

12

Services and Settlements

In developed countries, most people work in services, such as shops, offices, restaurants, universities, and hospitals. And most people obtain what they need from service providers. Services are closely linked with settlements because services are located in settlements. Geography plays an especially important role in the provision of services because geographic principles determine the optimal location for a service.

A market in Kashgar, Xinjiang Province, China.



LOCATIONS IN THIS CHAPTER



KEY ISSUES

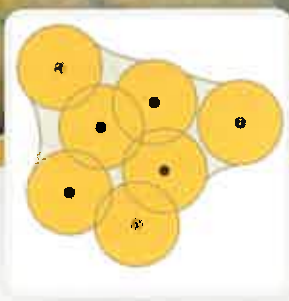
1

Where Are Services Distributed?

Services are divided into three types: consumer, business, and public. These have different distributions in *space*.



2



Where Are Consumer Services Distributed?

In developed countries, consumer services follow a regular distribution, based on the number of people in a market area with a particular radius. The optimal location for a consumer service often has a very local *scale*, such as one corner of an intersection.

3



Where Are Business Services Distributed?

Business services are disproportionately clustered in a relatively small number of global cities that have *connections* to each other in a global economy.

4



Why Do Services Cluster In Settlements?

Settlements are either rural or urban *places*. A higher percentage of people live in urban settlements in developed *regions*, but the world's most populous urban settlements are now in developing regions.

Where Are Services Distributed?

➤ Introducing Services and Settlements

LEARNING OUTCOME 12.1.1

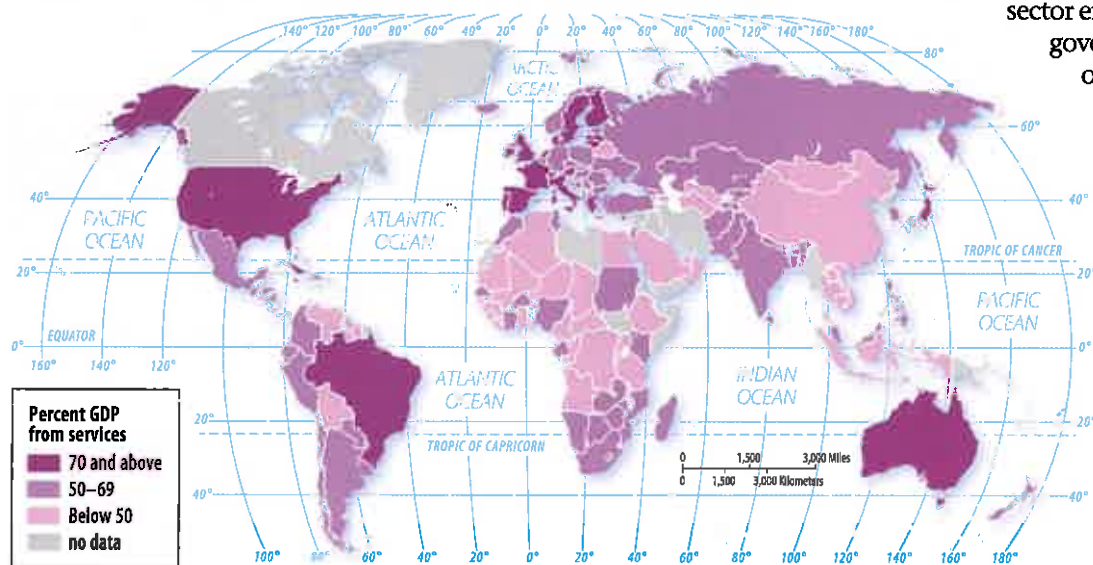
Describe the three types of services.

Most people in developed countries work in such places as shops, offices, restaurants, universities, and hospitals. These are examples of the tertiary, or service, sector of the economy. A **service** is any activity that fulfills a human want or need and returns money to those who provide it. A smaller number of people work on farms or in factories, the primary and secondary sectors.

Introducing Services and Settlements

Services generate more than two-thirds of GDP in most developed countries, compared to less than one-half in most developing countries (Figure 12-1). Logically, the distribution of service workers is opposite that of the percentage of primary workers (refer to Figure 9-3). If services were located merely where people lived, then China and India would have the most, rather than the United States and other developed countries. Services cluster in developed countries because more people who are able to buy services live there. Within developed countries, larger cities offer a larger scale of services than do small towns because more customers reside there.

Geographers see a close link between services and settlements because services are located in settlements.



A **settlement** is a permanent collection of buildings where people reside, work, and obtain services. They occupy a very small percentage of Earth's surface, well under 1 percent, but settlements are home to nearly all humans because few people live in isolation.

Explaining why services are clustered in settlements is at one level straightforward for geographers. In geographic terms, only one locational factor is critical for a service: proximity to the market. The optimal location of industry, described in Chapter 11, requires balancing a number of site and situation factors, but the optimal location for a service is simply near its customers.

On the other hand, locating a service calls for far more precise geographic skills than locating a factory. The optimal location for a factory may be an area of several hundred square kilometers, whereas the optimal location for a service may be a very specific place, such as a street corner.

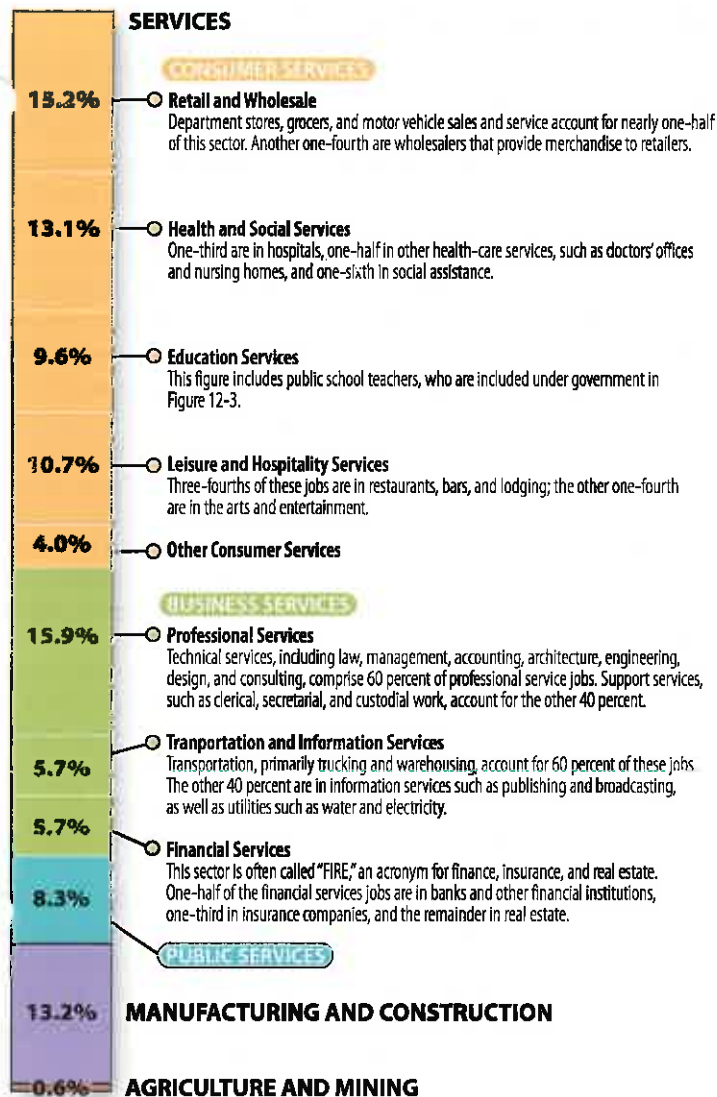
THREE TYPES OF SERVICES

The service sector of the economy is subdivided into three types: consumer services, business services, and public services. Each of these sectors is divided into several major sub-sectors (Figure 12-2):

- **Consumer services.** The principal purpose of **consumer services** is to provide services to individual consumers who desire them and can afford to pay for them. Around one-half of all jobs in the United States are in consumer services. Four main types of consumer services are retail, health, education, and leisure.
- **Business services.** The principal purpose of **business services** is to facilitate the activities of other businesses. One-fourth of all jobs in the United States are in business services. Professional services, transportation services, and financial services are the three main types of business services.
- **Public services.** The purpose of **public services** is to provide security and protection for citizens and businesses. About 10 percent of all U.S. jobs are in the public sector.

Excluding educators, one-sixth of public-sector employees work for the federal government, one-fourth for one of the 50 state governments, and three-fifths for one of the tens of thousands of local governments.

◀ **FIGURE 12-1**
PERCENTAGE OF GDP FROM SERVICES Services account for more than two-thirds of GDP in developed countries, compared to less than one-half in developing countries.



CHANGING SERVICE EMPLOYMENT

Figure 12-3 shows changes in U.S. employment. All of the growth in U.S. employment has been in services, whereas employment in primary- and secondary-sector activities has declined. Within business services, jobs expanded most rapidly in professional services and more slowly in finance and transportation services because of improved efficiency; fewer workers are needed to run trains and answer phones, for example. On the consumer services side, the most rapid increase was in the provision of health care, education, entertainment, and recreation.

PAUSE & REFLECT 12.1.1

In which sectors of the economy do you or members of your family work? If in the service sector, in which types of services are these jobs?

CHECK-IN KEY ISSUE 1

Where Are Services Distributed?

