

4.8 Measuring Development



4.8 Measuring Development

Economic Development

The World Bank divides countries into four groups according to their level of GNI per capita.

Classifications

Economically less developed countries:

1. Low income, with GNI per capita of US\$1,005 or less (US\$2 or less a day)
2. Lower middle income, with GNI per capita of \$1,006 - \$3,955 (US\$2 to US\$8 a day)
3. Upper middle income, with GNI per capita of \$3,956 - \$12,235 (US\$8 to US\$32 a day)

Economically more developed countries:

4. High income, with GNI per capita of \$12,235 or more (more than US\$32 a day)

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Economic Development

Similarities among developing countries

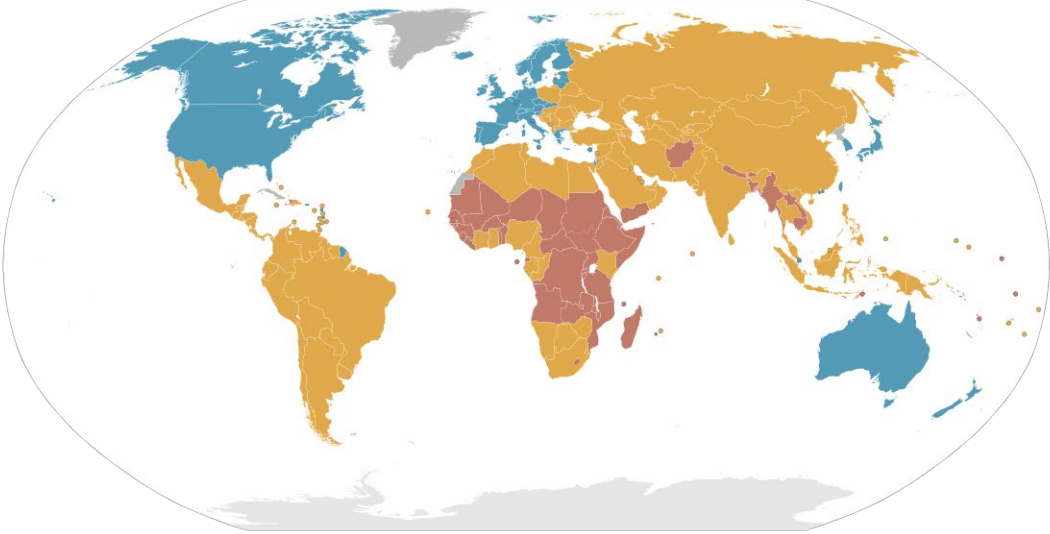
- Low levels of GDP/GNI per capita
- High levels of poverty
- Relatively large agricultural sector
- Large urban informal sector
- High birth rates and population growth

Country	GNI per capita (US\$ PPP)	Agriculture, value added (% of GDP)
United States	46 730	1
United Kingdom	37 360	1
Greece	28 440	3
Portugal	22 870	2
Russia	18 390	5
Brazil	10 260	7
China	6 770	10
India	3 260	17
Vietnam	2 850	22
Kyrgyzstan	2 200	29
Kenya	1 570	28
Uganda	1 190	34

4.8 Measuring Development

Economic Development

Similarities among developing countries

- Low levels of GDP/GNI per capita
 - High levels of poverty
 - Relatively large agricultural sector
 - Large urban informal sector
 - High birth rates and population growth
- 
- A world map illustrating the distribution of economic development status across different regions. The map uses a color-coded system: blue for developed countries (North America, Europe, Australia), orange for developing countries (South America, Africa, Asia, and parts of Europe and Oceania), and red for countries in transition (Russia and parts of Central Asia). The map is presented in a pseudo-cylindrical projection, showing the continents and their relative positions.
- Low levels of health and education
 - Low levels of productivity
 - **Dual economy:** two different and opposing set of circumstances that exist simultaneously

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Economic Development

Growth vs Development

Economic growth refers to increases in output and incomes over time, often measured on a per capita basis.

Economic development refers to a process that leads to improved standards of living for a population as a whole.

Economic growth does not guarantee better standards of living



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Economic Growth and Economic Development

Can economic development occur without economic growth?

Some economic development is possible in the absence of economic growth, provided access to basic social services for the poor is provided:

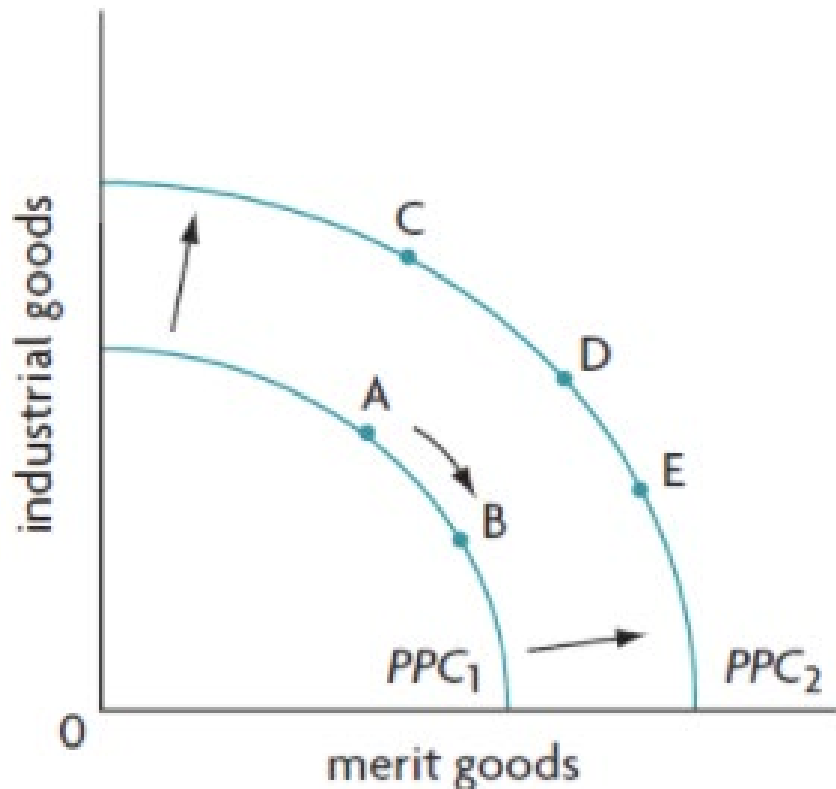
- Reallocation of resources from industrial goods to merit goods
- Over long periods of time, economic growth is necessary for economic development
- Higher incomes and ability to provide goods and services needed by the population

