

CASE STUDY / Bangladesh's Development Challenges

Rabea Rahman lives in the village of Bathoimuri, Bangladesh, with her three children—a son, 18, and two daughters, ages 10 and 7. Rahman's two other children died in infancy. Her husband died of tuberculosis.

Rahman's husband was a tenant farmer, or sharecropper. Under this arrangement, he shared a portion of his crops with the landowner instead of paying rent. After he died, Rahman went to work as a domestic servant and water carrier, working from 7 A.M. to 4 P.M. and from 6 P.M. to 11 P.M., seven days a week. Her son sells bread and prepares a midday meal for his two sisters. Total household income is \$16 per month (compared to a monthly household average of around \$4,000 in the United States).

Their house has a dirt floor and leaky roof, but the rent is only \$2 per month, plus \$3 per month for fuel. The remaining \$11 a month goes for food. The sum is sufficient to provide each member of the household with 100 grams (about a quarter pound) of

rice per day, but little else. The diet is supplemented by leftover food that Rahman receives from her employer. After paying for rent, fuel, and food, the family has no money left for other necessities. Because they cannot afford shoes, the family members often go barefoot. Rahman suffers from a gastric ulcer but cannot afford treatment.

Underlying the impoverished condition of the Rahman household is the role of women in a predominantly Muslim country such as Bangladesh. In rural villages, fewer than 10 percent of the women can read and write. Typically, a woman is married as a teenager and bears six babies in her lifetime, although on average one of the six does not survive infancy.

A woman like Rahman who is forced to find a job is limited to working as a servant or farm laborer. The condition of women—poor, illiterate, overburdened with children—is one of the most important factors holding back economic development in South Asian countries such as Bangladesh. ■

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 Chapter 8 pointed out that in the contemporary world, global military confrontation and alliances have been replaced by global economic competition and cooperation.

The second half of this book concentrates on economic elements of human geography. This chapter examines the most fundamental global economic pattern—the division of the world into relatively wealthy *regions* and relatively poor ones. Subsequent chapters look at the three basic ways that humans earn their living—growing food, manufacturing products, and providing services.

Earth's nearly 200 countries can be classified according to their level of **development**, which is the process of improving the material conditions of people through diffusion of knowledge and technology. The development process is continuous, involving never-ending actions to constantly improve the health and prosperity of the people. Every *place* lies at some point along a continuum of development.

Because many countries cluster at the high or low end of the continuum of development, they can be divided into two groups. A **more developed country (MDC)**, also known as a relatively developed country or simply as a developed country, has progressed further along the development continuum. A country in an earlier stage of development is frequently called a **less developed country (LDC)**, although many analysts prefer the term developing country or emerging country. “*Developing*” or “*emerging*” implies that the country has already made some progress and expects to continue.

The first geographic task is to identify *where* MDCs and LDCs are located. Geographers observe that MDCs cluster in some *spaces* and LDCs cluster in others. Next, geographers are concerned with *why* some regions are more developed than others. A number of economic, social, and demographic indicators distinguish regions of MDCs from regions of LDCs.

The *scale* of the severe economic downturn that began in 2008 has illustrated the *globalization* of the economy in the twenty-first century. In the recent recession, individual countries have seen their economies severely buffeted by close *connections* to the global economy. A return to economic growth has necessitated taking advantage of *local diversity* in skills and resources.

KEY ISSUE 1

Why Does Development Vary Among Countries?

- Economic Indicators of Development
- Social Indicators of Development
- Demographic Indicators of Development

A country's level of development can be distinguished according to three factors—*economic*, *social*, and *demographic*. The **Human Development Index (HDI)**, created by the United Nations, recognizes that a country's level of development is a function of all three of these factors (Figure 9-1). This key issue examines the three sets of development indicators. ■