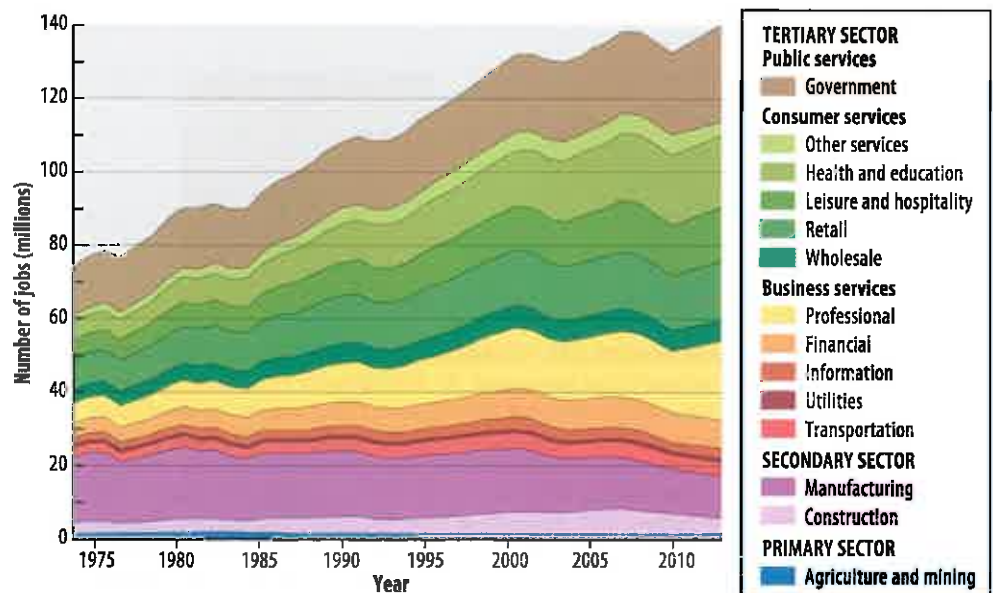
- ✓ Three types of services are consumer, business, and public.
- ✓ The fastest-growing consumer service is health care, and the fastest-growing business service is professional.

▲ **FIGURE 12-2 EMPLOYMENT IN THE UNITED STATES**

Approximately one-half of jobs in the United States are in consumer services and one-fourth in business services.

► **FIGURE 12-3 CHANGE IN U.S.**

EMPLOYMENT Jobs have increased in the tertiary sector, especially consumer services.



Where Are Consumer Services Distributed?

- **Central Place Theory**
- **Hierarchy of Consumer Services**
- **Market Area Analysis**
- **Periodic Markets**

LEARNING OUTCOME 12.2.1

Explain the concepts of market area, range, and threshold.

Consumer services and business services do not have the same distributions. Consumer services generally follow a regular pattern based on size of settlements, with larger settlements offering more consumer services than smaller ones. The third key issue will describe how business services cluster in specific settlements, creating a specialized pattern.

Central Place Theory

Selecting the right location for a new shop is probably the single most important factor in the profitability of a consumer service. **Central place theory** helps to explain how the most profitable location can be identified.

Central place theory was first proposed in the 1930s by German geographer Walter Christaller, based on his studies of southern Germany. August Lösch in Germany and Brian Berry and others in the United States further developed the concept during the 1950s.

MARKET AREA OF A SERVICE

A **central place** is a market center for the exchange of goods and services by people attracted from the surrounding area. The central place is so called because it is centrally located to maximize accessibility. Businesses in central places compete against each other to serve as markets for goods and services for the surrounding region. According to central place theory, this competition creates a regular pattern of settlements.

The area surrounding a service from which customers are attracted is the **market area**, or **hinterland**. A market area is a good example of a nodal region—a region with a core where the characteristic is most intense. To establish the market area, a circle is drawn around the node of service on a map. The territory inside the circle is its market area.

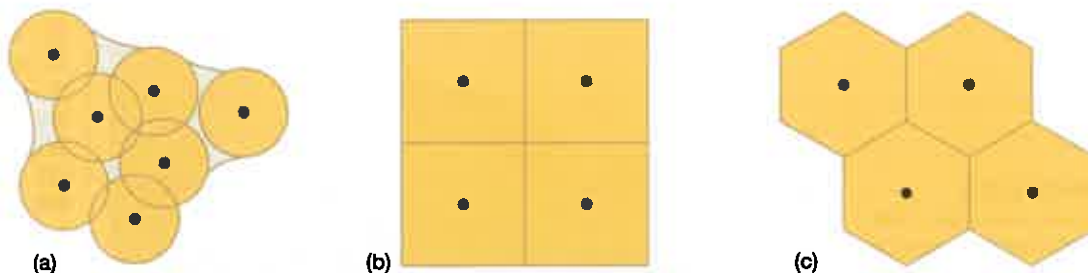
To represent market areas in central place theory, geographers draw hexagons around settlements (Figure 12-4). Hexagons represent a compromise between circles and squares. Like squares, hexagons nest without gaps. Although all points along a hexagon are not the same distance from the center, the variation is less than with a square.

Because most people prefer to get services from the nearest location, consumers near the center of the circle obtain services from local establishments. The closer to the periphery of the circle, the greater the percentage of consumers who will choose to obtain services from other nodes. People on the circumference of the market-area circle are equally likely to use the service or go elsewhere.

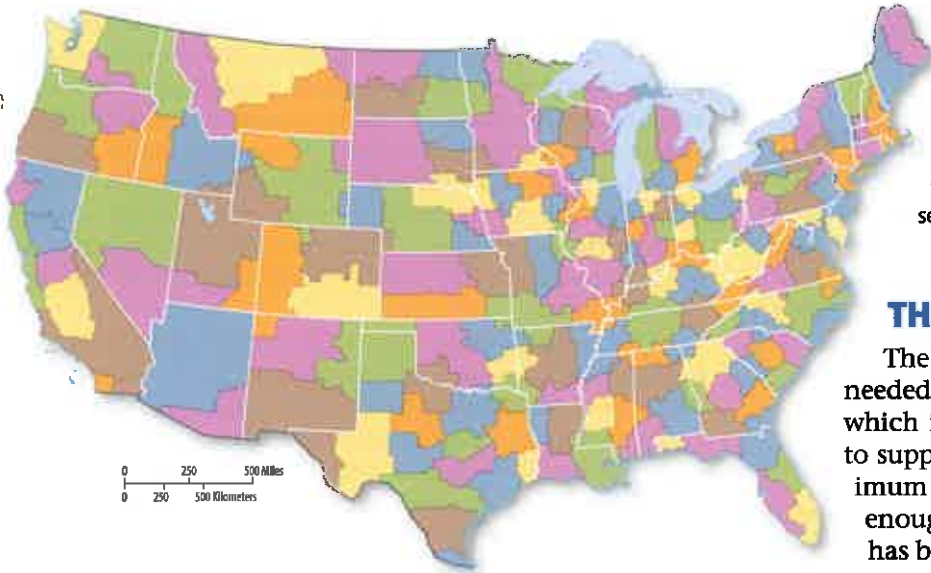
The United States can be divided into market areas based on the hinterlands surrounding the largest urban settlements (Figure 12-5). Studies conducted by C. A. Doxiadis, Brian Berry, and the U.S. Department of Commerce allocated the 48 contiguous states to 171 functional regions centered around commuting hubs, which they called “daily urban systems.”

PAUSE & REFLECT 12.2.1

What occurs in nature in the shape of hexagons? You can do an Internet search for “naturally occurring hexagons.”



▲ FIGURE 12-4 WHY GEOGRAPHERS USE HEXAGONS TO DELINEATE MARKET AREAS (a) **The problem with circles.** Circles are equidistant from center to edge, but they overlap or leave gaps. An arrangement of circles that leaves gaps indicates that people living in the gaps are outside the market area of any service, which is not true. Overlapping circles are also unsatisfactory because only one of the service centers can be the closest and the one that people will tend to patronize. (b) **The problem with squares.** Squares nest together without gaps, but their sides are not equidistant from the center. If the market area is a circle, the radius—the distance from the center to the edge—can be measured because every point around a circle is the same distance from the center. But in a square, the distance from the center varies among points along the side of the square. (c) **The hexagon compromise.** Geographers use hexagons to depict the market area of a good or service because hexagons offer a compromise between the geometric properties of circles and squares. Like squares, hexagons nest without gaps. Although all points along the hexagon are not the same distance from the center, the variation is less than with a square.



◀ **FIGURE 12-5 DAILY URBAN SYSTEMS** The U.S. Department of Commerce divided the 48 contiguous states into “daily urban systems,” delineated by functional ties, especially commuting to the nearest metropolitan area. This division of the country into daily urban systems demonstrates that everyone in the United States has access to services in at least one large settlement.

RANGE OF A SERVICE

Each service has a distinctive market area. To determine the extent of a market area, geographers need two pieces of information about a service: its range and its threshold (Figure 12-6). How far are you willing to travel for a pizza? To see a doctor for a serious illness? To watch a ball game? The **range** is the maximum distance people are willing to travel to use a service. The range is the radius of the circle (or hexagon) drawn to delineate a service’s market area.

People are willing to go only a short distance for everyday consumer services, such as groceries and pharmacies. But they will travel longer distances for other services, such as a concert or professional ball game. Thus a convenience store has a small range, whereas a stadium has a large range. In a large urban settlement, for example, the range of a fast-food franchise such as McDonald’s is roughly 5 kilometers (3 miles), the range of a casual dining chain such as Steak ‘n Shake is roughly 8 kilometers (5 miles), and the range of a stadium is more than 100 kilometers (60 miles).

As a rule, people tend to go to the nearest available service. For example, someone in the mood for a McDonald’s hamburger is likely to go to the nearest McDonald’s. Therefore, the range of a service must be determined from the radius of a circle that is irregularly shaped rather than perfectly round. The irregularly shaped circle takes in the territory for which the proposed site is closer than competitors’ sites.

The range must be modified further because most people think of distance in terms of time rather than in terms of a linear measure such as kilometers or miles. If you ask people how far they are willing to travel to a restaurant or a baseball game, they are more likely to answer in minutes or hours than in distance. If the range of a good or service is expressed in travel time, then the irregularly shaped circle must be drawn to acknowledge that travel time varies with road conditions. “One hour” may translate into traveling 100 kilometers (60 miles) while driving on an expressway but only 50 kilometers (30 miles) while driving city streets.

