THE ECONOMY 2030 INQUIRY

SHAPING A DECADE OF CHANGE

Under pressure

Managing fiscal pressures in the 2020s

Krishan Shah, James Smith & Daniel Tomlinson

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The Economy 2030 Inquiry

The Economy 2030 Inquiry is a collaboration between the Resolution Foundation and the Centre for Economic Performance at the London School of Economics, funded by the Nuffield Foundation. The Inquiry's subject matter is the nature, scale, and context for the economic change facing the UK during the 2020s. Its goal is not just to describe the change that Covid-19, Brexit, the Net Zero transition and technology will bring, but to help the country and its policy makers better understand and navigate it against a backdrop of low productivity and high inequality. To achieve these aims the Inquiry is leading a two-year national conversation on the future of the UK economy, bridging rigorous research, public involvement and concrete proposals. The work of the Inquiry will be brought together in a final report in 2023 that will set out a renewed economic strategy for the UK to enable the country to successfully navigate the decade ahead, with proposals to drive strong, sustainable and equitable growth, and significant improvements to people's living standards and well-being.

The Nuffield Foundation

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Contents

Executive summary

The state is growing, and so are debates about the extent and consequences of that growth. The current row about government plans to raise National Insurance to fund additional spending on health and social care is not a one-off event, but a sign of what is to come, as pressures on the size of the state build and politicians grapple with how to manage them.

The 2020s are set to see the pressures from ageing intensify, healthcare costs rise, and the state investing to drive the net zero transition. These trends will take place against the backdrop of significant economic change, placing further pressures on the state to do more in the decade ahead. This report assesses these demands in detail; considers what we can learn from the strategies employed to deal with the spending pressures of the past; and evaluates these and other strategies available to governments over the next decade as they seek to manage existing and emerging fiscal pressures.

Increases in spending on the State Pension and healthcare provide the largest spending pressures in the 2020s

The pressures pushing up on the size of the state in the 2020s are significant, requiring policy makers to respond.

Increasing longevity represents a major human achievement, but the UK's ageing population is also among the largest sources of these fiscal pressures. In 2020, for every 100 adults aged 20-64,

there were 32 adults aged 65 and over; by 2030, this ratio is set to have climbed to 38:100. This is projected to be the fastest pace of ageing in any decade from the 1960s to the 2060s, as higher longevity combines with the powerful effect of the large baby boomer cohort moving into retirement.

Many focus on the implications of ageing on health spending, but the largest demographic effect is likely to come from the social security system: demographic change on its own is set to push social security spending on the over-60s up by £22 billion a year between 2022 to 2030. These pressures are compounded by the 'triple lock' which will continue to ratchet up the value of the State Pension.

An ageing society is not new, but a major increase in the cost of the State Pension will be. In recent years, such cost pressures have been mediated by increases in the age at which men and (especially) women can claim their pension, but this change has now fully fed through and will no longer provide a large brake on future pension spending. All told, spending on the State Pension is forecast to increase, in real terms, from just over £108 billion in 2022-23 to £132 billion by 2030-31.

Longer lives do matter for health spending, although less than is often assumed. Much more important is our morbidity – the length of time spent in ill health –which has been rising recently: 34 per cent of 85-to-89-year olds had two or more diagnosed long-term conditions in 2006, rising to 44 per cent by 2015.

The rising costs of providing healthcare also play a key role. Technological innovation in health tends to be cost-increasing; studies estimate that technological change accounts for anywhere from 27 per cent to 75 per cent of health care spending growth in recent decades. The good news from a spending perspective is that the latest evidence suggests that healthcare costs in developed countries (including the UK) are not increasing one-for-one with national income. Income growth need not, on its own, imply a greater share of spending on health.

Overall, the latest long-term forecasts suggest that health spending could increase from 7.3 per cent of GDP pre-pandemic to 9 per cent of GDP in 2030-31 and 10 per cent of GDP by 2035-36.

This would imply a real-terms increase in health spending of £70 billion on pre-pandemic levels by 2030-31, or a £52 billion increase (a 40 per cent increase) compared to 2022-23 levels.

Net zero will require significant public investment

A new pressure on public spending is the cross-party consensus on the need to make significant progress towards our decarbonisation, in line with the UK's international and domestic commitments to reach net zero by 2050. This will require making progress during the 2020s to reap the pay-off in future: the Climate Change Committee's net zero investment estimates imply annual net investment across the public and private sector of £27 billion per year in the 2020s, £16 billion per year in the 2030s, before an average annual net payback of £11 billion in the 2040s. There are limited robust estimates of the amount of new public spending needed in this area in the decade ahead, but the OBR's indicative scenario suggests that additional public sector investment on net zero may have to climb to somewhere in the region of £14 billion a year (in 2020-21 prices) by the end of the 2020s.

The amount of investment that will ultimately be required is still highly uncertain, as it depends heavily on the pace of cost reductions in emerging technologies. The Government should now build on the ideas in the Net Zero Review to confirm how much investment it thinks will be required and how higher costs will be shared between households and firms, higher energy bills, or tax revenues, given that this will be a central policy challenge in the years ahead.

If governments in the 2020s were to maintain Public Sector Net Investment (PSNI) at 2.7 per cent of GDP – which seems to be this Government's intention – then funding £14 billion a year of net zero investment would still allow for other public investment to reach around 2.2 per cent of GDP (around £60 billion, 2020-21 prices) – a higher level than has been sustained at any time since the late-1970s.

These pressures could increase the size of the UK state towards size of the state in pre-pandemic Germany

These pressures will be accommodated in various ways and to

various extents by governments in the 2020s, but today's decision makers should have a sense of the potential size of the increase in the state if the pressures identified here were incorporated 'in full' in the years ahead.

Combined, relative to 2022-23, these imply additional spending of £76 billion by 2030-31 and £150 billion by 2035-36 (in 2020-21 prices). Potential spending increases on healthcare and State Pension alone would make the UK government more similar in size to Germany's pre-pandemic state (45 per cent of GDP) than Canada's (41 per cent of GDP) by 2030.

How governments have dealt with the fiscal pressures of the past helps us understand the strategies available in the 2020s

Since the Second World War, the size and the shape of the public sector has shifted substantially as the modern welfare state was built. These changes are best understood not as inevitable shifts that policy makers and the public passively accepted, but as the result of the choices made or 'coping strategies' adopted by governments managing them.

The long-run picture is of a rise in the size of the state, with total managed expenditure (TME) having risen from 38 per cent of GDP in the late 1940s to an expected level of around 42 per cent of GDP in the 2020s. Underlying that rise have been three main sources of upwards pressure. First, social security spending, which doubled from 5 per cent of GDP in the mid-1950s to reach 10 per cent of GDP in 1982-83 and has remained broadly stable since. Second, health spending, which has risen from around 3 percent of GDP in 1955-56 to an expected level of over 8 per cent by 2024-25 – a nine-fold increase in real per person spend. Finally, education spending, which rose from 4 per cent of GDP in 1999-2000 to reach 5.6 per cent of GDP in 2009-10. This was a 55 per cent increase in real per person spending. These increases reflect the public spending implications of building and maintaining a modern welfare state, so it is not surprising that similar pressures were seen in other advanced economies. Indeed, the UK is far from exceptional in the level of spending on these areas, with the increases in spending in the 2000s serving to bring our health and education spend in line with that of other rich countries.

To meet the fiscal pressures created by this extension of the state, policy makers have responded in three major ways. The first has been to squeeze spending on other functions, in particular defence. Between the 1950s and late 1970s, defence spending declined from around 8 per cent of GDP to 4 per cent, before falling to 2 per cent more recently. But spending has also fallen thanks to lower debt interest payments: in 2023-24, they are set to be half the level seen in the 1980s, when they amounted to over 3 per cent of GDP. This decline reflects the ultra-low interest rates, which have more than offset higher debt levels.

Second, the state has done a lot less investing. In the mid-1970s, public sector net investment (PSNI) amounted to over 5 per cent of GDP. By the mid-1990s. it had fallen below 1 per cent, thanks to the reduction in some kinds of investment and the outsourcing of others to the private sector. The type of investment the state engages in also changed, with a sharp decline in spending on housing – which comprised nearly 2 per cent of gross investment in the 1960s and 1970s, compared to less than half a per cent in the 2010s – and a rise in capital spending on science and technology. Keeping public investment low has been an enduring way in which the UK state has avoided growing despite greater welfare state spending, but this has recently reversed, and a new political priority to invest means that PSNI in the 2020s is set to reach its highest sustained level since the 1970s.

Finally, governments have opted to raise taxes to fund higher spending. Since bottoming out at 28 per cent in 1993-94, the tax take as a proportion of GDP has risen considerably and is expected to reach 36 per cent by 2026-27 – levels which were last seen in the immediate aftermath of the Second World War. Increasing existing taxes, rather than introducing new ones, has been the main route to a higher tax take. In particular, taxes on income – and, more specifically, on earnings – have increased, with higher rates of National Insurance (NI) being the path chosen most regularly in recent decades. Indeed, all of the increase in income taxes as a share of GDP this century has come through NI, reinforcing the longer-term trends that will mean NI is set to have risen from 3 to 7 per cent of GDP from the war to 2026-27 even as Income Tax falls from 12 to 10 per cent.

Strategies that involve reducing spending are unlikely to help with fiscal pressures in the 2020s: the state will grow

The most obvious option to manage the fiscal pressures of the next decade is to take steps to limit the size of the spending increase that they bring about. Given the amount of pressure coming from social security spending on pensioners, one obvious example would be to end the triple lock, for example. Curbing spending in a major way will require breaking taboos, such as accelerating the increase in the State Pension Age to 68 currently pencilled in for the late-2030s. On healthcare, effective policies to stem the rise in morbidity or treat those with long-term health conditions more cost effectively would, of course, be welcome. But, with the gains here difficult to achieve, policy makers might seek more ways to shift healthcare costs onto individuals directly. None of these strategies is politically appealing, though, and all of them will leave the vast majority of pressures still to be addressed.

As such, the strategies deployed in the past will be looked at by governments in the 2020s as they seek to cope with the looming fiscal pressures. On the spending side, the 2010s strategy of reducing many areas of working-age social security and day-to-day public spending to protect (in relative terms) health and pension spending has reached its limit. Even after increases in recent Spending Reviews, day-to-day public service spending is set to be 20 per cent lower in real terms per person in 2024-25 than in 2009-10.

But some past approaches could be deployed once again. Although the huge reductions in defence spending seen since the Second World War cannot be repeated, defence spending remains higher in the UK than in all other G7 countries bar the US. Public investment is set to reach a fifty-year high for the UK, even if it remains lower than countries such as the US, Canada, France and Japan. The temptation to cut spending further in both of these areas may persist, even if doing so would be unwise: cutting defence spending would breach the UK's NATO commitments at a time of rising geopolitical risks, and reductions in investment spending would be unwise given both historically low investment levels in the UK and the need for additional investment to accelerate the net zero transition in the 2020s.

These limits to the ability of policy makers to repeat the spending-reduction strategies of the post-war period means that the state is likely to grow in the decade ahead.

Borrowing to meet future pressures is not an advisable strategy

If spending is on an upward path, some may look to additional borrowing to take the strain, but that is unlikely to be a viable strategy. Fiscal policy has played a major role in two recent crises in that it helped avoid the collapse of the banking sector in 2009 and limited the rise in unemployment and the broader economic damage in the face of Covid-19. This lays bare the importance of future governments having the fiscal space to respond similarly when the next downturn inevitably occurs.

But these two crises have also reduced the fiscal space available: public sector debt has surged from around a third the size of national income before the financial crisis to be roughly equal to it. This is a significant rise by historical standards, returning debt to levels last seen in the aftermath of the Second World War. Where the safe limit is for levels of public debt in the UK is highly uncertain, but reducing – or, at the very least, maintaining – debt levels is highly desirable, given the likelihood of future crises. In so far as most cost pressures relate to ongoing day-to-day public spending, it is also the case that they should be covered by tax revenues during normal economic times. This tighter setting for fiscal policy to reduce debt levels will curtail the use of borrowing in response to the pressures of the 2020s. And while ultra-low borrowing costs provide some downward pressure on the public finances, history tells us that we should not rely on this continuing indefinitely, particularly given the prospect of an inflation-driven rise in interest rates.

There will be pressure for higher taxes later in the 2020s

The constraints on other potential strategies explains why a Conservative Government is already planning to increase the tax take over the coming four years from 33 per cent of GDP in 2021-22 to 36 per cent by 2026-27. But it is highly likely that more tax increases will be necessary to accommodate fiscal pressures

later in this decade. Looking at other comparable developed economies suggests this is feasible, as it is clear that the UK raises relatively low levels of tax as a share of GDP. In 2019, our tax take was comparable to that of Canada at 33 per cent of GDP: Germany raises 38 per cent of GDP in taxes, and other European comparators raise far more.

An economic strategy relying on higher taxes does, however, increase the need for an efficient system. That is not the system we have today, and nor would we move towards one if we continued the focus on raising additional revenues through National Insurance. Different allowances, rates and coverage between the Income Tax and National Insurance (NI) systems drive perverse behaviours; capital gains and inheritance taxes contain large unnecessary reliefs; property taxes impede mobility and, in the case of council tax, have morphed into the worst features of the tax (the Poll Tax) that they were designed to replace. The result is a highly complex and often distortionary system in need of reform.

The fairness of the tax system is also brought into sharp relief as taxes rise. For example, continuing to increase taxes on earnings but not other forms of income is indefensible. Doing so amidst a prolonged, and rapidly worsening, pay squeeze, while tax revenues from wealth-related taxes have remained largely stable as a proportion of GDP even as the value of household wealth has grown from three times to nearly eight times GDP, is an approach that has run out of road.

The tax headwind from the net zero transition is substantial, compounding the pressures facing the state

Policy makers will need to consider the prospects for future tax rises in the context of the large reduction in fuel duty revenues which will take place over the next two decades. The shift towards Battery Electric Vehicles (BEVs) will mean that around £35 billion of motoring tax revenue will disappear in the coming decades, and the latest data on uptake of BEVs suggests this is set to happen faster than current forecasts imply. The Government's Net Zero Strategy assumes that 24 per cent of all cars will be BEVs by 2030, but if BEV adoption takes place as fast over the next five years as has taken place in Norway since 2018, then this share could climb

as high as 60 per cent by 2030-31. Were this punchy forecast for BEV take-up to materialise, it would imply revenue losses from car fuel duty alone of £8 billion by 2030-31 and £14 billion by 2035-36 (in real terms, 2020-21 prices), compared to the OBR's more cautious assumptions that imply losses of £5 billion and £13 billion respectively. So new taxes on motoring will be required to avoid falling revenues and a narrowing of the tax base at the same time as higher taxes are required to deal with spending pressures.

If the economic growth rate could be raised, it would provide a large tax boost in the 2020s

Anything that increases growth will make a huge difference to these pressures. A simple thought experiment illustrates its importance: if the economy had continued to expand at pre-financial-crisis rates from 2007, the economy would be around a quarter larger by the eve of the pandemic in cash terms. Simply extrapolating from the long-run relationship between the size of the economy and overall spending suggests that the latter could have been sustainably higher by an order of £200 billion in 2019-20. So growing the economic pie in the 2020s is crucial to funding spending priorities and limiting the extent of tax rises.

Overall, the fiscal pressures in the 2020s mean difficult choices for policy makers

The emerging and evolving fiscal pressures on the horizon are of a scale and nature that means they cannot be simply wished away or ignored. The 2020s will see us facing up to long-term health and demography pressures, as well as the need to make new net zero-related investments. The realities of a decade of spending restraint, political support for higher spending in priority areas, and the economic benefits of maintaining high levels of public investment mean that today's debates about tax rises are likely to be a regular feature of the 2020s. A bigger state and higher tax take is what the future has in store for us. Accepting that prospectus should encourage policy makers to ensure that a higher tax take is raised in a more efficient and fair way. But it also puts up in lights the need to renew the UK's wider economic strategy, as smaller tax rises would be needed if we could avoid an extended period of relative economic underperformance and slow growth in the decade ahead.

Section 1

Introduction

UK Government spending has been growing over time, prompting debates about what this means for policy. The current debate about plans to raise taxes to pay for spending on health and social care should be seen against this backdrop, and is a sign of what is to come, as politicians struggle to get to grips with building pressures on the size of the state.

But these debates about tax rises and spending pressures are not happening in a vacuum. The UK is facing a decade of economic change as we adjust to a post-Covid-19 economy, a new international position outside the European Union (EU), and the transition to net zero. Change on this scale will affect the whole population, driving a reallocation of capital and labour across industries, occupations and regions. Managing this change successfully represents a challenge for policy makers, one that will require new policies and different approaches – many of which will take fiscal resources to deliver. The Economy 2030 Inquiry, to which this report contributes, exists to examine the challenges of the decade ahead, and to develop such a coherent set of policies.[1] While detailed policy proposals are the subject of our future work, it is likely that governments of the 2020s will need to shift resources to meet the shifting needs of the economy, whether that be in supporting workers to move between industries and occupations, or making the investments or necessary pump-priming to markets that facilities a move to net zero. The ability of policy makers to deliver such support will depend on other pressures on the state at the same time. Put simply, the wider forces shaping the size and shape of the state will determine the capacity of the UK to respond to the decade ahead.

A number of pressures look set to intensify over the next ten years. As discussed in Box 1, the Office for Budget Responsibility (OBR) has written extensively about the long-term pressures on spending and revenues. In this report, we take this work as a jumping off point, focussing on three key sources of spending pressure. First, the 2020s is set to be the decade in which the population will age rapidly, and this will create significant pressures on the state to spend more on the state pension and other benefits to

1 See T Bell et al., The UK's decisive decade: The launch report for The Economy 2030 Inquiry, Resolution Foundation & Centre for Economic Performance, May 2021.

provide a decent standard of living. Second, and closely related, demography will also put pressure on health spending, but long-term factors such as rising morbidity and development of new treatments will also play a crucial role. And third, new pressures are also emerging, particularly the need to invest in low carbon infrastructure today to drive both lower emissions and cheaper running costs tomorrow.

BOX 1: **The OBR's work on the fiscal pressures facing the UK Government**

The OBR plays a key role in analysing the impact of long-term pressures and uncertainty on the decisions of fiscal policy makers. As the UK's official independent fiscal watchdog, its most obvious role is in producing forecasts for the economy and the public finances, and evaluating the Government's performance against its fiscal targets. But, particularly in the light of criticisms that fiscal policy makers are too myopic and do not build uncertainty sufficiently into their decision making, the OBR has been innovative and proactive in providing analysis of longer-term pressures on fiscal policy and identifying key risks.[2]

The OBR's work has identified a number of key areas of longer-term pressures on the public finances which motivate our work in this report. In its Fiscal Sustainability Report, the OBR focuses on its longer-term central projections for government spending and revenues, and in its complimentary Fiscal Risks Report it identifies and analyses medium-term risks to fiscal policy.[3]

The near-term impact of Covid-19 has been a key focus of the most recent editions of these reports, with the OBR highlighting the risk that this could have a lasting impact on health spending and on tax revenues, through economic scarring. But looking at the medium- to long-term, which are the focus of this report, the OBR's work emphasises the role that the macroeconomic environment plays in determining the extent of future fiscal pressures – particularly longer-term growth and borrowing costs. Although these are discussed below, we largely take the macroeconomic environment as a given, leaving the issue of future growth to further work. Two other longer-term issues have dominated recent editions of these reports. The first is demographics and the associated rise in health spending. The second is the extent to which the transition to net zero will affect spending and receipts. These issues are core to this report, where our own analysis builds on that by the OBR.

