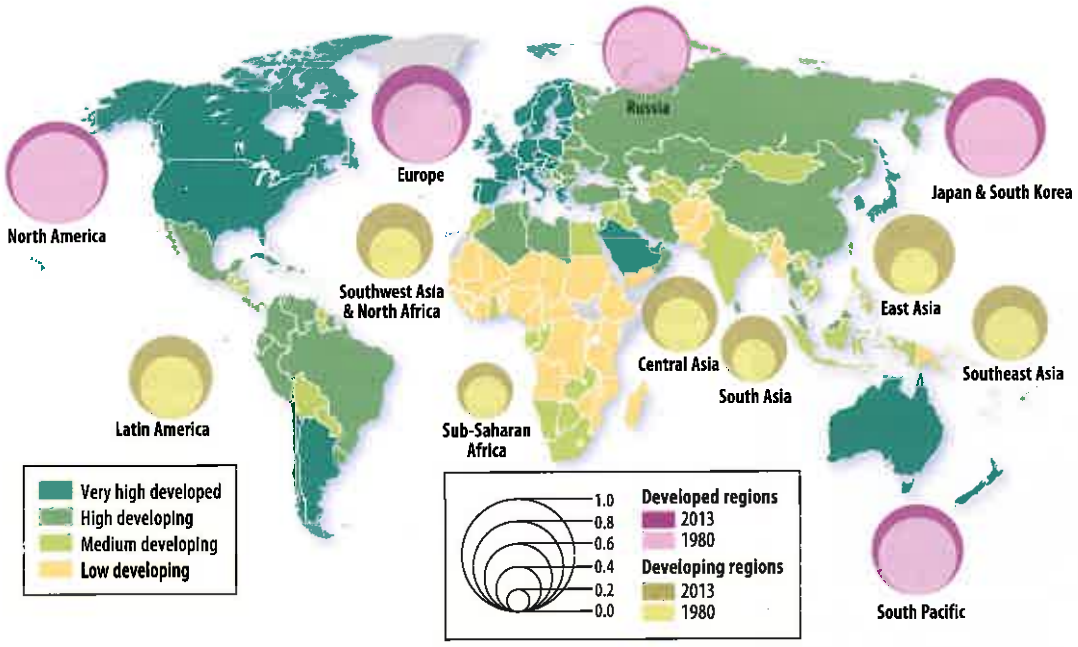


▲ **FIGURE 10-51 CHANGE IN EDUCATION** Mean years of education have increased by around three years in both developed and developing countries.

- **Education.** Since 1980, mean years of education has increased by around the same number in developed and developing countries (Figure 10-51).
- **Life expectancy.** Since 1980, life expectancy has increased by around the same number of years in developed and developing countries (Figure 10-52).



▲ **FIGURE 10-52 CHANGE IN LIFE EXPECTANCY** Life expectancy has increased in both developed and developing countries.



◀ **FIGURE 10-50 HDI CHANGE BY REGION** HDI has increased in all regions. Data are not available for Russia and Central Asia.

SUSTAINABLE DEVELOPMENT GOALS

To reduce disparities between developed and developing countries, the 193 members of the United Nations adopted 17 Sustainable Development Goals in 2015 (see Sustainability & Our Environment). All UN members agreed to achieve these goals by 2030. The **Sustainable Development Goals** replaced eight **Millennium Development Goals** adopted in 2002 with the goal of achieving them by 2015.

PAUSE & REFLECT 10.4.2

Which Sustainable Development Goals appear to be making the most limited progress? Why might that be the case?

CHECK-IN KEY ISSUE 4

Why Are Countries Making Progress in Development?

- ✔ **Fair trade is an alternative to the international trade model that provides greater equity to workers, small businesses, and consumers.**
- ✔ **Progress has been made in achieving development in most regions, but substantial gaps in performance between developed and developing countries persist.**

SUSTAINABILITY & OUR ENVIRONMENT

Sustainable Development Goals

Following are the 17 Sustainable Development Goals that were adopted by the UN in 2015.