THRESHOLD OF A SERVICE

The second piece of geographic information needed to compute a market area is the **threshold**, which is the minimum number of people needed to support the service. Every enterprise has a minimum number of customers required to generate enough sales to make a profit. So once the range has been determined, a service provider must determine whether a location is suitable by counting the potential customers inside the irregularly shaped circle within the circle.

How expected consumers inside the range are counted depends on the product. Convenience stores and fast-food restaurants appeal to nearly everyone, whereas other goods and services appeal primarily to certain consumer groups. For example:

- Movie theaters attract younger people; chiropractors attract older folks.
- Poorer people are drawn to thrift stores; wealthier ones might frequent upscale department stores.
- Amusement parks attract families with children; nightclubs appeal to singles.

Developers of shopping malls, department stores, and large supermarkets may count only higher-income people, perhaps those whose annual incomes exceed \$50,000. Even though the stores may attract individuals of all incomes, higher-income people are likely to spend more and purchase items that carry higher profit margins for the retailer. A large retailer has many locations to choose from when deciding to build new stores. A suitable site is one with the potential for generating enough sales to justify using the company’s scarce capital to build it.



◀ **FIGURE 12-6 MARKET AREA, RANGE, AND THRESHOLD** The market area is the area of the hexagon, the range is the radius, and the threshold is a sufficient number of people inside the area to support the service.

Hierarchy of Consumer Service

LEARNING OUTCOME 12.2.2

Explain the distribution of different-sized settlements.

We spend as little time and effort as possible obtaining consumer services and thus go to the nearest place that fulfills our needs. There is no point in traveling to a distant store if the same merchandise is available at a nearby one. We travel greater distances only if the price is much lower or if the item is unavailable locally.

NESTING OF SERVICES AND SETTLEMENTS

According to central place theory, market areas across a developed country would be a series of hexagons of various sizes, unless interrupted by physical features such as mountains and bodies of water. Developed countries have numerous small settlements with small thresholds and ranges and far fewer large settlements with large thresholds and ranges. In his original study, Walter Christaller showed that the distances between settlements in southern Germany followed a regular pattern.

North-central North Dakota is an example (Figure 12-7). Minot—the largest city in the area, with 46,000 inhabitants—is surrounded by:

- 11 small towns of between 1,000 and 3,000 inhabitants, with average ranges of 30 kilometers (20 miles) and market areas of around 2,800 square kilometers (1,200 square miles).
- 20 villages of between 100 and 999 inhabitants, with ranges of 20 kilometers (12 miles) and market areas of around 1,200 square kilometers (500 square miles).
- 22 hamlets of fewer than 100 inhabitants, with ranges of 15 kilometers (10 miles) and market areas of around 800 square kilometers (300 square miles), including Maxbass, illustrated in Figure 12-8.



▲ FIGURE 12-7 CENTRAL PLACE THEORY IN NORTH DAKOTA Central place theory helps explain the distribution of settlements of varying sizes in North Dakota.

Larger settlements provide consumer services that have larger thresholds, ranges, and market areas. Only consumer services that have small thresholds, short ranges, and small market areas are found in small settlements because too few people live in small settlements to support many services. A large store cannot survive in a small settlement because the threshold (the minimum number of people needed) exceeds the population within range of the settlement. For example, Minot is the only settlement in Figure 12-7 that has a Walmart.

The nesting pattern can be illustrated with overlapping hexagons of different sizes. Hamlets with very small market areas are represented by the smallest contiguous hexagons. Larger hexagons represent the market areas of larger settlements and are overlaid on the smaller hexagons because consumers from smaller settlements shop for some goods and services in larger settlements. Four different levels of market area—hamlet, village, town, and city—are shown in Figure 12-9.

Businesses in central places compete against each other to serve as markets for goods and services for the surrounding region. According to central place theory, this competition creates a regular pattern of settlements. Across much of the interior of the United States, a regular pattern of settlements can be observed.

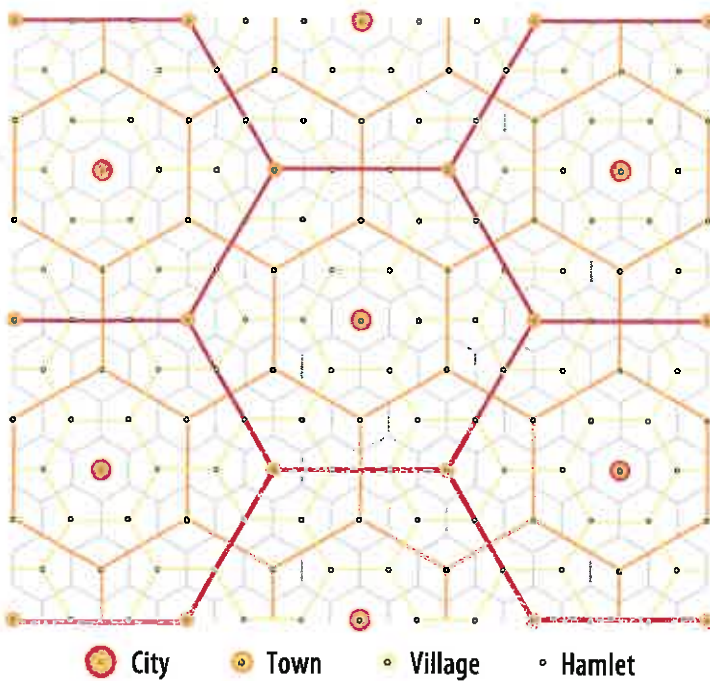
RANK-SIZE DISTRIBUTION

In many developed countries, ranking settlements from largest to smallest (population) produces a regular pattern. This is the **rank-size rule**, in which the country's n th-largest settlement is $1/n$ the population of the largest settlement.

According to the rank-size rule, the second-largest city is one-half the size of the largest, the fourth-largest city is one-fourth the size of the largest, and so on. When plotted on logarithmic paper, the rank-size distribution forms a fairly straight line. In the United States the distribution of settlements closely follows the rank-size rule (Figure 12-10).



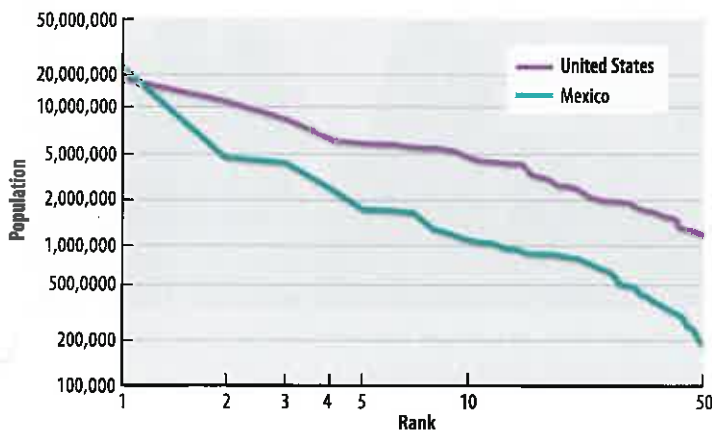
▲ FIGURE 12-8 HAMLET: MAXBASS, NORTH DAKOTA North of Minot, near the junction of routes 83 and 5, in Figure 12-9.



▲ FIGURE 12-9 CENTRAL PLACE THEORY

If the settlement hierarchy does not graph as a straight line, then the country does not follow the rank-size rule. Instead, it may follow the **primate city rule**, in which the largest settlement has more than twice as many people as the second-ranking settlement. In this distribution, the country's largest city is called the **primate city**. Mexico is an example of a country that follows the primate city distribution. Its largest settlement, Mexico City, is five times larger than its second-largest settlement, Guadalajara, rather than two times larger (Figure 12-11).

The existence of a rank-size distribution of settlements is not merely a mathematical curiosity. It has a real impact on the quality of life for a country's inhabitants. A regular hierarchy—as in the United States—indicates that the society is sufficiently wealthy to justify the provision of goods and services to consumers throughout the country (Figure 12-12). Conversely, the absence of the rank-size distribution in a developing country indicates that there is not enough wealth in the society to pay for a full variety of services. The absence of a rank-size distribution



▲ FIGURE 12-10 RANK-SIZE DISTRIBUTION OF SETTLEMENTS



▲ FIGURE 12-11 PRIMATE CITY DISTRIBUTION: MEXICO Querétaro, Mexico's tenth largest settlement, has a population that is 1/20 the size of the largest settlement Mexico City, instead of 1/10, as the rank-size distribution would suggest.

constitutes a hardship for people who must travel long distances to reach an urban settlement that offers services such as shops and hospitals.

PAUSE & REFLECT 12.2.2

Does Peru follow the rank-size rule or the primate city rule? Use your search engine to find "most populous cities in Peru."



▲ FIGURE 12-12 RANK-SIZE DISTRIBUTION: UNITED STATES Boston, the tenth-largest settlement in the United States, has a population that is one-fourth the size of the largest settlement, New York City, so it is even larger than the rank-size distribution would suggest.

Market Area Analysis

LEARNING OUTCOME 12.2.3

Explain how to use threshold and range to find the optimal location for a service.

Geographers apply central place theory to create market area studies that assist service providers with opening and expanding their facilities (see Doing Geography feature). And in a severe economic downturn, market area analysis helps determine where to close facilities.

Geographers have adapted the gravity model from physics. 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. The best location will be the one that minimizes the distances that all potential customers must travel to reach the service.

According to the gravity model, consumer behavior reflects two patterns:

1. The greater the number of people living in a particular place, the greater the number of potential customers for a service. An area that contains 100 families will generate more customers than a house containing only 1 family.
2. The farther people are from a particular service, the less likely they are to use it. People who live 1 kilometer from a store are more likely to patronize it than people who live 10 kilometers away. The threshold must also be adjusted because the further customers are from the service, the less likely they are to patronize it.

