

## Ageing populations

The population of the United Kingdom is ageing. Over the last 25 years the percentage of the population aged 65 and over increased from 8.3 million in 1983 to 9.8 million in 2008, accounting for 16% of the population. Over the same period, the percentage of the population aged 16 and under decreased from 21% to 19%. This trend is projected to continue. By 2033, 23% of the population will be aged 65 and over, compared to 18% aged 16 or younger. The number of people aged over one hundred is projected to increase from 11,000 in 2008 to over 80,000 in 2033.

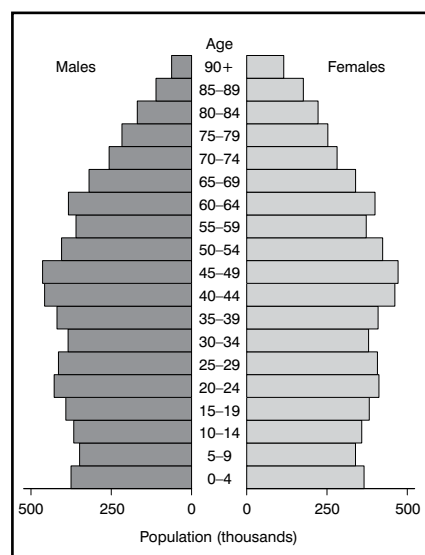
This **Geofile** looks at the causes of this demographic phenomenon and at the likely effects on the UK.

### Causes

The underlying causes of the ageing population of the UK are two-fold:

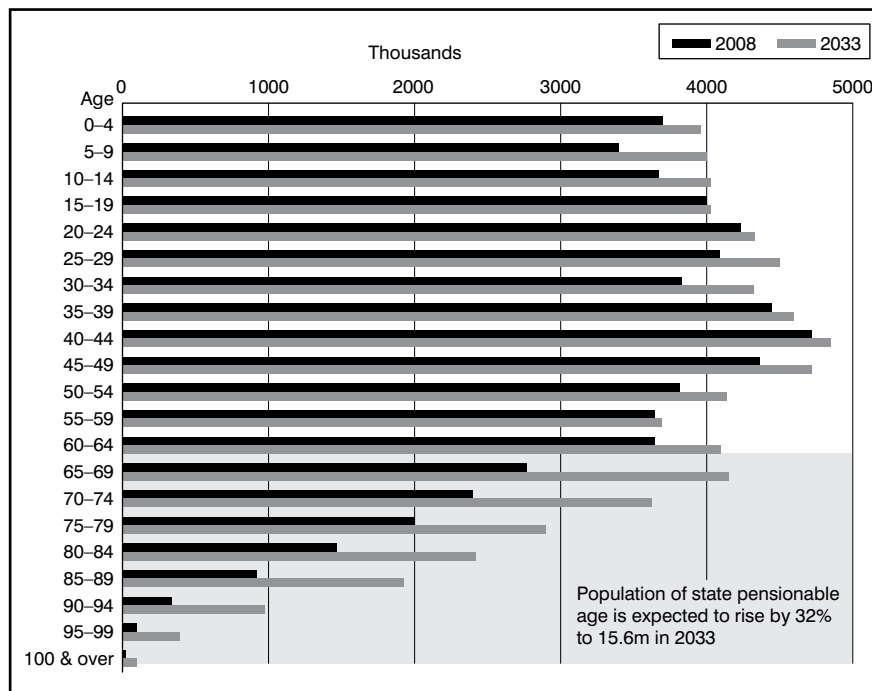
- Increased life expectancy, due to improving healthcare, improved diets and greater awareness of healthy lifestyles. In 1981, men aged 65 could expect to live a further 14.0 years on average, and women 18.1 years; by 2008 this had risen to 20.8 for men and 23.3 for women. The death rate in the UK fell from 11.8 deaths per thousand population in 1971 to 9.4 in 2008.

Figure 1: Age/sex pyramid of the UK population in mid-2008



Source: Office for National Statistics (ONS)

Figure 2: Expected increases in UK population by age group, 2008–2033



Source: Office for National Statistics (ONS)

- A low fertility rate - well below the replacement rate of 2.1 per woman. The fertility rate was 2.37 children per woman in 1971, but had fallen to 1.96 in 2008.