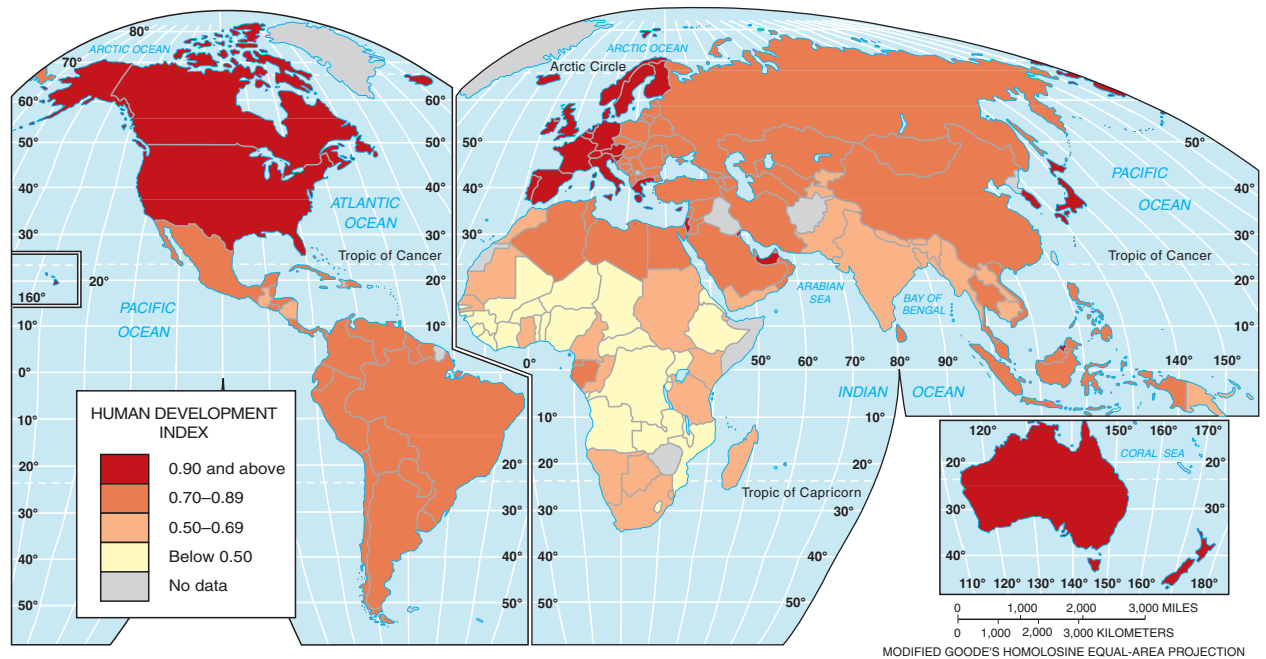


FIGURE 9-1 Human Development Index (HDI). The United Nations updated HDI scores in October 2009 based on 2006 data. It will be several years before lower HDI scores reflect the severe recession.

Economic Indicators of Development

To create the HDI, the United Nations selects one economic factor, two social factors, and one demographic factor that in the opinion of an international team of analysts best reveal a country's level of development:

- The economic factor is gross domestic product (GDP) per capita.
- The social factors are the literacy rate and amount of education.
- The demographic factor is life expectancy.

The four factors are combined to produce a country's HDI. The highest HDI possible is 1.0, or 100 percent. The UN has computed HDIs for countries every year since 1990, although it has tinkered a few times with the method of computation. The highest-ranking countries are typically in Europe and include Canada. The highest HDI in most recent years has been Norway's, at 0.971 in 2009. The lowest-ranked country in 2009 was Niger, with an HDI of 0.340. Thirty of the thirty-two lowest-ranking countries were in sub-Saharan Africa.

Gross Domestic Product Per Capita

The average individual earns a much higher income in an MDC than in an LDC. Per capita income is a difficult figure to obtain in many countries, so to get a sense of average incomes in various countries, geographers substitute per capita gross domestic product, a more readily available indicator.

The **gross domestic product (GDP)** is the value of the total output of goods and services produced in a country, normally

during a year. Dividing the GDP by total population measures the contribution made by the average individual toward generating a country's wealth in a year. For example, GDP in the United States was \$14 trillion in 2009 and its population was 307 million, so GDP per capita was about \$45,600.

In 2008, per capita GDP exceeded \$30,000 in MDCs, compared with less than \$3,000 in most LDCs (Figure 9-2). And the gap has widened: Since 1980 GDP per capita has increased from around \$15,000 to \$30,000 in MDCs and from around \$1,000 to \$4,000 in LDCs. Per capita GDP—or, for that matter, any other single indicator—cannot measure perfectly the level of a country's development. Few people may be starving in LDCs with per capita GDPs of a few thousand dollars. And not everyone is wealthy in MDCs with per capita GDP of more than \$40,000. Per capita GDP measures average (mean) wealth, not its distribution. If only a few people receive much of the GDP, then the standard of living for the majority may be lower than the average figure implies. The higher the per capita GDP, the greater the potential for ensuring that all citizens enjoy a comfortable life.

Types of Jobs

In addition to GDP per capita, three other economic indicators are especially useful in distinguishing between MDCs and LDCs—types of jobs, worker productivity, and availability of consumer goods.

Average per capita income is higher in MDCs because people typically earn their living by different means than in LDCs (Figure 9-3). Jobs fall into three types:

- Primary (including agriculture)
- Secondary (including manufacturing)
- Tertiary (including services)

