

## Box B: Economics and population change

By Norma Cohen

### Introduction

Watching population change, it may be said, is akin to watching paint dry. It is noticeable almost only in times of national upheaval such as wars or epidemics. Usually, it is a phenomenon of which we gain awareness only over long time periods. The economics profession, for its part, habitually looks at change from the opposite end of the telescope; that which is happening in the nearby to intermediate future, perhaps a quarter or maybe a year ahead. The practice of economic forecasting, therefore, has been almost completely divorced from that needed to consider the economics of population change.

But from the second half of the 20th century in particular, population change has occurred at a furious pace compared with that of a century earlier and it is no longer possible – or sensible – for economists to ignore it. Indeed, a quick look at the recent upheaval in France shows the risks of avoiding this discussion. There, rising life expectancy is forcing government to look at some of its most cherished social programs and enact very unpopular overhauls. This needs to be done to make these affordable in the face of a population not only changing in size, but perhaps most critically, in shape as well.

Britain, like most nations in the industrialised world – and many emerging economies as well – needs to take account of that change in the shape of its population and consider how it will respond. By the mid-20th century, the age profile of much of the industrialised world formed a pyramid shape, very large numbers of children and young people at the bottom and very few elderlies near the top. Now, for many nations, the shape more closely resembles that of an obelisk with similar numbers of those at the youngest ages compared with numbers in old age.

Given the fact that longevity at older ages is continuing to rise and that the rate at which new babies are produced is falling, is there a risk that eventually, Britain's population shape resembles that of a champagne flute? The implications of population change are profound.

Much has been made in recent months about what appears to be a slowdown in the rate at which longevity in Britain is rising and what that ought to mean for the economy and the nation's finances. A review of the State Pension Age in 2017 predicted that on average, women who lived to age 65 would live more than a further 25 years by 2050, while men would live a further 23.5 years. That has now been downgraded to 23 years for women and 21 years for men. What is the economic impact of rising longevity, albeit at a slower pace than had been expected only a few years ago?

This box will look at the big population trends and consider the economic and fiscal impacts of each. But first, it is helpful to step back and consider how Britain's population has changed shape over time and look at how that shape-shift may have changed its economy.

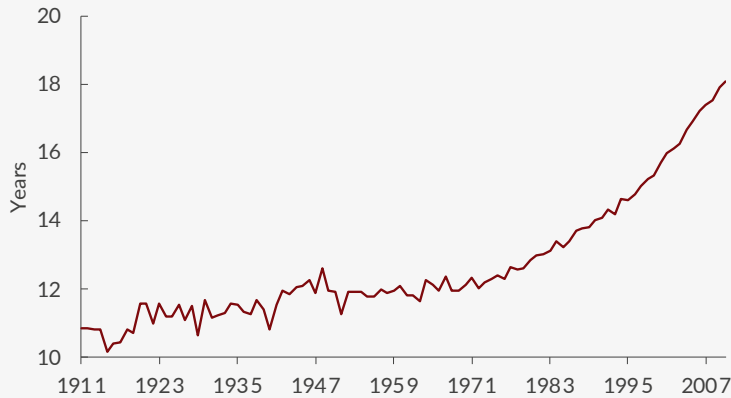
### Population trends in Britain

Life expectancy in Britain has been rising steadily since records began in 1841. Efforts to address old age poverty were first set out in legislation in 1908, providing the neediest over age 70 with a limited, means-tested pension that required recipients also to meet a moral test. In 1925, the then Chancellor Winston Churchill introduced Britain's first contributory pension for those earning what was then considered an annual salary below that earned by the middle classes, ie, below £250 annually. The age at which it could be drawn was set at 65.

The English Life Tables show that on average, a male born in the decade when that age was set would live to be 55.6 years while a woman born at that time would, on average, live to an age of 59.6 years. Mostly, the low life expectancies at birth reflected the very high levels of childhood mortality prevailing at the time. But reading between the lines, half the population born in the decade in which UK pensions were created were unlikely to live long enough to draw one. Data from the Department for Work and Pensions shows that on

average, life expectancy for men who lived to age 65 hovered between 11 and 12 years from 1911 until 1971 (figure B1).

**Figure B1** Average additional life expectancy for men aged 65



Source: Department for Work and Pensions.