The main causes of the decline in the fertility rate are the increase in the numbers of working women, and the continuing inadequacy and expense of proper childcare facilities, which discourage pregnancy. There is a tendency for women to seek to build their careers and achieve a level of financial stability before starting their families: women tend to marry later and get pregnant later. The average age for British women to bear their first child increased from 26.2 in 1995 to 27.5 in 2009. There has also been an increase in women who have no children. Only 11% of women born in 1940 had no children, compared with 19% of women born in 1960. For women born in 1965 and 1970, the proportion projected to remain childless is 19% and 18% respectively. However, as will be shown later, a very recent trend is raising the fertility rate.

A complicating factor in the ageing population is the impact of the

Second World War on the UK's demographic. With millions of men in the armed forces, normal married life was impossible and couples delayed the start of their families. Following the end of the war, the millions returned home and there was a rapid increase in births. In 1945 the birth rate was 16 per thousand population; by 1947 this had increased to 21 per thousand. In 1947 the population of the UK increased by over half a million during the year. This 'baby boom' lasted for four years, but by 1950 the birth rate had returned to 16 per thousand. In 2010 the baby boomers are just starting to retire, and this is accelerating the ageing population trend. Figure 1 is an age/sex pyramid of the UK population in 2008. It clearly shows the bulging population around 60 years of age, and the 'echoes' of the baby boomers around the ages of 40 and 20, as the next generations had children of their own.

The fastest population increase has been in the number of those aged 85 and over. In 1983, there were just over 600,000 people in the UK aged 85 and over. Since then the numbers have more than doubled, reaching 1.3 million in 2008. By

2033 the number of people aged 85 and over is projected to have more than doubled again, to reach 3.2 million, and to account for 5% of the total population, compared with 2.1% in 2008 (Figure 2).

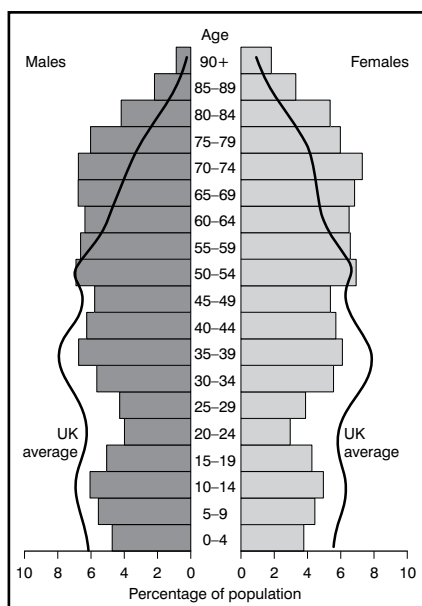
As a result of these increases in the numbers of older people, the median age of the UK population is increasing. The median age has increased from 35 years in 1983, to 39 in 2008. This affects the dependency ratio (the number of children aged 0-14 and older people aged 65 and over in a population as a ratio of the number of economically active people aged 15-64). The dependency ratio is worked out with this formula:

$$\text{Dependency ratio} = \frac{\% \text{ under 15} + \% 65 \text{ and over}}{\% \text{ aged 15} - 64} \times 100$$

The dependency ratio for the UK has actually fallen, from 52.26 in 1991 to 50.4 in 2008, as the declining numbers of children has more than balanced the increasing numbers of older people. For our purposes, a more useful ratio is the ageing index, which is the ratio of older people to children. This rose sharply from 64.0 in 1971 to 91.1 in 2008.

The ageing of the population will vary across the country. The average age for the UK in 2008 was 39.3 years. At present, West Somerset is the district with the highest average age in the UK, at 52, with almost three in 10 people there aged over 65. The figure could reach 56 by 2018 as people continue to retire to the coast.

Figure 3: The age/sex pyramid for Christchurch, Dorset in 2008



North Norfolk comes next, at 51, followed by Rother, Christchurch and East Dorset on the south coast. The population structure of Christchurch (Figure 3) shows that below the age of 50, there are fewer residents than the UK average, with a particularly large difference in people aged in their twenties. From 50 years of age the position is reversed, with considerably more people than the UK average in those ages, with particularly large differences in people aged in their seventies and eighties. Christchurch has had a similar population structure for many years, and its economy is well adjusted to its aged population – perhaps a model for other districts to follow, as the average population ages.