1. End poverty in all its forms everywhere. Poverty was cut in half between 1990 and 2010, but more than 1 billion people still live in extreme poverty.
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture. By 2030, the UN hopes to end all forms of malnutrition, double agricultural output, and ensure sustainable food production.
3. Ensure healthy lives and promote well-being for all at all ages. Infant mortality rates have declined in most regions, except sub-Saharan Africa. The maternal mortality rate declined by one-half between 1990 and 2013, but the UN hopes to see a further reduction. The number of HIV infections declined by 44 percent between 2001 and 2012, as discussed in Chapter 2, and the UN hopes to see an end to the epidemic by 2030.
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. The percentage of children enrolled in primary school increased from 82 percent to 90 percent in the first decade of the twenty-first century. The goal is to have all children in school.
5. Achieve gender equality and empower all women and girls. Gender inequalities have been reduced but linger in all regions, as discussed in Key Issue 2. The UN goal is to eliminate all forms of discrimination and violence against women and girls.
6. Ensure availability and sustainable management of water and sanitation for all.
7. Ensure access to affordable, reliable, sustainable and modern energy for all. The UN goal is to increase use of alternative energy sources, as discussed in Chapter 11.
8. Promote inclusive and sustainable economic growth and full and productive employment. The UN wants an increase in GDP per capita in developing countries of at least 7 percent per year.
9. Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.
10. Reduce inequality within and among countries. The UN goal is for the income of the poorest 40 percent of the population to increase faster than average.
11. Make cities and human settlements inclusive, safe, resilient and sustainable. Urban settlements are discussed in detail in Chapters 12 and 13.
12. Ensure sustainable consumption and production, such as reducing food waste and increasing recycling.
13. Take urgent action to combat climate change and its impacts. Global emissions of carbon dioxide increased by more than 50 percent between 1990 and 2015, as discussed in Chapter 11.
14. Conserve the oceans, seas and marine resources for sustainable development. Progress has been made in water quality, but overfishing is a problem.
15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
17. Strengthen implementation and revitalize the global partnership for sustainable development. Overall aid has increased from developed countries to developing countries, but little of it is targeted for the least developed countries.

Summary & Review

KEY ISSUE 1

Why does development vary among countries?

The United Nations uses the Human Development Index (HDI) to measure the level of development of every country. The HDI is based on three factors: a decent standard of living, a long and healthy life, and access to knowledge. In a more developed country, people are more likely to have adequate incomes, more schooling, and longer life expectancy.

THINKING GEOGRAPHICALLY

▲ **FIGURE 10-53 HUMAN DEVELOPMENT TREE** This winning visualization of development sheds the leaves of all countries that do not meet the development standards selected by the user.

1. The United Nations held the Human Development Data Visualization Competition in 2015. Participants were encouraged to create innovative ways to depict HDI data. The winner was the "Human Development Tree" created by Jurjen Verhagen, from the Netherlands (Figure 10-53). To view the "Human Development Tree" and the other eight finalists, enter Human Development Data Visualization Competition in your search engine, or go to hdrdata.tumblr.com. Which visualization do you think is the most effective? Is the winning visualization effective? Why?

KEY ISSUE 2

Where are inequalities in development found?

At least some degree of gender and economic inequality is found in every country. The inequality-adjusted HDI (IHDI) modifies the HDI to account for inequality within a country. The GDI measures the gender gap in the level of achievement for the three dimensions of the HDI. The GII measures the gender gap in the level of achievement in terms of reproductive health, empowerment, and the labor market.

THINKING GEOGRAPHICALLY

▲ **FIGURE 10-54 DEVELOPMENT INEQUALITY** Rickshaw and BMW share the road in Delhi, India.

2. Based on the world maps included in Key Issue 2, which two of the nine world regions appear to have the highest levels of inequality? Do these two regions have high or low HDIs?
3. What factors might account for the high levels of inequality and the distinctive HDIs in these two regions?
4. In Figure 10-54, what might be the reaction of the rickshaw driver to sharing the road with the BMW? What might be the reaction of the BMW driver to sharing the road with the rickshaw?

KEY ISSUE 3

Why do countries face challenges to development?

To promote development, developing countries choose between self-sufficiency and international trade paths. Most countries have adopted the international trade path, influenced by evidence that it gets better results than self-sufficiency. Development is financed through FDI and through international development agencies. To obtain development aid, countries are often required to adopt austerity measures that may cause short-term hardship for the population.

THINKING GEOGRAPHICALLY

▲ **FIGURE 10-55 EVIDENCE OF DEVELOPMENT** The Trans-Kalahari Corridor includes several new highways across Namibia, Botswana, and South Africa.

5. The Trans-Kalahari Corridor consists of several new roads and rail lines connecting Namibia with Botswana and South Africa. In what condition does the road appear?
6. What important elements of development can be seen in Figure 10-55, in addition to the road? Why would it be important for Namibia to have connections with South Africa?
7. As a very poor country, Namibia lacks the resources to build this infrastructure, so how do you think it got built?

KEY ISSUE 4

Why are countries making progress in development?

Countries have made considerable progress in achieving United Nations Millennium Development Goals for the first 15 years of the twenty-first century. The HDI has increased more rapidly in developing countries, whereas the GNI per capita has increased more rapidly in developed countries. Developed and developing countries have made comparable progress in education and life expectancy.

THINKING GEOGRAPHICALLY

▲ **FIGURE 10-56 DEVELOPMENT PROGRESS** A woman in Monrovia, Liberia, has opened a shop to sell fish with the help of a microfinance loan.

