
ECONOMIC
DEVELOPMENT

Economic growth V.S Economic development

Economic growth: increases in **total real output** produced by an economy (real GDP) over time; may also refer to increase in **real output per capita**.

Economic development: A **multidimensional concept** involving a sustained increase in living standards that implies higher levels of income and thus greater access to goods and services, better education and health, a better environment to live in as well as individual empowerment.

Development Economics

1. **Understanding economic development**
   - Sustainable development
   - Measuring development
2. **Barriers to economic growth and economic development**
   - Poverty cycles
   - Economic barriers
   - Political and social barriers
3. **Strategies to promote economic growth and economic development**

Sustainable Development

The conflicts between environmental and economic goals

Economic goals

– efforts to increase the quantities of output produced and consumed.

Environmental goals

– the preservation of the environment.

- **Focusing on economic goals while disregarding the environment may result in its irreversible destruction.**

- **Focusing on environmental goals while disregarding the economy may result in humankind's inability to satisfy needs and wants.**

The concept of sustainability

The **sustainability** refers to maintaining the ability of the environment and the economy to continue to produce and satisfy needs and wants into the future for future generations; depends crucially on **the preservation of the environment over time.**

Balance between environmental and economic goals:

→The **sustainable development:**
Development involving the use of resource in the present to meet **present needs and wants** in ways that do not deplete or degrade them, so that **future generations** will have enough resources to meet their own needs; refers to growth and development that does not deplete or degrade resources.

Sustainable development goals

Sustainable Development Goals (SDGs) are a set of **17 goals** developed at the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012; continue and expand upon the work begun years earlier by the Millennium Development Goals (MDGs), which ran until 2015. Are used by international organizations and national governments in their fight against poverty and efforts to achieve sustainable economic development.

- The **objective** was to produce a set of universal goals that meet the urgent **environmental, political and economic challenges** facing our world.

SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY

2 ZERO HUNGER

3 GOOD HEALTH AND WELL-BEING

4 QUALITY EDUCATION

5 GENDER EQUALITY

6 CLEAN WATER AND SANITATION

7 AFFORDABLE AND CLEAN ENERGY

8 DECENT WORK AND ECONOMIC GROWTH

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

10 REDUCED INEQUALITIES

11 SUSTAINABLE CITIES AND COMMUNITIES

Read text book: P736-738

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

14 LIFE BELOW WATER

15 LIFE ON LAND

16 PEACE AND JUSTICE STRONG INSTITUTIONS

17 PARTNERSHIPS FOR THE GOALS

THE GLOBAL GOALS
For Sustainable Development

Two types of environmental damage

Types of environmental damage:

- **Pollution of affluence** – arises mainly from **industrial production** based on use of fossil fuels and using up common pool resources like clean air, rivers, lakes and so on, leading to climate change. (both in developing and developed countries)

- **Pollution of poverty** – due to economic activities pursued by very poor people in an effort to survive. It occurs mainly in developing countries, and arising from **production and consumption activities** that are due to poverty.

The relationship between sustainability and poverty

- **Poverty** is a cause of environmental destruction due to the **overexploitation by poor people of their scarce environmental resources.** (negative externalities involving overuse of common pool resources)
  - Poor people usually have higher birth rates and higher population growth → open up new lands for agriculture
  - Lack of modern agricultural inputs that preserve the soil's fertility → deplete the soil's natural minerals, making soils less productive.
  - Poor people cut down forests (deforestation) in search of new farmland
  - Lacking modern energy sources → cut down forests to obtain firewood
  - Poor people move to fragile lands in mountains and hills, causing soil erosion.
  - Overgraze animals on pasture lands, depleting the nutrients there.
  - And so on…

Measuring development

Economic growth vs. Economic development

- **Economic growth** – Increases in **total real output** produced by an economy (real GDP) over time; may also refer to increases in **real output (real GDP) per capita** (or per person).

