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Contemporary Human Geography, 2e

Lectures

Chapter 12

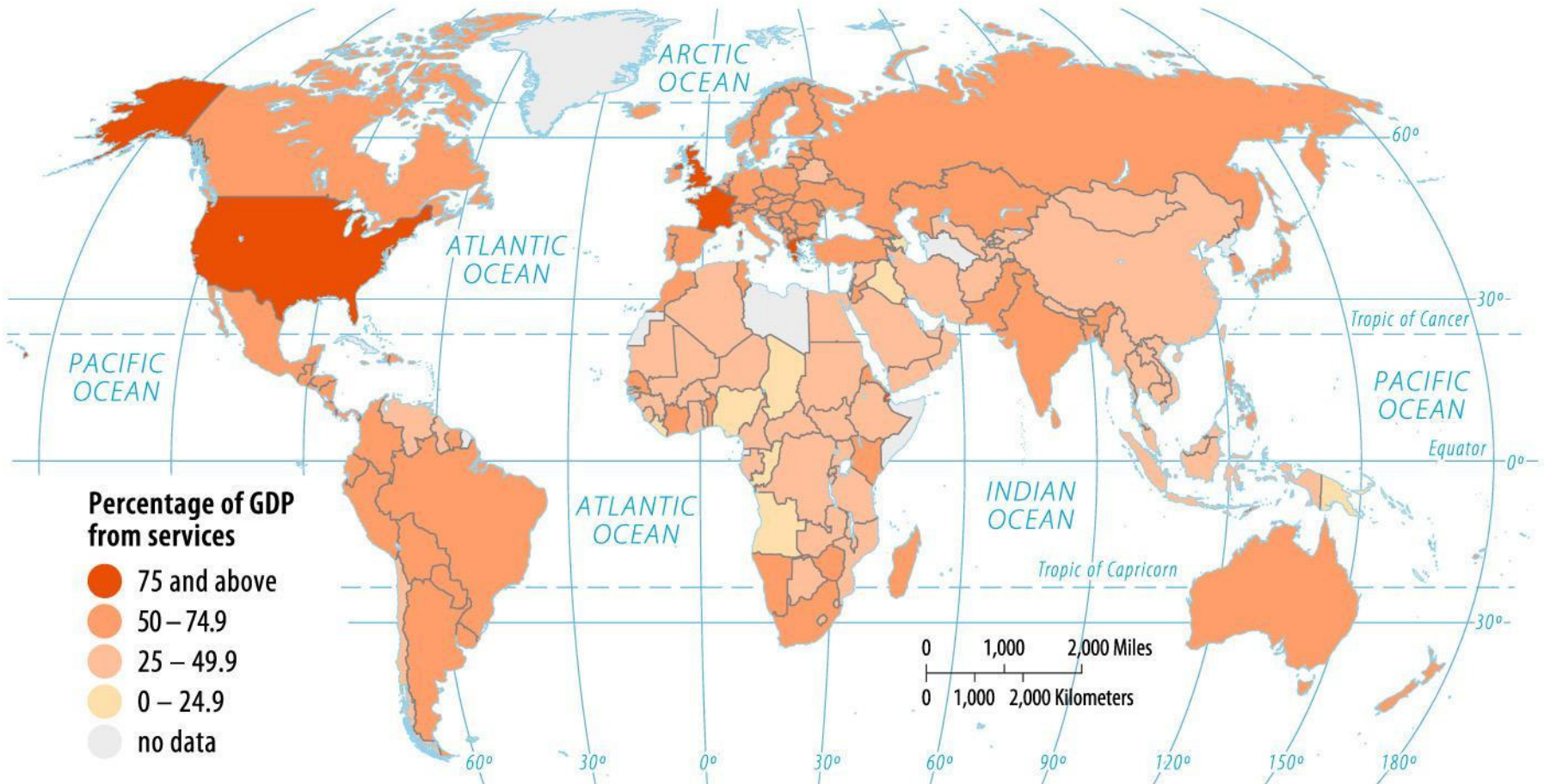
Services and Settlements

Karl Byrand,
University of Wisconsin-Sheboygan

12.1 Types of Services

- Service
- Any activity that fulfills a human want or need and returns money to those who provide it
- Generate more than 66% of the GDP in most developed countries
- Generate less than 50% in developing countries

12.1 Types of Services



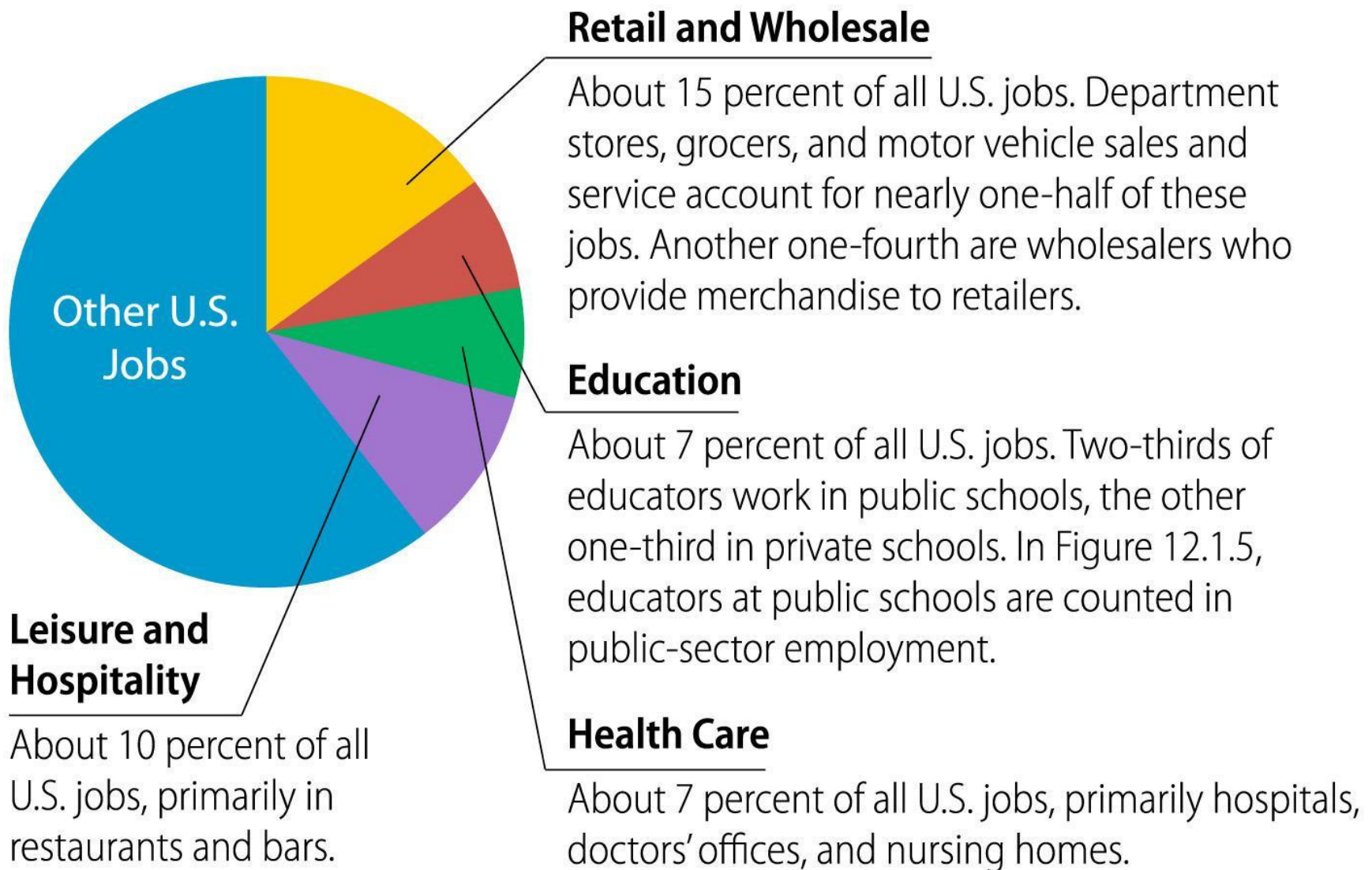
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PERCENTAGE OF GDP FROM SERVICES

12.1 Types of Services

- Consumer services
 - Provide services to individual consumers
 - Approximately 50 percent of all U.S. jobs are consumer services
 - Main types
 - Retail
 - Education
 - Health
 - Leisure

12.1 Types of Services



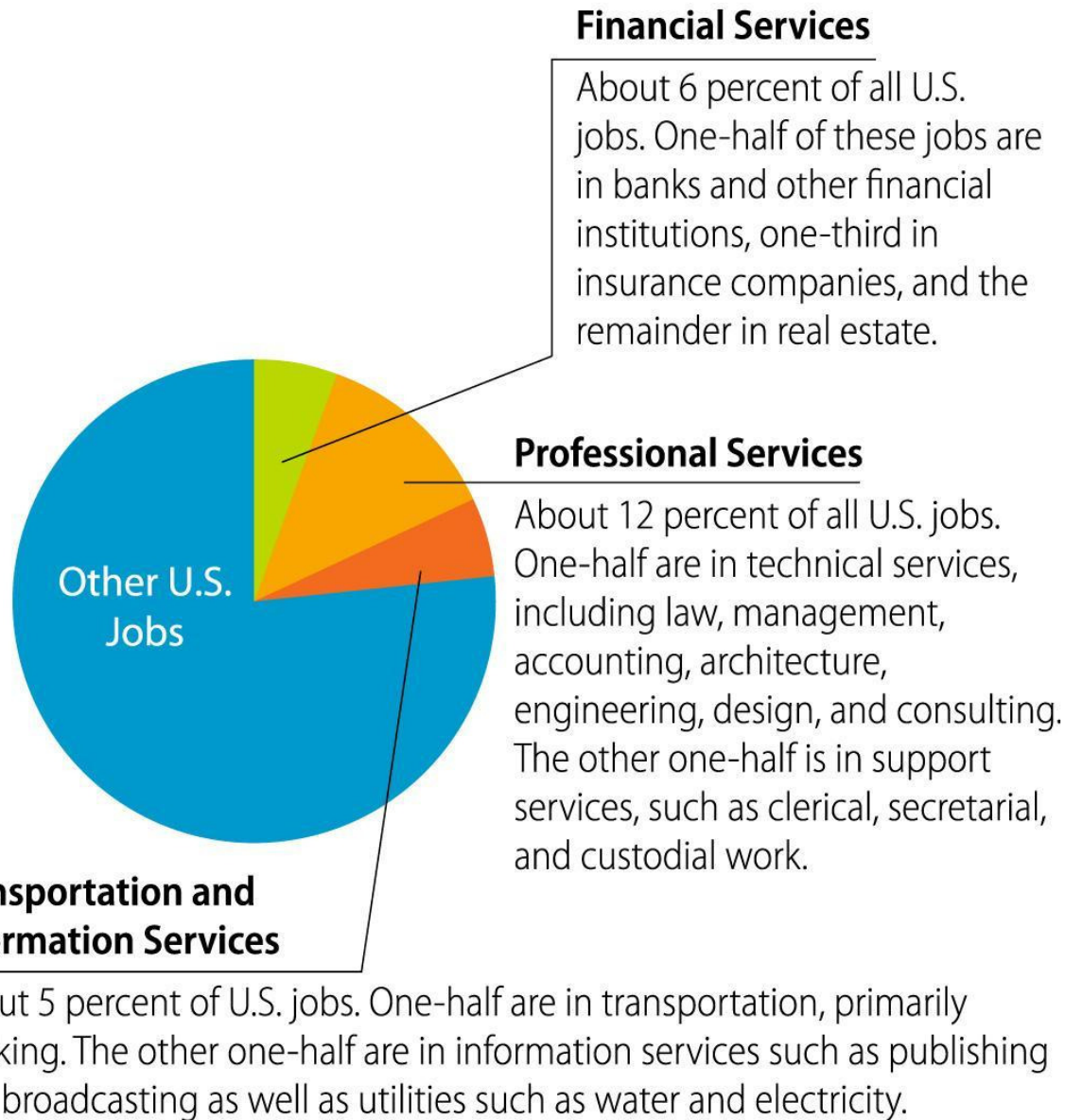
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U.S. CONSUMER SERVICES

12.1 Types of Services

- Business services
- Facilitate other businesses
- Approximately 25 percent of all U.S. jobs are business services
- Main types
 - Professional, financial, transportation services

12.1 Types of Services



Financial Services

About 6 percent of all U.S. jobs. One-half of these jobs are in banks and other financial institutions, one-third in insurance companies, and the remainder in real estate.