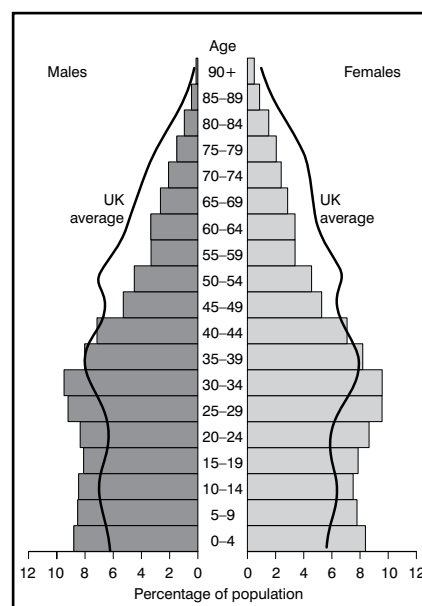
When it came to the youngest average age, university towns topped the list, with Oxford (28.9 years) and Cambridge (29.9), followed by Newham in London (30.1) (Figure 4), Manchester (30.1) and Nottingham (30.4).

## The impact of an ageing population

Negative economic consequences of an ageing population include:

- the increased tax burden which working people will face in order to fund the increased bills for pensions and health care
- pensioners are unlikely to receive less generous pensions than previously when the dependency ratio (and life expectancy) were lower

Figure 4: The age/sex pyramid for Newham in 2008



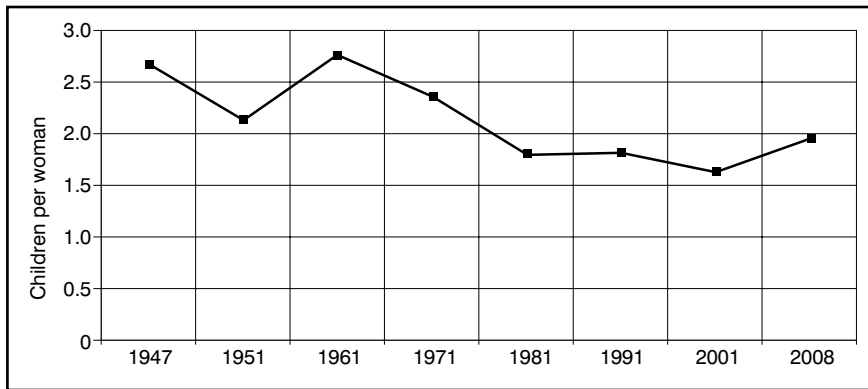
- more housing will be needed due to the increase in life expectancy, which will cause housing to be occupied for longer by each individual than in the past.

Social impacts will include the increased need for services for the elderly, including hospitals, residential homes and care workers. In the past, the elderly relied on their families for care, but family ties have been weakened by increased mobility and rising divorce rates. In future, the elderly will be less likely to be married or cohabiting, according to the ONS, and more will live alone. Among those aged 85 and over living independently, one third need help climbing the stairs and a quarter with bathing.

According to the Academy of Medical Sciences in a report published in 2009, age is the single greatest risk factor for many life-threatening diseases; for example, a tumour is 100 times more likely to occur at the age of 65 than at 35. However, the Wanless Report on financing the NHS, published in 2001, pointed out that although healthcare costs rise with age – more than a third of spending on hospital and community health services is for people over 65 – the ageing of the population has ‘less of an impact on health spending than many people tend to think’. The reason for this is that about a quarter of all the healthcare someone consumes in their lifetime is spent in the last year of their life, and the cost of this last year tends to fall with increasing age. A 1999 study in Scotland showed a person who died at 50 had an average £7,000 of health care in his or her final year of life, compared with just over £3,000 in the last year for a person dying at 90.

The National Health Service also confronts challenges in coping with the dentistry needs of the ageing population. The British Dental Association points out that older people are now increasingly keeping their own teeth. In 1973, 30% of UK adults had no natural teeth; by 2009 the percentage had fallen to 9%. This is clearly a good thing for the individuals involved, but false teeth need little dental care. In the future there will be an increased demand for replacement fillings and for care for eroded teeth, which will require substantial additional resources for the NHS.

