

Measuring development and quality of life

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A unit about the different ways of measuring development

This unit looks at ways of defining levels of development through economic and social measures. By discussing a range of different indicators, it helps to show how countries vary in terms of wealth and quality of life. It outlines how these indicators are used and starts to analyse some of their advantages and disadvantages. Having an understanding about how the data is collected and how it might have changed over time can help to strengthen a geographer's understanding about how and why countries' levels of development vary.

Key vocabulary

economic development, social development, indicators of development, Gross National Income (GNI), Gross Domestic Product (GDP), Human Development Index (HDI), life expectancy, infant mortality rates

Learning outcome

In this unit you will learn:

- about the different ways of defining development
- how development is measured
- how indicators can show contrasting levels of development between countries and regions.

Relevance to specifications

Exam board	Link to specification
AQA	Paper 2: Challenges in the human environment, see pages 17–23. Click here
Edexcel A	Component 2: The human environment, Topic 5: Global development, see pages 20–22. Component 2: The human environment, Topic 6: Resource management, see pages 23–25. Click here
Edexcel B	Component 1: Global geographical issues, Topic 2: Development dynamics, see pages 12–13. Component 1: Global geographical issues, Topic 3: Challenges of an urbanising world, see pages 14–15. Click here
OCR A	Component 1: Living in the UK today, 1.2 People of the UK, see page 7. Component 2: The world around us, 2.2 People of the planet, see pages 10–11. Click here
OCR B	Component 2: People and society, Topic 6: Dynamic development, see page 13. Click here
Eduqas A	Component 2: Environmental and development issues, Theme 6: Development and resource issues, see pages 17–18. Component 2: Environmental and development issues, Theme 7: Social development, see page 19. Click here
Eduqas B	Component 1: Investigating geographical issues, Theme 1: Changing places, changing economies see pages 9–10. Click here
WJEC	Unit 2: Environmental and development issues, Theme 7: Social development issues, see page 19. Click here
CCEA	Unit 2: Living in our world, Theme B: Contrasts in world development, see pages 19–20. Click here
Cambridge IGCSE	Theme 3: Economic development, Topic 3.1: Development, see page 19. Click here
Edexcel IGCSE	Section D: Global issues, Topic 9: Development and human welfare, see page 18. Click here

Measuring development and quality of life

Development refers to the improvement or advancement of a country. There are contrasting methods of defining the term, but it is frequently considered using economic and social measures. Economic development means an increase in wealth. Social development requires an improvement in the standard of living – or quality of life – of citizens, and can include factors such as education and health.

Economic development can have a considerable impact on social development and vice versa, so there is much crossover between the two concepts.

In order to make judgements about how developed a country is, we use indicators of development. Indicators may be used separately, or in conjunction with each other, to make assessments about the development of places, and to see how this development changes over time.

Gross National Income and Gross Domestic Product

Economic development is often measured using either Gross National Income (GNI) or Gross Domestic Product (GDP) values. GNI can be worked out using the sum shown in Figure 1.

The GNI value is usually converted into US dollars (US\$). It differs from the GDP, which calculates the economic value of the goods and

Country	GNI per capita (PPP) (US\$)	World ranking for GNI per capita	HDI	World ranking for HDI
Norway	64 992	6	0.944	1
USA	52 947	11	0.915	8
UK	38 267	23	0.907	14
The Bahamas	21 336	52	0.790	55
Chile	21 290	53	0.832	42
Libya	14 911	75	0.724	94
China	12 547	83	0.727	90
Fiji	7493	111	0.727	90
Haiti	1669	167	0.483	163
Malawi	747	186	0.445	173

Figure 2 GNI per capita and HDI data and rankings for selected countries
 Source: Data from UNDP Human Development Report 2015, <http://hdr.undp.org/en/data>

services produced within a country's borders. Both are used to compare the economic development of countries, but for the purposes of this unit, GNI will mainly be used.

How useful is it to compare overall GNI figures? Total GNI for a country can vary significantly depending on the size of the country and the number of people living there. It is often more useful, therefore, to make comparisons using an average figure. This is called the GNI per capita (per person) and is worked out by dividing the GNI by the total population of the country. GNI per capita values vary significantly around the world (Figure 2). The figure is also adjusted according to Purchasing Power Parity (PPP). This acknowledges that items cost different amounts in different countries. It makes adjustments that take these price differences

into account so that GNI values can be compared more uniformly.

