

ECONOMIC GEOGRAPHY
(Tertiary, Quaternary, Quinary)

Overview

- Tertiary Economic Activity
- Quaternary/Quinary Economic Activity
- Central Place Theory

Economic Geography

- How do people earn a living?
 - Physical environment
 - Cultural conditions
 - Technology
 - Politics/economic system
- How does that vary by place?
- How does it connect places?

Economic Geography

- **Primary** economic activity
 - Closest contact with natural resources
 - Generally, lowest income
- **Secondary:** value added (manufacturing)
- **Tertiary:** services for primary or secondary
- **Quaternary:** information-based services

Tertiary Economic Activity

Tertiary Economic Activity

- The tertiary sector of industry involves the provision of services to businesses as well as final consumers
- Services may involve the transport, distribution and sale of goods from producer to a consumer as may happen in wholesaling and retailing, or may involve the provision of a service, such as in pest control or entertainment

Tertiary Economic Activity

- Goods may be transformed in the process of providing a service, as happens in the restaurant industry or equipment repair
- However, the focus is on people interacting with people and serving the customer rather than transforming physical goods

Tertiary Economic Activity

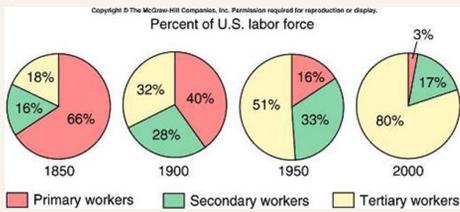


What are services?

- ❑ No tangible product
- ❑ “Leftover” economic activity
- ❑ Consumer vs. business vs. public
 - ❑ Retail vs. personal
 - ❑ Producer vs. transportation

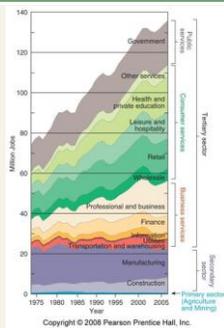
Tertiary Economic Activity

- ❑ Growth in employment in the U.S. since 1970 has been entirely in the tertiary sector, with the greatest increase in professional services



Employment Change in U.S.

- ❑ Growth in employment in the U.S. since 1970 has been entirely in the tertiary sector.



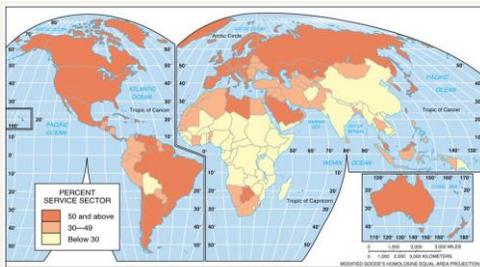
What are services

- ❑ Bifurcated wages, skills
- ❑ Labor more important, but fewer unions
- ❑ More women (“pink-collar” workers)
- ❑ Tertiary, quaternary, or quinary

Where are services?

- ❑ From local to global
- ❑ More developed = more service jobs
- ❑ “Post-industrial” economies

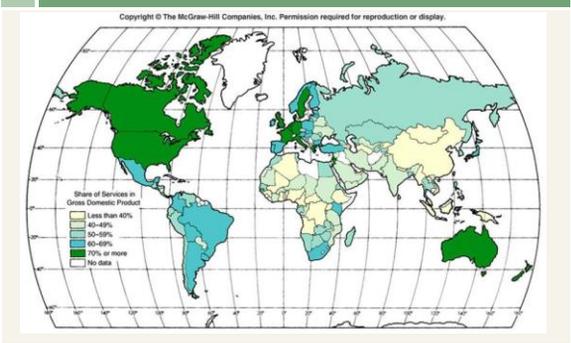
Where are services?



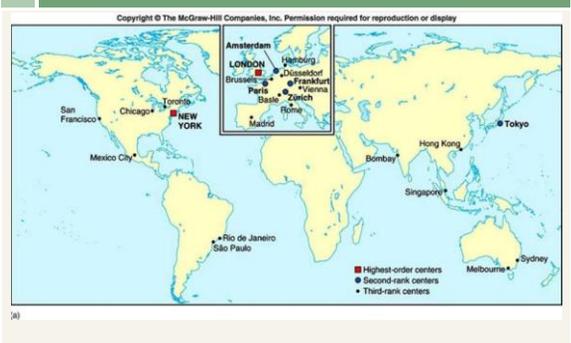
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Over half of workers are employed in the service sector in most MDCs, while a much smaller percentage are in the service sector in most LDCs.

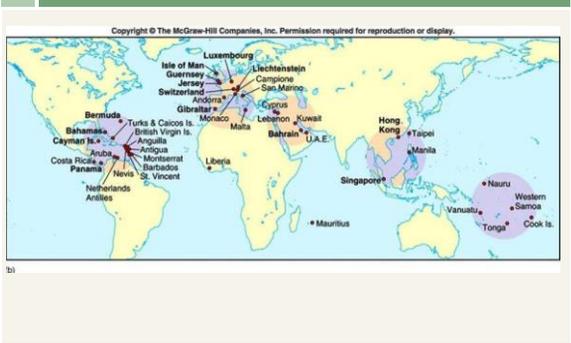
Where are services?



