

Cities and Urban Land-Use

AP Human Geography • Unit 6

AP Human Geography



Cities and Urban Land-Use

What we will cover

- 1 Urbanization
- 2 World cities
- 3 Size & distribution
- 4 Internal structure
- 5 Density & infrastructure
- 6 Sustainability challenges

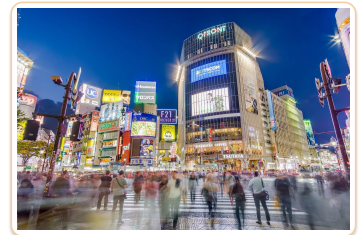
1 Growth of cities

Cities and Urban Land-Use

↳ Growth of cities

Urbanization

- **Urbanization** 城市化 is the rising *share* of people in cities; it began with the agricultural surplus that freed people from farming, and its *rate* is fastest in developing countries today.
- A city's **site** 场地 is its physical setting; its **situation** 位置 is its position to others.
- Transport, communication, and industrial jobs drive growth.



Cities concentrate people and activity

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↳ Growth of cities

World cities and globalization

- A **megacity** 特大城市 has over 10 million people.
- A **world city** 世界城市 is a command centre of the global economy.
- World cities form an interconnected global network.

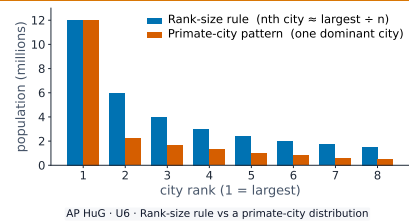


World cities command global networks

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↳ Growth of cities

The Distribution of Cities



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

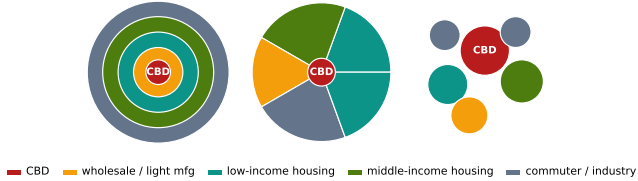
Cities and Urban Land-Use └ Growth of cities	Cities and Urban Land-Use └ Growth of cities
How cities sit in a country, and inside themselves	What a growing city costs, and what planners do
central place theory 中心地理论 Christaller: larger centres are fewer and farther apart, each serving a wider area of smaller ones three US models concentric-zone, sector and multiple-nuclei – three ways to describe the same North American city Griffin–Ford the Latin American model: a spine of wealth running out from the centre, poverty at the edge bid-rent 竞租 density and land price are highest at the CBD and fall outward – which is why the tall buildings are central Where infrastructure 基础设施 lags behind growth, informal settlements 非正规住区 fill the gap.	social housing shortages, segregation, and the displacement caused by gentrification 中产阶级化 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 services to a sprawling edge the response smart growth 精明增长, mixed-use and transit-oriented design, greenbelts 绿带, urban renewal 城市更新 A sustainable city grows up rather than out, and census and geospatial data decide where the schools and transit go.

Cities and Urban Land-Use └ Structure of cities	Cities and Urban Land-Use └ Structure of cities
2 Structure of cities	Size and distribution
	- The rank-size rule 位序-规模法则: the nth city $\approx 1/n$ of the largest. - A primate city 首位城市 is more than twice the second city. - The gravity model 引力模型: interaction rises with size, falls with distance.

Cities and Urban Land Use └ Structure of cities	Cities and Urban Land Use └ Structure of cities
Worked example – rank-size or primate?	Internal structure
Country A: largest 12M, 2nd 6.1M, 4th 3.0M. Country B: largest 12M, 2nd 2.5M. Which fits rank-size? A: rank-size predicts $2nd = \frac{12}{2} = 6M$ and $4th = \frac{12}{4} = 3M$. Both match, so A follows rank-size. B: $12 > 2 \times 2.5 = 5$, so B has a primate city. Test the second city first: more than double $\Rightarrow$ primate, and you can stop. Only if it is not primate do you check whether the whole $1/n$ ladder holds.	Concentric zone model 同心圆模型: rings around a CBD. Sector model 扇形模型: wedges along transport routes. Multiple nuclei model 多核心模型: several centres.

The concentric-zone

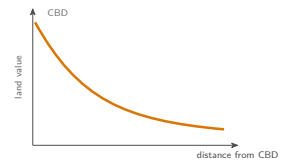
Concentric zone (Burgess) Sector (Hoyt) Multiple nuclei (Harris-Ullman)



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

Density and infrastructure

- **Land value** 地价 peaks at the CBD, pushing buildings up.
- **Zoning** 分区规划 sets what is built where.
- **Infrastructure** 基础设施 enables growth and development.



land value peaks at the CBD (bid-rent)

3 Urban challenges

Change and sustainability

- **Suburbanization** 郊区化 and **urban sprawl** 城市蔓延 consume land.
- **Gentrification** 士绅化 raises values and can displace residents.
- **Smart growth** 精明增长 and **greenbelts** 绿化带 support sustainability.



Uneven growth shapes who gets housing

Key points

Site = physical; **situation** = relative position

Rank-size vs **primate**-city distributions

Three models: **concentric**, **sector**, **multiple nuclei**

Sprawl + gentrification are key urban challenges

Worked example – the command word is the question

“Compare the concept of a metacity with the concept of a world city.” (real AP question)

“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. Tokyo can be both, but a large metacity in a poorer country may not be a world city.”

Compare needs an explicit point of difference (size versus influence), not two definitions sitting side by side.

Exam tips

- Separate a city's **site** (physical setting) from its **situation** (position relative to others).
- Apply the **rank-size rule** (the n th 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.

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Recap

Unit 6 – key takeaways

1 Site vs situation

physical setting vs position relative to others

2 Rank-size

n th city $\approx 1/n$ of the largest; primate city

3 Models

concentric zone, sector, multiple nuclei

4 Change

suburbanization, sprawl, gentrification, smart growth

Check yourself

- 1 Metacity or world city: defined by influence?
- 2 What does the rank-size rule predict?
- 3 What is a primate city?
- 4 Name one cost of rapid urbanization.

Answers 1. world city 2. the n th city is $1/n$ the size of the largest 3. one city far larger than all the rest 4. informal settlements, strained infrastructure