

SUSTAINABILITY AND INEQUALITY IN OUR GLOBAL VILLAGE

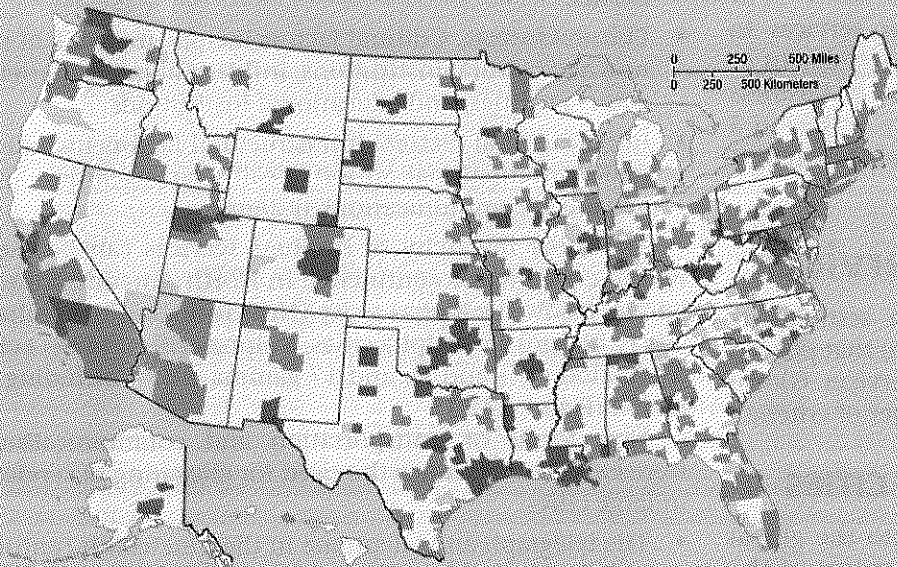
Unequal Spatial Impacts of the Severe Recession

The severe global recession that began in 2008 hit some communities harder than others. As Figure 12-7 shows, developed countries were more severely impacted by the global recession. GNI declined more sharply in developed countries than in developing countries. The countries least affected by the global recession were

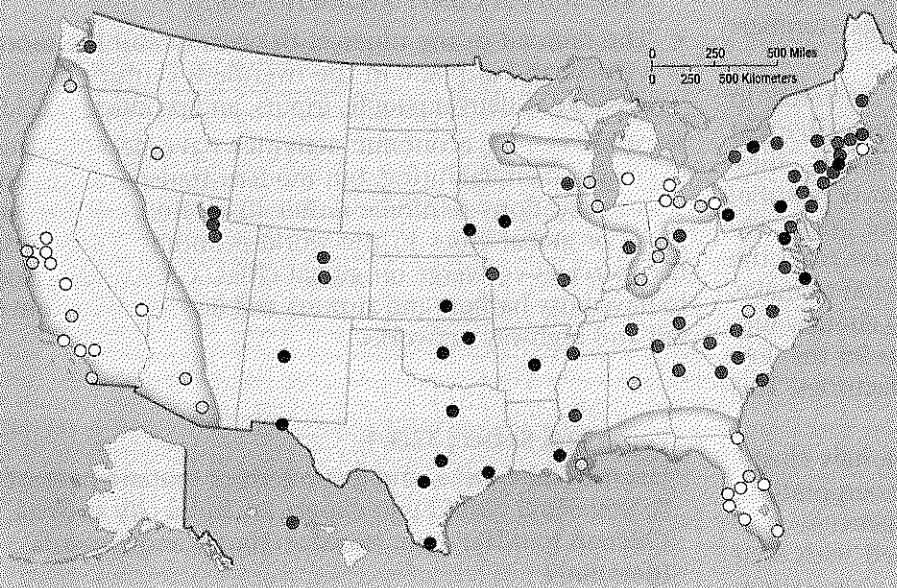
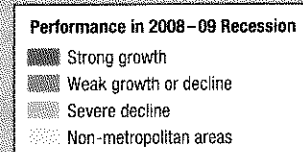
the poorest countries of sub-Saharan Africa. Those countries are the most peripheral to the global economy.

Within the United States, the recession hit some communities harder than others (Figure 12-18). Some of the hardest-hit communities were industrial centers in the Midwest, where bankrupt carmakers

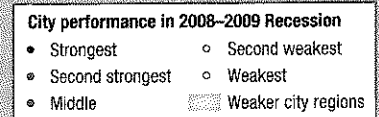
Chrysler and GM were based. But most of the hardest-hit communities were in the South and West, regions that had been the most prosperous. Those communities were especially affected by declines in services, especially real estate and finance (Figure 12-19).



▼ **FIGURE 12-18 IMPACT OF SEVERE RECESSION** The impact of the recession was especially strong in Florida, the Southwest, and the Great Lakes area.



▼ **FIGURE 12-19 IMPACT OF SEVERE RECESSION ON 100 LARGEST U.S. METROPOLITAN AREAS** California and Florida had the largest number of the weakest performing cities.



KEY ISSUE 3

Where Are Business Services Distributed?

- Hierarchy of Business Services
- Business Services in Developing Countries
- Economic Base of Settlements

Learning Outcome 12.3.1

Describe the factors that are used to identify global cities.

Every urban settlement provides consumer services to people in a surrounding area, but not every settlement of a given size has the same number and types of business services. Business services disproportionately cluster in a handful of urban settlements, and individual settlements specialize in particular business services.

Hierarchy of Business Services

Geographers identify a handful of urban settlements known as global cities (also called world cities) that play an especially important role in global business services. Global cities can be subdivided according to a number of criteria.

BUSINESS SERVICES IN GLOBAL CITIES

Global cities are most closely integrated into the global economic system because they are at the center of the flow of information and capital. Business services, including law, banking, insurance, accounting, and advertising, concentrate in disproportionately large numbers in global cities:

- Headquarters of large corporations are clustered in global cities, and shares of these corporations are bought and sold on stock exchanges located in global cities. Obtaining information in a timely manner is essential in order to buy and sell shares at attractive prices. Executives of manufacturing firms meeting far from the factories make key decisions concerning what to make, how much to produce, and what prices to charge. Support staff also far from the factory accounts for the flow of money and materials to and from the factories. This work is done in offices in global cities.
- Lawyers, accountants, and other professionals cluster in global cities to provide advice to major corporations and financial institutions. Advertising agencies, marketing firms, and other services concerned with style and fashion locate in global cities to help corporations

anticipate changes in taste and to help shape those changes.

- As centers for finance, global cities attract the headquarters of the major banks, insurance companies, and specialized financial institutions where corporations obtain and store funds for expansion of production.

Global cities are divided into three levels: alpha, beta, and gamma. These three levels in turn are further subdivided (Figure 12-20). A combination of economic, political, cultural, and infrastructure factors are used to identify global cities and to distinguish among the various ranks:

- **Economic factors.** Economic factors include number of headquarters for multinational corporations, financial institutions, and law firms that influence the global economy.
- **Political factors.** Political factors include hosting headquarters for international organizations and capitals of countries that play a leading role in international events.
- **Cultural factors.** Cultural factors include presence of renowned cultural institutions, influential media outlets, sports facilities, and educational institutions.
- **Infrastructural factors.** Infrastructural factors include a major international airport, health-care facilities, and advanced communications systems.

The same hierarchy of business services can be used within countries or continents. In North America, for example, below the alpha++ city (New York) and the alpha+ city (Chicago) are 4 alpha cities, 5 alpha- cities, 11 beta cities (including + and -), and 17 gamma cities (including + and -) (Figure 12-21).