However, **economic growth** does not guarantee economic development

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Economic Growth and Economic Development

Can economic development occur without economic growth?



A → B: no economic growth with some development

B → C: economic growth with no development

B → D or E: economic growth with development

It is possible to achieve some economic development by allocating resources to activities that improve living standards for the broader population

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Economic Development

Multidimensional

'Trickle-down theory' was largely believed by economists in the 1950s and 1960s.

Economic growth over long periods of time was thought to automatically provide economic and social benefits for the entire population.

However, this was clearly not the case. In the 1970s, the GNI per capita gap between the rich and poor countries more than doubled.



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Economic Development

Multidimensional

Economic development is defined as a process where increases in real per capita output and incomes are accompanied by...

- Improvements in standards of living
- Reductions in poverty
- Improved gender equality



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Economic Development

Multidimensional

Economic development is defined as a process where increases in real per capita output and incomes are accompanied by...

- Increased access to basic necessities
- Increasing employment opportunities
- Reductions of serious inequalities



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Economic Development

Human Development

Denis Coulet developed an even broader interpretation of the idea with three core values:

- Life sustenance
- Self-esteem
- Freedom



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Economic Development

Human Development

The economist Amartya Sen expands on Goulet's ideas and his approach was introduced in the Human Development Report of the United Nations Development Programme.

The UNDP makes a distinction between **income poverty** and **human poverty**.

Human development is a process of expanding human freedoms:

- To satisfy hunger
- Have adequate clothing and shelter
- Free of preventable illnesses
- Access to clean water and sanitation
- Able to read, write and receive education

4.8 Measuring Development

Economic Development

Human Development

The economist Amartya Sen expands on Goulet's ideas and his approach was introduced in the Human Development Report of the United Nations Development Programme.

The UNDP makes a distinction between **income poverty** and **human poverty**.

Human development is a process of expanding human freedoms:

- Able to find work
- Enjoy legal protection
- Participate in social and political life
- Freedom to develop one's potential and lead a full and productive life

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Economic Development

Indicators

Economic development requires economists to consider many different **indicators** that distinguish countries according to their level of economic or human development.



Do you remember...

Examples of indicators we have learnt in the course?



4.8 Measuring Development

Economic Development

Indicators

Economic development requires economists to consider many different **indicators** that distinguish countries according to their level of economic or human development.



Do you remember...

Examples of indicators we have learnt in the course?

Single and composite indicators

- Attributes and characteristics are measured by the use of indicators.
- An **indicator** is a measurable variable that indicates the state or level of something being measured.
- A **composite indicator** is a summary measure of several dimensions or goals of development - **example:** HDI

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Single Indicators

GDP/GNI per capita

For most countries the difference in the sizes between the two is not very large as inflows of income are roughly balanced by outflows.



GNI (gross national income) measures income earned, including income from investments, that flows back into the country



GNP (gross national product) includes the earnings from all assets owned by residents, omitting the earnings of all foreigners living in the country

GNI per capita is a better indicator of living standards of a country because it represents income per person received by the residents.

GDP per capita is a better indicator of the level of output per person produced in a country.

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	GNI <i>per capita</i> (US\$)	GDP <i>per capita</i> (US\$)	GNI as % of GDP*
High income countries			
United Kingdom	40 600	39 954	101.6
Japan	38 520	38 430	100.2
Switzerland	81 130	80 343	101.0
United States	59 160	59 928	98.7
Australia	51 360	53 793	95.5
Canada	42 790	44 871	95.4
Ireland	53 370	68 885	77.5
Middle and low-income countries			
Philippines	3660	2989	122.5
Lesotho	1210	1154	104.9
Pakistan	1580	1548	102.1
China	8690	8827	98.4
Bangladesh	1470	1516	97.0
Chad	640	662	96.7
Colombia	5980	6409	93.3
Indonesia	3540	3846	92.0
India	1790	1979	90.4
Kazakhstan	7970	9030	88.3
Russia	9220	10 749	85.8

If value of % is greater than 100, then $GNI > GDP$

If value of % is less than 100, then $GNI < GDP$

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Single Indicators

GDP/GNI per capita at PPP

There would be misleading results if we compared the GDP/GNI per capita across countries as different countries have different price levels.

The same amount of money in a low price country has greater purchasing power, than in a high-price country.

In other words, US\$1 is worth more in a low-price country than in a high-price country.



