

Industrial and Economic Development Patterns and Processes

AP Human Geography

The Industrial Revolution

The **Industrial Revolution** 工业革命 (from the 1700s) shifted production from hand tools in homes to machines in factories, first in Britain and then worldwide. It transformed geography:

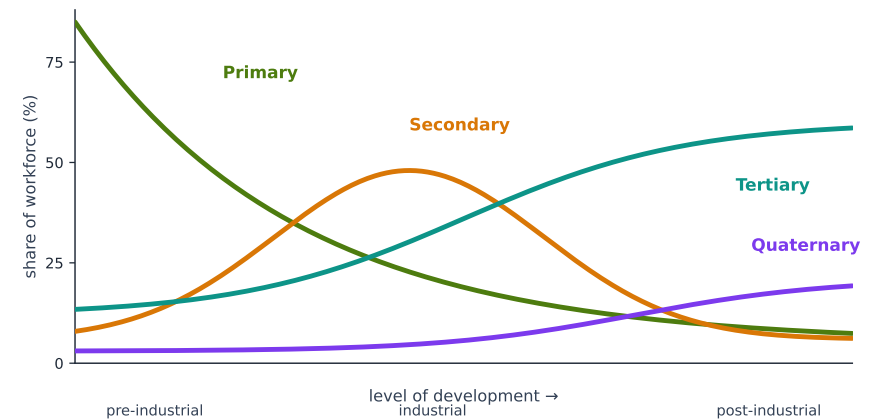
- Industry clustered where **resources** (coal, iron) and **transport** (rivers, ports, rail-ways) came together.
- It powered **urbanization** as workers moved to factory cities, and it began the huge, uneven spread of wealth between world regions.
- **Break-of-bulk points** 转运点 (ports, rail hubs where cargo changes transport) became key industrial locations.



A container port: ships, cranes, and rail meet here, so goods change transport. Such break-of-bulk points became major industrial locations

Economic Sectors and Patterns

An economy's jobs fall into sectors, and the mix shifts as a country develops.



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)

- **Primary sector** 第一产业 — extracting raw materials (farming, mining, fishing).
- **Secondary sector** 第二产业 — manufacturing raw materials into goods.



Robots welding on a factory line: the secondary sector turns raw materials into finished goods, increasingly with automation

- **Tertiary sector** 第三产业 — services (retail, transport, healthcare).
- **Quaternary** 第四产业 and **quinary** sectors — information, research, and top

decision-making.

Poorer economies lean on the primary sector; richer ones on the tertiary and quaternary. **Weber's least-cost theory** 韦伯最小成本理论 explains where factories locate, balancing the cost of transport, labour, and agglomeration.

Worked example (a real AP exam question). “Explain how deindustrialization has affected the economy of core countries.” (2025) A full-mark answer: “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.” The command word **Explain** wants the mechanism: name the change (loss of manufacturing) **and** carry it through to its economic effect. A one-word answer like “unemployment” is not enough.

Measures of Development

Development 发展 is the process of improving people's economic and social well-being. It is measured in several ways:

- **Gross Domestic Product (GDP) per capita** 人均国内生产总值 — economic output per person; a common but incomplete measure.
- The **Human Development Index (HDI)** 人类发展指数 combines income, education (years of schooling), and health (life expectancy) into one score from 0 to 1 — a fuller picture than money alone.
- The **Gender Inequality Index (GII)** 性别不平等指数 and the **Gini coefficient** 基尼系数 (income inequality) add social detail.

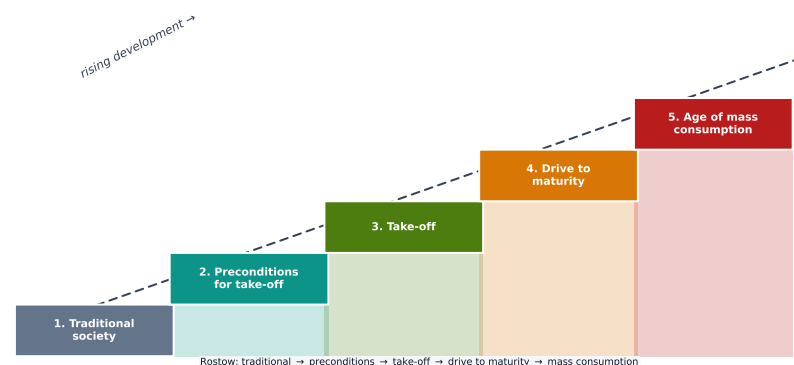
Women and Economic Development

The role of **women** is both a cause and a measure of development.

- As economies develop, more women enter paid work and education, which raises household income and lowers fertility (linking back to the demographic transition).
- **Microfinance** 小额信贷 — small loans, often to women — helps start businesses in poorer regions.
- Gender gaps in pay, land ownership, and schooling hold development back; closing them is one of the UN's key goals.

Theories of Development

Two famous theories explain **why** some regions are rich and others poor.



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

- **Rostow's stages of growth** 罗斯托发展阶段 — every country climbs through **five stages**: traditional society, preconditions for take-off, take-off, drive to maturity, and age of mass consumption. It is optimistic but assumes all countries can follow the same path.
- **Wallerstein's world-systems theory** 沃勒斯坦世界体系理论 divides the world into a wealthy **core** 核心, a poorer **periphery** 边缘, and a middle **semi-periphery** 半边缘. The core stays rich partly by using the periphery's cheap labour and resources — a **dependency** 依附 view that challenges Rostow.

Trade and the World Economy

Countries are linked by trade, which reshapes development.

- **Comparative advantage** 比较优势 means each country gains by specialising in what it makes most efficiently and trading for the rest.
- **Complementarity** and **neoliberal** free-trade policies, plus organisations like the WTO and trade blocs (EU, USMCA), have deepened **globalization**.
- **Outsourcing** 外包 and global supply chains move manufacturing to lower-cost countries, changing where — and by whom — the world's goods are made. **Special economic zones** 经济特区 attract this investment with tax breaks.



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

Sustainable Development

Sustainable development 可持续发展 meets present needs without harming the ability of future generations to meet theirs.

- It tries to balance **economic growth**, **social fairness**, and **environmental protection** — the “three pillars”.
- **Ecotourism** 生态旅游 and small-scale, renewable projects can develop an economy while protecting the environment.
- The UN’s **Sustainable Development Goals (SDGs)** 可持续发展目标 set shared targets for poverty, health, education, and climate — a common way to measure progress today.



A solar farm: sustainable development balances growth with long-term environmental capacity

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.