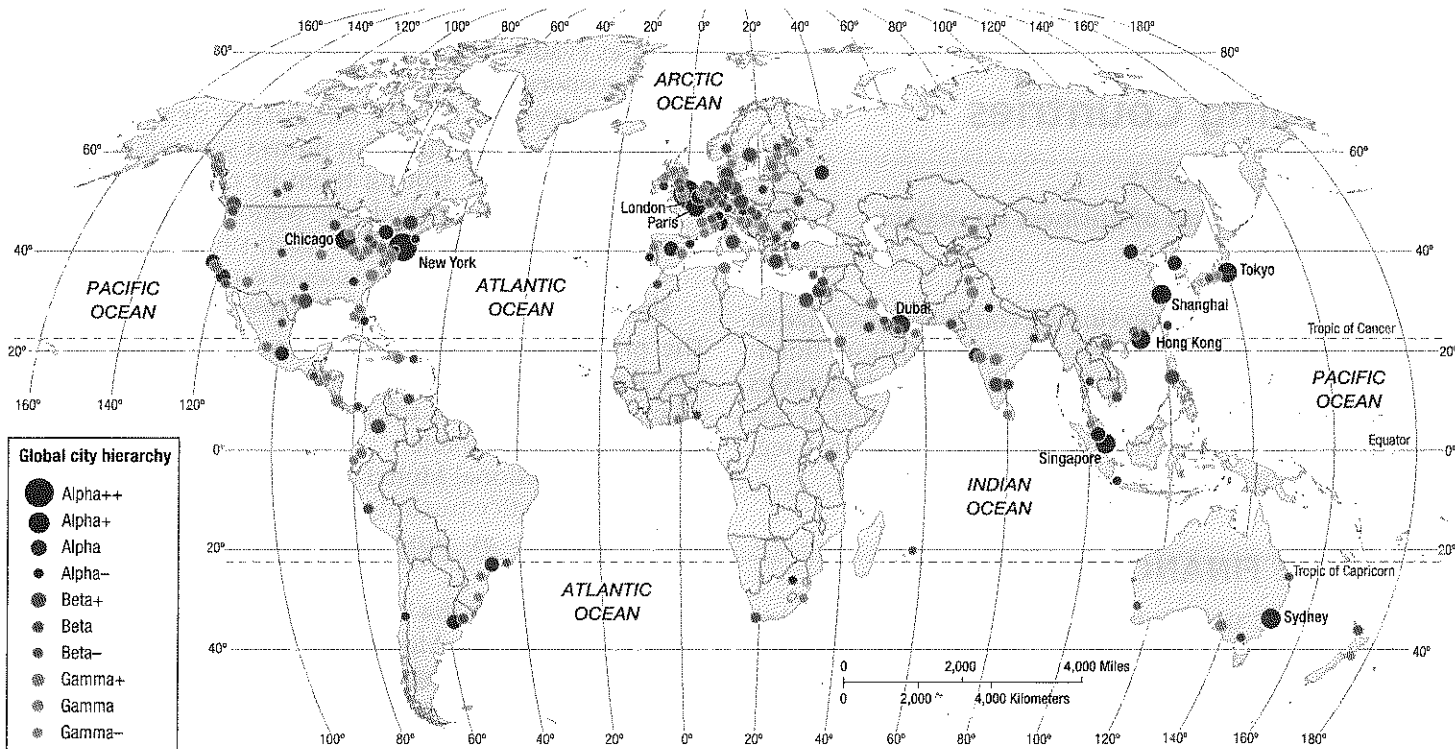
New forms of transportation and communications were expected to reduce the need for clustering of services in large cities:

- The telegraph and telephone in the nineteenth century and the computer in the twentieth century made it possible to communicate immediately with coworkers, clients, and customers around the world.
- The railroad in the nineteenth century and the motor vehicle and airplane in the twentieth century made it possible to deliver people, inputs, and products quickly.

To some extent, economic activities have decentralized, especially manufacturing, but modern transportation and communications reinforce rather than diminish the primacy of global cities in the world economy. Transportation services converge on global cities. Global cities tend to have busy harbors and airports and lie at the junction of rail and highway networks.

Pause and Reflect 12.3.1

List the alpha, beta, and gamma cities that are nearest to you. How would you expect an alpha city such as Chicago to differ from Houston (beta) and Phoenix (gamma)?



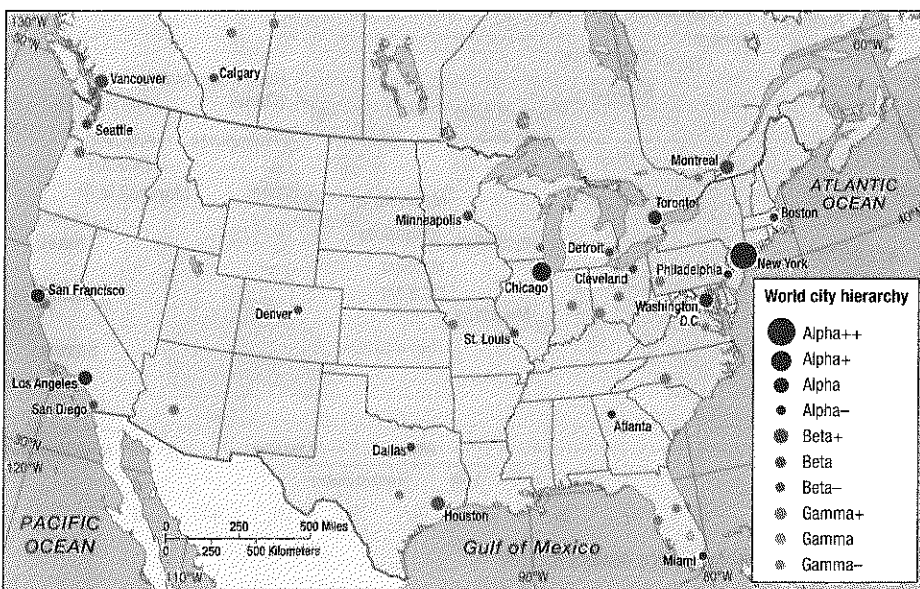
▲ **FIGURE 12-20 GLOBAL CITIES** Global cities are centers for the provision of services in the global economy. London and New York, the two dominant global cities, are ranked as alpha++. Other alpha, beta, and gamma global cities play somewhat less central roles in the provision of services than the two dominant global cities. Cities ranked alpha++ and alpha+ are labeled on the map.

CONSUMER AND PUBLIC SERVICES IN GLOBAL CITIES

Because of their large size, global cities have retail services with extensive market areas, but they may have even more retailers than large size alone would predict. A disproportionately large number of wealthy people live in global cities, so luxury and highly specialized products are especially likely to be sold there. Global cities typically offer the most plays, concerts, operas, night clubs, restaurants, bars, and professional sporting events. They contain the largest

libraries, museums, and theaters. London presents more plays than the rest of the United Kingdom combined, and New York nearly has more theaters than the rest of the United States combined. Leisure services of national significance are especially likely to cluster in global cities, in part because they require large thresholds and large ranges and in part because of the presence of wealthy patrons.

Global cities may be centers of national or international political power. Most are national capitals, and they contain mansions or palaces for the head of state, imposing structures for the national legislature and courts, and offices for the government agencies. Also clustered in global cities are offices for groups having business with the government, such as representatives of foreign countries, trade associations, labor unions, and professional organizations. Unlike other global cities, New York is not a national capital. But as the home of the world's major international organization, the United Nations, it attracts thousands of diplomats and bureaucrats, as well as employees of organizations with business at the United Nations. Brussels is a global city because it is the most important center for European Union activities.



◀ **FIGURE 12-21 GLOBAL CITIES IN NORTH AMERICA** Atop the hierarchy of business services are New York and Chicago.

Business Services in Developing Countries

Learning Outcome 12.3.2

Explain the two types of business services in developing countries.

In the global economy, developing countries specialize in two distinctive types of business services: offshore financial services and back-office functions. These businesses tend to locate in developing countries for a number of reasons, including the presence of supportive laws, weak regulations, and low-wage workers.

OFFSHORE FINANCIAL SERVICES

Small countries, usually islands and microstates, exploit niches in the circulation of global capital by offering offshore financial services. Offshore centers provide two important functions in the global circulation of capital:

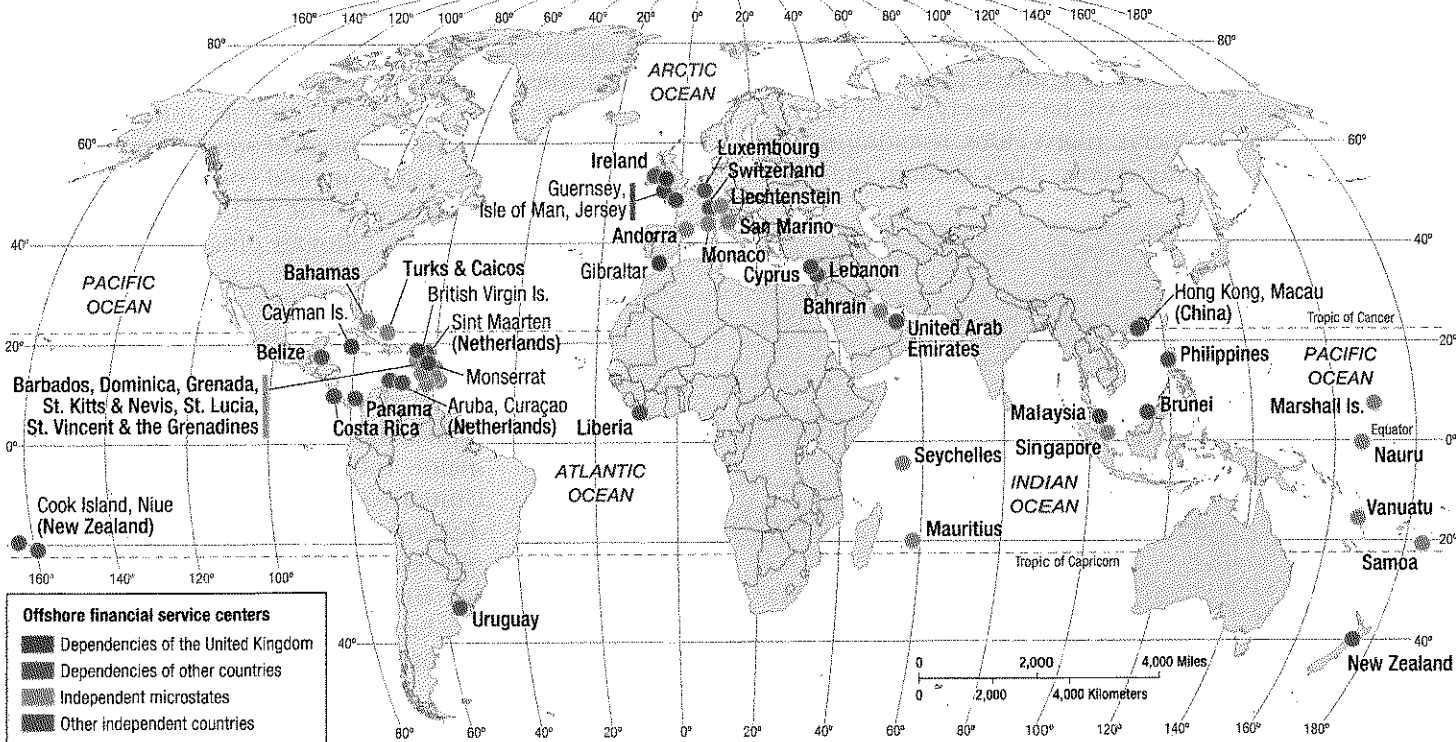
- **Taxes.** Taxes on income, profits, and capital gains are typically low or nonexistent. Companies incorporated in an offshore center also have tax-free status, regardless of the nationality of the owners. The United States loses an estimated \$70 billion in tax revenue each year because companies operating in the country conceal their assets in offshore tax havens.