2 For a discussion of these criticisms, see: R. Hughes et al., Britannia waives the rules?: Lessons from UK and international experience with fiscal rules, Resolution Foundation, October 2019.
3 See: Fiscal Sustainability Report – July 2020, OBR, July 2020 and: Fiscal Risks Report – July 2021, OBR, July 2021.

These pressures and the legacy of a difficult economic environment provide the context for policymaking in the coming decade. Exacerbating this challenge is the legacy of two huge economic shocks over the past 15 years or so – the financial crisis and the Covid-19 pandemic. This legacy, combined with a period of weak economic growth in between, has seen debt balloon from around a third of national income to roughly the same size. These elevated debt levels make it harder for governments to borrow significant sums during future downturns, but the experience of the pandemic has demonstrated the importance of being able to increase debt in a crisis. Maintaining the fiscal space to do this in future means a tighter approach to fiscal policy than would otherwise be required, increasing the pressures facing policy makers.

It would be wrong to pretend that the challenges faced by the Government now are unprecedented. Throughout the past century and this one, the size and shape of the state has frequently shifted as the demands on it have changed, and, in aggregate, grown. The most extreme examples are the changes that happen during wartime: both world wars involved huge increases in military spending, with resources diverted from other parts of public spending. Since the 1940s, the priorities for peace-time governments have shifted considerably, in part due to the construction of the modern welfare state, necessitating a large change in the activities and size of the state.

More generally, successive UK governments have been forced to develop 'coping strategies' in order to respond to increased pressures, whether that be: reprioritising overall spending; leaving pressures unmet; reducing what the state provides, putting the onus on the private sector to provide more; or finding ways to increase revenues. This paper considers what strategies might be available to this and future governments to cope with the pressures coming in the 2020s. In doing so, we look back at what today's policy makers can take from past experience of comparable pressures, but also consider the macroeconomic environment that future governments are likely to face as they manage their way through the decade of change.

With all that in mind, the rest of this report is structured as follows.

- **Section 2** identifies and quantifies the spending pressures facing governments in the 2020s, namely: an ageing population, demands for further health spending, and a significant increase in net zero public investment.
- **Section 3** analyses the changing size and shape of the British state over recent decades, discussing how governments have responded to fiscal pressures in the past.
- **Section 4** provides a framework for thinking through how policy makers could respond to the pressures of the 2020s, considering the broader economic context,

including the implications of the already-evident changes being brought about by a faster-than-expected transition to electric vehicles.

- **Section 5** concludes with a brief discussion of the implications of our findings for policy making in the 2020s.

Section 2

Spending pressures in the 2020s

The 2020s will see long-run pressures on the state intensify and new ones emerge. We focus on three key sources of such pressures for the decade ahead. First, although increased longevity is to be welcomed as a source of progress, the ageing of the UK population is set to push up State Pension spending as the large 'baby boomer' cohort retire. Second, rising morbidity and technological innovation will combine with demography to put continued pressure on health spending to grow faster than GDP. Third, the path to net zero by 2050 requires a step change in public sector investment in the 2020s to drive behaviour change and generate savings in future decades. These will make it harder for policy makers to respond to other, perhaps yet unanticipated, challenges that the decade ahead will bring.

Spending pressures can be accommodated in various ways and to various extents by governments. But if these three were to be absorbed in full, it would imply additional spending of £76 billion by 2030-31 and £150 billion by 2035-36 (in real terms, 2020-21 prices), relative to 2022-23. This would grow the UK state as a share of the economy from 40 per cent of GDP pre-pandemic to 45 per cent by the middle of the 2030s, shifting us from a Canada-sized state to a Germany-sized one.

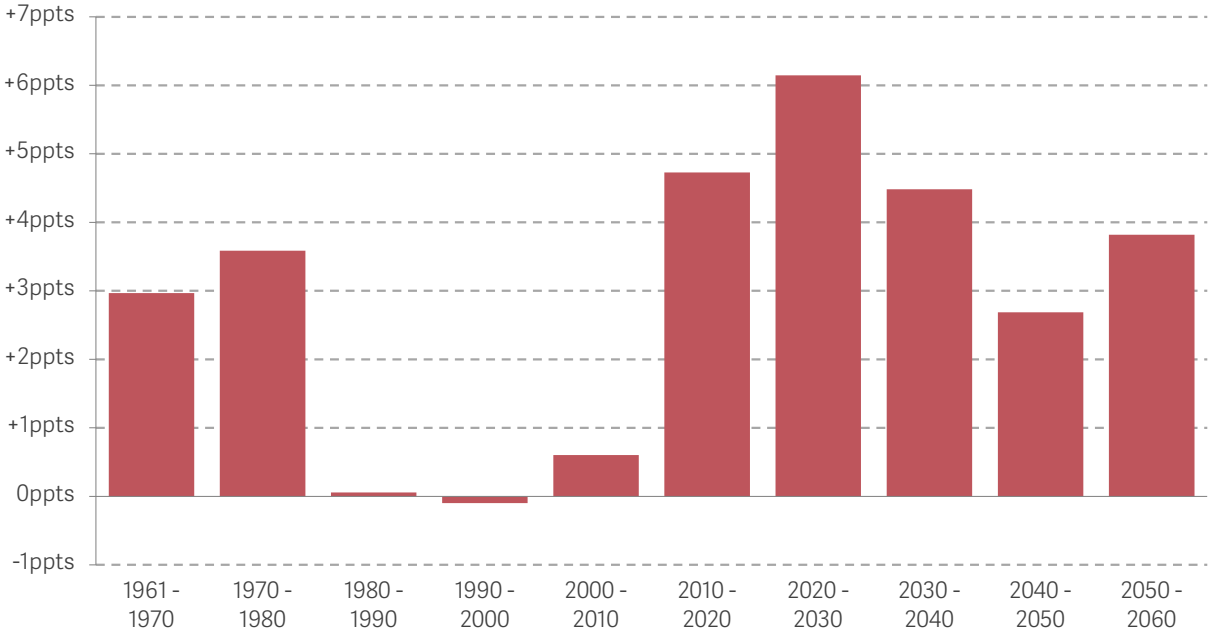
In this section, we look at the main spending pressures over the next decade, building on the OBR's analysis (see Box 1, in Section 1). We start with the long-standing pressures on spending from an ageing society. Next, we look at health spending and its other long-run drivers. Finally, we look at the impact of government investment from spending to bring down carbon emissions.

UK population ageing is set to accelerate in the 2020s

Changes in the structure of the population in the 2020s will have a significant bearing on public spending in the UK. Along with many other rich countries, the UK population is ageing. In 2020, for every 100 adults in Great Britain aged 20-64 there were 32 adults aged 65 and over: by 2030, this is set to have climbed by 6 adults to 38. As Figure 1 shows, this is projected to be the fastest pace of ageing in any decade from the 1960s to the 2060s.

FIGURE 1: **The population will age faster in the 2020s than in any of the previous six decades**

Ten-year percentage point change (ppts) in the age ratio (65+ population/20-64 population): GB



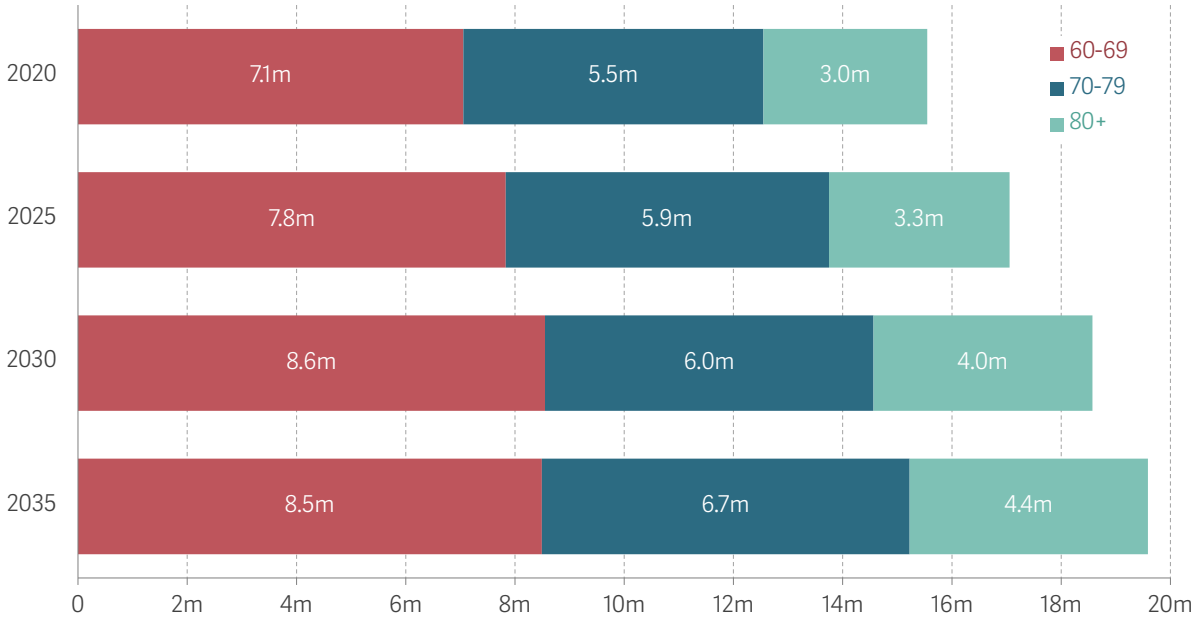
SOURCE: ONS, Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland: Mid-2020 edition, June 2021; ONS, National population projections: 2020-based, January 2022.

Increases in life expectancy combined with the large 'baby boomer' cohort (born between 1946 and 1965) moving into, and deeper into, retirement are the core drivers of this population ageing.[4] The oldest baby boomers will be in their early 80s by 2030, by which point it is projected that 4 million people (6.5 per cent of the population) will be aged 80 or over, compared to 3 million (5 per cent) in 2020 (Figure 2).

4 For a decomposition of the longevity and cohort drivers of ageing see Figure 5.2 in: Resolution Foundation, A New Generational Contract: The final report of the Intergenerational Commission, May 2018.

FIGURE 2: **The number of over 80s will increase by a quarter in the 2020s**

Projected population of those aged 60 and over: UK



SOURCE: ONS, National population projections: 2020-based, January 2022.

The ageing of the baby boomers will produce significant fiscal pressure in the 2020s

Longer lives are, of course, usually to be celebrated – with many social and economic benefits.[5] But increased longevity will combine with the powerful effect of ageing of the baby boomer cohort to push up public spending on older people by a significant amount in the decade ahead. The latest estimates for public spending by single year of age in 2023-24 (as forecast by the OBR in 2019) are shown by the purple line in Figure 3. Public spending per person is estimated to be around £20,000 a year for school-aged children, less than £10,000 a year for those of working age and then to rise sharply from age 65 to above £40,000 for those in their late-80s and older.[6] This is largely as a result of social security and health spending being concentrated on the very old.[7]

We can combine these with the latest population projections to get an estimate for the total amount of spending on people of any given single year of age: this is shown by the gold line in Figure 3. This shows that if the 2022 population structure were to be applied to spending per person estimates for 2023-24, total public spending would be highest on

5 See, for example: S Dimitriadis & P Swain, Health equals wealth: The global longevity dividend, International Longevity Centre UK, October 2020.

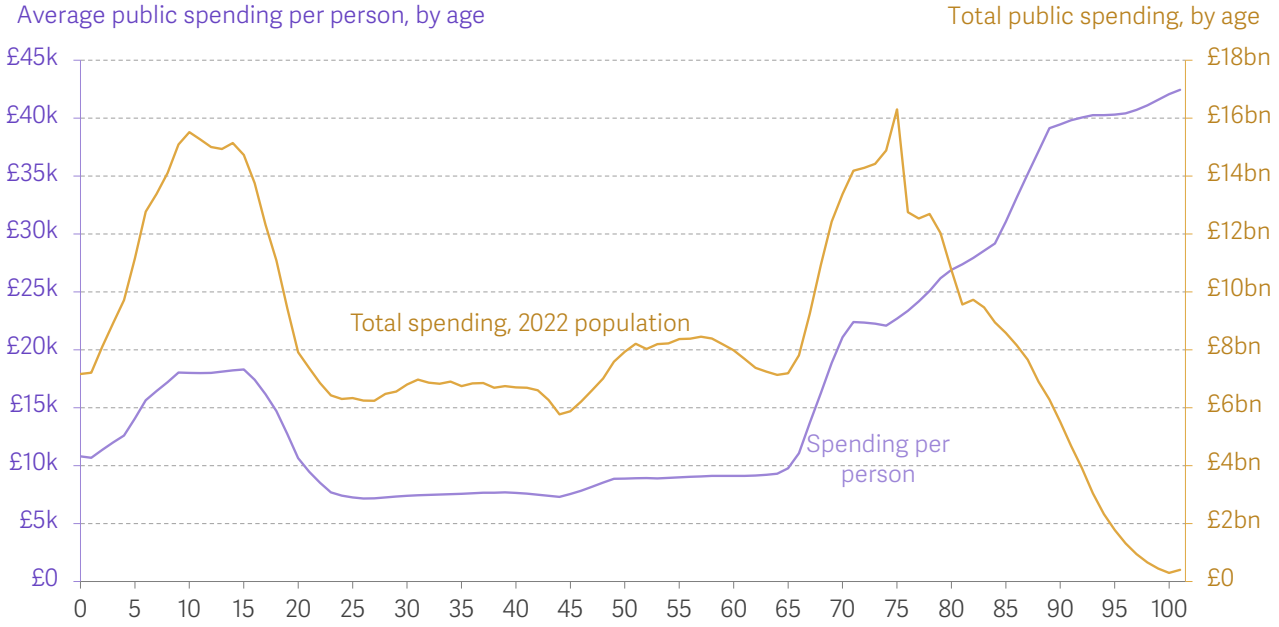
6 Estimates of public spending per person are for the financial year 2023-24 as forecast in 2019. They are not, therefore, an estimate of public spending per person in either 2020 or 2030, nor are they updated for the changes in public spending projections resulting from government decisions since 2019. However, they provide a good ball-park estimate to demonstrate the size of the demographic pressures on spending in the decade ahead. Estimates from: OBR, Fiscal Risks Report, July 2019.

7 For more on how social security spending varies by age, see: K Handscomb & L Gardiner, Age-old or new-age?: The changing incidence of social security benefits by age, Resolution Foundation, August 2021.

those aged 75 not because spending per person peaks at age 75, but because of the very large number of births that took place in 1947 (there are estimated to be 720,000 people aged 75 at the mid-point of 2022 a higher number than is projected to be the case in any year until 2037).

FIGURE 3: **The ageing of the large 'baby boomer' cohort will provide a large spending pressure in the 2020s**

Total public spending in 2023-24 (GDP-deflator adjusted to 2020-21 prices), and average spending per person, by single year of age when applied to 2022 population projections: UK



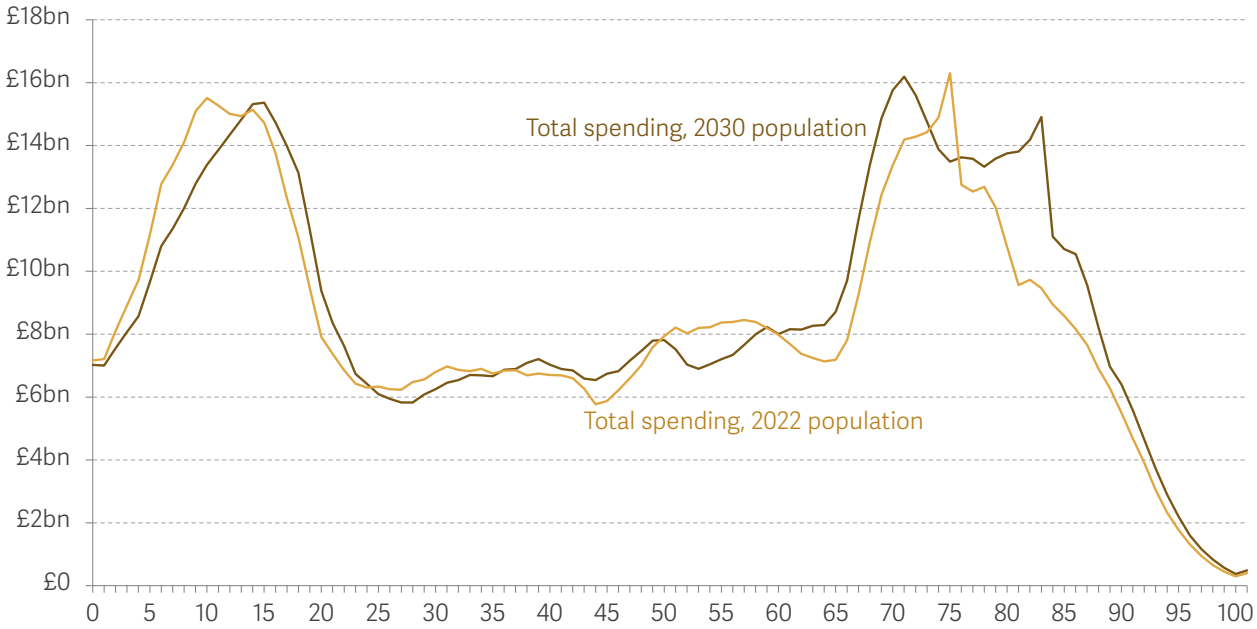
NOTES: Spending in 2023-24 as projected pre-pandemic.
SOURCE: Analysis of OBR, Fiscal Risks Report, July 2019; ONS, National population projections: 2020-based, January 2022.

We can illustrate the impact of demographic change on public spending by applying the ONS's 2030 population projections to the same spending-per-person figures. As Figure 4 shows, this exercise reveals how a large cohort moving through the population can cause a significant fiscal pressure, even where spending per person is unchanged. For example, these estimates suggest total spending on those aged 80-89 could increase by a third due to demographic change alone.[8]

8 Demographic change translates into spending falls at other parts of the age range, such as a reduction in expenditure on school-aged children as a result of smaller cohorts. This is shown more clearly in Figure 5, and is discussed in more detail in: M Gustafsson & D Willetts, A return to boom and bust (in births): How birth cycles will affect public spending pressures over the coming decade, Resolution Foundation, October 2021.

FIGURE 4: **Spending on those in their 80s will be much higher in 2030 than in 2020**

Total public spending in 2023-24 (GDP-deflator adjusted to 2020-21 prices) by single year of age based when applied to 2022 and 2030 population projections: UK



NOTES: Spending in 2023-24 as projected pre-pandemic, deflated to 2020-21 prices.
SOURCE: RF analysis of OBR, Fiscal Risks Report, July 2019; ONS, National population projections: 2018-based, October 2019.

