



Seven billion and counting

This article looks at reasons for global population change and investigates regional variations

The world's population is growing quickly and on 31 October 2011 it reached 7 billion, although no one knows exactly where or when on that day this number was reached.

Current projections show a steady decline in the *rate* of population growth but a continuing increase in the world's total population, reaching 8 billion by around 2025. By 2045–50 the total is expected to reach around 9 billion.

The uncertainty comes partly from the fact that all predictions of population make assumptions about birth and

death rates, and the actual rates will vary from these assumptions. In addition, in many of the less economically developed countries (LEDCs) it is difficult to hold an accurate census and get precise figures for the total population.

Population growth rate

The growth rate of the world's population was highest in the 1960s and 1970s, peaking at 2.2 % per year in 1963 (Figure 1). By 2009 it had declined to 1.1%. The rate of population growth varies widely from one part of the world to another.

The situation in Africa

In recent years Africa has been the continent with the fastest growing population in the world. At some point during 2009, according to the United Nations, a child born somewhere in the continent became the 1 billionth African.

The doubling time for Africa's population is short. It took just 27 years to double from 500 million to 1 billion and by 2050 it is predicted to double again to 2 billion. According to the US-based Population Reference Bureau the average woman worldwide has 2.6 children. In Africa the figure is much higher,

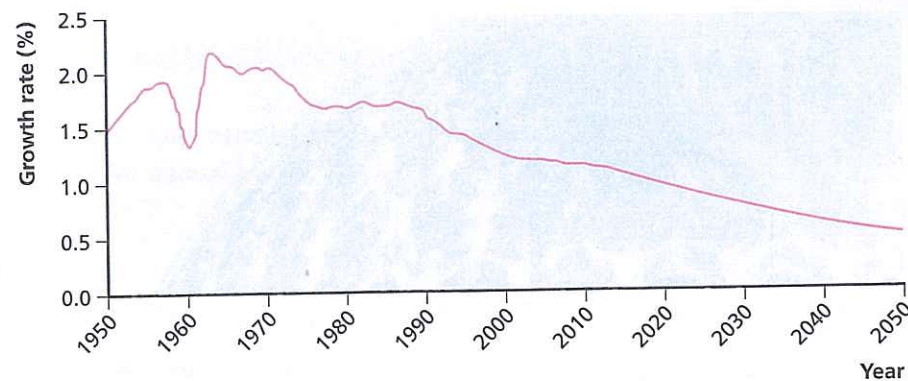


Figure 1 World population growth rates 1950–2050

especially in sub-Saharan Africa, where it is 5.3. The African country of Niger has the world's highest fertility rate. Women there have on average 7.4 children. Africa's population is continuing to rise in spite of low life expectancy and high infant mortality.

