

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:

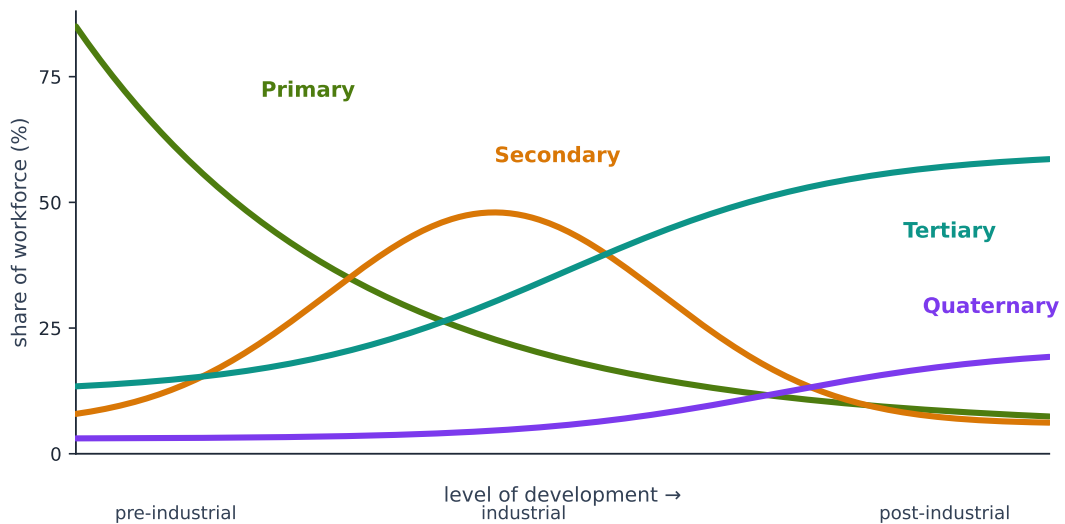
- Industry clustered where **resources** (coal, iron) and **transport** (rivers, ports, rail-ways) came together.
- It powered **urbanization** as workers moved to factory cities, and it began the huge, uneven spread of wealth between world regions.
- **Break-of-bulk points** 转运点 (ports, rail hubs where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

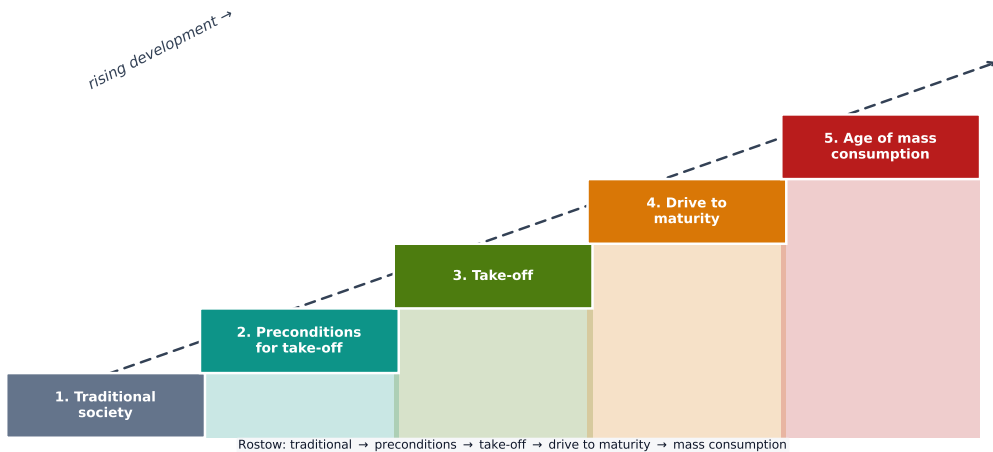
Women and Economic Development

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.