IGCSE Geography – Mega Cities Crunching Some Data

The future is urban
Global population (billion)

9
8
7
6
5
4
3
2
1
0

1950   1970   1990   2010   2030

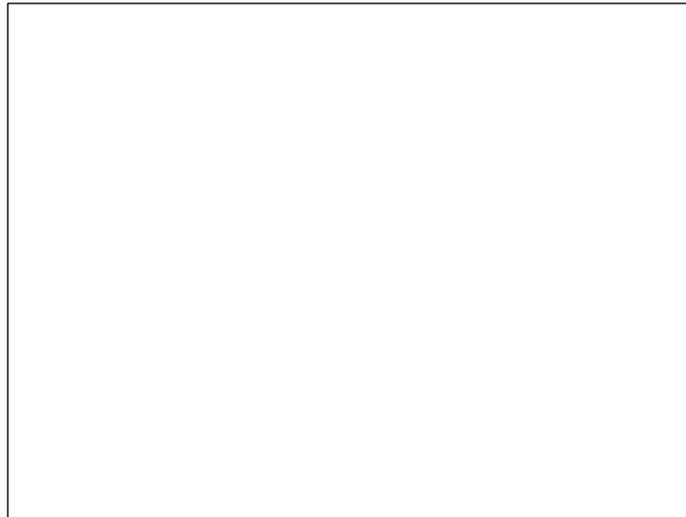■ in rural areas ■ in urban areas

Source: UN
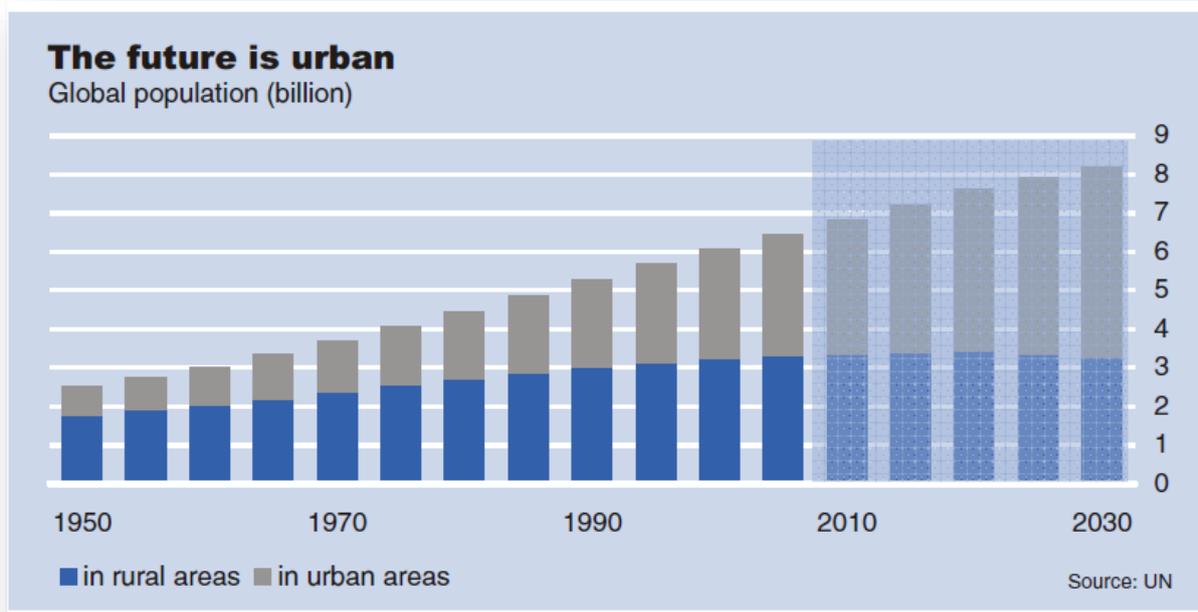
There are 400 x 1 million cities (of which nearly 100 are in China alone) of which 40 urban agglomerates >10 million known as **mega-cities** of which more than ½ in Asia A strongly growing population and gains in agricultural productivity are reasons are the main reasons with the technological revolution to speed it up.