8. The U.N. lets you change the numbers used to calculate the HDI to see the impact on a country's level of development. Go to hdr.undp.org/and search for the *Calculating the Indices using Excel* tool. Select the HDI worksheet. Country A is an example of a high developing country. The U.N.'s cutoff for a developed country is 0.80. Change one or more of the four data columns until you get an HDI above 0.80.
9. Which of the four columns needs to change the most in order for Country A to be reclassified from developing to developed? Which of the four columns needs to change the most to reclassify Country D as developed?

KEY TERMS

Adolescent fertility rate *(p. 364)* The number of births per 1,000 women ages 15 to 19.
Cooperative store *(p. 377)* A member-owned, member-governed business that operates for the benefit of its members according to common principles agreed upon by the international cooperative community.
Developed country *(p. 350)* A country that has progressed relatively far along a continuum of development.
Developing country *(p. 350)* A country that is at a relatively early stage in the process of development.
Development *(p. 350)* A process of improvement in the conditions of people through diffusion of knowledge and technology.
Fair trade *(p. 376)* An alternative to international trade that provides greater equity to workers, small businesses, and consumers, focusing primarily on products exported from developing countries to developed countries.
Female labor force participation rate *(p. 363)* The percentage of women holding full-time jobs outside the home.
Foreign direct investment (FDI) *(p. 372)* Investment made by a foreign company in the economy of another country.
Gender-related Development Index (GDI) *(p. 360)* An indicator constructed by the U.N. to measure the gender gap in the level of achievement in terms of income, education, and life expectancy.
Gender Inequality Index (GII) *(p. 360)* An indicator constructed by the U.N. to measure the extent of each country's gender inequality in terms of reproductive health, empowerment, and the labor market.
Gross domestic product (GDP) *(p. 352)* The value of the total output of goods and services produced in a country in a year, not accounting for money that leaves and enters the country.
Gross national income (GNI) *(p. 352)* The value of the output of goods and services produced in a country in a year, including money that leaves and enters the country.
Human Development Index (HDI) *(p. 350)* An indicator constructed by the U.N. to measure the level of development for a country through a combination of income, education, and life expectancy.
Inequality-adjusted Human Development Index (IHDI) *(p. 358)* A modification of the HDI to account for inequality.
Literacy rate *(p. 355)* The percentage of a country's people who can read and write.
Maternal mortality rate *(p. 364)* The number of women who die giving birth per 100,000 births.
Microfinance *(p. 375)* Provision of small loans and financial services to individuals and small businesses in developing countries.
Millennium Development Goals *(p. 379)* Eight goals adopted by the U.N. in 2002 to reduce disparities between developed and developing countries by 2015.
Primary sector *(p. 352)* The portion of the economy concerned with the direct extraction of materials from Earth, generally through agriculture.
Productivity *(p. 353)* The value of a particular product compared to the amount of labor needed to make it.
Pupil/teacher ratio *(p. 355)* The number of enrolled students divided by the number of teachers.
Purchasing power parity (PPP) *(p. 352)* The amount of money needed in one country to purchase the same goods and services in another country.
Secondary sector *(p. 352)* The portion of the economy concerned with manufacturing useful products through processing, transforming, and assembling raw materials.
Structural adjustment program *(p. 374)* Economic policies imposed on less developed countries by international agencies to create conditions that encourage international trade.
Sustainable Development Goals *(p. 379)* Seventeen goals adopted by the U.N. in 2015 to reduce disparities between developed and developing countries by 2030.
Tertiary sector *(p. 352)* The portion of the economy concerned with transportation, communications, and utilities, sometimes extended to the provision of all goods and services to people in exchange for payment.
Value added *(p. 353)* The gross value of a product minus the costs of raw materials and energy.

EXPLORE

Niger: The World's Lowest HDI

In some years, Niger has the lowest HDI of any country.

Fly to *Arlit, Niger*.

1. Nearly the entire landscape is a desert. For a city to exist in the desert, it needs water. Where is Arlit's water being stored?

   Zoom in to around 3,000 feet eye alt.

2. What is the material of the roads and open space? Do you see any grass?
3. Set imagery date to 2004. What differences do you see in 2004 and 2014? In which direction has the town grown most rapidly?

   Zoom out to around 45,000 feet eye alt.

Niger is one of the world's leading sources of uranium. The reason for Arlit's existence is the uranium mine at the top of the image.

Click *Roads*, center the image on the uranium mine, and zoom in to 32,000 feet eye alt.

4. How might the uranium mine affect Arlit's level of development in transportation, income, employment, and environmental quality?

MG GeoVideo | Log in to the MasteringGeography Study Area to view this video

China: Economic Growth and Communism

In just a few decades, China has become an industrial powerhouse by following a model of growth very different from that of the United States and most other industrial countries.

1. What has been the relationship between market forces and government policy throughout China's recent rapid economic growth?
2. Describe the role of the city of Wenzhou in China's "new Industrial Revolution."
3. According to the video, what two problems must China solve to ensure continued economic growth and social stability?

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