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Single Indicators

GDP/GNI per capita at PPP

	1 GDP <i>per capita</i> (converted into US\$ by use of exchange rates)	2 GDP <i>per capita</i> (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

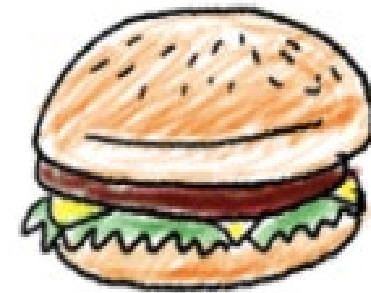
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Single Indicators

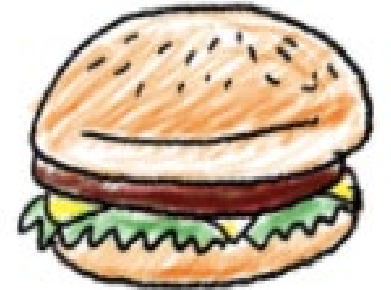
GDP/GNI per capita at PPP

Therefore, we need a method of currency conversion for different price levels. Such a method is provided by the special exchange rate called **purchasing power parities (PPP)**.

PPP is the amount of a country's currency that is needed to buy the same quantity of local goods and services that can be bought with US\$1 in the United States.



\$ 3.57



£ 2.29

\$ 1.56 : £ 1 PURCHASING
POWER PARITY

\$ 2 : £ 1 ACTUAL
EXCHANGE RATE

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	1 GDP per capita (converted into US\$ by use of exchange rates)	2 GDP per capita (converted into US\$ by use of US\$ PPP)
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For poorer countries, GDP figures based on PPPs are higher than those based on exchange rates.

This is because prices of products on average tend to be lower in countries with low per capita GDPs

4.8 Measuring Development

	1 GDP <i>per capita</i> (converted into US\$ by use of exchange rates)	2 GDP <i>per capita</i> (converted into US\$ by use of US\$ PPP)
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Comparisons of GDP/GNI per capita across countries require measures of per capita output or income based on conversions of national currencies into US\$ by use of PPP, to eliminate the influence of price differences on the value of output or income.

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Single Indicators

Health indicators

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

Income per capita is not the only factor that determines health outcomes in a country

4.8 Measuring Development

Single Indicators

Health indicators

- Adequate public health services
- Adequate health care services with broad access by the entire population
- Healthy environment (safe drinking water, sewerage and sanitation, low levels of pollution)
- Adequate diet and avoidance of malnutrition
- High level of education of the entire population
- Absence of serious income inequalities and poverty

4.8 Measuring Development

Single Indicators

Health indicators



The discussion of health indicators illustrates that:

- GNI per capita is an insufficient indicator of health outcomes
- Limited resources are not always the most important cause of poor health outcomes. Most countries (more and less developed) can do more with their available resources to meet economic development goals.
- Some development issues apply to developed countries as well – presence of poverty in wealthy societies make people on low incomes subject to similar deprivations as poor people in developing economies.

4.8 Measuring Development

Single Indicators

Education indicators

Education indicators measure levels of educational attainment.

These can include:

- **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.
- **Lower secondary school enrolment** measures the percentage of children enrolled in the lower years of secondary school.

4.8 Measuring Development

Country	GNI <i>per capita</i> 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

4.8 Measuring Development

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Sri Lanka	12 520	91.9	–	–
Ecuador	11 350	94.4	97	–
Armenia	10 060	99.7	100	98
Morocco	8050	68.5	89	–

As income per capita increases, all three indicators tend to increase

Zambia	3900	63.4	87	49
Chad	1920	22.3	50	13
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4.8 Measuring Development

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Angola	6450	71.1	76	31
Moldova	6100	99.4	–	–

Exceptions:

- Former communist countries have very good education outcomes because governments placed a high priority on education.
- Some have made a special effort to provide education services to their populations.

4.8 Measuring Development

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Bolivia	7350	92.5	97	–
India	6950	71.2	83	–
Angola	6450	71.1	76	31
Moldova	6100	99.4	–	–

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

4.8 Measuring Development

Single Indicators

Economic inequality indicators

- Lorenz curves
- Gini coefficients
- Poverty lines
- Minimum income standards
- Multidimensional poverty index



4.8 Measuring Development

Single Indicators

Social inequality indicators

- Adolescent fertility rates
- Prevalence of undernourishment
- Inequality in life expectancy
- Inequality in education
- Gender inequalities
- Populations vulnerable to poverty
- Child malnutrition
- Infants lacking immunization
- Child labour
- Old-age pension recipients
- Homeless people due to disaster
- Birth registration

4.8 Measuring Development

Single Indicators

Energy indicators

Indicators for Sustainable Development: Guidelines and Methodologies identifies 30 indicators which are classified according to three dimensions:

- Social dimension
- Economic dimension
- Environmental dimension

Social dimension

- Share of households 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/electricity

4.8 Measuring Development

Single Indicators

Energy indicators

Indicators for Sustainable Development: Guidelines and Methodologies identifies 30 indicators which are classified according to three dimensions:

- Social dimension
- Economic dimension
- Environmental dimension

Environmental dimension

- Air pollutant emissions from energy systems
- Rate of deforestation attributed to energy use



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Single Indicators

Environmental indicators

- CO₂ emissions per unit of GDP per capita
- Emissions of other hazardous substances
- Bird species threatened
- Fish species threatened



4.8 Measuring Development

Single Indicators

Environmental indicators

- Measure of ozone layer depletion
- Measure of waste generation
- Measures of waste water treatment
- Measures of intensity of water use



4.8 Measuring Development



Real world context – calculate your carbon footprint

Using the [carbon footprint calculator](#), find how many earths it would take to sustain your current level of consumption and waste output if everyone lived like you.