Human Development Index

The Human Development Index (HDI) assesses quality of life as well as the wealth. It does this by bringing together three factors:

- life expectancy
- the average number of years that citizens attend school (or are expected to attend, if they are children)
- GNI per capita.

It uses these to generate a number between 0 and 1 for each country. The closer a country is to 1, the higher its level of development.

An increase in wealth can mean there is more money available to spend on healthcare, education and other social development measures. However, the way that GNI is spent can vary significantly between countries. HDI rankings may, therefore, not correspond with GNI per capita rankings (Figure 2).

Furthermore, snapshots of data do not necessarily tell us the whole story. Despite the fact that Libya's

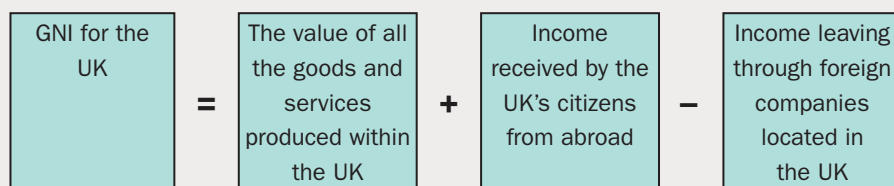


Figure 1 GNI calculation, using the UK as an example

HDI ranking is 19 places below its GNI per capita ranking, looking at those values over time can tell a different story. According to the UNDP Human Development Report 2015, Libya's HDI value increased from 0.636 to 0.724 between 1980 and 2014, whereas its GNI per capita decreased by roughly 60.9% in the same period. Therefore, when measuring development and quality of life it can be useful to analyse data over time as well as using it to compare countries with each other. Where countries have seen dramatic changes to either their GNI or HDI, such as in the case of Libya, it is important to ask questions as to what external factors may have occurred that have caused these changes.

“When measuring development and quality of life it can be useful to analyse data over time.”

How else do geographers measure social development?

Population indicators can often be used to make assessments about the quality of life and wellbeing of a country's citizens. Life expectancy, for example, is the average age that

a person lives to within a country. This value can vary significantly between countries (Figure 3).

According to estimated figures from The World Factbook from the CIA, the world's highest life expectancy is to be found in Monaco, with a value of 89.52 years. Chad (a country in central Africa) has the lowest life expectancy at just 49.81 years.

Life expectancy matters because it gives an indication of a range of different social development factors. For example, if a country has a low life expectancy, it may also indicate a lower number of doctors per person, suggesting that citizens have less access to healthcare. It may also show a lack of money to invest in healthcare facilities, meaning there is not adequate equipment or medication to treat the sick. Low-income developing countries (LIDCs) may suffer from a 'brain drain' as qualified medical professionals leave the country to search for better-paid work abroad.

A low life expectancy may also be linked to a lack of access to education. For example, ignorance about the importance of a varied diet can lead to malnutrition. Or a poor understanding about hygiene may lead to increased incidents of

diarrhoea, which is the second leading cause of death in children under five years old according to the World Health Organization. Such high rates of diarrhoea may also indicate a lack of access to sanitation facilities or a clean water source, which again may be linked to low economic development and a lack of investment in infrastructure.

Since life expectancy figures are averages, countries with low life expectancy often have high infant mortality rates (Chad's is 88.69 deaths/1000 live births, giving it the 6th highest infant mortality rate in the world, according to The World Factbook). When children die young, the average age of death for the whole population is inevitably reduced. Life expectancy figures may also be affected by high rates of a particular disease. In Liberia, deaths from Ebola in recent years caused a reduction in life expectancy estimated to be between 1.63 and 5.56 years, as researched by Helleringer and Noymer, 2015.

What are the problems with using indicators of development?

There are problems with ensuring that all data are reliable. Although many countries conduct censuses, they may not be taken regularly and there can often be difficulties with collecting accurate data. For example:

- Remote rural communities can be difficult to access because of poor roads or difficult terrain.
- Some of the population may be illiterate, and find it difficult to fill out forms.
- Countries that have citizens who speak many different languages, or groups that migrate within and between countries, may find it difficult to collect accurate information.