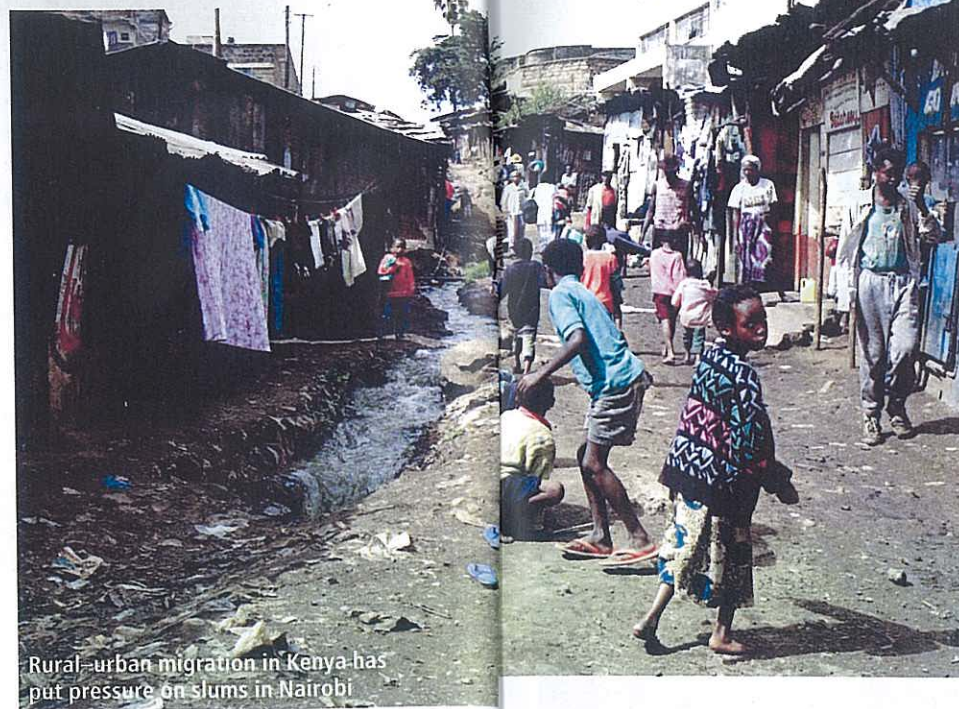
The demographic transition model

The demographic transition model shows how the population of a country changes over time. Most African countries are in the 'Late expanding' stage of the model (Figure 2), where the death rate has declined significantly but there is a time-lag before the birth rate declines to a similar level. In Africa in 2009, for example, Niger had a birth rate of 49.1 per 1,000 and a death rate of 19.9 per 1,000. It is the difference between the two measures that leads to a high rate of natural increase in the population. In Niger the difference is 29.2 (that is, 49.1 – 19.9) per 1,000, or 2.92% population growth per year.

The demographic transition model is based on the idea that, as urban populations increase, education becomes more effective, healthcare improves, contraception becomes more widespread, and women and men have more equal status. These trends result in birth rates dropping to a level more or less equal to the death rates, as countries move into the 'Low fluctuating' stage, where the rate of population growth is low. However, it will be some time before most African countries reach this stage. Many people agree that improving education for girls and giving them access to employment is the best way of cutting birth rates and reducing population growth rates in the future.

Rural–urban migration and health

As well as the size of its population, the *distribution* of Africa's population is changing rapidly. Rural–urban migration means cities such as Nairobi in Kenya and Cape Town in



South Africa are growing fast. This puts enormous pressure on urban services such as housing, schools, healthcare and transport. Unexpected consequences of these rapidly expanding cities are emerging. For example, Africa's roads are the most dangerous in the world. If current trends continue, by 2020 more Africans will die in road accidents than from HIV/AIDS, malaria and tuberculosis combined. Smoking rates are increasing too. Chronic diseases linked to smoking — heart attacks, strokes, cancer, asthma and diabetes — caused 25% of deaths in Africa in 2004. By 2030 that figure is predicted to rise to 46%.

An ageing world

A recent report by the US Census Bureau called *An Ageing World* highlights the rapid increase of older people in the world. By 2040 there will be 1 billion pensioners. The main reason for this is continuing improvements in healthcare. This trend is putting increasing burdens on health services, pension systems and social services. John Appleby, a health policy expert in the UK, points out that:

The main users of the NHS tend to be older people. Those in their 80s cost the

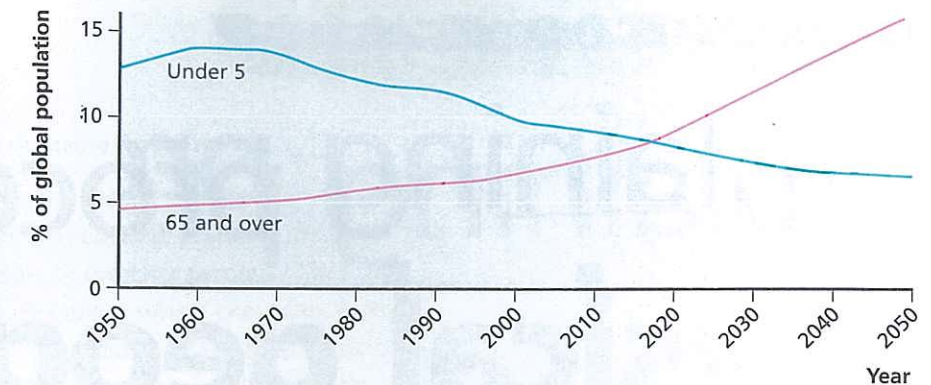


Figure 3 Young people and older people as a percentage of the global population

NHS around £2,700 a year; 20-year-olds cost around £400.