- **Economic development** – Broad-based rises in **standards of living and well-being of a population**, particularly in developing countries. It involves increasing income levels and reducing poverty, reducing income inequalities and unemployment, and increasing provision of and access to basic goods and services such as food and shelter, sanitation, education and health care services.

*Economic growth does not guarantee the economic development will occur.

Three core values of development
- by Denis Goulet, 1971

- **Life sustenance** – access to basic services (merit goods) such as education and health care services, as well as satisfaction of basic needs like food, clothing and shelter.
- **Self-esteem** – it involves the feeling of self-respect; development provides individuals with dignity, honor and independence.
- **Freedom** – it involves freedom from want, ignorance and squalor; it is freedom to make choices that are not available to people who are subjected to conditions of poverty.

Human development

- by Amertya Sen, 1998

Human development is a process of expanding human freedoms: the freedom to satisfy hunger; to be adequately fed; to be free of preventable illnesses; to have adequate clothing and shelter; to have access to clean water and sanitation; to be able to read, write and receive an appropriate education; to be knowledgeable; to be able to find work; to enjoy legal protection; to participate in social and political life; and, in general, to have the freedom to develop one's potential and lead a full and productive life.

Distinction between:

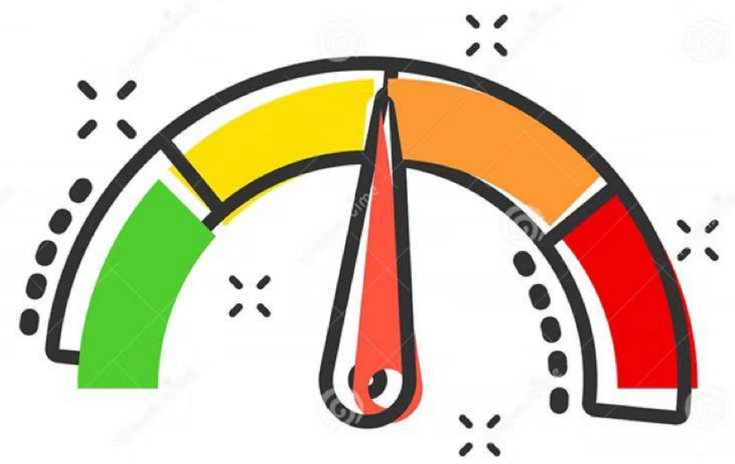
- **Income poverty** – it occurs when income falls below a nationally or internationally determined poverty line.
- **Human poverty** – it involves deprivations and the lack of opportunities that allow individuals 'to lead a long, healthy, creative life and to enjoy a decent standard of living, freedom, dignity, self-esteem and the respect of others'.

Usefulness of indicators

An **indicator** is a measurable variable that indicates the state or level of something being measured.

Indicator are useful for:

- Monitoring how a country changes (develops) over time with respect to the attribute measured by the indicator.
- Making comparisons between countries with respect to the attribute
- Assessing how well a country is performing with respect to particular goals or targets of development.
- Devising appropriate policy measures to deal with specific problems.



Measuring economic development

1.Individual indicators

Individual attributes and indicators

1. GDP per capita and GNI per capita
2. GDP per capita and GNI per capita in terms of PPPs
3. Health indicators
4. Education indicators
5. Economic inequality indicators
6. Social inequality indicators
7. Energy indicators
8. Environmental indicators

2.Composite indicators

1. The Human Development Index (HDI)
2. Inequality-adjusted Human Development Index (IHDI)
3. Gender Inequality Index
4. Happy Planet Index

Individual indicators:

1.1 GDP per capita and GNI per capita

- **Recall**: what is the differences between these two indicators?
  - **GDP** is an indicator of the **value of output** produced within a country.
  - **GDP per capital** is a better indicator of the level of output per person produced in a country.

  - **GNI** is an indicator of the **income (or value of output) received by the residents of a country**, usually within a year.
  - **GNI per capita** is a better indicator of the standards of living of a country, because it represents income per person received by the residents.