4.8 Measuring Development

Composite Indicators

Human Development Index (HDI)

HDI measures average achievement in three dimensions:

- A long healthy life is measured by life expectancy at birth
- Access to knowledge is measured by mean years and expected years of schooling
- A decent standard of living is measured by GNI per capita (US\$ PPP)

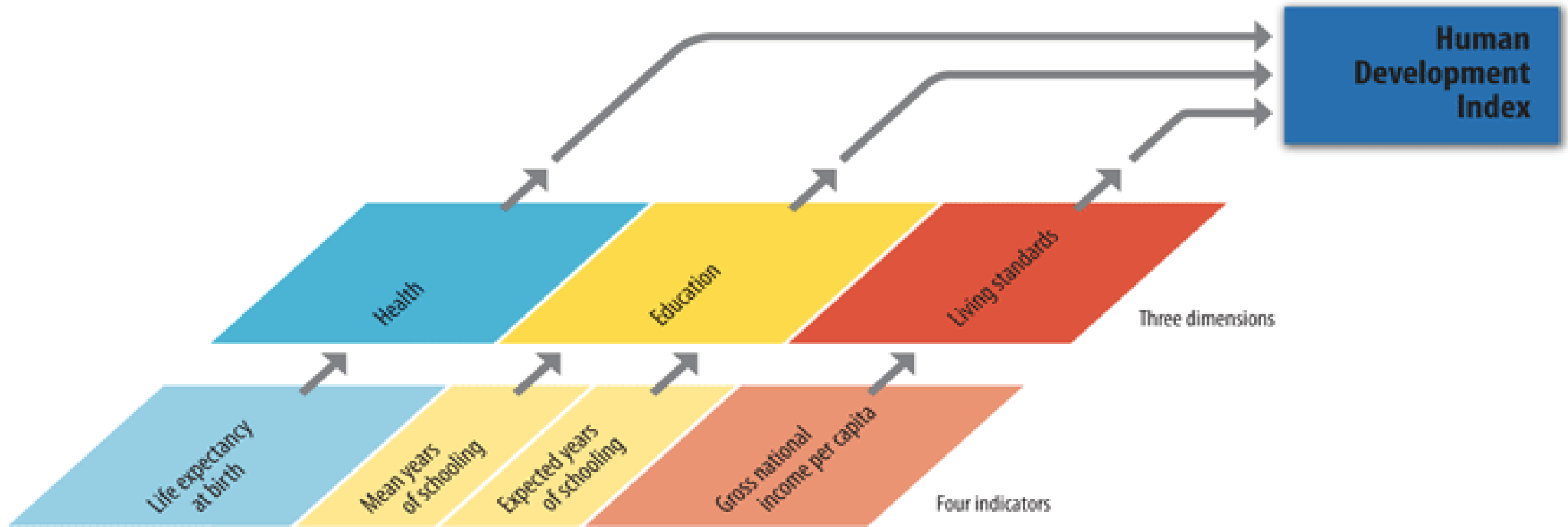
Each dimension is expressed as a value between 0 and 1.
The composite index is the average over the three dimensions.

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HDI RANK	Human Development Index (HDI)	SDG 3 Life expectancy at birth	SDG 4.3 Expected years of schooling	SDG 4.4 Mean years of schooling	SDG 8.5 Gross national income (GNI) per capita	GNI per capita rank minus HDI rank	HDI rank
	Value	(years)	(years)	(years)	(2017 PPP \$)		
	2019	2019	2019 ^a	2019 ^a	2019	2019	2018
Very high human development							
1 Norway	0.957	82.4	18.1 ^b	12.9	66,494	7	1
2 Ireland	0.955	82.3	18.7 ^b	12.7	68,371	4	3
2 Switzerland	0.955	83.8	16.3	13.4	69,394	3	2
4 Hong Kong, China (SAR)	0.949	84.9	16.9	12.3	62,985	7	4
4 Iceland	0.949	83.0	19.1 ^b	12.8 ^c	54,682	14	4
6 Germany	0.947	81.3	17.0	14.2	55,314	11	4
7 Sweden	0.945	82.8	19.5 ^b	12.5	54,508	12	7
8 Australia	0.944	83.4	22.0 ^b	12.7 ^c	48,085	15	7
8 Netherlands	0.944	82.3	18.5 ^b	12.4	57,707	6	9
10 Denmark	0.940	80.9	18.9 ^b	12.6 ^c	58,662	2	10
11 Finland	0.938	81.9	19.4 ^b	12.8	48,511	11	11
11 Singapore	0.938	83.6	16.4	11.6	88,155 ^d	-8	12
13 United Kingdom	0.932	81.3	17.5	13.2	46,071	13	14
14 Belgium	0.931	81.6	19.8 ^b	12.1 ^e	52,085	6	13
14 New Zealand	0.931	82.3	18.8 ^b	12.8 ^c	40,799	18	14
16 Canada	0.929	82.4	16.2	13.4 ^c	48,527	5	14
17 United States	0.926	78.9	16.3	13.4	63,826	-7	17
18 Austria	0.922	81.5	16.1	12.5 ^c	56,197	-3	18
19 Israel	0.919	83.0	16.2	13.0	40,187	14	21
19 Japan	0.919	84.6	15.2	12.9 ^f	42,932	9	20
19 Liechtenstein	0.919	80.7 ^g	14.9	12.5 ^h	131,032 ^{d,j}	-18	19
22 Slovenia	0.917	81.3	17.6	12.7	38,080	15	24
23 Korea (Republic of)	0.916	83.0	16.5	12.2	43,044	4	22

Table shows how its possible for countries to achieve similar levels of human development with very different levels of GNI per capita.

