Cities and Urban Land-Use Patterns and Processes

AP Human Geography

Origin and Growth of Cities

Urbanization 城市化 is the growth in the share of people living in cities. It began with the agricultural surplus that freed some people from farming, and accelerated with the Industrial Revolution.

- **Urbanization rate** rises fastest in developing countries today, driven by rural-to-urban migration.
- A **suburb** 郊区 is a residential area on the edge of a city; **suburbanization** 郊区化 and **sprawl** 城市蔓延 spread cities outward.
- **Site** 地点 (the physical features of a place) and **situation** 区位 (its location relative to other places) explain why a city grew where it did.

Cities and Globalization

Some cities have influence far beyond their own country.

- **World cities** 世界城市 (also called **global cities**) — such as New York, London, and Tokyo — are command centres of the global economy, finance, and culture.
- Globalization links cities into networks; a decision in one world city can affect jobs on the other side of the planet.

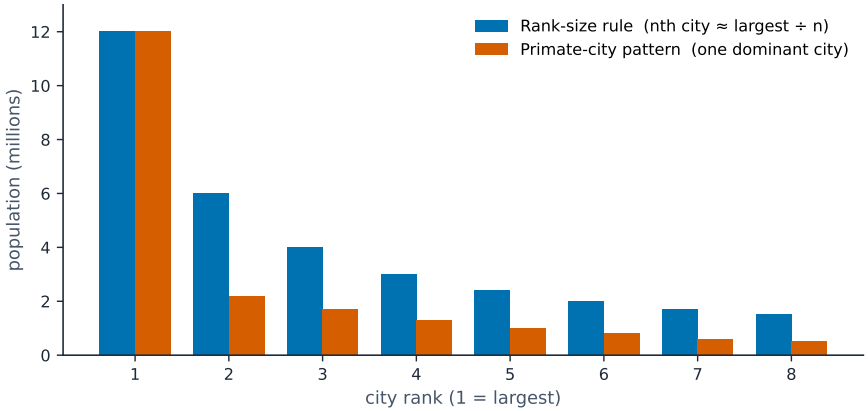
The Manhattan skyline in New York, a world city: its banks and company headquarters help run the global economy

Shibuya Crossing: world cities concentrate people, infrastructure and global connections

The Distribution of Cities

Cities within a country follow patterns of size and spacing.

- The **rank-size rule** 位序规模法则 says the nth-largest city is 1/n the size of the largest (the 2nd city is half the largest, the 3rd a third, and so on).
- A **primate city** 首位城市 is far larger than all others (Paris, Bangkok), dominating its country.
- **Central place theory** 中心地理论 (Christaller) explains the spacing of settlements: larger centres are fewer and farther apart and offer higher-order goods; their **market area** is the surrounding region they serve.



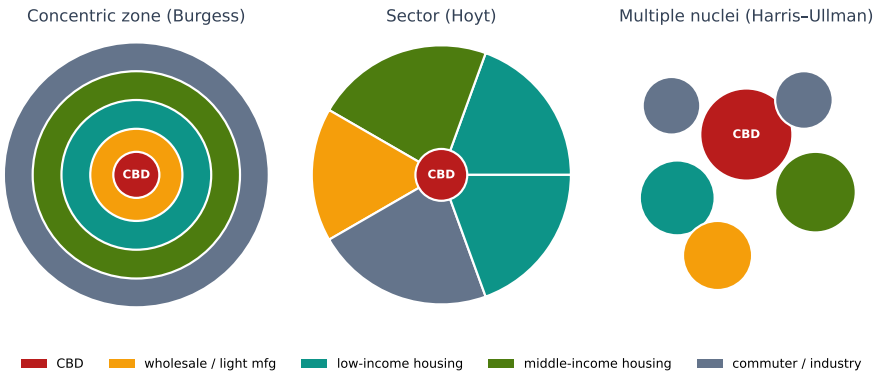
AP HuG · U6 · Rank-size rule vs a primate-city distribution

Under the rank-size rule the nth city is about 1/n the size of the largest; a primate pattern has one dominant city far bigger than the rest

Worked example (a real AP exam question). *"Compare the concept of a metacity with the concept of a world city."* (2024) A full-mark answer: *"A metacity is defined by size — a continuous urban area of more than 20 million people — while a world city is defined by influence, acting as a command centre for the global economy. A city such as Tokyo can be both, but a large metacity in a poorer country may not be a world city."* The command word **Compare** needs an explicit point of difference (size versus influence), not two separate definitions sitting side by side.

The Internal Structure of Cities

Three classic models describe how North American cities are arranged inside.



The concentric-zone, sector, and multiple-nuclei models each explain city land use differently

- **Concentric zone model** 同心圆模型 (Burgess) — rings around the **Central Business District (CBD)** 中央商务区, from inner-city to commuter suburbs.
- **Sector model** 扇形模型 (Hoyt) — land use grows outward in wedges along transport routes.
- **Multiple nuclei model** 多核心模型 (Harris–Ullman) — the city has several centres (nodes), not just one CBD, as it grows and specialises.

Developing-world cities have their own models (e.g. the Latin American, or Griffin–Ford, model with a spine of wealth from the centre).

Density, Land Use, and Infrastructure

Inside the city, land use and density change from centre to edge.

- **Density** is highest near the CBD (tall buildings, high land prices) and falls outward — the **bid-rent** curve again.
- **Zoning** 分区规划 laws separate land uses (residential, commercial, industrial).
- **Infrastructure** 基础设施 — roads, water, power, transit — must grow with the city; where it lags, **informal settlements** 非正规住区 (slums) may form.

An informal settlement (favela) on a hillside in Rio de Janeiro, built where housing and services could not keep up with fast urban growth

Urban Sustainability and Data

Planners use **data** and design to make cities work better.

- **Smart-growth** 精明增长, **mixed-use** development, and **transit-oriented** design fight sprawl and car dependence.
- **Greenbelts** 绿带 limit outward growth; **urban renewal** 城市更新 rebuilds decayed areas, but can cause **gentrification** 中产阶级化 that displaces poorer residents.
- Census and geospatial **data** guide where to put schools, transit, and services.

Challenges of Urban Changes and Sustainability

Rapid urban growth brings problems:

- **Social**: housing shortages, segregation, and the displacement caused by gentrification.
- **Environmental**: air and water pollution, the **urban heat island** 城市热岛 effect, waste, and heavy resource use.
- **Economic**: strained budgets, congestion, and the cost of extending infrastructure to sprawling edges.

Sustainable cities try to grow **up** rather than **out**, invest in public transit, and mix homes with jobs and services.

Exam tips

- Separate a city's **site** (physical setting) from its **situation** (position relative to others).
- Apply the **rank-size rule** (the nth city is about 1/n of the largest) and spot a **primate city**.
- Match a city description to the right model: **concentric zone**, **sector**, or **multiple nuclei**.
- Link **land value** to density — costly central land is used by building upward.
- Discuss change with **suburbanization**, **sprawl**, and **gentrification**, and **smart-growth** responses.