Professional Services

About 12 percent of all U.S. jobs. One-half are in technical services, including law, management, accounting, architecture, engineering, design, and consulting. The other one-half is in support services, such as clerical, secretarial, and custodial work.

Transportation and Information Services

About 5 percent of U.S. jobs. One-half are in transportation, primarily trucking. The other one-half are in information services such as publishing and broadcasting as well as utilities such as water and electricity.

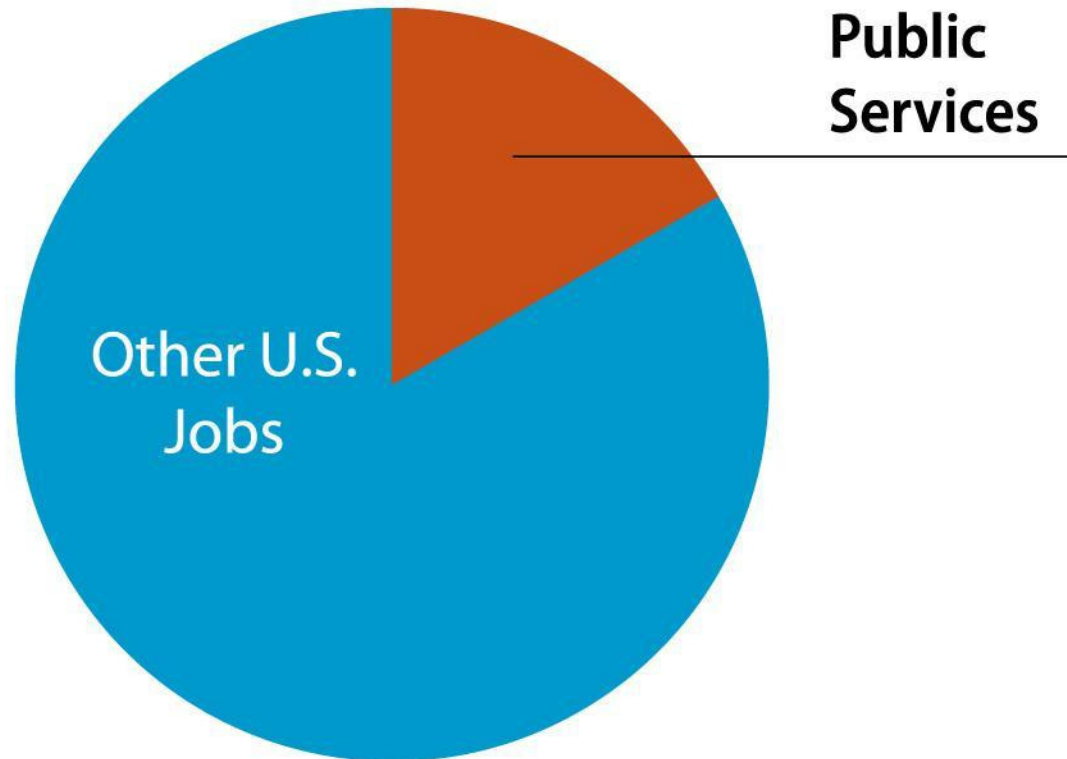
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U.S. BUSINESS SERVICES

12.1 Types of Services

- Public services
 - Provide security and protection for citizens and businesses
 - Main types
 - Education and government jobs
 - Approximately 16 percent of all U.S. jobs are public sector
 - 9 percent of public school employees were excluded from total and counted under education
 - 1/6 of public service workers work for the federal government
 - 1/4 of public service workers work for one of 50 state governments
 - 3/5 of public service workers work for local governments

12.1 Types of Services



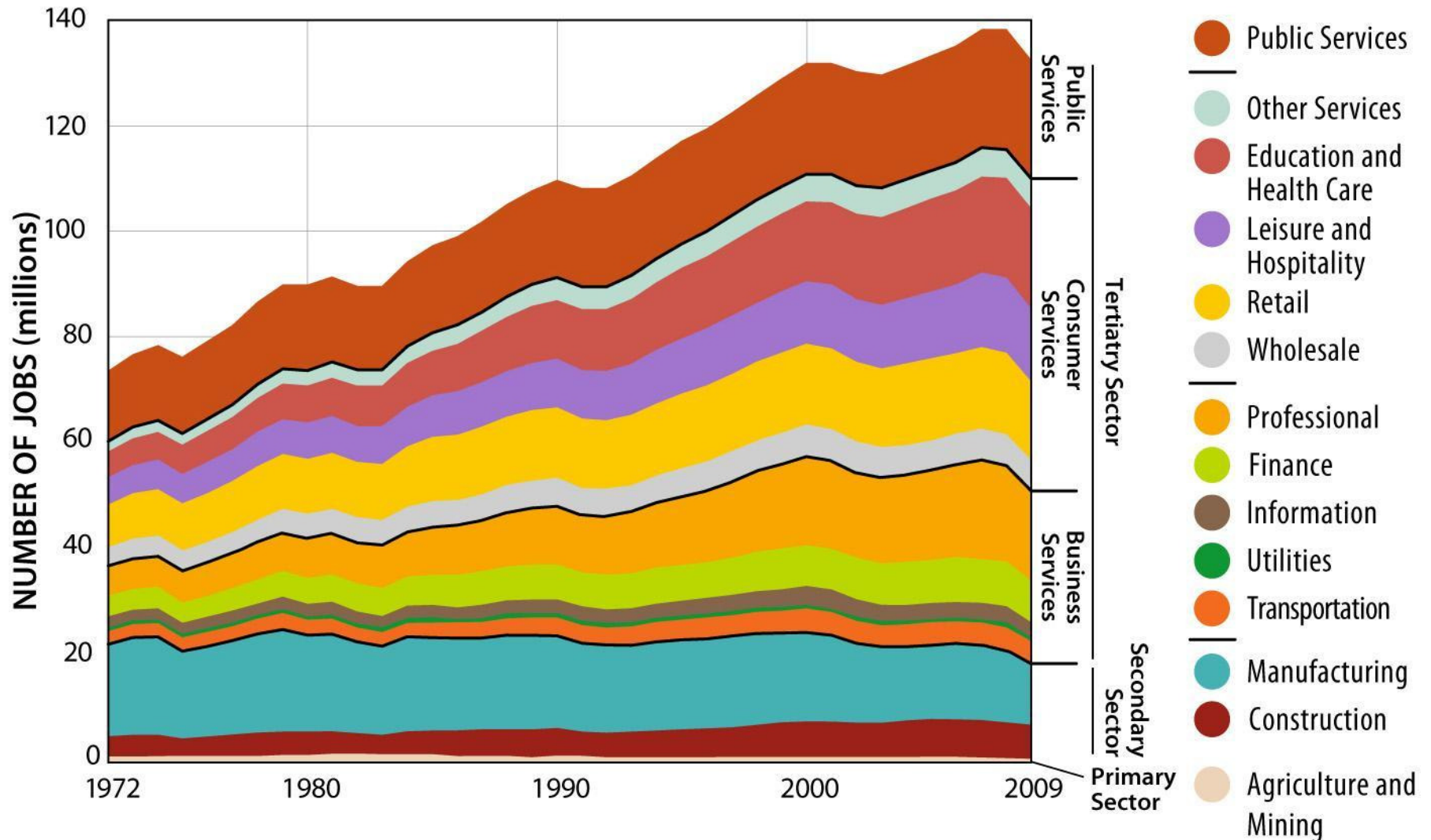
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U.S. PUBLIC SERVICES

12.1 Types of Services

- Employment change in the United States
 - Business services
 - Rapid expansion in professional services
 - Consumer Services
 - Most rapid increase was in the provision of health care
 - Public Services
 - Has declined in the past 20 years

12.1 Types of Services



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EMPLOYMENT CHANGE IN THE UNITED STATES

12.2 Central Place Theory

- Market area of a service
 - Central place theory
 - Explains how services are distributed and why a regular pattern of settlements exists
 - Market area
 - Area surrounding a service
 - AKA hinterland
 - Consumers will seek to obtain goods and services from nearest locations
 - i.e., the node, or market area
 - Closer to the periphery they are, the more likely they will select another location

12.2 Central Place Theory



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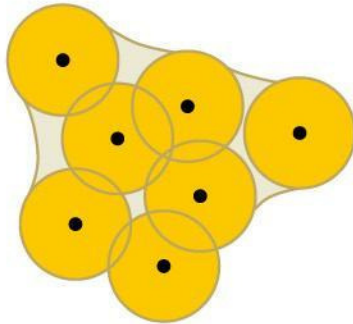


TYPES OF CONSUMER SERVICES

12.2 Central Place Theory

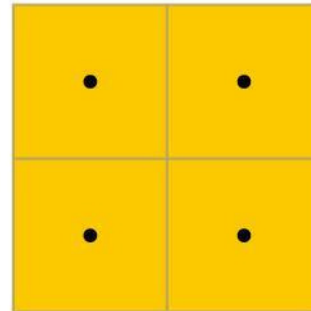
- Range of a service
 - Range
 - Maximum distance people are willing to travel to use a service
 - Distance willing to travel is based on the value of the good or service
 - High-order goods will have a longer range
 - Low-order goods will have a shorter range

12.2 Central Place Theory



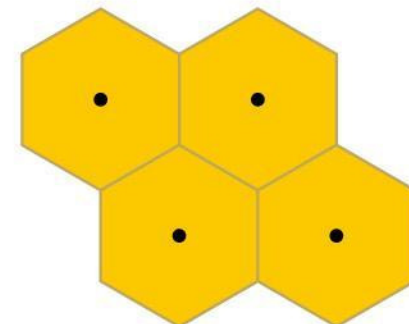
The problem with circles.

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 obviously not true. Overlapping circles are also unsatisfactory, for one service or another will be closer, and people will tend to patronize it.



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 a square.