Individual indicators:
1.1 GDP per capita and GNI per capita

- The difference in the size of GDP per capita and GNI per capita
- Key →labor and capital
  - **GNI = GDP + Income from abroad – Income sent abroad**

→Inflow of money

- **Workers** abroad (labor) send part of their wages back homes (worker remittances)
- **Corporations** located abroad (capital) send their profits back home (profit repatriation)

→Outflow of money

- **Foreign Workers** abroad send part of their wages back homes.
- **Foreign corporations** send their profits back to their country

Examples

	GNI per capita ($)	GDP per capita ($)	GNI as % of GDP
Ireland	53,370	68,885	77.5
Philippines	3,660	2,989	122.5

- If the value <100, GNI <GDP
- If the value>100, GNI > GDP

- GNI as % of GDP is identical to GNI per capita as % of GDP per capita.

Individual indicators:

1.2 GDP per capita and GNI per capita in terms of PPPs

- Different countries have different price levels, GDP per capita and GNI per capita might misleading if we want to make comparison across countries.

→**Purchasing Power Parity (PPP)** exchange rates make them comparable across countries.

- For poorer countries starting at the top of the table, column 2 figures are higher than column 1.
- For the wealthier countries at the bottom of the table, column 2 figures are lower than column 1.
- Why??

→Price level tend to be lower in countries with lower per capita GDPs, and higher in countries with high per capita GDPs.

	1 GDP *per capita* (converted into US$ by use of exchange rates)	2 GDP *per capita* (converted into US$ by use of US$ PPP)
Burundi	292	735
Pakistan	1548	5539
Philippines	2989	8360
China	8827	16 842
Argentina	14 398	20 829
Czech Republic	20 380	38 020
Japan	42 583	42 067
United States	59 928	59 928
Norway	75 704	62 183
Switzerland	80 343	66 307
World	10 749	17 100

Source: *World Bank, World Development Indicators*

Individual indicators:

1.3 Health indicators

- **Life expectancy at birth** – the average number of years of life in a population.
- **Infant mortality** – the number of infant deaths from the time of birth until the age of one, per 1000 live births.
- **Maternal mortality** – the number of woman who die per year as a result of pregnancy-related causes, per 100,000 live births.

Country	GNI per capita US$ PPP 2017	Life expectancy at birth (years) 2017	Infant mortality rate (per 1000 live births) 2017	Maternal mortality ratio (per 100 000 live births) 2017
Norway	64 760	83	2	5
United States	61 120	79	6	14
Finland	46 880	81	2	3
United Kingdom	44 090	81	4	9
Japan	43 540	84	2	5
Greece	28 640	81	4	3
Turkey	27 640	76	10	16
Russia	25 120	72	7	25
Chile	23 780	80	6	22
China	16 800	76	8	27
Sri Lanka	12 520	75	8	30
Armenia	10 060	75	11	25
India	6950	69	32	174
Angola	6450	62	54	477
Moldova	6100	72	13	23
Zambia	3900	62	42	224
Chad	1920	53	73	856
Uganda	1820	62	35	343
Sierra Leone	1510	52	82	1360
Burundi	730	58	43	712
World	17 043	72	29	216

- Check the data and find some connection between these indicators.
- Explain the rationale behind.
- Any exception?
- Try to explain.

Individual indicators:
1.3 Health indicators

- For any given level of income per capita, life expectancy is higher, and infant mortality and maternal mortality are lower, when there are:
  - Adequate public health services and prevention of communicable diseases.
  - Adequate health care services with broad access by the entire population.
  - A healthy environment, including safe drinking water, sewerage and sanitation, and low levels of pollution.
  - An adequate diet and avoidance of malnutrition.
  - A high level of education of the entire population
  - Absence of serious income inequalities and poverty.