Social security spending, not health spending, is the largest demography-driven fiscal pressure in the 2020s

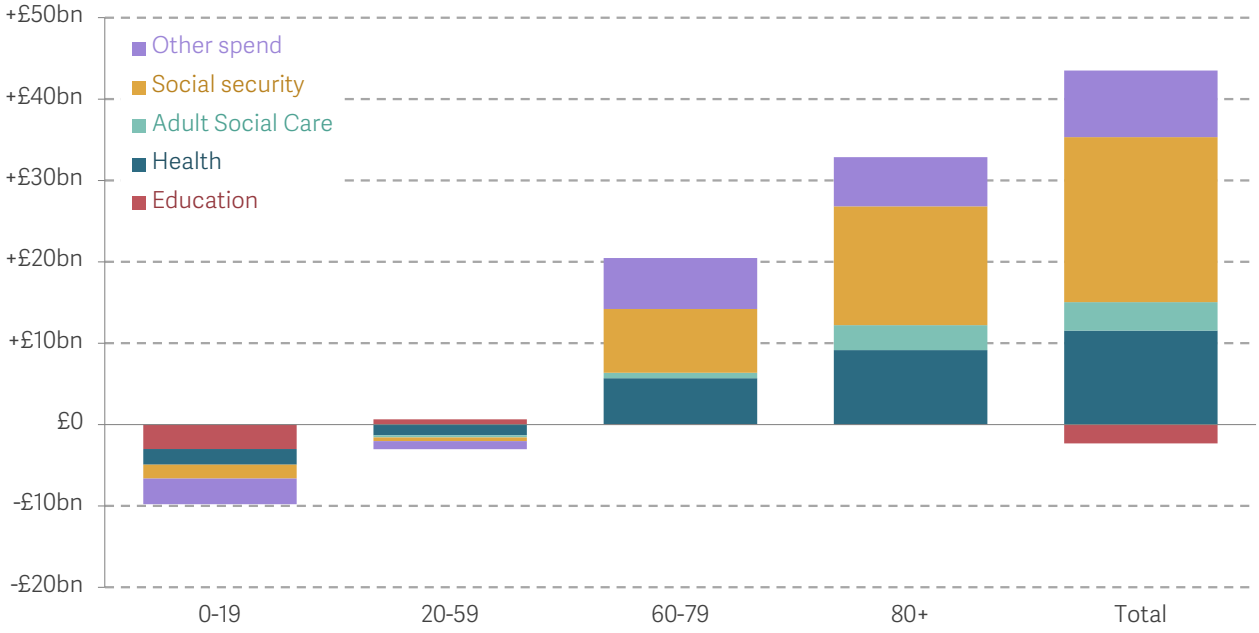
The exercise above can be extended by splitting out public spending into its component parts, again using published OBR estimates. These show that social security spending per person increases sharply at the State Pension age (up from £2,100 per person at age 65 to £10,900 at age 70), well above spending on health per person at the same age (at £4,800 by age 70), but that health spending increases more rapidly from around age 70 onwards. By age 90, health spending is estimated at £12,100 per person and social security spending estimated at £15,300.[9]

These imply that, absent any policy change, demography will place the largest pressure on public spending through the social security system. The vast majority of this increase is a simple result of the State Pension being paid to more people, with the OBR estimating that social security spending on the over 60s will rise by £22 billion (in 2020-21 prices) between 2022 and 2030. In fact, social security spending accounts for half of the potential demographic-driven growth in public spending, with the implied health spending accounting for around a quarter (see Figure 5).[10]

9 See Chart 5.3 in: OBR, Fiscal Risks Report, July 2019.
10 The ageing of the large baby boomer cohort will mean that a higher number of people will be of an age at which healthcare expenditure is high, but this is not the main driver of increased healthcare costs, as discussed below.

FIGURE 5: **Demographic pressures in the 2020s will show up primarily in higher social security spending**

Hypothetical change in government spending if 2023-24 estimates for spending per person are applied to 2022 and 2030 demographic profiles, by age: UK



NOTES: Spending in 2023-24 as projected pre-pandemic.
SOURCE: Analysis of OBR, Fiscal Risks Report, July 2019; ONS, National population projections: 2018-based, October 2019.

It is important to emphasise that the estimates in Figure 5 have not accounted for any changes in average spending per person over this time period. For example, if 80-year-olds in 2030 are less healthy than 80-year-olds in 2020 then health spending per person at age 80 will rise.

One planned policy change not accounted for here is the uprating of the State Pension age (SPA) from 66 to 67 planned for 2026-27; this will reduce State Pension spending by around £8 billion a year.[11] However, this increase is the only planned change to the SPA in the 2020s: this is in stark contrast to the 2010s, when the female SPA increased from 60 to 66 and the male state pension age increased from 65 to 66. Indeed, the rapid uprating of the female SPA not only acted to push down social security spending in the 2010s but also had wider benefits to the public finances through higher labour market participation.[12]

Although increases as large as that which took place to the female SPA in the 2010s cannot be repeated in future decades, faster increases in the State Pension Age are one way in which demographic pressures can be managed; we discuss this in more detail in

11 Detail on State Pension Age changes can be found in: D Thurley & R Keen, State Pension age review, House of Commons Library, August 2017.
12 N Amin-Smith & R Crawford, State pension age increases and the circumstances of older women, in The dynamics of ageing: evidence from the English Longitudinal Study of Ageing 2002-2016 (Wave 8), Institute for Fiscal Studies, October 2018.

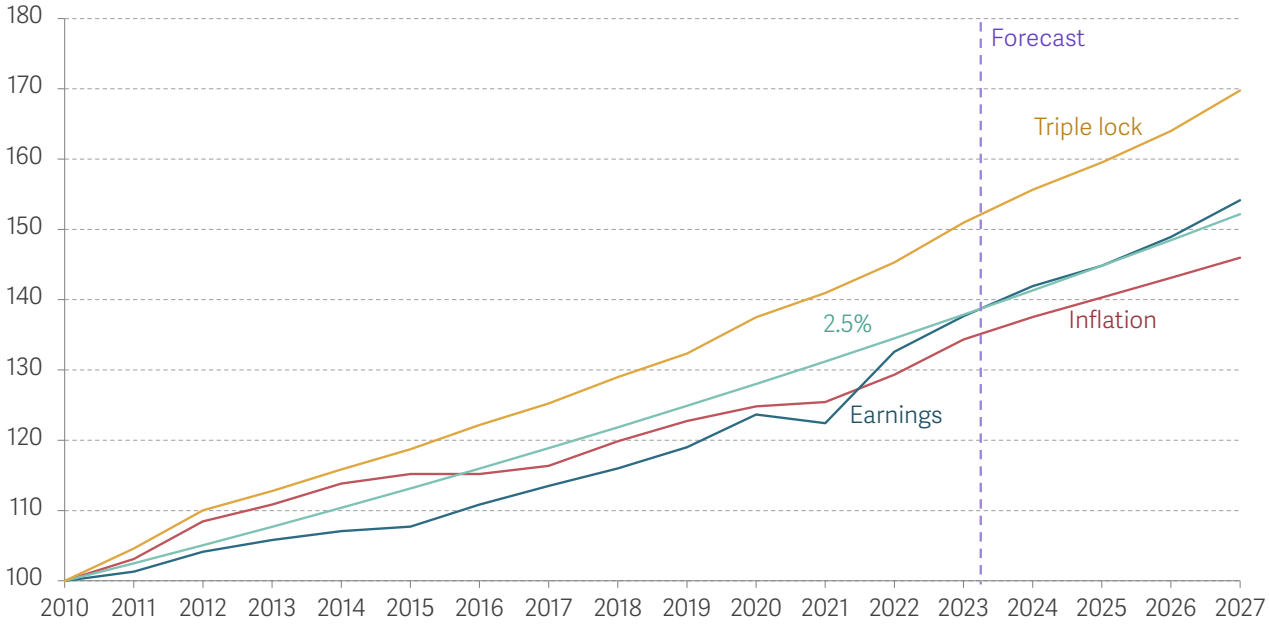
Section 4. The impact of the pressure can also be exacerbated by State Pension uprating policies, and it is to this that we now turn.

The triple lock will continue to exacerbate the fiscal pressure arising from ageing

The triple lock, under which the State Pension is uprated by the highest of earnings, inflation or 2.5 per cent, was designed to avoid any single year where the State Pension increases by a small nominal amount. But this has caused the value of the State Pension to increase at a fast pace over the past decade. As Figure 6 shows, the State Pension is forecast to have increased by 70 per cent between 2010 and 2027 as a result of the triple lock, compared to a 54 per cent increase in average earnings and a 46 per cent increase in inflation. This would mean that State Pension could reach twice the value of the main rate of unemployment benefit by the end of the decade.[13]

FIGURE 6: **The triple lock is providing a fiscal pressure of its own**

Change in value of the State Pension under various uprating policies (2010=100): 2010 to 2027



NOTES: Triple lock refers to the government uprating policy actually implemented since 2010, including the reversion to a 'double lock' for one-year as a result of the pandemic and the use of RPI to uprate the State Pension in 2011.
SOURCE: ONS, CPI inflation, Average Weekly Earnings (including bonuses); House of Commons Library, Briefing document 7812.

The importance of the triple lock to public spending pressures comes in the way that the increases compound. As we showed above, the State Pension is forecast to be 16 per

13 For a fuller discussion of the triple lock policy and its position relative to other major benefits see: T Bell & L Gardiner, Locked in?: The triple lock on the State Pension in light of the coronavirus crisis, Resolution Foundation, June 2020. See also Figure 7 of: M Brewer et al., Social Insecurity: Assessing trends in social security to prepare for the decade of change ahead, Resolution Foundation, January 2022.

cent higher in 2027 than if it had been increased with inflation since 2010. This in turn means that every 1 per cent increase in the State Pension in 2027 would be around £200 million more costly than if the previous 17 years had seen inflation uprating.

In the long- run, the cost of the triple lock is greater than if the State Pension were indexed to earnings because, although earnings growth is usually higher than inflation and 2.5 per cent, the triple lock provides an above-earnings ratchet in the years in which this is not the case.[14] All told, and accounting for volatility in this way along with the demographic trends discussed above, spending on the State Pension is forecast to increase, in real terms, from £108 billion in 2020-21 to £132 billion by 2030-31.

Long-term upward drivers of health spending will continue to provide a fiscal pressure in the 2020s

The pandemic has clearly had a very large effect on healthcare spending over the past two years, with a medium-term impact now also evident as a result of the backlog of non-Covid-19 treatments that built up during the pandemic (the impact of Covid-19 on NHS spending is discussed in Box 2). But it is the long-term drivers of rising health spending that are likely to be more important sources of upward pressure on health spending in the 2020s and beyond.

BOX 2: **NHS spending and the Covid-19 pandemic**

The acute pressures on the NHS from Covid-19 are now abating, but the delay in non-Covid-19 treatments mean that the NHS now has a significant backlog to deal with; the number of people on NHS waiting lists waiting for treatment has increased from 4.2 million at the start of the pandemic to 6 million in November 2021.[15] The Government has allocated almost £18 billion to the Department of Health and Social Care (DHSC) for these pandemic-related costs over the next three years, indicated by the light-pink bars in Figure 7.[16] This follows on from more than £80 billion of additional spending on the pandemic in 2020-21 and 2021-22.

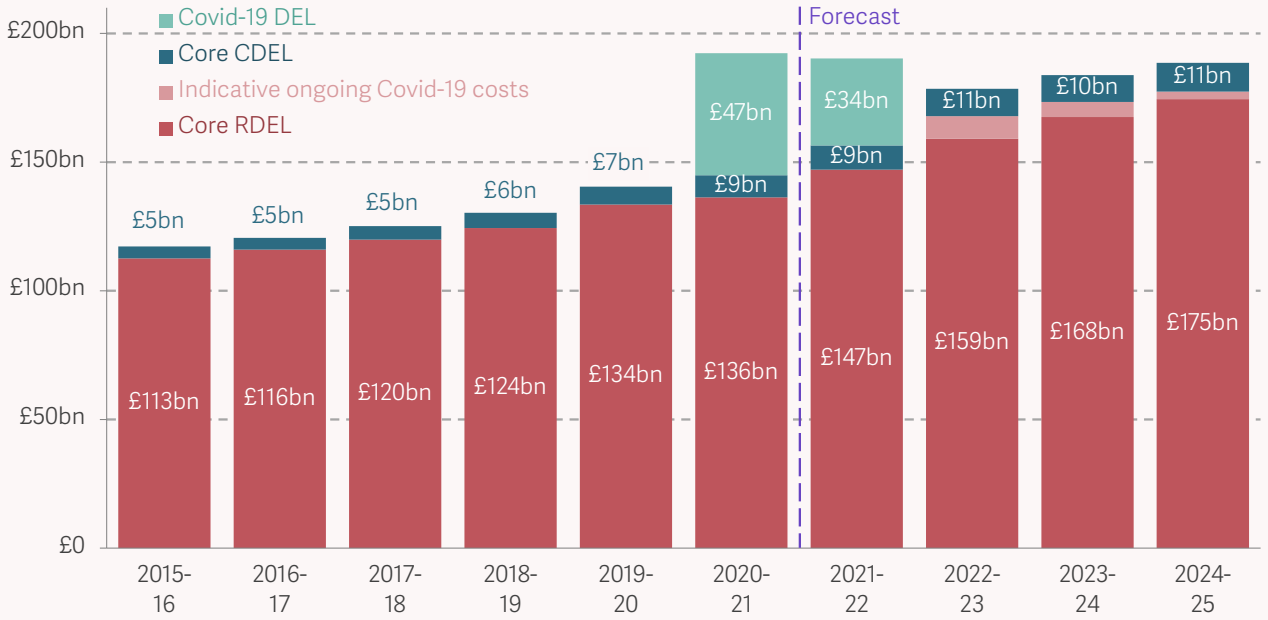
14 The OBR estimates that the triple lock means that, on average, the State Pension rises by 0.36 percentage points a year faster than it would if it had been uprated by earnings, this being "the average additional uprating each year if the triple lock had been applied rather than earnings from 1991 to the end of our medium-term forecast in 2022-23". See: OBR, Fiscal Sustainability Report, July 2018.

15 BMA, Pressure points in the NHS, January 2022.

16 Specifically, £9.6 billion for spending directly on managing the virus such as vaccinations and testing and £8 billion to "tackle the elective backlog" with the aim of delivering "30 per cent more elective activity" by the mid-2020s than pre-pandemic. See: HM Treasury, Autumn Budget and Spending Review 2021, October 2021.

FIGURE 7: **The Government has allocated £18 billion to the NHS over the next three years for pandemic-related pressures**

Components of the Department of Health and Social Care budget, Resource, Capital and Covid-19 Departmental Expenditure Limits (DEL), outturn and forecast: England



NOTES: The Government has not yet provided details of how it will allocate £17.6 billion of Covid-19 related funding between CDEL and RDEL or between each of the years of the Spending Review 2021 period. For illustrative purposes, we show this funding allocated entirely to RDEL budgets and front-loaded, with half the funding spent in 2022-23, one-third spent in 2022-24 and one-sixth spent in 2024-25.
SOURCE: HM Treasury, Autumn Budget and Spending Review 2021, October 2021.

These plans are also very likely to be topped up before the end of the Spring Review period (2024-25) because they provide only small real- terms growth of less than 1 per cent in the DHSC budget between 2023-24 and 2024-25. Indeed, even if the planned increase was less modest, history shows that NHS spending almost always grows faster than planned.[17]

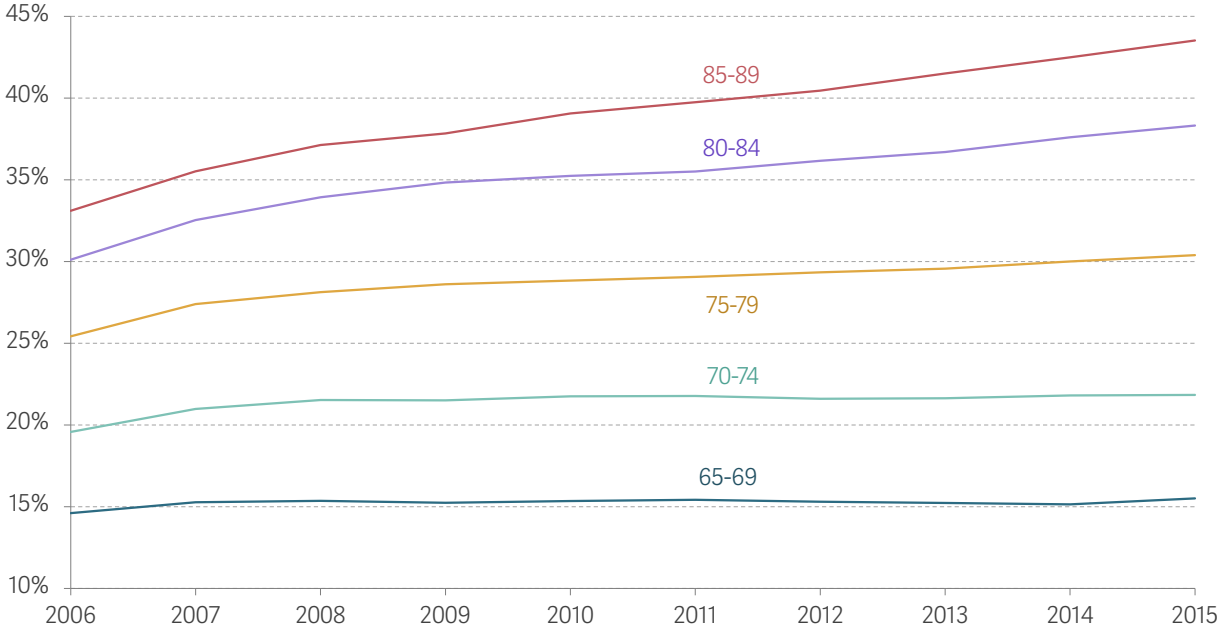
One of the largest pressures on NHS spending has been, and is likely to continue to be, the cost implications of rising rates of ill health.[18] Healthy life expectancy has been declining over the past decade for women, and is broadly unchanged for men,[19] and, over the longer term, the number of years lived with disability has increased among older age groups since 1990.[20] More older adults are now living with multiple long-term

17 B Zaranko, An ever-growing NHS budget could swallow up all of this week's tax rise, leaving little for social care, Institute for Fiscal Studies, September 2021.
18 See, for example: N Rice & M Aragón, The determinants of health care expenditure growth, Centre for Health Economics, University of York, July 2018.
19 D Tabor, Health state life expectancies, UK: 2017 to 2019, ONS, January 2021.
20 Years lived with disability (YLD) is a measure of morbidity that combines the incidence of different diseases with the severity of its symptoms. Change in age-specific YLD between 1990 and 2017 for England is shown in: Public Health England, Health Profile for England 2019: 9 key points from our 2019 update, September 2019.

health conditions: 34 per cent of 85-to-89-year olds had two or more diagnosed long-term conditions in 2006, rising to 44 per cent by 2015 (see Figure 8).

FIGURE 8: **More older adults have multiple long-term conditions**

Percentage of the population with two or more diagnosed long-term conditions, by selected age groups: England



SOURCE: A Raymond et al., Our ageing population: How ageing affects health and care need in England, The Health Foundation, December 2021.