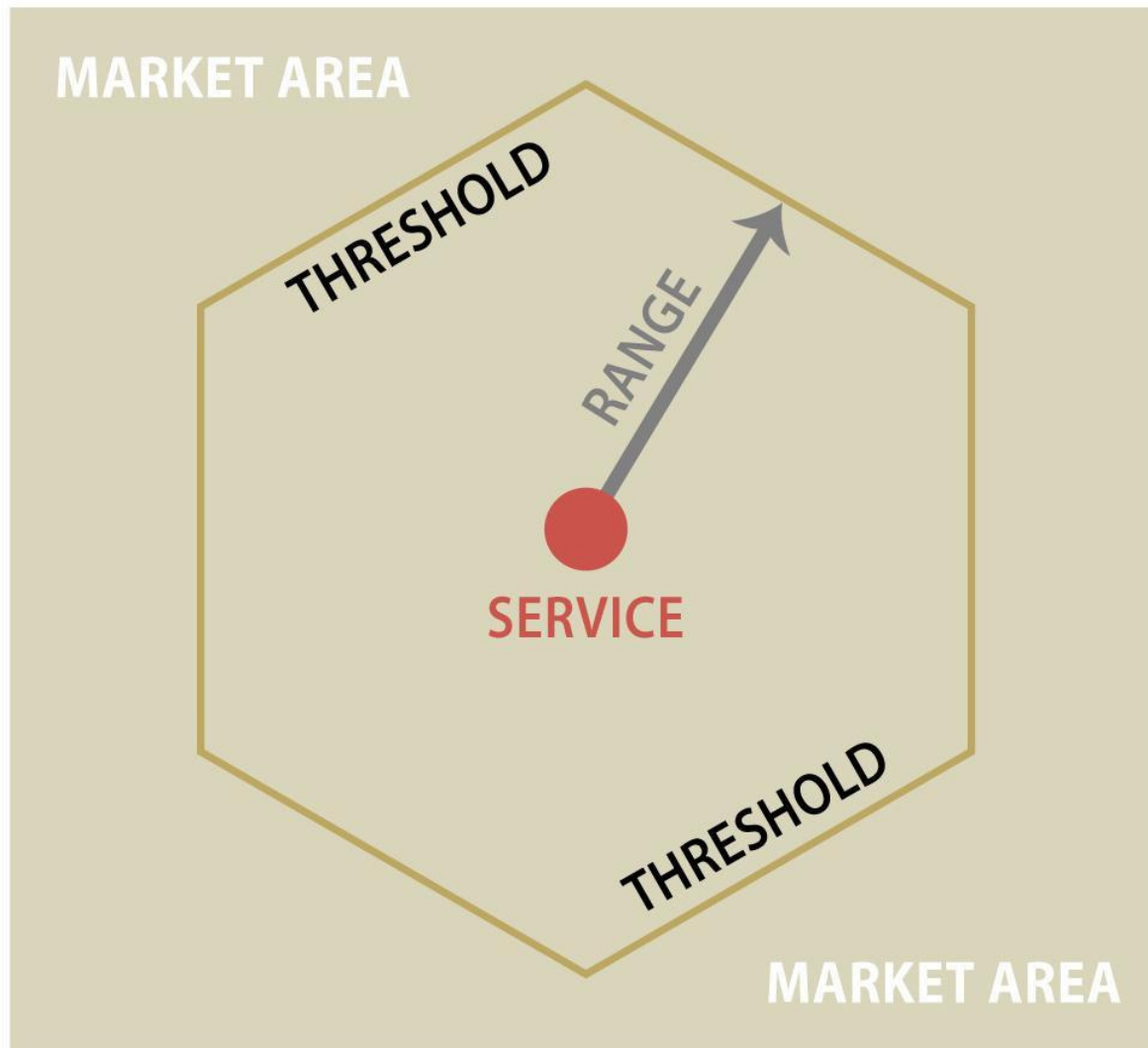
The hexagon compromise.

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.

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WHY CENTRAL PLACE THEORY USES HEXAGONS TO DELINEATE MARKET AREAS

12.2 Central Place Theory



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MARKET AREA OF A SERVICE

12.2 Central Place Theory

- Threshold of a service
 - Threshold
 - Minimum number of people needed to support a service
 - Once range is determined, then need to see if there is a high enough threshold within that range
 - The product determines how consumers are counted
 - Based on age, gender, income, education

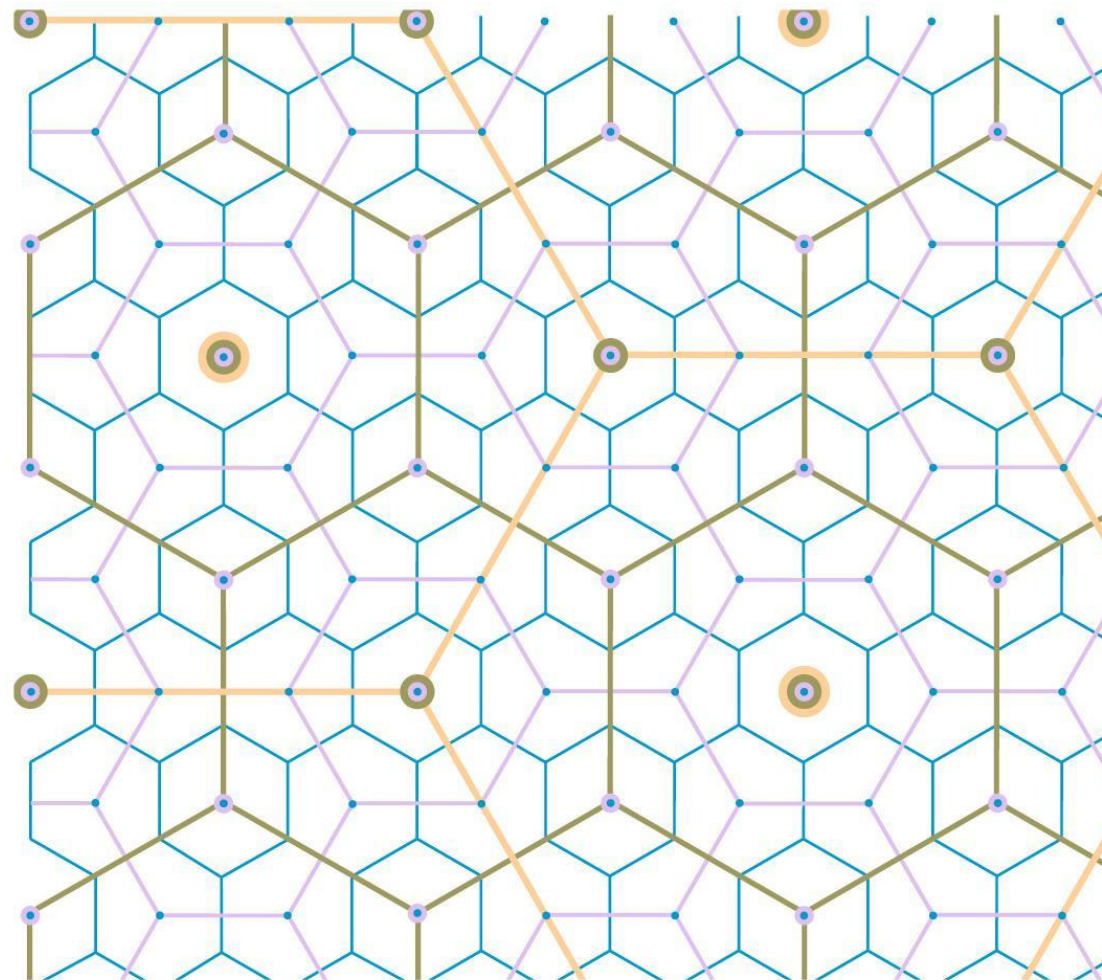
12.3 Hierarchy of Consumer Services

- Small settlements
 - Have smaller thresholds, ranges, and market areas
- Large settlements
 - Have larger thresholds, ranges, and market areas

12.3 Hierarchy of Consumer Services

- Nesting of settlements and services
 - Market areas across a developed country would be a series of hexagons of various sizes.
 - These hexagons would overlap as a nested hierarchy
 - Hamlets, villages, towns, cities
 - Walter Christaller
 - German geographer
 - Found that the distances between settlements in southern Germany followed a regular pattern
 - This pattern plays out in the U.S.

12.3 Hierarchy of Consumer Services



Size of market areas and settlements

○ larger

● large

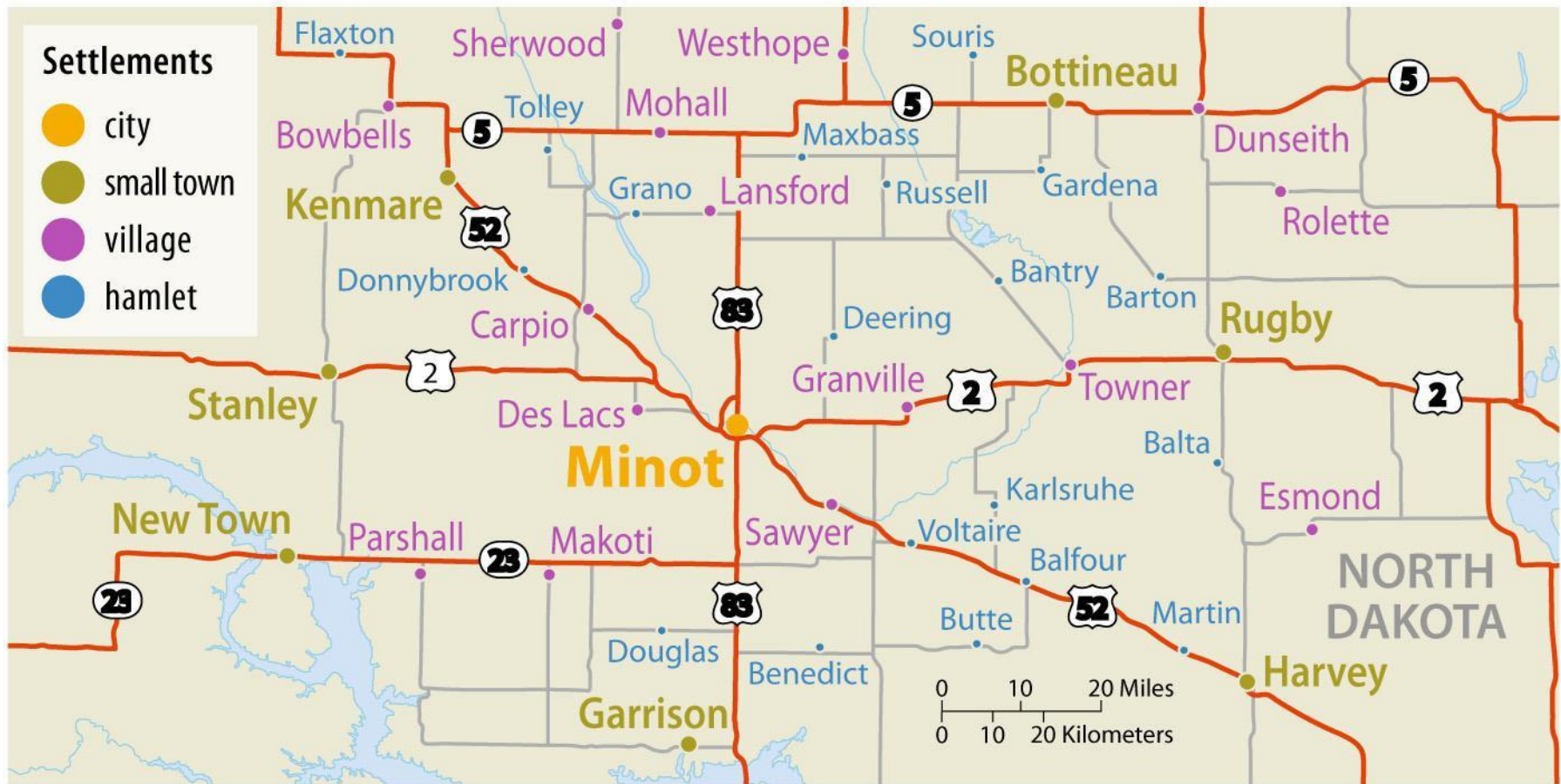
● small

● smaller

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NESTING OF SETTLEMENTS AND SERVICES