Individual indicators:
1.3 Health indicators

- **The discussion of health indicators illustrates that:**
  - GNI per capita (or any other income or output measure) is an **insufficient indicator** of health outcomes.
  - Countries with low GNI per capita, can do more with their available resources to meet economic development goals. They can reallocate resources towards provision of more social services and merit goods, improving the institutions through which these services are delivered, as well as reducing poverty.
  - In some developed countries, the presence of poverty in wealthy societies that make people on low incomes subject to similar deprivations as poor people in developing economies.

Individual indicators:
1.4 Education indicators

- Education indicators measure levels of educational attainment:
  - **The adult literacy rate** - measures the percentage of people aged 15 or more in the population who can read and write.
  - **Primary school enrolment** - measures the percentage of school-age children who are enrolled in primary school (elementary school).
  - **Lower Secondary school enrolment** - measures the percentage of children enrolled in the lower years of secondary school (high school)

Country	GNI *per capita* US$ PPP 2017	Total adult literacy rate (% of people aged 15 and above) 2015–2016	Primary school enrolment (% of children of official school age) 2010–2016	Lower secondary school enrolment (% of children of official school age) 2010–2016
China	16 800	96.4	97	–
Colombia	14 120	94.7	94	77
Peru	12 900	94.2	92	86
Sri Lanka	12 520	91.9	–	–
Ecuador	11 350	94.4	97	–
Armenia	10 060	99.7	100	98
Morocco	8050	68.5	89	–
Bolivia	7350	92.5	97	–
India	6950	71.2	83	–
Angola	6450	71.1	76	31
Moldova	6100	99.4	–	–
Zambia	3900	63.4	87	49
Chad	1920	22.3	50	13
Uganda	1820	78.4	87	17
Sierra Leone	1510	48.1	76	36
Burundi	730	85.6	85	11

- Check the data and find some connection between these indicators.
- Explain the rationale behind.
- Any exception?
- Try to explain.

Individual indicators:

1.4 Education indicators

Countries can achieve universal literacy and universal primary education even if they have relatively low per capita incomes, provided their governments allocate enough resources to education services, and ensure that all children have access to these.

Individual indicators:

1.5 Economic inequality indicators

- Already covered in Chapter 12
  - Lorenz Curves
  - Gini coefficients
  - Poverty lines
  - Minimum income standards
  - Multi-dimensional Poverty Index

Individual indicators:

1.6 Social inequality indicators

- There are many indicators of social inequality. Examples including:
  - Adolescent fertility rates
  - Prevalence of undernourishment
  - Inequality in life expectancy
  - Inequality in education
  - Gender inequalities
  - Population vulnerable to poverty
  - Child malnutrition
  - Infants lacking immunization
  - Child labor
  - Old-age pension recipients
  - Homeless people due to natural disaster
  - birth registration

Individual indicators:
1.7 Energy indicators

- There are numerous energy indicators.
- ‘indicators for sustainable development: guidelines and methodologies’

→identified 30 indicators, these indicators are classified according to three dimensions:

- **Social dimension**
  - Share of households (or population) without electricity or commercial energy, or heavily dependent on non-commercial energy.
  - Share of household income spent on fuel and electricity.
- **Economic dimension**
  - Energy use per capita
  - Renewable energy share in energy
- **Environmental dimension**
  - Air pollutant emissions from energy systems
  - Rate of deforestation attributed to energy use.

Individual indicators:

1.8 Environmental indicators

- **Environmental indicators** help provide a description of developments affecting the environment that can be used to monitor changes and progress toward meeting environmental objectives.

- **Examples of environmental indicators**:
  - CO2 emissions per unit of GDP or per capita
  - Emissions of other hazardous substances
  - Bird species threatened
  - Fish species threatened
  - Measures of ozone layer depletion
  - Measures of waste generation
  - Measures of waste water treatment
  - Measures of intensity of water use

2. Composite indicators:

- **Composite indicator**, summary measures of more than one dimension of development. By including more than one dimension, composite indicators are more accurate measures of development.
- **United Development Programme (UNDP)** produces a Human Development Report every year with analyses of various development issues as well as statistical information.