International financial centers



International financial centers



Quaternary/Quinary Sector

Three-sector hypothesis

- **Three-sector hypothesis** – is an economic theory which divides economies into three sectors of activity:
 - Extraction of raw materials (primary),
 - Manufacturing (secondary), and
 - Services (tertiary)
- It was developed by Colin Clark and Jean Fourastié

Three-sector hypothesis

- According to the hypothesis, the main focus of an economy's activity shifts from the primary, through the secondary and finally to the tertiary sector

Three-sector hypothesis

- ❑ **First phase:** Traditional civilizations
 - ❑ Primary sector: 70%
 - ❑ Secondary sector: 20%
 - ❑ Tertiary sector: 10%
- ❑ This phase represents a society which is scientifically not yet very developed, with a negligible use of machinery

Three-sector hypothesis

- ❑ **Second phase:** Transitional period
 - ❑ Primary sector: 20%
 - ❑ Secondary sector: 50%
 - ❑ Tertiary sector: 30%
- ❑ More machinery is deployed in the primary sector, which reduces the number of workers needed
- ❑ As a result, the demand for machinery production in the secondary sector increases

Three-sector hypothesis

- ❑ **Third phase:** Tertiary civilization
 - ❑ Primary sector: 10%
 - ❑ Secondary sector: 20%
 - ❑ Tertiary sector: 70%
- ❑ The primary and secondary sectors are increasingly dominated by automation, and the demand for workforce numbers falls in these sectors

Three-sector hypothesis

- It is replaced by the growing demands of the tertiary sector
- Today the tertiary sector has grown to such an enormous size that it is sometimes further divided into an information-based quaternary sector, and even a quinary sector based on non-profit services

Quaternary Sector

- The quaternary sector of industry is an extension of the Three-sector hypothesis of industrial evolution
- It principally concerns the intellectual services: information generation, information sharing, consultation, education and research and development

Quaternary Sector

- It is sometimes incorporated into the tertiary sector but many argue that intellectual services are significant enough to warrant a separate sector
- This sector evolves in well developed countries and requires a highly educated workforce

Quinary Sector

- The quinary sector of industry is the sector of industry suggested by some economists as comprising health, education, culture, research, police, fire service, and other government industries not intended to make a profit
- These industries are more often included in the tertiary or quaternary sectors

Quinary Sector

- The quinary sector also includes domestic activities such as those performed by stay-at-home parents or homemakers
- These activities are not measured by monetary amounts but make a considerable contribution to the economy

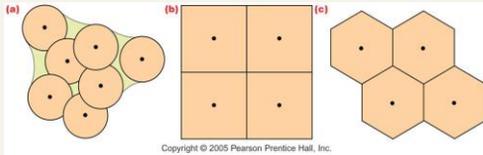
Central Place Theory

Distribution of Consumer Services

- Central place theory
 - Market area of a service
 - Size of market area
- Market area analysis
 - Profitability of a location
 - Optimal location within a market
- Hierarchy of services and settlements
 - Nesting of services and settlements
 - Rank-size distribution of settlements

Market Areas as Hexagons

- Hexagons are often used to delineate market areas because they are a compromise between circles, which have edges equidistant from the center but leave gaps, and squares, which don't leave gaps but whose edges are not equidistant from the center



Market Areas for Stores



Central Place Theory

- Central place theory is a geographical theory that seeks to explain the size and spacing of human settlements
- It rests on the notion that centralization is a natural principle of order and that human settlements follow it

Central Place Theory

- Created by the German geographer Walter Christaller, the theory suggests that there are laws determining the number, size and distribution of towns
- He argued that population alone couldn't measure the significance of a town

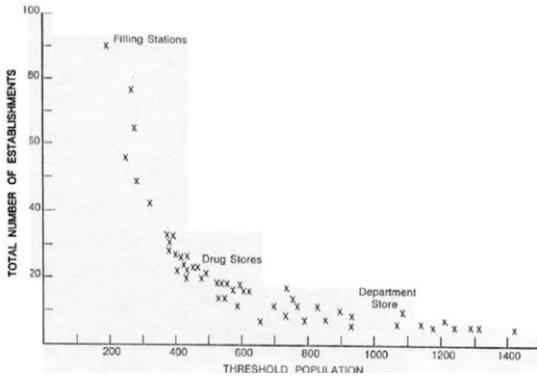
Central Place Theory

- How are services distributed?
- Why does a regular pattern exist?
- How are large and small cities connected?
- Central place: market center for region

Central Place Theory

- Range: how far are you willing to travel for a service?
- Threshold: how many customers do you need?
- Assume shortest distance possible
- Threshold < range
- Market area, not city size, matters

FIG. 7.A. THE RELATIONSHIP BETWEEN THE FREQUENCY OF OCCURRENCE OF CENTRAL FUNCTIONS AND THEIR THRESHOLD SIZES, SNOHOMISH COUNTY, WASHINGTON. (Source: Berry and Garrison, 1958B, Fig. 3.)

