

Ageing, fast and slow

When place and demography collide

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Executive Summary

All developed countries have aged and the UK is no different, but our big demographic transition into old age is only just beginning

All developed countries are getting older. This is one of the major trends of our time, despite the scale of change being less dramatic in the UK than in other comparable countries over the past 70 years. We all know that Japan stands out in the ageing race: its average age has sky rocketed from just over 26 years old in 1947 to over 46 years old in 2017. The UK has also been getting older throughout much (but not all) of this period, although at a less rapid pace. Its average age rose from 35.1 in 1947 to 38.6 in 2001, and stands at 40.2 today.

One of the underlying drivers of population ageing in the UK is the fact that we're all living longer – men born today can expect to live 8.4 years longer, and women 6.1 years longer, than those born in the early 1980s. The other, less discussed, driver is cohort size, resulting from varying birth rates over time and to a lesser extent migration.

This second driver of ageing is currently having profound effects on Britain's demographic profile. This is due to the large baby boomer generation moving from working age into pension age. The country-wide implications of a greater proportion of pensioners – not least the upward pressure this puts on health, care and social security spending – is why the topic of ageing

currently commands national policy attention. Although it may feel like ageing has been on the agenda for a while, we are now at a demographic tipping point and our big demographic transition into old age is only just beginning.

The geography of ageing receives much less attention

In contrast to this national ageing debate, local demographic change has received far less attention. The intersection between demography and place, and its implications for politics and policy are under-appreciated.

Different parts of the country have very different average ages. The typical age of the UK is 40.1 years (very similar to the mean age of 40.2 years, mentioned above). In the youngest region, London, the typical age is just 35.3 years. By contrast the South West, the oldest region, has a typical age of 43.9 years.

The gaps in typical ages are even starker when we compare local authorities. North Norfolk is the area of the UK with the oldest typical age (53.8 years), while the youngest area is Oxford (29 years). There are clear geographic patterns in typical ages across the country, with coastal and rural areas generally much older than urban ones. Even neighbouring areas can have very different age structures: Brighton and Hove, with a typical age of 35.4 years, neighbours Lewes, with a typical age of 47.7 years. Indeed even within local authorities, substantial differences exist.

How do our local areas compare internationally? There were 60 local authorities in the UK in 2015 (16 per cent of all local authorities) with a higher typical age than the oldest country in the world, Japan (46.4 years of age). At the other end of the scale, there were 23 local authorities in 2015 (6 per cent) with a median age that is lower than that in Chile (33.8 years of age), one of the youngest OECD countries. This comparison brings home the extent of variation in the age of different places in Britain today.

Britain has experienced demographic divergence, with older places ageing faster than younger ones

Crucially, places do not just have very different ages – they are

diverging. Over the course of the 21st century places that started off older have, on average, aged faster than places that started out younger. The typical age in the oldest 10 per cent of local authorities in 2001 grew by 12 per cent in the following 17 years, while the youngest tenth of local authorities experienced an increase in typical ages of only 4 per cent.

These groupings hide that fact that while 91 per cent of local authorities have aged over this period, some places are actually getting younger. There are 35 local areas that are now younger than they were in 2001, including the likes of Barking and Dagenham, Manchester, and Nottingham. The latter two examples have large and growing universities, highlighting the importance of rising student numbers to the trends we describe.

Older places ageing faster and younger places getting old at a slower pace (or actually getting younger) means that the spread of average ages across local authorities has increased substantially. In 2001, 15 local authorities in the UK had an average age 10 per cent higher than the national average, and 17 had an average age 10 per cent lower than the national average. Roll forward to 2018, and those figures have increased to 33 and 39, respectively.

Demographic divergence is also observed at the regional level. London started off in 2001 as the youngest region and its average age had risen by only half a year by 2018. By contrast the South West, Wales and the East of England – the oldest regions and nations in 2001 – had increases of at least 1.8 years over this period. Northern Ireland bucks this big-picture trend by being young at the start of the 21st century and having aged fast (by 3 years) and closed most of its gap compared to the rest of the UK, excluding London.

This divergence has been driven primarily by differences in birth and migration rates

What's causing Britain's demographic divergence? Why have already-old places got older, while some relatively young places have actually got younger? To answer these questions we decompose the change in the age of an area into its component

parts: births, deaths, internal immigration and emigration and international immigration and emigration.

Focusing first on the national picture, we know that without births, deaths and migration, the average age of the population would increase by one year, every year. Births and deaths have the opposite effect – pulling down the average age of the population. And higher rates of relatively younger international immigrants compared to international emigrants have tended to, on average, bring down the country's mean age this century.

How do these components of change differ at the local level? Our decomposition shows that the quarter of local authorities in England and Wales that have aged fastest have done so due to a lack of births as a share of the population, and lower rates of migration, than the England and Wales average. This low number of births is accounted for simply by the fact that there are fewer women of childbearing age in these places, rather than lower fertility rates. In the 10 local authorities that have aged fastest, women aged 15-44 years old account for between 14 and 15 per cent of the population, significantly below the 19 per cent share for this same group across England and Wales as a whole.

On the flipside, the quarter of local authorities that have aged slowest (or actually got younger) have done so due to migration, both from other parts of the UK and from other countries. In some of these areas, like Nottingham and Newcastle, inward internal and international migration of 19-21 year old university students has had a particular impact.

But not all local authorities in this group fit this profile: the biggest driver of Barking and Dagenham getting younger is not more downward pressure than average from migration, but a particularly high birth rate compared to the rest of the country.

Barking and Dagenham is a local authority in the bottom decile of household incomes. This tallies with a pattern of both the poorest and richest areas of the country ageing slowest (and even getting younger), while middle-income areas have aged most rapidly. Rather than just the old and rapidly ageing 'left behind' coastal communities that are often discussed, the poorest parts of the country are often urban, young (and getting

younger) ethnically diverse local authorities with high birth rates.

Demographic divergence has huge implications for policy, economics and politics

The big-picture trend is our current demographic transition into old age, but different parts of the country are having very different experiences. Some places – often those that started out young – are getting younger. By contrast, many already-older places are ageing fast. Understanding this demographic divergence by place is the key task of this report.

The fact that the country as a whole is ageing and that the share of the population in pension age is now rising forms a key part of national policy and political conversations. But the implications of unequal ageing across regions and local authorities haven't been sufficiently debated to date. This is despite the fact that demographic divergence matters for local government, for local economies, and for our politics.

Local authorities with older populations are grappling with rising demand for social care services in the wake of acute funding cuts over the past decade. This is taking place alongside moves to offer councils some greater control over their own finances, via business rates retention and the ability to put in place a social care council tax precept. But local authorities' revenue-raising potential from existing (largely property-based) local taxes is greatest in (often urban, younger) areas with high property prices. These map poorly onto those areas with the greatest social care needs, and increasingly so when the age gaps between places are growing. A greater measure of self-financing by local government is not in and of itself a bad thing. But demographic divergence highlights the reality that revenue streams often do not match well with the service requirements of local populations of very different – and ever more different – ages.

Demographic divergence also matters for local economic strategies. Typical pensioner incomes have grown by 25 per cent between 2003-04 and 2017-18, compared to 7 per cent growth

for non-pensioners. Older populations represent a growing economic resource to certain parts of the country due to their spending power. This suggests that many local economic strategies need to think beyond the exclusive focus on securing growth in productivity as a route to income growth. Indeed, pensioners' spending power in some ways inverts this central tenant of local economic policy makers, with incomes and consumption driving elements of GVA in some areas, rather than the other way around.

Finally, demographic divergence matters for our politics because age has replaced class as the big dividing line in party choice. Bigger age gaps between constituencies mean that places will increasingly tend more strongly towards a particular party. Indeed, the oldest and youngest parliamentary constituencies have become safer for their respective parties in recent elections, despite an overall trend away from party allegiance. This matters because it is likely to solidify age divides in our politics, making it more difficult for politicians to bridge them and address Britain's big challenges.

One of these big challenges is how we meet the costs of an ageing society as the baby boomers enter old age, while ensuring living standards progress for younger generations coming behind. Britain's demographic divergence means an understanding of the evolving role of place is crucial to meeting this challenge.

Section 1

Introduction

Everyone knows the developed world is ageing – it is one of the major underlying trends of our time. A huge amount of research and commentary has documented rapid ageing, with a large focus on what it means for national policy and politics.¹ In Britain, and the developed world, varying cohort sizes and mortality explain most of the change in the population structure over the past 50 years. Over 18 per cent of the population is now over the age of 65, and the proportion of people in the UK² over the age of 90 has doubled in the past 30 years.

But while our country is ageing, all parts of the country are not ageing at the same pace. This is something that is often ignored, despite its major implications for policy and politics. Indeed, while some parts of Britain are older than Japan, other parts of the country are actually getting younger. So, demographic divergence is a key feature of modern Britain, and these geographical differences matter immensely for our politics and policy.

Demographic changes are profoundly important for living standards, but differences across places – and their implications for policy – are generally ignored

Britain is getting older. Life expectancy is rising and, with Britain's large post-war baby boomer generation now moving into retirement, a growing proportion of our population is of pension age. It's important not to lose sight of just how far we have come and remember that longer lives are themselves a crucial marker of rising living standards. Since 1982, life expectancy at birth has increased by 8.4 years for men and 6.1 years for women.³

1 See, for example: O Kamm, 'An ageing population is posing problems that Britain cannot ignore', The Times, August 2018; United Nations, World Population Ageing 2017 - Highlights, 2017

2 Note that this research uses the largest geography possible when focusing on national statistics. Due to availability of data the report interchanges between primarily the UK and England and Wales (with Great Britain used less often).

3 For a fuller discussion of longevity trends, see D Finch, Live long and prosper? Demographic trends and their implications for living standards, Resolution Foundation, January 2017

But rising longevity brings with it its own set of challenges: more people living into old age can place additional demands on the working-age population, who are most likely to bear the brunt (financially, physically and mentally) of looking after them. People have been talking about these kinds of challenges for decades, but they are only really emerging now as the relative share of the population at older ages begins to rise. How our labour force copes and how we fund this – with health and social security spending set to increase rapidly in the coming decades – is a key question facing Britain.

This shift to an older-aged population is widely understood, but policy makers need a much richer understanding of how demographic tides play out across the country. Local demographic change is a huge (and under-appreciated) issue. The goal of this report is to describe differences in ageing by geography, with some places getting older and some getting younger; to understand the drivers of those differences; and to examine the implications for politics and policy.

In doing so, this report asks questions such as: what is the pace of demographic change throughout Britain, and how does it vary by place? What factors explain the demographic divergence in population ageing? What are the implications of this collision between Britain's demography and geography for our politics, economics and society? And how should policy makers respond to these issues?

The structure of this report

Five sections follow in the remainder of this report, structured as follows:

- **Section 2** provides an **overview of the picture on ageing**, i.e. the national trends that have hogged the headlines. It situates changes in context of rising longevity, historic birth fluctuations, and how these forces have shaped the current and future population structure of the country.
- **Section 3** focuses on **differences in population ageing across the country**. It shows that places have aged at different paces, with older places ageing faster and some places actually getting younger.
- **Section 4** looks into how **demographic factors including births, deaths and migration explain this demographic divergence**.
- **Section 5** reflects on **the implications of this intersection between geography and demography for politics and policy makers today**.
- **Section 6** provides a brief **conclusion**.

Section 2

Drivers of population ageing

In this section we look at trends in population ageing across the UK, with a particular focus on rising longevity and the impact of fluctuations in cohort size. Whichever way we look at it, we are getting older: the average age has risen by 4.7 years since 1961. Rising longevity and fluctuating births rates – with the former now being brought to bear as the baby boomer generation moves into pension age – are the twin drivers of Britain’s changing population structure. With a quarter of the UK population set to be over 65 by 2041, national politics and policy makers have largely woken up to the need to adapt public finances and the labour market in order to support an ageing society.

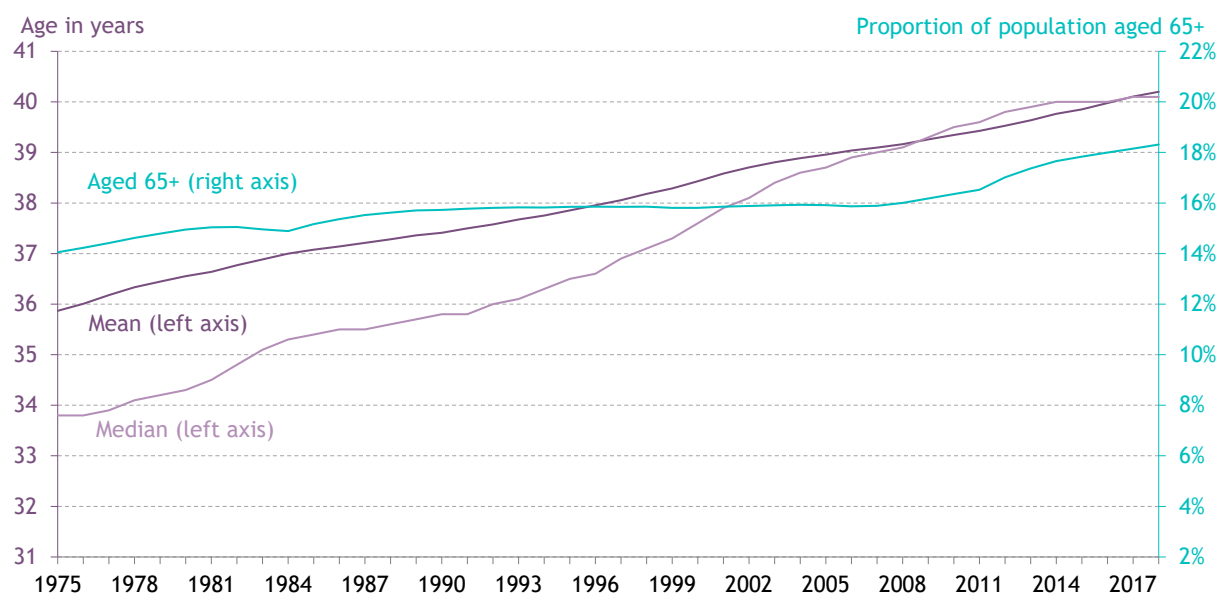
Population ageing is evident whichever way we look at it

Concern over population ageing is often driven by a focus on the increased proportion of the population above a certain age threshold, with 65 a common cut off (being male State Pension age until recently). This shift in the distribution of the UK’s population towards older ages is also reflected in rising mean and median ages, and a decline in the proportion of younger or working-age people.

Figure 1 shows that irrespective of the measure used, the general trend has been towards an ageing UK population since 1975. First, the proportion of the population aged 65 and over has increased by 4 percentage points since 1975, from 14 per cent of the population to 18 per cent in 2018. Within this period, most of growth in the proportion of the population aged 65 and over happened in the second decade of this century. The trend at older ages has been even starker: over the past 30 years the proportion of people aged 90 and over has more than doubled.

FIGURE 1: The UK population is getting older

Different measures of population ageing: UK

SOURCE: RF analysis of ONS, *Mid-Year Population Estimates*

Over the same period, the population's average age has also increased, with both the median and mean age now above 40. The median age has increased by more than six years since 1975. Different measures of ageing all point to the same conclusion: we are getting older. Box 1 justifies the measures used to describe population ageing throughout this report.

BOX 1: Different measures of population ageing

A population's median age and the proportion of the population aged 65 and over are more often used than the mean age to think about population ageing. However, we often focus on the mean age in this report, as well as using these other two measures where appropriate if more readily available. It is therefore important to establish that these measures all tell a similar story.

We analyse mean ages at various points because this measure gives more weight to observations at extreme

ends of distribution; can be used for decomposing age changes; and is highly correlated with both of the other ageing metrics. The mean age is extremely strongly correlated with the proportion of the population aged over 65 in 2018 (+0.983), and the median age (+0.982), for local authorities across England and Wales. These correlation coefficients are higher than those between the median age and the proportion of the population aged over 65 (+0.956).

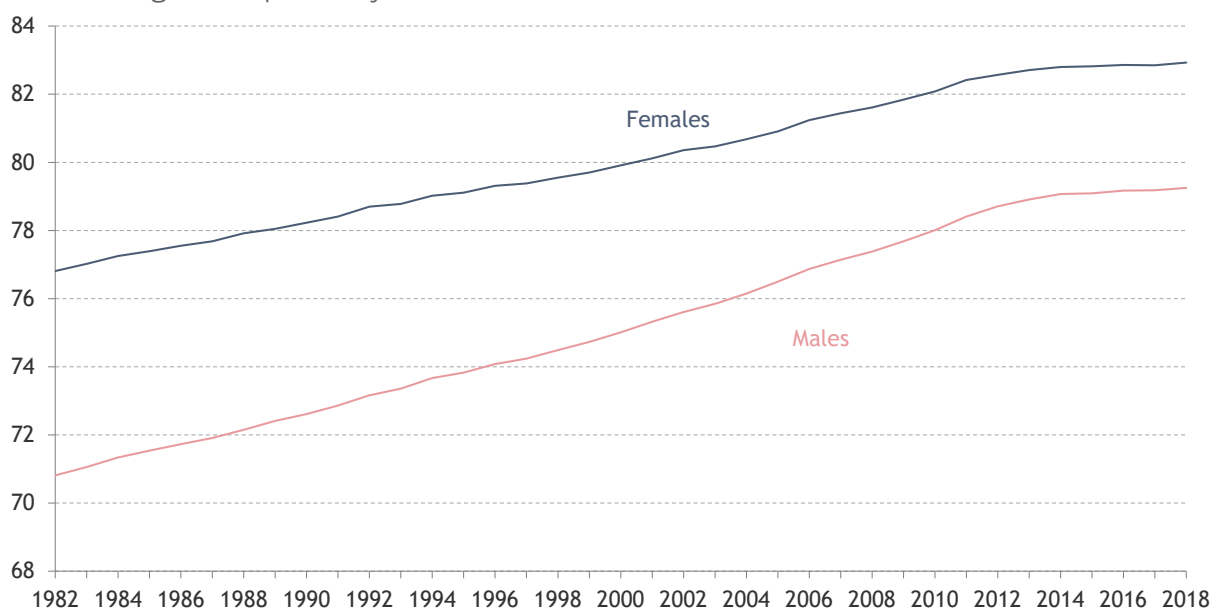
Longevity is the most-discussed driver of population ageing

Longevity is the most obvious component of 21st century ageing. Each successive generation is expected to live much longer lives than generations before them. This reflects rising prosperity over the last century or so and with it significant medical advances, improved living conditions and happy, healthier lifestyles.