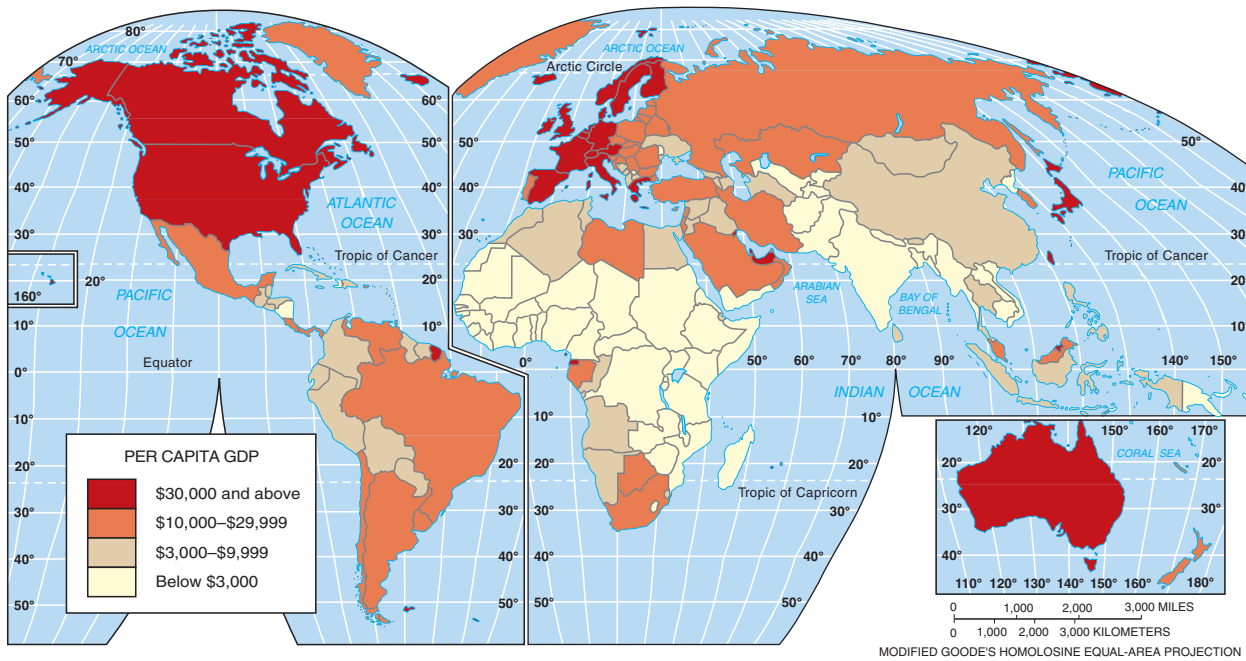


FIGURE 9-2 Annual gross domestic product (GDP) per capita. This measure exceeds \$30,000 in most MDCs, compared to less than \$10,000 in most LDCs. Figures are for “purchasing power parity,” which is a method for comparing living standards based on the price for equivalent products in different local currencies. Figures are latest estimates by the CIA, mostly from 2008.

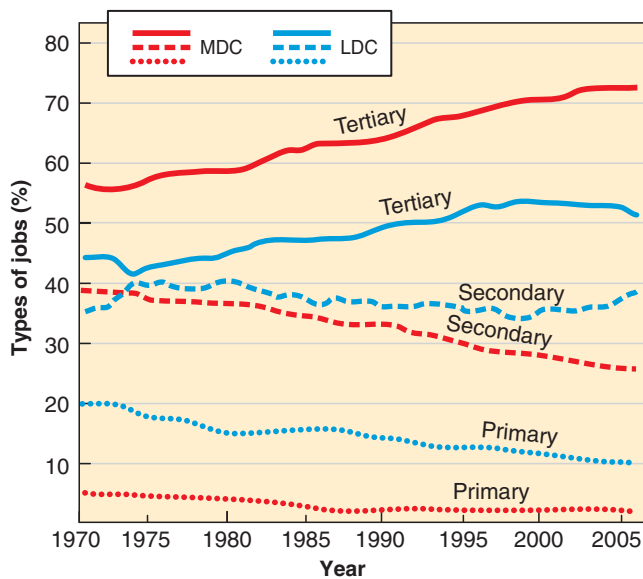


FIGURE 9-3 Percent GDP contributed by type of job. The tertiary sector contributes a greater share to GDP in MDCs than in LDCs. In MDCs, the tertiary sector contributes an increasing share to GDP, whereas the secondary sector contributes a decreasing share.

Workers in the **primary sector** directly extract materials from Earth through agriculture, and sometimes by mining, fishing, and forestry. The **secondary sector** includes manufacturers that process, transform, and assemble raw materials into useful products. Other secondary-sector industries take manufactured goods and fabricate them into finished consumer goods. The **tertiary sector** involves the provision of goods and services to

people in exchange for payment. Tertiary-sector activities include retailing, banking, law, education, and government.

To compare the types of economic activities found in MDCs and LDCs, we can compute the contribution to GDP from each of these three sectors. The contribution to GDP among primary, secondary, and tertiary sectors varies between MDCs and LDCs.

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

Productivity

Workers in MDCs are more productive than those in LDCs. **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 the product minus the costs of raw materials and energy. The value added per capita exceeds \$5,000 in the United States and \$7,000 in Japan, compared to around \$500 in China and \$100 in India.

Workers in MDCs 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 LDCs must rely more on human and animal power. The larger per capita GDP in MDCs in part pays for the manufacture and purchase of machinery, which in turn makes workers more productive and generates more wealth.

Consumer Goods

Part of the wealth generated in MDCs is used to purchase goods and services. Especially important are goods and services related to transportation and communications, including motor vehicles, telephones, and computers. Motor vehicles provide individuals with access to jobs and services and permit businesses to distribute their products (Figure 9-4). Telephones enhance interaction with providers of raw materials and customers for goods and services (Figure 9-5). Computers facilitate the sharing of information with other buyers and suppliers (see Figure 4-20).

Products that promote better transportation and communications are accessible to virtually all residents in MDCs and are vital to the economy's functioning and growth. In contrast, in LDCs 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. In many LDCs, 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.

In MDCs, the number of telephones is around 800 per 1,000 inhabitants, motor vehicles 400, and Internet users 400. In LDCs, the figures are around 200 telephones per 1,000 inhabitants, motor vehicles 20, and Internet users 100. Lower numbers indicate that people in LDCs are much less likely to have access to these products. Most people in LDCs 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 LDCs, 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.

Technological change is helping to reduce the gap between MDCs and LDCs in access to communications. Cell phone ownership, for example, is expanding rapidly in LDCs 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.