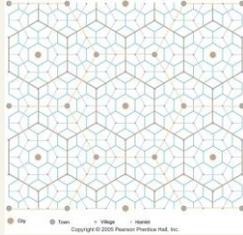


Central Place Theory

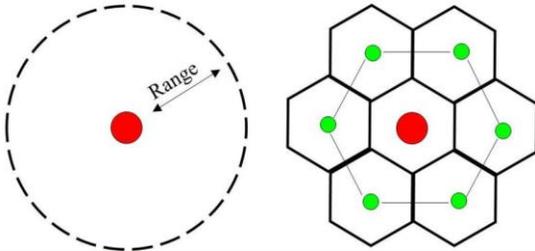
- Hexagonal market areas
 - Cover all space
 - No overlap
- First order: largest threshold and range
- Second order, etc.

Central Place Theory

- Market areas are arranged into a regular pattern according to central place theory, with larger settlements fewer and further apart.
- Also, services like universities will have a larger range than a primary or secondary school.



First order





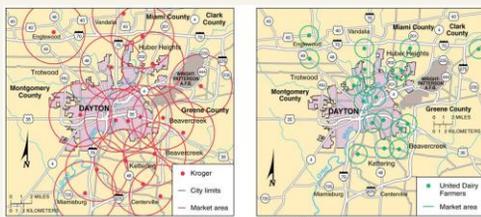
Central Place Theory

- Accessibility based on time, not distance
- Administrative principle
 - Political boundaries affect consumers
 - Lower taxes, more permissive rules

So what?

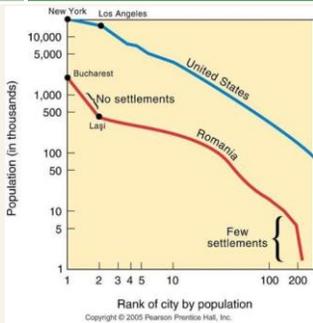
- Model for regional development
- Explains decline as well as growth
 - Neighborhood or city scale
- The point is not the hexagons, but the hierarchy and interconnectedness of places

Supermarket & Convenience Store Market Areas



Market area, range, and threshold for Kroger supermarkets (left) and UDF convenience stores in Dayton, Ohio. Supermarkets have much larger areas and ranges than convenience stores.

Rank-Size Distribution of Cities



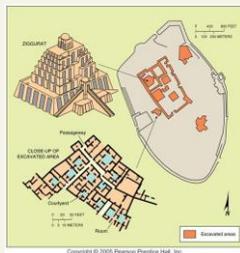
- Cities in the U.S. closely follow the rank-size distribution, as indicated by the almost straight line on this log scale
- In Romania, there are few settlements in two size ranges

Business Services & Settlements

- World cities
 - Ancient world cities
 - Medieval world cities
 - Modern world cities
- Hierarchy of business services
 - World cities
 - Command and control centers
 - Specialized producer-service centers
 - Dependent centers
- Economic base of settlements

Ancient Ur

- Ur, in modern-day Iraq, was one of the earliest urban settlements.
- The ziggurat, or stepped temple, was surrounded by a dense network of residences



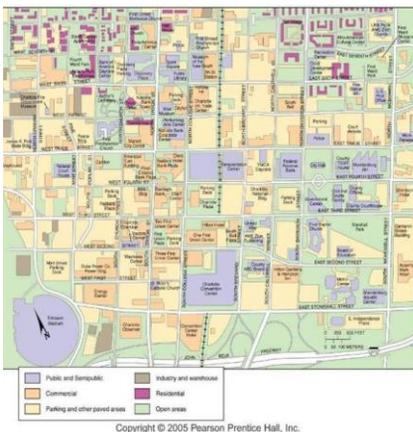
Geography of Talent

- Cities with high levels of talent (scientists, professionals, etc.) are also often cities with high levels of diversity



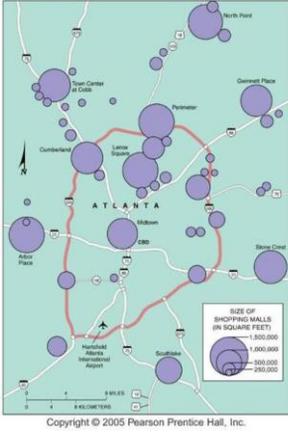
Clustering of Services

- Central business district (CBD)
 - Retail services in the CBD
 - High land costs in the CBD
 - Activities excluded from the CBD
 - European CBD's
- Suburbanization of businesses
 - Suburbanization of retailing
 - Suburbanization of factories and offices



CBD of Charlotte, NC

Charlotte's CBD is dominated by retail and office buildings. Public and semipublic buildings are also in the downtown area



Retail Centers in Atlanta

Most shopping malls in Atlanta and other cities are in the suburbs

The ideal location is near an interchange on an interstate highway beltway circling the city