The most recent figures for the UK show that life expectancy continues to rise. Life expectancy at birth for women is now 82.9 years, and 79.3 years for men, as shown in Figure 2. Life expectancy at birth at the beginning of 1980s was 76.8 years for women and 70.8 years for men, 6.1 and 8.4 years lower than today's estimates, respectively. So lives for today's younger generations will be much longer on average than for today's oldest ones.

FIGURE 2: **Life expectancy at birth has surged since the 1980s**

Average life expectancy at birth: UK



NOTES: Data is for three-year averages to date shown.

SOURCE: RF analysis of ONS, *National life tables, UK: 2016 to 2018*

And yet there are signs that the pace of improvement in life expectancy has begun to slow. The latest projections⁴ from the Office for National Statistics (ONS) imply smaller improvements than previous projections did. Despite most of the focus being on a declining birth rate, the most recent population statistics highlight some potentially worrying trends in mortality.⁵ This means that UK life expectancy hasn't grown as we previously expected it to, with as yet no definitive explanation for this slowdown.⁶

⁴ Office for National Statistics, National population projections: 2018-based, October 2019

⁵ As the ONS have commented, 2018 had the highest number of deaths since 1999, but when the age and the size of the population are accounted for, the rates of deaths have remained more or less stable since 2011. See: Office for National Statistics, Overview of the UK Population, August 2019

Returning to the long-term trend, what explains why generations today are living longer lives than their predecessors? In the first half of the 20th century, large falls in infant mortality played a key role in boosting average life expectancy, with greater numbers surviving at very young ages. Continuous improvements in the control of infectious diseases and the prevention and treatment of cancer (especially that caused by smoking) led to deaths from these causes being all but eradicated by the 1960s. This led to falls in deaths during adult life, delivering improvements up to the middle of the last century. Finally, towards the end of the last century and since the start of this one, the largest improvements in mortality have stemmed from tackling circulatory health problems such as heart disease, which has helped boost life expectancy at older ages.⁷

Fluctuations in birth cohort sizes are just as important

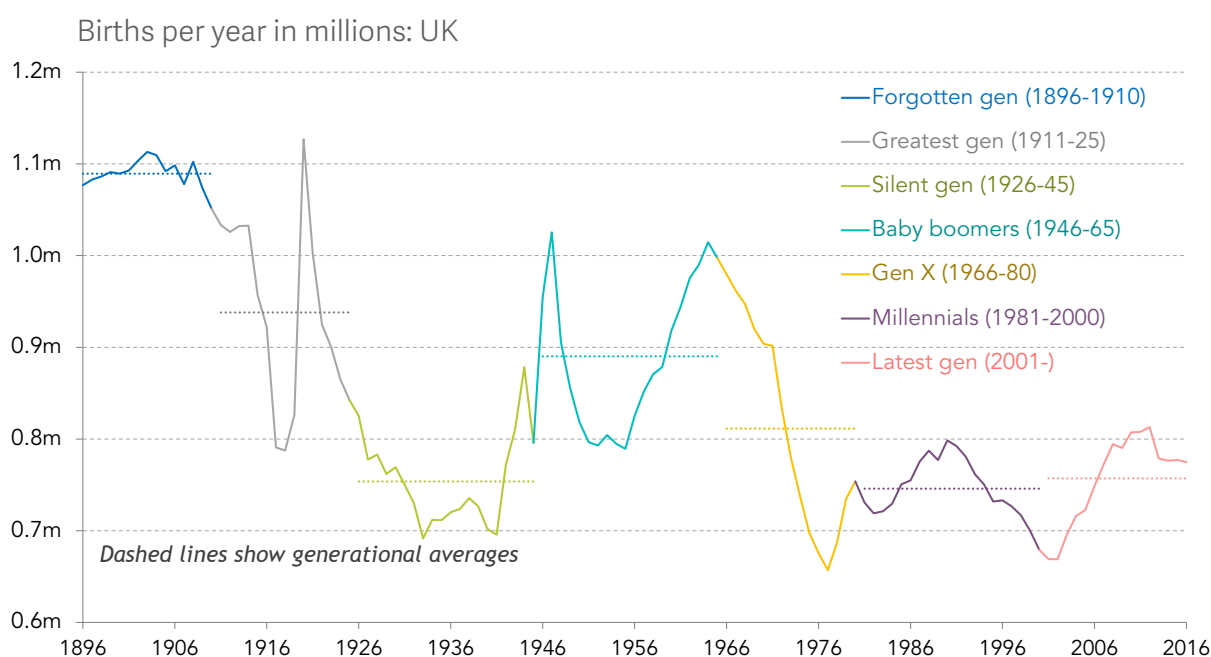
Demographers are currently focused on a falling number of births, with much debate as to the causes.⁸ Figure 3 sets this recent outcome in its longer-term context, showing how birth patterns have fluctuated since the 1930s. It highlights a number of important trends, not least the spikes in births in the mid-1940s and mid-1960s, bookending the baby boomer generation. This generation has played a historic role in the story of population ageing. More boomers born than members of the generations both before and after them means that this large generation getting old is a major part of our current ageing story.

⁶ Diseases at older ages have been cited as a major contributor to the slowdown in life expectancy, including influenza and pneumonia. Dementia and Alzheimer's disease prevalence increased in 2018, with people living for longer cited as a possible reason. In addition, for males aged 35-49, accidental or drug poisoning became the leading cause of death in 2018. Austerity has also been cited. See here for a UK and international discussion: Office for National Statistics, Deaths registered in England and Wales: 2018, August 2019; OECD, Trends in life expectancy in EU and other OECD countries: Why are improvements slowing?, February 2019

⁷ S Allender et al., Patterns of coronary heart disease mortality over the 20th century in England and Wales: Possible plateaus in the rate of decline, BMC Public Health 8(148), May 2008

⁸ In 2018, the number of live births fell for the third year in a row, having not been as low since 2005. Explanations for this outcome have included the fact that the number of births rose through the 2000s due to increased immigration (with non-UK born women having more children than UK-born women), and the delayed parenthood among women who drove the surge in university attendance in the 1990s. The implication is that these changes disrupted an otherwise downward trajectory in the number of live births. See, for example: Office for National Statistics, Births in England and Wales: 2018, August 2019

FIGURE 3: Birth patterns have fluctuated over time



SOURCE: ONS, *Birth Characteristics (England and Wales)*; NRS, *Births Time Series Data (Scotland)*; NISRA, *Live births, 1887 to 2015 (Northern Ireland)*

Of course, cohorts do not remain the same size between birth and death. The third – albeit relatively smaller – driver of how our population ages relates to the impact of net migration patterns. These are discussed in Box 2.

BOX 2: Younger migrants are also contributing to the changing shape of the country's population

Beyond births and longevity, there is one more component of population change that affects the age of the population: migration.

Compared to people born in the UK, migrants are much more likely to be working age, and less likely to be children or people of retirement age.⁹ This reflects the fact that one of the most common reasons to move to the UK is for work. However, immigration

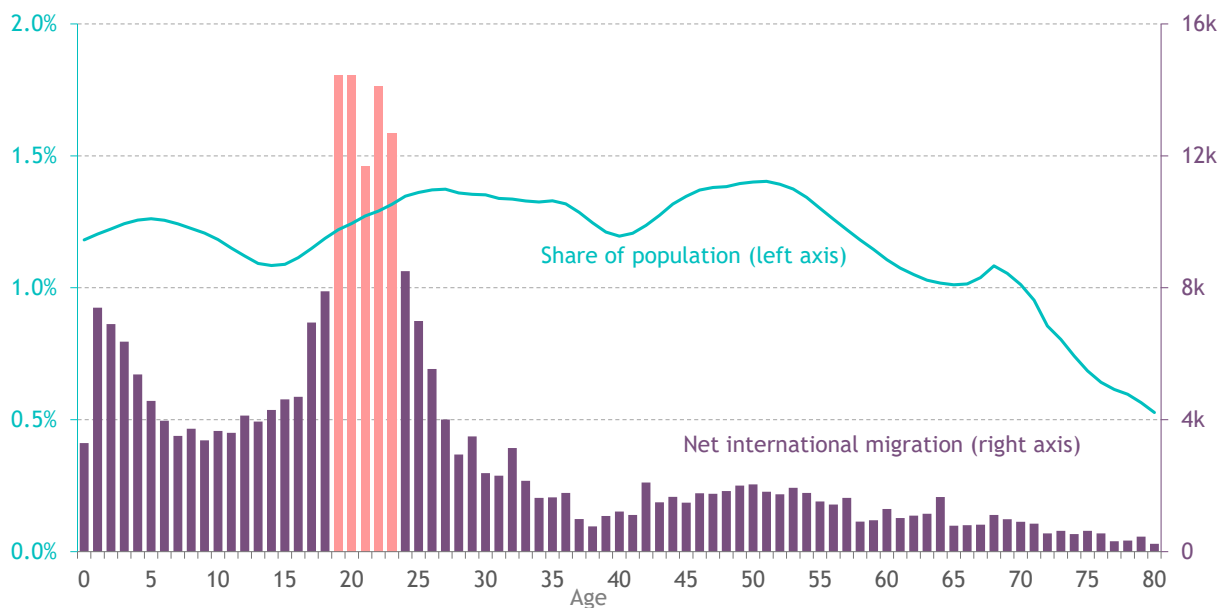
for work reasons has been falling since 2016, and studying has narrowly overtaken work as the main reason for immigration.¹⁰ Indeed, Figure 4 shows that net international migration is highest amongst 19-23 year olds: the ages at which people are most likely to be studying.

⁹ The Migration Observatory, *Migrants in the UK: An Overview*, University of Oxford, October 2019

¹⁰ Office for National Statistics, *Migration statistics quarterly report*, August 2019

FIGURE 4: Net international migration is highest amongst 19-23 year olds

Population and net international migration by single year of age: England and Wales, 2018



NOTES: Population data is smoothed using a five-year moving average over the age range.
SOURCE: RF analysis of ONS, *Mid-Year Population Estimates*

International students can therefore have a relatively large impact on the UK's population structure. This has raised the question of whether they should be included in measures of migration that are used to guide policy. Indeed, the fact that the measures of migration used to guide policy in the UK include students sets us apart from most other developed economies. To inform this debate, ONS is in the process of developing a better understanding of student migration to and from the UK.¹¹

In 2018, people born outside the UK made up an estimated 14 per cent of the population, with 39 per cent of

migrants coming from EU countries.¹² Migration flows are not the biggest factor in population age changes over time, but they do play an important role in how fast the working-age population is expected to grow relative to the older population. In this way, migration has the potential to offset demographic headwinds such as the baby boomer generation moving into retirement age, with smaller younger cohorts coming behind. But migration is likely to play less of a role in future, following the decision to leave the EU.

¹¹ Office for National Statistics, *Migration statistics quarterly report*, August 2019

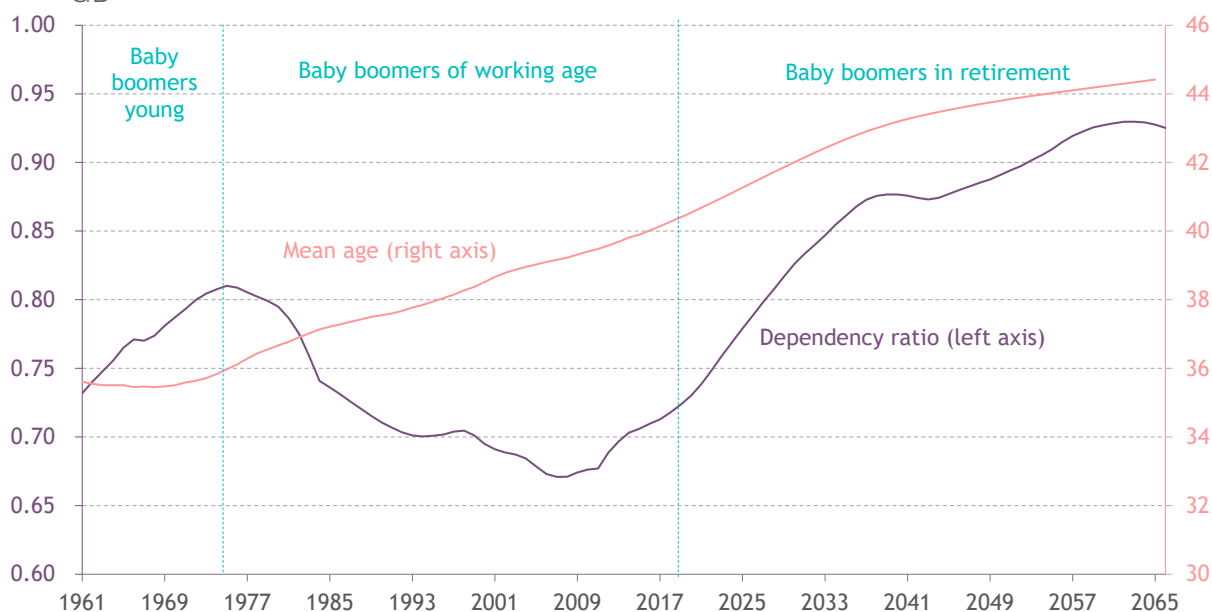
¹² The Migration Observatory, *Migrants in the UK: An Overview*, University of Oxford, October 2019

A continuation of longevity plus the baby boomers' transition into retirement explains today's national interest in demographic shifts

This transition of baby boomers from working age into retirement age means we have reached a demographic tipping point. We can demonstrate this using simplistic age-based 'dependency' ratios. From the middle of the 1970s through most of the first decade of the 21st century, the dependency ratio (the ratio of older adults and children to 20-64 year olds) fell even though longevity rose. But since 2009, as a result of the baby boomers moving into retirement age, dependency has risen, as shown in Figure 5.

FIGURE 5: The transition of the baby boomer generation into old age is pushing up the dependency ratio

Dependency ratio ((under 20 and 65+ population)/20-64 population) and mean age: UK/GB



NOTES: Mean age is for Great Britain whereas dependency ratio is for UK.

SOURCE: RF analysis of ONS, 2016-Based Mid-Year Population Estimates; ONS, 2016-Based Population Projections

Useful though the dependency ratio is for providing a high-level overview of key demographic trends, we should be careful not to overstate the coming challenge based on what is a simplistic approach. By setting a fixed threshold for the older population, this approach fails to recognise the myriad ways in which life is changing (including improved health and rising labour market participation above the age of 65), or the ways that policies like a rising State Pension age are changing it.

The dependency ratio is perhaps most helpful when used in tandem with other measures of our demographic tipping point – such as the ratio of workers to non-workers or the ratio of welfare spending to GDP. On these measures, the tipping point comes somewhat

later that the late 2000s – the late 2010s in the case of the worker-to-non-worker ratio, and the early 2020s in the case of welfare spending.¹³

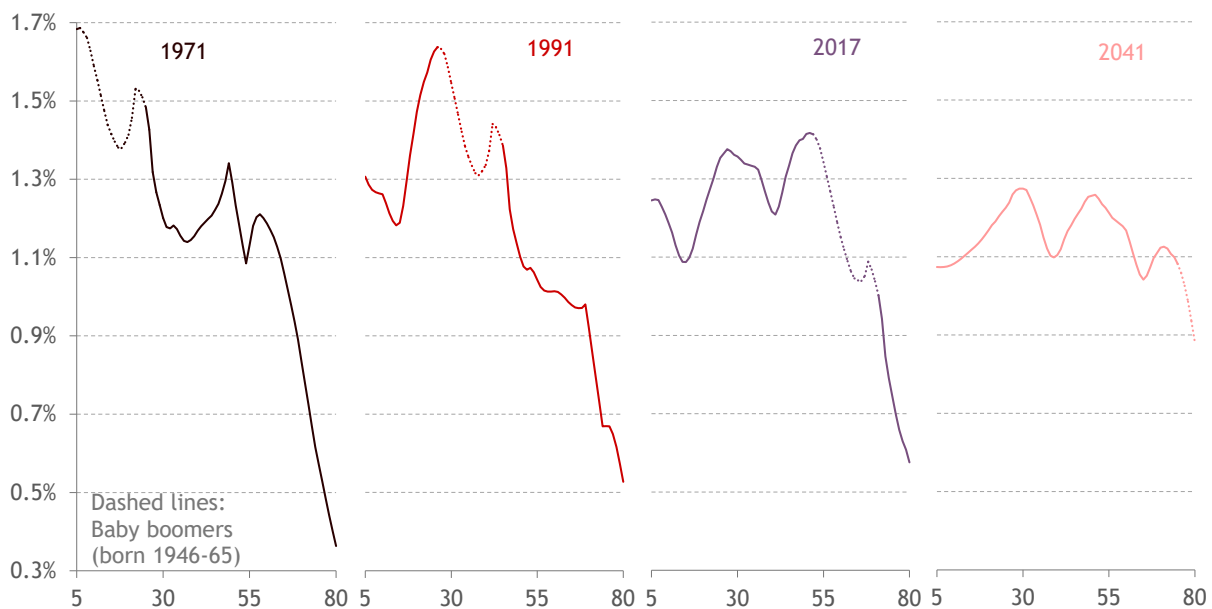
As we have shown in previous analysis, we should not downplay the role of cohort size in driving us to the tipping point we are now at. If all cohorts were of equal size, the dependency ratio would look very different: longevity itself accounts for less than half of the projected increase in the dependency ratio over the next two decades.¹⁴

The large spike in the number of births in the 20 years following WW2 has shaken up and dominated the UK population for 70 years. In the era of baby boomers – a time of relative peace, low infant mortality and medical advances – large cohorts have remained large as they have aged.

Figure 6 illustrates the story we have told in this section, showing that Britain was much younger 40 years ago than it is today. In 1971, 28 per cent of the population was under the age of 18. This figure has fallen by 7 percentage points to 21 per cent of the population in 2017. At the same time - and mainly driven by the ageing of the boomers - the proportion of older people in the UK has grown.