Figure 5: The UK's fertility rate 1947–2008



The picture is by no means uniformly negative. Positive economic consequences include an increased demand for certain goods and services, whether they be those connected with health and social care, or those associated with leisure and tourism. As Christine Jeavans, writing on the BBC website in 2004, said:

'Researchers predict that the baby boomer generation will revolutionise what it means to be old because their attitudes are so different to those of their parents. According to market research, they are likely to be demanding and imaginative consumers of both products and services, seeking out information for themselves and refusing to be defined by their age-group. But even before the bulk of the boomers retire, lingering stereotypes of the average senior citizen as a frail and passive creature are already out of date. The latest available figures on volunteering show that 35% of people aged 75+ regularly give up some of their free time to help others. Participation in society in other ways, such as voting or joining pressure groups and forums, is also high among current retirees. Then the Saga phenomenon has revealed a love of adventurous travel and the boom in "later love" dating websites suggests a passion for a full life.'

## The Policy Response

UK governments have acted in response to the issues posed by the country's ageing population. Governments have aimed to increase the participation in the work force of those aged 50 to 70. In response to the increasing life expectancy, it has been decided to raise the age at which people can start to receive a state pension. The Pensions Act of 1995 will raise the state pension age for women from 60 to 65 in stages between 2010 and 2020. In 2007 another Pensions Act increased the state pension age for both men and women from 65 to 68 between 2024 and 2046.

Despite these increases in state pension age, the population of state pensionable age is still predicted to increase by a challenging 32 per cent over the next 25 years. By contrast, the population of working age is predicted to increase by only 14 per cent.

Pensions for public sector workers have been revised, with increased payments from members and a raised age at which pensions can be taken. Political debate has centred on the possible ending of the final salary pension schemes of public sector workers (pensions based on the salary earned in the final years of work), and their replacement by an average salary scheme (the lower figure resulting from calculating the average salary earned over the pensioner's career). Final salary schemes in the private sector have been greatly reduced in number since the late 1990s. A survey of 1,000 blue-chip companies by Pricewaterhouse Coopers, conducted in 2009, found that 96% of the companies believed their final salary schemes were unsustainable. Most of the companies had closed their schemes to new employees, and 16% of the companies had already closed their schemes to existing members.

In 2002 the Scottish government introduced a policy of free residential and personal care for those aged over 65, and has continued with the policy following a review in 2008. The UK government refused to follow suit, so England, Wales and Northern Ireland have less generous policies.

Another line of government policy aimed at ameliorating the effects of an ageing population has been encouragement of immigration. Younger workers from overseas can

fill skills gaps in the labour market. The UK government responded to the expansion of the European Union by encouraging migrant workers from the Eastern European states which joined the EU in 2004 (the so-called A8 countries of Slovenia, Estonia, Latvia, Lithuania, Poland, the Czech Republic, Slovakia and Hungary). The result was a rapid influx of over half a million people.

The rate of immigration into the UK is a major driver of population change, and migration rates are closely linked to economic growth. For instance, the economic recession of 2008 caused a rapid change in net migration from the A8 countries. In 2007 there were 109,000 arrivals whilst 31,000 returned home; in 2008 the arrivals had fallen to 79,000 while the number returning home had more than doubled to 66,000. Stricter controls on immigration introduced by the UK government in 2007 also had an impact.

## Recent changes in the fertility rate

Following four decades of a declining fertility rate, the rate increased each year between 2003 and 2008 (Figure 5). The impact has been dramatic, with the total UK population increasing by two million between 2001 and 2009. In 2008 alone the population increased by 408,000 within the year. There were 791,000 births in 2008, an increase of 33,000 over 2007 and compared with 674,000 in 2001. Between mid-2007 and mid-2008, natural change (the difference between the numbers of births and deaths) accounted for 54% of UK population growth. Net migration and other changes accounted for the remaining 46%. This is the first time in a decade that natural change has contributed over half of population growth in a 12-month period.