Social Indicators of Development

MDCs use part of their greater wealth to provide schools, hospitals, and welfare services. As a result, their people are better educated, healthier, and better protected from hardships. Infants are more likely to survive, and adults are more likely to live longer. In turn, this well-educated, healthy, and secure population can be more economically productive.

Education and Literacy

In general, the higher the level of development, the greater are both the quantity and the quality of a country's educational services. Two measures of education for which data are regularly collected for most countries of the world are student/teacher ratio and literacy rate.

In elementary or primary school, the number of students per teacher exceeds 30 in most LDCs, whereas it is less than 20 in most MDCs. The fewer pupils a teacher has, the more likely that each student will receive personalized instruction (Figure 9-6).

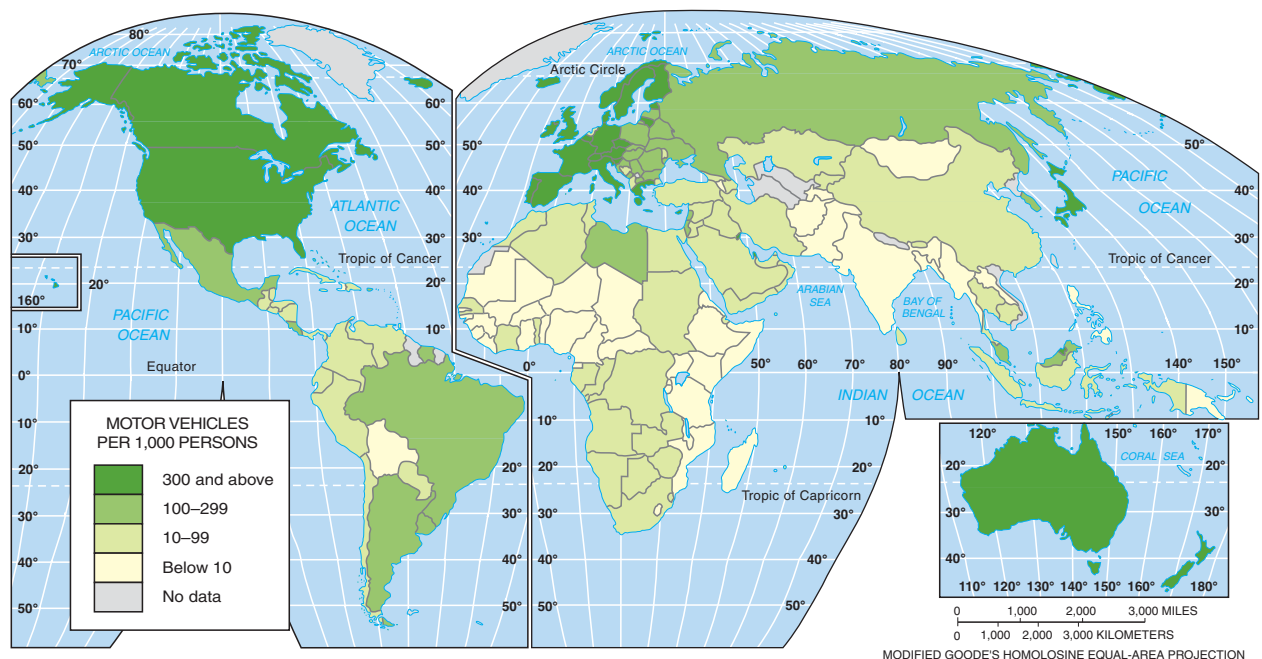


FIGURE 9-4 Motor vehicles per 1,000 persons. MDCs have several hundred vehicles per 1,000 persons, compared with less than 100 in most LDCs.