FIGURE 6: The UK's population structure is changing dramatically

Proportion of population by single year of age: UK



NOTES: Data is smoothed using a five-year moving average over the age range.

SOURCE: RF analysis of ONS, *Mid-Year Population Estimates*

¹³ For a fuller discussion of the different tipping points, see: D Willetts, *The Pinch: How the Baby Boomers Took Their Children's Future – And Why They Should Give It Back*, Revised and updated, Atlantic Books, November 2019

¹⁴ Resolution Foundation, *A new generational contract: The final report of the Intergenerational Commission*, May 2018

In 1971, the entire generation of baby boomers had been born, and it made up the entirety of those aged six to 25. In 1991, baby boomers made up a weighty chunk of the prime-age working population (from 26 to 45). At these points in time, the baby boomers to a large extent offset the gradual ageing of our society due to rising longevity.

By 2017, the baby boomers had started to retire, with the oldest aged 71 and the youngest aged 52. The boomers still boosted the working-age population, being larger than generations they followed, but their contribution was waning. The very boomers who had previously been part the answer to our ageing society were becoming the thing that makes it a challenge.

Looking forward to 2041, the baby boomers will be aged 77-95. Because of their size, the shape of the overall population is expected to be very different than in 1971 when they were young. Almost one-in-four (24.4 per cent) of the population is expected to be over the age of 65 by 2041. This is almost double the proportion in 1971, when just over 13 per cent of the population was aged over 65.

The ageing of the UK population may appear dramatic, but many other developed economies are ageing even more rapidly, as set out in Box 3.

BOX 3: How does the UK's population ageing compare internationally?

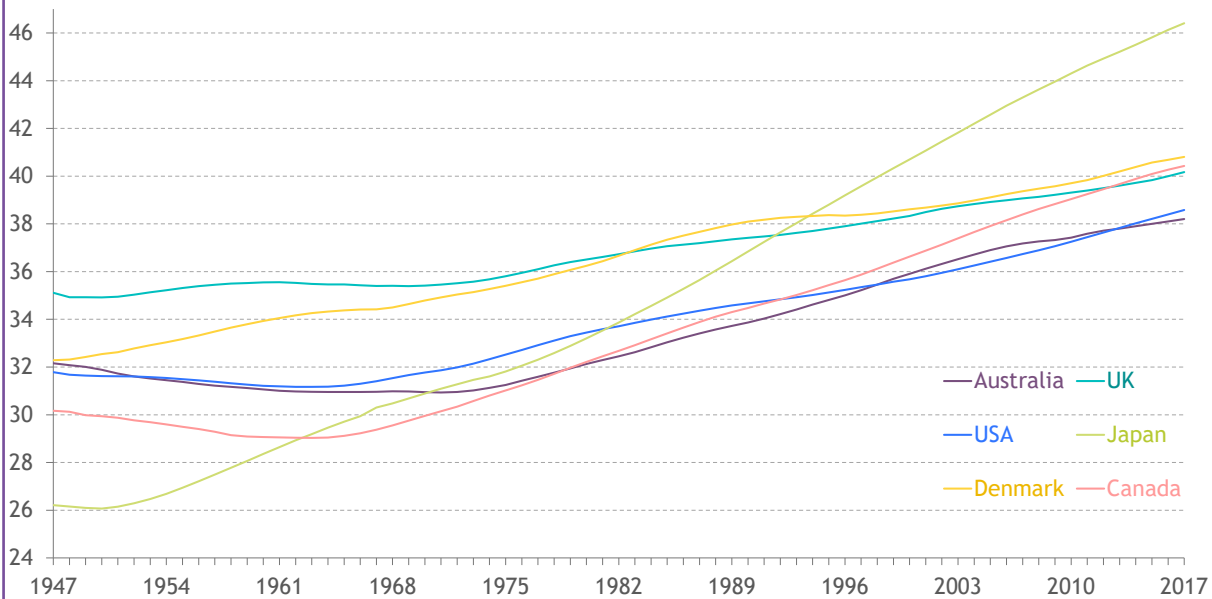
An ageing society is not a phenomenon unique to the UK. Figure 7 shows that across other comparable countries, average ages have followed a broadly similar pattern. Average ages rose slowly and steadily in the latter half of the last century, albeit starting from quite different points. The scale of change is less dramatic in the UK than in other countries, given it had a relatively high average age at the beginning of this 70-year period.

Japan stands out as a country in which the average age has sky rocketed, from just over 26 in 1947 to over 46 in 2017. Japan's population is winning the shrinking and ageing race: it's the country that other countries look to when thinking about their own futures as ageing societies. The fact that Japan now has more nappies for adults than for babies sets its demographic transition in the starkest terms.¹⁵

¹⁵ For an example, see: Economic Innovation Group, [Japan-level Demographic Decline is Widespread Across the US](#), October 2019

FIGURE 7: Japan's average age has increased by over 10 years in the past four decades

Average ages of select countries



SOURCE: RF analysis of Human Mortality Database

Across most OECD countries, the dependency ratio is following a similar trajectory to its path in the UK, falling in the second half of the last century and rising in the first half of this century.¹⁶ Again, Japan stands out as a country that experienced this shift earlier, and to a greater magnitude, than other developed countries did.

China's population changes are also important for the global economy. After

rapid improvement in the country's dependency ratio between 1970 and 2015, the Chinese population is now set to age rapidly and the dependency ratio to rise. This is an important component of the global slowdown in the growth of the working-age population, and global patterns of ageing. These trends have huge implications for both domestic markets and the global economy, including setting the context for future changes in wages and interest rates.¹⁷

All of the factors discussed in this section have contributed to a national policy focus on population ageing. The debate has gained national traction, and so too have the policy

¹⁶ D Finch, Live long and prosper? Demographic trends and their implications for living standards, Resolution Foundation, January 2017

¹⁷ See, for example: C Goodhart, et al., "Could Demographics Reverse Three Multi-Decade Trends?", September 2015; R Sharma, Demographics of Stagnation: Why people matter for economic growth, March/April 2016; B Clements, et al., Older and Smaller, Finance and Development, March 2016

implications. State Pension age increases, health and social care spending, and policies to support older workers are just some of the current areas of focus. Something which has received much less attention is the intersection between demography and place. We turn to this topic in the following section.

Section 3

Geographic differences in population ageing

Within the UK there are stark local differences in age structures.¹⁸ This section shows that there are big differences in local authority average ages across the country today. There are high proportions of children in urban areas like Barking and Dagenham, which brings down the area's average age. In the capital there are high proportions of working-age adults, with London boroughs typically younger than the rest of the country. In contrast, coastal and rural areas, such as those in the South West, have much higher average ages. For example the average age in the oldest local authority (North Norfolk) is almost 25 years higher than that in the youngest local authority (Oxford).

These gaps are growing as places age at different rates – what we term Britain's demographic divergence. Those places, like many rural and coastal communities, that were oldest at the turn of the 21st century have aged faster than places that started out younger. The oldest 10 per cent of local authorities in 2001 are 11 per cent older today than they were then, while the youngest 10 per cent of local authorities in 2001 are only 4 per cent older. And, importantly, there are also some local areas, like Manchester and Nottingham that are younger now than they were in 2001.

There are stark local and regional differences in age

As discussed in Section 2, as a country we have become much older over recent decades. But this national story has played out very differently in different parts of the country, and this geographic element of ageing has received much less of the limelight. In this section we take a more detailed look at differences in typical ages across local areas and differences in the rates of population ageing.

Before unpicking differences in rates of population ageing across the country, it's useful to explore local and regional differences in average¹⁹ ages today.

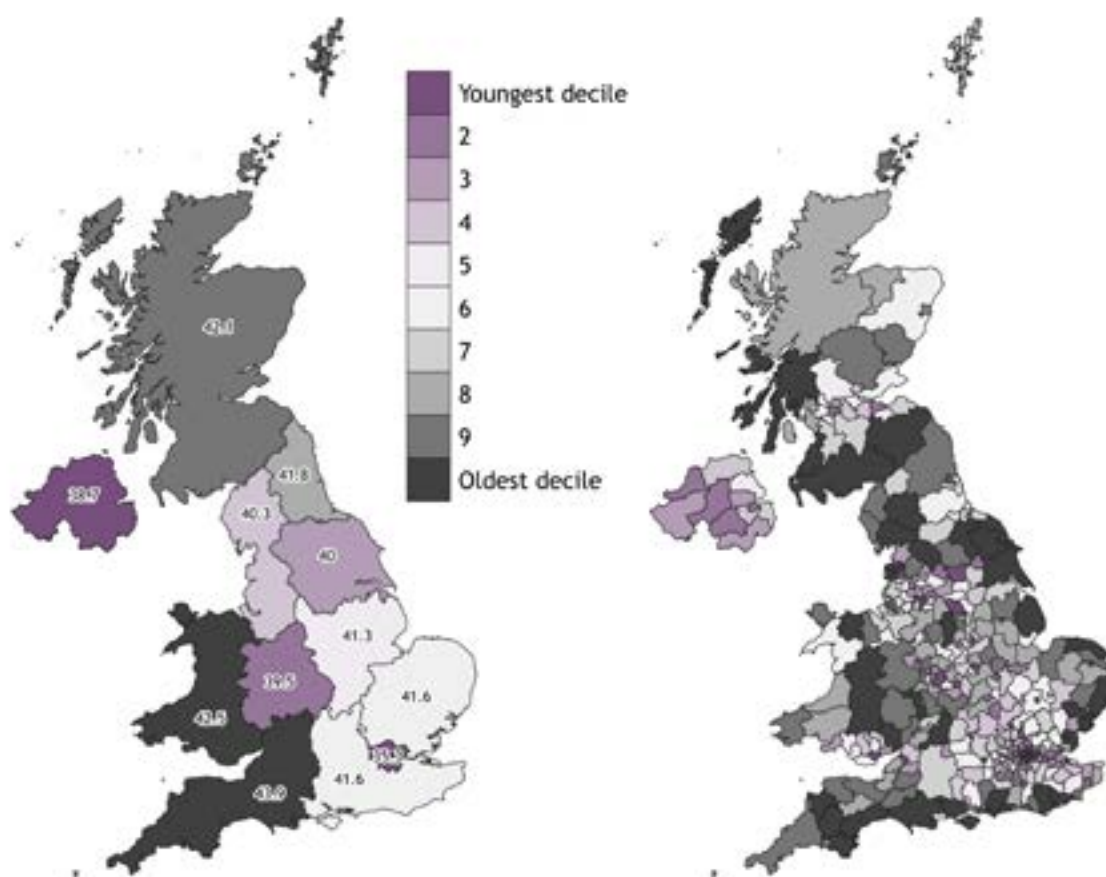
¹⁸ Office for National Statistics, Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland, June 2019

¹⁹ The availability of population data explains why this section uses both the mean and median averages at different points.

Figure 8 maps median ages in the UK by region (left) and local authority (right). These maps highlight considerable local and regional differences from the UK's typical age of 40.1 years. By region, London has the youngest typical age, at just 35.3 years, compared to the South West where the typical age is 43.9 years.

FIGURE 8: Stark differences exist between regional and local authority typical ages

Median ages across local authorities and regions of the UK: 2018



SOURCE: RF analysis of ONS, Mid-Year Population Estimates; OS data © crown copyright

Next we turn to differences across local authorities. With a median age of 53.8 years, North Norfolk is the country's oldest local authority. Rother (52.8 years) and East Lindsey (52 years) are also towards the top-end of the scale.

At the other end of the scale, Oxford has a median age of just 28 years, reflecting its large universities. The next youngest places in 2018 after Oxford were Nottingham (29.7 years), Manchester (30 years), Cambridge (30.6 years) and Tower Hamlets (31.3 years). This reflects the fact that places like Nottingham, Manchester, and Cambridge have some of the highest proportions of young adults in the country, with their student populations again a big factor.

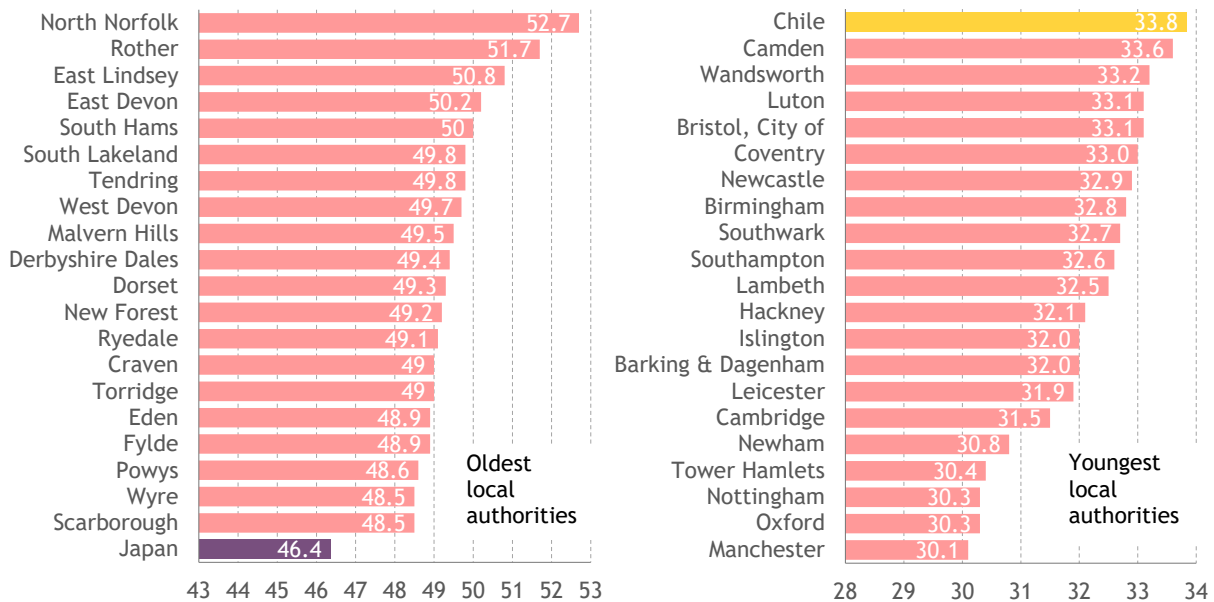
The area in the UK with the highest proportion of children is Barking and Dagenham, where almost a third (29.9 per cent) of the population is under 18. This is compared to just 21 per cent of the population across the UK as a whole.

But how does all of this look on an international scale? How do the likes of Barking and Dagenham and parts of the South West compare to countries at very different points in their demographic development?

Figure 9 shows the top 20 oldest local authorities by median age in 2015 compared to Japan on the left, and the top 20 youngest local authorities by median age in 2015 compared to Chile on the right. Overall, there were 60 local authorities in the UK in 2015 (16 per cent of all local authorities) with a higher typical age than the oldest country in the world, Japan (46.4 years of age). At the other end of the scale, there were 23 local authorities in 2015 (6 per cent) with a median age younger than Chile (33.8 years of age). These comparisons bring home the fact that there is considerable difference by age across the country.

FIGURE 9: North Norfolk’s median age in 2015 was over six years older than the median age of Japan

Local authorities by median age compared to Japan and Chile, respectively: UK, 2015



NOTES: 2015 is the most recent year of comparable data to international estimates.
 SOURCE: RF analysis of ONS, *Mid-year population estimates*; United Nations, *World Population Prospects 2019*

The above analysis has highlighted that there are significant differences in average age across the country, with coastal and rural areas generally older and urban areas generally younger. But differences in average ages aren’t always so uniformly spread across

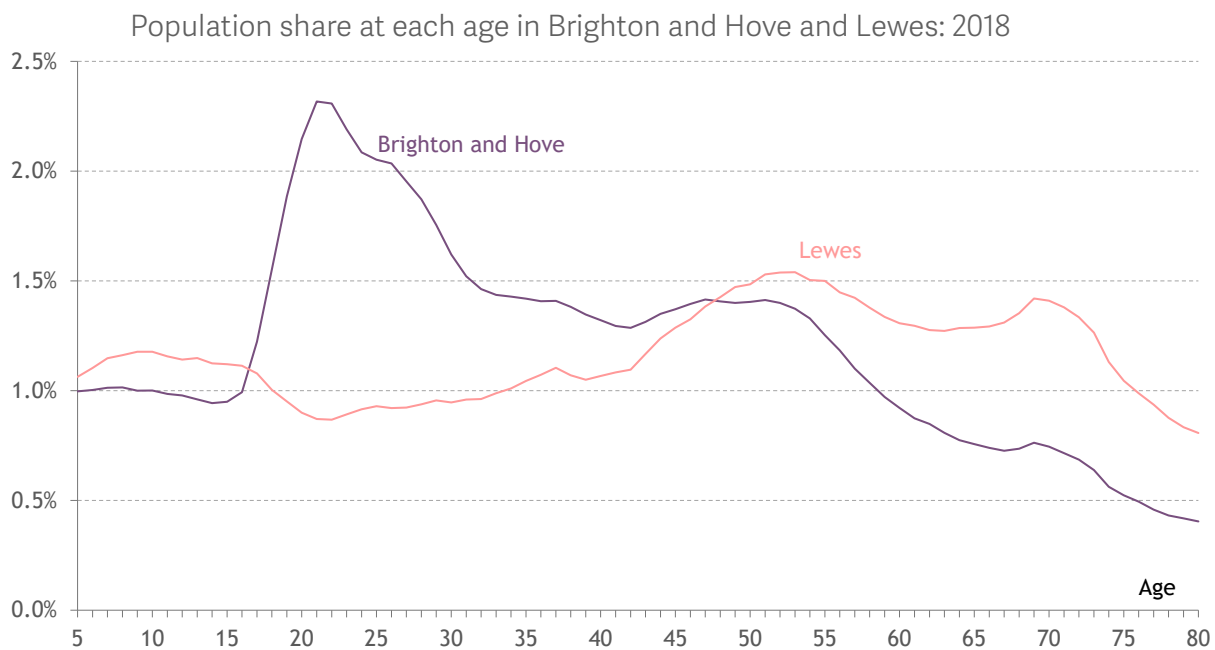
the country. As Box 4 shows, there are cases where geographically contiguous local authorities have very different median ages. Other analysis highlights that even within local authorities, population age structures can vary considerably.²⁰

BOX 4: Neighbouring areas can have very different age structures

Even places sharing borders can have very dissimilar age structures. People from Brighton and Hove have a typical age of 35.4 years, compared to neighbouring Lewes where the typical age is 47.7 years. This reflects very different age structures of the population, as shown in Figure 10. While Lewes has a higher proportion of under 18s (19.5 per cent) than Brighton and Hove (17.6 per cent), this younger

population is offset by a much higher proportion of the population aged 65 and over (25.5 per cent) compared to 13.3 per cent in Brighton and Hove. Even within local authorities, there are considerable differences by constituency. For example, the average age in Brighton, Kempdown was 39.6 years in 2017, compared to 35.6 years in Brighton, Pavilion.