12.3 Hierarchy of Consumer Services



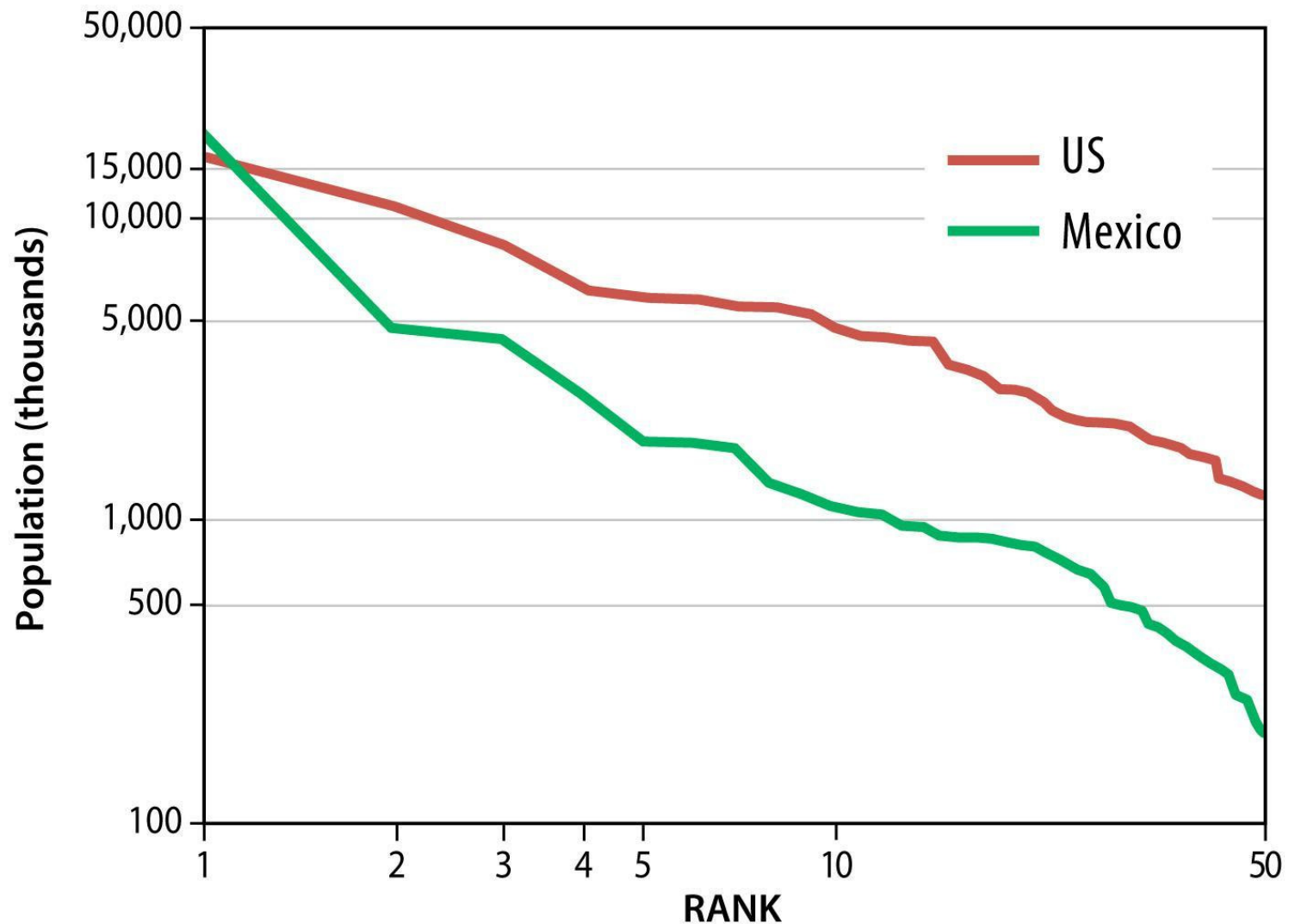
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SETTLEMENTS IN NORTH DAKOTA

12.3 Hierarchy of Consumer Services

- Rank-size distribution of settlements
 - Rank-size rule
 - The country's n th largest settlement is $1/n$ the population of the largest settlement
 - Primate city rule
 - Largest settlement has more than twice as many people as the second-ranking settlement

12.3 Hierarchy of Consumer Services



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RANK-SIZE AND PRIMATE CITY DISTRIBUTIONS OF SETTLEMENTS

12.3 Hierarchy of Consumer Services



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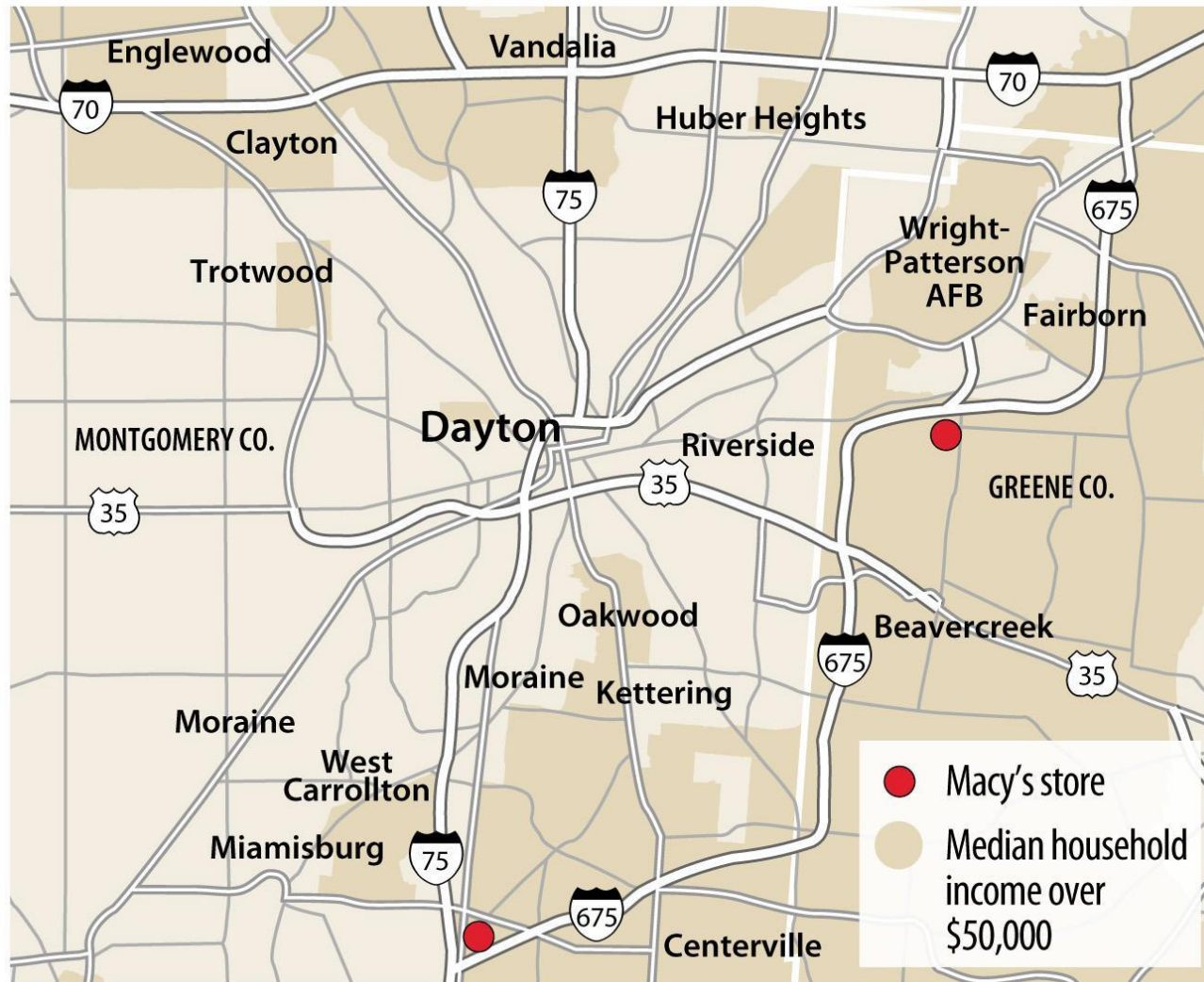
MORELIA (above) AND BALTIMORE (right)

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12.4 Market Area Analysis

- Profitability of a location
 - 1. Compute the range
 - People willing to travel 15 minutes to a department store
 - 2. Compute the threshold
 - Department store typically needs 25,000 people within the 15 minute range
 - 3. Draw the market area
 - Draw circle with 15-minute radius
 - Count number of people within
- Gravity model
 - Predicts the optimal location of a service
 - Related to the number of people in an area
 - Inversely related to the distance they must travel

12.4 Market Area Analysis



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MARKET AREA, RANGE, AND THRESHOLD FOR MACY'S
DEPARTMENT STORES IN THE DAYTON, OHIO,
METROPOLITAN AREA

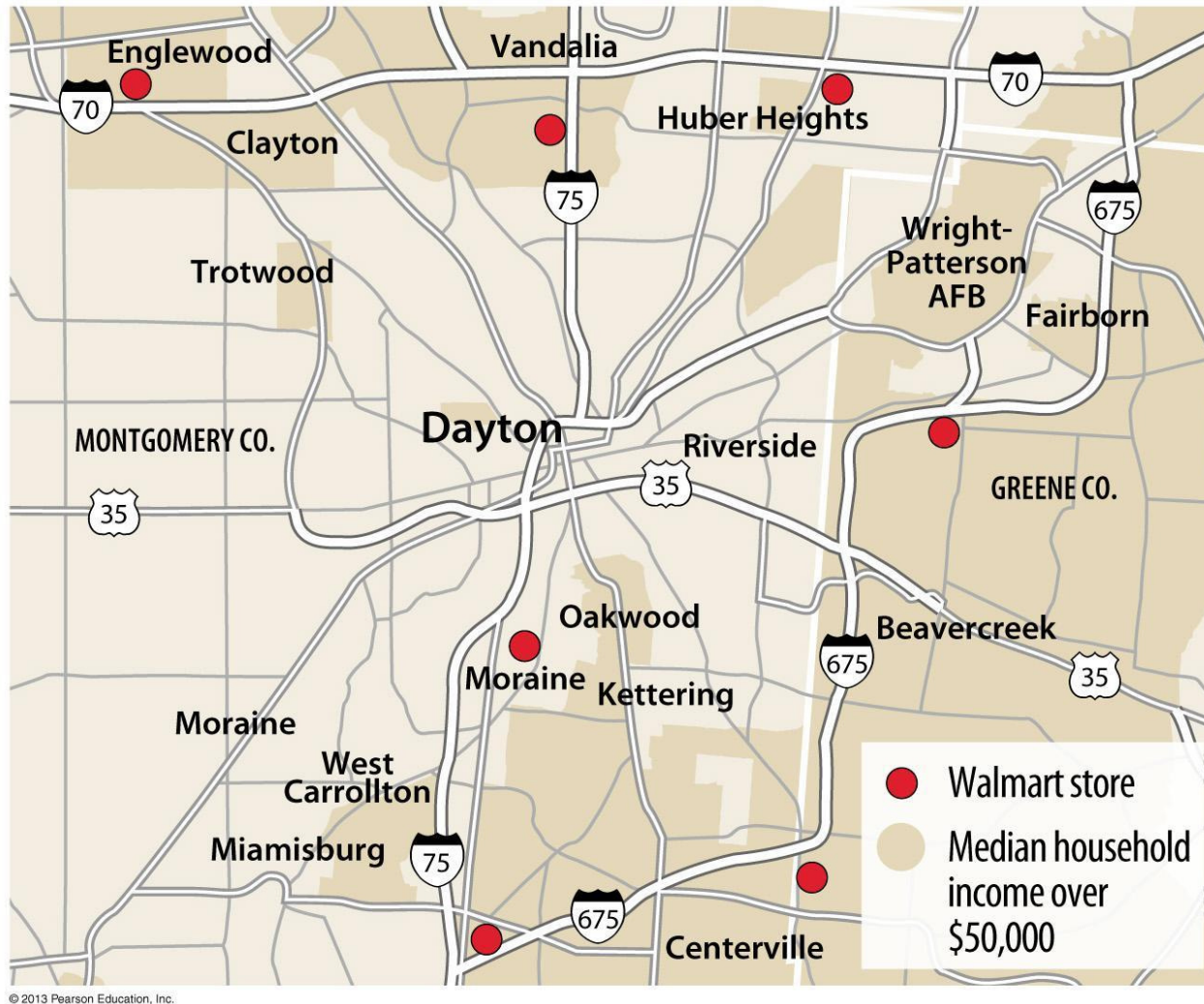
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12.4 Market Area Analysis