DEBATE IT! Is Walmart good or bad for a settlement?

Walmart is the world's largest provider of consumer services (Figure 12-13). Some of Walmart's business practices have sparked controversy (Figure 12-14). When Walmart comes to town, what are the benefits and drawbacks for the settlement? What do you think?

WALMART BENEFITS THE SETTLEMENT

- Consumers get lower prices on groceries.
- Employment is offered to minimally skilled workers who otherwise have trouble finding jobs.
- Stores are often sited in rural areas and lower-income urban neighborhoods that lack other shopping options.



▲ FIGURE 12-13 WALMART EMPLOYEE Miami, Florida.

WALMART HARMS THE SETTLEMENT

- Wage and benefit levels are too low to lift Walmart workers out of poverty.
- Walmart costs Americans jobs because most of the products it sells are made overseas.
- Locally owned shops are forced out of business after Walmart opens.



▲ FIGURE 12-14 WALMART PROTEST Protest asking Walmart to pay living wages, Towson, Maryland.

DOING GEOGRAPHY

Locating Supermarkets and Food Deserts

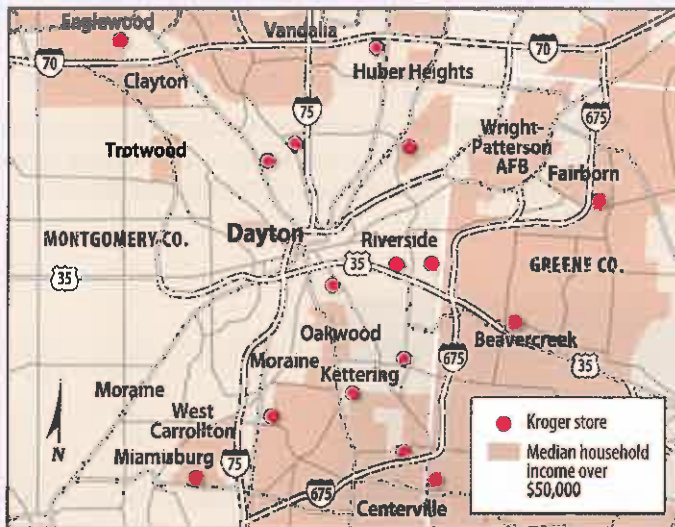
Major retailers employ geographers to determine the best locations to build new stores. Here is a typical process for siting a supermarket:

- 1. Estimate the range.** Geographers estimate the range as the distance that most people travel to reach an existing store judged to be comparable to the proposed one. The range is calculated as the distance from the existing store where between two-thirds and three-fourths of the customers live. The home addresses are compiled from credit-card records.
- 2. Estimate the threshold.** Geographers next determine whether enough people live within the range of the proposed store to justify its construction. The threshold for a large supermarket is about 25,000 people living within a 15-minute range.
- 3. Modify the threshold.** The threshold must be modified in two ways:
 - The proposed new supermarket will have to share customers with competitors. The market share of existing stores judged to be comparable is applied to the proposed new store.

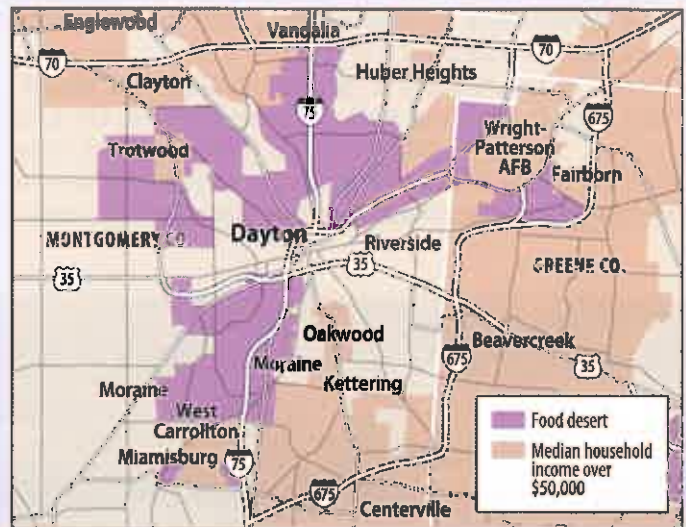
- People are counted only if they have sufficient income to shop regularly at the store. Retailers avoid neighborhoods with below-average incomes. In the Dayton, Ohio, area, for example, the leading supermarket chain, Kroger, has most of its stores in the relatively affluent south and east (Figure 12-15a).

Supermarkets, as well as most other retailers, avoid low-income neighborhoods. This can lead to the existence of food deserts. The U.S. government defines a **food desert** as an area that has a substantial amount of low-income residents and has poor access to a grocery store. Poor access is defined by the government in most cases as further than 1 mile. A distance of 1 mile is not far for people to travel in a car, but it is far for low-income people who do not own cars.

Not surprisingly, food deserts in Dayton are located in areas that lack supermarkets operated by Kroger and its competitors (Figure 12-15b).



(a)



(b)

▲ FIGURE 12-15 SUPERMARKETS AND FOOD DESERTS IN DAYTON, OHIO (a) Dayton's leading supermarket chain, Kroger, has clustered its stores in and near high-income neighborhoods to the south and east. (b) Dayton's food deserts are on the west and north sides, where relatively few supermarkets are located.

WHAT'S YOUR RETAIL GEOGRAPHY?

1. What is the distance from your home to the grocery store most frequently used by your family?
2. By what means of transportation does your family usually shop at the grocery store?
3. Does your family shop at the nearest grocery store? If not, why not?
4. Map the food deserts in your community. Search the internet using key words "Food Access Research Atlas" or go to the U.S. Department of Agriculture's Food Access web page. Zoom in on your community.
5. Is your home located in a food desert? Is your home neighborhood accurately classified as being within or outside a food desert? Why or why not?

Periodic Markets

LEARNING OUTCOME 12.2.4

Describe the concept of periodic markets in developing countries.

Geographers apply central place theory to create market area studies that assist service providers with opening and expanding their facilities. And in a severe economic downturn, market area analysis helps determine where to close facilities.

Services at the lower end of the central place hierarchy may be provided at a periodic market, which is a collection of individual vendors that come together to offer goods and services in a location on specified days. A periodic market typically is set up in a street or other public space early in the morning, taken down at the end of the day, and set up in another location the next day (Figure 12-16).

A periodic market provides goods to residents of developing countries, as well as rural areas in developed countries, where sparse populations and low incomes produce purchasing power too low to support full-time retailing. A periodic market makes services available in more villages than would otherwise be possible, at least on a part-time basis. In urban areas, periodic markets offer residents fresh food brought in that morning from the countryside (Figure 12-17).

Many of the vendors in periodic markets are mobile, driving their trucks from farm to market, back to the farm to restock, then to another market. Other vendors, especially local residents who cannot or prefer not to travel to other villages, operate on a part-time basis, perhaps only a



▲ FIGURE 12-16 PERIODIC MARKET The weekly market at Bati is considered the largest in Ethiopia.

few times a year. Other part-time vendors are individuals who are capable of producing only a small quantity of food or handicrafts.

The frequency of periodic markets varies by culture:

- **Muslim countries.** Markets in Muslim countries may conform to the weekly calendar—once a week in each of six cities and no market on Friday, the Muslim day of rest.



◀ FIGURE 12-17 BRINGING FOOD TO THE PERIODIC MARKET Food is carried to be sold at the periodic market in Gongtan, China.

What Types of Services Are Airbnb and Uber?

New companies are challenging the traditional classification of services. Airbnb and Uber are two prominent examples that might be considered a form of periodic services in developed countries. Time will tell whether these sharing services are economically and socially sustainable, or whether they come to be regarded as unsustainable business models.

The Airbnb website and smart phone app match people looking for lodging with people who have rooms and houses for rent (Figure 12-18). Since the company was founded in 2008, it has grown to more than 1 million listings in nearly every country of the world. Airbnb competes with hotels, and the employees of a hotel are clearly classified as a leisure and hospitality consumer service.

How should the employees of Airbnb be classified? Though the purpose of the company is to provide a leisure and hospitality consumer service, the people who actually rent out their rooms and homes are not Airbnb employees. Airbnb employees are primarily computer operators, a type of employment classified under transportation and information business services.

The Uber website and smart phone app match people looking for a ride with people who are willing to transport them. Uber competes with taxis. Most taxis are summoned through a phone call or a hit-or-miss process of flagging one down on the street. In contrast, an Uber car is summoned by using a smart phone app. A driver shows up promptly because the GPS tracking device in

your smart phone tells the driver your location.

How should the nearly 200,000 drivers of Uber be classified? Uber claims that each driver is an independent contractor, essentially a one-person business providing a transportation business service. In 2015, the California Labor Commission ruled that Uber drivers should be classified as employees of Uber rather than as independent contractors. The classification matters because critics charge that Uber drivers are not properly screened, trained, and insured. If they are Uber employees, then it is Uber's responsibility to screen, train, and insure them. In some cities, especially in Europe, Uber is banned because the company's alleged insufficient screening, training, and insurance results in unfair competition with licensed taxi services.



(a)



(b)

▲ **FIGURE 12-18 AIRBNB APP** (a) Is it a consumer leisure service (accessed through an app)? (b) Or is it a business information service (at Airbnb headquarters, San Francisco)?

- **Rural China.** According to G. William Skinner, rural China has a three-city, 10-day cycle of periodic markets. The market operates in a central market on days 1, 4, and 7; in a second location on days 2, 5, and 8; in a third location on days 3, 6, and 9; and no market on the tenth day. Three 10-day cycles fit in a lunar month.
- **Korea.** Korea has two 15-day market cycles in a lunar month.
- **Africa.** In Africa, the markets occur every 3 to 7 days. Variations in the cycle stem from ethnic differences.