FIGURE 10: 28.1 per cent of Brighton's population is between the age of 16 and 30



NOTES: Data is smoothed using a five-year moving average over the age range.

SOURCE: RF analysis of ONS, *Mid-Year Population Estimates*

²⁰ D Kingman, *Generations Apart? The growth of age segregation in England and Wales*, Intergenerational Foundation, September 2016

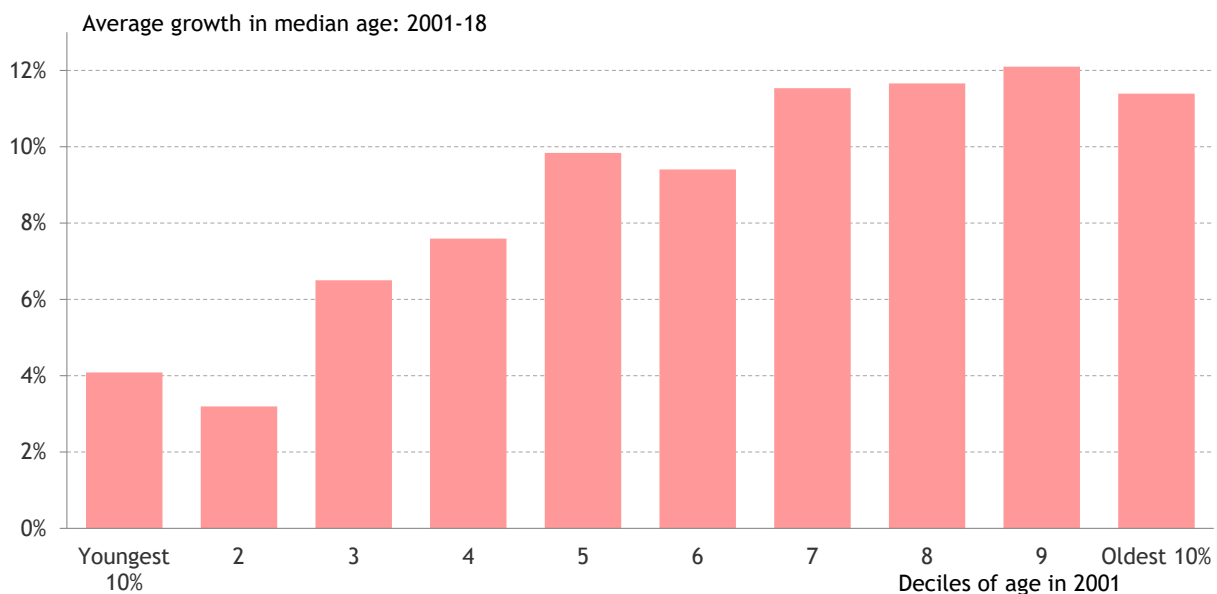
Britain has experienced demographic divergence during the 21st century

We have shown that there are big differences in average ages across the country. But local areas vary considerably in terms of the pace and scale of ageing, and this pattern means that they have diverged by age.

Figure 11 plots the average growth in the median ages of local authorities during this century according to their decile of median age in 2001. The general trend is that those places that were oldest in 2001 have aged fastest. The top 10 per cent oldest local authorities in 2001 are, on average, 12 per cent older today than they were then. By contrast, the youngest 10 per cent of local authorities in 2001 have only aged by 4 per cent in this period.

FIGURE 11: The oldest places in 2001 have aged the fastest

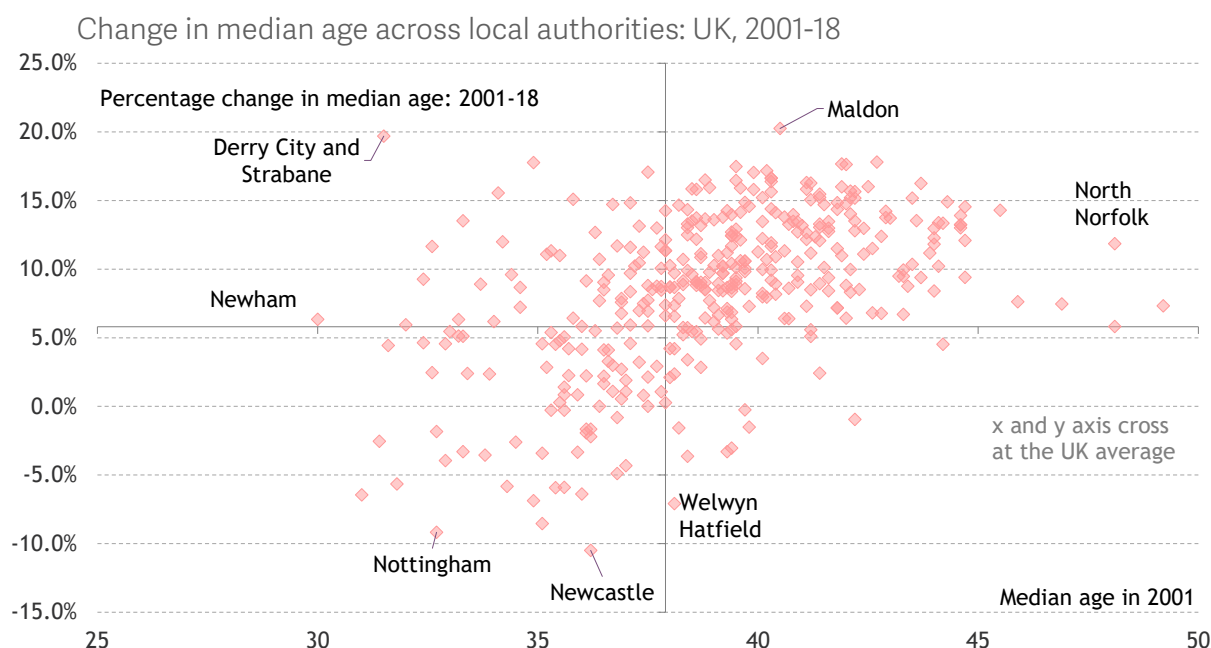
Average growth in median age of local authorities by deciles of median age in 2001: UK, 2001-18



SOURCE: RF analysis of ONS, *Mid-Year Population Estimates*

More generally, we observe that all deciles have experienced growth in median ages. But this obscures greater variation at the local authority level. Figure 12 plots local authorities in the UK according to their median age in 2001 (horizontal axis) and the change in their median age between 2001 and 2018 (vertical axis). It compares local authorities to the UK, which had a typical age of 37.9 years in 2001 and has experienced growth of 5.8 per cent. Again, it shows that those places that were oldest in 2001 have tended to age fastest since then.

FIGURE 12: Most but not all local authorities are older today than they were in 2001



SOURCE: RF analysis of ONS, *Mid-Year Population Estimates*

Most local authorities have aged, but not all have. Some 75 per cent of the local authorities for which we have data have aged faster than the UK average, while a further 91 per cent have aged. But there are 35 local authorities that are now younger than they were in 2001, including Manchester, Nottingham, Newcastle and Bristol.

The bottom-left-hand quadrant of Figure 12 shows areas that were younger than the national average in 2001, and that have aged at a slower rate (or even got younger) than the UK as a whole has. This includes Nottingham, where the median age has fallen by 9 per cent since 2001, from 32.7 years to 29.7 years. Nottingham's youthfulness partly reflects its status as a growing student destination. Box 5 provides a more detailed analysis of how Nottingham's population has changed over the course of the 21st century.

BOX 5: Nottingham started the 21st century young and has got even younger

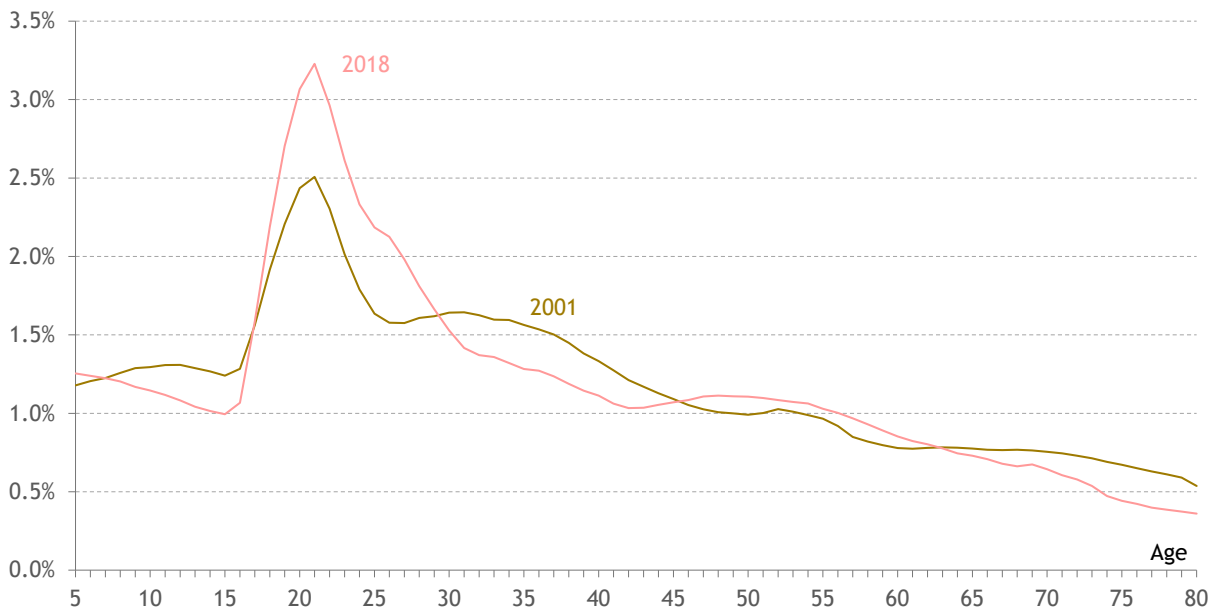
Figure 13 shows the proportion of people living in Nottingham by single year of age. It reflects a broader trend of young people moving into our major cities, for university or work, and older people moving out. 46 per cent of

Nottingham's population in 2001 was below the age of 30. This figure is now 50 per cent, with almost one-in-five (23 per cent) between the ages of 18 and 24. This influx of students is counted as internal migration in the statistics,

although might be better thought of as (temporarily) going away to study.

FIGURE 13: 23 per cent of Nottingham's population is between the ages of 18 and 24

Population share at each age in Nottingham: 2001 and 2018



NOTES: Data is smoothed using a five-year moving average over the age range.
SOURCE: RF analysis of ONS, *Mid-Year Population Estimates*

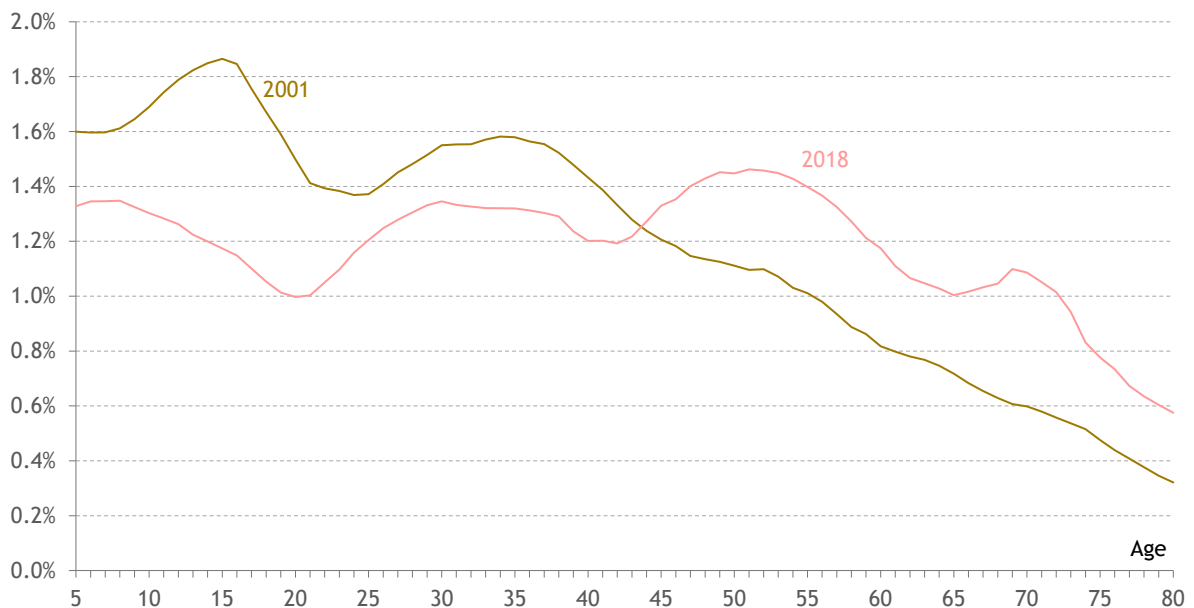
At the other end of the spectrum, there are also those local authorities that started this century older than the national average and have aged faster than the national average. The areas in the top-right-hand quadrant of Figure 12 exhibit this trend. Rother had a particularly high age in 2001, and has aged since then only slightly faster than the national average. On the other hand, Richmondshire is a place which stands out in terms of how much its median age has grown - from 37.5 years in 2001 to 43.9 years in 2018. Box 6 provides more detail on how the population structure of Richmondshire district has changed since 2001.

BOX 6: Richmondshire district has aged, fast

The region of Yorkshire and the Humber has an average age of 40 years, roughly equivalent to the national average, but there are big differences within it. Focusing on some of the rural parts of the region, local leaders across Richmondshire and the Yorkshire Dales National Park have long identified families and younger people choosing not to live and work there as a potential problem.²¹

Figure 14 shows the population structure of Richmondshire district in 2001 and 2018. It provides evidence for the concerns mentioned above: in 2001, 15 per cent of the population was over 65, while this figure is now 21 per cent, with some 4,000 more people of pension age. At the same time, the proportion of the population aged under 16 has fallen from 20 per cent to 17 per cent.

FIGURE 14: Over one-in-five of Richmondshire’s population is a retiree
Population share at each age in Richmondshire: 2001 and 2018



NOTES: Data is smoothed using a five-year moving average over the age range.
SOURCE: RF analysis of ONS, *Mid-Year Population Estimates*

There are also those local authorities that buck the overall trend, for example, those that started the 21st century relatively young but have since aged fast. These can be seen

²¹ Richmondshire District Council, Attracting and Retaining Families and Younger People to Richmondshire and the Yorkshire Dales: Report of Senior Management Team, July 2018

in the top-left-hand quadrant of Figure 12. Derry City and Strabane stands out: a local authority with a median age of just 31.5 years in 2001, which has since shot up to 37.7 years. This area is explored further in Box 7.

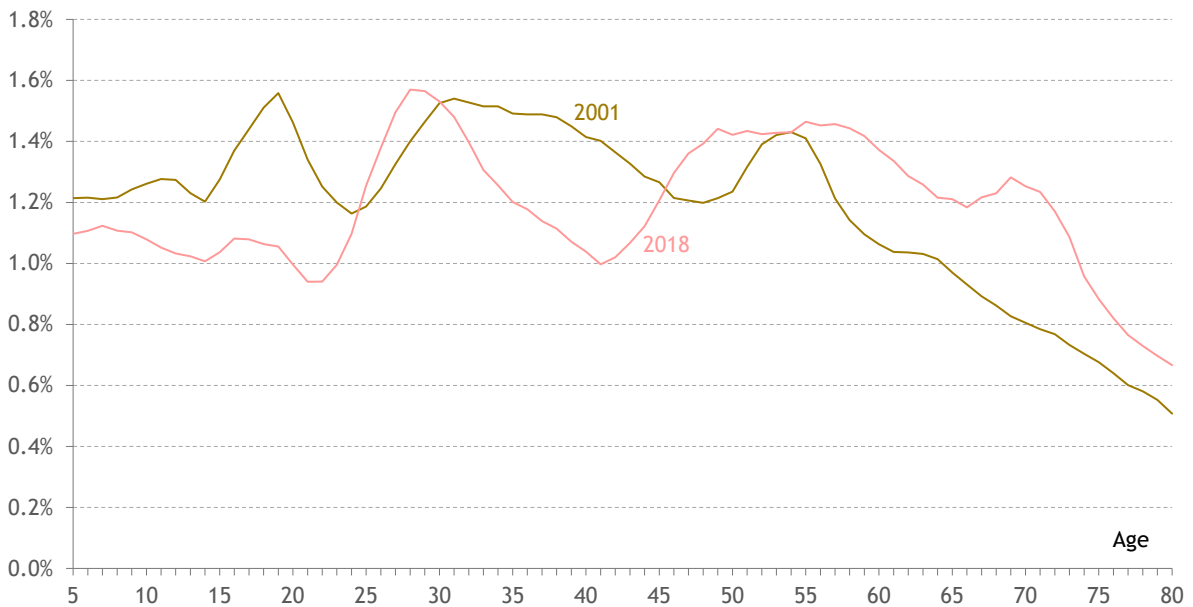
BOX 7: Derry City and Strabane was once young but has got much older

Derry City and Strabane started off this century in the youngest 10 per cent of local authorities. The area’s median age has increased by almost 20 per cent since then, the largest increase of any local authority in the bottom decile of median ages in 2001. This reflects Derry’s relatively young population in 2001 having aged significantly over the last 17 years, seemingly without births or migration affecting the picture much, as shown in Figure 15.