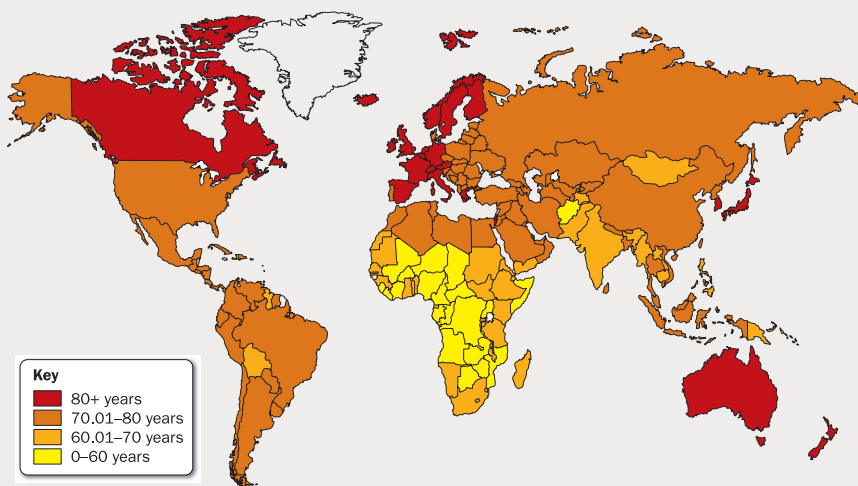


Figure 3 Life expectancies around the world
Source: The World Factbook at www.cia.gov; estimated figures for 2015

- War can affect the collection of data.

“There are problems with ensuring that all data are reliable.”

- If a large proportion of a country’s economy is made up of subsistence farmers, or informal sector work, then it is difficult to calculate the GNI.

Even where countries can afford to conduct a census as accurately as possible every ten years, there may still be barriers. For example, the Office for National Statistics acknowledges that in the UK’s most recent census, taken in 2011, adjustments have had to be made for people who didn’t respond, or were counted more than once, or were counted in the wrong place.

Figure 4 presents some useful definitions when assessing development and issues concerning the quality of life.

Brain drain – when people who are highly trained or educated emigrate from a country, usually in search of better-paid work or improved living conditions

Indicators of development – measures such as GNI per capita or life expectancy that can be used to make an assessment about the development of a country or region

Infant mortality rates – the number of babies that die before their first birthday, per 1000 live births

Informal sector – jobs that are not regulated by the government and where the workers pay no tax

Infrastructure – basic features such as roads, buildings and water supplies that are needed for countries and businesses to operate

Malnutrition – when somebody is lacking the right balance of nutrients to lead a healthy life

Subsistence farmers – farmers who grow enough food to feed themselves and their families, but not to sell for profit

Figure 4 Some useful definitions when assessing development and the quality of life

Case study: differences within countries – India

Measures of development can give an indication about a country as a whole, but they can also mask vast differences *within* a country. Only by looking at a range of data together does a clearer picture emerge. India, for example, has seen its economy grow rapidly in recent years and yet many within its population are still living in poverty (Figure 5).

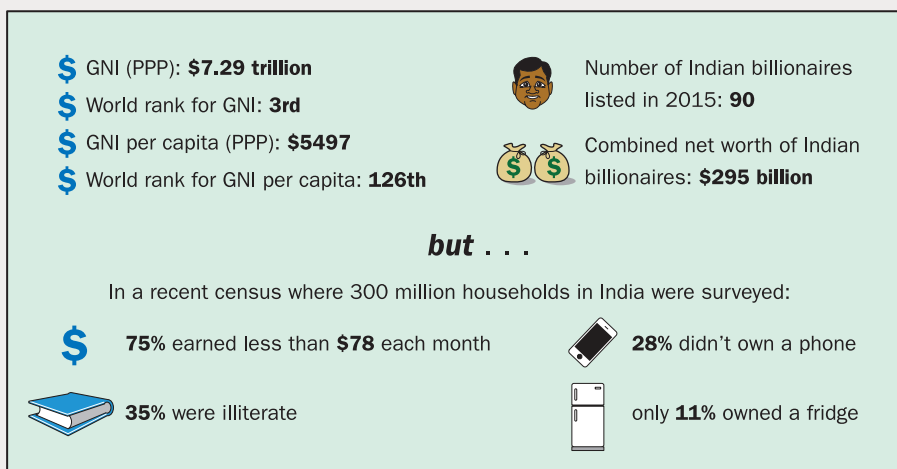


Figure 5 Some facts about India
Sources: The World Bank; data.worldbank.org; UNDP Human Development Report 2015; cnn.com; www.forbes.com