PAUSE & REFLECT 12.2.4

Identify an example of a periodic market in developed countries.

CHECK-IN KEY ISSUE 2

Where Are Consumer Services Distributed?

- ✓ Central place theory helps determine the most profitable location for a consumer service.
- ✓ A central place is surrounded by a market area that has a range and a threshold.
- ✓ Market areas of varying sizes nest and overlap.
- ✓ Regular patterns of settlements that provide consumer services can be observed, especially in developed countries.

Where Are Business Services Distributed?

- **Hierarchy of Business Services**
- **Business Services in Developing Countries**
- **Economic Specialization 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



FIGURE 12-19 WALL STREET FINANCIAL INSTITUTIONS A statue of George Washington stands near the New York Stock Exchange.

information and capital. Business services that concentrate in disproportionately large numbers in global cities include:

- **Financial institutions.** 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 (Figure 12-19).
- **Headquarters of large corporations.** 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 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 professional services.** Professional services 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.

RANKING GLOBAL CITIES

Global cities are divided into three levels: alpha, beta, and gamma. These three levels are further subdivided (Figure 12-20). The

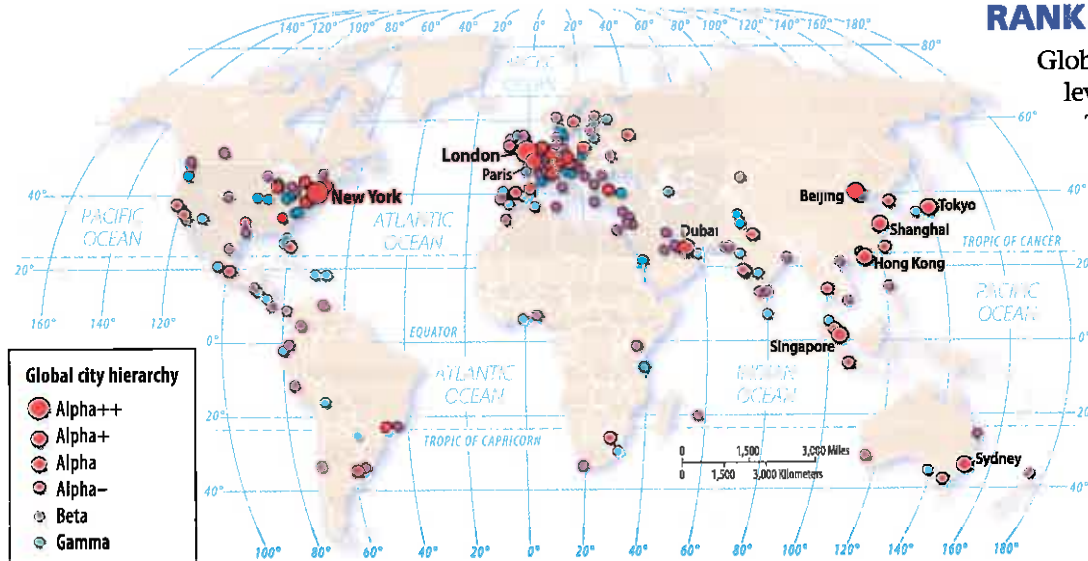


FIGURE 12-20 GLOBAL CITIES Global cities are centers for the provision of services in the global economy. London and New York, the two dominant global cities, are ranked as alpha++. Other alpha, beta, and gamma global cities play somewhat less central roles in the provision of services than the two dominant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

► **FIGURE 12-21 GLOBAL CITIES IN NORTH AMERICA** Atop the hierarchy of business services is New York, followed by Chicago, Los Angeles, and Toronto.

same hierarchy of business services can be used within countries or continents (Figure 12-21). A combination of factors is used to identify and rank global cities:

- **Economic factors.** Number of headquarters for multinational corporations, financial institutions, and law firms that influence the global economy.
- **Political factors.** Hosting headquarters for international organizations and capitals of countries that play a leading role in international events.
- **Cultural factors.** Presence of renowned cultural institutions, influential media outlets, sports facilities, and educational institutions.
- **Infrastructure factors.** A major international airport, health-care facilities, and advanced communications systems. Technology was expected to reduce the need for clustering of services in large cities, but it hasn't.
- **Communications.** 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.
- **Transportation.** 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. Modern transportation and communications enable industry to decentralize, as discussed in Chapter 11, but they reinforce rather than diminish the primacy of global cities in the world economy.



PAUSE & REFLECT 12.3.1

How would you expect an alpha city such as Chicago to differ from a beta city such as Houston or a gamma city such as Phoenix?

CONSUMER AND PUBLIC SERVICES IN GLOBAL CITIES

Because of their large size, global cities have consumer services with extensive market areas, but they may have even more consumer services 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.

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 typically offer the most plays, concerts, operas, night clubs, restaurants, bars, and professional sporting events. They contain the largest libraries, museums, and theaters (Figure 12-22).

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 12-22 LONDON THEATRE DISTRICT** Leisure services, such as theaters, cluster in global cities.



Business Services in Developing Countries

LEARNING OUTCOME 12.3.2

Describe 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 \$150 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. Corporations and people who may be accused of malpractice, such as a doctor or lawyer, or the developer of a collapsed building, can protect some of their assets from lawsuits by storing them in offshore centers. So 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 Tax Justice Network's Financial Secrecy Index, and the Organisation for Economic Co-operation and Development all maintain lists of offshore financial services centers. Figure 12-23 shows locations that appear on all three organizations' lists. These include:

- Dependencies of the United Kingdom, such as Anguilla and Montserrat in the Caribbean, Isle of Man and Jersey in the English Channel, and Gibraltar off Spain.
- Dependencies of other countries, such as Cook Island (controlled by New Zealand), Aruba and Curaçao (controlled by the Netherlands), and Hong Kong and Macau (controlled by China).
- Independent island countries, such as The Bahamas and Grenada in the Caribbean, Nauru and Vanuatu in the Pacific Ocean, and the Seychelles in the Indian Ocean.
- Other independent countries, such as Liechtenstein and Switzerland in Europe, Belize and Uruguay in Latin America, and Bahrain and Brunei in Asia.

BUSINESS-PROCESS OUTSOURCING

A 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

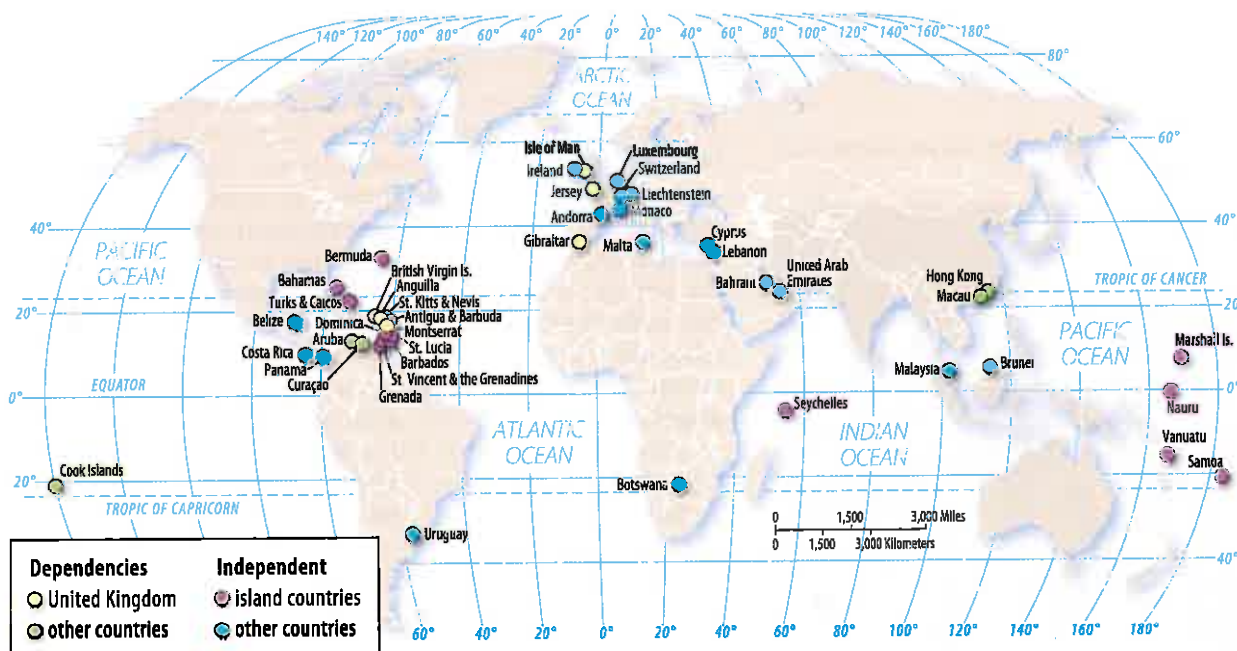


FIGURE 12-23
OFFSHORE FINANCIAL SERVICE CENTERS Most offshore financial service centers are microstates or dependence of other countries.



▲ FIGURE 12-24 CALL CENTER Bangalore, India.

management, transcription work, and other routine clerical activities. 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.

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 suburbs or nearby small towns. For many business services, improved telecommunications is the most important factor in eliminating 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 may be 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 (Figures 12-24 and 12-25). 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 often must 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 and depend on public transportation, which typically does not operate late at night. Sleeping and entertainment rooms may be provided at work to fill the extra hours.

PAUSE & REFLECT 12.3.2

If 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 1-15.



▲ FIGURE 12-25 CALL CENTER TRAINING Madurai, India.

Economic Specialization of Settlements

LEARNING OUTCOME 12.3.3

Explain the concept of economic base.