- **Privacy.** Bank secrecy laws can help individuals and businesses evade disclosure in their home countries. People and corporations in litigious professions, such as a doctor or lawyer accused of malpractice or the developer of a collapsed building, can protect some of their assets from lawsuits by storing them in offshore centers, as can a wealthy individual who wants to protect assets in a divorce. Creditors cannot reach such assets in bankruptcy hearings. Short statutes of limitation protect offshore accounts from long-term investigation.

The privacy laws and low tax rates in offshore centers can also provide havens to tax dodges and other illegal schemes. By definition, the extent of illegal activities is unknown and unknowable.

The International Monetary Fund, the United Nations, and the Tax Justice Institute identify the following places, among others, as offshore financial services centers (Figure 12-22):

- **Dependencies of the United Kingdom**, such as Anguilla, Cayman Islands, Montserrat, and the British Virgin Islands in the Caribbean; Guernsey/Sark/Alderney, Isle of Man, and Jersey in the English Channel; and Gibraltar, off Spain.
- **Dependencies of other countries**, such as Cook Island and Niue, controlled by New Zealand; Aruba, Curaçao, and Sint Maarten, controlled by the Netherlands; and Hong Kong and Macau, controlled by China.
- **Independent island countries**, such as The Bahamas, Barbados, Dominica, Grenada, St. Kitts & Nevis, St. Lucia,



▲ FIGURE 12-22 OFFSHORE FINANCIAL SERVICE CENTERS Offshore financial service centers include microstates and dependencies of other countries.

St. Vincent & the Grenadines, and Turks & Caicos in the Caribbean; the Marshall Islands, Nauru, Samoa, and Vanuatu in the Pacific Ocean; and Mauritius and Seychelles in the Indian Ocean.

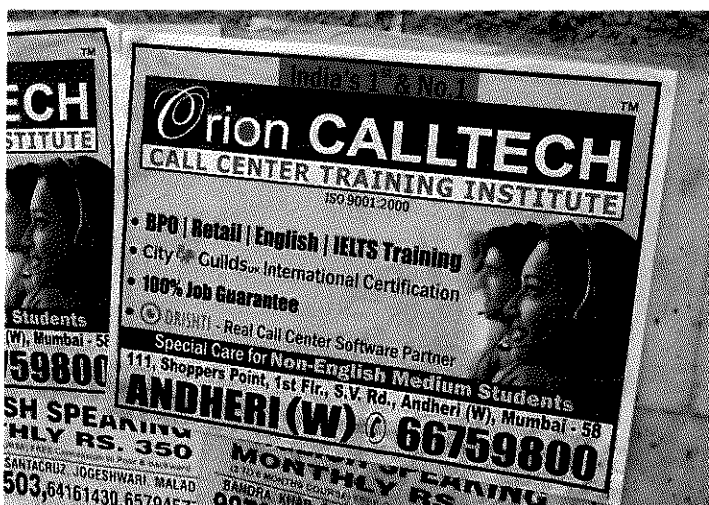
- Other independent countries, such as Andorra, Cyprus, Ireland, Liechtenstein, Luxembourg, Monaco, San Marino, and Switzerland in Europe; Belize, Costa Rica, Panama, and Uruguay in Latin America; Liberia in Africa; and Bahrain, Brunei, Lebanon, Malaysia, New Zealand, the Philippines, Singapore, and the United Arab Emirates in Asia.

A prominent example is the Cayman Islands, a British Crown Colony in the Caribbean near Cuba. The Caymans comprise three main islands and several smaller ones totaling around 260 square kilometers (100 square miles), with 40,000 inhabitants. Several hundred banks with assets of more than \$1 trillion are legally based in the Caymans. Most of these banks have only a handful of people, if any, actually working in the Caymans.

In the Caymans, it is a crime to discuss confidential business—defined as matters learned on the job—in public. Assets placed in an offshore center by an individual or a corporation in a trust are not covered by lawsuits originating in the United States, Britain, or other service centers. To get at those assets, additional lawsuits would have to be filed in the offshore centers, where privacy laws would shield the individual or corporation from undesired disclosures.

BUSINESS-PROCESS OUTSOURCING

The second distinctive type of business service found in peripheral regions is back-office functions, also known as business-process outsourcing (BPO). Typical back-office functions include insurance claims processing, payroll management, transcription work, and other routine clerical activities (Figure 12-23). Back-office work also includes centers for responding to billing inquiries related to credit cards, shipments, and claims, or technical inquiries related to installation, operation, and repair.



▲ FIGURE 12-23 CALL CENTER Young Indians are recruited to work in call centers.

Traditionally, companies housed their back-office staff in the same office building downtown as their management staff, or at least in nearby buildings. A large percentage of the employees in a downtown bank building, for example, would be responsible for sorting paper checks and deposit slips. Proximity was considered important to assure close supervision of routine office workers and rapid turnaround of information.

Rising rents downtown have induced many business services to move routine work to lower-rent buildings elsewhere. In most cases, sufficiently low rents can be obtained in buildings in the suburbs or nearby small towns. However, for many business services, improved telecommunications have eliminated the need for spatial proximity.

Selected developing countries have attracted back offices for two reasons related to labor:

- **Low wages.** Most back-office workers earn a few thousand dollars per year—higher than wages paid in most other sectors of the economy, but only one-tenth the wages paid for workers performing similar jobs in developed countries. As a result, what is regarded as menial and dead-end work in developed countries may be considered relatively high-status work in developing countries and therefore able to attract better-educated, more-motivated employees in developing countries than would be possible in developed countries.
- **Ability to speak English.** Many developing countries offer lower wages than developed countries, but only a handful of developing countries possess a large labor force fluent in English. In Asia, countries such as India, Malaysia, and the Philippines have substantial numbers of workers with English-language skills, a legacy of British and American colonial rule. Major multinational companies such as American Express and General Electric have extensive back-office facilities in those countries.

The ability to communicate in English over the telephone is a strategic advantage in competing for back offices with neighboring countries, such as Indonesia and Thailand, where English is less commonly used. Familiarity with English is an advantage not only for literally answering the telephone but also for gaining a better understanding of the preferences of American consumers through exposure to English-language music, movies, and television.

Workers in back offices are often forced to work late at night, when it's daytime in the United States, peak demand for inquiries. Many employees must arrive at work early and stay late because they lack their own transportation, so they depend on public transportation, which typically does not operate late at night. Sleeping and entertainment rooms are provided at work to fill the extra hours.

Pause and Reflect 12.3.2

When it is 3 P.M. on a Tuesday where you live, what time and day is it at a call center in India? Refer to Figure 1-11.

Economic Base of Settlements

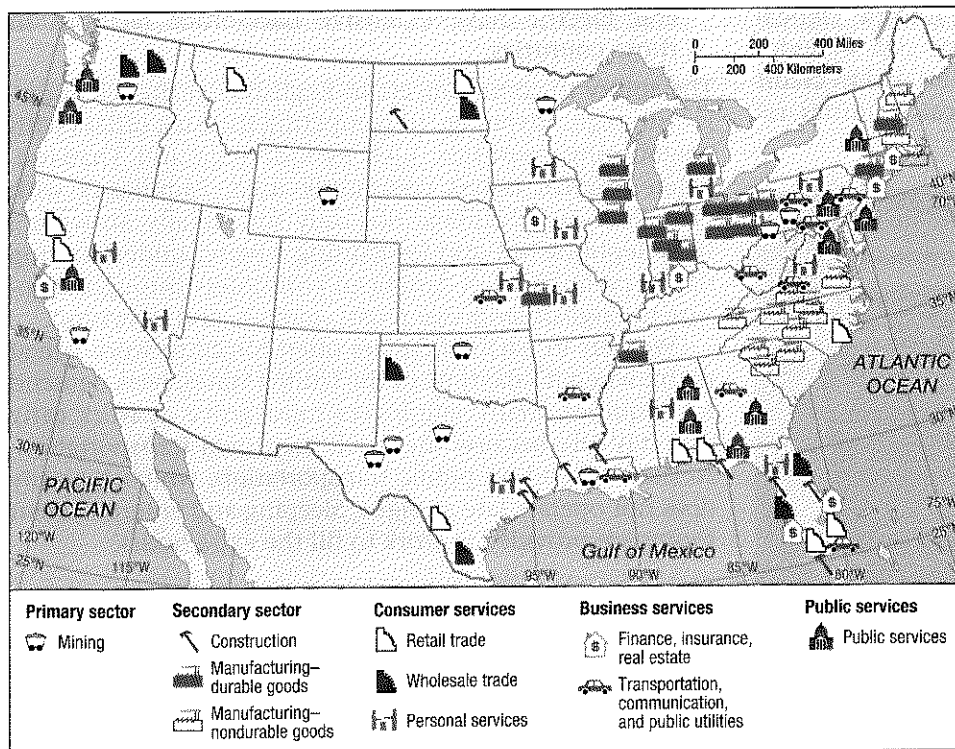
Learning Outcome 12.3.3

Explain the concept of economic base.