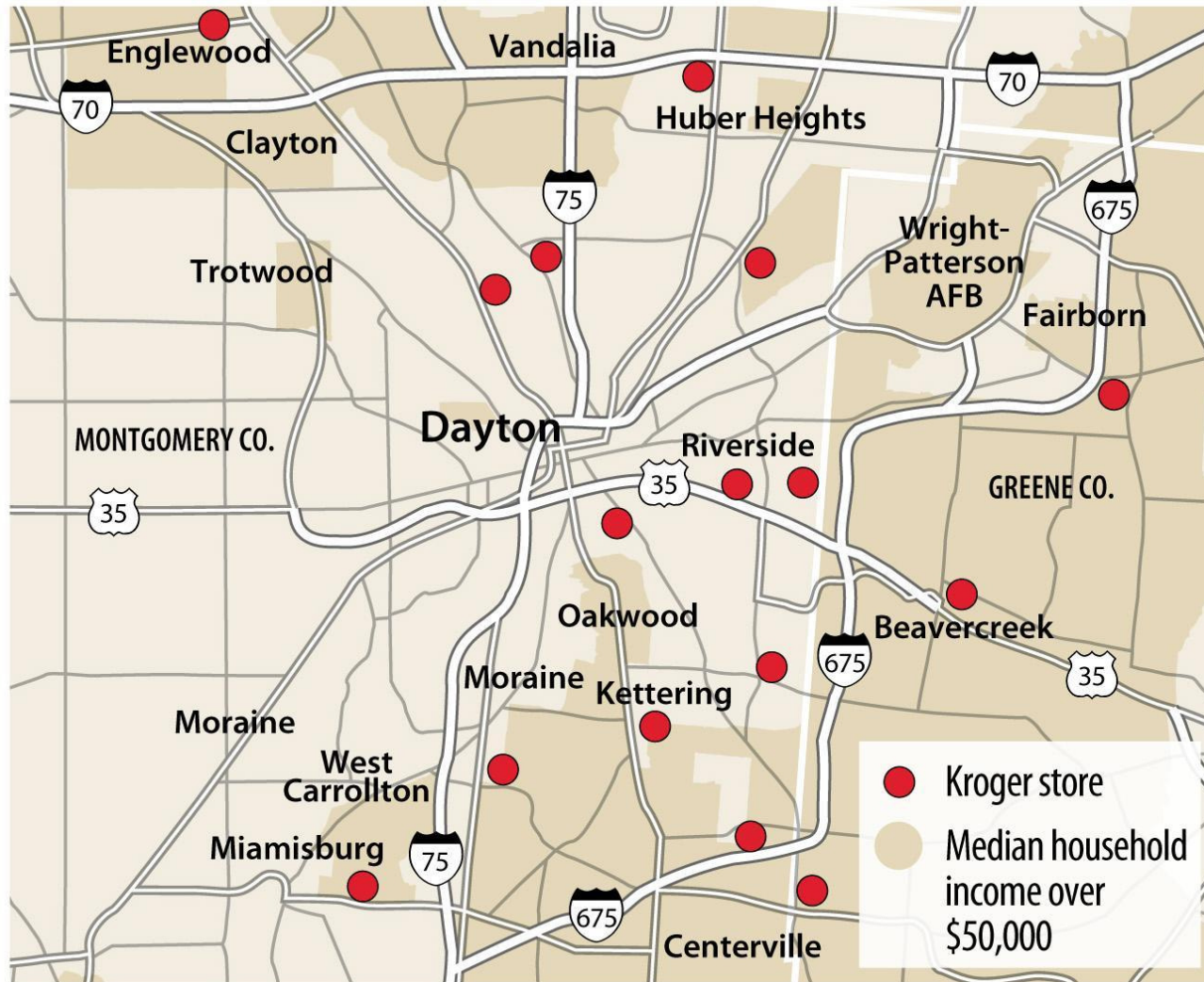
- Locating a new retail store
 - 1. Define market area
 - Use zip code data to obtain customer information
 - 2. Estimate range
 - Use customer data obtained from customers to determine how many reside within a 10-minute driving range
 - 3. Estimate threshold
 - Count customers within range
 - 4. Market share
 - Determine how many customers will have to be shared with competitors

12.4 Market Area Analysis



MARKET AREA, RANGE, AND THRESHOLD FOR WALMART STORES IN THE DAYTON, OHIO, METROPOLITAN AREA

12.4 Market Area Analysis



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MARKET AREA, RANGE, AND THRESHOLD FOR KROGER SUPERMARKETS IN THE DAYTON, OHIO, METROPOLITAN AREA

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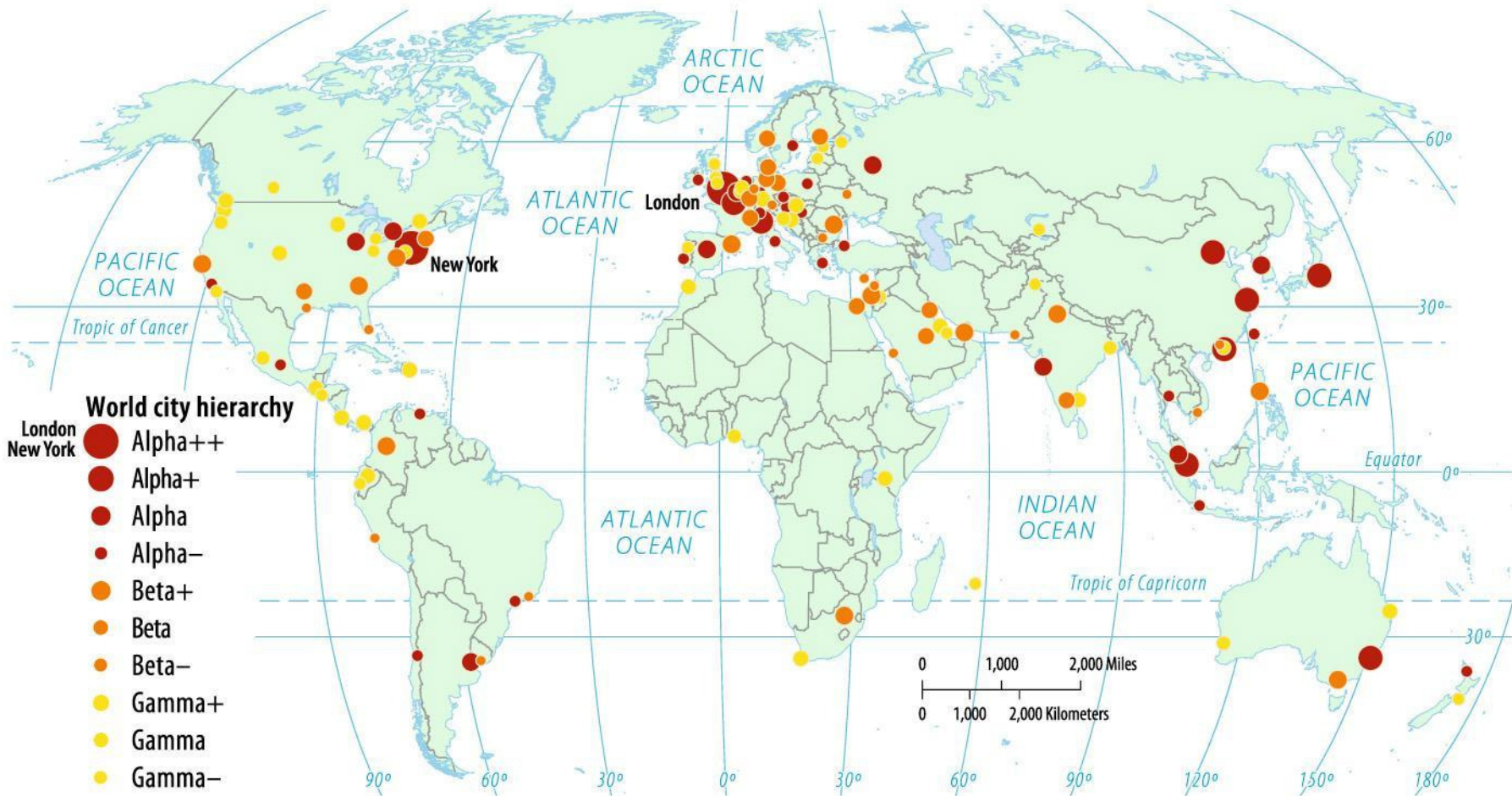
12.5 Hierarchy of Business Services

- Business services in world cities
 - World cities
 - Closely integrate into global economic system
 - Centers of the flow of information and capital
 - HQs of large corporations
 - Lawyers, accountants, other professionals
 - HQs of major banks, insurance companies, and other specialized financial institutions
 - Art, culture, consumer spending

12.5 Hierarchy of Business Services

- Alpha, beta, and gamma cities
 - Economic factors
 - Political factors
 - Cultural factors
 - Infrastructural factors

12.5 Hierarchy of Business Services



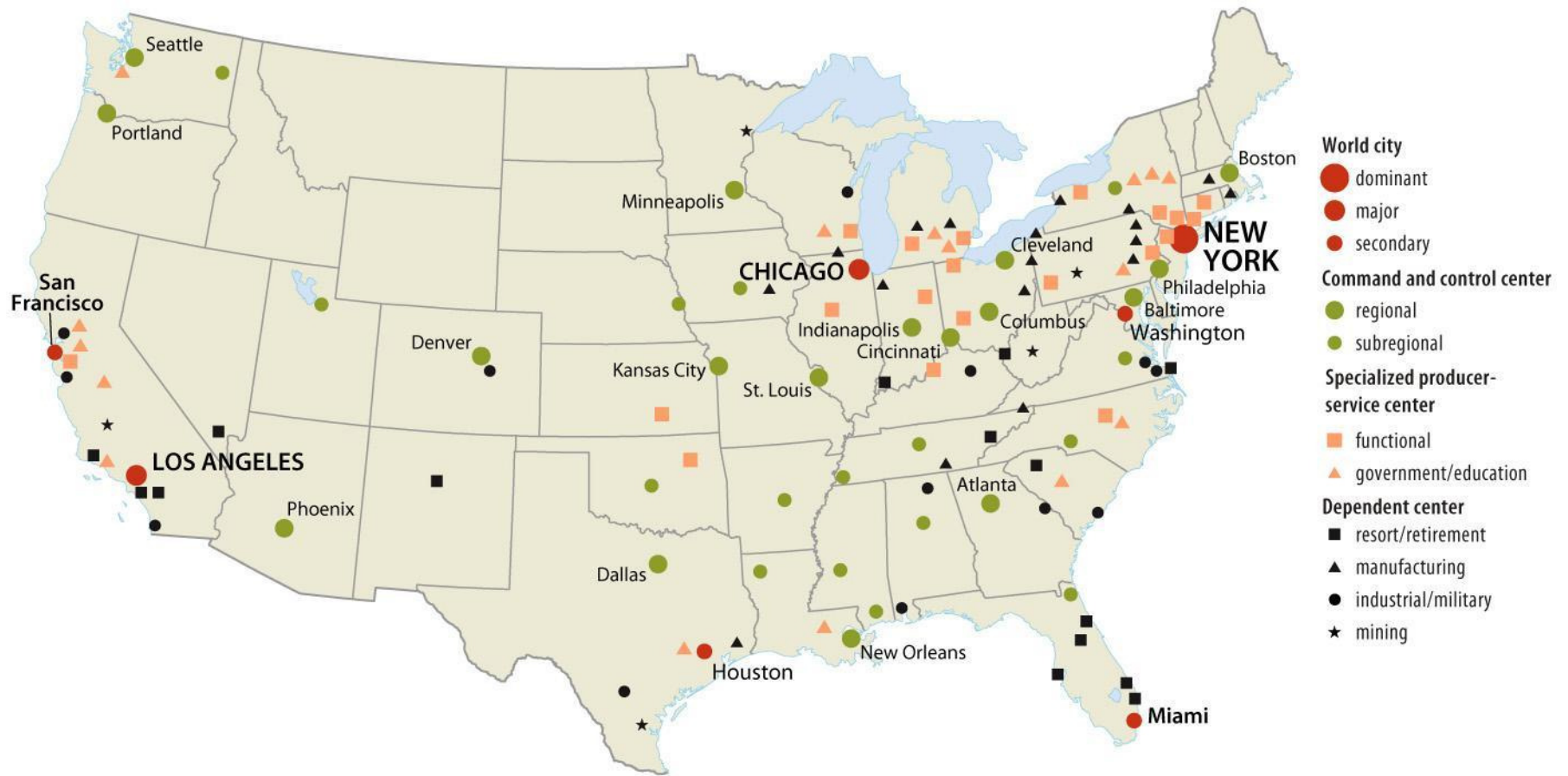
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HIERARCHY OF WORLD CITIES