Settlements can be classified by the distinctive types of economic activities that take place there. All sectors of the economy—be they the various types of agriculture, the various types of manufacturers, or the various types of services—have distinctive geographic distributions.

ECONOMIC BASE

The economic activities in a settlement can be divided into two types:

- A **basic business** exports primarily to customers outside the settlement.
- A **nonbasic business** serves primarily customers living in the same settlement.

The unique cluster of basic businesses in a settlement is its **economic base**.

A settlement's economic base is important because exporting by the basic businesses brings more money into the local economy, thus stimulating the provision of more nonbasic services for the settlement. It works like this:

- New basic businesses attract new workers to a settlement.
- The new basic business workers bring their families with them.
- New nonbasic services are opened to meet the needs of the new workers and their families.

For example, when a new car assembly plant opens, new supermarkets, restaurants, and other consumer services soon follow. But the opposite doesn't occur: A new supermarket does not induce construction of a new car plant.

Settlements in the United States can be classified by their distinctive collection of basic businesses (Figure 12-26). The concept of basic businesses originally referred to manufacturing, but with the growth of the service sector of the economy, the basic



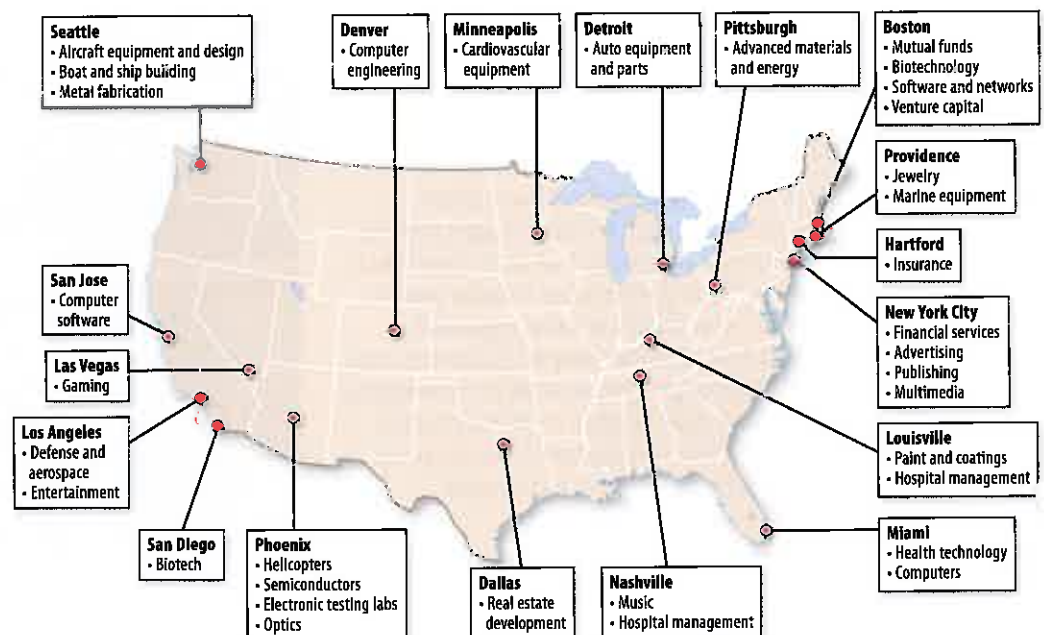
▲ FIGURE 12-27 ECONOMIC BASE OF LAS VEGAS: GAMING

businesses of many communities are in consumer, business, and public services (Figure 12-27).

If a settlement's basic businesses are growing, they attract other basic and nonbasic businesses that can benefit from proximity. The result can be a cluster of businesses that reinforce each other's growth. For example, Boston's basic sector in biotechnology consists of a cluster of business sectors that complement each other (Figure 12-28). Conversely, if a settlement's basic businesses are shedding jobs—such as Detroit's auto industry—then other businesses in the cluster may also decline.

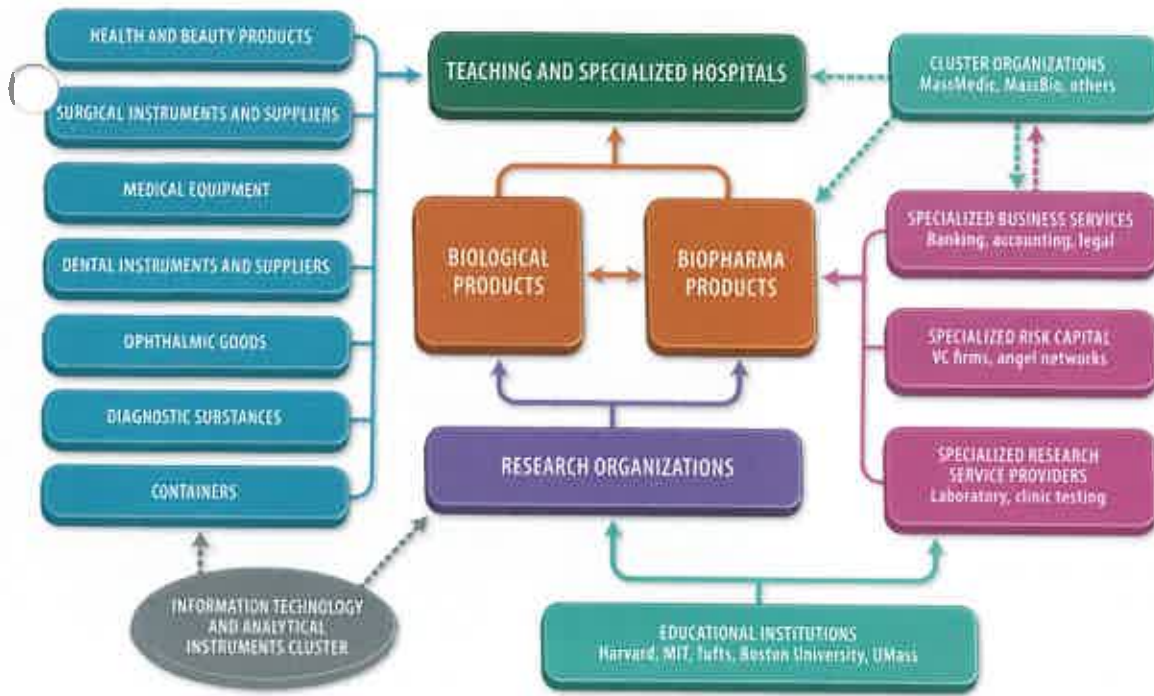
DISTRIBUTION OF TALENT

Individuals possessing special talents are not distributed uniformly among cities. Some cities have a higher percentage of talented individuals such as scientists and professionals



► FIGURE 12-26 ECONOMIC BASE OF SELECTED U.S.

SETTLEMENTS Settlements specialize in different economic activities.



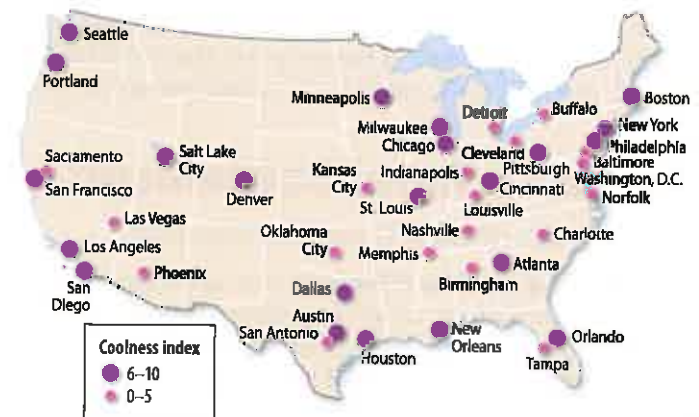
▲ **FIGURE 12-28 ECONOMIC BASE OF BOSTON** Clustering of businesses related to biotechnology.

(Figure 12-29). Attracting talented individuals is important because these individuals are responsible for promoting economic innovation. They are likely to start new businesses and infuse the local economy with fresh ideas.

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 is cultural rather than economic, according to research conducted by Richard Florida. Florida found that individuals with special talents gravitate toward cities that offer more cultural diversity. He used a “coolness” index developed by *POV Magazine* that 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 12-30).



▲ **FIGURE 12-29 DISTRIBUTION OF SCIENTISTS AND PROFESSIONALS** Some cities have higher concentrations than others of scientists and professionals.



▲ **FIGURE 12-30 COOLNESS INDEX** Based on a “coolness” index developed by *POV Magazine*.

PAUSE & REFLECT 12.3.3

Do settlements with high concentrations of scientists and professionals rank high on “coolness” or low? What might account for that pattern?

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.

Why Do Services Cluster in Settlements?

- **Services in Rural Settlements**
- **Services in Early Urban Settlements**
- **Percent Urban**
- **Size of Urban Settlements**

LEARNING OUTCOME 12.4.1

Describe the difference between clustered and dispersed rural settlements.

Services locate primarily 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** 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.

Each person living in a clustered rural settlement is allocated strips of land in the surrounding fields. 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 clustered rural settlements.** A circular clustered rural settlement consists of a central open



▲ **FIGURE 12-31 CIRCULAR RURAL SETTLEMENT** A kraal village (also known as a boma), Meserani, Tanzania.

space surrounded by structures. In sub-Saharan Africa, the Maasai people, who are pastoral nomads, build circular settlements known as kraal (Figure 12-31). Women have the principal responsibility for constructing them. The kraal villages have enclosures for livestock in the center, surrounded by a ring of houses. von Thünen observed this circular pattern in Germany in his landmark agricultural studies in the early nineteenth century (refer to Figure 9-35).

- **Linear clustered 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 12-32). Québec got the system from the French.

▼ **FIGURE 12-32 CLUSTERED LINEAR RURAL SETTLEMENT** Long lots along the St. Lawrence River in Québec.