Alongside rising morbidity, the other key source of health spending pressures are health-specific cost increases. One such example is technological innovation, which, unlike in the private sector, tends to be cost-increasing rather than acting to reduce costs. This is because some technological improvements in healthcare can lead to increases in demand (where improvements or expansions in treatments enable more people to receive care at an overall higher cost to the health systems), and others lead to better outcomes or treatment for those who receive care, but with no overall cost saving for the NHS.[21] The contribution of technological change to the growth in health spending is large, although estimates of its precise contribution range from 27 per cent to 75 per cent.[22]

Another factor that is thought to put pressure on health spending is rising income, with the idea that people individually and countries overall demand more healthcare as they

21 For a fuller discussion of other cost pressures, including the impact of slower than average productivity growth in healthcare see: M Licchetta & M Stelmach, Fiscal sustainability analytical paper: Fiscal sustainability and public spending on health, Office for Budget Responsibility, September 2016.

22 European Commission, The 2015 Ageing Report: Economic and budgetary projections for the 28 EU Member States (2013-2060), 2015.

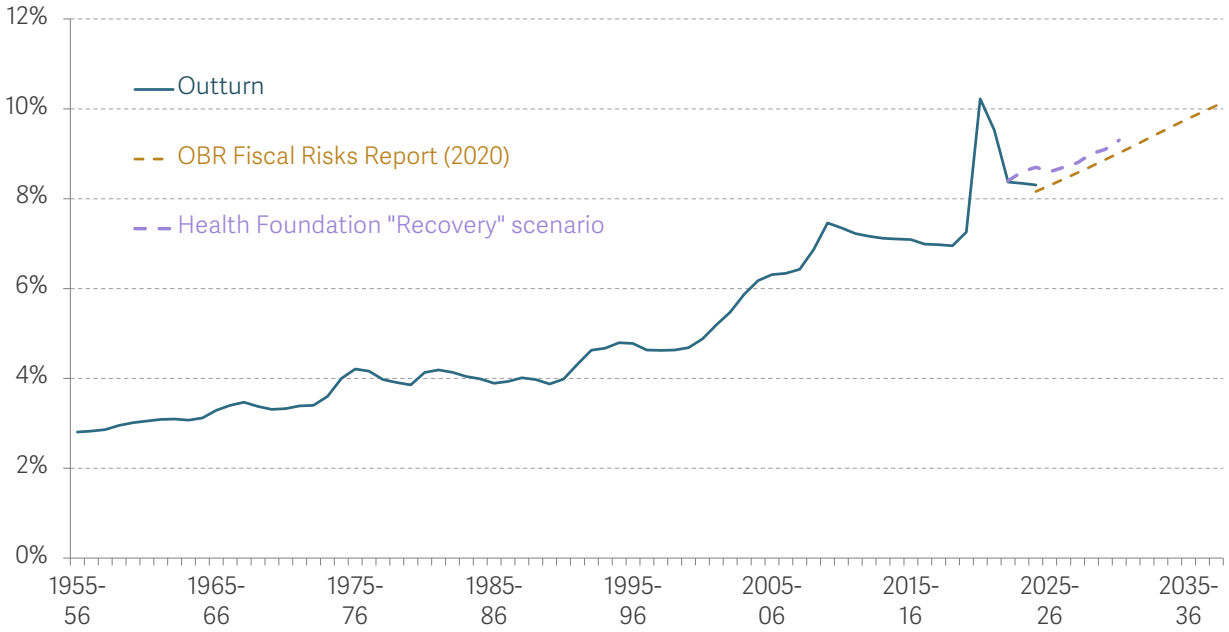
become better off. In fact, the latest evidence suggests that income growth alone does not lead to increased spending pressures – the income elasticity of health spending in high-income countries, including the UK, imply a responsiveness of less than one.[23] Income growth then need not, on its own at least, imply spending on health growing as a share of GDP.

Health spending could reach 10 per cent of GDP by the late-2030s

Overall, the latest long-term forecasts (from both the OBR and the Health Foundation) suggest that health spending could increase from 7.3 per cent of GDP pre-pandemic to 8.4 per cent of GDP in 2022-23, and up to around 9 per cent of GDP in 2030-31 (Figure 9).[24] If this scale of increase were to take place, it would imply a real-terms (2020-21 prices) increase in health spending of £80 billion from prior to the pandemic to 2030-31, a 46 per cent increase. This is a slower pace of increase than took place in the 2000s, but a faster pace than occurred in the 2010s.

FIGURE 9: **Health spending could reach 10 per cent of GDP by the late-2030s**

Outturn and projected spending on health and as a share of GDP: UK



NOTES: Devolved health spending assumed to grow in line with health spending in England from 2021-22 to 2024-25.
SOURCE: Analysis of OBR, Economic and Fiscal Outlook, October 2021; OBR, Fiscal Risks Report, July 2020; HM Treasury, Autumn Budget and Spending Review 2021, October 2021; HM Treasury, Public Expenditure Statistical Analyses 2020, July 2020.

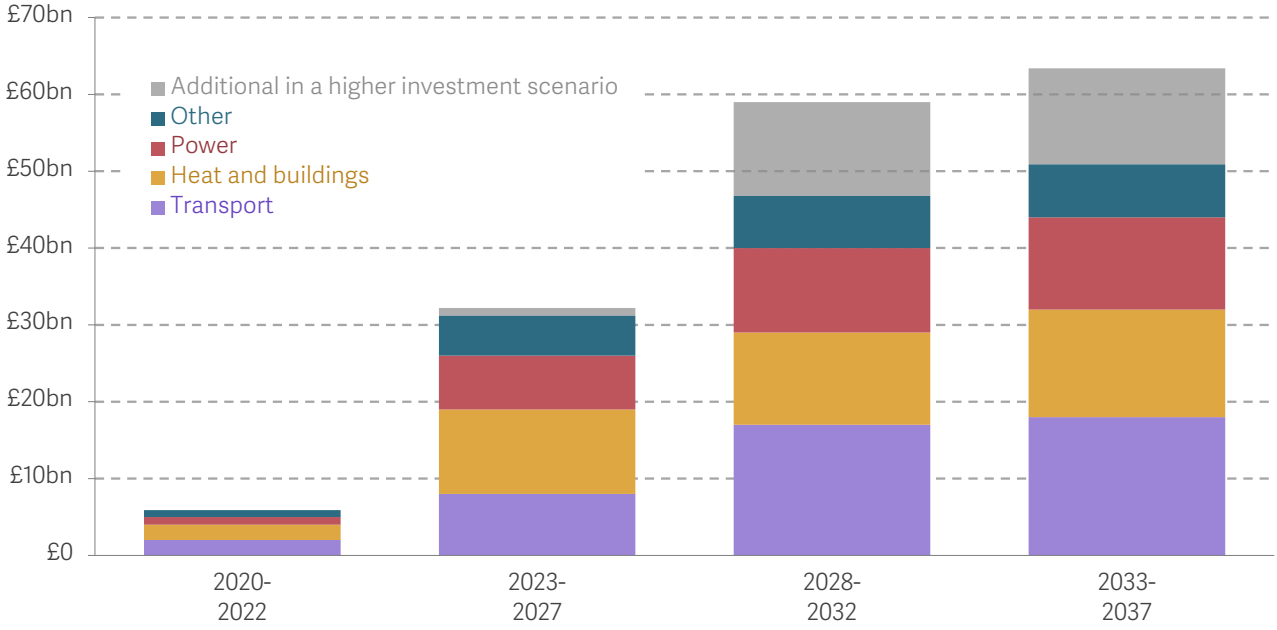
23 B Baltagi, Health Care Expenditure and Income: A Global Perspective, Center for Policy Research, November 2016.
24 On a basis consistent with the spending levels presented Figure 10, The Health Foundation's 'Stabilisation' projection reaches 8.9 per cent of GDP by 2030-31, its 'Recovery' scenario reaches 9.3 per cent of GDP. With thanks to Stephen Rocks for providing these figures. For published scenarios, see: S Rocks et al., Health and social care funding projections 2021, The Health Foundation, October 2021.

Public sector investment on net zero needs to increase sharply in the 2020s

The largest identifiable new pressure on public spending is the net zero transition. Extensive investment is needed during the 2020s and beyond, both to regain lost ground on our future greenhouse gas targets and to deliver significant savings from lower operational costs.[25] The Government recently set out in its Net Zero Strategy its assessment of the amount of additional net zero investment needed across the public and private sectors in each of the 'carbon budget' periods between now and 2037.[26] As shown in Figure 10, this requires an extra £30 billion of investment a year in the period 2023-2027, rising to closer to £50 billion (2.3 per cent of GDP) a year in the 2030s. These are broadly similar estimates to those set out in the Climate Change Committee's (CCCs) Sixth Carbon Budget.[27]

FIGURE 10: **The Government has set out how much investment it expects to be required across both the public and private sectors**

Government estimate of additional real (adjusted to 2020 prices) public and private investment needed to implement the Net Zero Strategy



NOTES: Investment is additional to 'baseline of existing policies' at the time of the publication of the Government's Net Zero strategy. Chart depicts the lower end of the range set out by the Government, with the higher investment scenario showing the extra investment to reach the upper end of the range set out by the Government: this difference is largely driven by higher investment in the Power sector under a scenario involving higher demand "from end-use sectors". The first bar represents the three latter years of the third carbon budget, compared with the full five years of the fourth to sixth budgets.
SOURCE: Department for Business, Energy & Industrial Strategy, Net Zero Strategy: Build Back Greener, October 2021.

25 For further discussion on this point, and on the broader challenges of accelerating the net zero transition in the 2020s, see: J Marshall & A Valero, The Carbon Crunch: Turning targets into delivery, Resolution Foundation, September 2021.
26 See Table 11 in: Department for Business, Energy & Industrial Strategy, Net Zero Strategy: Build Back Greener, October 2021.
27 Climate Change Committee, Sixth Carbon Budget, December 2020

The Government has not said how it sees this investment being split between the public and private sector (and the CCC's estimates similarly do not attempt to make this split). To get a very approximate sense of the scale required, we can consider how much additional public sector investment would take place were the state to invest an amount proportionate to its overall size – around 40 per cent of the total. This would imply around £12 billion a year of investment in the mid-2020s, rising to £20 billion a year in the 2030s.[28] Another estimate has been provided by the OBR: this suggests that additional public sector investment on net zero will have to increase to somewhere in region of £14 billion a year (in 2020-21 prices) by the end of the decade, or 0.5 per cent of GDP.[29]

There are big decisions to be made in the months and years ahead on how this investment spending is split between individuals (e.g. households paying for their own boiler replacement and insulation directly), and the state. Payment via bills has already been used to make progress towards net zero, funding renewable investment and some insulation costs.[30] Although the approach does come with downsides: it is far less progressive than funding the transition through general taxation, and also risks politicising the objectives of keeping energy bills low for families and providing sufficient net zero investment.[31]

Getting these decisions right, both in terms of who pays and the timing of investments, are the key barriers to the state playing an effective role in the net zero transition. The extensive range and variety of policy choices means that a universal approach is unlikely to be optimal, instead requiring a more interventionist strategy than has been the case for the net zero transition to-date.

Likely to be less of a constraint than generally assumed is the Government's fiscal rule that requires public sector net investment (PSNI) to remain under 3 per cent of GDP. If governments in the 2020s were to maintain a PSNI at 2.7 per cent of GDP in total (as is the current Government's plan), and within that undertake additional net zero investment to the levels implied by the OBR's indicative scenario (this is the approach that has been

28 In some areas it seems likely that the state will pay a much lower share than this, for example the UK Government is already significantly reduced the subsidies for electric car purchase due to the fast uptake of electric cars and continued price falls. See, for example: B Clatworthy, Government slashes electric car grants by 40%, The Times, 15 December 2021. Additionally, targeted cost reductions in heat pumps, with the government aiming for costs to be comparable to that of a gas boiler by 2030, could see costs borne by both the state and households fall.

29 OBR, Fiscal Risks Report, July 2021.These estimates are based off an apportionment of the CCC's calculations of the additional investment required to meet net zero, provided in: Climate Change Committee, Sixth Carbon Budget, December 2020. They are not directly comparable with those provided in the Net Zero Strategy document. Further, they are estimates of the extra investment required to meet net zero not the gross investment spending that will take place. For a fuller discussion of this see: OBR, Climate-related measures in the Budget and Spending Review, October 2021.

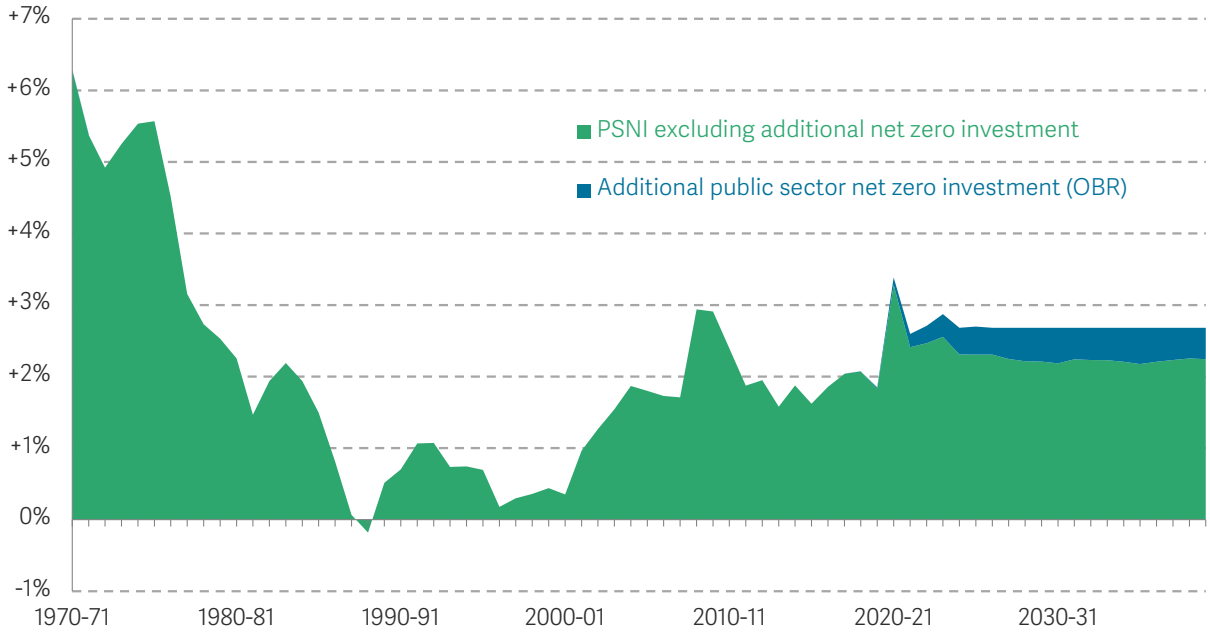
30 The Government has seemingly acknowledged that the status quo of loading more and more costs onto energy bills is not sustainable with accelerating the net zero transition, announcing an intention to move policy costs away from electricity bills during the 2020s, with more detail forthcoming in an imminent call for evidence on 'Fairness and Affordability'. See: Department for Business, Energy amd Industrial Strategy, Heat and Buildings Strategy.

31 For example, when faced with pressure over rising energy bills in 2013, the Coalition Government drastically reduced investment in energy efficiency and renewable electricity generation, decisions that would have reduced dependency on natural gas and lessened the current cost of living squeeze. See, for example: S Evans, Cutting the 'green crap' has added £2.5 bn to UK energy bills, Carbon Brief, January 2022.

taken to net zero-related investments so far), then this would still leave around 2.2 per cent of GDP for other investment (around £60 billion, in 2020-21 prices) – a higher level than sustained since the late-1970s, as shown in Figure 11.

FIGURE 11: **Public sector net zero investment could be delivered alongside maintaining overall public investment at current levels**

Public Sector Net Investment (PSNI) projected at 2.7 per cent of GDP including additional net zero investment: UK



NOTES: Long-run level of PSNI assumed to be 2.7 per cent of GDP, in line with current Government's plans.
SOURCE: Analysis of OBR, Fiscal Risks Report, July 2021; OBR, Economic and Fiscal Outlook, October 2021.

If these pressures are absorbed in full in the 2020s, the British state would move from being Canada-sized to Germany-sized

Calculations of the size of these three spending pressures – State Pension, health spending and net zero investment – should not be interpreted as estimates of precisely how much total public expenditure must rise over the course of the next decade. This is most obviously the case in the context of the net zero transition, as it is likely that much of the public sector investment required will come from within existing (historically high) investment budgets, and that technology costs will continue to fall, thereby lessening overall levels of funding needed.

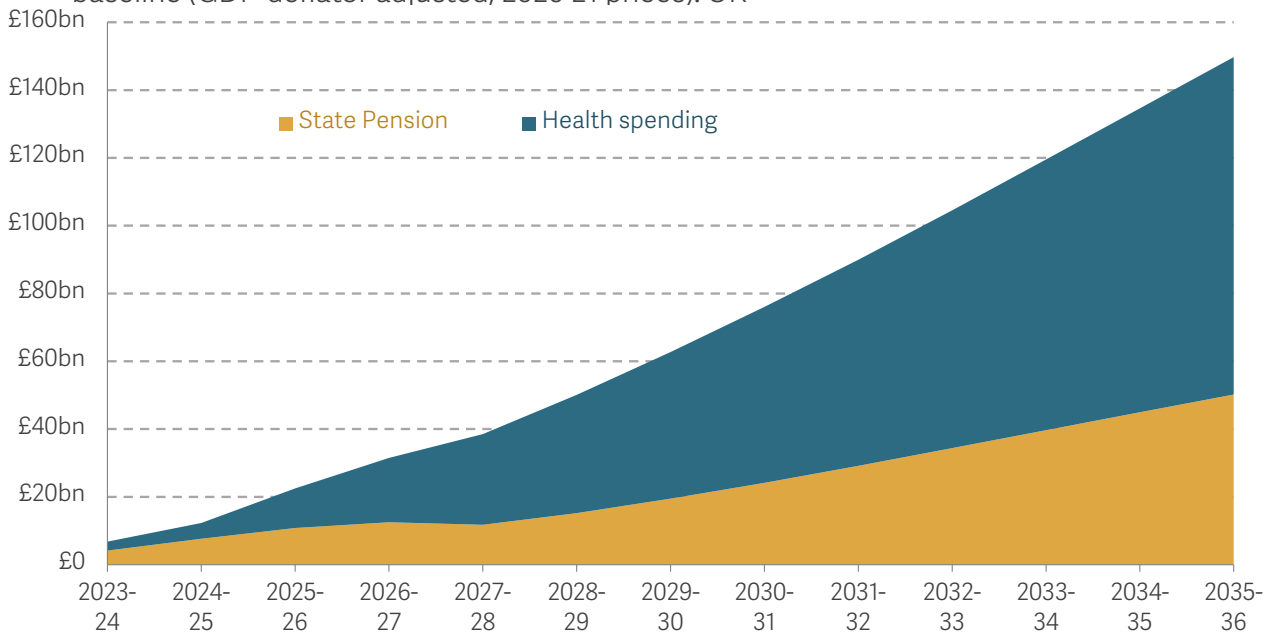
Today's decision makers need to have a sense of the potential size of the increase in the state if the increase in pension and health spending identified here were to be fully additional to the spending plans already set out by the Government. As shown in Figure 12, relative to 2022-23, these two pressures imply additional spending of £76 billion by 2030-31 and £150 billion by 2035-36 (in 2020-21 prices). Health spending is the largest

pressure, accounting for £52 billon of the £76 billion increase between 2022-23 and 2030-31.