A settlement's distinctive economic structure derives from its **basic industries**, which export primarily to consumers outside the settlement. **Nonbasic industries** are enterprises whose customers live in the same community—essentially, consumer services. A community's unique collection of basic industries defines its **economic base**.

A settlement's economic base is important because exporting by the basic industries brings money into the local economy, thus stimulating the provision of more nonbasic consumer services for the settlement. New basic industries attract new workers to a settlement, and these workers bring their families with them. The settlement then attracts additional consumer services to meet the needs of the new workers and their families. Thus a new basic industry stimulates establishment of new supermarkets, laundromats, restaurants, and other consumer services. But a new nonbasic service, such as a supermarket, will not induce construction of new basic industries.

A community's basic industries can be identified by computing the percentage of the community's workers employed in different types of businesses. The percentage of workers employed in a particular industry in a settlement is then compared to the percentage of all workers in the country employed in that industry. If the percentage is much higher in the local community, then that type of business is a basic economic activity.



SPECIALIZATION OF CITIES IN DIFFERENT SERVICES

Settlements in the United States can be classified by their type of basic activity (Figure 12-24). Each type of basic activity has a different spatial distribution. The concept of basic industries originally referred to manufacturing. Some communities specialize in durable manufactured goods, such as steel and automobiles, others in nondurable manufactured goods, such as textiles, apparel, food, chemicals, and paper. Most communities that have an economic base of manufacturing durable goods are clustered between northern Ohio and southeastern Wisconsin, near the southern Great Lakes. Nondurable manufacturing industries, such as textiles, are clustered in the Southeast, especially in the Carolinas.

In a postindustrial society, such as the United States, increasingly the basic economic activities are in business, consumer, or public services. Geographers Ó hUallacháin and Reid have documented examples of settlements that specialize in particular types of services. Examples of settlements specializing in business services include:

- **General business:** Large metropolitan areas, especially Chicago, Los Angeles, New York, and San Francisco.
- **Computing and data processing services:** Boston and San Jose.
- **High-tech industries support services:** Austin, Orlando, and Raleigh-Durham.
- **Military activity support services:** Albuquerque, Colorado Springs, Huntsville, Knoxville, and Norfolk.
- **Management-consulting services:** Washington, D.C.

Examples of settlements specializing in consumer services include:

- **Entertainment and recreation:** Atlantic City, Las Vegas, and Reno.
- **Medical services:** Rochester, Minnesota.

Examples of settlements specializing in public services include:

- **State capitals:** Sacramento and Tallahassee.
- **Large universities:** Tuscaloosa.
- **Military bases:** Arlington.

Although the populations of cities in the South and West have grown more rapidly in recent years, Ó hUallacháin and Reid found that cities in the North and East have expanded their provision of business services more rapidly. Northern and eastern cities that were once major manufacturing centers have been transformed

◀ **FIGURE 12-24 ECONOMIC BASE OF U.S. CITIES** Cities specialize in different economic activities.

into business service centers. These cities have moved more aggressively to restructure their economic bases to offset sharp declines in manufacturing jobs.

Steel was once the most important basic industry of Cleveland and Pittsburgh, but now health services such as hospitals and clinics and medical high-technology research are more important. Baltimore once depended for its economic base on manufacturers of fabricated steel products, such as Bethlehem Steel, General Motors, and Westinghouse. The city's principal economic asset was its port, through which raw materials and fabricated products passed. As these manufacturers declined, the city's economic base turned increasingly to services, taking advantage of its clustering of research-oriented universities, especially in medicine. The city is trying to become a center for the provision of services in biotechnology.

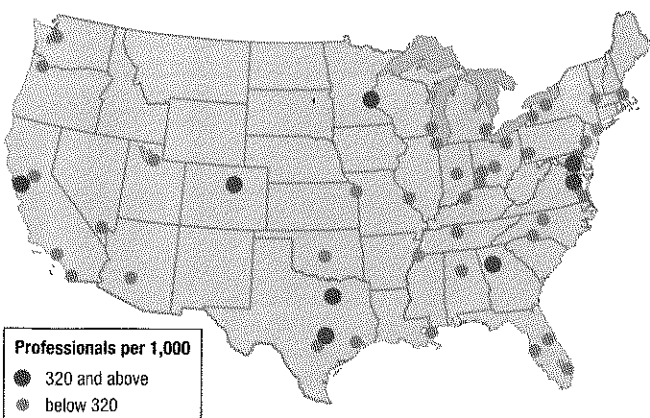
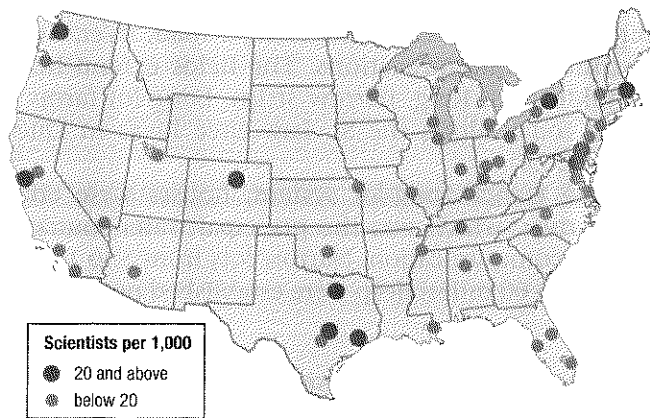
DISTRIBUTION OF TALENT

Individuals possessing special talents are not distributed uniformly among cities. Some cities have a higher percentage of talented individuals than others (Figure 12-25). To some extent, talented individuals are attracted to the cities with the most job opportunities and financial incentives. But the principal enticement for talented individuals to cluster in some cities more than others is cultural rather than economic, according to research conducted by

Richard Florida. Individuals with special talents gravitate toward cities that offer more cultural diversity.

Florida measured talent as a combination of the percentage of people in the city with college degrees, the percentage employed as scientists or engineers, and the percentage employed as professionals or technicians. He used three measures of cultural diversity: the number of cultural facilities per capita, the percentage of gay men, and a "coolness" index. The "coolness" index, developed by *POV Magazine*, combined the percentage of population in their 20s, the number of bars and other nightlife places per capita, and the number of art galleries per capita (Figure 12-26). A city's gay population was based on census figures for the percentage of households consisting of two adult men. Two adult men who share a house may not be gay, but Florida assumed that the percentage of adult men living together who were gay did not vary from one city to another.

Florida found a significant positive relationship between the distribution of talent and the distribution of diversity in the largest U.S. cities. In other words, cities with high cultural diversity tended to have relatively high percentages of talented individuals. Washington, San Francisco, Boston, and Seattle ranked among the top in both talent and diversity, whereas Las Vegas was near the bottom in both. Attracting talented individuals is important for a city because these individuals are responsible for promoting economic innovation. They are likely to start new businesses and infuse the local economy with fresh ideas.

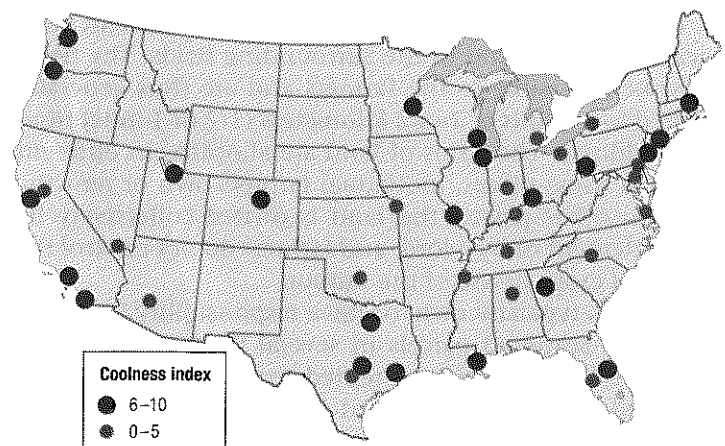


▲ FIGURE 12-25 GEOGRAPHY OF TALENT Some cities have concentrations of scientists and professionals.

CHECK-IN: KEY ISSUE 3

Where Are Business Services Distributed?

- ✓ Business services cluster in global cities.
- ✓ Developing countries provide offshore financial services and business-process outsourcing.
- ✓ Communities specialize in the provision of particular services; the specialized services constitute a community's economic base.



▲ FIGURE 12-26 GEOGRAPHY OF CULTURAL DIVERSITY The map is based on a "coolness" index developed by *POV Magazine*.

KEY ISSUE 4

Why Do Services Cluster in Settlements?

- Services in Rural Settlements
- Urbanization

Learning Outcome 12.4.1

Describe the difference between clustered and dispersed rural settlements.