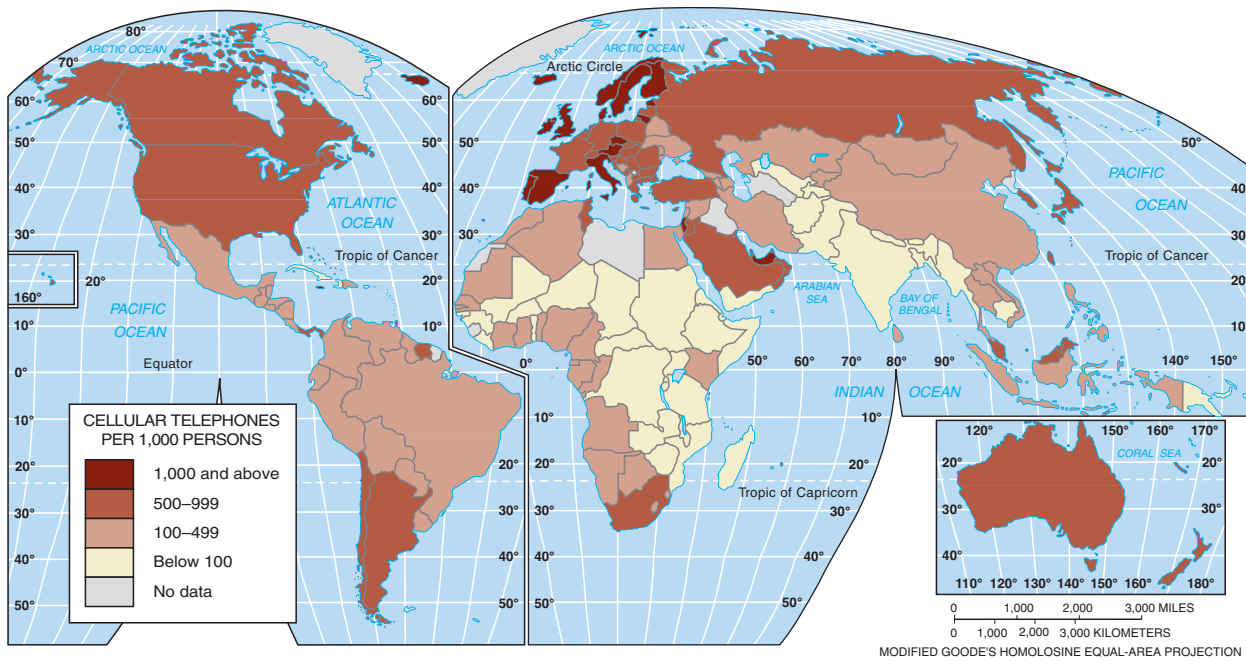


FIGURE 9-5 Cellular telephone lines per 1,000 persons. MDCs have nearly as many cell phones as inhabitants.

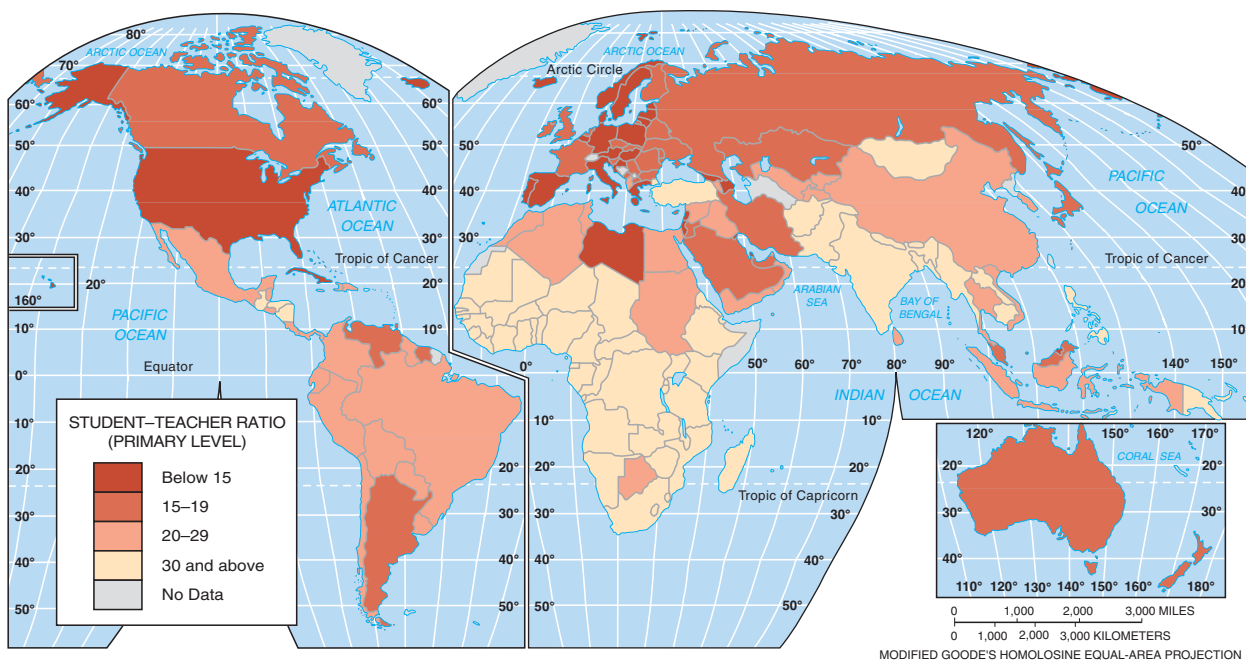


FIGURE 9-6 Students per teacher, primary school. Primary-school teachers must deal with much larger average class sizes in LDCs than in MDCs.

The **literacy rate** is the percentage of a country's people who can read and write. The rate exceeds 98 percent in MDCs, compared with less than 60 percent in LDCs (refer ahead to Figure 9-20). The MDCs publish more books, newspapers, and magazines per person because more of their citizens read and write, and MDCs dominate scientific and nonfiction publishing worldwide—this textbook is an example. Students in LDCs must learn technical

information from books that usually are not in their native language but are printed in English, German, Russian, or French. For many in LDCs, education is the ticket to better jobs and higher social status. Improved education is a major goal of many LDCs, but funds are scarce. Education may receive a higher percentage of the GDP in LDCs, but their GDP is far lower to begin with, so they spend far less per pupil than do MDCs.