Case study: differences within cities – London

Even within cities, the differences can be stark. For example, the Royal Borough of Kensington and Chelsea in London (Figure 6, top) has one of the highest life expectancies in the UK at 83.3 years according to the Office for National Statistics.

However, research done by Imperial College London and cited in the *Evening Standard* newspaper states that this drops to 77.4 years for men in the Borough of Tower Hamlets, only 16 km away (Figure 6, bottom). What do these statistics tell us about varying levels of wealth, education and health – and therefore development and quality of life – between even *neighbouring* areas within the UK? If there are such differences within this very small area of one country, consider how much greater those differences are between different regions and countries around the world.



Figure 6 Kensington and Chelsea (top) and Tower Hamlets (bottom)
Sources: Shutterstock/Andersphoto; Shutterstock/ClaudioDivizia

Conclusion

There are many ways of defining and measuring development. Countries at different levels of development will have significant contrasts in their demographic and economic data, some of which reflects social development and some economic development.

Although there may be flaws with the collection of this data, and the data can be interpreted in many ways, indicators of development provide a useful way of gauging the development of countries. By interpreting this data, governments and non-governmental organisations can make decisions in an attempt to

improve conditions for people both at home and abroad.

“There are many ways of defining and measuring development.”

Activities

- 1 Draw a bar chart to show HDI in a range of different countries. As well as using information from Figure 2, you could use the internet to search for HDI values for other countries.
- 2 Copy and complete Figure 7. Work out the GNI per capita for each country. Divide the total GNI by the total population (all figures are rounded).
- 3
 - a Produce proportional circles for the GNI per capita data listed in Figure 2. (There is advice about how to do this on the internet and YouTube.)
 - b Plot your proportional circles onto a blank map of the world so that they are located in the correct country.
 - c Explain what GNI per capita can tell geographers about the uneven development of countries. Your answer should include key words and data as supportive evidence.
- 4
 - a Describe the pattern of life expectancies shown by the choropleth map in Figure 3.
 - b Explain why life expectancies vary in different parts of the world.
 - c How far do you think that life expectancy gives an accurate indication as to the development of a country? Explain your answer fully.
- 5 Explain why only using one indicator of development may not give a full picture about India's level of development. Use Figure 5 to help you.
- 6 'Data used to measure development is inaccurate and therefore not useful.' How far do you agree with this view? Have a class debate on this topic, using ideas from this unit and further research.

Country	GNI (PPP) (\$ billions)	Total population (millions)	GNI per capita (PPP) (\$)
Japan	4821	127	37 961
Mexico	2086	125	
Bangladesh	530	159	
Ireland	195	5	
Chad	28	14	

Figure 7 GNI, total population and GNI for selected countries
 Source: World Bank, data.worldbank.org

Learning checkpoint

- Economic development is associated with wealth and is often measured using GDP or GNI per capita.
- Social development assesses quality of life and can be measured using a variety of indicators, including life expectancy.
- The Human Development Index aims to incorporate both economic and social development measures.
- There is a range of benefits and problems associated with using indicators of development.
- While there are variations in GNI and HDI between countries, there are also considerable variations within individual countries and large urban areas.

Glossary task

Write glossary definitions for these terms:

- | | |
|-------------------------------|---------------------------|
| economic development | indicators of development |
| Gross Domestic Product (GDP) | infant mortality rates |
| Gross National Income (GNI) | life expectancy |
| Human Development Index (HDI) | social development |

Remember this case study

To help you remember this case study, make notes under the following headings:

- What is meant by economic development?
- What is meant by social development?
- How is development measured?
- What are some advantages of using indicators of development?
- What are some difficulties with using indicators of development?

Try to make your notes fit a single sheet of A4.