Services are clustered in settlements. Rural settlements are centers for agriculture and provide a small number of services. Urban settlements are centers for consumer and business services. One-half of the people in the world live in rural settlements and the other half in urban settlements.

Services in Rural Settlements

Rural settlements are either clustered or dispersed. A **clustered rural settlement** is an agricultural-based community in which a number of families live in close proximity to each other, with fields surrounding the collection of houses and farm buildings. A **dispersed rural settlement**, typical of the North American rural landscape, is characterized by farmers living on individual farms isolated from neighbors rather than alongside other farmers in settlements.

CLUSTERED RURAL SETTLEMENTS

A clustered rural settlement typically includes homes, barns, tool sheds, and other farm structures, plus consumer services, such as religious structures, schools, and shops. A handful of public and business services may also be present in a clustered rural settlement. In common language, such a settlement is called a *hamlet* or *village*.

Each person living in a clustered rural settlement is allocated strips of land in the surrounding fields. The fields must be accessible to the farmers and are thus generally limited to a radius of 1 or 2 kilometers (1/2 or 1 mile) from the buildings. The strips of land are allocated in different ways. In some places, individual farmers own or rent the land. In other places, the land is owned collectively by the settlement or by a lord, and farmers do not control the choice of crops or use of the output.

Farmers typically own, or have responsibility for, a collection of scattered parcels in several fields. This pattern of controlling several fragmented parcels of land has encouraged living in a clustered rural settlement to minimize travel time to the various fields. Traditionally, when the population of a settlement grew too large for the capacity of the surrounding fields, new settlements were

established nearby. This was possible because not all land was under cultivation.

Homes, public buildings, and fields in a clustered rural settlement are arranged according to local cultural and physical characteristics. Clustered rural settlements are often arranged in one of two types of patterns: circular or linear.

CIRCULAR RURAL SETTLEMENTS. Circular rural settlements comprise a central open space surrounded by structures. The following are examples:

- Kraal villages in sub-Saharan Africa were built by the Maasi people, who are pastoral nomads. Women have the principal responsibility for constructing them. The kraal villages have enclosures for livestock in the center, surrounded by a ring of houses. Compare *kraal* to the English word *corral* (Figure 12-27).
- Gewandorf settlements were once found in rural Germany. von Thünen observed this circular rural pattern in his landmark agricultural studies during the nineteenth century (refer to Figure 10-52). Gewandorf settlements consisted of a core of houses, barns, and churches, encircled by different types of agricultural activities. Small garden plots were located in the first ring surrounding the village, with cultivated land, pastures, and woodlands in successive rings.

LINEAR RURAL SETTLEMENTS. Linear rural settlements comprise buildings clustered along a road, river, or dike to facilitate communications. The fields extend behind the buildings in long, narrow strips. Long-lot farms can be seen today along the St. Lawrence River in Québec (Figure 12-28).

In the French long-lot system, houses were erected along a river, which was the principal water source and means of communication. Narrow lots from 5 to 100 kilometers (3 to 60 miles) deep were established perpendicular

▼ FIGURE 12-27 CIRCULAR RURAL SETTLEMENT A kraal village, Kenya.





▲ FIGURE 12-28 CLUSTERED LINEAR RURAL SETTLEMENT Québec long lots.

to the river, so that each original settler had river access. This created a linear settlement along the river. These long, narrow lots were eventually subdivided. French law required that each son inherit an equal portion of an estate, so the heirs established separate farms in each division. Roads were constructed inland parallel to the river for access to inland farms. In this way, a new linear settlement emerged along each road, parallel to the original riverfront settlement.

CLUSTERED SETTLEMENTS IN COLONIAL AMERICA.

New England colonists built clustered settlements centered on an open area called a common (Figure 12-29). Settlers grouped their homes and public buildings, such

▼ FIGURE 12-29 CLUSTERED COLONIAL AMERICAN SETTLEMENT

Newfane, Vermont, includes a courthouse and church buildings clustered around a central common.



as the church and school, around the common. In addition to their houses, each settler had a home lot of $\frac{1}{2}$ to 2 hectares (1 to 5 acres), which contained a barn, a garden, and enclosures for feeding livestock. New England colonists favored clustered settlements for several reasons:

- They typically traveled to the New World in a group. The English government granted an area of land, in New England perhaps 4 to 10 square miles (10 to 25 square kilometers). Members of the group then traveled to America to settle the land and usually built the settlement near the center of the land grant.
- The colonists wanted to live close together to reinforce common cultural and religious values. Most came from the same English village and belonged to the same church. Many of them left England in the 1600s to gain religious freedom. The settlement's leader was often an official of the Puritan Church, and the church played a central role in daily activities.
- They clustered their settlements for defense against attacks by Native Americans.

Each villager owned several discontinuous parcels on the periphery of the settlement to provide the variety of land types needed for different crops. Beyond the fields, the town held pastures and woodland for the common use of all residents. Outsiders could obtain land in the settlement only by gaining permission from the town's residents. Land was not sold but rather was awarded to an individual when the town's residents felt confident that the recipient would work hard. Settlements accommodated a growing population by establishing new settlements nearby. As in the older settlements, the newer ones contained central commons surrounded by houses and public buildings, home lots, and outer fields.

The contemporary New England landscape contains remnants of the old clustered rural settlement pattern. Many New England towns still have a central common surrounded by the church, school, and various houses. However, quaint New England towns are little more than picturesque shells of clustered rural settlements because today's residents work in shops and offices rather than on farms.

Pause and Reflect 12.4.1

How might the presence of clustered rural settlements in New England have contributed to the region's distinctive dialect of English noted in Chapter 5?

DISPERSED RURAL SETTLEMENTS

Learning Outcome 12.4.2

Explain the types of services in early settlements.

Dispersed rural settlements were more common in the American colonies outside New England. Meanwhile, in New England and in the United Kingdom, clustered rural settlements were converted to a dispersed pattern.

DISPERSED RURAL SETTLEMENTS IN THE UNITED STATES. The Middle Atlantic colonies were settled by more heterogeneous groups than those in New England. Colonists came from Germany, the Netherlands, Ireland, Scotland, and Sweden, as well as from England. Most arrived in Middle Atlantic colonies individually rather than as members of a cohesive religious or cultural group. Some bought tracts of land from speculators. Others acquired land directly from individuals who had been given large land grants by the English government, including William Penn (Pennsylvania), Lord Baltimore (Maryland), and Sir George Carteret (the Carolinas).

Dispersed settlement patterns dominated in the American Midwest in part because the early settlers came primarily from the Middle Atlantic colonies. The pioneers crossed the Appalachian Mountains and established dispersed farms on the frontier (Figure 12-30). Land was plentiful and cheap, and people bought as much as they could manage. In New England, a dispersed distribution began to replace clustered settlements in the eighteenth century. Eventually people bought, sold, and exchanged land to create large, continuous holdings instead of several isolated pieces.

The clustered rural settlement pattern worked when the population was low, but settlements had no spare land to meet the needs of a population that was growing through natural increase and net in-migration. A shortage of land eventually forced immigrants and children to strike out

alone and claim farmland on the frontier. In addition, the cultural bonds that had created clustered rural settlements were weakened. Descendants of the original settlers were less interested in the religious and cultural values that had unified the original immigrants.

DISPERSED RURAL SETTLEMENTS IN THE UNITED KINGDOM. To improve agricultural production, a number of European countries converted their rural landscapes from clustered settlements to dispersed patterns. Dispersed settlements were considered more efficient for agriculture than clustered settlements. A prominent example was the **enclosure movement** in Great Britain, between 1750 and 1850. The British government transformed the rural landscape by consolidating individually owned strips of land surrounding a village into a single large farm owned by an individual. When necessary, the government forced people to give up their former holdings.

Owning several discontinuous fields around a clustered rural settlement had several disadvantages: Farmers lost time moving between fields, villagers had to build more roads to connect the small lots, and farmers were restricted in what they could plant. With the introduction of farm machinery, farms operated more efficiently at a larger scale.

The enclosure movement brought greater agricultural efficiency, but it destroyed the self-contained world of village life. Village populations declined drastically as displaced farmers moved to urban settlements. Because the enclosure movement coincided with the Industrial Revolution, villagers who were displaced from farming moved to urban settlements and became workers in factories and services. Some villages became the centers of the new, larger farms, but villages that were not centrally located to a new farm's extensive land holdings were abandoned and replaced with entirely new farmsteads at more strategic locations. As a result, the isolated, dispersed farmstead, unknown in medieval England, is now a common feature of that country's rural landscape.

▼ FIGURE 12-30 DISPERSED RURAL SETTLEMENT Wisconsin.



SERVICES IN EARLY SETTLEMENTS

Before the establishment of permanent settlements as service centers, people lived as nomads, migrating in small groups across the landscape in search of food and water. They gathered wild berries and roots or killed wild animals for food (see Chapter 10). At some point, groups decided to build permanent settlements. Several families clustered together in a rural location and obtained food in the surrounding area. What services would these nomads require? Why would they establish permanent settlements to provide these services?



▲ **FIGURE 12-31 EARLY SETTLEMENT** Karain Cave, Turkey. Evidence of human settlement has been found in the cave dating back 150,000–200,000 years.

No one knows the precise sequence of events through which settlements were established to provide services. Based on archaeological research, settlements probably originated to provide consumer and public services. Business services came later.