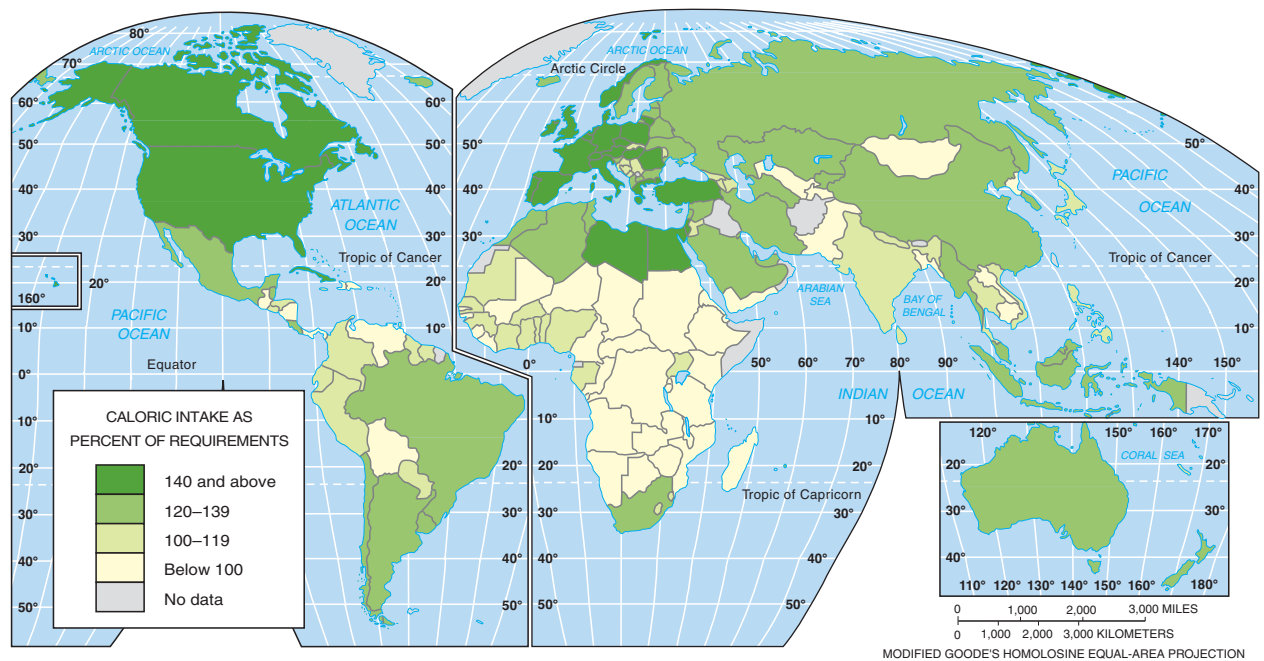


FIGURE 9-7 Daily available calories per capita as a percentage of requirements. Daily available calories per capita (food supply) is the domestic agricultural production plus imports, minus exports and nonfood uses. To maintain a moderate level of physical activity, an average individual requires at least 2,350 calories a day, according to the United Nations Food and Agricultural Organization. The figure must be adjusted for age, sex, and region of the world. In more developed countries, the average citizen consumes about one-third more calories than the minimum needed. The typical resident of a less developed country receives almost precisely the minimum number of calories needed to maintain moderate physical activity—on average. At first glance, this does not reveal a serious problem. However, because these figures are means, a substantial proportion of the population must be receiving less than the necessary daily minimum. The problem is especially severe in Africa, where most people consume less than the needed minimum.

Health and Welfare

People are healthier in MDCs than in LDCs. The health of a population is influenced by diet. On average, people in MDCs receive more calories and proteins daily than they need. But in the LDCs of Africa and Asia, most people receive less than the daily minimum allowance of calories and proteins recommended by the United Nations (Figure 9-7).

When people get sick, MDCs possess the resources to care for them. Total expenditures on health care exceed 8 percent of GDP in MDCs, compared to less than 6 percent in LDCs (Figure 9-8). So not only do MDCs have much higher GDP per capita than LDCs, they spend a higher percentage of that GDP on health care. Some of that additional expenditure on health in MDCs is reflected in more hospitals, doctors, and nurses per capita (Figure 9-9).

In most MDCs, health care is a public service that is available at little or no cost. Government programs pay more than 70 percent of health-care costs in most European countries, and private individuals pay less than 30 percent. In LDCs, private individuals must pay more than half of the cost of health care (Figure 9-10). An exception is the United States, where private individuals are required to pay an average of 55 percent of health care, more closely resembling the pattern in LDCs.

The MDCs 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. Countries in northwestern Europe, such as Denmark, Norway, and Sweden, typically provide the highest level of public-assistance payments. However, MDCs are hard-pressed to maintain their current levels of public assistance. In the past, rapid economic growth permitted these states to finance generous programs with little difficulty. But in recent years economic growth has slowed, whereas the percentage of people needing public assistance has increased. Governments have faced a choice between reducing benefits or increasing taxes to pay for them.

Demographic Indicators of Development

MDCs display many demographic differences from LDCs. The UN's HDI utilizes life expectancy as a measure of development. Other demographic characteristics described in Chapter 2 that distinguish between more and less developed countries include infant mortality, natural increase, and crude birth rates.