But far more Britons now live into old age than before. In the 40 years between 1980 and 2020, the mortality rate among British men in their 50s more than halved. That means that far more men are living into old age than ever. At age 66, the current State pension age, the mortality rate among men in the nation is slightly less than a half the rate of only 40 years ago. Many more men today will live to claim their State pension than did just a few decades ago. Indeed, the Office for National Statistics (ONS) calculates that the fastest-growing age group of the UK population between now and mid-2045 will be those of pensionable age, while the percentage of children will decline slightly.

Of course, averages can be misleading because they obscure what happens at the margins. One measure cited by actuaries is the 'slope measure of inequality' which offers a glimpse into how longevity differs by socioeconomic status. According to data compiled by the OECD, for men over age 15, as of the 2010s the inequality gap is wider in Britain than it is in the Netherlands, Italy, Spain or Sweden but is narrower than the inequality gap in Germany or France. For women, the slope of inequality is wider, as of the 2010s, than for any other European country. Not all Britons are benefitting from rising longevity in the same way.

### Why does this matter?

The Office for Budget Responsibility (OBR) spells this out annually in its Fiscal Risks and Sustainability report. Its July 2022 Report, OBR (2022), set out spending on overall welfare by age in Britain. They found that per capita welfare expenditure, net of tax receipts, is lowest for those of prime working ages 25 to 49 years old and tax receipts, per capita, peak among those in their late 40's. While expenditure is relatively high, and tax receipts non-existent, for the very young aged 0 to 15 years, it is a fraction of per capita expenditure for those aged 80+ years. For the latter group, average per capita expenditure is roughly £43,300, more than double the £19,800 per-head spent on the nation's youngest.

Using the most recent (ie, 2020) ONS population projections, the percentage of those aged 80+ will rise to 9.4 per cent of the total population by 2050, fewer than 30 years from now, from the 5.0 per cent these were as of 2020. Worse, what is known as the Old Age Dependency Ratio (OADR) – the number of people of pensionable age for every 1,000 of working age – will rise to 341 from the 2020 level of 280. A big element behind the rising OADR is falling fertility, a trend since 1973 across Britain generally and indeed, in much of the industrialised world. In short, Britain is producing too few new babies to replace the population that is ageing and dying. To keep population stable, women need to bear 2.1 babies each on average. ONS data suggest that, although there was a slight uptick in fertility in England and Wales in 2021 to 1.61 babies per woman, that is far below the trend in recent years. And the OADR may be even more painful than the numbers show. That is because it does not take account of the actual size of the workforce; it uses broad

total population measures. The steep rise in economic inactivity seen among those aged 50 to 64, therefore, implies a level of taxation for workers that is even more burdensome in the future.

### What can be done?

The short answer is that it will not do to wait until the full effect of population change has arrived. Economists can help by building into their forecasts the full effects of this change not only on tax revenue and expenditure but also on income, output, productivity and housing demand and pricing.

Many of the world's current State social protection systems – including that of pensions - were created in the aftermath of the Second World War which, as economic historian Alan Milward (1994) put it, forced widespread questioning of what States were for if they could not protect the lives and property of their citizens. One thing is clear: the general public – not just that in the UK but in much of the industrialised world as well – has come to believe that withdrawal from the workplace in one's seventh decade of life is, and should be, the norm. The rising prevalence of longer, healthier lives has become synonymous with a longer period of leisure, perhaps subsidised by the tax revenues of others.

Also, it may be helpful to recall the economic conditions into which Britain's 1925 State pension was introduced, conditions which have parallels with US legislation in 1935. In both instances, each nation was facing record unemployment rates. One objective of proponents of State retirement systems in each country was a desire to syphon off 'surplus' labour, creating job vacancies.

But it is helpful to discuss alternatives. Gratton and Scott (2016) urge a move to 'transitions': periods of life where individuals prepare for yet a new stage of their lives, perhaps returning to school to train for entirely new careers. So far, there is no evidence that this is happening in Britain. Data from the Office for Students shows that both the absolute numbers and percentage of participants in higher education aged 40 and older, slipped in the years 2010-11 through 2017-18, even before the effects of Covid showed up.

Nevertheless, Gratton and Scott (2016) note that at the start of the 20th Century, there were only two stages of life; childhood and adulthood. The concepts of 'adolescence' and 'retiree' were life stages that did not exist a century ago. Now, these are firmly embedded into national consciousness. It is possible that more of these transitional stages can be introduced into Britain's national psyche.

### References

- Gratton, L and Scott, A J (2016), *The hundred-year life*, Bloomsbury: London.
- Milward, A S (1994), *The European rescue of the nation state*, Taylor and Francis: London.
- Office for Budget Responsibility (2022), *Fiscal risks and sustainability*