4.8 Measuring Development



HDI is very useful tool and is far superior to single indicators as a measure of development

However, economic and human development are much broader concepts with more dimensions that are not reflected in the HDI.

4.8 Measuring Development

Composite Indicators

HDI and GNI per capita

- GNI (or GDP) per capita used alone can be a poor measure of the different dimensions of development.
- Many countries are capable of making significant improvements in the well-being of the populations by making different choices regarding resource allocation.
- Economic and human development issues apply to both developed and developing countries.



4.8 Measuring Development

Composite Indicators

Inequality-adjusted Human Development Index (IHDI)

The IHDI measures human development in the same three dimensions but each dimension is adjusted for **inequality**.

If there was perfect equality in income, health and education, the IHDI would be exactly equal to the HDI.



4.8 Measuring Development

												SDG 10.1				
	Human Development Index (HDI)	Inequality-adjusted HDI (IHDI)			Coefficient of human inequality	Inequality in life expectancy	Inequality-adjusted life expectancy index	Inequality in education ^a	Inequality-adjusted education index	Inequality in income ^a	Inequality-adjusted income index	Income shares held by			Gini coefficient	
				Difference from HDI rank ^b								(%)				
HDI RANK	Value	Value	Overall loss (%)			(%)	Value	(%)	Value	(%)	Value	Poorest 40 percent	Richest 10 percent	Richest 1 percent		
	2019	2019	2019	2019	2019	2015-2020 ^c	2019	2019 ^c	2019	2019 ^c	2019	2010-2018 ^e	2010-2018 ^e	2010-2017 ^e	2010-2018 ^e	
Very high human development																
1	Norway	0.957	0.899	6.1	0	6.0	3.0	0.931	2.3	0.908	12.6	0.858	23.2	21.6	9.4	27.0
2	Ireland	0.955	0.885	7.3	-3	7.2	3.4	0.926	3.3	0.892	15.0	0.838	20.5	25.9	11.3	32.8
2	Switzerland	0.955	0.889	6.9	-1	6.8	3.5	0.947	1.8	0.883	14.9	0.841	20.2	25.5	10.6	32.7
4	Hong Kong, China (SAR)	0.949	0.824	13.2	-17	12.6	2.5	0.973	9.8	0.793	25.6	0.724	..	..	..	..
4	Iceland	0.949	0.894	5.8	2	5.6	2.4	0.946	2.8	0.900	11.7	0.841	23.7	22.5	7.6	26.8
6	Germany	0.947	0.869	8.2	-4	7.9	3.8	0.908	2.3	0.922	17.7	0.786	20.4	24.6	12.5	31.9
7	Sweden	0.945	0.882	6.7	0	6.5	2.9	0.938	3.7	0.884	13.0	0.828	22.2	22.3	9.0	28.8
8	Australia	0.944	0.867	8.2	-3	7.9	3.7	0.940	2.7	0.899	17.3	0.771	19.6	27.0	9.1	34.4
8	Netherlands	0.944	0.878	7.0	0	6.9	3.1	0.928	5.4	0.865	12.2	0.843	22.6	23.3	6.2	28.5
10	Denmark	0.940	0.883	6.1	4	6.0	3.6	0.903	2.9	0.894	11.4	0.853	22.8	24.0	10.7	28.7
11	Finland	0.938	0.888	5.3	7	5.3	3.0	0.924	2.2	0.907	10.6	0.835	23.4	22.6	10.1	27.4
11	Singapore	0.938	0.813	13.3	-15	12.8	2.5	0.954	11.0	0.751	25.0	0.750	..	..	14.0	..
13	United Kingdom	0.932	0.856	8.2	-3	7.9	4.1	0.905	2.7	0.902	17.0	0.769	19.0	26.8	12.6	34.8
14	Belgium	0.931	0.859	7.7	1	7.7	3.6	0.914	8.2	0.828	11.4	0.837	22.9	21.9	7.8	27.4
14	New Zealand	0.931	0.859	7.7	1	7.5	4.3	0.917	1.8	0.909	16.4	0.759	..	..	8.7	..
16	Canada	0.929	0.848	8.7	-1	8.4	4.6	0.916	2.7	0.870	18.1	0.766	19.1	25.1	13.6	33.8
17	United States	0.926	0.808	12.7	-11	12.1	6.3	0.848	2.8	0.875	27.1	0.711	15.4	30.5	20.5	41.4
18	Austria	0.922	0.857	7.0	3	6.9	3.7	0.912	2.9	0.840	14.1	0.821	21.3	23.0	9.3	29.7
19	Israel	0.919	0.814	11.4	-6	10.9	3.3	0.937	5.7	0.833	23.7	0.691	15.7	27.7	..	39.0
19	Japan	0.919	0.843	8.3	1	8.1	2.9	0.965	4.7	0.812	16.7	0.763	20.5	26.4	10.4	32.9
19	Liechtenstein	0.919	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22	Slovenia	0.917	0.875	4.6	12	4.6	2.9	0.916	2.1	0.891	8.7	0.820	24.8	20.4	7.7	24.2
23	Korea (Republic of)	0.916	0.815	11.0	-2	10.7	3.0	0.941	8.8	0.789	20.2	0.731	20.3	23.8	12.2	31.6
23	Luxembourg	0.916	0.826	9.8	2	9.6	3.4	0.925	6.3	0.756	19.0	0.806	18.4	25.8	11.9	34.9
25	Spain	0.904	0.783	13.4	-10	13.1	3.0	0.949	16.9	0.691	19.5	0.732	18.4	25.4	11.9	34.7
26	France	0.901	0.820	9.0	2	8.9	3.8	0.927	9.5	0.740	13.5	0.804	21.1	25.8	11.2	31.6
27	Czechia	0.900	0.860	4.4	14	4.4	3.0	0.886	1.4	0.878	8.9	0.818	24.9	21.5	10.1	24.9
28	Malta	0.895	0.823	8.0	5	7.9	4.6	0.918	6.2	0.774	13.0	0.786	21.9	23.3	11.4	29.2