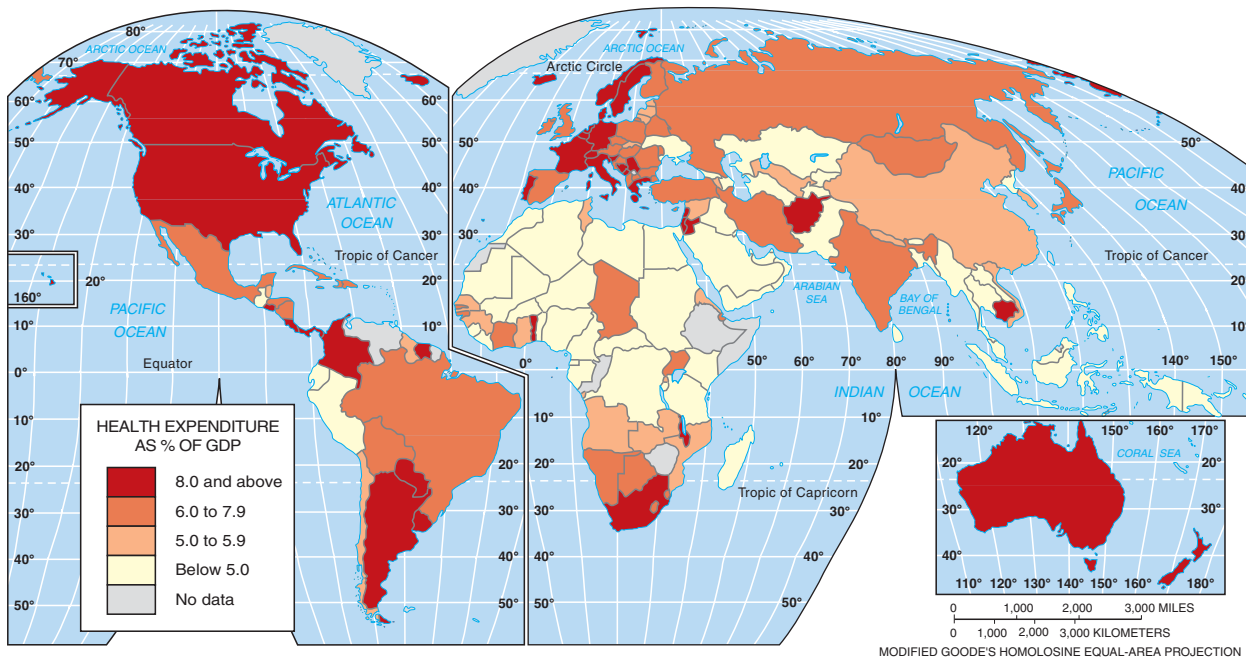


FIGURE 9-8 Expenditure on health care as percent of GDP. MDCs have a much higher gross domestic product (GDP) than LDCs, and they spend a higher percentage of that GDP on health care.

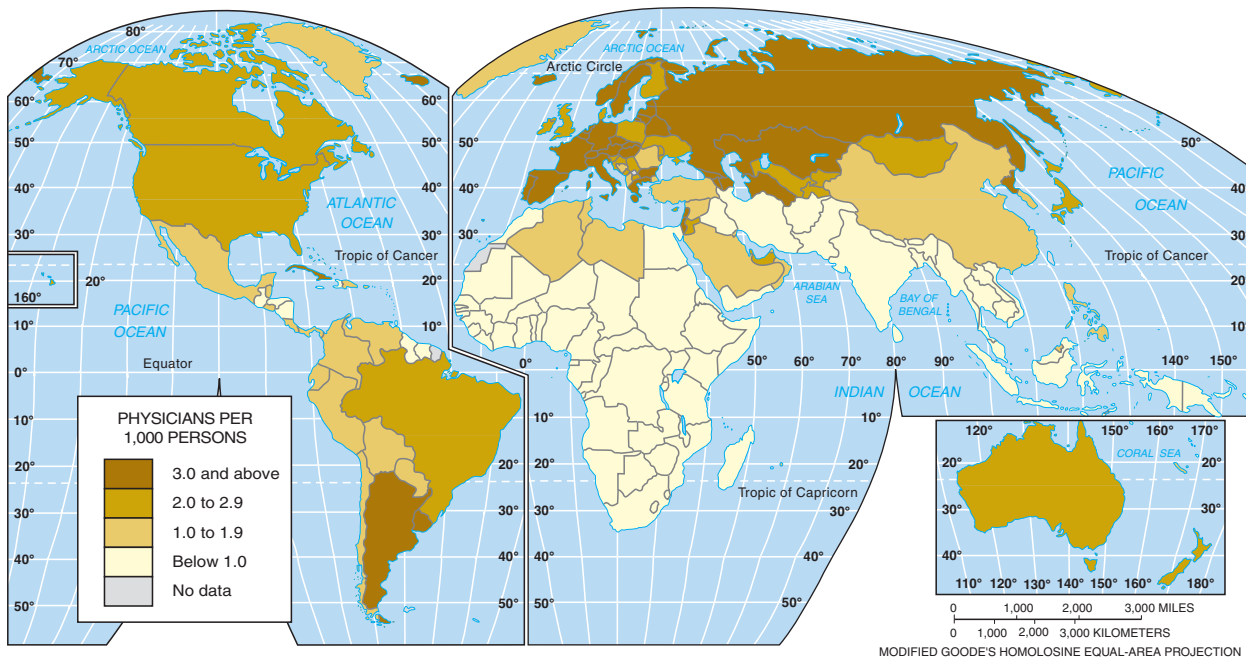


FIGURE 9-9 Physicians per 1,000 persons. MDCs have three or more physicians per 1,000 persons, compared with less than one in most LDCs

Life Expectancy

Better health and welfare in MDCs permit people to live longer. 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. Babies born today can expect to live into their sixties in LDCs compared to their seventies in MDCs (see Figure 2-13). The gap in life expectancy is greater for females than for males. Males can expect to live 10 years longer in MDCs

than in LDCs, whereas females can expect to live 13 years longer in MDCs.

