Your notes

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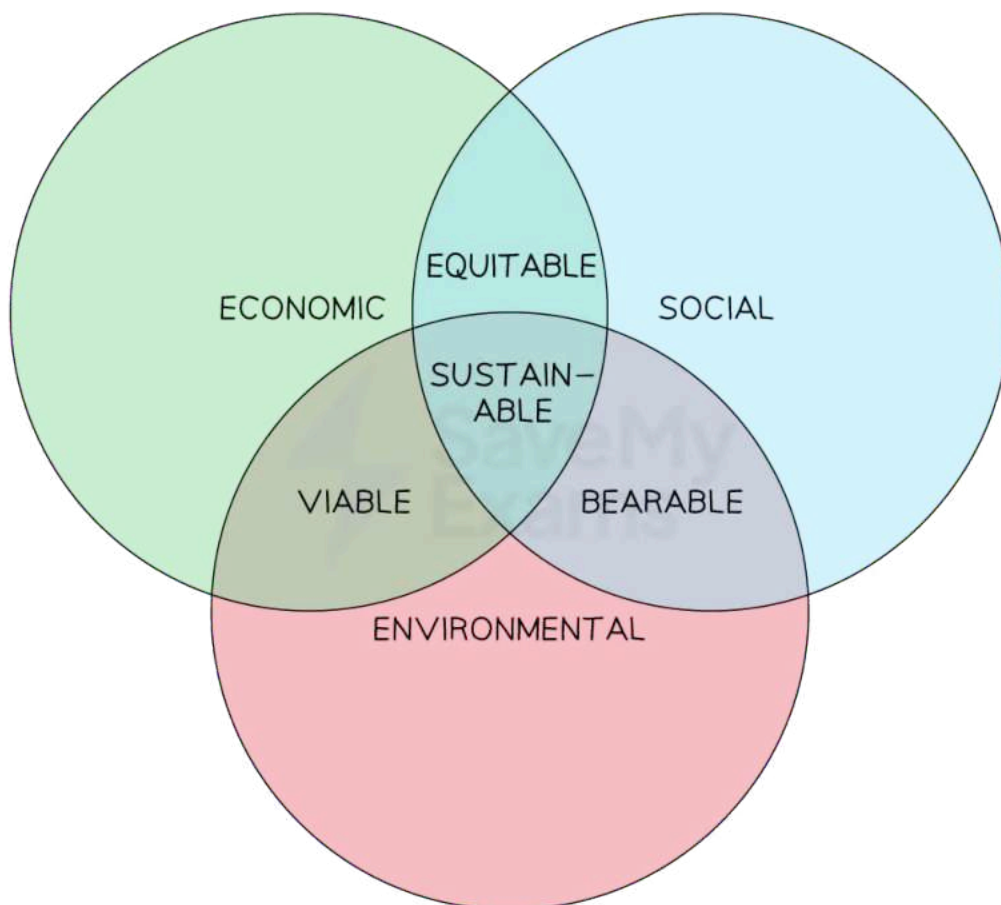
4.8 Measuring Economic Development

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4.8.1 Single Indicators of Development

The Multidimensional Nature of Economic Development

- The **17 Sustainable Development Goals** demonstrate the complexity of the nature of **economic development**

- The different elements can be separated into three categories: **economic, social and environmental**

- **Sustainable economic development** occurs at the intersection of all three and is represented in the diagram below

Sustainable economic development is a multi-dimensional concept incorporating economic growth, environmental care and social progress

- **Viable** refers to the fact that the combination of economic and environmental progress is happening with some care, however it is not sustainable in the long term

- **Bearable** refers to the fact that the interaction of society and the environment is happening with some thought, however it is still not sustainable in the long term

- **Equitable** refers to the fact that the interaction of the economy and society is happening with some attention to well-being, however it is still not sustainable in the long term

- Due to this complexity, elements of economic development can be measured using single or **composite** indicators

Single Indicators of Economic Development

- A single indicator is one factor, such as GDP per person (capita), used to measure the development of a country

- Single indicators measures only one development characteristic within a country