4.8 Measuring Development

Composite Indicators

Gender Inequality Index (GII)

The **GII** measures inequalities between the genders in three dimensions:

- Reproductive health is measured by
 - The maternal mortality ratio (death per 100,000 live births)
 - The adolescent birth rate (births per 1000 women ages 15 – 19)



4.8 Measuring Development

Composite Indicators

Gender Inequality Index (GII)

The **GII** measures inequalities between the genders in three dimensions:

- Empowerment is measured by
 - The share of parliamentary seats held by women
 - Proportion of women in the total population with at least some secondary education
- Proportion of women in the labour force



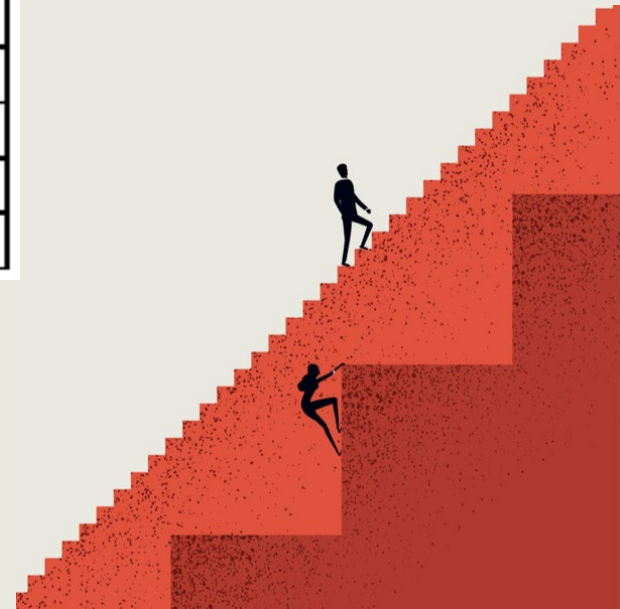
4.8 Measuring Development

Composite Indicators

Gender Inequality Index (GII)

Country	HDI rank 2017	Human Development Index 2017	Life expectancy at birth	Expected years of schooling	Mean years of schooling	GNI <i>per capita</i> 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

The higher the GII, the greater the gender inequality



4.8 Measuring Development

Composite Indicators

Happy Planet Index (HPI)

Developed by the New Economics Foundation (NEF) devoted to exploring new models 'based on equality, diversity and economic stability'.

$$\text{Happy Planet Index (HPI)} = \frac{\text{life expectancy} \times \text{well-being}}{\text{inequality of outcomes} \times \text{ecological footprint}}$$

Countries receive a score from 0 to 100.