▲ **FIGURE 12-33 CLUSTERED NEW ENGLAND SETTLEMENT** Newfane, Vermont, includes courthouse and church buildings clustered around a central commons.

Clustered rural settlements were characteristic of colonial New England. New England colonists typically traveled from England in a group, and they wanted to live close together to reinforce common cultural and religious values. 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 (Figure 12-33).



▲ **FIGURE 12-34 DISPERSED RURAL SETTLEMENT** Isolated farm, New Jersey.



▲ **FIGURE 12-35 U.K. RURAL SETTLEMENT** Condicote was originally a clustered rural settlement, but during the enclosure movement, the surrounding fields were consolidated into large farms.

DISPERSED RURAL SETTLEMENTS

Isolated farms are typical of most of the rural United States. A dispersed pattern developed from the time of initial settlement of the Middle Atlantic colonies because most immigrants to these colonies arrived individually rather than as members of a cohesive group, as in New England. As people moved westward from the Middle Atlantic region, they took with them their preference for isolated individual farms. Land was plentiful and cheap, so people bought as much as they could manage (Figure 12-34).

In Europe, some clustered settlements were converted to dispersed settlements in order to make agriculture more efficient. Clustered rural settlements worked when the population was low, but they had no spare land to meet the needs of a growing population. With the introduction of machinery, farms operated more efficiently at a larger scale. For example, in the United Kingdom, the **enclosure movement** between 1750 and 1850 resulted in the consolidation of individually owned strips of land surrounding villages into large farms owned by single individuals (Figure 12-35). When necessary, the government forced people to give up their holdings. As displaced farmers moved to urban settlements, the population of clustered rural settlements declined drastically. Because the enclosure movement coincided with the Industrial Revolution, villagers displaced from farming became workers in urban factories.

PAUSE & REFLECT 12.4.1

In which sector of the economy would you expect most of the residents of Newfane, Vermont, or Condicote, U.K., to be employed? Why?

Services in Early Urban Settlements

LEARNING OUTCOME 12.4.2

Identify important prehistoric, ancient, and medieval urban 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 9). 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?

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.

PREHISTORIC URBAN SETTLEMENTS

Settlements may have originated in Mesopotamia, part of the Fertile Crescent of Southwest Asia (see Figure 8-7), and diffused at an early date west to Egypt and east to China and to South Asia's Indus Valley (Figure 12-36a). 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.

Among the oldest well-documented urban settlements in Mesopotamia is Ur in 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 12-37).

PAUSE & REFLECT 12.4.2

In prehistoric times, before the invention of settlements, why might caves have played an important role?



▲ FIGURE 12-37 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 were 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. A U.S. Army Black Hawk helicopter hovers above the ancient Ziggurat of Ur in 2009.

EARLY CONSUMER SERVICES. The earliest permanent settlements may have been established to offer consumer services, specifically places to bury the dead. 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 of them featured places of worship.

Settlements were 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. 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: 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.



(a)



(b)

▲ FIGURE 12-36 LARGEST URBAN SETTLEMENTS IN HISTORY (a) 3000–500 B.C. (b) 500 B.C.–A.D. 1800.

EARLY BUSINESS SERVICES. Early urban settlements were places where groups could store surplus food and trade with other groups. People brought plants, animals, and minerals, as well as tools, clothing, and containers, to the urban settlements, and exchanged them for items brought by others. To facilitate this trade, officials in the settlement set fair prices, kept records, and created currency.

EARLY PUBLIC SERVICES. Early settlements housed political leaders as well as defense forces to guard the residents of the settlement and defend the surrounding hinterland from seizure by other groups.

ANCIENT URBAN SETTLEMENTS

Settlements were first established in the eastern Mediterranean about 2500 B.C. 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, which were defined in Chapter 8 as independent self-governing communities that included the settlement and nearby countryside.

Athens, the largest city-state in ancient Greece (Figure 12-38), made substantial contributions to the development of culture, philosophy, and other elements of Western civilization. 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 and Southwest Asia & North Africa 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. Rome—the empire's center for administration, commerce, culture, and all other services—was the world's most populous city 2,000 years ago and may have been the first city to reach a half million inhabitants.

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

After the collapse of the Roman Empire, most of the world's largest urban settlements were clustered in China. Several cities in China are estimated to have been the world's most populous at various times between 600 and 1500 A.D., including Beijing, Ch'ang-an, Hangzhou, Jinling, and Kaifeng (refer to Figure 12-36b).

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

► **FIGURE 12-38 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. To the right of the Acropolis is the Propylaea, which was the entrance gate to the Acropolis.



Percent Urban

LEARNING OUTCOME 12.4.3

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 *percentage* of people living in urban settlements.
- An increase in the *number* 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.

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. 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.

In medieval times, European urban settlements were usually surrounded by walls even though by then cannonballs could destroy them (Figure 12-39). 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 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.

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.

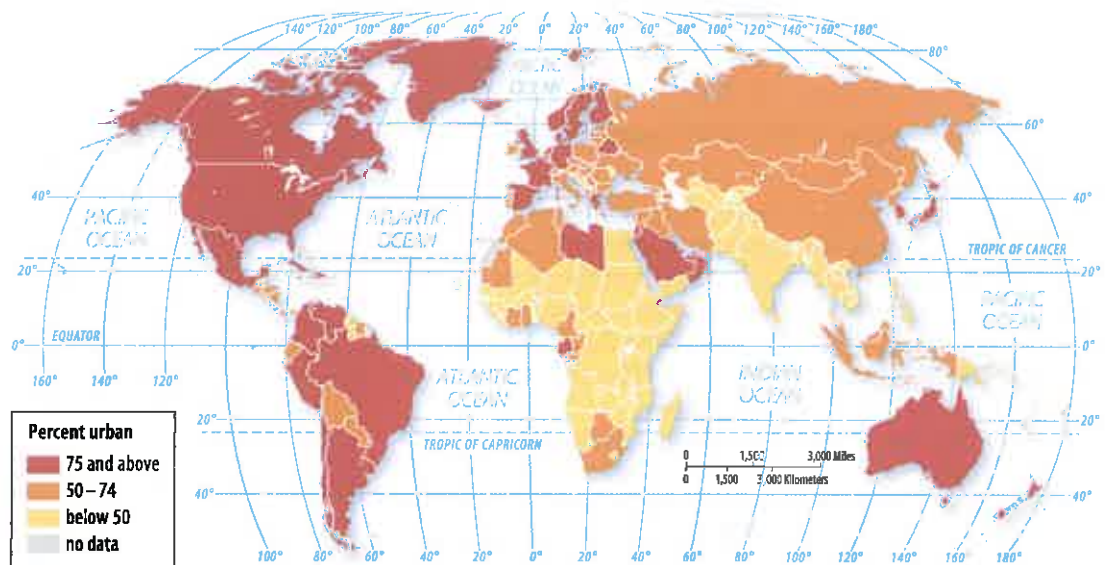
Wirth's three-part distinction between urban and rural settlements may still apply in developing countries. But in developed countries, social distinctions between urban and rural life have blurred. According to Wirth's definition, nearly everyone in a developed country now is urban. All



▲ **FIGURE 12-39 MEDIEVAL WALLED CITY: ÁVILA** The 2.5-kilometer (1.6-mile) wall encircling Ávila de los Caballeros, Spain, was started in A.D. 1090. 1. Why were walls built around cities in ancient and medieval times? 2. What changes in urbanization influenced the decline in walled cities? 3. What technology changes contributed to the decline in walled cities?

► FIGURE 12-40 PERCENTAGE LIVING IN URBAN SETTLEMENTS

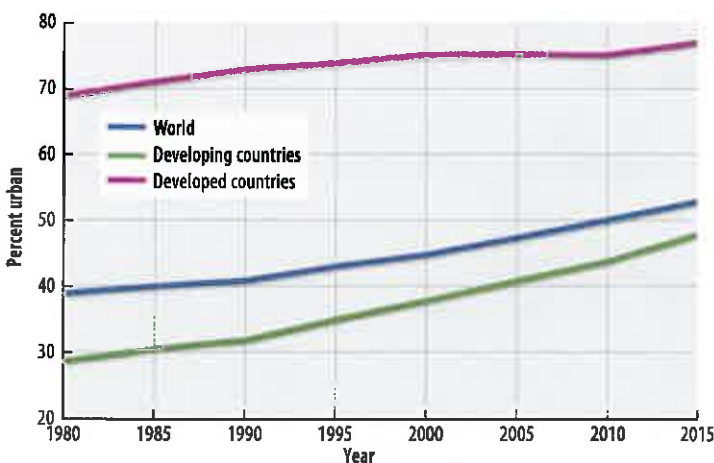
Developed countries have higher percentages of urban residents than do developing countries, though Latin America has a comparable percentage to that of developed countries.



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.

PERCENTAGE IN URBAN SETTLEMENTS

The percentage of the world’s population living in urban settlements has increased rapidly, from 3 percent in 1800 to 6 percent in 1850, 14 percent in 1900, 30 percent in 1950, and 45 percent in 2000. The population of Earth’s urban settlements exceeded that of rural settlements for the first time in human history around 2008.



▲ FIGURE 12-41 CHANGING PERCENTAGE LIVING IN URBAN AREAS The percentage living in urban areas is increasing more rapidly in developing countries, though the gap between developed and developing regions remains high.

The percentage of people living in urban settlements reflects a country’s level of development. In developed countries, 77 percent live in urban areas, compared to 48 percent in developing countries (Figure 12-40). Figure 12-41 shows that the gap in urbanization between developed and developing countries is closing rapidly. In 1980, 69 percent lived in urban areas in developed countries compared to only 29 percent in developing countries. The percentage living in urban areas is comparable in Latin America to the level in developed countries. On the other hand, only 33 percent live in urban areas in South Asia and 38 percent in sub-Saharan Africa, not by coincidence the two developing regions with the lowest HDIs (see Chapter 10).