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

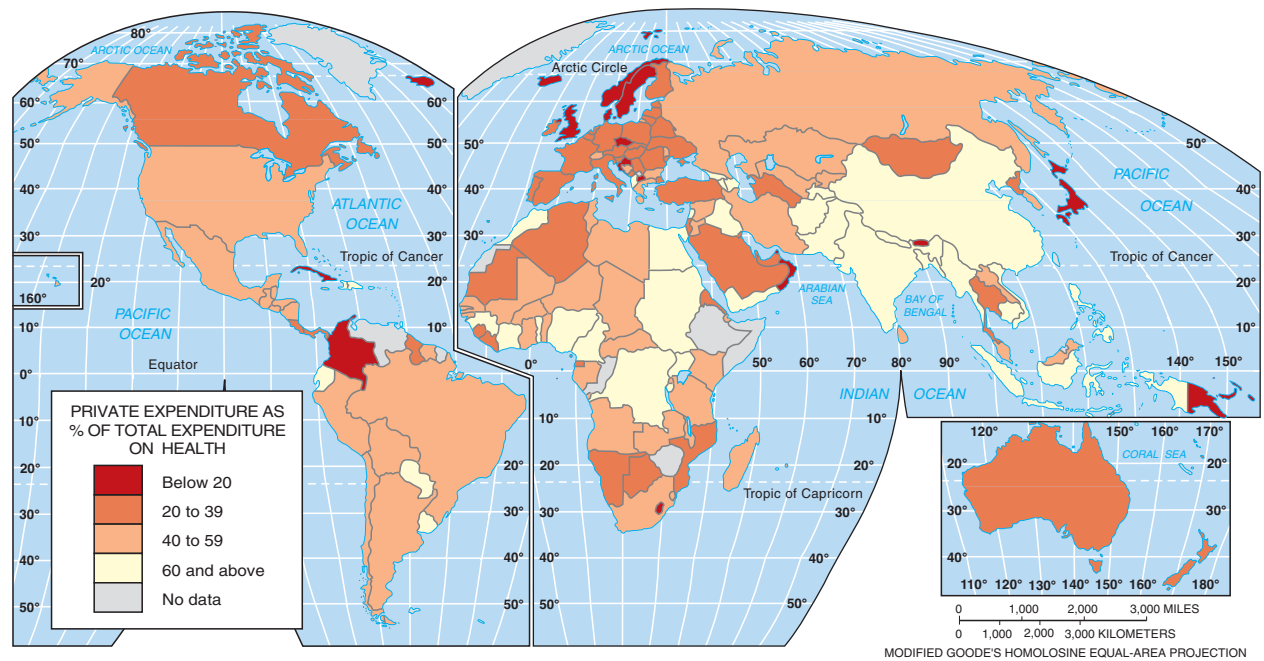


FIGURE 9-10 Private expenditure on health care as percent of total health-care expenditure, 2005. Health care is considered a public service in most MDCs, except for the United States, where—like in most LDCs—private individuals must pay most health-care costs.

people in LDCs, whereas the two are nearly the same in MDCs (see Figure 2-15).

Infant Mortality Rate

Better health and welfare also permit more babies to survive infancy in MDCs. About 94 percent of infants survive and 6 percent die in LDCs, whereas in MDCs more than 99.5 percent survive and fewer than one-half of 1 percent perish (see Figure 2-12). The infant mortality rate is greater in LDCs for several reasons. Babies may die from malnutrition or lack of medicine needed to survive illness, such as dehydration from diarrhea. They may also die from poor medical practices that arise from lack of education.

Natural Increase Rate

The natural increase rate averages 1.5 percent annually in LDCs compared to only 0.2 percent in MDCs. Greater natural increase strains a country's ability to provide hospitals, schools, jobs, and other services that can make its people healthier and more productive. Many LDCs must allocate increasing percentages of their GDPs just to care for the rapidly expanding population rather than to improve care for the current population (see Figure 2-9).

Crude Birth Rate

LDCs have higher natural increase rates because they have higher crude birth rates. The annual crude birth rate is 23 per 1,000 in LDCs, compared to 12 per 1,000 in MDCs. Women in

MDCs choose to have fewer babies for various economic and social reasons, and they have access to various birth-control devices to achieve this goal (see Figure 2-10).

The crude death rate (CDR) does not indicate a society's level of development. The CDR is lower in LDCs than in MDCs, 8 per 1,000 compared to 10 per 1,000. Two reasons account for the lower rate in LDCs. First, diffusion of medical technology from MDCs has eliminated or sharply reduced the incidence of several diseases in LDCs. Second, MDCs have higher percentages of older people, who have high mortality rates, as well as lower percentages of children, who have low mortality rates once they survive infancy.

KEY ISSUE 2

Where Are MDCs and LDCs Distributed?

- More Developed Regions
- Less Developed Regions

The countries of the world can be categorized into nine major regions according to their level of development—North America, Europe, Latin America, East Asia, Southwest Asia (with North Africa), Southeast Asia, Central Asia, South Asia, and sub-Saharan Africa (Figure 9-11). In addition to these nine major regions, three other distinctive areas can be identified—Japan, Oceania, and Russia. These