4.8 Measuring Development

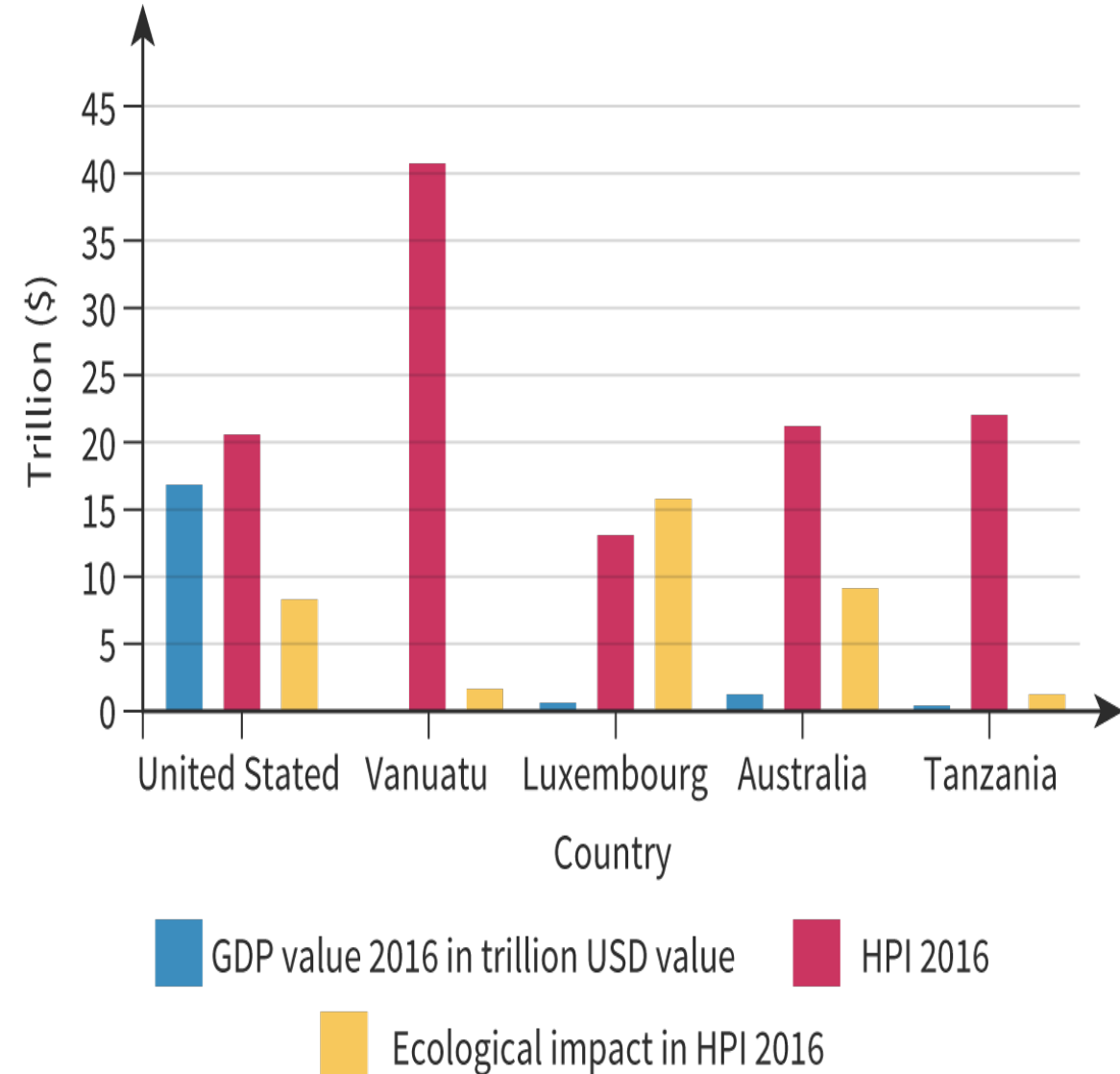
Composite Indicators

Happy Planet Index (HPI)

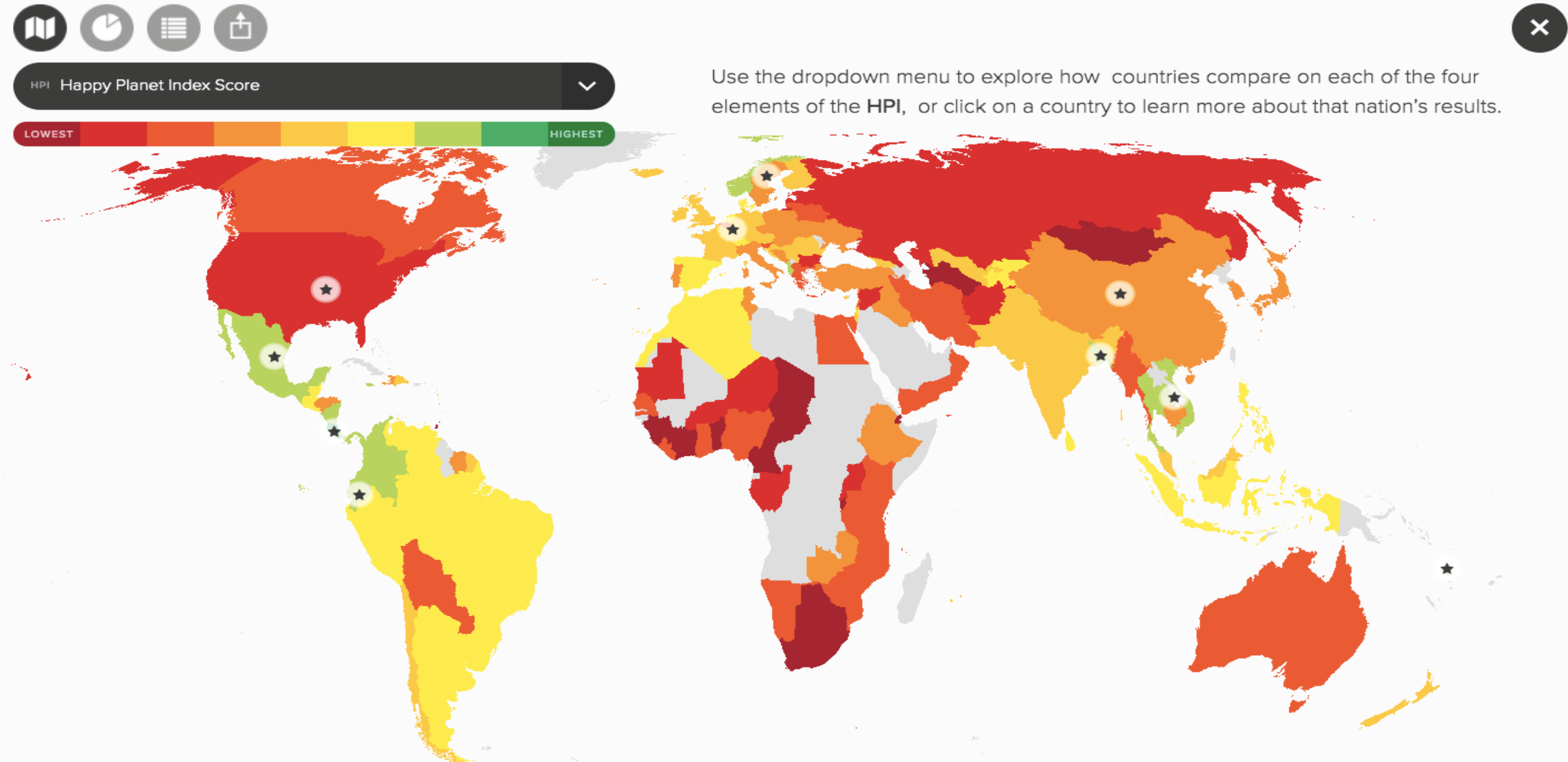
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4.8 Measuring Development