1. GDP/GNI per person (per capita) at PPP

- **Real GDP** is the **value of all goods/services** produced in an economy in a **one-year** period - and **adjusted for inflation**

  - For example, if **nominal GDP** is £100bn and **inflation is 10%** then **real GDP** is £90bn

- **GDP per capita** = GDP / the population

  - It shows the **mean wealth** of each citizen in a country

  - This makes it easier to compare **standards of living** between countries:

    - For example, Switzerland has a much higher GDP/capita than Burundi

- **Gross national income (GNI)** measures the **income** earned by citizens operating **outside of the country + the GDP**

  - Many citizens **employ their resources** outside of a country's borders - and then send the income home

- **Purchasing power parity (PPP)** is a **conversion factor** that can be applied to GDP, GNI and GNP

  - PPP calculates the relative **purchasing power** of different currencies

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- It shows the number of **units of a country's currency** that are required to buy a product in the **local economy**, as $1 would buy of the **same product** in the **USA**

- The **aim of PPP** is to help make a more accurate **standard of living comparison** between countries where goods/services cost **different amounts**

- Using **real GDP/Capita** provides better information than real GDP as it takes **population differences** into account

- Using **real GNI/capita** is a more realistic metric for analysing the **income available per person than GDP/capita**

- Using **GDP/GNI per person (per capita) at PPP** allows for comparisons between countries which take into account the substantial differences in the cost of living

2. Health and education indicators

- Multiple single indicators for health and education can **provide useful data for comparisons** between countries

- Typical **single health indicators** include:

    - Infant mortality rate

    - Life expectancy

    - Number of doctors per 1,000 of the population

    - Diabetes incidence

- Typical **single education indicators** include:

    - Youth literacy rate

    - Adult literacy rate

    - Mean years in school

    - Ratio girls/boys in school

    - Math achievement 8th grade

3. Economic/social inequality indicators

- Typical single **economic and societal indicators** include:

    - The **Gini Coefficient**

    - Murders per 1000 of the population

- Percentage of women in national parliaments

4. Energy indicators

- Typical **single energy indicators** include:

  - Coal consumption per person

  - Electricity generation per person

  - Residential electricity usage

  - Oil consumption per person

5. Environmental indicators

- Typical **single environmental indicators** include:

  - CO_2 emissions per person

  - Total CO_2 emissions

  - Agricultural water withdrawal

  - Primary forest area

## 4.8.2 Composite Indicators of Development

The Human Development Index (HDI)

- **Economic development** is the sustainable increase in living standards for a country, typically characterised by increases in life span, education levels, & income

- **Composite indicators** include indicators such as the Human Development Index (HDI), the Gender Inequality Index (GII), Inequality Adjusted Human Development Index (IHDI), and the Happy Planet index (HPI)

- Developed by the United Nations, the Human Development Index is a combination of 3 indicators
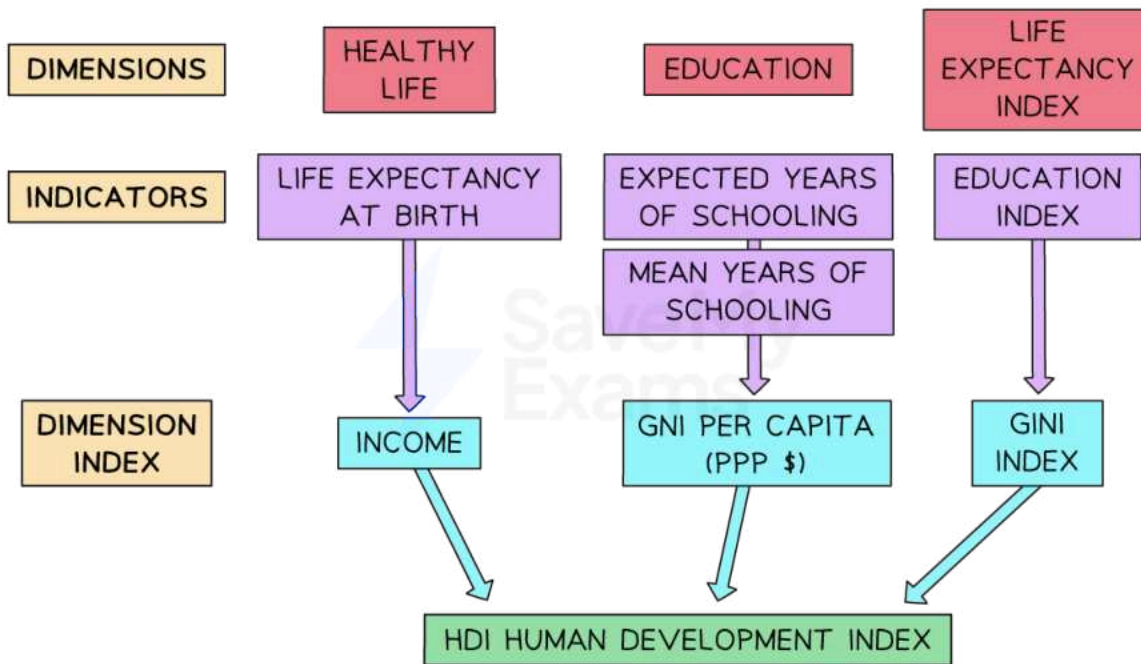
*The components of the Human Development Index*