2.1 The Human Development Index (HDI)

2.2 The Inequality-adjusted Human Development Index (IHDI)

2.3 The Gender Inequality Index (GII)

2.4 The Happy Planet Index

Composite indicators:

1. The Human Development Index

Human Development Index (HDI): a composite indicator of development which includes indicators that measure three dimensions of development: ① income per capita, ② levels of health and ③ educational attainment; is considered to be a better indicator of development than single indicators such as GNI per capita.

- The best-known and most widely used index of the UNDP.
- **Three dimensions** are measured by the following indicators:
  - A long and healthy life is measured by life expectancy at birth
  - Access to knowledge is measured by mean years of schooling and expected years of schooling
  - A decent standard of living is measured by GNI per capita (US$ PPP)
- Value of each dimension: between 0 and 1. (0 being the lowest, 1 being the highest).
- The composite index is **the average over the three dimension**. The countries are ranked according to their HDI values

Composite indicators:
1. The Human Development Index

Country	HDI rank 2017	Human Development Index 2017	Life expectancy at birth	Expected years of schooling	Mean years of schooling	GNI *per capita* US$ PPP
Spain	25	0.891	83.3	17.9	9.8	34 258
Luxembourg	26	0.914	82.0	14.0	12.1	65 016
Tajikistan	127	0.650	71.2	11.2	10.4	3317
Namibia	128	0.647	64.9	12.3	6.8	9387
India	129	0.640	68.8	12.3	6.4	6353
Myanmar	147	0.578	66.7	10.0	4.9	5567
Nepal	148	0.574	70.6	12.2	4.9	2471

- Selected countries are listed in order of **declining HDIs**.
- Countries have been selected to show how it is possible to achieve similar levels of human development with very different levels of GNI per capita.
- HDI is very useful as a tool for governments wishing to devise policies focusing on economic and human development.

Composite indicators:

2.1 The Human Development Index

- **Learning from the HDI:**
  - GNI (or GDP) per capita used alone can be a poor measure of the different dimensions of development.
  - Many countries, even with their given levels of GNI per capita, are capable of making significant improvements in the well-being of their populations by making different choices regarding the resources allocated to health, education and other services or merit goods.
  - Economic and human development issues apply both to developing countries and developed countries.

- **Shortcomings of HDI:**
  - Economics and human development are much broader concepts with more dimensions than are reflected in the HDI.
  - The HDI does not provide us with information about income distribution, malnutrition, demographic trends, unemployment, gender and other inequalities, political participation, etc.

Composite indicators:
2.2 Inequality-adjusted Human Development Index

- The **Inequality-adjusted Human Development Index (IHDI)** measures human development in the same three dimensions as the HDI, but **each dimension is adjusted for inequality in the corresponding dimension**.
- It attempts to measure losses in human development that arise from inequality.
- If there were perfect equality in income , health and education, the IHDI would be exactly equal to the HDI.
- **When there are inequalities, the IHDI is lower than the HDI. The greater the inequalities, the lower the IHDI relation to the HDI.**

Comparing HDI and IHDI

Country	HDI	IHDI	Overall loss (%)	Gini coefficient
Japan	0.909	0.876	3.6	32.1
Czech Republic	0.888	0.840	5.3	25.9
Finland	0.920	0.868	5.6	27.1
Slovenia	0.896	0.846	5.6	25.4
Iceland	0.935	0.878	6.0	25.6
Gambia	0.460	0.289	37.2	35.9
Chad	0.404	0.249	38.3	43.3
Haiti	0.498	0.304	39.0	41.1
Central African Republic	0.367	0.212	42.1	56.2
Comoros	0.503	0.275	45.3	45.3
World	0.728	0.582	20.0	-

- The five countries whose HDI has decreased the least and the five countries whose HDI decreased the most on account of inequalities.
- Discuss, find the interrelations between these indicators and explain.