EARLY CONSUMER SERVICES. The earliest permanent settlements may have been established to offer consumer services, specifically places to bury the dead (Figure 12-31). Perhaps nomadic groups had rituals honoring the deceased, including ceremonies commemorating the anniversary of a death. Having established a permanent resting place for the dead, the group might then install priests at the site to perform the service of saying prayers for the deceased. This would have encouraged the building of structures—places for ceremonies and dwellings. By the time recorded history began about 5,000 years ago, many settlements existed, and some featured temples. In fact, until the invention of skyscrapers in the late nineteenth century, religious buildings were often the tallest structures in a community.

Settlements also may have been places to house families, permitting unburdened males to travel farther and faster in their search for food. Women kept “home and hearth,” making household objects, such as pots, tools, and clothing, and educating the children. These household-based services evolved over thousands of years into schools, libraries, theaters, museums, and other institutions that create and store a group’s values and heritage and transmit them from one generation to the next.

People also needed tools, clothing, shelter, containers, fuel, and other material goods. Settlements therefore became manufacturing centers. Men gathered the materials needed to make a variety of objects, including stones for tools and weapons, grass for containers and matting, animal hair for clothing, and wood for shelter and heat.

Women used these materials to manufacture household objects and maintain their dwellings. The variety of consumer services expanded as people began to specialize. One person could be skilled at repairing tools, another at training horses. People could trade such services with one another. Settlements took on a retail-service function.

EARLY PUBLIC SERVICES. Public services probably followed religious activities into the early permanent settlements. A group’s political leaders also chose to live permanently in the settlement, which may have been located for strategic reasons, to protect the group’s land claims.

Everyone in a settlement was vulnerable to attack from other groups, so for protection, some members became soldiers, stationed in the settlement. The settlement likely was a good base from which the group could defend nearby food sources against competitors. For defense, the group might surround the settlement with a wall. Defenders were stationed at small openings or atop the wall, giving them a great advantage over attackers. Thus settlements became citadels—centers of military power. Walls proved an extremely effective defense for thousands of years, until warfare was revolutionized by the introduction of gunpowder in Europe in the fourteenth century.

EARLY BUSINESS SERVICES. Everyone in settlements needed food, which was supplied by the group through hunting or gathering. At some point, someone probably wondered: Why not bring in extra food for hard times, such as drought or conflict? This perhaps was the origin of transportation services.

Not every group had access to the same resources because of the varied distribution of vegetation, animals, fuel wood, and mineral resources across the landscape. People brought objects and materials they collected or produced into the settlement and exchanged them for items brought by others. Settlements became warehousing centers to store the extra food. The settlement served as neutral ground where several groups could safely come together to trade goods and services. To facilitate this trade, officials in the settlement provided producer services, such as regulating the terms of transactions, setting fair prices, keeping records, and creating a currency system.

Through centuries of experiments and accidents, residents of early settlements realized that some of the wild vegetation they had gathered could generate food if deliberately placed in the ground and nursed to maturity—in other words, agriculture, as described in Chapter 10. Over time, settlements became surrounded by fields, where people produced most of their food by planting seeds and raising animals rather than by hunting and gathering.

Pause and Reflect 12.4.2

Infer what functions caves might have served for early humans, in addition to burying the dead.

Urbanization

Learning Outcome 12.4.3

Identify important prehistoric, ancient, and medieval urban settlements.

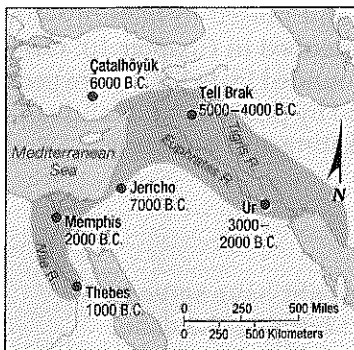
Settlements existed prior to the beginning of recorded history around 5,000 years ago. With a few exceptions, these were rural settlements. As recently as 1800, only 3 percent of Earth's population lived in urban settlements. Two centuries later, one-half of the world's people live in urban settlements.

EARLIEST URBAN SETTLEMENTS

Settlements may have originated in Mesopotamia, part of the Fertile Crescent of Southwest Asia (see Figure 8-10), and diffused at an early date west to Egypt and east to China and to South Asia's Indus Valley. Or settlements may have originated independently in each of the four hearths. In any case, from these four hearths, settlements diffused to the rest of the world.

PREHISTORIC URBAN SETTLEMENTS. The earliest urban settlements were probably in the Fertile Crescent of Southwest Asia and North Africa (Figure 12-32). Among the oldest well-documented urban settlements is Ur in Mesopotamia (present-day Iraq). Ur, which means "fire," was where Abraham lived prior to his journey to Canaan in approximately 1900 B.C., according to the Bible. Archaeologists have unearthed ruins in Ur that date from approximately 3000 B.C. (Figure 12-33).

ANCIENT URBAN SETTLEMENTS. Settlements were first established in the eastern Mediterranean about 2500 B.C. The oldest settlements include Knossos on the island of Crete, Troy in Asia Minor (Turkey), and Mycenae in Greece. These settlements were trading centers for the thousands of islands dotting the Aegean Sea and the eastern Mediterranean and provided the government, military protection, and other public services for their surrounding hinterlands. They were organized into **city-states**—independent self-governing communities that included the settlement and nearby countryside.



◀ **FIGURE 12-32 LARGEST URBAN SETTLEMENTS IN PREHISTORIC TIMES** The earliest known large urban settlements were in the Fertile Crescent of Southwest Asia and Egypt.



▲ **FIGURE 12-33 PREHISTORIC URBAN SETTLEMENT: UR** The remains of Ur, in present-day Iraq, provide evidence of early urban civilization. Ancient Ur was compact, perhaps covering 100 hectares (250 acres), and was surrounded by a wall. The most prominent building, the stepped temple, called a *ziggurat*, was originally constructed around 4,000 years ago. The ziggurat was originally a three-story structure with a base that was 64 by 46 meters (210 by 150 feet) and the upper stories stepped back. Four more stories were added in the sixth century B.C. Surrounding the ziggurat was a dense network of small residences built around courtyards and opening onto narrow passageways. The excavation site was damaged during the two wars in Iraq.

Athens, the largest city-state in ancient Greece (Figure 12-34), made substantial contributions to the development of culture, philosophy, and other elements of Western civilization, an example of the traditional distinction between urban settlements and rural. The urban settlements provided not only public services but also a concentration of consumer services, notably cultural activities, not found in smaller settlements.

The rise of the Roman Empire encouraged urban settlement. With much of Europe, North Africa, and Southwest Asia under Roman rule, settlements were established as centers of administrative, military, and other public services, as well as retail and other consumer services. Trade was encouraged through transportation and utility services, notably construction of many roads and aqueducts, and the security the Roman legions provided.

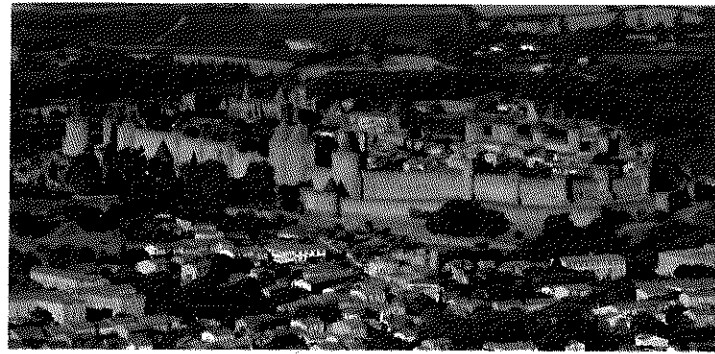
The city of Rome—the empire's center for administration, commerce, culture, and all other services—grew to at least 250,000 inhabitants, although some claim that the population may have reached 1 million. The city's centrality in the empire's communications network was reflected in the old saying "All roads lead to Rome."

With the fall of the Roman Empire in the fifth century, urban settlements declined. The empire's prosperity had rested on trading in the secure environment of imperial Rome. But with the empire fragmented under hundreds of rulers, trade diminished. Large urban settlements shrank or were abandoned. For several hundred years, Europe's cultural heritage was preserved largely in monasteries and isolated rural areas.

MEDIEVAL URBAN SETTLEMENTS. Urban life began to revive in Europe in the eleventh century, as feudal



▲ **FIGURE 12-34 ANCIENT URBAN SETTLEMENT: ATHENS** Dominating the skyline of modern Athens is the ancient hilltop site of the city, the Acropolis. Ancient Greeks selected this high place because it was defensible, and they chose it as a place to erect shrines to their gods. The most prominent structure on the Acropolis is the Parthenon, built in the fifth century B.C. to honor the goddess Athena. The structure in the foreground is the Herodes Atticus Odeon, a theater built in 161 A.D. Behind the Odeon is the Propylaea, which was the entrance gate to the Acropolis. To the right of the Parthenon, in the background, is the Chapel of St. George, built in the nineteenth century atop Mount Lycabettus, the highest point in Athens.