1. **Health**, as measured by the life expectancy at birth e.g.in 2019 it was 81.2 years in the UK

2. **Education**, as measured by a combination of the **mean** years of schooling that 25 year old's have received, together with the **expected years** of schooling for a pre-school child

3. **Income**, as measured by the real **gross national income** per capita at **purchasing power parity (PPP)**

- Each indicator is given **equal weighting** in the index

- The index ranks countries on a score between 0 & 1

   - The closer to 1, the **higher the level of economic development** & the better the **standard of living**
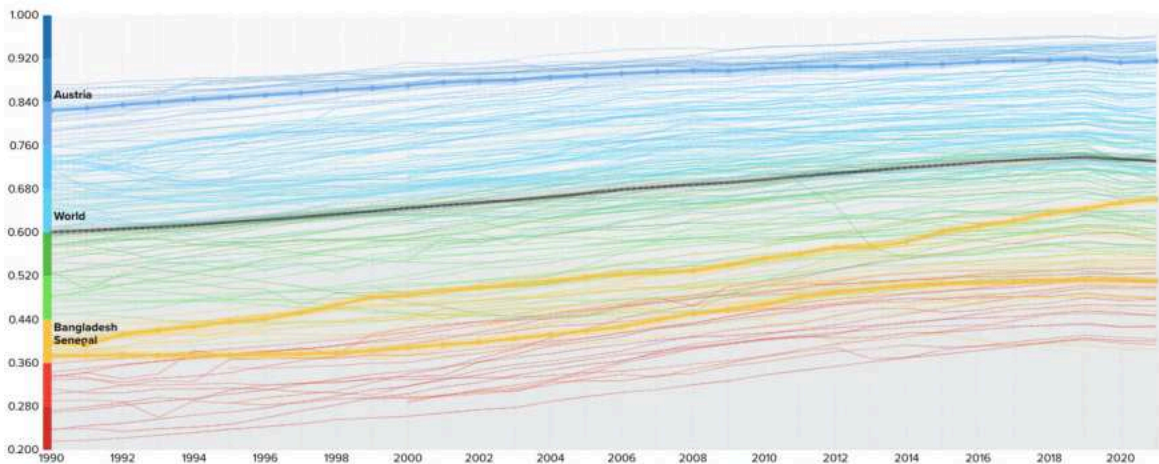
The Human Development Index scores from 1990 to 2021 (Source: UNDP Data Centre)

- A value of < 0.550 is considered **low development** e.g. Senegal was at 0.514 in 2021

- A value of 0.550–0.699 is considered **medium development** e.g.Bangladesh was at 0.667 in 2021

- A value of 0.700–0.799 is considered **high development** e.g Thailand was at 0.777 in 2021

- A value ≥ 0.800 is considered **very high development** e.g. Austria was at 0.918 in 2021