12.5 Hierarchy of Business Services

- Three lower tiers of business services
 - Second tier: command and control centers
 - Third tier: specialized producer-service centers
 - Fourth tier: dependent centers
 - Resort, retirement, residential centers
 - Manufacturing centers
 - Military centers
 - Mining and industrial centers

12.5 Hierarchy of Business Services



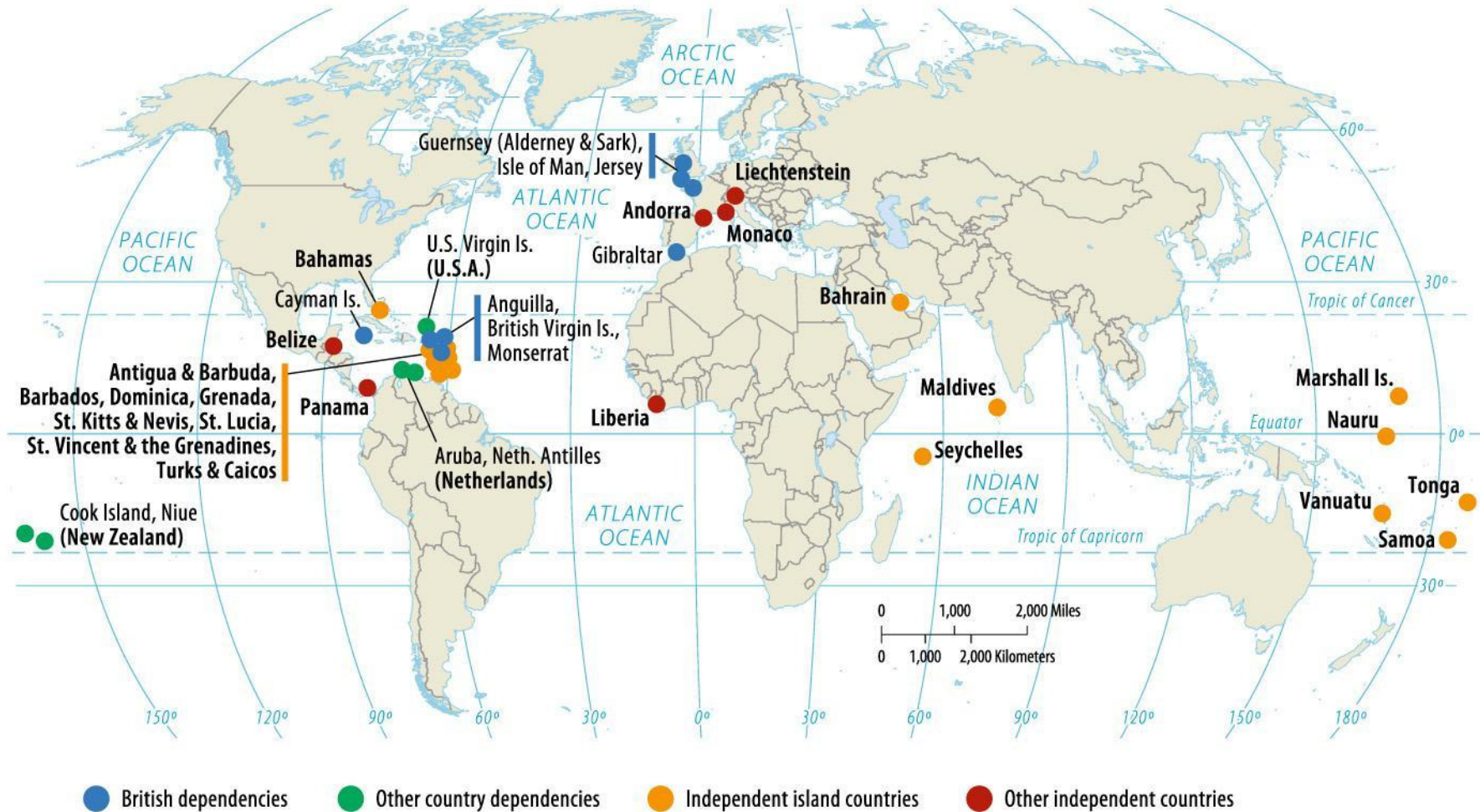
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BUSINESS SERVICE CITIES IN THE UNITED STATES

12.6 Business Services in Developing Countries

- Offshore financial services
 - Taxes
 - Typically low or non-existent
 - Often possess tax-free status
 - Privacy
 - People and corporations can evade disclosure
 - Can protect their assets from lawsuits
 - Include dependencies of the UK and other developed countries
 - E.g., Cayman Islands

12.6 Business Services in Developing Countries



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OFFSHORE FINANCIAL SERVICE CENTERS

12.6 Business Services in Developing Countries

- Back offices
 - Aka business-process outsourcing
 - Includes clerical work such as insurance, payroll management, transcription work
 - Low wages
 - Most earn only a few thousand dollars per year
 - Ability to speak English
 - Call center workers must be able to understand North American customers

12.6 Business Services in Developing Countries



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CALL CENTER, BANGALORE, INDIA

12.6 Business Services in Developing Countries



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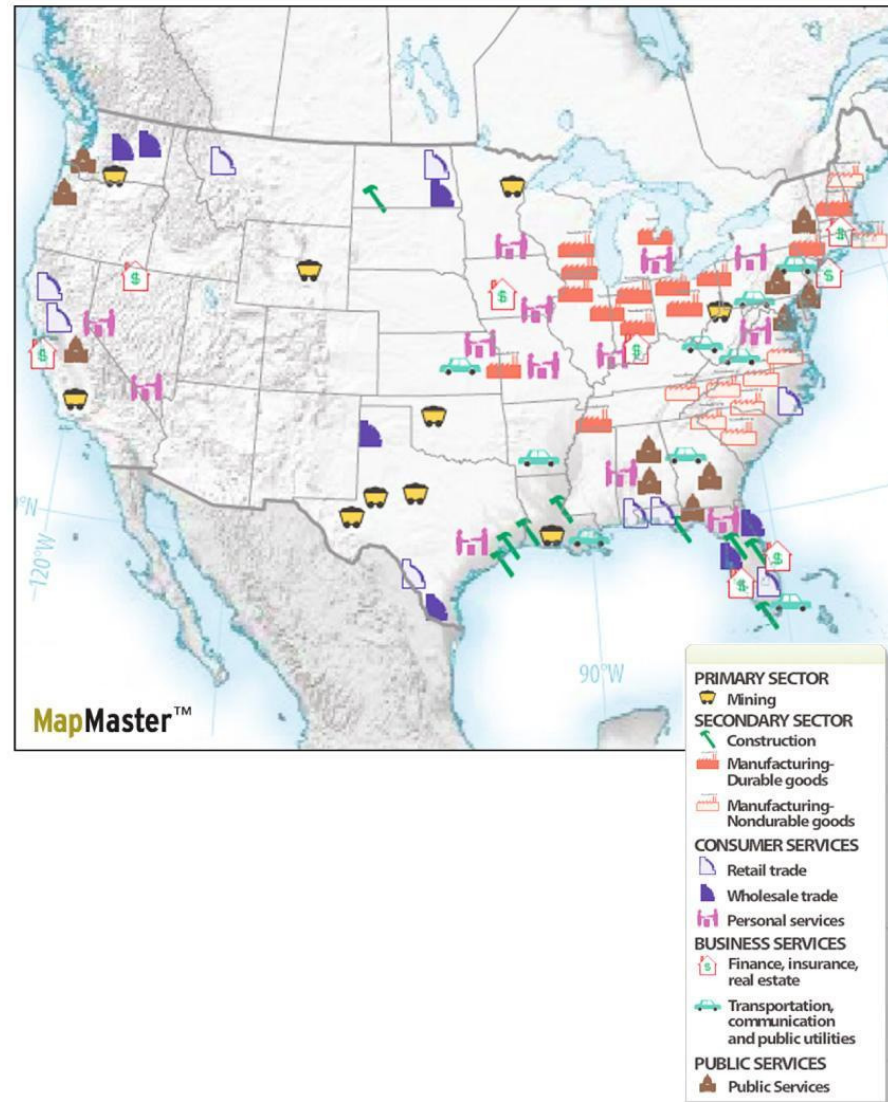
ADVERTISEMENT, BANGALORE, INDIA

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12.7 Economic Base

- Basic industries
 - Export primarily to businesses and individuals outside the settlement
- Nonbasic industries
 - Enterprises whose customers live in the same community
- Economic base
 - A community's unique collection of basic industries

12.7 Economic Base



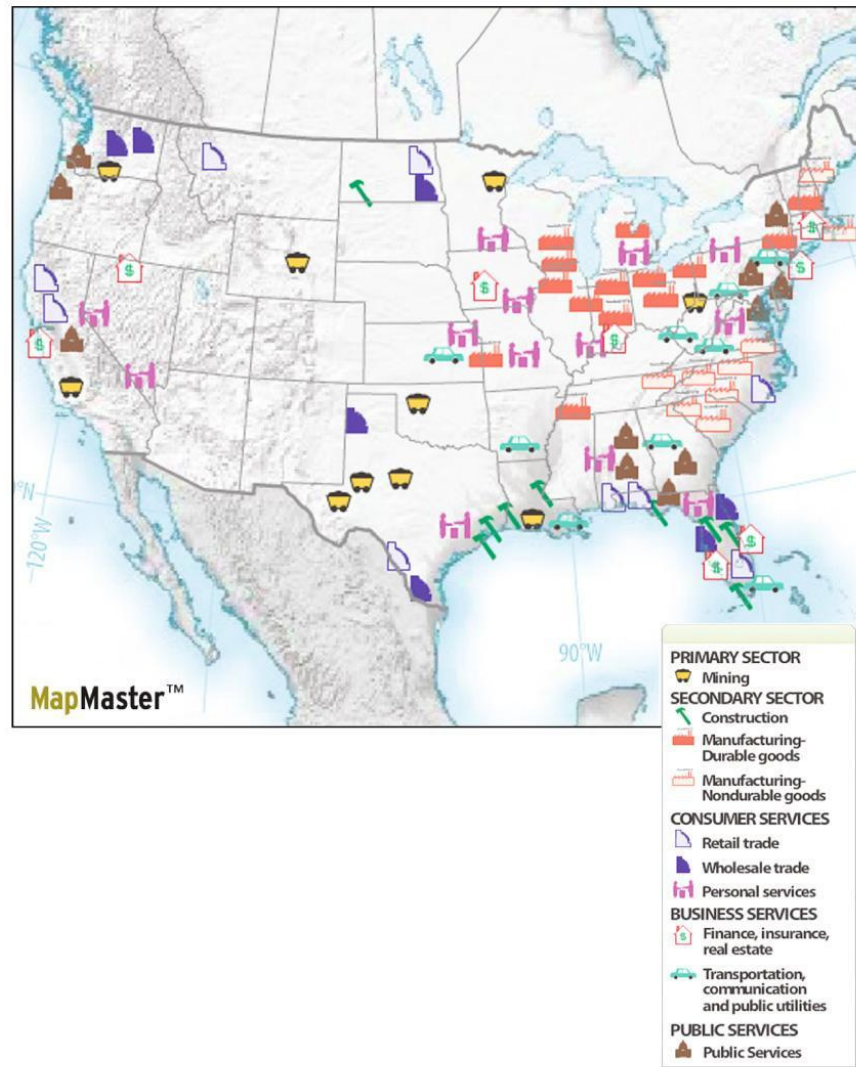
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ECONOMIC BASE OF U.S. CITIES

12.7 Economic Base

- Specializing in specific services
 - General businesses
 - Computing and data processing
 - High-tech industries
 - Military activity support service
 - Management-consulting services
 - Entertainment and recreation
 - Medical services
 - State capitals
 - Large universities
 - Military