Of course, these pressures can be accommodated in various ways and to various extents by governments (as discussed in Section 3), but the pensions and health pressures discussed above are a clear sign that our economic strategy for 2020s needs to be consistent with the likelihood that there will be substantial pressure to increase the size of the state.

FIGURE 12: **Spending pressures could lead to an additional £76 billion of spending by the end of the decade**

Increase in government spending on the State Pension and health relative to 2022-23 baseline (GDP-deflator adjusted, 2020-21 prices): UK



NOTES: Including existing plans for health spending until 2024-25, for State Pension until 2026-27.
SOURCE: Analysis of OBR, Fiscal Sustainability Report, July 2020; OBR, Economic and Fiscal Outlook, October 2021; HM Treasury, Autumn Budget and Spending Review 2021, October 2021; DWP, Benefit expenditure and caseload tables, March 2021.

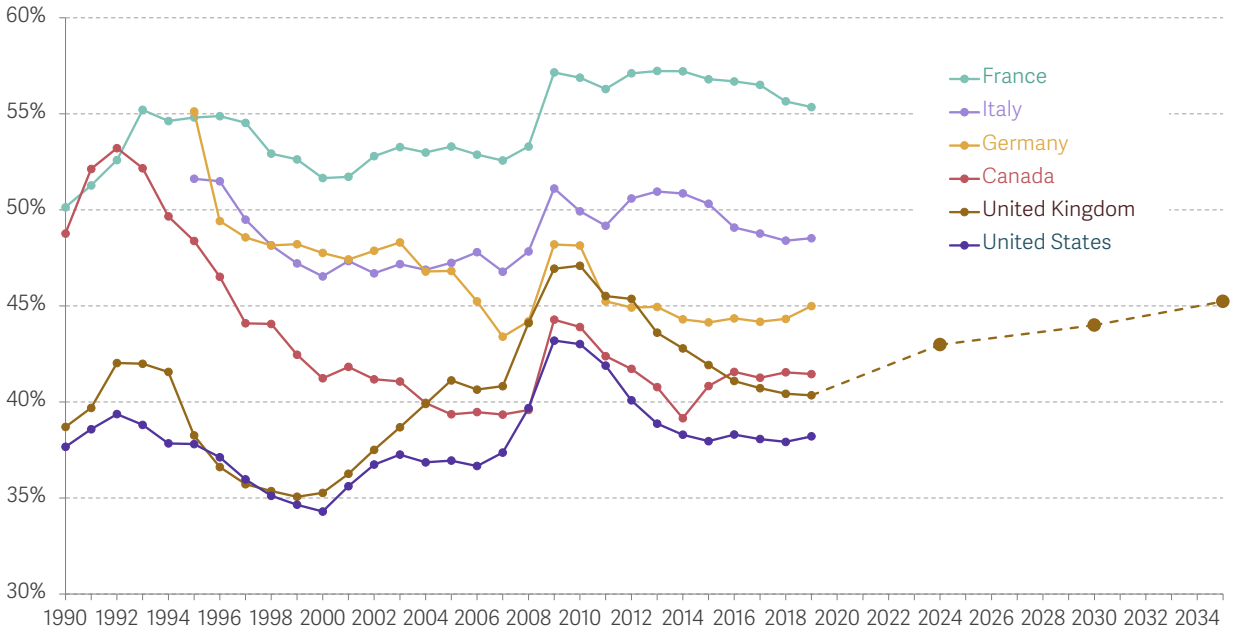
An increase of this magnitude would imply the state expanding from 43 per cent of GDP in 2024 (on an internationally-comparable basis: see the notes to Figure 13) to 44 per cent by 2030 and 45 per cent by 2035. This would not be unprecedented: in fact, it is a similar to the change that took place between 2000 and 2005.

In an international context, an increase of this size this would take the UK state from being one broadly similar in size to that in Canada (as we were in 2019) to one in 2030 that would be broadly similar in size to the pre-pandemic state in Germany. We show this

in Figure 13, which also demonstrates just how different the decisions about the size of the state are in different countries over time – France's state is equivalent to 55 per cent of GDP, compared to 38 per cent in the US.

FIGURE 13: **Fiscal pressures could push the size of the UK state up to 44 per cent of GDP by 2030**

Total general government expenditure, outturn, planned to 2024, and UK 'fiscal pressure' projection



NOTES: Figures presented here are consistently higher than the OBR's Total Managed Expenditure (TME) primarily because the internationally comparable definition of government spending used by the OECD includes two additional expenditure lines: Market output and output for own final use and pension contributions. TME as forecast by the OBR in 2024-25 is used as baseline, with health and State Pension pressures beyond this point added in full for 2030 and 2035 estimates.
SOURCE: OECD, Total expenditure of general government, percentage of GDP; see Notes to previous Figure for detail of sources for fiscal pressure projection.

This section has set out the three main pressures on public spending the UK is likely to face in the 2020s, and argued that ignoring these pressures is not sustainable. Before we consider how future governments could reduce these pressures (and so allow policy makers to meet other challenges of the 2020s), we next look at what history can tell us about the strategies open to the governments of the 2020s.

Section 3

Past fiscal pressures and government responses

Section 2 argued that three large factors will put pressure on the size of the state in the decade ahead. But the state has faced similar pressures to increase the range and volume of its activities in the past. Outlining what these past pressures were and the measures taken to accommodate them provides insights into the range of strategies available to today's policy makers.

The principal factor that has grown the size of the state since the end of the Second World War has been the construction of a modern welfare state. But this has not happened automatically: the different strategies that governments have taken in doing this have themselves played a key role in determining the shape, as well as the size, of the state. Health, education and social security spend have been the big contributors to this overall increase in spending, together nearly doubling as a proportion of GDP between 1955-56 and 2019-20, driven by demographic trends and policy choices.

To facilitate this increased spending, the UK state changed in three central ways. The first was to change its shape, shrinking defence spending from 8 per cent of GDP to just under 2 per cent between 1955-56 and 2019-20. The second was to cut investment spending, directly and via outsourcing investment to the private sector – leading net investment to fall from an average of 5 per cent of GDP in the 1970s to just under 2 per cent by the 2000s. Finally, taxes were raised: total tax revenues are expected to reach 36 per cent in the early 2020s, up from 28 per cent of GDP in the mid-1990s, with the majority of this increase delivered by raising taxes on earnings and consumption.

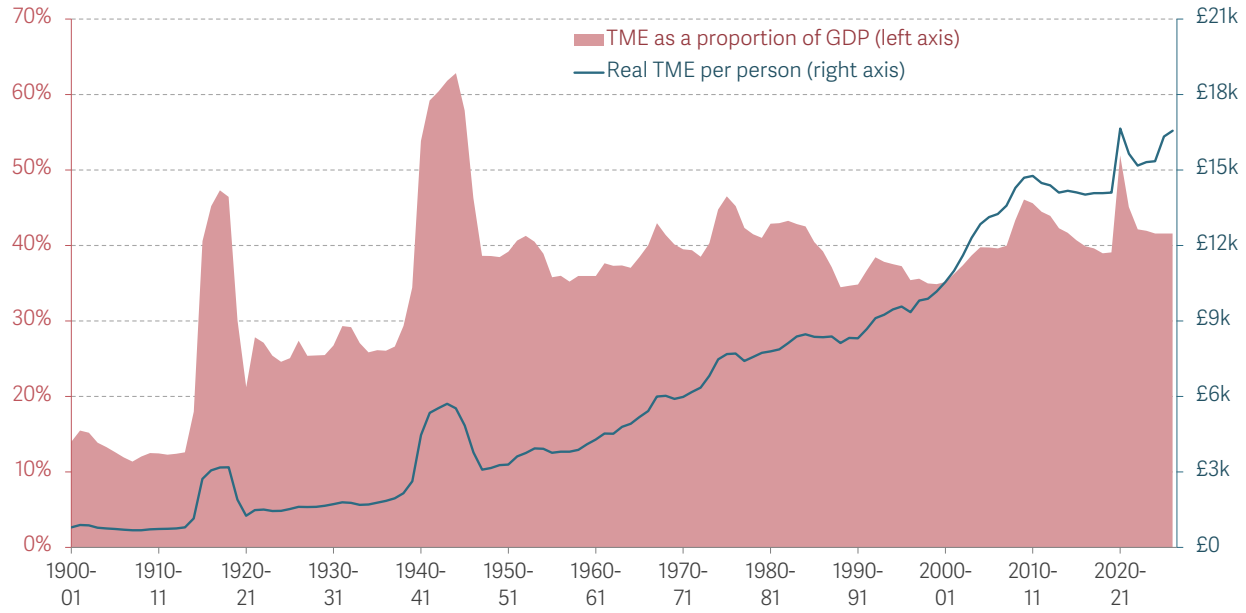
The story of the last seventy years reveals that the way that social and demographic changes affect the state depends on political choices alongside the economic and social context, and that many of the coping strategies of the past may not be available in the same way today.

Post-war state spending has remained relatively flat in the face of substantial pressures on its size and scope

A historical view of state spending over the twentieth century reveals that it developed in two phases: the first one of rapid war-driven growth, and the second one of relatively flat spending since the late 1940s. As Figure 14 shows, the UK entered the 1900s with total managed expenditure (TME) at just above 10 per cent of GDP.[32] Two world wars then led to huge increases in spending, with TME peaking at over 60 per cent of GDP in 1944-45.

FIGURE 14: **Spending is expected to settle at historically high levels in the 2020s**

Total managed expenditure in real (2020-21) terms per person and as a proportion of GDP: UK, 1900-01 to 2026-27



NOTES: Real total managed expenditure is deflated to 2020-21 cash terms using a composite GDP deflator. OBR financial year population estimates are used to calculate per capita spend.
SOURCE: Analysis of OBR, Public Sector Finances Databank; Bank of England, A millennium of macroeconomic data for the UK, 2020.

The story since the end of the Second World War is of fluctuations around a steady trend: in 1949-50, TME stood at just under 40 per cent of GDP, the same level as it was on the eve of the pandemic in 2019-20. But TME reached a post-1940s low point of 34 per cent in 1988-89, and a high point of 47 per cent in 1975-76.

32 The total amount the government spends is known as total managed expenditure and consists of current spending, capital spending and depreciation.

In the most recent years, the combination of an unprecedented shock from a pandemic and new political priorities have ended the austerity-driven decline in the size of the state seen in the 2010s, with TME now expected to stabilise at 42 per cent by 2026-27, bringing TME to a level last seen (outside of recessions) in the early 1980s.

This relatively stable level of spending as a proportion of national output over the past 70 years came against the backdrop of a single large pressure: the building of the modern welfare state. This has redefined the state's size and scope.[33] Governments have taken different approaches to accommodate this pressure, sometimes by absorbing the pressures without growing the size of overall spending relative to the economy, and at other times allowing the state to grow, with the latter response particularly common since the end of the 1980s.

Understanding what areas of spending have driven increases in TME since the Second World War, and how the state responded, provides insights into the options for the state when meeting the pressures of the coming decade.

Social security, health and education spend have grown strongly since the war

In responding to the pressures of building a welfare state, the shape of state spending has changed markedly since the Second World War. As Figure 15 shows, total spending relative to GDP is set to have grown from 36 per cent to 42 per cent between 1955-56 and 2024-25.[34] Over the same period, health spending as a share of GDP will have grown by around 5 percentage points; education spending by just under 2 per cent of GDP; and social security spending will have doubled to reach 10 per cent of GDP. These three areas of social security, health and education have been the key functions through which the pressures of constructing a welfare state have driven spending.[35]

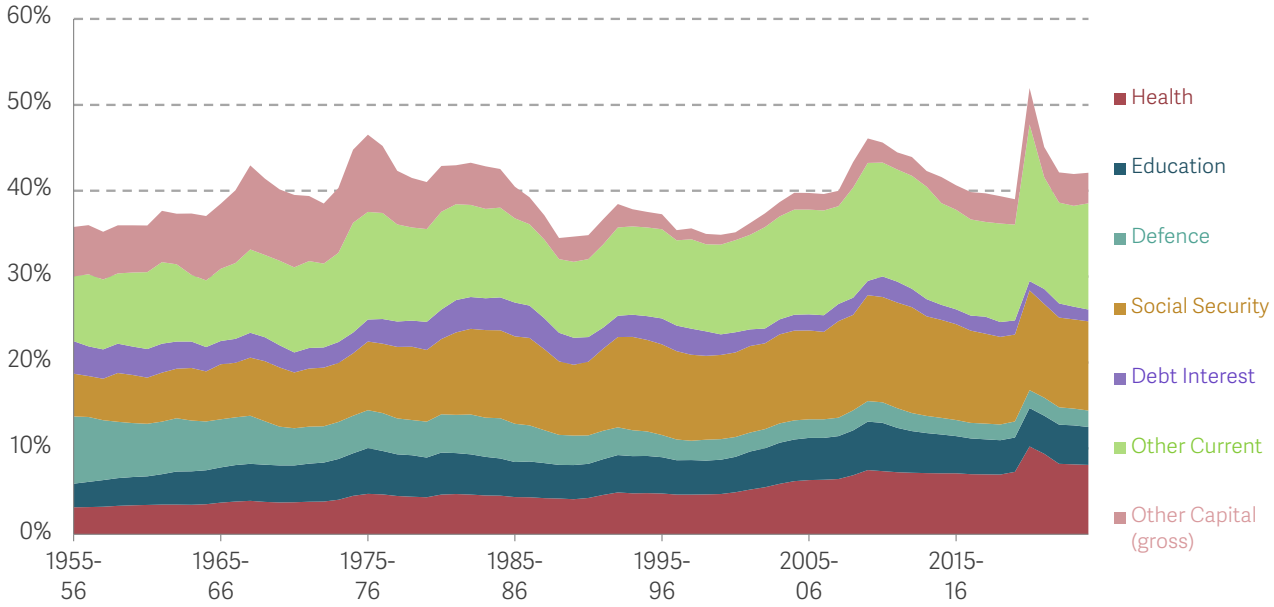
33 For a historical overview of how the welfare state developed since the Beveridge Report, see: N Timmins, The Five Giants: A Biography of the Welfare State, 2001.

34 Departmental spending breakdowns are not available before 1955-56. As shown in Figure 14, there was a sharp drop in TME between the late-1940s and the mid-1950s. Spending post 2020-21 is estimated using growth in Total Departmental Expenditure Limit (TDEL) outlined in Spending Review 2021.

35 'Other Current' includes spending on public order, transport, economic affairs, housing, environmental protection, and culture. Of these, housing would also be considered part of the welfare state but it is not possible to identify it separately.

FIGURE 15: **Health, education and social security have grown since the 1950s**

Total managed expenditure as a proportion of GDP, by function: UK, 1956-57 to 2024-25



NOTES: Education spend is estimated using growth in TDEL outlined in the Spending Review 2021, and calculating the resulting block grant adjustments. The presented numbers do not adjust for the impact of student loans. Total health spend is assumed to grow at the same rate as TDEL for the Department of Health and Social Care in Spending Review 2021. 'Other Current' includes spending on public order, transport, economic affairs, housing, environmental protection, and culture. 'Other Capital' is a gross measure including depreciation and excluding the capital spend which is part of defence, education, and health.
SOURCE: Analysis of HMT, PESA Tables, various, and Spending Review 2021; OBR, Economic and Fiscal Outlook Oct 2021; Bank of England, A millennium of macroeconomic data for the UK, 2020; IFS TaxLab, IFS spending composition sheets.

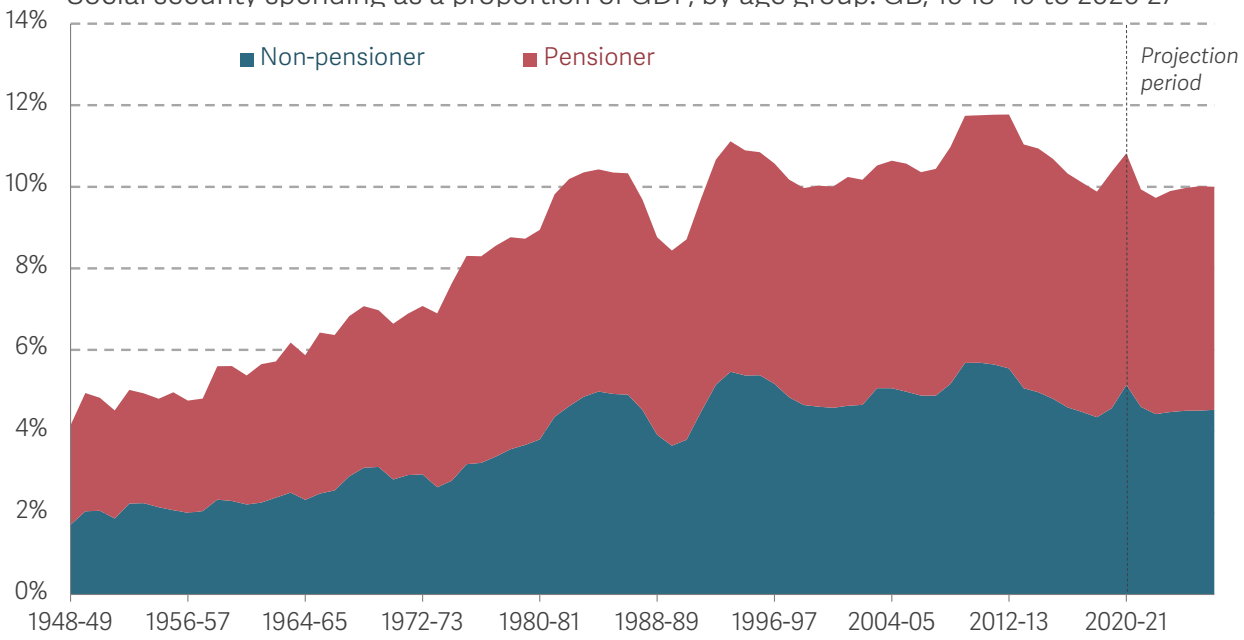
Social security spending grew as demographic changes increased the number of older adults, and as policy makers have directed more support to families with children

The story of rising social security spending as a share of GDP largely played out prior to the 1980s as the modern-day welfare state was constructed. Total social security spending stood at just under 5 per cent of GDP at the start of the 1950s, and rose steadily until 1982-83 where it reached just over 10 per cent of GDP (Figure 16). Since then, social security spending has remained broadly steady relative to output, with counter-cyclical fluctuations (as would be expected). Within this total spend, 55 per cent constitutes pensioner benefits and 45 per cent is benefits received by working age claimants and children (see Figure 16).[36]

36 This Figure originally appeared in: M Brewer et al., Social Insecurity: Assessing trends in social security to prepare for the decade of change ahead, Resolution Foundation, January 2022.