4.8 Measuring Development

Composite Indicators

Happy Planet Index (HPI)

Countries with high ranks of GNI per capita or HDI do not necessarily rank highly on the HPI

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 (ecological footprint)

4.8 Measuring Development

Indicators

Strengths and limitations



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

However, economic development cannot be accurately represented by any one measure.

The conflicting perspectives of composite indicators result in different values and rankings of the countries, depending on their performance in the particular dimension of development.

Indicators are based on statistical information which cannot always be precise.

4.8 Measuring Development

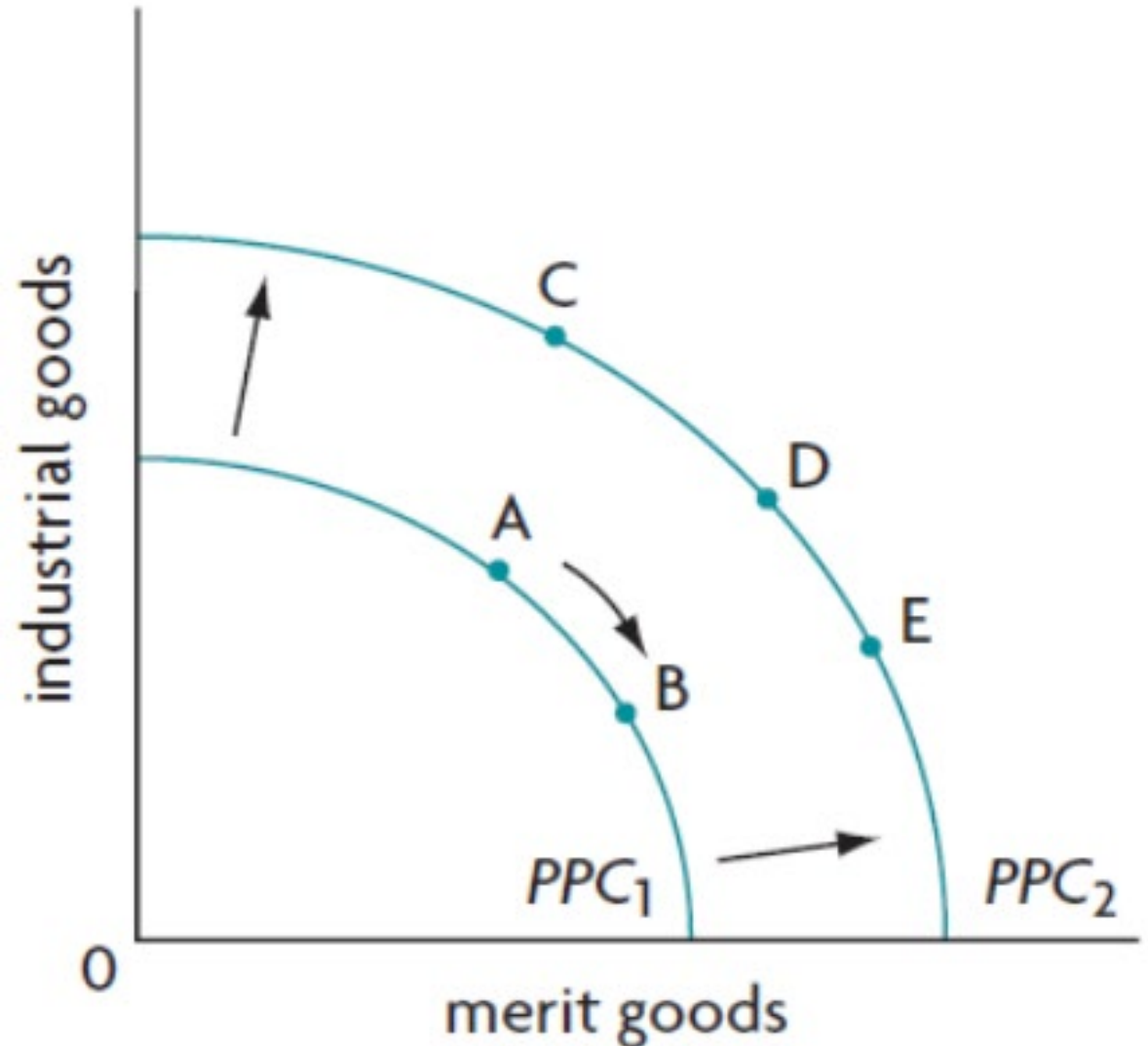
Economic Growth and Economic Development

Economic growth can occur without **economic development**

A → B: No EG with some development

B → C: EG with no development

B → D or E: EG with development



4.8 Measuring Development

Economic Growth and Economic Development

Economic growth can occur without **economic development**

Over long term, the possibilities for improving the population's well-being by moving along the same PPC will be exhausted.

Further improvements will depend on outward PPC shifts.

