

Industrial and Economic Development

AP Human Geography ■ Unit 7

AP Human Geography



What we will cover

- 1 Industrial Revolution
- 2 Economic sectors
- 3 Measures of development
- 4 Theories
- 5 Trade & restructuring
- 6 Sustainable development

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Industry and sectors

The Industrial Revolution

- Production shifted from hand tools to machines and factories.
- It began in Britain and diffused outward via technology and capital.
- It drove **urbanization** 城市化 as workers moved to cities.
- Industry clustered where **resources** (coal, iron) met **transport** (rivers, ports, railways), and **break-of-bulk points** 转运点 – ports and rail hubs where cargo changes transport – became key locations.



Machines still reshape production

Economic sectors

- **Primary** 第一产业 (extract),
secondary 第二产业 (make),
tertiary 第三产业 (services),
- **quaternary** 第四产业 (information),
quinary 第五产业 (top decisions).
- Development shifts jobs from primary toward services.

The sectors, and what development does to them

Primary sector

Extracts from the earth: farming, fishing, forestry, mining. Poorer economies lean on it.

Secondary sector

Makes things: manufacturing and construction, increasingly automated.

Tertiary sector

Services: retail, transport, health, education – the sector that grows as a country develops.

Quaternary sector

Information: research, IT, finance.

Quinary sector

The top decisions: senior government and corporate leadership.

Development **shifts jobs** from the primary sector toward services and information – the sector mix is itself a development measure.

Weber's least-cost theory

the question

where does a factory locate?

three costs

transport, **labour**, and **agglomeration** 集聚 – the saving from clustering near similar firms

bulk-reducing 原料指向型

the product weighs less than its inputs (steel, copper), so locate near the **raw material**

bulk-gaining 市场指向型

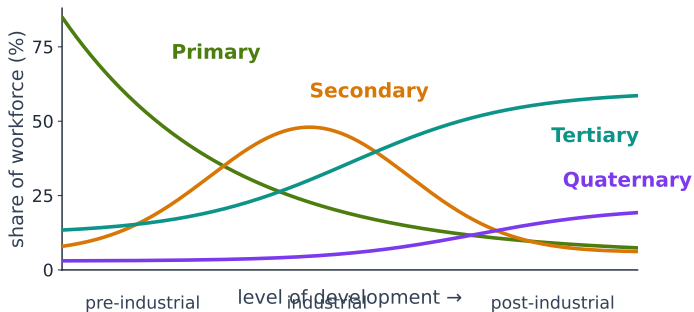
the product weighs more than its inputs (drinks, cars), so locate near the **market**

the sectors

poorer economies lean on the **primary** sector, richer ones on **tertiary and quaternary**

Ask which weighs more, the input or the output. That one question decides most Weber items before any calculation.

As development rises



AP HuG · U7 · Clark-Fisher sector shift with development

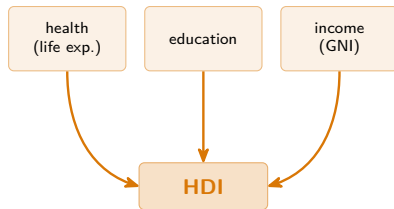
As development rises, workers move from primary (farming) to secondary (industry) to tertiary and quaternary (services)

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Development

Measures of development

- **Gross domestic product (GDP) per capita** 人均国内生产总值 – output per person; common but incomplete.
- The **Human Development Index (HDI)** 人类发展指数 adds education and life expectancy, scoring 0 to 1.
- The **Gender Inequality Index (GII)** 性别不平等指数 and **Gini coefficient** 基尼系数 add social detail.
- The **informal economy** 非正规经济 is untaxed and unrecorded.



HDI combines three measures

What development means, and how it is measured

development 发展

the process of improving people's economic *and* social well-being – not output alone

GDP per capita 人均国内生产总值

economic output per person – simple, and blind to how it is shared

HDI 人类发展指数

income, **life expectancy** and **education** combined – the standard composite

GII 性别不平等指数

gender inequality: reproductive health, empowerment, labour participation

Gini coefficient 基尼系数

how unequally income is distributed *within* a country

Two countries with equal GDP per capita can differ by decades of life expectancy. That gap is exactly why HDI exists.

Measuring development, four ways

GDP per capita 人均 GDP

economic output per person – common, and incomplete: it says nothing about who gets it

HDI 人类发展指数

income, life expectancy and schooling combined into one number

Gini coefficient 基尼系数

how unequally that income is shared inside the country

GII 性别不平等指数

the Gender Inequality Index: health, empowerment and labour-market gaps

As economies develop more women enter paid work and education, raising household income and lowering fertility. **Microfinance** 小额信贷 – small loans, often to women – starts businesses where banks will not.

Worked example – why GDP alone misleads

Two countries share a GDP per capita of \$20,000. X: life expectancy 79, mean schooling 12 yr. Y: 61 and 6 yr. Do they have the same development?

No. GDP per capita is only the **income** strand. Y's shorter lives and thinner schooling drag both other strands down, so Y's **HDI** is **far lower** on the same income.

An average also hides **distribution**: the same mean fits a broad middle class or a rich few. Say **which strand** the measure misses – that is the mark.