FIGURE 16: **Total social security spending rose to 10 per cent by 1980-81 and has remained relative stable since**

Social security spending as a proportion of GDP, by age group: GB, 1948-49 to 2026-27



SOURCE: Analysis of DWP, Benefit Expenditure Tables; Bank of England, A millennium of macroeconomic data for the UK, 2020; OBR, Economic and Fiscal Outlook.

The flatness in total social security spending since the 1980s reflects decisions to hold down basic rates of both pensioner and non-pensioner benefits, with weak uprating solely in line with prices. Over the last two decades, the working-age benefit system instead evolved to focus on those with additional costs such as parents, those facing high housing costs, and those who are long-term sick and disabled, rather than providing a higher level of basic support.[37] Meanwhile, a different approach was taken to pensioner benefits with the introduction of a more generous triple lock uprating policy in 2010. The full impact of this policy on social security spend was mitigated by the increase in the state pension age as described in Section 2. Together, these decisions have served to keep overall social security spend fairly stable as a proportion of GDP since the 1980s, with pensioner benefits becoming larger more recently.

Health spending grew, driven by an ageing population and improved treatments, and the political consensus to keep the NHS free-to-access at the point of use

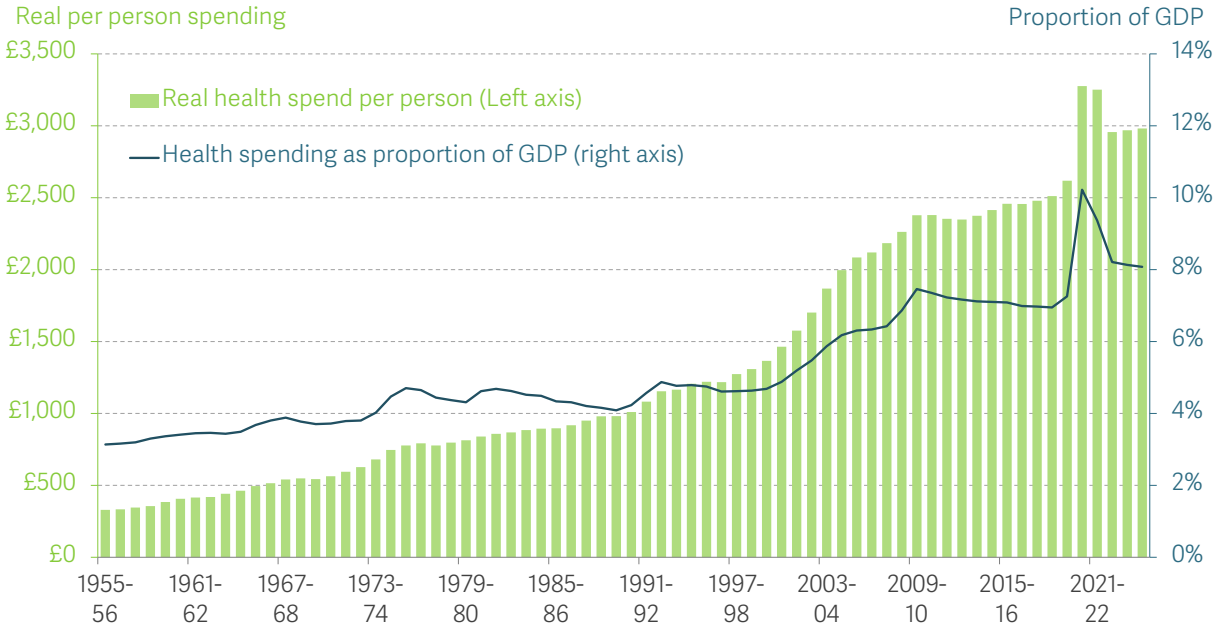
Health spending as a proportion of GDP is set to have nearly tripled between 1955-56 and 2024-25, rising from 3 per cent of GDP to an expected level of just over 8 per cent. The majority of this increase – 2.8 percentage points of the 5-percentage-point rise – came in the 2000s (see Figure 17), when real per person spending on health grew from £1,400 in

37 M Brewer et al., Social Insecurity: Assessing trends in social security to prepare for the decade of change ahead, Resolution Foundation, January 2022.

1999-00 to £2,400 in 2009-10. Health spending fell slightly as a share of GDP in the 2010s (with modest real-terms rises), but this represented a relatively generous settlement compared to the austerity-driven cuts in the size of the state at that time (see Figure 14).[38]

FIGURE 17: **Health spending has almost tripled relative to GDP, and risen nine-fold in real per person terms since 1955-56**

Real (2020-21) terms per person spending on health and as a proportion of GDP: UK, 1955-56 to 2024-25



NOTES: Total health spend is assumed to grow the same rate as TDEL for the Department of Health and Social Care in Spending Review 2021. Values are deflated using the OBR's GDP deflator.
SOURCE: Analysis of HMT, PESA Tables various, and Spending Review 2021; OBR, Economic and Fiscal Outlook Oct 2021; Bank of England, A millennium of macroeconomic data for the UK, 2020.

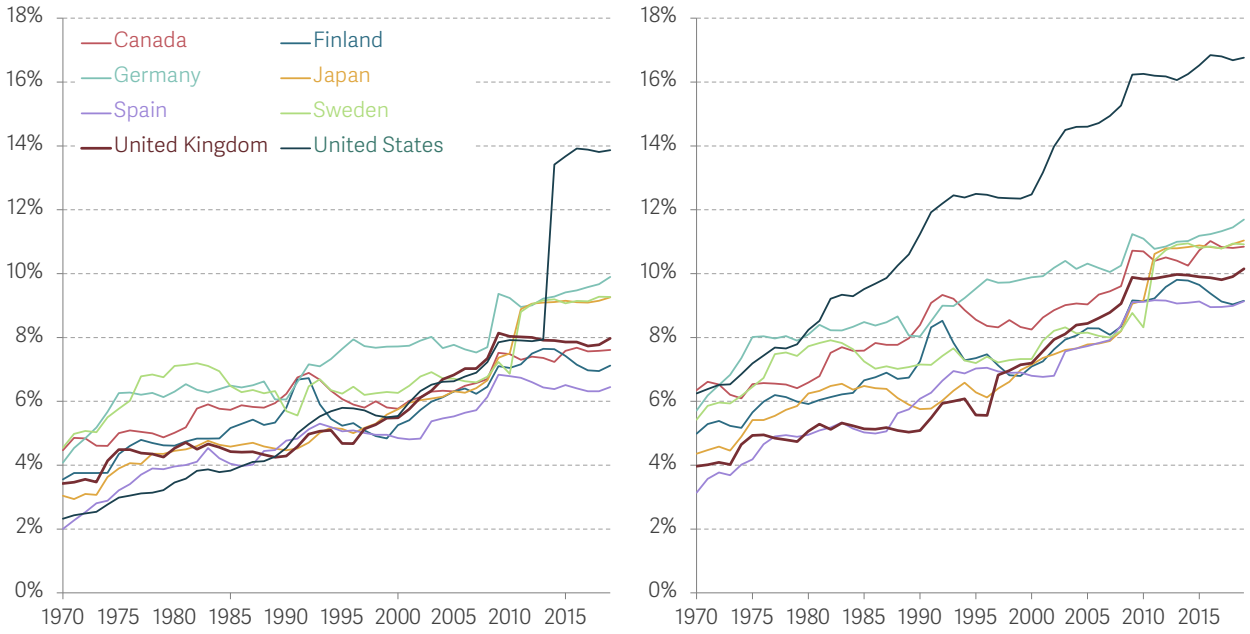
Whether increased demands on healthcare exert pressure on the fiscal position of a country is determined by the funding model for healthcare. The prevailing model for the NHS means that UK healthcare provision is heavily reliant on public funding, and this means that a very large proportion of the pressures on healthcare spend have been taken on by the state. Figure 18 uses international data to demonstrate this point, showing trends in government and compulsory expenditures on healthcare, as well as total expenditure from all sources (i.e. adding that spent by individuals, employers and private insurance arrangements). All countries have seen health spending rise, but this pressure has been met by government spending in the UK, where it is in the middle of the pack: considering total spend, the UK is towards the lower end of the group.

38 M Whittaker, The shape of things to come: Charting the changing size and shape of the UK state, Resolution Foundation, November 2019.

The model of a publicly-funded NHS has had three main implications for the way that the UK has dealt with pressures on its health system. First, it has focused governments to operate within a tax and spend paradigm, as the bulk of this pressure has fallen on current spending. Second, it has meant that the political decision of how much of the spending pressure to recognise at different times has become a crucial driver of the overall size of the state. For example, the recent Spending Review saw a large rise in the allocation for the Department of Health and Social Care resulting from a recognition of both the pressures in the social care system and the need for post-pandemic catch-up, which drove a fast increase in total spend. Finally, the NHS has seen attempts throughout its life to leave more healthcare spend to private individuals. This has seen patients having to meet individually the costs of prescription dispensing, dentists' check-ups and eye-tests, unless they meet means tests for NHS support. Should this model remain, the drivers outlined in Section 2 will push up public spending in future. Equally, however, the funding model pursued can also influence the level of total healthcare spend observed, with public systems liable to ration care to limit pressures.[39]

FIGURE 18: **The UK spends less on health relative to similar countries when taking into account personal expenditures**

Current expenditure on health from government and compulsory schemes and from all sources as a proportion of GDP, by country: 1970-2019



NOTES: The structural break in the United States government and compulsory spend series reflects the passing of the Affordable Care Act which led to some pre-existing health spending to be reclassified as "compulsory". UK figures are not directly comparable with those presented elsewhere in this report.
SOURCES: Analysis of OECD, Health expenditure and financing.

39 For a discussion of this issue in the NHS, see: H Crump, M Dayan & N Edwards, Rationing in the NHS, Nuffield Trust, February 2015.

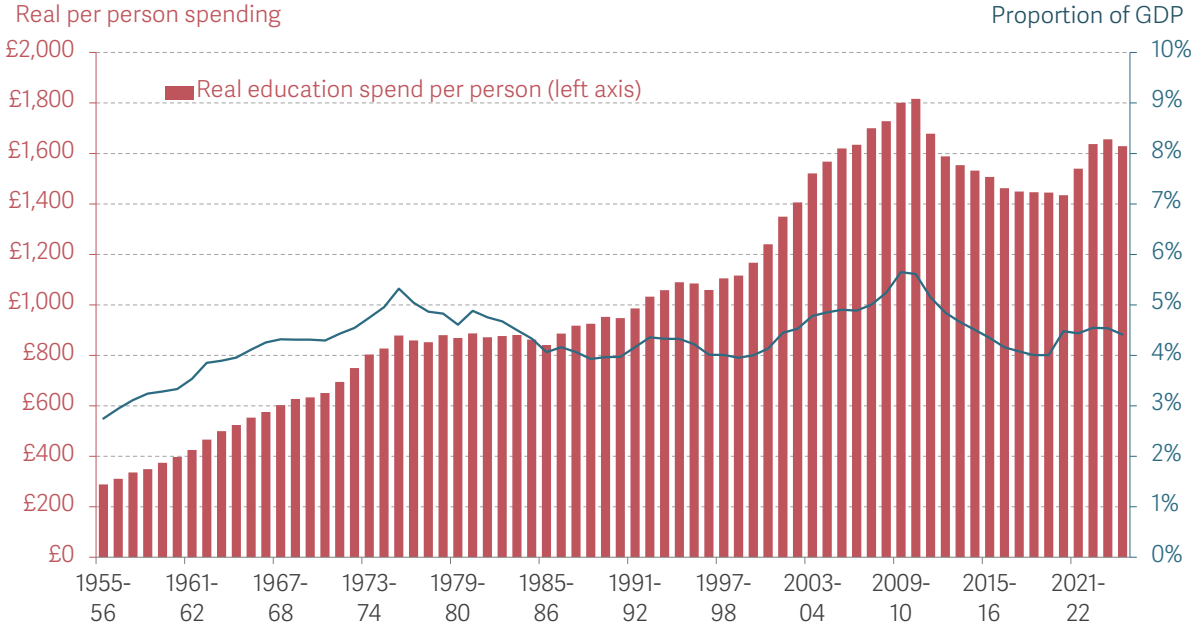
Education spend also grew as the demand for schooling rose

Education has been a third beneficiary of higher spending over the last seventy years. In 1955-56, spending on education amounted to 2.7 per cent of GDP; by 2006-07, this figure stood at 5 per cent, although it has since fallen back to 4.6 per cent of GDP. By 2024-25, it is expected that real terms per person spending on education will be over 5 times larger than in the mid-1950s (see Figure 19).

The growth in the size of education spend occurred in two waves: the first from the mid-1950s to the 1970s, when education spend rose from 2.7 per cent of GDP to just over 5 per cent, and the second in the 2000s, where spending rose from 4 per cent of GDP in 1999-00 to 5.6 per cent in 2009-10.

FIGURE 19: **Education spend has grown as a proportion of GDP since the 1950s but peaked in 2009-10**

Real (2020-21) terms spending on education, per person and as a proportion of GDP: UK, 1955-56 to 2024-25



NOTES: Education spend is estimated using growth in TDEL outlined in the Spending Review 2021, and calculating the resulting block grant adjustments. The presented numbers do not adjust for the impact of student loans. Values are adjusted using the OBR's GDP deflator.
SOURCE: Analysis of HMT, PESA Tables, various, and Spending Review 2021; OBR, Economic and Fiscal Outlook Oct 2021; Bank of England, A millennium of macroeconomic data for the UK, 2020.

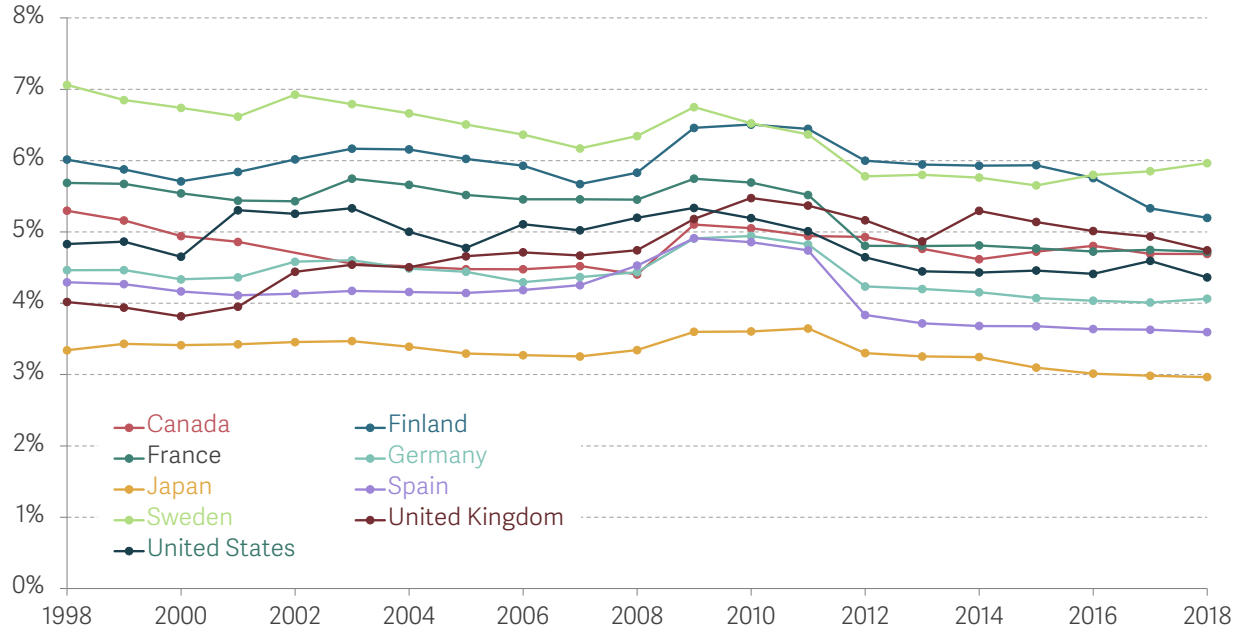
The long-run change reflects that people are spending longer in the education system, as the incentives to gain skills and human capital have risen. Here, the experience of higher education is instructive. Initially, this greater demand for higher education was met by the state with the fraction of young people (18-30-year-olds) going to university rising from

nearly 1 per cent in 1955 to reach 25 per cent by 2002.[40] More recently, starting from the introduction of tuition fees, and particularly since their substantial increase in the 2010s, this spend has been semi-privatised contributing to the fall in overall education spend seen since then.[41] Falling demographic pressure has also helped to reduce spending on education in the later 2000s and early 2010s[42] along with real-term falls in real per-pupil spend.[43]

Comparing the change and level of public spending on education in the UK with other developed countries, as we do in Figure 20, reveals that the second period of expansion in spend in the 2000s brought the UK in line with international comparators: the UK rose from the second-lowest spending nation within this group in 1998 to become the median spender. Figure 20 also shows that almost all the countries considered have had similarly flat or slightly-declining spend on education as a proportion of GDP since 2010.

FIGURE 20: **The UK is not an outlier when it comes to the level of education spend**

Total general government expenditure on primary to tertiary education as a proportion of GDP, by country: 1998-2018



NOTES: US and UK series adjust for net student loans. All countries' education spend data is created by splicing two datasets together at 2012. UK figures are not directly comparable with those presented elsewhere in this report.
SOURCE: Analysis of OECD, Education at a glance and National accounts at a glance.

40 V Carpentier, Funding in Higher Education and Economic Growth in France and the United Kingdom, 1921-2003, Higher Education Management and Policy 18, 2006.
41 The figures above do not include the implicit state spending on student loans. Including these in education spending increases it as a share of national income to 4.8 per cent in 2020-21 (from 4.5 per cent without the adjustments), levels seen in 2003-04. See: C Farquharson et al., 2021 annual report on education spending in England, Institute for Fiscal Studies, November 2021.
42 Partly reflecting a reduction in births during the 1990s, which reduced the numbers of children in school in the late 2000s and 2010s. See: M Gustafsson & D Willetts, A return to boom and bust (in births), Resolution Foundation, October 2021.
43 See: L Sibieta, School spending in England: trends over time and future outlook, Institute for Fiscal Studies, September 2021.

The state facilitated higher spending in the key areas of the welfare state by lowering spending in other areas, cutting investment and raising taxes

In the face of these pressures to do more on social security, health and education, governments have taken a range of approaches. It is worth reviewing these, as they will inform the potential strategies that future governments could take to deal with the pressures outlined in Section 2.

One strategy that the state has historically taken to directly reduce the pressures it faces has been to change the balance of services and support it provides. As we discussed above, increases to the state pension age, reductions in the treatments covered by the NHS (e.g. requiring individuals to meet the costs of dental and eye care), and the introduction of tuition fees have all pushed down on the total amount of welfare state spending. These alone, though, have not prevented the large increases we have documented over the long term.