12.7 Economic Base



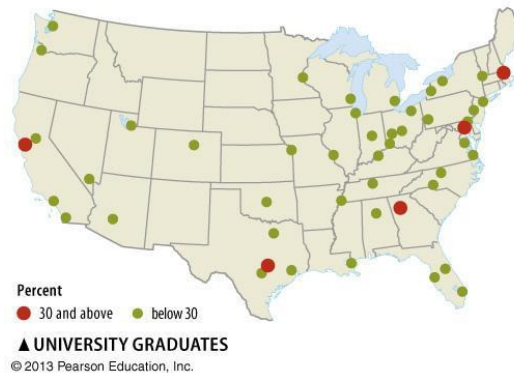
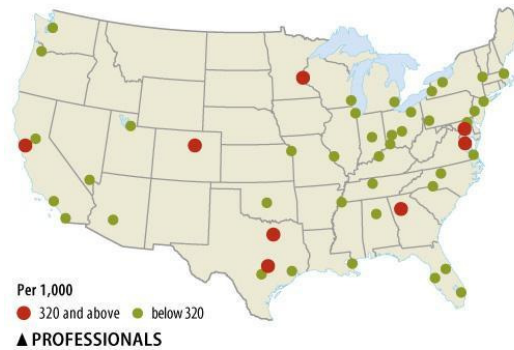
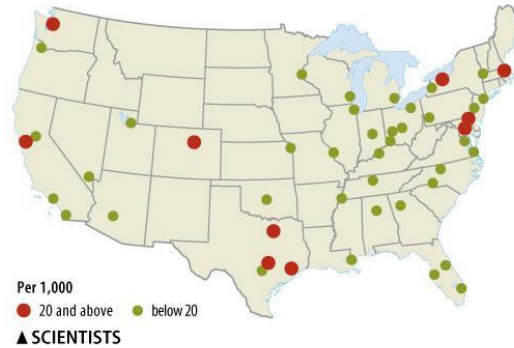
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ECONOMIC BASE OF U.S. CITIES

12.7 Economic Base

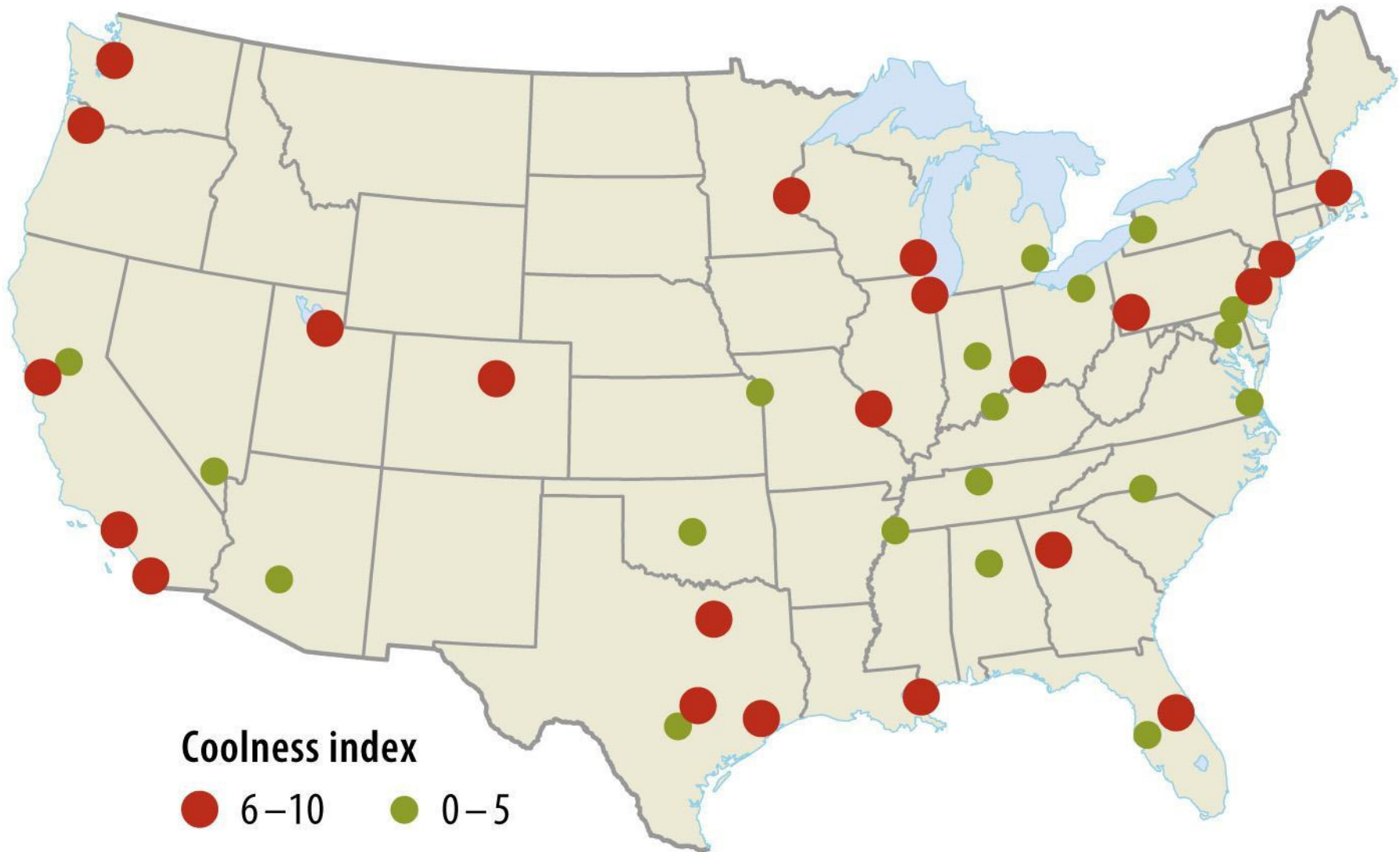
- Distribution of talent
 - Individuals possessing special talents are not distributed uniformly among cities
 - Measured as the combination of:
 - Percentage of people with college degrees
 - Percentage employed as scientists or engineers
 - Percentage employed as professionals or technicians
 - Talent correlates with cultural diversity
 - Reciprocal relationship between talented and a city's economic innovation

12.7 Economic Base



GEOGRAPHY OF TALENT

12.7 Economic Base



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GEOGRAPHY OF CULTURAL DIVERSITY

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12.8 Rural Settlements

- Dispersed rural settlements
 - Farmers living on individual farms
 - Isolated from neighbors rather than alongside
 - Originated with American colonists
 - Primarily in the Middle Atlantic colonies

12.8 Rural Settlements



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DISPERSED RURAL SETTLEMENT

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12.8 Rural Settlements

- Clustered rural settlements
 - Agricultural-based community
 - Number of families live in close proximity to each other
 - Fields surround a collection of houses and buildings
 - Farm structures are clustered with consumer services
 - Found in Europe and in New England

12.8 Rural Settlements



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CLUSTERED RURAL SETTLEMENT

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12.8 Rural Settlements

- Clustered linear rural settlements
 - Sometimes arranged in a geometric pattern
 - Buildings clustered along a road or body of water
 - to facilitate transportation or communications
 - Fields extend behind in long narrow strips

12.8 Rural Settlements



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CLUSTERED LINEAR RURAL SETTLEMENT

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12.8 Rural Settlements

- Clustered circular rural settlements
 - Central open space surrounded by structures
 - Von Thunen observed in Germany
 - Maasi in Sub-Saharan Africa also reside in this type of settlement
 - Circular settlements know as kraal villages

12.8 Rural Settlements



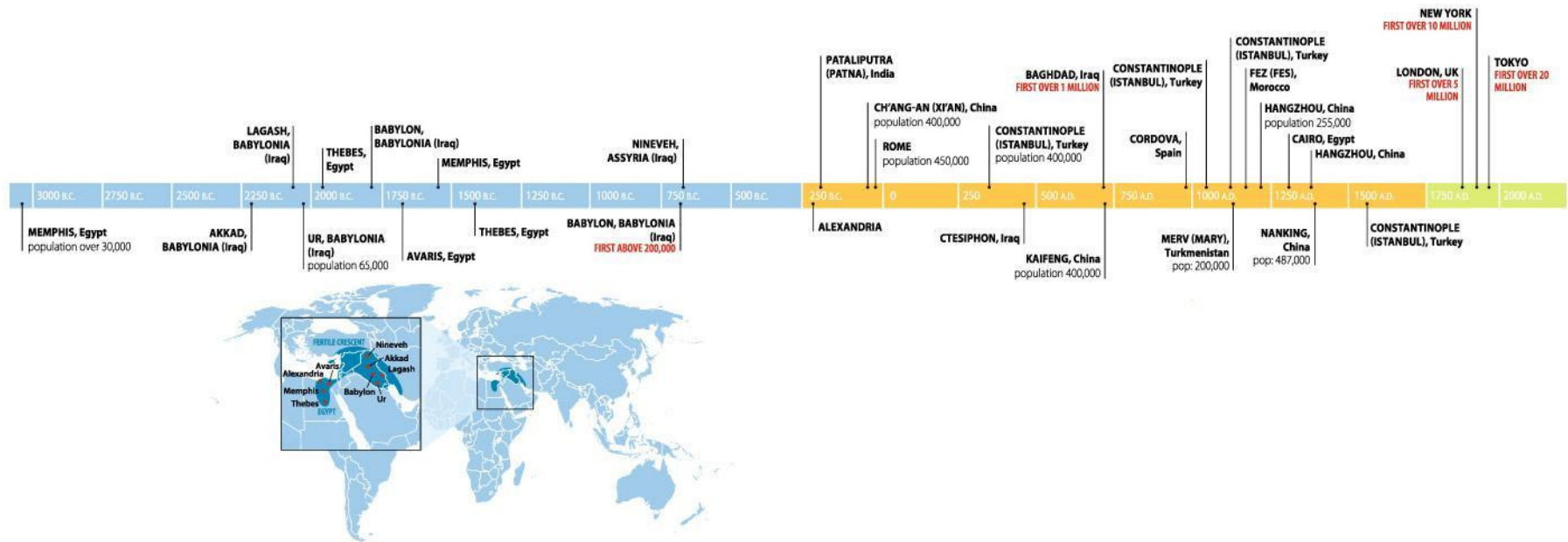
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CLUSTERED CIRCULAR RURAL SETTLEMENT

12.9 Settlements in History

- Earliest settlements had three services
 - Consumer services
 - First permanent settlements may have been for nomads
 - To bury and honor their dead
 - Business services
 - Groups could store surplus food and engage in trade
 - Public services
 - House political leaders, military forces
- Mesopotamia
- Egypt
- China
- Indus Valley

12.9 Settlements in History



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LARGEST SETTLEMENTS BEFORE 350 B.C.

12.9 Settlements in History



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MEMPHIS, EGYPT

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12.9 Settlements in History



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LARGEST SETTLEMENTS 350 B.C.–1750 A.D.