In 2001, 27 per cent of the population was under 16 years old. Now in 2018, 22 per cent of the population is under 16 years old. At the same time, the proportion of retirees has shot up: from 10 per cent of the population in 2001 to 15 per cent of the population in 2018. Over the course of just 17 years, Derry City and Strabane has undergone demographic change equivalent to the UK’s change over a 40-year period.

FIGURE 15: Derry City and Strabane’s demographic transition over just 17 years is comparable to the change the UK has undergone in 40 years

Population share at each age in Derry City and Strabane: 2001 and 2018



NOTES: Data is smoothed using a five-year moving average over the age range.
SOURCE: RF analysis of ONS, *Mid-Year Population Estimates*

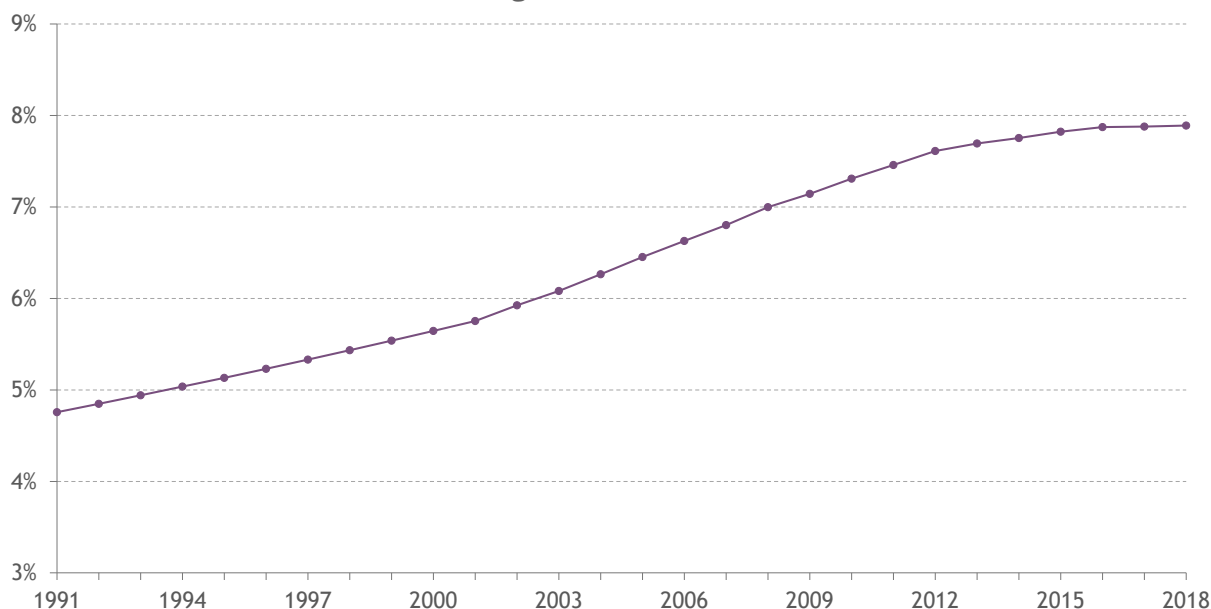
This demographic divergence means the dispersion of average ages across local authorities has increased

As shown in the first part of this section, the geographic spread of ages is wide. However, the oldest places have generally aged faster while some places that started out young have got younger, meaning Britain has diverged demographically.

Figure 16 confirms the gradual divergence of mean ages across the country. The spread of average ages across local authorities has increased substantially. The coefficient of variation (a measure of how much average age varies across the local authorities of the UK, with a higher number representing a large distance from the overall average value) of mean age across local authorities has risen since 1991. The coefficient of variation is currently just under 8 per cent across the country.

Put another way: in 2001, 15 local authorities in the UK had an average age 10 per cent higher than the national average, and 17 had an average age 10 per cent lower than the national average. Roll forward to 2018, and those figures had increased to 33 and 39, respectively.

FIGURE 16: The spread of average ages across local authorities has increased
Coefficient of variation of mean ages across local authorities: UK



NOTES: The coefficient of variation is the standard deviation of mean ages divided by the mean across local authorities. Data is smoothed between 1991 and 2001 to reflect a discontinuity in the time series between 2001 and 2002.

SOURCE: RF analysis of ONS, *Mid-Year Population Estimates*

Figure 17 maps the difference between each local authority's median age and the country's median age, in two time periods. Despite the fact that the vast majority of

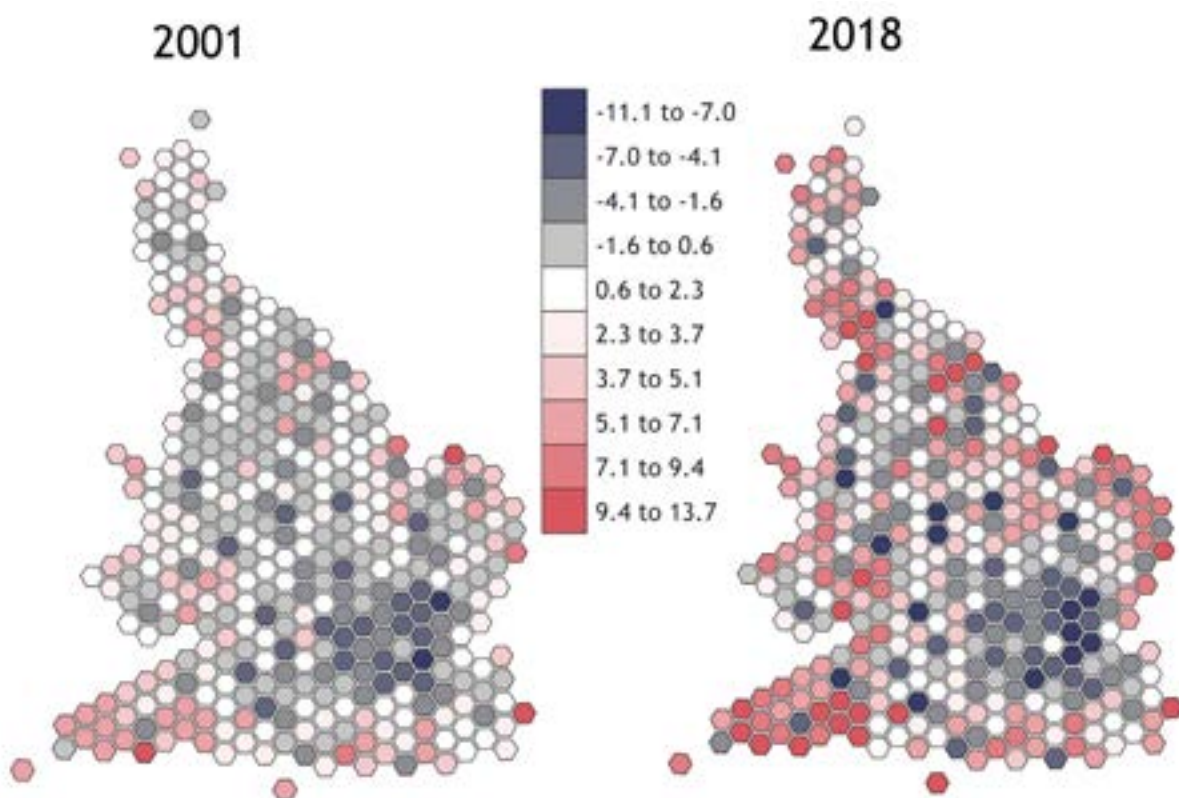
places are ageing, it highlights the increased divergence of local authorities into old and (relatively) young places.

Indeed, we can see that local authorities in London have become more dissimilar to the national average: Barking and Dagenham was 3.6 years younger than the national average in 2001. This figure is now 7.8 years. Likewise, Islington's average age was 5.2 years younger than the Great British²² average in 2001, and is now 8 years younger.

This map also confirms our above observations about which places are old (predominantly rural and coastal areas) and which places are young (student and urban areas). Areas in the South West of the country have average ages (relative to the Great British average) that are much higher than they were in 2001.

FIGURE 17: The 21st century has brought more divergence in average ages across places

Difference between median age in local authority and median age across Great Britain, in years



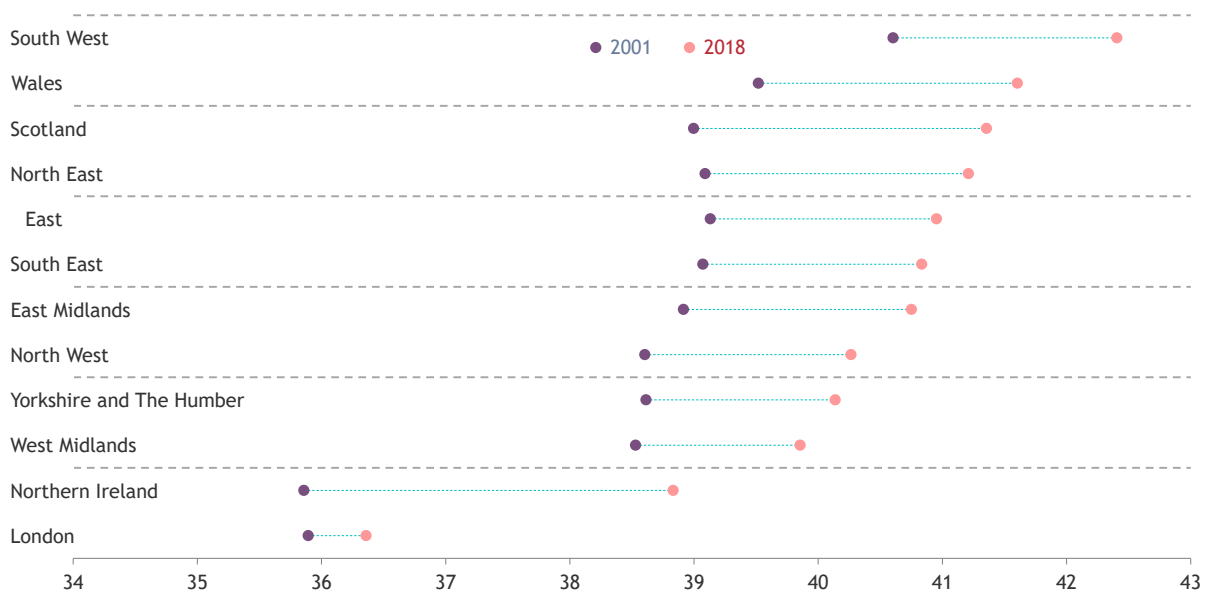
SOURCE: RF analysis of ONS, *Mid-Year Population Estimates*; OS data © crown copyright

²² This maps uses Great Britain rather than UK due to accessibility of spatial, hexagonal shapefiles with the difference harder to interpret otherwise.

As can be seen in Figure 18, the spread of ages has also increased at the regional level, just as it is at the local authority level. Average ages have increased in all regions and nations of the UK, with Northern Ireland experiencing the biggest absolute change, ageing by almost three years, an 8 per cent increase. At the bottom of the spectrum, London's population has not experienced much change in its average age. Aside from London, the average age in the West Midlands has only grown by 3.4 per cent, or 1.3 years. As a result, the difference between the West Midlands's and the North East's average age has more than doubled over the 2001-18 period. This is further evidence of demographic divergence: there is more regional variation in average ages than in the past. Northern Ireland bucks this trend: it was young in 2001 and has aged fast, to close its gap with the rest of the country, excluding London.

FIGURE 18: Demographic divergence has happened between the regions of the UK

Mean age across regions and nations of the UK: 2001 & 2018



SOURCE: RF analysis of ONS, *Mid-Year Population Estimates*

Different ages across local areas and regions place challenges on local councils. For example, places with a greater share of older residents face greater demands on health and social care services, while childcare and education services are likely to be more in demand in younger areas. This is discussed in more detail in Section 5. Before turning to these implications, we explore the drivers of demographic divergence, the topic of the next section.

Section 4

Drivers of demographic divergence

The previous section highlighted numerous differences in both the levels of, and growth in, the average and typical ages of localities across the country. We switch in this section to looking at the drivers of this demographic divergence. Our primary aim is to understand why the divergence is taking place, by looking at the demographic conditions responsible for population ageing. In very general terms, we find that a lack of births relative to the national average is the key driver of places ageing faster-than-average, while high net internal and international migration relative to the national average is responsible for places ageing slowly or getting younger.

Understanding the drivers of population ageing

So far we have looked at recent and historical trends in population ageing, and the differences in population ageing across the country. This section now turns to the crux of our analysis, taking a closer look at the demographic conditions responsible for differences in population ageing. It uses a method of decomposition that relies on simple accounting to show the contribution that each component of population change makes to the rate of population ageing (measured by the change in the mean age).²³ Box 8 provides more detail on the method that has been used.

BOX 8: The Preston, Himes and Eggers (PHE) decomposition method

The decomposition approach developed by Preston, Himes and Eggers (1989)²⁴ describes overall population changes over time as

resulting from births, deaths, and migration. PHE develop an expression for the rate of change in a population's mean age, which builds on a number

²³ The analysis throughout this section refers to the average annual change in average age over the 2001-18 period.

²⁴ S Preston, C Himes & M Eggers, 'Demographic Conditions Responsible for Population Aging', *Demography* 26(691), 1989

of key and intuitive demographic principles.

First, we know that in a population with no births, deaths, or migration, the mean age will increase by one year each calendar year. We can otherwise think of this term as a secular trend: without anybody entering or exiting our population, the average age will increase by exactly a year. Birth and deaths (unless people on average die younger than the average age of the population, which would be extremely unusual) will push against this trend. Babies enter the population at age zero and so will bring the average age down. Lopping off the top end of a population – i.e. people dying who are older than the average age – will also reduce the average age.

This method also accounts for the impact of migration. Intuitively, a migrant's age and the rate of migration will have a bearing on population ageing. Because immigrants tend to be young, having more immigration than emigration usually pulls the mean age of the population down. However, this isn't a cast-iron rule: the average age of immigrants and emigrants relative to the average age of the population

as a whole, and the overall volume of immigration and emigration relative to the size of the population, all combine to determine precisely the effect that migrant patterns have on the age structure.

The PHE decomposition allows us to unpick this complex interplay between the rates of births deaths and migration, and the relative difference between the ages of those involved in these events and the average age of the population as a whole. It can be broken down into an equation which very closely approximates to the rate of change in the mean age over a year:²⁵

$$dA_p/dt = 1 - bA_p - d(A_D - A_p) - i(A_i - A_p) - o(A_o - A_p)$$

Where A_p is the mean age of the population, A_D is the mean age at death, b is the birth rate of the population (births per person), d is the death rate of the population (deaths per person), i is the rate of in-migration, o is the rate of out-migration, A_i is the mean age of the immigrants, A_o is the mean age of emigrants, and dA_p/dt is the derivative of the mean age of the population with respect to time. Without births, deaths or migration, $dA_p/dt = 1$.

What's causing Britain's demographic divergence? Why do already-old places get older while some relatively young places have actually been getting younger? Before we delve

²⁵ This approach doesn't deal perfectly with changes in population size, and the data being used is also bounded above the age of 90, meaning that our estimate of mean ages and how they change is a close approximation to the true values, rather than being exact. But these issues are minor, and the ONS dataset used is the most comprehensive dataset to date on local demographics in England and Wales. Due to data availability, this section covers England and Wales only.

into our formal analysis based on our decomposition method, it's worth making some intuitive judgments. There are both demographic and social and economic factors at play. A lot of what we observe relates to movement around the country. We also often hear that poor, coastal, ageing areas are being left behind. In line with this narrative we might expect the poorest places, relative to the rest of the country, to have fewer births than the rest of the country. There are other demographic movements that relate to a number of real-world economic and social trends. We observe that:

- Many urban areas bring in students who then leave in their early 20s; other areas then attract people in their early 20s for economic reasons – notably London and Manchester.
- The role that different places play within their wider economic areas is a key consideration. Things like proximity to other local authorities is important for understanding why some places age while others don't. Being close to big urban areas or part of a wider travel-to-work area or housing market is part of this. Many residential places close to urban centres experience large daily outflows of their populations for work. This reflects different lifestyle preferences like moving to leafier areas when starting a family.²⁶
- Mobility more generally matters to population ageing, and will be related to other characteristics of the population and how these change over time. Some demographic groups tend to be more mobile than others. For example more highly educated individuals (such as graduates) tend to be more mobile than those with fewer qualifications. The evidence also indicates that those in the lowest earnings bracket are the least mobile.²⁷ Changing housing costs, particularly rising rents in more productive areas, have also been bearing down on labour market mobility.²⁸

These assumptions and insights are tested and explored in the remainder of this section.

At a national level, births and deaths make a big difference to the changing average age

Figure 19 sets out the components of annual change in average age in England and Wales over the 2001-18 period. It shows how much each demographic component is responsible for population ageing. On average – in each year between 2001 and 2018 – England and Wales as a whole has aged by 0.1 years. This matches previous analysis set out in this report, which showed that the country's average age has increased by almost two years in the 21st century.