In order to facilitate the increases in health, education and social security spending outlined above, the state responded in three main ways: adjusting spending on other functions, reducing investment spend, and raising more through tax. These strategies have been used at different times, reflecting the different social and economic contexts: for example, the end of conflicts such as the Second World War and the Cold War enabled cuts to defence budgets. At other times, the state got lucky, such as demographic trends acting to increase the working-age population by 3 million between 1985 and 1995.[44]

Falling spend on other functions of government – particularly defence and debt interest – helped to accommodate fiscal pressures

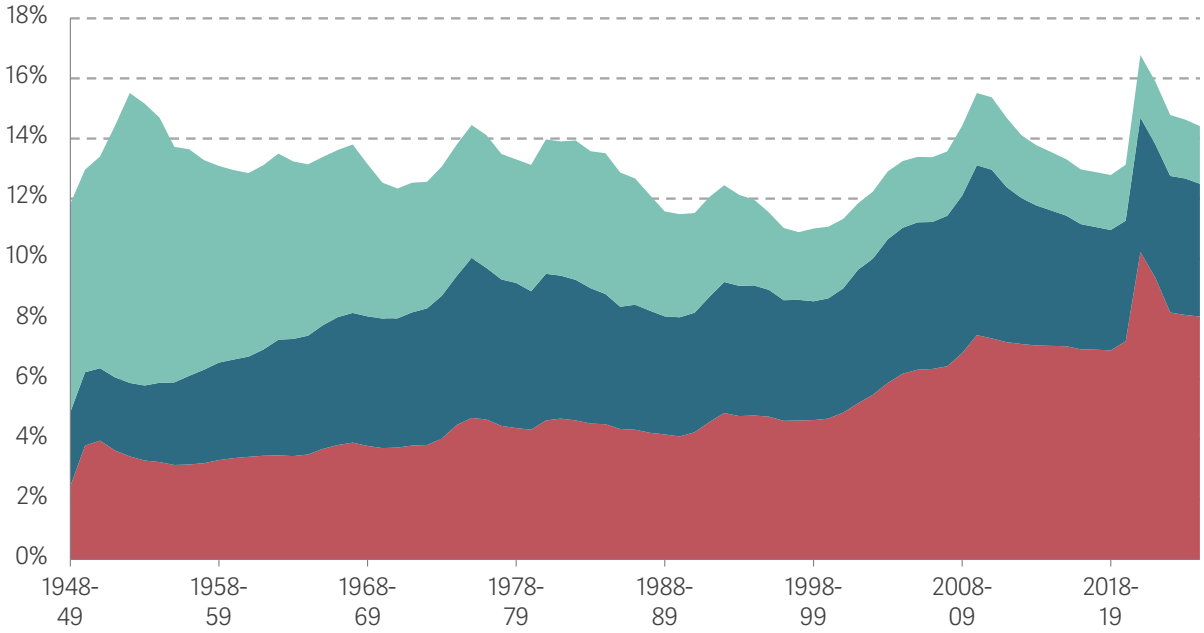
Up to the 1980s, accommodating the growth in spend on health, education and social security largely involved reducing spending on defence (see Figure 21). Between 1948-49 and 1979-80, defence spending almost halved relative to GDP, falling from 7 per cent to 4 per cent of output (in real per person terms, defence spending was held fixed at around £800 a year, allowing it to fall relative to GDP as the economy grew over time). But there are clearly limits as to how often a fall of this magnitude can be repeated. Since the late 1970s, the collapse of the Soviet Union and the end of the Cold War delivered a so-called 'peace dividend', which allowed governments to let real per person defence spend fall further from the 1980s to nearly £700 a year, reducing defence spending by a further 2 per cent of GDP to 2 per cent. Given the UK's pledge as a member of NATO to spend 2 per

44 Taken from: D Willetts, The Pinch, Atlantic Books, 2011.

cent of national income on defence commitments (although on a slightly wider definition of 'defence spending'), it will be a struggle for this function to be squeezed further.[45]

FIGURE 21: **Declines in defence only weakly offset the rise in spending in more recent times**

Expenditure on defence, education and health as a proportion of GDP: UK, 1948-49 to 2024-25



NOTES: Education spend is estimated using growth in TDEL outlined in the Spending Review 2021, and calculating the resulting block grant adjustments. The presented numbers do not adjust for the impact of student loans. Total health spend is assumed to grow the same rate as TDEL for the Department of Health and Social Care in Spending Review 2021.
SOURCE: Analysis of HMT, PESA Tables various, and Spending Review 2021; OBR, Economic and Fiscal Outlook Oct 2021; Bank of England, A millennium of macroeconomic data for the UK, 2020.

Since the 1980s, continuing reductions in defence spend as a proportion of GDP have been matched by declines in spending on debt interest, as a result of the secular fall in interest rates experienced globally. Since 1990-91, debt interest has fallen from 4 per cent of GDP and is expected to amount to 1.4 per cent of GDP in 2024-25, with ultra-low interest rates more than offsetting the impact of higher debt levels.[46]

The 2010s saw the government of the time prioritise a new goal: that of deficit reduction. But this saw the continued reinforcement of the big picture approach of controlling other areas of spend to accommodate growing pressures from health spending. The difference was that this austerity period shared out the spending restraint more broadly across departments, instead of relying solely on the secular decline of defence or the luck of

45 The NATO pledge to spend 2 per cent of national income on defence uses a wider definition of defence expenditure than that used above, including spending on war pensions and contributions to UN peace keeping. See: N Dempsey, UK defence expenditure, House of Commons Library, June 2021.
46 These figures do not include impacts from Bank of England transactions in respect of Asset Purchase Facility and Special Liquidity Scheme.

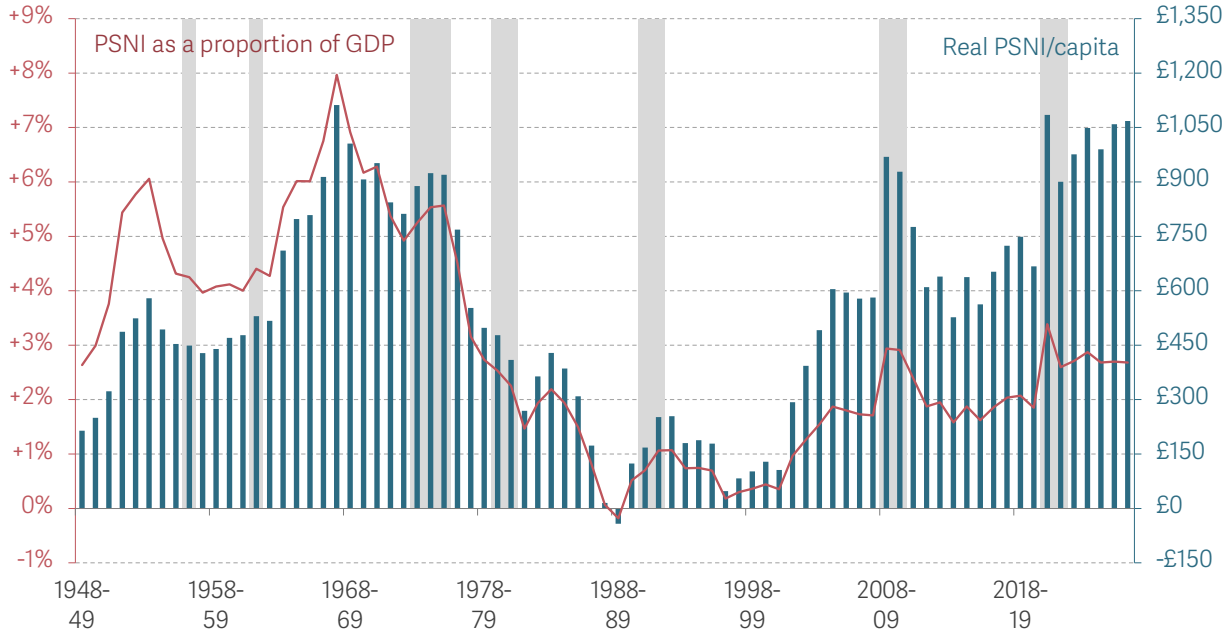
lower interest rates; however, achieving such broad-based cuts was more difficult to achieve and arguably has been less sustainable in many areas.

Cutting capital spending, especially in recessions, has been a key coping mechanism of the past

A second element of the approach taken since the 1950s has been to cut capital spending. At the start of the 1970s, public sector net investment (PSNI) was as high as 6 per cent of GDP, but by the late 1990s this figure was below 1 per cent (see Figure 22). The fall in PSNI over this period was the direct result of privatisation, which transferred a large asset base (which requires maintenance and investment) out of the public sector: at the start of the 1970s, for example, the UK state included British Telecom, British Petroleum, Rolls Royce, and water and electricity companies. More recently, governments have cut back on capital spending during recessions so as to allow the demands on health and education spend to be met without significantly increasing deficits. This can be a viable short-run strategy, as capital spend is often not urgent, but in the long run this will diminish the UK's capital stock.

FIGURE 22: **Public investment has been squeezed by successive governments**

Real public sector net investment per capita and as a proportion of GDP: UK, 1948-49 to 2026-27



NOTES: Values of real public sector net investment per capita prior to 1955-56 are calculated using a composite GDP deflator.
SOURCE: Analysis of OBR, Public Sector Finances Databank; Bank of England, A millennium of macroeconomic data for the UK, 2020.

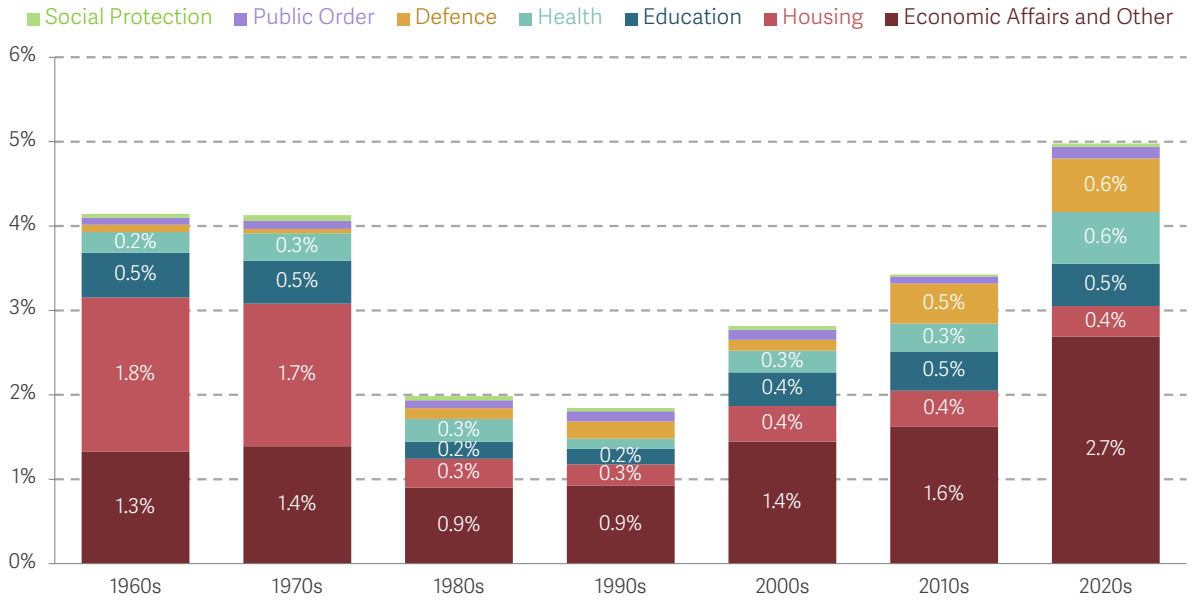
One of the reasons that today's level of public investment is much lower than that of the 1970s is that governments since the 1990s have tried to privatise the cost of delivering

what was previously publicly delivered and managed infrastructure, through the use of private finance initiatives (PFI) and other procurement methods. Alongside the widescale privatisation of utilities and other previously state-run companies in the 1980s, the combined effect has led to a notable change in the type of investment in which the state is engaged, skewing investment away from housing and towards 'economic affairs', a category that includes enterprise investment, science and technology spend and transport (see Figure 23).

Although low and volatile public investment has been a core way in which the UK state has limited its growth when dealing with pressures historically, this is set to reverse in the coming years with a renewed prioritisation of capital spending expected to bring PSNI up to its highest sustained level since the 1970s.

FIGURE 23: **Public investment has become increasingly skewed towards economic affairs**

General government gross fixed capital formation as a proportion of GDP, by function: UK, 1960s to 2020s



NOTES: 'Economic affairs and other' includes enterprise and economic development; science and technology; employment policies; agriculture, fisheries and forestry; transport; and recreation, culture and religion. From the 2000s, all science and technology spend is classified as capital spend; before this, it was split between capital and current. 2020s uses data from 2020-21 and projections calculated using CDEL growth until 2024-25 from Spending Review 2021.
SOURCE: Analysis of T Clark et al., Twenty-five years of falling investment? Trends in capital spending on public services, November 2001; HM Treasury, PESA Tables, various and Spending Review 2021.

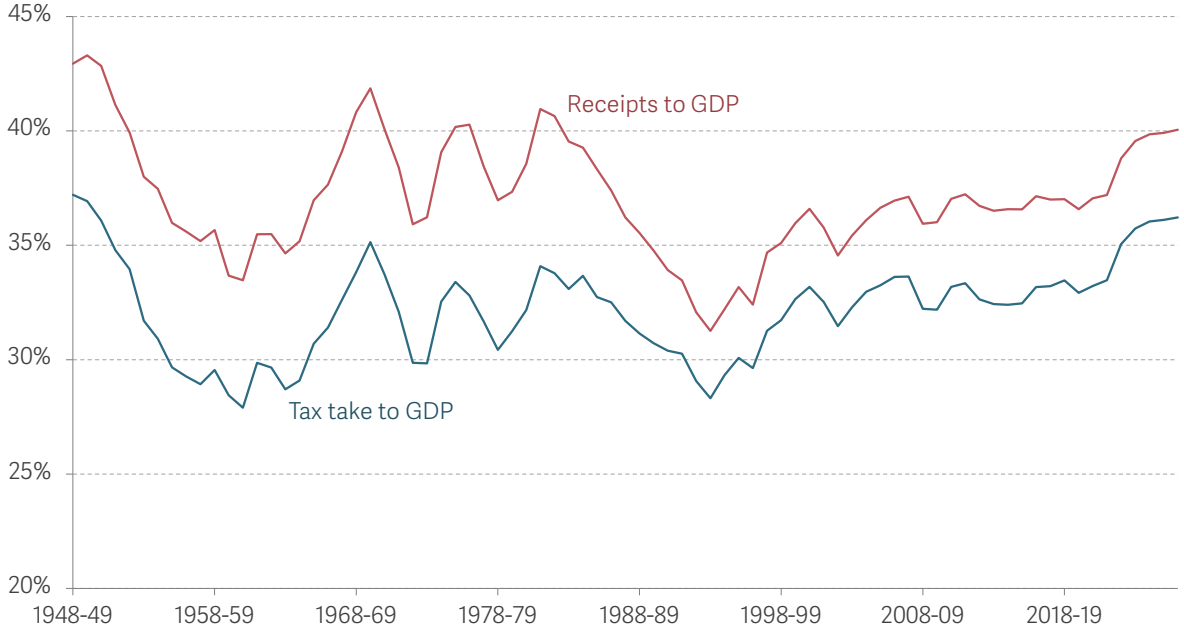
Raising taxes, largely on income and consumption, has also helped governments accommodate fiscal pressures

A final way in which the state has responded to rising spending pressures has been to

raise taxes. From a low point of 28 per cent of GDP in 1993-94, tax revenues have since risen, and are expected to reach 36 per cent of GDP in 2026-27, matching levels last seen in the immediate aftermath of the Second World War (see Figure 24). However, although the tax take is at a post-war high, total receipts as a share of GDP are not. This reflects the decline in non-tax sources of revenue for the state, which is mostly due to the privatisation of companies that had previously given the Government a revenue stream: the private sector has taken on not just the responsibility for investing in those companies (as we discussed above, in the context of the falling PSNI) but also the revenue stream.

FIGURE 24: **Tax take relative to GDP has grown since the end of the 1990s**

Current receipts and taxes as a proportion of GDP: UK, 1948-49 to 2026-27

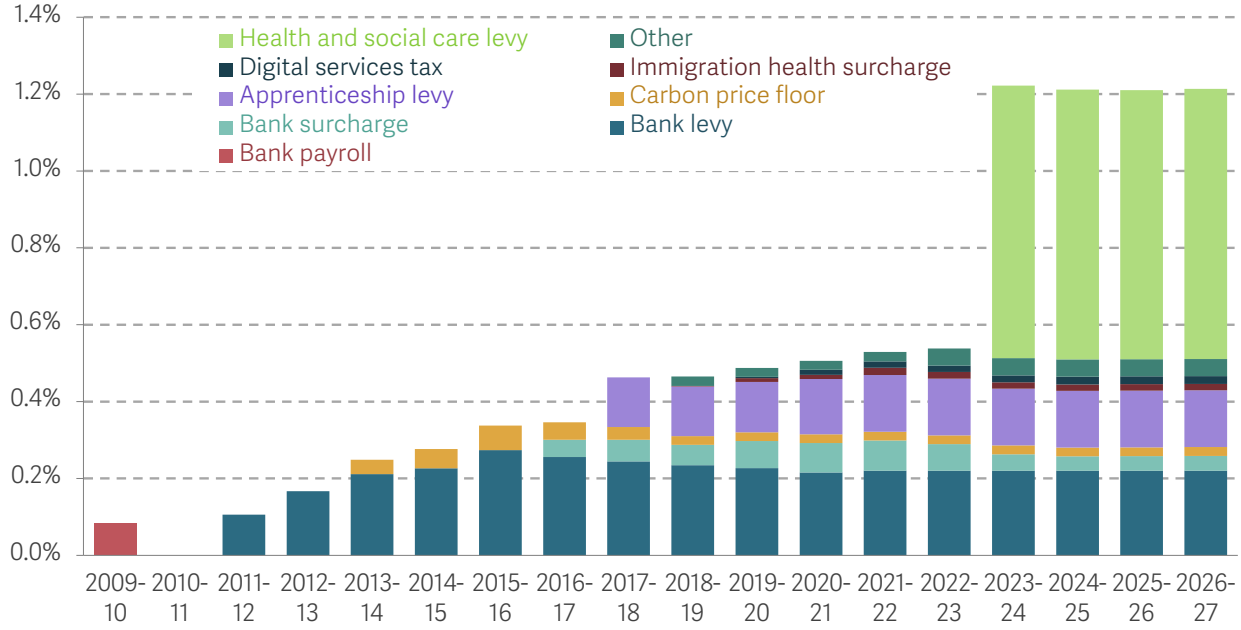


SOURCE: Analysis of OBR, Public Sector Finances Databank.

The recent rise in the tax take has not been due to the introduction of new taxes. Figure 25 shows that the use of new taxes since the financial crisis to raise state revenues has been modest: these have contributed just over 0.5 per cent of GDP to the tax take over the most recent years, or an eighth of the total rise since 2009-10. Should the health and social care levy go ahead, though, the contribution of new taxes would more than double, but the fact that the levy simply replaces an increase in National Insurance Contributions does question whether we should consider it as a new tax.

FIGURE 25: **The introduction of new taxes has had a limited impact on the overall tax take**

New taxes and receipts as a proportion of GDP: UK, 2009-10 to 2026-27



SOURCE: Analysis of OBR, Policy measures database.