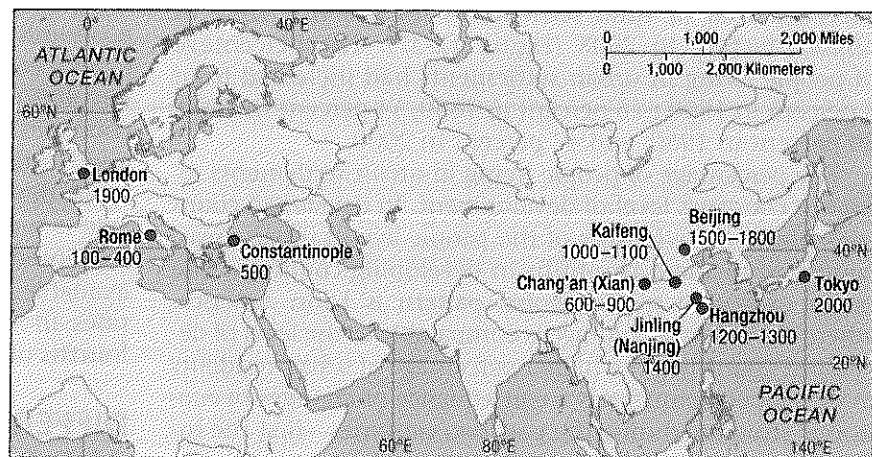


▲ **FIGURE 12-35 MEDIEVAL URBAN SETTLEMENT: CARCASSONNE** Medieval European cities, such as Carcassonne in southwestern France, were often surrounded by walls for protection. The walls have been demolished in most places, but they still stand around the medieval center of Carcassonne.

lords established new urban settlements. The lords gave residents charters of rights with which to establish independent cities in exchange for their military service. Both the lord and the urban residents benefited from this arrangement. The lord obtained people to defend his territory at less cost than maintaining a standing army. For their part, urban residents preferred periodic military service to the burden faced by rural serfs, who farmed the lord's land and could keep only a small portion of their own agricultural output.

With their newly won freedom from the relentless burden of rural serfdom, the urban dwellers set about expanding trade. Surplus from the countryside was brought into the city for sale or exchange, and markets were expanded through trade with other free cities. The trade among different urban settlements was enhanced by new roads and greater use of rivers. By the fourteenth century, Europe was covered by a dense network of small market towns serving the needs of particular lords.

The largest medieval European urban settlements served as power centers for the lords and church leaders, as well as major market centers. The most important public services occupied palaces, churches, and other prominent buildings arranged around a central market square. The tallest and most elaborate structures were usually churches, many of which still dominate the landscape of smaller European towns. In medieval times, European urban settlements were usually surrounded by walls even though by then cannonballs could destroy them (Figure 12-35). Dense and compact within the walls, medieval urban settlements lacked space for construction, so ordinary shops and houses nestled into the side of the walls and the large buildings. Most of these modest medieval shops and homes, as well as the walls, have been demolished in modern times, with only the



▲ **FIGURE 12-36 LARGEST SETTLEMENTS SINCE 1 A.D.** The largest cities have been in China for most of the past 2,000 years.

massive churches and palaces surviving. Modern tourists can appreciate the architectural beauty of these medieval churches and palaces, but they do not receive an accurate image of a densely built medieval town.

After the collapse of the Roman Empire, most of the world's largest urban settlements were clustered in China (Figure 12-36). Several cities in China are estimated to have exceeded 1 million inhabitants between 700 and 1800 A.D., including Chang'an (now Xian), Kaifeng, Hangzhou, Jinling (now Nanjing), and Beijing. London grabbed the title of world's largest urban settlement during the nineteenth century, as part of the Industrial Revolution. New York held the title briefly during the mid-twentieth century, and Tokyo is now considered to be the world's largest urban settlement.

Pause and Reflect 12.4.3

Medieval walled cities were constructed near political boundaries. How far is the medieval walled city of Carcassonne, France, from an international boundary?

RAPID GROWTH OF URBAN SETTLEMENTS

Learning Outcome 12.4.4

Explain the two dimensions of urbanization.

The process by which the population of urban settlements grows, known as **urbanization**, has two dimensions: an increase in the *number* of people living in urban settlements and an increase in the *percentage* of people living in urban settlements. The distinction between these two factors is important because they occur for different reasons and have different global distributions.

INCREASING PERCENTAGE OF PEOPLE IN URBAN SETTLEMENTS. The population of urban settlements exceeded that of rural settlements for the first time in human history in 2008 (Figure 12-37). The percentage of people living in urban settlements had increased from 3 percent in 1800 to 6 percent in 1850, 14 percent in 1900, 30 percent in 1950, and 47 percent in 2000.

The percentage of people living in urban settlements reflects a country's level of development. In developed countries, about three-fourths of the people live in urban areas, compared to about two-fifths in developing countries. The major exception to the global pattern is Latin America, where the urban percentage is comparable to the level of developed countries. The higher percentage of urban residents in developed countries is a consequence of changes in economic structure during the past two centuries—first the Industrial Revolution in the nineteenth century and then the growth of services in the twentieth. The world map of urban percentages looks very much like the world map of percentage of GDP derived from services (see Figure 12-2).

The percentage of urban dwellers is high in developed countries because over the past 200 years, rural residents have migrated from the countryside to work in the factories and services that are concentrated in cities. The need

for fewer farm workers has pushed people out of rural areas, and rising employment opportunities in manufacturing and services have lured them into urban areas. Because everyone resides either in an urban settlement or a rural settlement, an increase in the percentage living in urban areas has produced a corresponding decrease in the percentage living in rural areas.

INCREASING NUMBER OF PEOPLE IN URBAN SETTLEMENTS.

Developed countries have a higher percentage of urban residents, but developing countries have more of the very large urban settlements (Figure 12-38). Eight of the 10 most populous cities are currently in developing countries: Cairo, Delhi, Jakarta, Manila, Mexico City, São Paulo, Seoul, and Shanghai. New York and Tokyo are the two large cities in developed countries. In addition, 44 of the 50 largest urban settlements are in developing countries. That developing countries dominate the list of largest urban settlements is remarkable because urbanization was once associated with economic development. In 1800, 7 of the world's 10 largest cities were in Asia. In 1900, after diffusion of the Industrial Revolution from the United Kingdom to today's developed countries, all 10 of the world's largest cities were in Europe and North America.

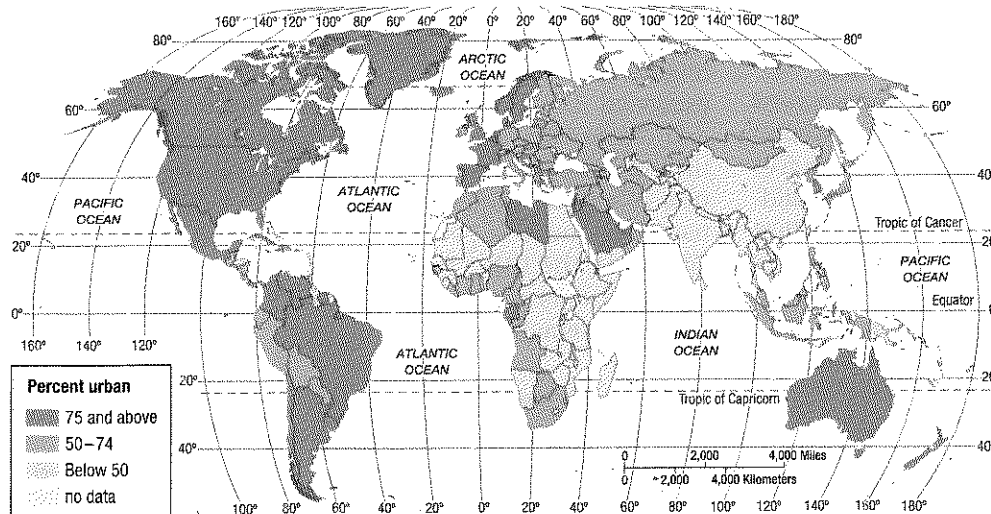
In developing countries, migration from the countryside is fueling half of the increase in population in urban settlements, even though job opportunities may not be available. The other half results from high natural increase rates; in Africa, the natural increase rate accounts for three-fourths of urban growth.