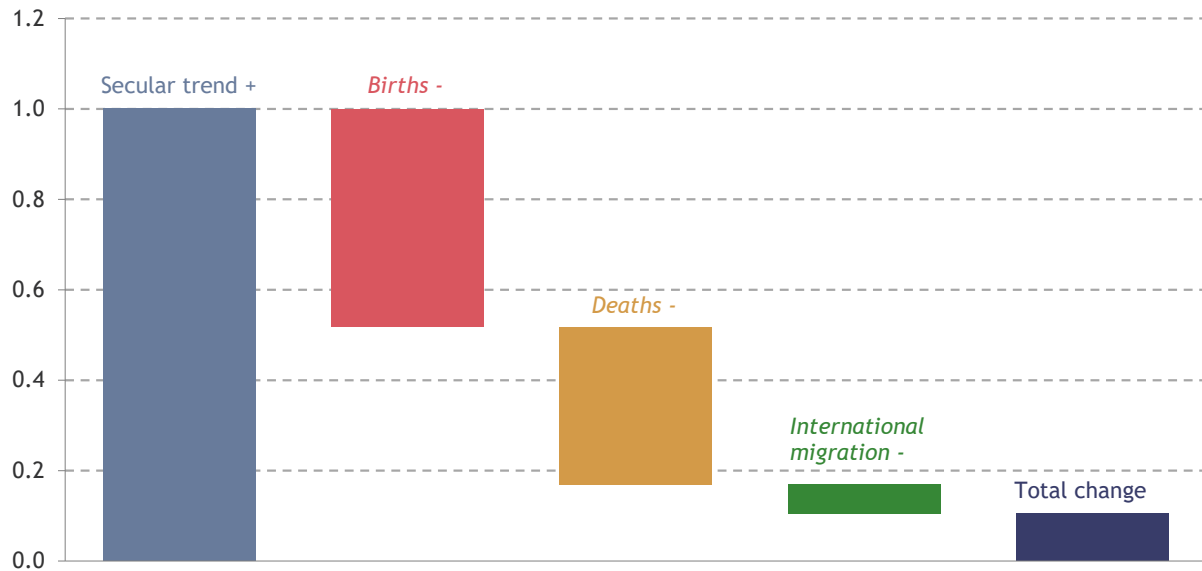
²⁶ E Thomas, I Serwicka & P Swinney, Urban demographics: why people live where they do, Centre for Cities, November 2015

²⁷ See, for example: P Gregg, S Machin & A Manning, 'Mobility and Joblessness' in C Blundell & R Freeman (eds.), Seeking a Premier League Economy, University of Chicago Press, 2004

²⁸ L Judge, Moving Matters: Housing costs and labour market mobility, Resolution Foundation, June 2019

FIGURE 19: The natural process of ageing counteracts all other demographic processes

Decomposition of annual change in average age in years: England and Wales, 2001-18 average



NOTES: This method is an approximation of mean age changes because the data that we use is banded above age 90, meaning that estimates use 90 in place of 90+ to calculate mean ages.
SOURCE: RF analysis of ONS, *Mid-2001 to Mid-2018 Detailed Population Time Series*

Births do the biggest job in bringing down the average age. From 2001-18 there have been 12.3 births in each year, on average, per 1,000 of the population. Deaths (including the number of deaths and age of death) is the next largest component, pulling the average age down by 0.35 years per year.

International migration has also tended to – on average – bring the average age of England and Wales down. This happens for two reasons: the youthfulness of migrants, and an excess of immigrants over emigrants. Over this period, international immigrants were 27.9 years old on average, while people moving abroad (international emigrants) were slightly older at 31 years old. There have also been 9.7 international immigrants per 1,000 of the population entering England and Wales each year since 2001, compared to just 5.6 emigrants per 1,000 of the population leaving. This age gap between immigrants and emigrants and the excess of immigrants over emigrants explains why international migration helps bring down the average age of the population.

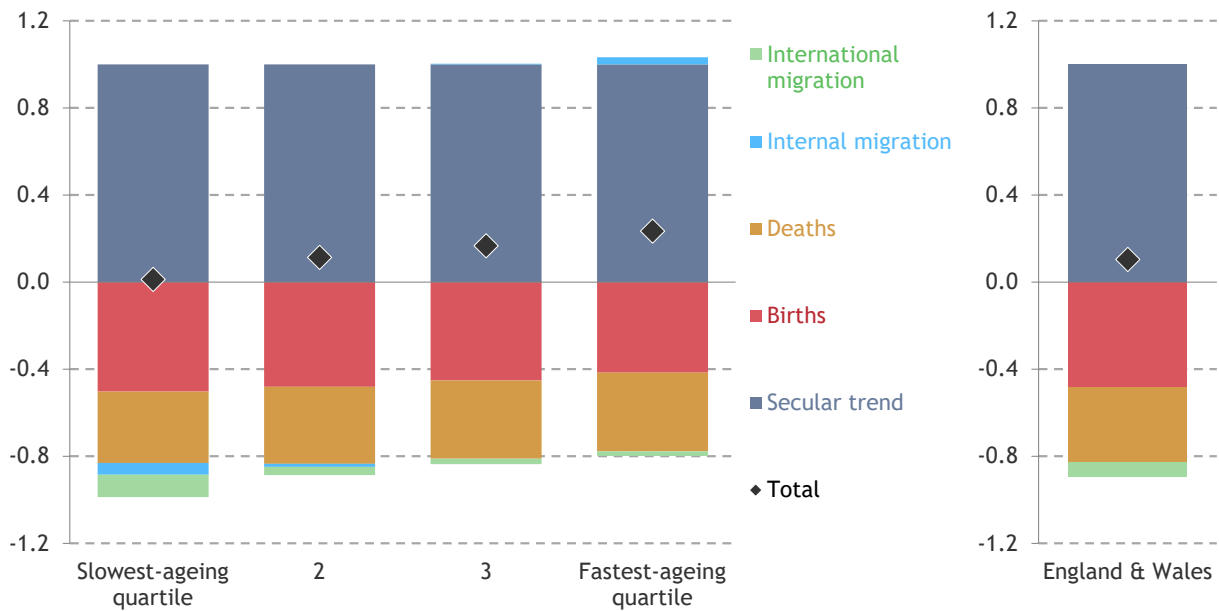
Older places are ageing fastest because of a lack of births, while migration is causing younger places to age more slowly or even become younger

We are predominantly interested in what explains demographic divergence across the

country. This section turns first to why some of the oldest places in the country are ageing fastest, before looking at why younger places are ageing more slowly or even becoming younger. Figure 20 sets the foundations for answering this question. It shows us that a lack of births in the fastest-ageing quartile is a more of important factor in pulling up the average age relative to the rest of the country.

FIGURE 20: There are important differences between the places ageing slowest and fastest, and the England and Wales average

Decomposition of annual change in average age in years for quartiles of local authorities by pace of ageing, and England & Wales as a whole: 2001-18 average



NOTES: This method is an approximation of mean age changes because the data that we use is banded above age 90, meaning that estimates use 90 in place of 90+ to calculate mean ages.
SOURCE: RF analysis of ONS, *Mid-2001 to Mid-2018 Detailed Population Time Series*

For a clearer picture of differences, in the following charts we subtract groupings of areas (for example, each of the quartiles on the left-hand side of Figure 20) from the England and Wales average (on the right-hand side of Figure 20).

Figure 21 presents the decomposition of annual change in average age in these four quartiles of local authorities in relation to the results for England and Wales as a whole. In the fastest-ageing quartile, the contribution of births is the thing that differs most from the England and Wales average. This is because there were an average of 10 births per 1,000 population per year in this quartile over this period, compared to 12.3 births per 1,000 population across England and Wales as a whole.

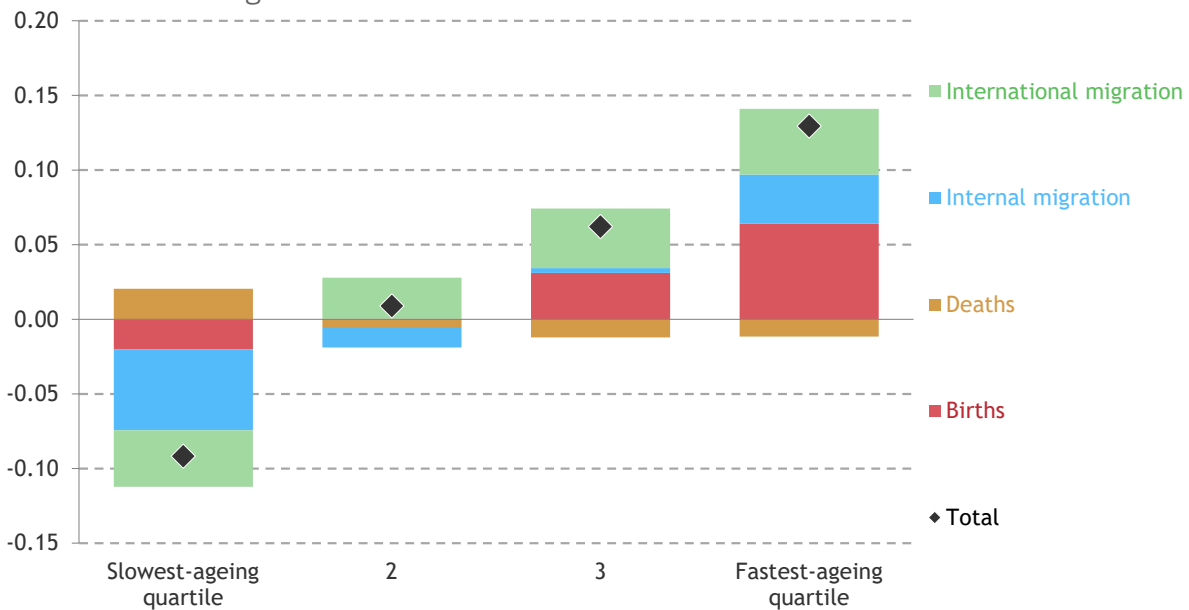
A lower international migration rate is also pulling the average age up in the fastest-ageing local areas relative to England and Wales. The international immigration rate was

4.2 and the international emigration rate was 3.2 (both per 1,000 population), compared to 9.7 and 5.6 per 1,000 population, respectively, across England and Wales as a whole. There are similar gaps between the average age of international immigrants (30.1 years) and emigrants (32.8 years) and the average age of the population in the fastest-ageing quartile (41.9 years) compared to these gaps across England and Wales. This tells us that it is the higher rate of net migration (the immigration rate minus the emigration rate), not the relative ages of immigrants or emigrants, that is making the difference in the fastest-ageing quartile.

It is the combined differences in birth and migration rates that lead to the overall conclusion that a low birth rate and a low net migration rate are doing most of the work in pulling up age (relative to the England and Wales average) in the fastest-ageing quartile.

FIGURE 21: A low birth rate relative to the England and Wales average has sped up ageing in the fastest-ageing local authorities

Decomposition of annual change in average age in years for quartiles of local authorities by pace of ageing, relative to change across England and Wales as a whole: 2001-18 average



NOTES: This method is an approximation of mean age changes because the data that we use is banded above age 90, meaning that estimates use 90 in place of 90+ to calculate mean ages.

SOURCE: RF analysis of ONS, *Mid-2001 to Mid-2018 Detailed Population Time Series*

Looking at the slowest-ageing quartile: internal migration (which includes moving to go to university, something that many might not think of as migration but is unavoidably included in this category in the data we use) has played a big part in explaining differences from the England and Wales average. The main driver of this outcome relates to the relative ages of emigrants. Specifically, the average age of emigrants from places

in the slowest-ageing quartile (29.8 years) is closer to the average age of the population (37.7 years, resulting in a difference of -7.9 years), than across England and Wales as a whole, where the gap is -8.9 years. This relative youthfulness of internal emigrants in the slowest-ageing quartile of local authorities means that internal emigration puts less upward pressure on the average age of the population in these places than it does across the country as a whole.

A relatively low birth rate is increasing the rate at which the fastest-ageing local authorities age

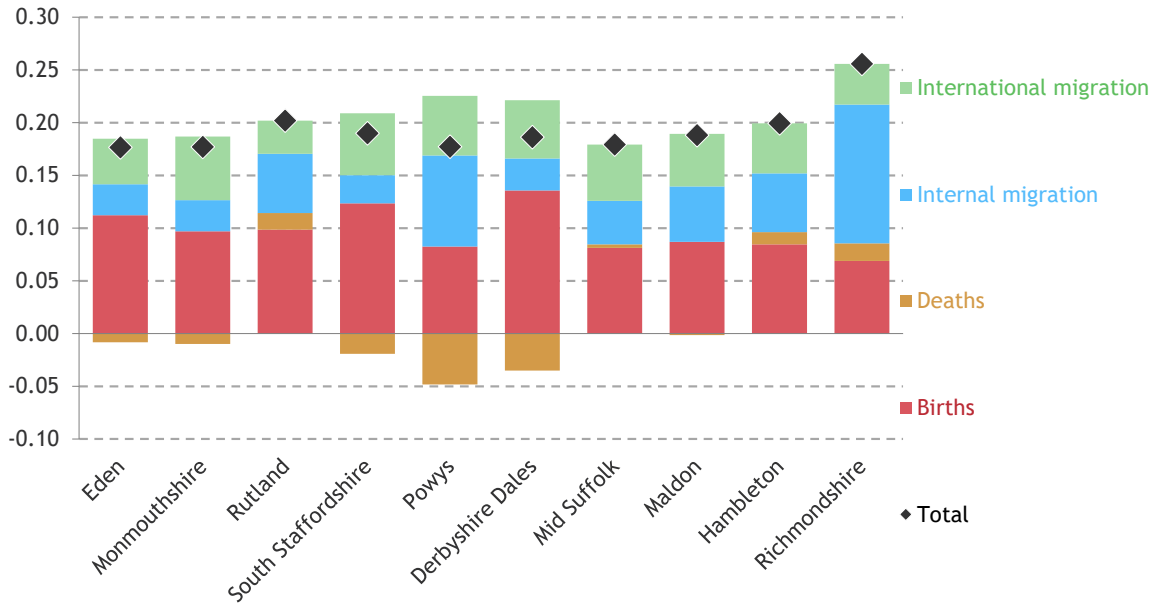
To further understand what's driving demographic divergence we now dig into more detail on specific places. First, we turn to the 10 local authorities that have been ageing fastest this century.

Figure 22 shows the 10 fastest-ageing areas. Very low birth rates are doing most of the work in boosting the mean age of these areas relative to the England and Wales average. For example, in the Derbyshire Dales there were 7.8 births per 1,000 population in each year during 2001-18, compared to 12.3 per 1,000 population in England and Wales as a whole. This is the lowest birth rate of the top ten fastest-ageing local authorities. Because of the large difference in average age between the Derbyshire Dales (44.1) and England and Wales (39.3), a given birth rate would have a greater effect in counteracting ageing in the Derbyshire Dales than it would across the country as a whole. So, because these places tend to be older than the England and Wales average, it is the birth rate most of the work in driving the relative upward pressure on ageing from births that is shown in Figure 22.

Richmondshire district is the local authority with the highest birth rate of those shown in Figure 22 (10.4 births per 1,000 population). Here, a low birth rate explains less of the difference from the England and Wales average than internal migration does. Again this relates to the age of migrants: there was a much bigger gap between the average age of internal emigrants (28.7) and the overall average age (39.6) in Richmondshire and the average figures across England and Wales as a whole. Likewise, there was a smaller gap between the average age of internal immigrants (31.1) and the average age (39.6) than across England and Wales as a whole. It is this pattern of relatively young emigrants and relatively old immigrants that leads us to the conclusion that internal migration is dragging up age relative to the England and Wales average in Richmondshire. Put simply, the age of those young adults who are moving between Richmondshire and other parts of the country (combined with a relatively low birth rate) is pushing up the area's average age.

FIGURE 22: A lack of births helps explain why places are ageing much faster than the England and Wales average

Decomposition of annual change in average age in years in the ten fastest-ageing local authorities, relative to change across England and Wales as a whole: 2001-18 average



NOTES: This method is an approximation of mean age changes because the data that we use is banded above age 90, meaning that estimates use 90 in place of 90+ to calculate mean ages.
SOURCE: RF analysis of ONS, *Mid-2001 to Mid-2018 Detailed Population Time Series*

In terms of understanding the big role that a lack of births is playing in pushing up average ages in these places, it's important to remember that these places are, simply put, much older. In the ten fastest-ageing local authorities, women aged 15-44 years old account for between 14 and 15 per cent of the population, significantly below the 19 per cent share for this same group across England and Wales as a whole.²⁹ With fewer women of a child-bearing age, lower birth rates are something of a given.

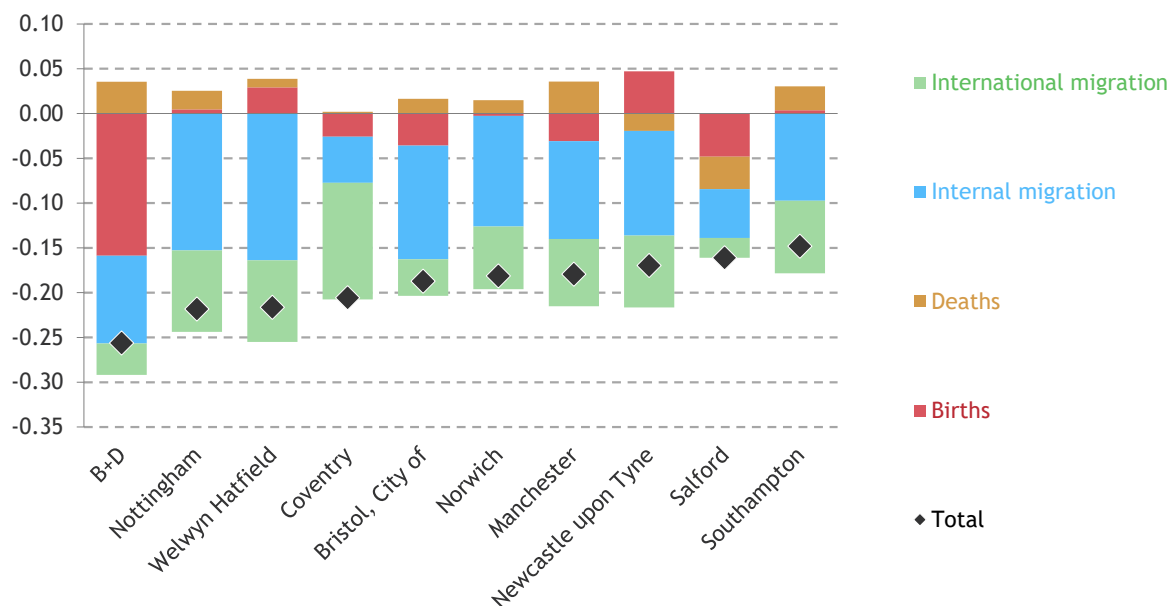
Migration is making younger places age more slowly or even become younger

We next turn to those local authorities that are ageing slowly or getting younger. This further helps us unpick why specific places have diverged so much from the national trend. Figure 23 focuses on the ten slowest-ageing local authorities – places that have all got younger over the 2001-18 period. The tendency to grow older has been counteracted in these places by other demographic factors.

²⁹ Only five of the ten fastest-ageing local authorities are in the bottom quintile of general fertility rates (live births per 1,000 women aged 15-44). So a lower number of births is due to these places being old, not lower fertility.