Composite indicators:
2.3 Gender inequality Index

The Gender Inequality Index (GII) measures inequalities between the genders in three dimensions measured by the following indicators:

- **Reproductive health**, measured by:
  - The maternal mortality ratio (death per 100,000 live births)
  - The adolescent birth rate (births per 1000 women ages 15-19)
- **Empowerment**, measured by:
  - The share of parliamentary seats held by women
  - The proportion of women in the total population with at least some secondary education.
- **Labour market participation**, measured by:
  - The proportion of women in the labour force.
- GII measures **the loss in human development of women due to inequalities in these areas**. **The higher the GII, the greater the gender inequality.**

Values for the GII according to groups of countries

Country group	Gender Inequality Index
Sub-Saharan Africa	0.569
Arab States	0.531
South Asia	0.515
Latin America and the Caribbean	0.386
East Asia and the Pacific	0.312
Europe and Central Asia	0.270
OECD countries	0.186
World	0.441

- Discuss the GII for different groups of countries.

Composite indicators:
2.4 Happy Planet Inde

HAPPY PLANET INDEX

Developed by the New Economics Foundation (NEF), calculated for 140-150 countries, **score from 0 to 100, the highest being the best**.

Exploring new economic models 'based on equality, diversity and economic stability'. – measure of sustainable well-being.

$$\text{Happy planet Index (HPI)} = \frac{\text{Life expectancy} * \text{well-being} * \text{inequality of outcome}}{\text{Ecological footprint}}$$

- ✓ **Life expectancy**: the average number of years a person expects to live;
- ✓ **Well-being**: a population's satisfaction;
- ✓ **Inequality of outcome**: inequalities between people with regard to life expectancy and well-being (adjusted downward)
- ✓ **Ecological footprint:** the impact on the environment of each individual in a society on average. It is measured as the amount of land needed to provide for all their requirements and the amount of land needed to absorb their CO2 emissions.

HPI ranks of selected countries

Country	Happy Planet Index Rank	Happy Planet Index	Human Development Index Rank	GNI per capita US$ PPP
Costa Rica	1	44.7	63	14 636
Indonesia	16	35.7	115	10 846
Germany	49	29.8	4	46 136
India	50	29.2	129	6 353
Canada	85	23.0	12	43 433
Malawi or Tanzania	98	22.1	170	1064
Australia	105	21.2	3	43 560
Luxembourg	139	13.2	26	65 016

- HPI is the **only one that adjusts for unsustainable resource use** through its inclusion of the ecological footprint.
- The concepts of well-being and ecological footprint remain controversial.

- The HPI ranks of selected countries, and compares them with GNI per capita as well as HDI ranks.
- There is little correspondence between the three indicators shown in the table mainly due to the ecological footprints of high-income countries which work to substantially lower their rank in the HPI.

Measures of economic development (AO3)

Strengths

- Individual and composite indicators, used alone or in combination with per capita GNI (or GDP) statistics, are enormously useful as measures of different aspects of development.

* We cannot rely on any one measure to obtain a complete picture of the level of development of a country. It is necessary to combine the use of many indicators to obtain an overall picture.

Measures of economic development (AO3)

Limitations

- Different single or composite indicators measure different aspects of development, they sometimes present **conflicting perspectives**. The conflicting perspectives result in different values and rankings of the countries.
  - Human Development Index (HDI) conflicts in part with the Inequality-adjusted Human Development Index (IHDI), and both of these conflict with the happy Planet Index (HPI)
- Both single and composite indicators are subject to limitations arising from the fact that they are **based on statistical information**, which poses a distinct set of problems:
  - Some countries have a limited capacity for collection of statistical data
  - Data are not fully available in many countries
  - In some situation (though not always) where data are missing international agencies try to come up with estimates but these may not be accurate.
  - Very often international agencies do not have access to all the most recently available data with the result that data of different years may be compared against each other.
  - Definitions of variables and methods used by statistical services vary from country to country, despite efforts by international organizations to achieve standardization.