Comment on the pattern of global population in rural and urban areas between 1950 and 2030 (predicted)   (4)

Cities in poor countries grow fastest
Population growh until 2015 (p.a.)
GDP per capita at PPP (2005, log scale)

Sources: IMF, UN, DB Research
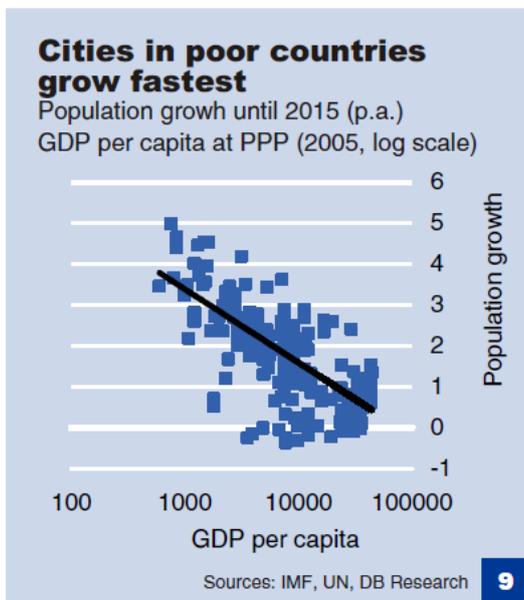
General trends: cities in LIC's grow faster – Describe how the graph below shows this. (3)

What are the reasons for the development?

Larger communities provide market places and trading and thereby promote division of labour. This means city dwellers can specialise. By specialising, the productivity increases – this goes for the surrounding rural areas too, as subsistence agriculture will not suffice to feed the city dwellers
An important benefit is that they are sited on trade routes, whether river, sea or roads and railways, which provides good communication.

For a city to grow, there needs to be high population growth, in the surrounding rural areas. If there is enough reasonably well-paid employment for the rural dwellers, they will have no need to move. So for a city to grow, they must offer better prospects to the rural population to attract them to move. The graph shows this to be true.

Similar specialised activities tend to cluster together in cities e.g. banking and insurance in the financial quarter of Paris – this means there is a pool of workers and jobs and these large organisations can network and cooperate and become more efficient (or in the case of the recent global crisis, encourage each other on to all make the same stupid mistakes in a bigger, better and more spectacular way!!)

It is cheaper to provide services in cities, e.g. cable TV or education requires a much smaller investment per person to provide superior quality of service – you do not tend to get the newest high tech hospital equipment in a little local hospital, nor can you have complicated surgery carried out there – the cost of installing such equipment would be astronomical when costed out per person in the population. Equally, better staffed and equipped schools only happen in cities and this has the knock-on effect and providing a better educated workforce. These people are then able to increase the overall productivity of the city, raising still further its GDP. The richness and diversity and level of education of the city dwellers leads to cultural activity which in itself is a consumer good, which leads to greater economic activity. In addition, the availability of this kind of activity attract migrants who want to participate in it.

Together, these and other factor mean that mega-cities contribute much more to economic activity of the country e.g Sao Paulo has about 15% of the population of Brazil but contributes over 30% of the GDP for the country and Bangkok has about 10% of the population and also approaches 30% of the GDP for Thailand. Mumbai (India) generates 40% of India's taxes.

https://www.geographypods.com/1-dynamics-distribution-density.html

Why mega-cities are emerging now

When the dotcom era took off about 20 years ago – it was suggested that cities would lose some of their importance – production/communication would become computerised, so there would be less need for everyone to cluster together in the same places. However this has proved not to be the case.

Cities attract migrants with their higher productivity and above all with the higher wages that come with it. This also applied in decades past. But why are mega-cities forming at this particular time?

World population increased fourfold in 100 years
Number of people in Earth since the year 0 (billions)

Source: US Census **12**

Four factors play a part:

1. **Population growth**: The most obvious reason is the population boom in many countries which started only a few decades ago. The world's population did not reach the one billion mark until around 1750. Before this, the global total grew at an average rate of 0.05% per year. Subsequently, this growth accelerated: it did not even take 200 years to reach the two billion mark. And in the following years, especially after the second world war, the pace picked up to as much as 2% per year, so within 70 years the number of people on the planet rose to the current total of nearly 7 billion. Mega-cities are thus largely the result of an increase in life expectancy and a decrease in infant mortality, in other words medical advances and better hygiene.

2. **Reduced need for agricultural labour**: greater capital investment that leads to productivity gains means that fewer workers are needed, together with greater opportunities in the cities.