FIGURE 23: Barking and Dagenham's birth rate is pulling the average age down compared to England and Wales

Decomposition of annual change in average age in years in the ten slowest-ageing local authorities, relative to change across England and Wales as a whole: 2001-18 average



NOTES: This method is an approximation of mean age changes because the data that we use is banded above age 90, meaning that estimates use 90 in place of 90+ to calculate mean ages. B+D refers to Barking and Dagenham.

SOURCE: RF analysis of ONS, *Mid-2001 to Mid-2018 Detailed Population Time Series*

There are very high proportions of younger people in student areas, like Southampton, Newcastle, and Manchester, and in places where people move for jobs, such as London. For these places – many of which are shown in Figure 23 – migration has helped drive the average age down relative to England and Wales. Young people and students tend to be more mobile, so the expansion of universities is likely to be making an important contribution to Britain's demographic divergence. Both universities in Newcastle have experienced pretty significant increases in student enrolments over the 21st century (an increase of 36.5 per cent and 17 per cent since 2001). Nottingham has experienced the same trend, with the number of enrolments to the University of Nottingham having increased by 19.1 per cent, and an increase of 28.8 per cent in enrolments at Nottingham Trent University. At the same time, the University of East Anglia in Norwich has had a 35.9 per cent increase in student enrolments since 2001.³⁰

We would expect these changes to have profound implications for our youngest local authorities, and we can see the trend playing out for some of the local authorities displayed in Figure 23. For example, the share of Newcastle and Nottingham's populations aged 19-21 has grown by a third since 2001. The proportion of 19-21 year olds in Norwich has also grown by 31 per cent between 2001 and 2018. The trend in growing

³⁰ HESA, HE student enrolments by HE provider, domicile, level of study, mode of study and country of HE provider, January 2019

populations of very young adults, likely linked to rising student numbers, help explain our story of divergence.

Barking and Dagenham stands out in Figure 23: the tendency to grow older is counteracted almost entirely by very high birth rates (18.8 per 1,000 population) in Barking and Dagenham compared to England and Wales (12.3 births per 1,000). A death rate of just 7.7 per 1,000 population, compared to 9.3 per 1,000 across England and Wales, explains why deaths are shown to have an upward effect on the average age in Barking and Dagenham.

Nottingham's difference from England and Wales is driven almost entirely by migration (which includes moving to a different area to go to university). This is due to the fact that the age of internal immigrants to Nottingham (24.6 years) is 10.4 years lower than the average age in Nottingham, compared to an average gap of -8.7 years across England and Wales as a whole. It is the combined effects of a high rate of migration and the fact that immigrants are younger than the average age that leads to the overall conclusion that internal migration is pulling the average age down in Nottingham, relative to the England and Wales average.

The poorest and richest local areas are getting younger

To add more nuance to our analysis, we next turn to the question of whether there is a link between rates of ageing and income. Our analysis suggests that the story is more complicated than the poorest, 'left behind' areas getting older.

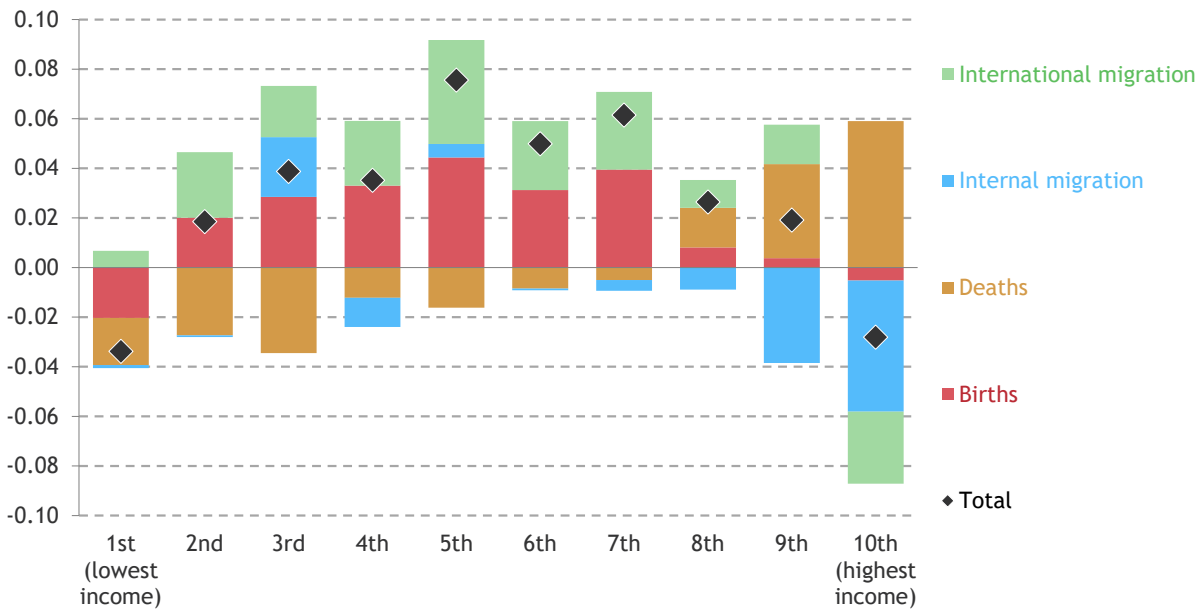
Figure 24 splits out our decomposition of annual change in average age by household income decile for local authorities. Overall, the poorest and richest deciles have aged slower (and at the very top and bottom, have got younger), while middle-income local authorities have tended to age fastest. Richer local authorities have lower death rates than the national average, and have experienced a larger reduction in average age from migration.

Zooming in on the poorest decile of local authorities when ranked by household income, births have the largest downward effect on the average age relative to England and Wales. The birth rate in the bottom decile is 13.2 per 1,000 population, compared to 12.3 per 1,000 across England and Wales. This relatively high birth rate is pulling down the average age in the poorest decile. The areas in this decile are primarily urban and young. They are the local authorities with some of the highest proportions – at the time of the 2011 Census - of black, Asian and minority ethnic groups in the country. The fact that large numbers of children are being born in low-income places echoes previous

Resolution Foundation research, which shows that rates of relative poverty across the country are particularly high for children.³¹

FIGURE 24: Births and deaths bring the average age down in the poorest and richest local authorities compared to England and Wales

Decomposition of annual change in average age in years by local authority income decile, relative to change across England and Wales as a whole: 2001-18 average



NOTES: This method is an approximation of mean age changes because the data that we use is banded above age 90, meaning that estimates use 90 in place of 90+ to calculate mean ages.
 SOURCE: RF analysis of ONS, *Mid-2001 to Mid-2018 Detailed Population Time Series*; ONS, Regional gross disposable household income per head at current basic prices

Policy makers need to acknowledge these findings: poorer places typically have high birth rates and, far from the poorest parts of the country as is often assumed, it is middle-income areas that have tended to age fastest. Before considering these and other implications of this research for policy – the topic of the next section – Box 9 looks at how these differences have played out across regions.

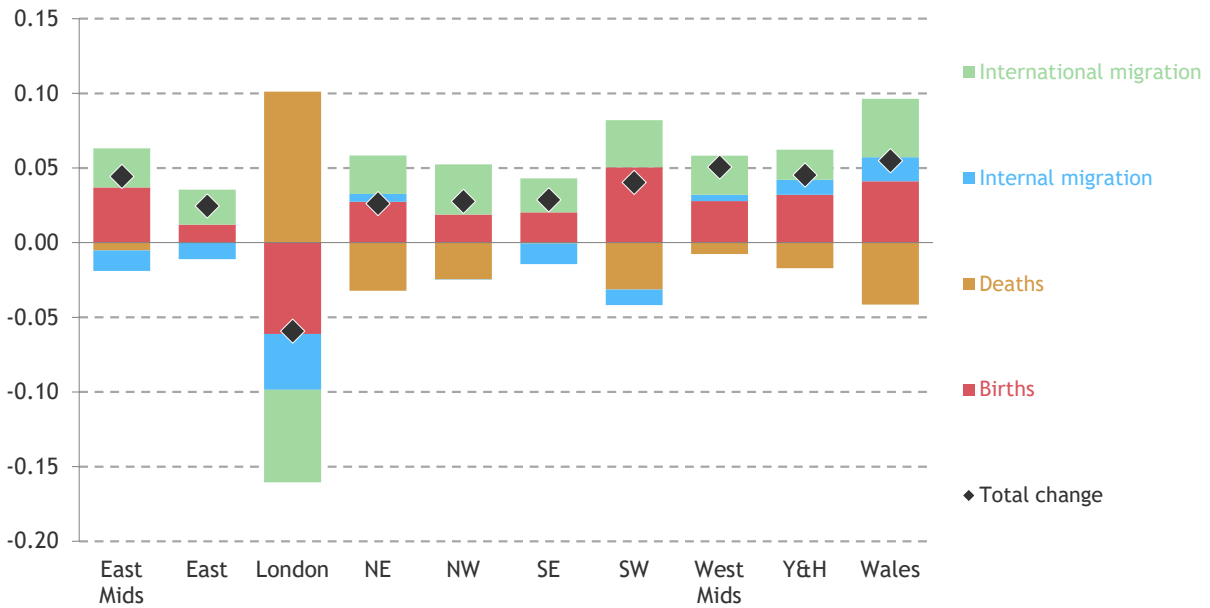
BOX 9: Births and migration abringing the average age of London’s population down relative to England and Wales

Figure 25 compares the annual change in average age in different regions, relative to the England and Wales average. London stands out for its low rate of death of 6.4 per 1,000, compared to 9.3 per 1,000 across England and Wales.

³¹ A Corlett, The benefit freeze has ended, but erosion of the social security safety net continues: Expected benefit uprating in April 2020, Resolution Foundation, October 2019

FIGURE 25: Compared to England and Wales, migration and births bring London’s average age down

Decomposition of annual change in average age in years by region, relative to change across England and Wales as a whole: 2001-18 average



NOTES: This method is an approximation of mean age changes because the data that we use is banded above age 90, meaning that estimates use 90 in place of 90+ to calculate mean ages. Y&H refers to Yorkshire & the Humber.

SOURCE: RF analysis of ONS, *Mid-2001 to Mid-2018 Detailed Population Time Series*

At the same time, the birth rate over the 2001-18 period has averaged 15.2 per 1,000 population in London, compared to 12.3 per 1,000 in England and Wales as a whole. Moreover, the international immigration rate was 26.9 per 1,000 population and the international emigration rate was 14.4 per 1,000, compared to 9.7 per 1,000 and 5.6 per 1,000, respectively, in England and Wales as a whole. This high rate of international immigrants trumps the outflow of international emigrants

from London in determining the big downward effect that international migration has on ageing within the capital. The average age of international immigrants to London (28.3) suggests that while overseas students will form a part of this group, they are not the dominant part.

It is these combined differences that lead to the conclusion that births and immigration are pulling down the age in London.

Section 5

Implications of demographic divergence

The country is diverging demographically. Some places – often those that started out young – are getting younger, for example because they have universities which have grown, or they have high proportions of women of childbearing age. By contrast, many already-older places are ageing fast. However, while the fact that the country as a whole is ageing forms a key part of the national conversation, the implications of unequal ageing by place haven't been sufficiently debated to date. This is despite the fact that demographic divergence matters for local government, for local economies, and for our politics.

For local authorities, demographic divergence means growing differences in demand for social care services, with this demand mapping increasingly poorly onto councils' existing revenue-raising potential. In terms of local economic strategies, demographic divergence means that a single focus on the pursuit of productivity growth to drive incomes misses a key piece of the jigsaw in many areas. Rather, in older or rapidly ageing places, strong pensioner income growth can itself create opportunities for increasing output. For our politics, the fact that age differences between places are growing is particularly worrying because it runs directly into another trend: the growing age polarisation of party choice.

The implications of growing age divergence between places are insufficiently discussed in our national ageing debate

Nationally, population ageing has received political bandwidth. From how we finance rising demand for NHS services, to the future path of the State Pension age, to efforts to combat loneliness and isolation, we're aware of the challenges posed by the older population boom that is only just beginning. That's not to say we have all the answers. There is currently no consensus, for example, on how our fiscal settlement should respond to an additional public spending requirement in the region of £83 billion in 2040, with the option of just turning to the usual taxes having profound implications for today's

working-age generations.³² But in contrast, we rarely talk about the specific challenges, and opportunities for some, that demographic divergence by place brings.

This is important because the implications of these trends at the local level can be quite different to those at the national level. In this section we explore three areas in which the place-based dimension of ageing matters: local government, local economic strategies, and politics.

Demographic divergence matters for local government

How we think about financing and running local government must account for Britain's demographic divergence. Places with a greater share of older residents face greater demands on health and social care services, while childcare and education services may be more in demand in younger areas. Relative demographic change can be a challenge given the lack of flexibility that local areas often have over how they spend money. Much of the funding received from central government is allocated for specific issues such as potholes and schools. If allocations do not respond sufficiently to changes in different areas' population structures, councils will be limited in the extent to which they can prioritise according to differing age profiles.³³

But when those revenue are raised locally, the matching of revenues to need can be complicated further. Local revenue raising has certainly been the recent direction of travel in England. The business rates retention scheme means council budgets will depend to an increasing extent on local business performance, and in recent years councils have been given more flexibility to increase council tax bills using the social care precept.³⁴ The latter was part of central government's response to calls for more money for social care, due rising demand for services and acute cuts to non-ring-fenced local authority budgets over the past decade.³⁵

But this approach is not straightforward when demographics, and therefore needs, vary substantially. The social care precept provides a vivid demonstration. Those areas where an increase in council tax bills raises the most revenue – such as urban areas with high house prices and often younger populations – map quite poorly onto the older areas that have the greatest social care needs.³⁶ Given that adult social care accounts for more than a third of English local authorities' budgets, the same logic applies to a greater emphasis on retention of business rates revenues to fund overall council services. Those

³² As we have estimated in previous analysis. See, G. Bangham et al, *An intergenerational audit for the UK: 2019*, Resolution Foundation, June 2019

³³ A Carter & P Swinney, *Where are the UK's youngest and oldest city populations?*, BBC, 19 March 2018

³⁴ Full Fact, *Council tax and social care: explaining your bill*, March 2017

³⁵ By 2020, local authorities will have faced a reduction to core funding from central government of nearly £16 billion over the preceding 10 years. See: Local Government Association, *Local government funding: moving the conversation on*, June 2018

³⁶ N Amin Smith, P Johnson & D Phillips, *How far do today's social care announcements address social care funding concerns?*, Institute for Fiscal Studies, December 2016

areas where business rates have grown fastest are not those where (lower-income, lower-wealth older) people eligible for publicly funded care services are generally located. This divergence between revenue-raising potential and service demand is particularly challenging in the face of central government demands for a greater consistency of social care service standards across the country.³⁷

One response to mounting pressures on adult social care budgets has been a greater emphasis on private user charges for care services. For example, the 2017 Conservative Manifesto suggested expanding user charges for domiciliary care on the basis of housing assets (down to a 'floor' level). But on its own, such an approach suffers from similar challenges. Areas with large populations of lower-housing-wealth older people will be able to raise relatively little via user charges, meaning the pressure to fund care services would remain. For this reason, our Intergenerational Commission proposed a combination of modest increases in (capped) charges on wealthier service users, and a national funding settlement that allocates funding to those areas with high needs but low revenue from charges.³⁸

Crucially, demographic divergence – on top of already-existing large age gaps between places – will only amplify the issues discussed here. A general insight is that local authorities' current revenue-raising potential is greatest in areas with high property prices (to which council tax and business rates are closely related), while the most acute upward pressure on spending is being felt in areas where the population is ageing fast.

Policy makers need to think about how to finance local government in a way that's fit for Britain's current and possible future demographic divergence. In particular, they should consider how local revenue streams being increasingly relied upon match up to the service requirements of local populations of very different – and ever more different – ages.

Demographic divergence matters for local economies

National economic conditions drive outcomes across the country. A sharp economic downturn affects economic activity and employment everywhere, just as economic growth and tight labour markets improve the prospects for pay growth in local areas.

But divergence in economic outcomes is real. Output per hour worked is 56 per cent higher in London than in Wales.³⁹ Local economic strategies generally focus on chasing productivity measures such as these by raising gross value added (GVA)/ per job, with

³⁷ N Amin Smith, D Phillips & P Simpson, Adult social care funding: a local or national responsibility?, Institute for Fiscal Studies, March 2018

³⁸ Resolution Foundation, A new generational contract: The final report of the Intergenerational Commission, May 2018

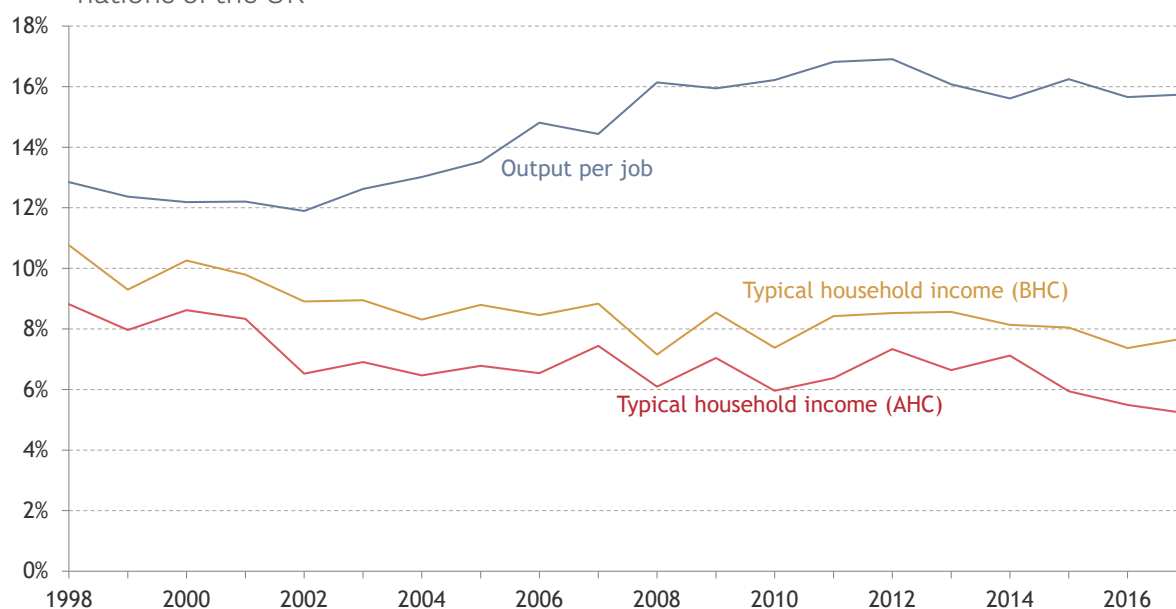
³⁹ S Clarke, Mapping Gaps: Geographic inequality in productivity and living standards, Resolution Foundation, July 2019

the view being that everything else you might want, not least the living standards of residents, will flow from productivity growth.