Europe is the 'greyest' continent, with 23 of the world's 25 'oldest' countries. The UK is at number 19 in this league table, with a life expectancy of 80.1 years, according to the World Bank in 2009.

The older dependency ratio (ODR)

The ODR varies widely from one country to another and at present is much higher in the more economically developed countries (MEDCs) than the LEDCs. It ranges from 6 in Kenya and 7 in Bangladesh to 26 in the UK and 33 in Japan. The significance of this is that countries with a high dependency ratio have to pay the costs of a prolonged retirement and healthcare for their older population.

One response to this has been MEDCs raising the retirement age for citizens.

In France, where the retirement age is 60, plans to raise it to 62 by 2018 have brought nationwide protests. Both Germany and the Netherlands have announced that their retirement ages will be raised in stages from 65 to 67 over the next few years, and in the UK the retirement age for both men and women is likely to increase to 66 by 2020 (although this proposal is not yet law and requires the approval of parliament).

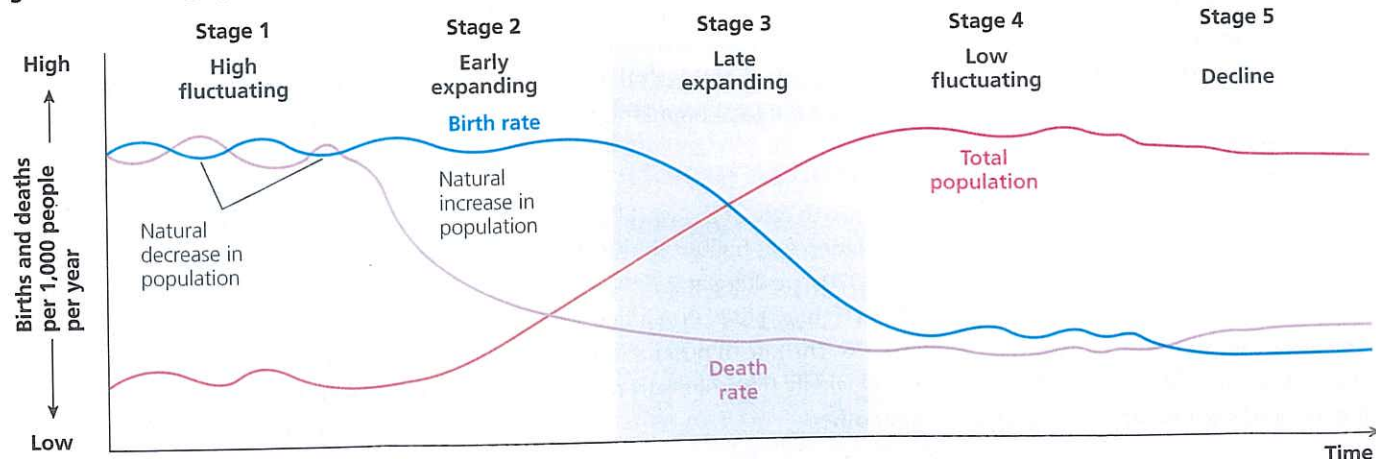
People associate ageing populations with MEDCs but the situation is steadily changing and by 2040 LEDCs will have 76% of the world's population over 65, amounting to over 1 billion people. As Figure 3 shows, on a global level the percentage of over-65s will exceed the percentage of under-5s before 2020. So it seems that most of the world's countries will have the task, sooner rather than later, of having to find much more money to fund pensions and healthcare for their ageing populations.

However, *An Ageing World* points out that not only are the elderly in many cases major taxpayers and providers of childcare, but in many countries they are more likely to provide financial support than to receive it.

Glossary

- Billion** One thousand million (1,000,000,000).
- Doubling time** The time it takes for a population to double in size.
- Life expectancy** The number of years a person might be expected to live.
- ODR** Older dependency ratio: the number of people aged 65 and over for every 100 people of working age (20–64).

Figure 2 The demographic transition model



French students protesting at plans to raise the retirement age in France



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