DIFFERENCES BETWEEN URBAN AND RURAL SETTLEMENTS

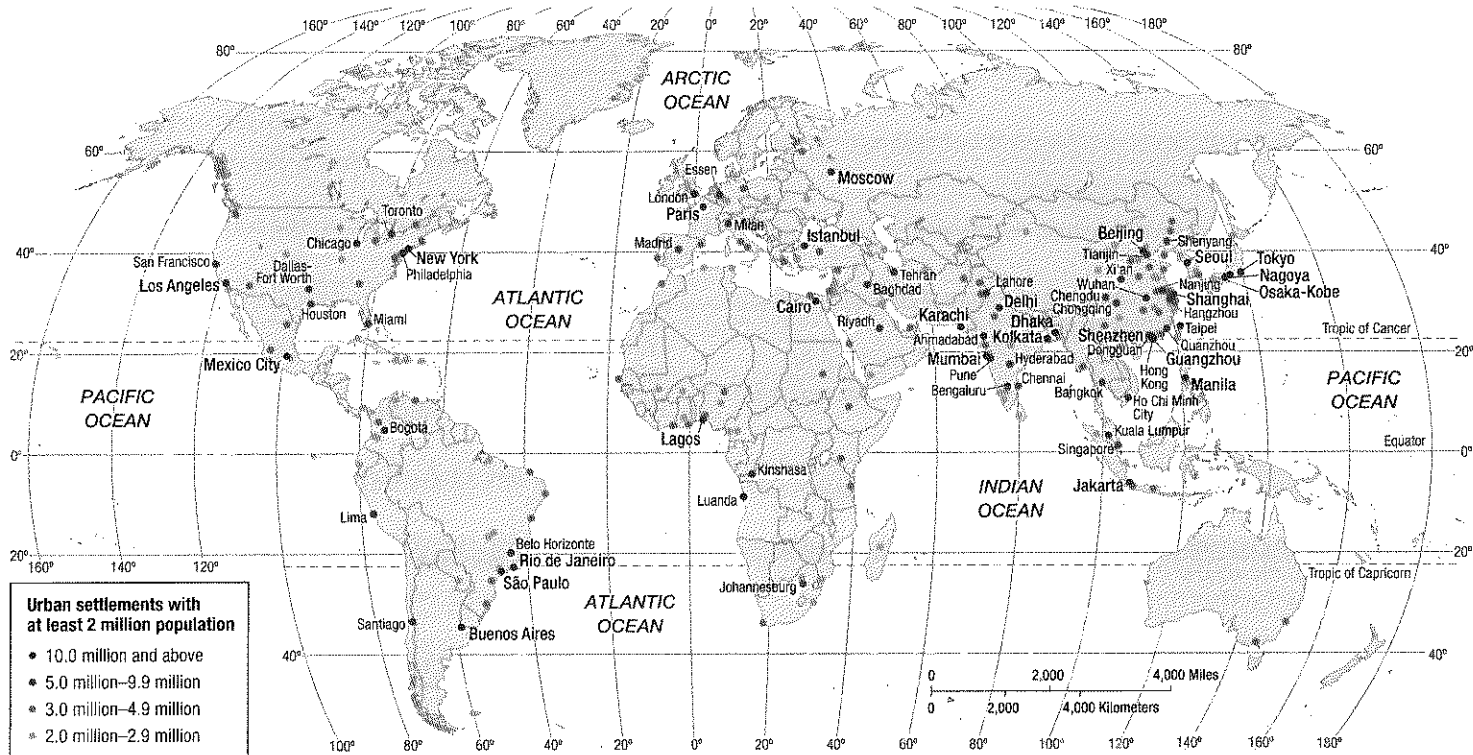
A century ago, social scientists observed striking differences between urban and rural residents. Louis Wirth argued during the 1930s that an urban dweller follows a different way of life than does a rural dweller. Thus Wirth defined a city as a permanent settlement that has three characteristics: large size, high population density, and socially heterogeneous people. These characteristics produced differences in the social behavior of urban and rural residents.

LARGE SIZE. If you live in a rural settlement, you know most of the other inhabitants and may even be related to many of them. The people with whom you relax are probably the same ones you see in local shops and at church.

In contrast, if you live in an urban settlement, you can know only a small percentage of the other residents. You meet most of them in specific roles—your supervisor, your lawyer, your supermarket cashier, your electrician.



▲ FIGURE 12-37 PERCENTAGE LIVING IN URBAN SETTLEMENTS Developed countries have higher percentages of urban residents than do developing countries.



▲ FIGURE 12-38 URBAN SETTLEMENTS WITH AT LEAST 2 MILLION INHABITANTS

Most of the world's largest urban settlements are in developing countries, especially in East Asia, South Asia, and Latin America.

Most of these relationships are contractual: You are paid wages according to a contract, and you pay others for goods and services. Consequently, the large size of an urban settlement produces different social relationships than those formed in rural settlements.

HIGH DENSITY. High density also produces social consequences for urban residents, according to Wirth. The only way that a large number of people can be supported in a small area is through specialization. Each person in an urban settlement plays a special role or performs a specific task to allow the complex urban system to function smoothly. At the same time, high density also encourages social groups to compete to occupy the same territory.

SOCIAL HETEROGENEITY. The larger the settlement, the greater the variety of people. A person has greater freedom in an urban settlement than in a rural settlement to pursue an unusual profession, sexual orientation, or cultural interest. In a rural settlement, unusual actions might be noticed and scorned, but urban residents are more tolerant of diverse social behavior. Regardless of values and preferences, in a large urban settlement, individuals can find people with similar interests. But despite the freedom and independence of an urban settlement, people may also feel lonely and isolated. Residents of a crowded urban settlement often feel that they are surrounded by people who are indifferent and reserved.

Wirth's three-part distinction between urban and rural settlements may still apply in developing countries. But in developed countries, social distinctions between urban and rural life have blurred. According to Wirth's definition, nearly everyone in a developed country now is urban. All but 1 percent of workers in developed societies hold "urban" types of jobs. Nearly universal ownership of automobiles, telephones, televisions, and other modern communications and transportation has also reduced the differences between urban and rural lifestyles in developed countries. Almost regardless of where you live in a developed country, you have access to urban jobs, services, culture, and recreation.

CHECK-IN: KEY ISSUE 4

Why Do Services Cluster in Settlements?

- ✓ Settlements are either rural or urban; rural settlements, which specialize in agricultural services, may be clustered or dispersed.
- ✓ Few humans lived in urban settlements until the nineteenth century.
- ✓ Developed countries have higher percentages of urban residents, but developing countries have most of the very large cities.

Summary

KEY ISSUE 1

Where Are Services Distributed?

Most jobs are in the service sector, especially in developed countries.

LEARNING OUTCOME 12.1.1: Describe the three types of services and changing numbers of types of jobs.

- Three types of services are consumer, business, and public.
- Jobs are growing in the service sector rather than in agriculture and industry.

THINKING GEOGRAPHICALLY 12.1: What evidence can you find in your community of economic ties to developing countries?

GOOGLE EARTH 12.1: The Pentagon is the world's largest public-sector building. Fly to the Pentagon. How many concentric pentagons does the structure contain?



Key Terms

Basic industries (p. 446) Industries that sell their products or services primarily to consumers outside the settlement.

Business services (p. 432) Services that primarily meet the needs of other businesses, including professional, financial, and transportation services.

Central place (p. 434) A market center for the exchange of services by people attracted from the surrounding area.

Central place theory (p. 434) A theory that explains the distribution of services based on the fact that settlements serve as centers of market areas for services; larger settlements are fewer and farther apart than smaller settlements and provide services for a larger number of people who are willing to travel farther.

City-state (p. 452) A sovereign state comprising a city and its immediate hinterland.

Clustered rural settlement (p. 448) A rural settlement in which the houses and farm buildings of each family are situated close to each other, with fields surrounding the settlement.

Consumer services (p. 431) Businesses that provide services primarily to individual consumers, including retail services and education, health, and leisure services.

Dispersed rural settlement (p. 448) A rural settlement pattern characterized by isolated farms rather than clustered villages.

KEY ISSUE 2

Where Are Consumer Services Distributed?

Consumer services generally follow a regular pattern, based on size of settlements.

LEARNING OUTCOME 12.2.1: Explain the concepts of market area, range, and threshold.

- The market area is the area surrounding a service from which customers are attracted.
- The range is the maximum distance people are willing to travel to use a service.
- The threshold is the minimum number of people needed to support a service.

LEARNING OUTCOME 12.2.2: Explain the distribution of different-sized settlements.

- Larger settlements provide consumer services that have larger thresholds, ranges, and market areas.
- In many developed countries, settlements follow a regular hierarchy.

LEARNING OUTCOME 12.2.3: Explain how to use threshold and range to find the optimal location for a service.

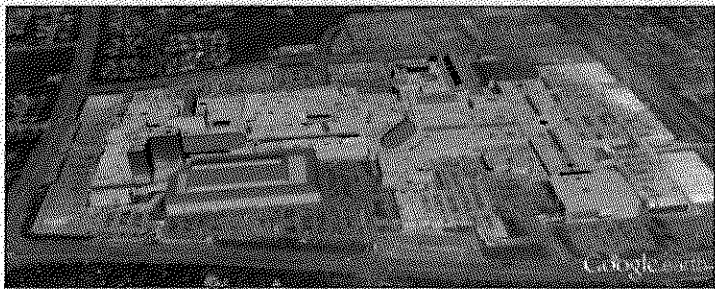
- The gravity model predicts that the optimal location of a service is directly related to the number of people in the area and inversely related to the distance people must travel to access it.

LEARNING OUTCOME 12.2.4: Understand the role of periodic markets in the provision of services in developing countries.

- A periodic market provides goods where sparse populations and low incomes produce purchasing power too low to support full-time retailing.

THINKING GEOGRAPHICALLY 12.2: In most communities, the largest employers other than local government are consumer services. What are the largest consumer services in your community? You can Google "largest employers [your community]" to find out.

GOOGLE EARTH 12.2: West Edmonton Mall, in Edmonton, Alberta, is the largest mall in North America. How does it compare in area with Jungle Jim's, shown in Google Earth 10.2?



Economic base (p. 446) A community's collection of basic industries.

Enclosure movement (p. 450) The process of consolidating small landholdings into a smaller number of larger farms in England during the eighteenth century.

Gravity model (p. 438) A model which holds that the potential use of a service at a particular location is directly related to the number of people in a location and inversely related to the distance people must travel to reach the service.

Market area (or hinterland) (p. 434) The area surrounding a central place from which people are attracted to use the place's goods and services.

Nonbasic industries (p. 446) Industries that sell their products primarily to consumers in the community.