The higher percentage of urban residents in developed countries is a result 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 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.

PAUSE & REFLECT 12.4.3

What migration factor discussed in Chapter 3 might help to explain why the percentage of people in developed countries living in urban areas may not continue to increase?

Size of Urban Settlements

LEARNING OUTCOME 12.4.4

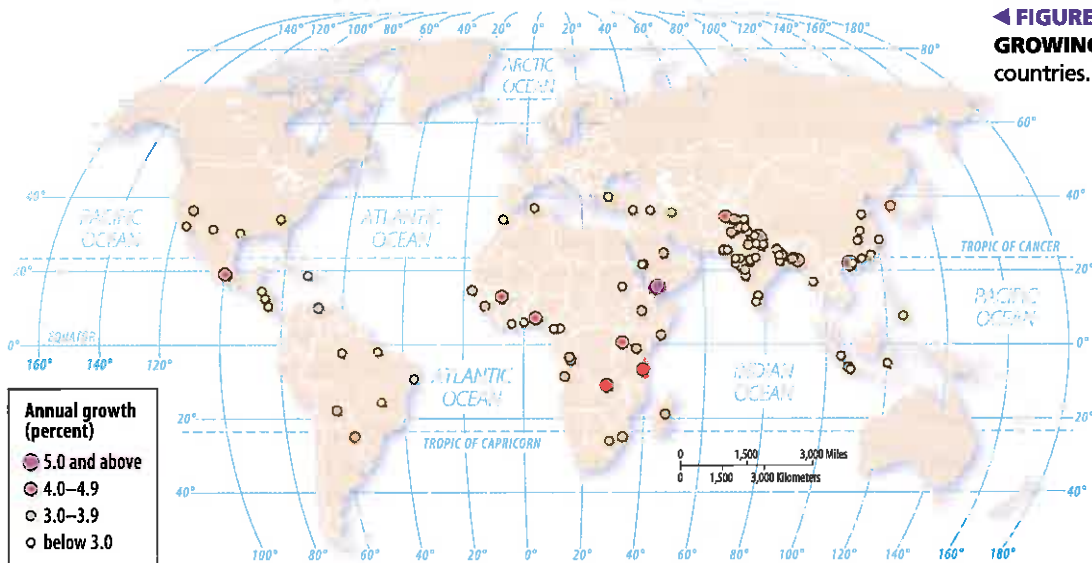
Describe the location of the fastest-growing cities.

Developed countries have a higher percentage of urban residents, but developing countries have more of the very large urban settlements (Figure 12-42). Seven of the 10 most populous cities, according to Demographia, are in developing countries: Jakarta, Delhi, Manila, Shanghai, Karachi, Beijing, and Guangzhou. In addition, 41 of the 50 largest urban settlements are in developing countries.

All but 3 of the 100 fastest-growing urban settlements are in developing countries. Five of the 13 growing at more than 4 percent per year are in Africa, 3 are in India, 4 are elsewhere in Asia, and 1 is in Latin America (Figure 12-43). The 3 exceptions in developed countries are Las Vegas, Austin, and Atlanta.

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 (Figure 12-44). However, Tokyo, Seoul, and New York are the only 3 cities in developed

► **FIGURE 12-42 URBAN SETTLEMENTS WITH AT LEAST 2 MILLION INHABITANTS** Most of the world's largest settlements are in developing countries, especially in East and South Asia and Latin America.



◀ **FIGURE 12-43 WORLD'S 100 FASTEST-GROWING CITIES** Nearly all are in developing countries.

▼ **FIGURE 12-44 WORLD'S LARGEST CITY: TOKYO** The Tokyo-Yokohama urban area has an estimated 38 million inhabitants.





countries ranked among the 10 largest. The three fastest-growing urban settlements are relatively unfamiliar places: Beihai, China, Ghaziabad, India, and Sana'a, Yemen (Figure 12-45).

That developing countries dominate the lists of largest and fastest-growing urban settlements is remarkable because urbanization was once associated with economic

▼ FIGURE 12-45 THIRD FASTEST-GROWING CITY: SANA'A, YEMEN Sana'a is adding more than 100,000 inhabitants per year, a rate of 5 percent per year.



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.

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 & Review

KEY ISSUE 1

Where are services distributed?

Most jobs are in the service sector, especially in developed countries. Three types of services are consumer, business, and public.

THINKING GEOGRAPHICALLY



▲ FIGURE 12-46 UBER PROTEST Taxi drivers protest against Uber providing services in Budapest, Hungary. The sign in Hungarian says “Ban Uber.”

1. Sharing services for housing, such as Airbnb, are illegal in many cities in the United States and Europe. Sharing services for transportation, such as Uber, are strongly opposed in many places. Figure 12-46 shows a protest against Uber by taxi drivers in Budapest, Hungary. Why would cities make these services illegal or difficult to use?

KEY ISSUE 2

Where are consumer services distributed?

Consumer services generally follow a regular pattern, based on size of settlements. 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. The market area is the area surrounding a service from which customers are attracted. Larger settlements provide consumer services that have larger thresholds, ranges, and market areas.

THINKING GEOGRAPHICALLY



▲ FIGURE 12-47 CONSUMER SERVICES IN A COLLEGE TOWN Massachusetts Street, Lawrence, Kansas.

2. Education services frequently attract other types of consumer services to nearby locations. What are examples of distinctive consumer services that are located near a university in your community? Why might these consumer services pick locations near a university?

KEY ISSUE 3

Where are business services distributed?

Business services disproportionately cluster in global cities, which are centers for global flows of information and capital. Some developing countries attract offshore financial services and back-office operations. A settlement's economic activities that export primarily to businesses and consumers elsewhere are its basic industries. Basic businesses are the principal source of growth and wealth for a settlement.

THINKING GEOGRAPHICALLY



▲ FIGURE 12-48 CONNECTION TO GLOBAL CITY JPMorganChase, the largest bank based in the United States, has branches across the United States, including this one in Winter Haven, Florida.

3. What evidence can you find in your community of economic ties to alpha++ or alpha+ global cities? Figure 12-48 offers one example.

KEY ISSUE 4

Why do services cluster in settlements?

Services cluster in rural and urban settlements. Rural settlements may be either clustered or dispersed. Few people lived in urban settlements until modern times. Urbanization involves an increase in the percentage of people living in urban settlements. Developed countries have higher percentages of urban residents than do developing countries. Urbanization also involves an increase in size of settlements. Most very large settlements are in developing countries.

THINKING GEOGRAPHICALLY



▲ FIGURE 12-49 SMALLEST MAJOR LEAGUE BASEBALL SETTLEMENT

4. Professional sports teams are examples of services with large ranges, thresholds, and areas, and consequently they cluster in large urban settlements. Google “Largest U.S. Metropolitan Statistical Areas.” Compare the list with the distribution of Major League Baseball teams shown in Figure 1-29. What are the largest metropolitan areas without a team? What is the smallest settlement with a team?

KEY TERMS

Basic business (p. 446) A business that sells its products or services primarily to consumers outside the settlement.

Business service (p. 432) A service that primarily meets 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.

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 service (p. 432) A service that primarily meets the needs of individual consumers, including retail, education, health, and leisure services.

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

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

Enclosure movement (p. 449) The process of consolidating small landholdings into a smaller number of larger farms in England during the eighteenth century.

Food desert (p. 439) An area that has a substantial amount of low-income residents and has poor access to a grocery store, defined in most cases as further than 1 mile.

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 lo-

cation and inversely related to the distance people must travel to reach the service.

Hinterland (p. 434) The area surrounding a central place from which people are attracted to use the place's goods and services (also known as market area).

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

Nonbasic business (p. 446) A business that sells its products primarily to consumers in the same settlement.

Primate city (p. 437) A city that is the largest settlement in a country and has more than twice as many people as the second-ranking settlement.

Primate city rule (p. 437) A pattern of settlements in a country such that the largest settlement has more than twice as many people as the second-ranking settlement.

Public service (p. 432) A service offered by the government to provide security and protection for citizens and businesses.

Range (of a service) (p. 435) The maximum distance people are willing to travel to use a service.

Rank-size rule (p. 436) A pattern of settlements in a country such that the n th largest settlement is $1/n$ the population of the largest settlement.

Service (p. 432) Any activity that fulfills a human want or need and returns money to those who provide it.

Settlement (p. 432) A permanent collection of buildings and inhabitants.

Threshold (p. 435) The minimum number of people needed to support a service.

Urbanization (p. 452) An increase in the percentage of and the number of people living in urban settlements.

EXPLORE



West Edmonton Mall

Use Google Earth to explore North America's largest shopping mall.

Fly to *West Edmonton Mall, Alberta*.

Show *Ruler* and measure the area occupied by the mall, including parking lots, inside the rectangle formed by the four perimeter streets. Explore the four streets that form the perimeter of the mall by zooming in to eye alt around 2,500 ft and dragging to Enter Street View.

Large consumer service centers such as a mega mall often attract other consumer services nearby.

1. Can you see any evidence of consumer services adjacent to the mall? Why might the continent's largest mall have relatively few services immediately adjacent?
2. What is the principal use of land on the other sides of the four perimeter streets?
3. What evidence do you see of transportation services for people to arrive other than in individual passenger cars?

MG

GeoVideo

Log in to the MasteringGeography Study Area to view this video

Ukraine: Serhiy's Leap

In a Ukrainian village, people raise much of their own food, and jobs other than farming are scarce. Like most of the village's other young people, Serhiy plans to leave when he finishes school.

1. How does Serhiy's family earn its living? What is Serhiy's contribution?
2. How does Serhiy rate the advantages and disadvantages of village life versus city life?
3. Describe Serhiy's plan for his life. Does it seem reasonable? What is the alternative?



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