Recent Resolution Foundation analysis has called into question whether this relationship is as direct as might be believed.⁴⁰ For example, Figure 26 shows that while variation in productivity between the regions and nations of the UK has increased during the 20th century, variation in household incomes has done the opposite. The implication is that divergent productivity between areas has not dragged incomes with it.

FIGURE 26: Regional variation in productivity has increased, even as variation in typical incomes has remained broadly constant

Coefficient of variation of output per job and household income across regions and nations of the UK



NOTES: The coefficient of variation is the standard deviation of GVA per job and median equivalised household income divided by the mean, computed across the 12 regions and nations of the UK. Northern Ireland is not included in the household income series in the years between 1998 and 2002. Income is presented both before housing costs (BHC) and after housing costs (AHC).

SOURCE: ONS, *Family Expenditure Survey (1961–91)*; DWP, *Households Below Average Income (1994–95 – 2017–18)*; ONS, *Nominal regional gross value added (balanced) per head and Region by industry labour productivity*

Why have income differences between areas not grown with productivity differences? Partly this reflects the redistributive effect of the tax and benefit system, falling employment gaps between places and the narrowing of earnings inequality brought about by the minimum wage. All of these have acted to reduce regional income disparities. But this outcome may also reflect Britain's 21st century demographic divergence.

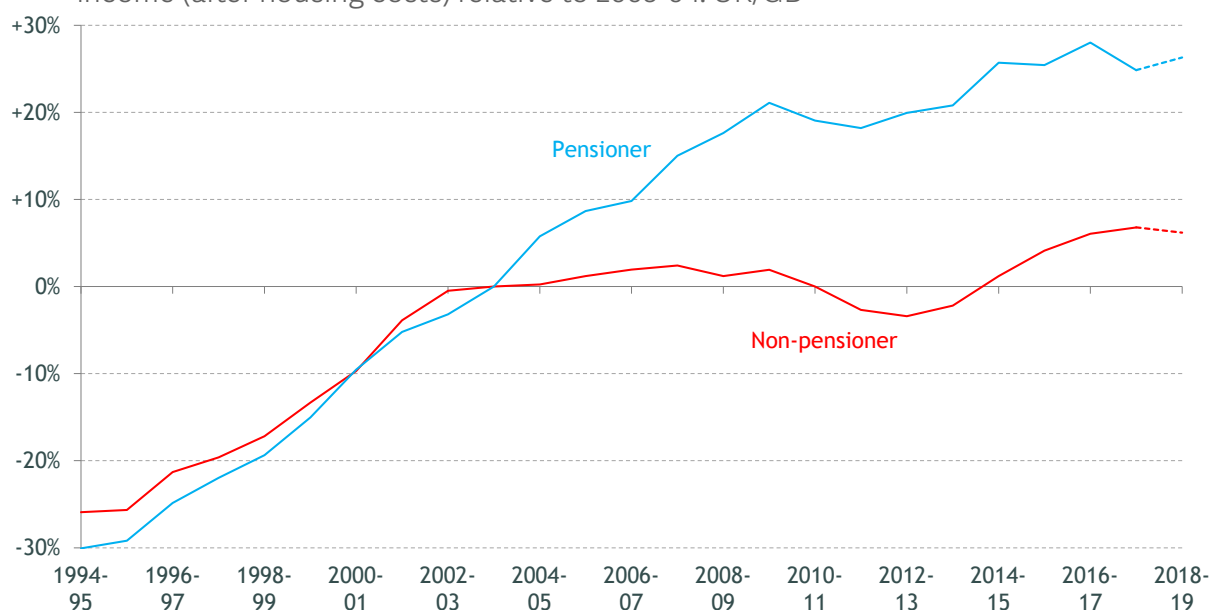
⁴⁰ S Clarke, Mapping Gaps: Geographic inequality in productivity and living standards, Resolution Foundation, July 2019

First, growing productivity gaps between areas may well be related to these growing age gaps that we have observed over the same time period. There is evidence that an ageing population is bad for productivity growth, and that middle-aged people (35-44 year olds) are particularly important for productivity.⁴¹

Second and crucially, we need to consider the sources of income at different ages. Poorly performing productivity and pay (particularly for young adults) – set against improvements in pensioner benefits, private pension income and post-State Pension age employment – have resulted in a marked divergence of pensioner and working-age household incomes over the past 15 years. Figure 27 shows that pensioner incomes had a much stronger decade after 2003-04, averaging 1.9 per cent real growth a year, compared to growth of 0.5 per cent per year for non-pensioners.

FIGURE 27: Pensioner incomes had a much stronger decade after 2003-04 than non-pensioner incomes

Cumulative growth in real (CPI-adjusted) median equivalised disposable household income (after housing costs) relative to 2003-04: UK/GB



NOTES: 2018-19 values are nowcasts. UK from 2002-03, GB before.

SOURCE: RF analysis of DWP, *Households Below Average Income*; RF nowcast

Strong pensioner income growth has helped the relative performance in living standards terms of some places with lots (or growing numbers) of older people.

Indeed, an ageing place can be seen as an opportunity, and a reminder for more imagination in local economic strategies. Pensioners' spending power creates the potential to think more about (pensioner) incomes driving GVA growth via demand for

⁴¹ V Skirbekk, 'Age and Productivity Potential: A New Approach Based on Ability Levels and Industry-Wide Task Demand', *Population and Development Review* 34, March 2008

the goods and services that the older population is increasingly spending money on (like eating out and going to the cinema),⁴² and not the other way round. Ghosts of the old industries are still present in small towns and rural areas in the form of their Defined Benefit pension schemes,⁴³ and these may offer new economic opportunities to some areas. Of course, boosting productivity and dynamism is still an important aim for local areas in and of itself, both financially and in terms of how an area feels to live in. But in many areas, economic strategies need to do much more to understand and perhaps embrace the economic change brought about by differential ageing.

These insights suggest that there isn't a straight-forward story of old places being left behind, or poor coastal communities where young people might disappear.⁴⁴ As the latest iteration of the Indices of Multiple Deprivation shows, the highest proportions of older people living in income-deprived households tend to be in urban areas, rather than rural or coastal ones. This echoes our finding in the previous section: that the places that are ageing fastest are found in the middle of the income scale, not towards the bottom as might be assumed.

In sum, demographic divergence may well be a contributing factor to the different paths of productivity and income variation across the country during the 21st century. This outcome is instructive as to the economic opportunities that different places are presented with. Strong pensioner income performance and growing spending at older ages suggest that an area's income is less closely linked to its productivity than might be expected. Indeed, the former may have the potential to drive the latter. Local economic strategies need to reflect this reality.

Demographic divergence matters for politics too

In recent decades, age has replaced class as the big dividing line in our politics. Back in October 1974, 22 per cent of those in the lowest socio-economic groups (people in semi-skilled and unskilled occupations, and the unemployed) voted Conservative while 57 per cent voted Labour. By 2017, that difference had almost entirely disappeared at 41 per cent and 44 per cent, respectively.⁴⁵

Instead age has become a key driver of voting preferences,⁴⁶ as Figure 28 shows. In 1974, 30 and 70 year olds were just as likely to vote Labour as one another, but in 2017 a 30 year old was almost twice as likely to vote Labour as a 70 year old. Conservative support

⁴² Flip Chart Fairy Tales, What happens when the pensions dry up?, March 2014

⁴³ Flip Chart Fairy Tales, Is pensioner spending keeping our small towns afloat?, March 2016

⁴⁴ D Rhodes, 'England's seaside towns where young people might disappear', BBC News, July 2019

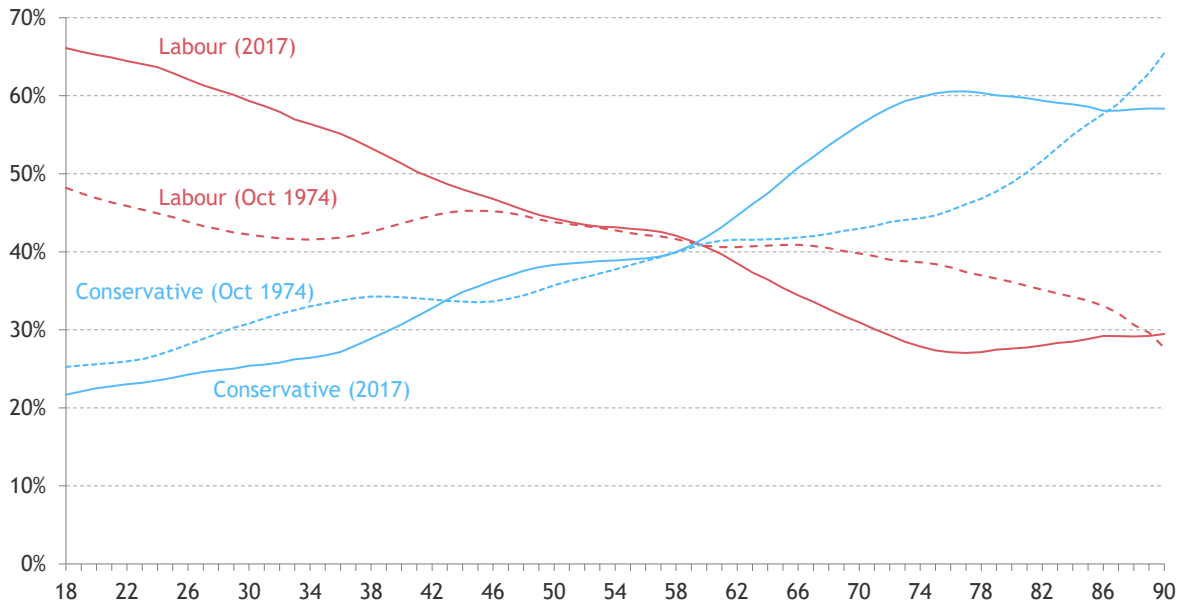
⁴⁵ T Bell & L Gardiner, My Generation, Baby: The Politics of Age in Brexit Britain, The Political Quarterly 90(S2), February 2019

⁴⁶ Age divides in voting also help explain the narrowing of traditional measures of class-based voting preferences. This is because older voters, recorded as being working class, are now disproportionately likely to vote Conservative, while younger, poor voters remain much less likely to do so.

has experienced the opposite shift: a 70 year old was 2.2 times more likely to vote for the party than a 30 year old in 2017, compared to just 1.4 times as likely in October 1974.

FIGURE 28: **Age is the big dividing line in our politics now**

Percentage of voters voting Conservative or Labour, by age: October 1974 and 2017
General Elections: GB

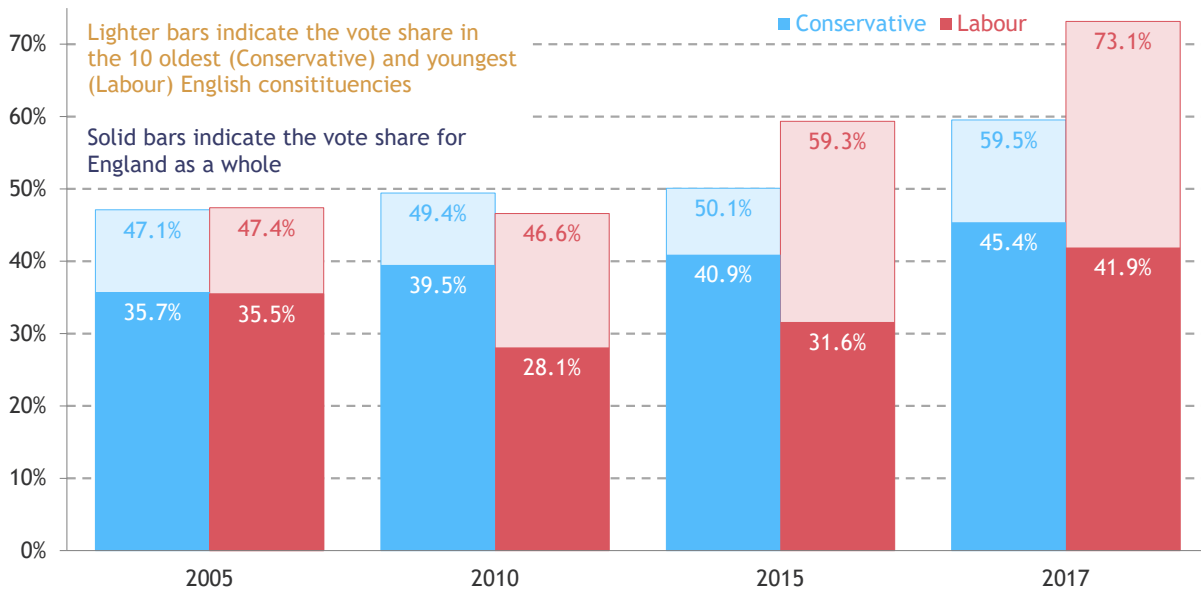


SOURCE: RF Analysis of British Election Study

This outcome implies that the age of parliamentary constituencies is an increasing determinant of which party's candidate gets returned to Westminster. In turn, demographic divergence – that is, bigger age gaps between constituencies – means that politicians will have a narrower electorate in terms of age. All else equal, this means that places will increasingly tend more strongly towards a particular party. Indeed, Figure 29 shows that the oldest and youngest parliamentary constituencies have become safer for their respective parties in recent years, despite an overall trend away from party allegiance.

FIGURE 29: The oldest and youngest constituencies have become more strongly aligned to a particular party

Conservative and Labour vote shares at UK General Elections in the 10 oldest (Conservative) and youngest (Labour) English constituencies, relative to each party's average share of votes



SOURCE: RF analysis of House of Commons, *UK Election Statistics 1918-2019: A century of elections*; ONS, *Mid-Year Population Estimates*

The implication is that Conservative MPs will now have an even greater incentive to implement policies that benefit older people, whereas Labour MPs will have an even greater incentive to appeal to younger adults. This may only act to further solidify age divides in our politics and make bridging them even more difficult than it otherwise might have been. This matters a lot: alongside the (not unrelated) issue of finding a resolution to Brexit, the generational divide represents one of the very biggest challenges facing Britain today.⁴⁷

While there are opportunities too, place-based, age-related challenges are not going away, and will become more acute if demographic divergence continues. Providing a proactive response to the intersection of place and demography is required.

⁴⁷ T Bell & L Gardiner, *My Generation, Baby: The Politics of Age in Brexit Britain*, *The Political Quarterly* 90(S2), February 2019

Section 6

Conclusion

Population ageing is a key part of 21st century Britain. People living longer is not a phenomenon unique to our country – it is one of the defining features of the developed world. This reflects the combined effects of fluctuating birth numbers and rising longevity. The scale of change in the UK has been less dramatic over the past 70 years than in other comparable countries. But, with the large baby boomer generation just hitting retirement, we are now at a demographic tipping point. The policy implications that this national trend has for the public finances and our labour force have dominated the headlines when it comes to ageing.

What has received far less attention is the geographic distribution of ageing across the country. Within the UK, there are stark differences in the average ages of local authorities. For example, North Norfolk has the highest typical age (53.8 years), while the youngest area is Oxford (29 years of age). Our oldest and youngest local authorities stand out internationally. In 2015, 60 local authorities had a higher median age than Japan, the oldest country in the world.

The standout finding of this report is that these age gaps between places have been getting wider because Britain has been experiencing demographic divergence. Places that were oldest in 2001, like many rural and coastal communities, have aged fastest. But there are also places, like Manchester or Nottingham, that are younger now than they were in 2001 – usually those places that started out younger at the turn of the century.

So age differences between local areas have grown. In 2001 there were 15 local authorities in the UK that had an average age 10 per cent higher than the national average, and 17 with an average age 10 per cent lower than the national average. Now in 2018, those figures have increased to 33 and 39, respectively.

This demographic divergence has been driven primarily by differences in birth and migration rates. For the fastest-ageing 25 per cent of local authorities, lower birth and migration rates relative to the rest of the country play the key role in pushing their average age up. These places tend to be older, with women aged 15-44 accounting for a

smaller proportion of the population than the national average, so it is unsurprising that they are behind the curve on births.

This report has also shown that the slowest-ageing (and sometimes getting younger) parts of the country are characterised by higher rates of young migrants moving into already-young areas. We also find that the poorest parts of the country are the areas that are most likely to be getting younger, due to urban, ethnically diverse populations delivering a high number of births. This finding challenges simple stories of old, coastal, 'left behind' areas being the places where poverty is concentrated.

Demographic divergence has huge implications for policy, economic and politics. For local authorities, demographic divergence means growing differences in demand for social care services, with this demand mapping increasingly poorly onto councils' existing revenue-raising potential. For local economies, demographic divergence challenges the assumption that local authorities should only ever pursue output growth as an economic strategy. Strong pensioner income growth can itself create opportunities for increasing output, so embracing the economic change brought about by differential ageing could be a better approach for local authorities that are older or ageing fast. Finally, in our politics, age has become a key driver of voting preferences, with demographic divergence meaning that the oldest and youngest constituencies have become more strongly aligned to the major parties. This means that both Labour and Conservative now have an even greater incentive to implement policies that benefit the young and old, respectively.

Overall, the analysis in this report – and in particular our core finding that Britain is diverging demographically – underscores the need for analysts and policy makers to consider the intersection of ageing and place when trying to understand and shape 21st century Britain.

The Resolution Foundation is an independent research and policy organisation. Our goal is to improve the lives of people with low to middle incomes by delivering change in areas where they are currently disadvantaged.

We do this by undertaking research and analysis to understand the challenges facing people on a low to middle income, developing practical and effective policy proposals; and engaging with policy makers and stakeholders to influence decision-making and bring about change.

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