The OCNS stated:

'Recent increases in the Fertility Rate have been driven mainly by faster increases in fertility rates for women in their thirties and forties, continuing the long-term trend that started in the late 1970s. In addition, there has also been a reversal in fertility trends among younger women over the past six years, with rates starting to increase at age 25-29 and to a lesser extent at age 20-24 (in contrast to falling rates for women in their twenties during the 1990s).

Figure 6: UK births to foreign mothers, 2008

Country of birth of mother	Number	2008 Percentage of all live births
Pakistan	18,826	2.7
Poland	16,101	2.3
India	12,453	1.8
Bangladesh	8,629	1.2
Nigeria	6,974	1.0
Somalia	6,058	0.9
Germany	5,084	0.7
South Africa	4,542	0.6
Ghana	3,722	0.5
Sri Lanka	3,329	0.5
<b>Total</b>	<b>170,834</b>	<b>24.1</b>

There is no single explanation underlying these changes in fertility, which is likely to have resulted from a combination of factors. Possible causes may include less postponement of childbearing among women currently in their twenties, changes in support for childbearing (e.g. changes in tax credits and maternity leave) and the impact of international migration on fertility.'

The OCNS figures showed that the average age of mothers has increased from 26.2 in 1971 to 29.3 in 2008. Fertility rates for women over 40 years old have dramatically increased over the last two decades. In 2008 there were 12.6 births per 1,000 women over 40, compared with just 5.1 in 1988.

There is a significant geographical variation. With 2.09 per head, women in the West Midlands had the most children, while those in the North East had the lowest, at 1.86.

The latter factor may be of particular importance. In 2009 the average UK-born woman had 1.84 children, whilst women living in the UK who had been born abroad had 2.51 children. Nearly 25% of births in 2008 were to mothers who had been born abroad (Figure 6). Between 2007 and 2008, the number of births in England and Wales to women born in the UK increased by 1.5%, to 537,854 births in 2008. Over the same period the number of births to foreign-born women increased by 6.5% to 170,834 births in 2008.

There is a geographical variation in the distribution of foreign mothers within the UK. In 2008, the Government Office Region (GOR) in England with the highest percentage of births to mothers born outside the UK was London (55%). The North

East had the lowest percentage of live births to mothers born outside the UK (9.5%). Of the local authorities in England, the London borough of Newham recorded 75% of births to mothers born outside the UK, the highest percentage in 2008, followed by Brent (73%). Outside London, the Unitary Authority of Slough had the highest percentage of births to mothers born outside the UK (57%), followed by Luton (50%). The area with the lowest percentage of births to mothers born outside the UK in 2008 was Teesdale, with 2.3%. In Wales, the percentage of live births in 2008 to mothers born outside the UK was 9.8%. Within Wales, Cardiff had the highest percentage of births to mothers born outside the UK (24%) and Torfaen had the lowest (3.2%). The Scottish areas with the highest proportion of births to foreign-born mothers, with over one-fifth of births occurring, were Edinburgh, Glasgow and Aberdeen.

## Conclusion

Ageing populations present challenges, but also opportunities. Careful policy-making will be required to ensure that the negative effects are ameliorated and that the ageing population can be a positive contribution to the health and wealth of society.

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'Welcome to the Ageing Future' by Christine Jeavans at <http://news.bbc.co.uk/1/hi/uk/4012797.stm>

'Ageing: fastest increase in the oldest old' at <http://www.statistics.gov.uk/cci/nugget.asp?ID=949>

"Costs of aging population could dwarf economic downturn"  
[www.acmedsci.ac.uk](http://www.acmedsci.ac.uk)

[http://www.statistics.gov.uk/downloads/theme\\_population/FAQbirthsfertility.pdf](http://www.statistics.gov.uk/downloads/theme_population/FAQbirthsfertility.pdf)

### Report:

Tromans, N., Natamba, E. and Jefferies, J. (2009) 'Have women born outside the UK driven the rise in UK births since 2001?', *Population Trends* 136 pp 28-42.

## Focus Questions

1. Compare and contrast the age/sex pyramids shown in Figures 3 and 4. What factors help to explain their shapes? How are the economies of the two places likely to differ as a result of their differing population structures?
2. Discuss the implications of an ageing population for the economies of countries affected.
3. What was the impact of migration on the population structure of the UK between 2004 and 2008? Why might a government wish to encourage immigration to offset the effects of an ageing population?