

Population and Migration

AP Human Geography ■ Unit 2

AP Human Geography



What we will cover

- 1 Distribution & density
- 2 Composition
- 3 Dynamics & the DTM
- 4 Malthus & policies
- 5 Women & aging
- 6 Migration causes
- 7 Migration effects

Distribution and density

- People cluster where climate, water, and soil are favourable.
- **Arithmetic density** 算术密度 = people per land; **physiological density** 生理密度 = people per farmland.
- **Carrying capacity** 环境承载力: the population an area's resources can support.

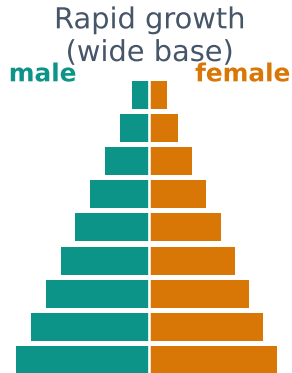


People cluster where resources allow

Population composition

- A **population pyramid** 人口金字塔 shows age and sex structure.
- A wide base = high fertility; a narrow base = low fertility, aging.
- **Dependency ratio** 抚养比 compares dependents to the working-age group.

Population composition



Slow growth
(straight sides)



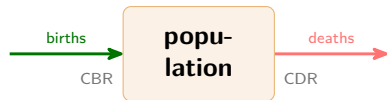
Decline / aging
(narrow base)



age cohorts stack from young (bottom) to old (top)

Population dynamics

- **CBR** 粗出生率 and **CDR** 粗死亡率 give **RNI** 自然增长率 = $(\text{CBR} - \text{CDR}) / 10 \%$.
- **TFR** 总和生育率 near 2.1 is replacement level.
- Doubling time $\approx 70 \div \text{RNI}$.



$$\text{RNI} = \text{CBR} - \text{CDR}$$

births in, deaths out; the gap is growth

Worked example – rates to doubling time

Nigeria: CBR = 37, CDR = 12 (per 1000). Find the RNI and the doubling time.

$$\text{RNI} = \frac{37 - 12}{10} = 2.5\% \text{ per year}$$

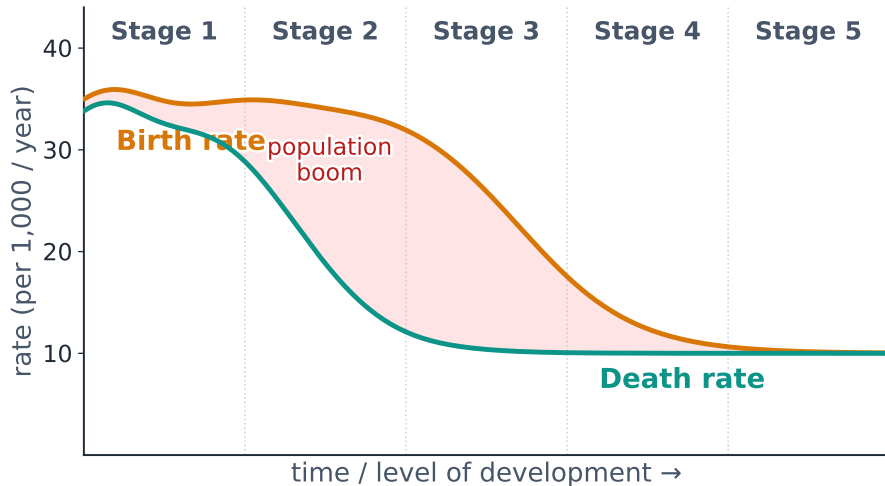
$$\text{doubling time} \approx \frac{70}{2.5} = 28 \text{ years}$$

Divide by 10: CBR and CDR are per 1000, but RNI is a percent. Skip that step and you report 25% – a century of growth in one year.

The Demographic Transition Model

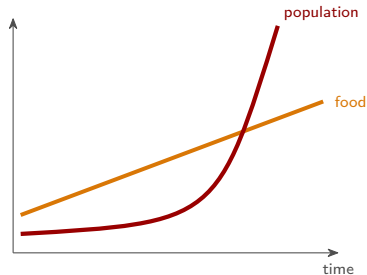
- Stage 1 high/high; Stage 2 death falls (fast growth); Stage 3 birth falls; Stage 4 low/low; Stage 5 decline.
- The death rate falls before the birth rate.
- Limitation: based on Europe; ignores migration and policy.

The Demographic Transition Model



Malthus and population policies

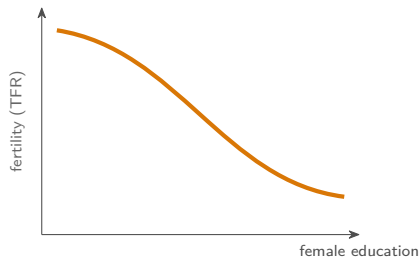
- **Malthus** 马尔萨斯: population outgrows food – underestimated technology.
- **Pro-natalist** 鼓励生育 policies encourage births; **anti-natalist** 限制生育 discourage them.
- Strict anti-natalist policy can skew the sex ratio and age the population.



*population (exponential) outgrows food
(linear)*

Women and aging

- Female education and employment lower fertility.
- Aging (low fertility + long life) raises the **elderly dependency ratio** 老年抚养比.
- Responses: raise retirement age, encourage immigration.



more education, fewer children

Causes of migration

- **Push factors** 推力 drive people away; **pull factors** 拉力 attract them.
- **Intervening obstacles** 阻碍因素 block a move; **intervening opportunities** 中介机会 divert it.
- **Forced** 被迫迁移 migration gives no choice; **voluntary** 自愿迁移 is chosen.



Push, pull, and the choice to move

Causes of migration

PUSH factors (origin)

- war, conflict
- poverty, no jobs
- natural disaster
- persecution
- poor services

migrant



*intervening
obstacle
(distance, cost,
borders)*

PULL factors (destination)

- safety, peace
- jobs, higher pay
- family reunion
- freedom
- better services

Effects of migration

- **Remittances** 侨汇 raise income in the origin country.
- **Brain drain** 人才流失: loss of skilled workers weakens the origin.
- Origin ages; destination gains young workers.



Migration reshapes origin and destination

Key points

The **DTM** tracks
births/deaths across five stages

TFR 2.1 = replacement;
below it, population falls

Migration = **push** +
pull, forced or voluntary

Migration brings **remit-
tances** but **brain drain**

Worked example – the command word is the question

“Explain ONE reason why the rate of natural increase (RNI) in urban areas may vary significantly from RNI in rural areas in the same country.” (real AP question)

“In cities the cost of living – housing, schooling, childcare – is higher, so urban families tend to have fewer children. Fewer births lower the crude birth rate, so the urban RNI falls below the rural RNI, where children still help with farm work.”

Explain wants a **cause-and-effect chain**: name the reason **and follow it all the way to the RNI**. A bare fact – “cities are expensive” – earns **zero**.

Check yourself

- 1 In which DTM stage does the death rate fall while births stay high?
- 2 What did Malthus predict, and why was he wrong?
- 3 A wide pyramid base means what?
- 4 Push or pull: a famine at home?

Answers 1. stage 2 – so population grows fastest 2. food would outrun supply; technology raised yields 3. high birth rate, a young population 4. push