3. **Loss of farm land:** growing industrialisation, poor farming methods and climate change all contribute to this loss, e.g. China loses 3-6000 sq km of agricultural land each year.

4. **The technological revolution:** the ease and speed by which information can be shared
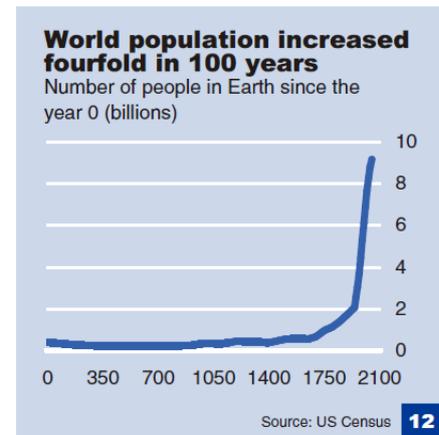
Outline the reasons for the growth and development of the number of megacities in the last 50 years. (5)

The problems of mega-cities

Costs of mega-cities – high property process, traffic congestion, environmental problems, adverse impacts on health, crime and lack of social cohesion reduce the advantages of very big cities compared with smaller ones

The high price of land lead to an increasing number of high-rise flats e.g. in Hong Kong there are 7500 building with more than 12 storeys. These reduce the availability of green spaces and living in high-rises accommodation diminishes the quality of life of those there.

As cities grow, and where residential areas are far from the commercial areas, walking or cycling to work is not an option. So **congestion is an issue**. Designing a transport network takes time and money and also may need to involve dismantling what has grown up – not popular. So the road traffic grows faster than an organised system which leads to the inevitable traffic jams and pollution. Four hours of travel daily is not usual in mega-cities. So a good public system makes much better use of space – the space taken by one or 2 people in a car is far greater than a bus carrying 50 people. Underground trains (Metro) do make even better use of space but they are very expensive. It also means that well ahead of when they will be used, how many and from

> ## The bus system in São Paulo – a solution
> São Paulo has probably the most complex bus system in the world today, and it is an operating success. Over 26,000 buses on nearly 2,000 routes carry up to 11 m people daily. Within one week the total number of passengers would nearly equal the population of Germany. By comparison: the Tokyo subway carries "only" 7.8 m passengers per day, even though almost twice as many people live there.
> The key is to a system of bus lanes that means bus commuters can avoid the traffic jams on the streets. The bus thus travels faster than cars. In addition, Everywhere in the city is on a bus route. For these 2 reasons are why it is so successful. Trams or underground construction would have been far too expensive and disruptive.

where is needed to be known prior to planning phase – not easy as these mega-cities grown very fast and often in an unplanned way.

But traffic problems are by no means confined to developing countries – congestion charging in London puts a cost on space and concentrates the mind wonderfully when how to get to work is decided!

Nor is congestion the only problem caused by the traffic. 75% of global emission (of which traffic is a sizable portion) are made by cities. For example Sao Paulo consumes 60% of Brazil's energy while housing only 15% of its population. This means that **air pollution is a serious issue**.

Where 100% of household in HIC's have piped potable water, only 50% have a similar supply in many LIC's and NICs. In some cites where the populations are growing fastest, the % of people with ready access to potable water is deteriorating. However, do not assume HIC's are exempt – both in Germany and in the France many water and sewage systems are reaching the end of their useful life and need huge investment. While improvements are being made, the water companies still leaked 3,3 megalitres of water a day - enough to fill the bowl of the new Wembley stadium, UK (see picture) almost three times every 24 hours! (Source: industry regulator OFWAT).

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The large cities have **a high crime rate**. This is in part due to **the disparity between shanty town dwellers** and those who have achieved high status in big organisations, and also that shanty town dwellers have worse education, health and social benefits and thus few chances of improving their circumstances. But is also because large cities are **anonymous places** and it easy to hide in large sprawling shanties so criminal behaviour is much less likely to end up in a court appearance than a similar offence in a rural area.

From the above it can be seen that many mega-cities have serious quality of life issues. However, if it was really that bad for everyone, then the growth of cities would have been halted and it has not so this implies the positives outweigh the negatives.

Thinking about both sides of the story.

Living in Mega Cities can have more advantages than disadvantages. How true is this?