Inequality adjusted Human Development Index (IHDI)

- Created in 2010 to deal with the lack of information that the HDI provides on **inequality**

- The IHDI will be **equal** to the HDI value when there is **no inequality**, but falls below the HDI value as inequality rises

- This means that the IHDI measures the level of human development when **inequality** is accounted for

- The difference between the HDI and IHDI can be expressed as a percentage and represents the loss in **potential human development** due to inequality

- It provides greater insight into the **differences in human development** that exist in a country as opposed to the average human development

Gender Inequality Index (GII)

- The **Gender Inequality Index (GII)** measures gender inequality using three dimensions:

    - Reproductive health

    - Empowerment

    - The labour market

- Countries are graded on a scale of 0→1

    - The **lower the value** the better the inequality between men and women, and vice-versa
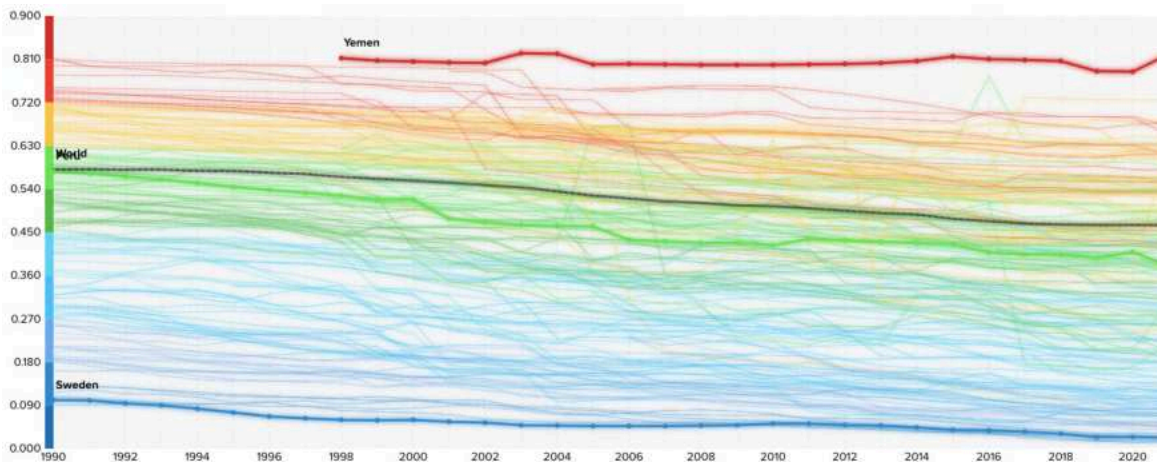
Sweden, Peru and Yemen all score vastly differently on the GII index with Sweden the most equal and Yemen the least equal (Source: UNDP Data Centre)

Happy Planet Index (HPI)

- The Happy Planet Index (HPI) attempts to measure **sustainable** wellbeing

- Countries are ranked by how efficiently they deliver long, happy lives using the earth's scarce resources in a sustainable way

- The HPI scores countries with a lower ecological footprint higher than countries with more environmental degradation

- The HPI measures a country's progress using three variables

    - **Wellbeing**

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- **Life expectancy**

- **Ecological footprint**

- HPI Score $= \dfrac{\text{wellbeing} \times \text{life expectancy}}{\text{ecological footprint}}$

RANK	COUNTRY	LIFE EXPECTANCY	WELL BEING	ECOLOGICAL FOOTPRINT	HPI SCORE
1	COSTA RICA	80.4 years	7.00/10	2.65 gha/p	62.1
2	VANUATU	70.5 years	6.96/10	1.62 gha/p	60.4
3	COLOMBIA	77.3 years	6.35/10	1.90 gha/p	60.2

150	CENTRAL AFRICAN REPUBLIC	53.3 years	3.08/10	1.21 gha/p	25.2
151	MONGOLIA	69.9 years	5.56/10	10.08 gha/p	24.5
152	QATAR	80.2 years	6.37/10	15.04 gha/p	24.3

The top 3 and bottom 3 countries on the HPI in December 2022 (Source: Happy Planet Index)