Theories of development

- **Rostow** 罗斯托: five stages from traditional to mass consumption.
- **Wallerstein** 沃勒斯坦: core, semi-periphery, periphery.
- **Dependency theory** 依附理论: poor countries kept dependent.

Three theories, three different verdicts

Rostow's stages of growth

Every country climbs **five stages**: traditional society, pre-conditions for take-off, take-off, drive to maturity, age of mass consumption. Optimistic – and it assumes every country can.

Wallerstein's world-systems theory

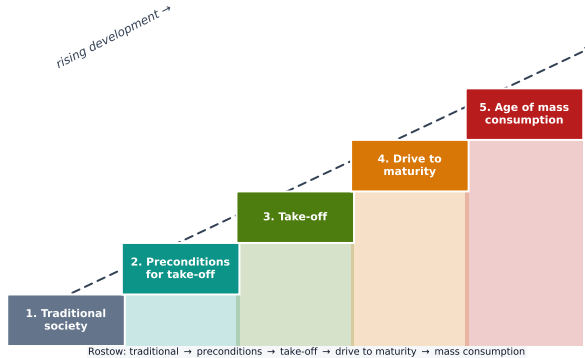
A wealthy **core**, a poorer **periphery** and a middle **semi-periphery**. The core stays rich partly by using the periphery's cheap labour and raw materials.

Dependency theory

Poor countries are kept dependent by the terms of trade, not merely behind on a ladder.

An essay that contrasts **Rostow's stages of growth** with **Wallerstein's world-systems theory** is doing the CED's own comparison.

Rostow's five stages of economic growth



Rostow sees development as a climb through five stages; critics say it ignores global inequalities

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Trade and sustainability

Trade and restructuring

- **Comparative advantage** 比较优势: specialise and trade.
- **Tariffs** 关税 tax imports; free-trade agreements remove barriers.
- **Outsourcing** 外包, **deindustrialization** 去工业化, and **special economic zones** 经济特区 reshape industry.



Trade corridors move goods worldwide

How countries trade, and who sets the terms

comparative advantage 比较优势

each country specialises in what it produces relatively most efficiently, and trades for the rest

complementarity 互补性

trade needs one country to want what the other has spare – advantage alone is not enough

trade blocs 贸易集团

the EU, USMCA, ASEAN – lower barriers inside, common barriers outside

WTO 世界贸易组织

sets and enforces the rules, and adjudicates disputes

neoliberal policies 新自由主义

deregulation, privatisation and free trade – credited with growth, criticised for widening inequality

Comparative advantage predicts *what* is traded; the blocs and the rules decide *on whose terms*. An answer needs both halves.

Container ports link global trade



Container ports link global trade: goods, capital and ideas move through the world economy

Sustainable development

- **Sustainable development** 可持续发展: meet needs without harming the future.
- An **ecological footprint** 生态足迹 measures resource use.
- **Ecotourism** 生态旅游 and the UN **Sustainable Development Goals** 可持续发展目标 guide action.



Development that leaves room for the future

Sustainable development: three pillars, and what it looks like

Three pillars

It balances **economic growth**, **social fairness** and **environmental protection** – growth that ruins the resource base is not development.

Ecotourism

Ecotourism 生态旅游 brings paying visitors to protected areas, so the forest or reef earns more standing than cleared.

Small-scale renewables

Village solar, micro-hydro and improved cookstoves develop an economy *while* protecting the environment.

The SDGs

The UN's **Sustainable Development Goals (SDGs)** set shared targets for poverty, health, education and climate – today's common yardstick.

Definition to keep: meeting present needs **without harming** the ability of future generations to meet theirs.

Key points

Five **sectors**: primary →
quinary shift with development

HDI beats GDP: adds
health and education

Rostow vs **world-
systems**/dependency theory

Comparative advantage drives
trade; balance sustainability

Worked example – the command word is the question

“Explain how deindustrialization has affected the economy of core countries.” (real AP question)

“As factories closed or moved abroad, core-country economies shifted away from manufacturing toward services and high-technology work, so many manufacturing workers lost their jobs while new tertiary and quaternary jobs grew.”

Explain wants the **mechanism**: name the change (loss of manufacturing) **and** carry it through to its economic effect. “Unemployment” alone is **not enough**.

Exam tips

- Classify jobs by **sector** (primary through quinary) and tie the mix to the development level.
- Prefer the **HDI** over GDP per capita – it adds education and life expectancy.
- Contrast **Rostow's stages** with **world-systems** (core and periphery) and **dependency** theory.
- Use **comparative advantage** and the effect of **tariffs** in any trade answer.
- Bring in **sustainable development** and the **ecological footprint** for evaluation marks.

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Recap

Unit 7 – key takeaways

1

Sectors

primary through quinary; mix tracks development

2

HDI

prefer it over GDP – adds education and life expectancy

3

Theories

Rostow vs world-systems vs dependency

4

Trade

comparative advantage and tariffs; footprint for evaluation

Check yourself

- 1 Which sector is extraction of raw materials?
- 2 What does deindustrialization do to core economies?
- 3 Is GDP per capita alone a good development measure?
- 4 What does Rostow assume every country follows?

Answers 1. primary 2. shifts them from manufacturing to services 3. no – it hides inequality; use HDI 4. the same linear stages of growth