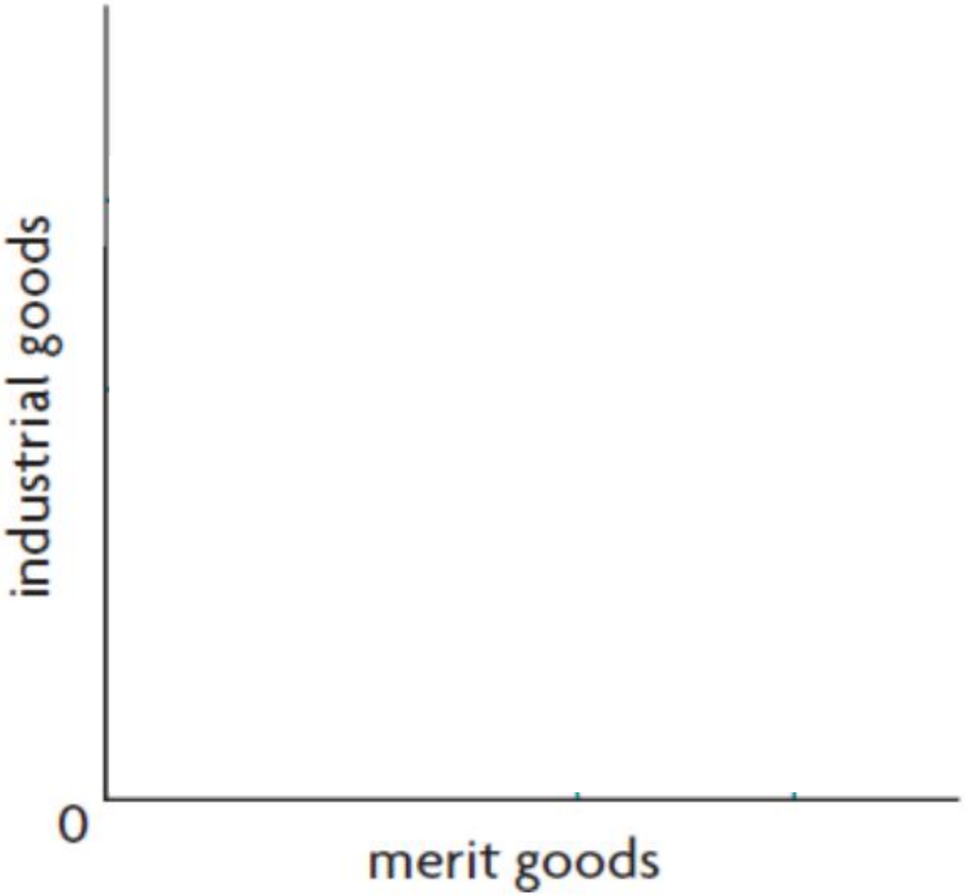
  →These statistical problems mean that the indicators cannot always be precise and should be used as rough guides of trends over time or differences between countries, rather than as very precise measures.

Relationship between economic growth and economic development

- Economic growth can occur without economic development.
- Can economic development occur without economic growth?
  - Some economic development is possible in the absence of rapid growth, if appropriate policies are followed to provide access to basic social services for the poor.

- **In the production possibilities model:**
  - Vertical axis: production of industrial goods
  - Horizontal axis: merit goods (education, health care services, sanitation, clean water supplies, etc)

- It is assumed an economy can produces some combination of industrial goods and merit goods at some point on the PPC.



Relationship between economic growth and economic development

- An economy that does not experience growth can still achieve some economic development, by reallocating its resources, cutting back on industrial production and increasing merit goods production. → movement along PPC1 from **point A to point B**.
- Over long period of time, economic growth, represented by outward PPC shift from PPC1 to PPC2, are therefore necessary for economic development to be maintained.
- However, economic growth does not guarantee that economic development will occur.
  - **B→C**, economic growth with no development
  - **B→D or E**, economic growth with development