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12.9 Settlements in History



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LARGEST SETTLEMENT IN THE MIDDLE AGES: CONSTANTINOPLE

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12.9 Settlements in History



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LARGEST SETTLEMENT IN 1950: NEW YORK

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12.9 Settlements in History



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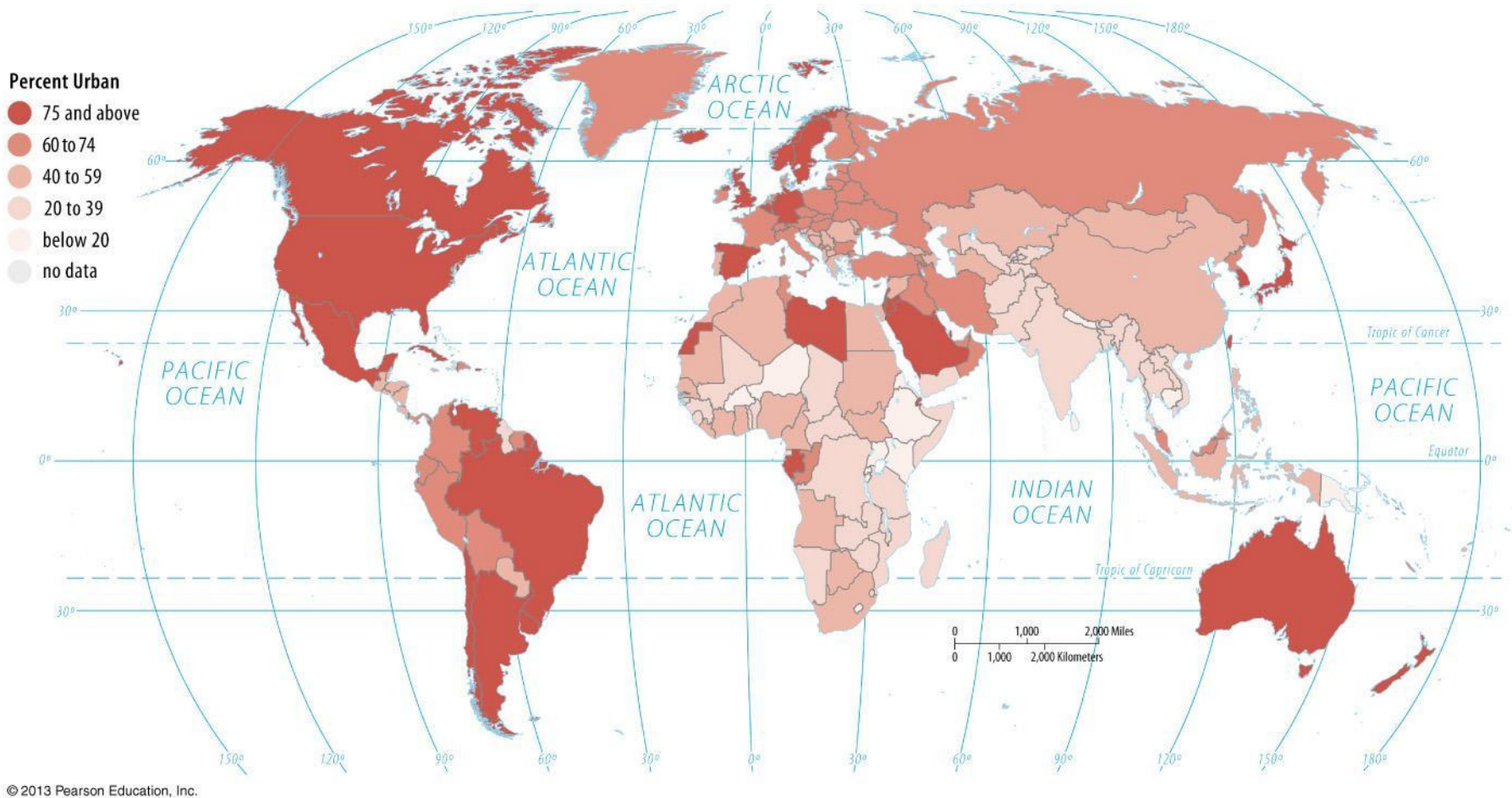
LARGEST SETTLEMENTS 1750–2010

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12.10 Urbanization

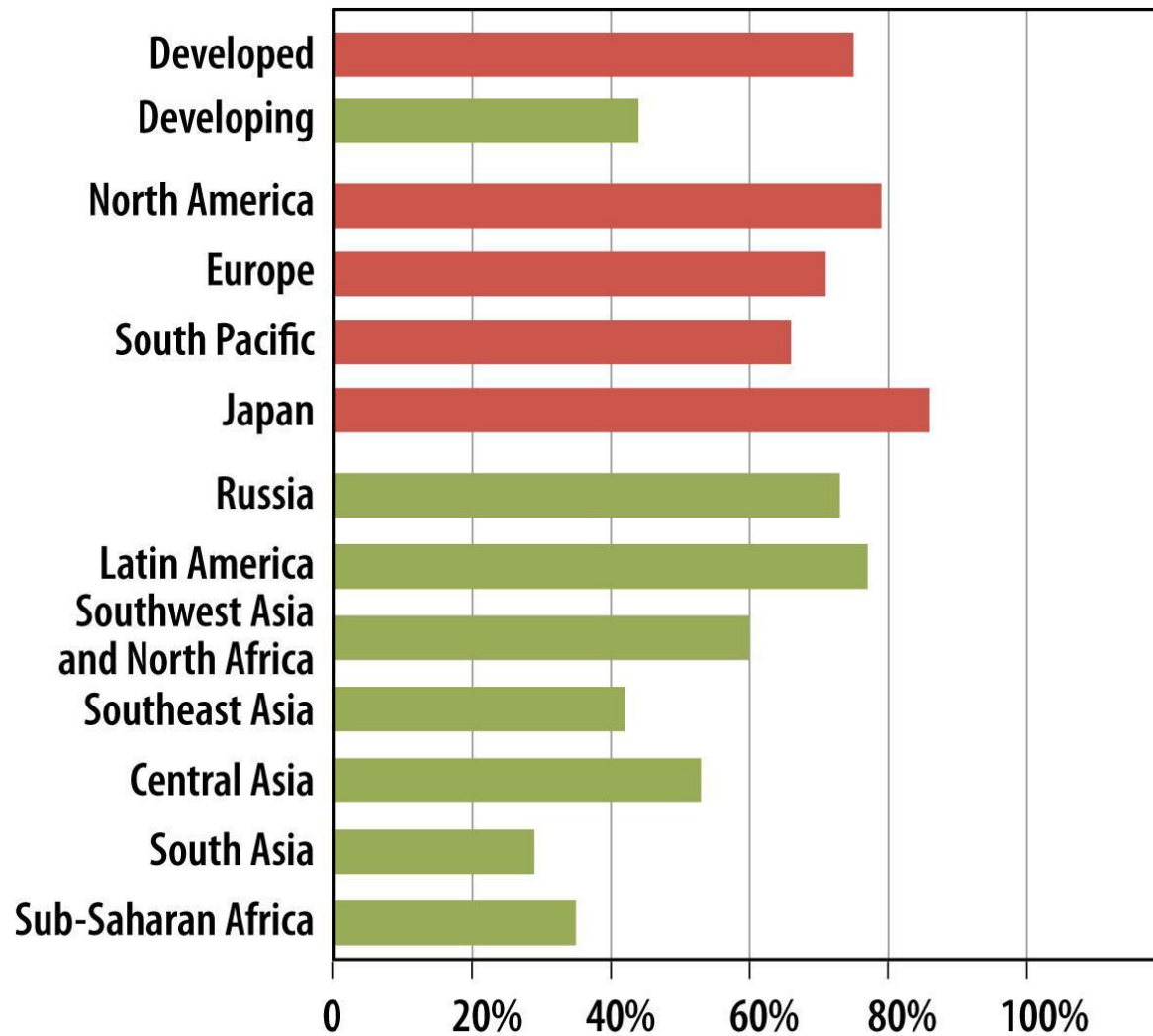
- Urbanization
 - The process by which the population of urban settlements grows
- Percentage of people in cities
 - 2008, over 50% urban globally
 - 1800 = 3%
 - 1850 = 6%
 - 1900 = 14%
 - 1950 = 30%
 - Measure of development
 - $\frac{3}{4}$ of more of the people in developed countries reside in urban areas
 - Result in a nation's change in its economic structure

12.10 Urbanization



PERCENT LIVING IN URBAN SETTLEMENTS

12.10 Urbanization



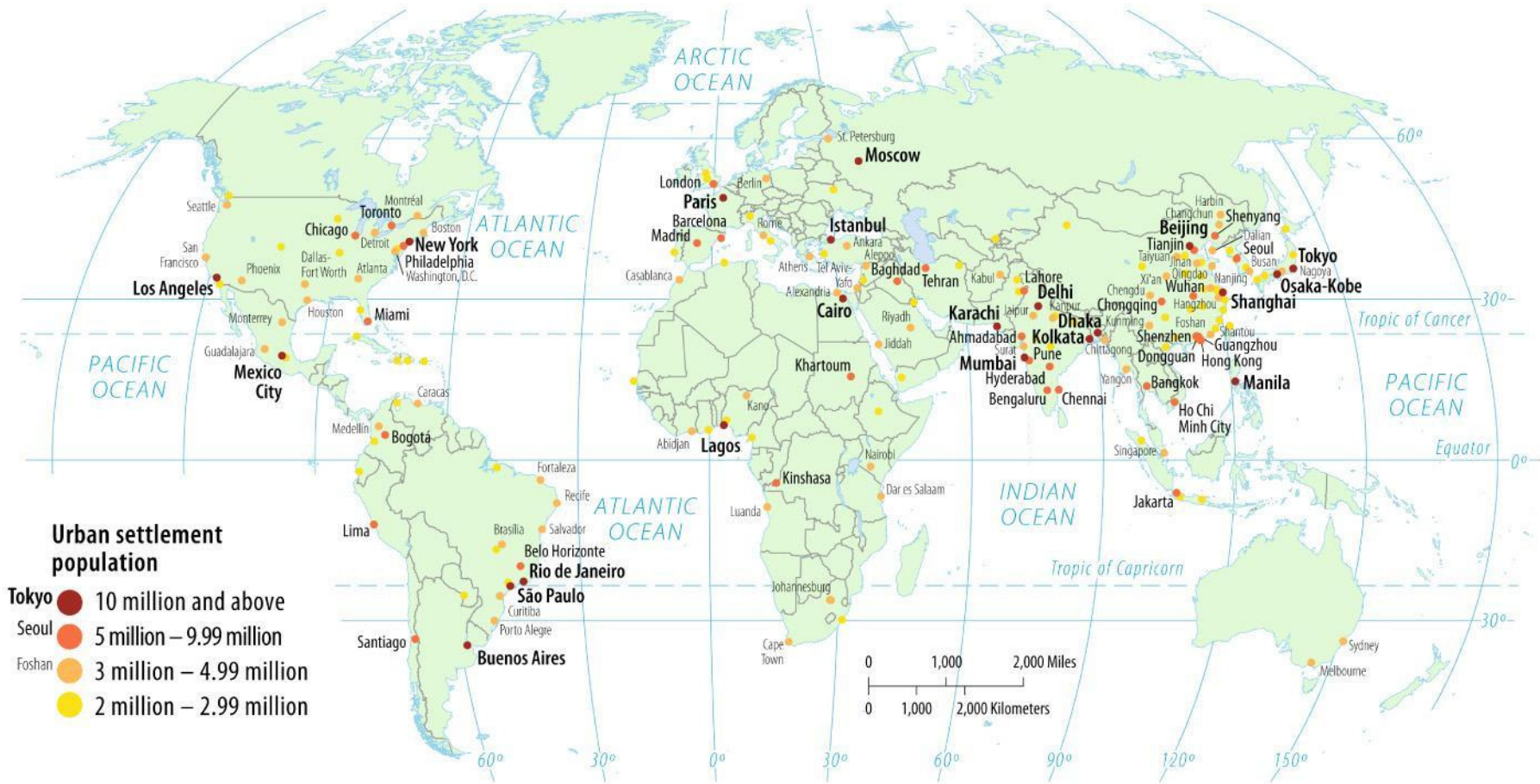
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PERCENT LIVING IN URBAN SETTLEMENTS BY REGION

12.10 Urbanization

- Number of people in cities
 - Developed countries
 - Have higher percentage of urban residents
 - Developing countries
 - Have more very large urban settlements
 - Difficult to identify the world's largest city
 - Each country's definition is unique
 - Developing countries dominate list of largest urban settlements
 - Several of the world's most populous cities do not rank among the world's most important business service centers

12.10 Urbanization



URBAN SETTLEMENTS WITH AT LEAST 3 MILLION INHABITANTS

12.10 Urbanization



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MEXICO CITY

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Chapter Review

- Key Questions

- Where are consumer services distributed?
- Where are business services distributed?
- Where are settlements distributed?