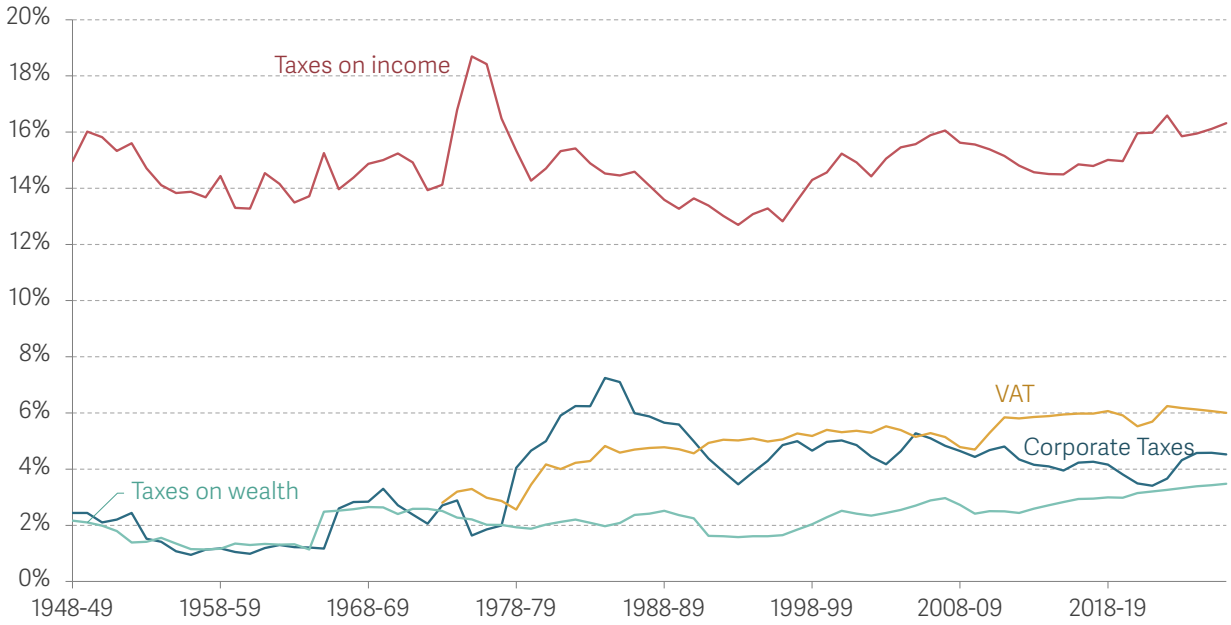
Instead, existing taxes have been used to raise more revenue. Figure 26 shows that rising revenues from taxes on income, the introduction of VAT and increases in taxes on corporations have been the largest contributors to rising tax revenues over the long term. Within the bucket of income-related taxes, taxes specifically on earnings have increased, with higher rates of National Insurance being the path chosen to generate more revenue most frequently in recent decades. All of the increase in income taxes as a share of GDP this century has come via National Insurance, reinforcing the longer-term trends that mean that NI is set to have risen from 3 to 7 per cent of GDP from the late 1940s to 2026-27, even as the contribution of Income Tax falls from 12 to 10 per cent. This is reflected in the main rates of the two, where the main rate of Income Tax has fallen, from 35 to 20 per cent since 1975-76, but the rate of NI contributions for employees has risen from 5.5 to 12 per cent over the same period.[47]

The hump profile in corporate tax revenues in the early 1980s reflects the impact of taxes on profits derived North Sea oil. Revenue from this tax peaked in 1984-85 at just over 3 per cent of GDP, as a result of high oil prices and strong levels of UK production which generated a windfall for oil companies. Today, this tax contributes closer to 0.1 per cent of GDP in revenues to the state, and cannot support spending (or be used to finance tax cuts) in the same way as it has in the past.

47 And will rise further to 13.5 per cent following April 2022. Analysis of Institute for Fiscal Studies TaxLab, IFS Fiscal Facts.

FIGURE 26: **State tax revenues have become increasingly dominated by taxes on income and earnings**

Tax revenue as a proportion of GDP, by tax type: UK 1948-49 to 2026-27



NOTES: 'Taxes on income' includes income tax and national insurance contributions. 'Taxes on wealth' includes stamp duties, inheritance tax, capital gains tax, and recurring property taxes (such as council tax). 'Corporate taxes' includes corporation tax, profit taxes, North Sea oil tax revenues, and business rates.
SOURCE: Analysis of OBR, Economic and fiscal outlook; Bank of England, A millennium of macroeconomic data, 2020; IFS TaxLab, Revenue composition spreadsheet.

This section has argued that the creation of the modern welfare state after the Second World War resulted in significant pressures on the state. The different strategies that governments used to deal with these pressures have determined the size and shape of the state we see today. In the early 1980s, reductions in defence spending and cuts in public investment enabled total spending to fall as a proportion of GDP, while profits from the North Sea oil reserves provided fiscal space to pursue other policy priorities (such as tax cuts). In more recent times, governments have accommodated the demands for more health and education spending by letting total spending rise, and taxes rise with it. With this historical lesson in mind, we now turn to what strategies exist for the governments over the next decade, as they face the pressures outlined in Section 2.

Section 4

Coping with fiscal pressures in the 2020s

Having identified the three main pressures on the size of the state in the 2020s – the ageing of the UK population, a continued structural rise in health spending and the public investment required to accelerate the net zero transition – and at how past governments have coped with pressures in previous decades, this section discusses the strategies available in the decade ahead.

Perhaps the most obvious approach is to take steps to hold down increases in spending, but doing so in any scale will require breaking taboos. On pensions spending, this could include ending the triple lock or accelerating the increase in the State Pension Age to 68 currently pencilled in for the late-2030s. On healthcare, with gains from reducing morbidity or treating longer-term conditions more cost effectively hard to come by, policy makers could be forced to explore shifting more healthcare costs onto individuals directly. None of these strategies is politically appealing, and all will leave the vast majority of pressures unaddressed.

The strategies of the past will be looked at again. The approach taken in the 2010s, of holding down social security and day-to-day departmental spending, seems to have reached its limits. The huge reductions in defence spending seen since the war cannot be repeated, but it remains higher in the UK than in all other G7 countries bar the US. That said, further reductions in military spending would breach the UK's NATO commitments at a time of rising geopolitical risks. Cutting back on investment spending – which fell sharply during the 1970s and 1980s – would be very unwise in the context of prolonged under-investment in the UK and the need to get going on key net zero infrastructure in the 2020s.

Borrowing more is not the answer. The huge importance of having fiscal space to deploy should the economy need supporting has been demonstrated by policy responses to the Covid-19 pandemic and the financial crisis. But these two

crises have also diminished the fiscal space available for future crises. So future governments should aim to limit increases in debt, particularly in meeting day-to-day public spending. Lower debt-servicing costs should not be relied upon to continue indefinitely. particularly given the prospect of an inflation-driven rise in interest rates.

These spending and borrowing constraints imply that there will be pressure for higher taxes in the 2020s. Higher taxes are eminently possible: many other high-income economies have a higher tax take than the UK. But they should come alongside an improved and fairer taxation system: future changes should not over-burden workers with higher taxes and instead must look to large, and often passive, increases in wealth as a source of revenues. Additionally, the tax system faces its own headwinds in the next decade, with £35 billion of annual motoring taxes on track to reduce faster than expected as electric vehicle adoption picks up pace.

But it is not just the extent of increases in spending that matter for the future tax take: growth is also crucial. If growth over the past 15 years had continued at pre-financial crisis levels, a simple extrapolation of spending trends suggests it could have been around £200 billion higher by 2019-20 – or more than £7,500 per household – without huge rises in taxes. This would be transformational for the pressures we now face. Growing the economic pie is, therefore, key to future pressures and will be the subject of future work.

In this section, we focus on possible 'coping strategies' available to the governments of the 2020s to address the pressures on the size of the state that they are set to face. We start by evaluating the possibility of either lower spending or higher borrowing and then discuss higher taxation, before finally touching on the importance of economic growth.

The coming spending pressures can be reduced but not removed and will require breaking political taboos

Perhaps the most obvious option to deal with the spending pressures outlined in Section 2 is to consider ways to limit them. There are options available to policy makers, although using them will only reduce – not eliminate – the challenges to come.

On the State Pension, changes to the triple lock such that the State Pension keeps track with broad changes in living standards, rather than ratcheting up ever further beyond changes in pay and inflation should be considered.[48] The planned increase in the SPA to 67 in the late-2020s is already keeping a lid on State Pension spending increases (and

48 Such a policy was recommended by the Resolution Foundation's Intergenerational Commission, see: Resolution Foundation, A New Generational Contract: The final report of the Intergenerational Commission, May 2018.

is assumed in our projections). In the coming years a decision will be needed on the timing of the next rise to 68, which is currently planned for the late-2030s. Bringing this increase forward is a realistic option, although the fiscal benefits of raising the SPA must be evaluated against the drawbacks of reducing the length of retirement, particularly for those with lower life expectancy.[49]

When it comes to healthcare, policies to stem the rise in morbidity or to contain cost pressures would slow the pace of increase in spending. These outcomes may be difficult to achieve, having been a priority for policy makers for many years already. Instead, it may be that governments in the 2020s may have to explore once more the strategy of reducing the universality of healthcare provision to contain costs.[50] The Government, for example, has recent concluded a consultation on raising the age at which adults qualify for free prescription charges in England from 60 to the SPA.[51]

Overall, it is clear that the pressures identified in the Section 2 cannot simply be wished away or ignored, with no strategy being politically appealing and all leaving the vast majority of pressures still to be addressed. Because of this, the strategies deployed in the past will be looked at by governments in the 2020s as they seek to cope with the looming fiscal pressures.

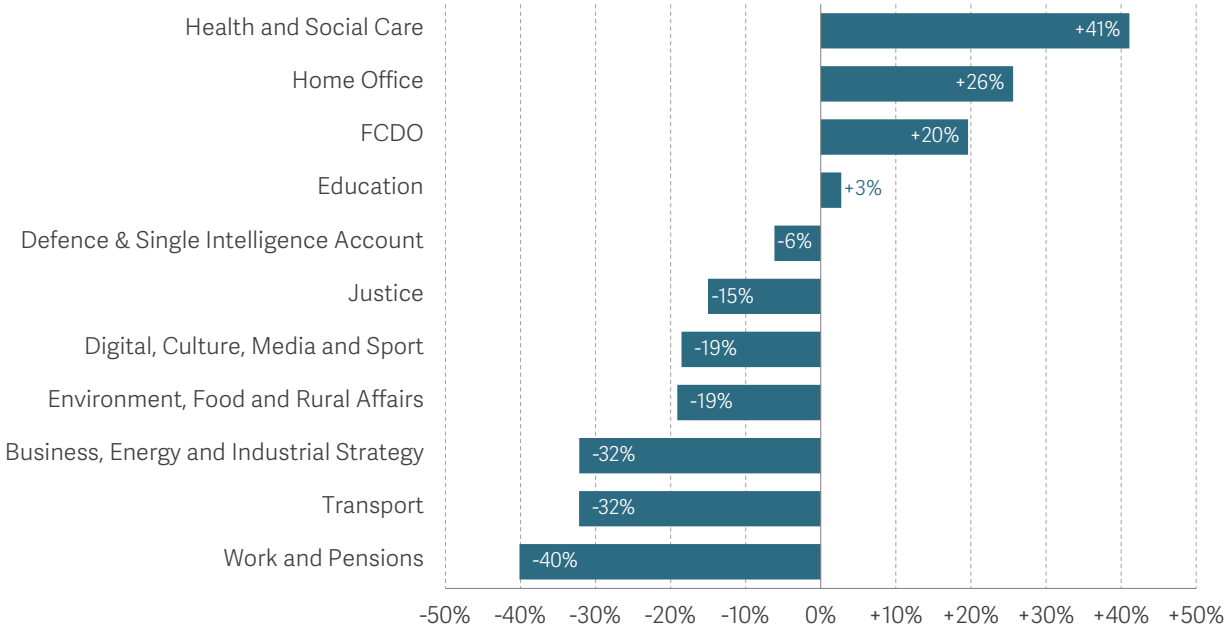
Holding down spending in other areas was a key strategy in the 2010s, but has now largely run out of road

During the 2010s, governments turned to day-to-day public service spending restraint to keep a lid on the size of the state, delivering the longest period of falling spending as a proportion of GDP since the Second World War (see Figure 15 earlier). But this approach will be very difficult to replicate in the 2020s given the scale of the reductions in spending that departments have already experienced. Despite increases announced in the most recent Spending Reviews, real day-to-day spending per person is set to be 20 per cent lower in 2024-25 than in 2009-10, and some departments will have experienced deeper cuts, including a 40 per cent cut for the Department for Work and Pensions and a 32 per cent reduction in day-to-day transport spending (see Figure 27).[52]

49 Difference in healthy life expectancy for different socio-economic groups and regions, and the interaction with uprating of the SPA are discussed in: Department for Work and Pensions, Independent Review of the State Pension Age: Smoothing the Transition, March 2017.
50 The various NHS charges, their rates and exemptions, and differences in approach between the devolved nations are set out in detail in: T Powell, E Parkin & A Kulakiewicz, NHS charges, House of Commons Library, January 2022.
51 Department of Health and Social Care, Aligning the upper age for NHS prescription charge exemptions with the State Pension age, September 2021.
52 T Bell et al., The Boris Budget: Resolution Foundation analysis of Autumn Budget and Spending Review 2021, Resolution Foundation, October 2021.

FIGURE 27: **A range of departments have experienced large spending cuts since 2010**

Percentage change in real (GDP-deflator adjusted) day-to-day spending, selected departments: 2009-10 to 2024-25



NOTES: Day-to-day spending refers to Resource Departmental Expenditure Limits (RDELs). Comparison of departmental spending levels shown adjusts as far as is possible for machinery of government and other related spending changes.
SOURCE: Analysis of HM Treasury, PESA tables, various.

It seems unlikely that future governments will be able to make large cuts to working-age social security spending – due to take up 4.5 per cent of GDP in 2026-27– to curtail spending growth.[53] This is partly because the long-term approach to uprating benefits only in line with inflation or, in recent years, not even that, has left the support provided by the UK social security system to some groups at very low levels. As a result, the basic rate of unemployment benefit is now only just higher than a the estimated destitution level. More broadly, rates of poverty that use a fixed real poverty line have seen hardly any decline since 2001-02, with absolute poverty among working-age adults barely falling (from 21 per cent in 2001-02 to 17 per cent in 2019-20). This is an exceptionally poor performance given that a modern economy should be providing increases in real-terms living standards in the medium-term. And spending on working-age social security has its own pressures too, including the high cost of housing, the growing incidence of poor health, and, until recently, a secular trend upwards in household-level earnings inequality. A companion Economy 2030 report to this suggested that, if anything, the

53 This paragraph draws on: M Brewer et al., Social Insecurity: Assessing trends in social security to prepare for the decade of change ahead, Resolution Foundation, January 2022.

direction of travel in the 2020s may see more spending devoted to working-age benefits, both to tackle the UK's legacy of high inequality and poverty, and provide greater income replacement to workers in the face of enhanced structural change.[54]

Some twentieth century 'coping strategies' could be used again, but to less effect and with big risks

As we discussed in Section 3, cuts in defence and investment spending have both been used in the past to make space for new fiscal pressures, however reducing spending in these areas in the 2020s seems either hard to achieve or unwise.

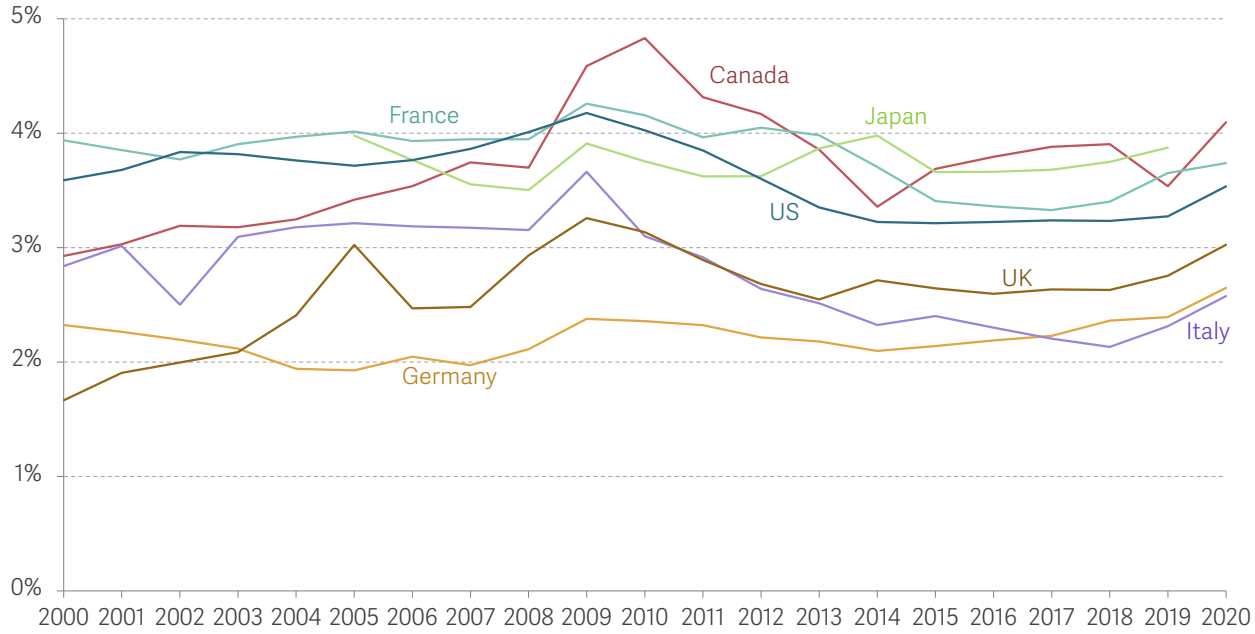
On defence, there is currently a cross-party consensus in favour of maintaining the NATO target that 2 per cent of GDP is allocated to defence spending. However, this consensus may come under pressure, as many other advanced economies spend substantially less than the UK on defence, and this could tempt future governments to pare down defence spending further to accommodate fiscal pressures elsewhere.[55] But the fact that the defence budget is so much smaller than it was at the height of the cold war means that there is limited scope to cut much more. For example, cutting the defence budget by 25 per cent today would 'free up' around 0.5 per cent of GDP for other spending pressures or lower borrowing – half as much as the same reduction would have provided in the 1970s. And growing geopolitical tensions are placing their own pressures on defence spending.[56]

As shown earlier in Figure 22, cuts to public sector investment have been used as an important margin for adjustment, with investment spending falling sharply in the 1980s and 1990s. Although, as with defence spending, there currently is cross-party support for the existing plans for high investment through the 2020s, the Treasury could well row back on these commitments in the face of rising demands for increases in current spending. But cutting investment spending would be an unwise approach. This is partly because the UK public sector has consistently under-invested relative to a number of international peers (Figure 28), leaving the country with a public capital stock which stood 17 per cent of GDP below the international average pre-pandemic.[57] But this is also because of the UK's domestic and international commitments to reach net zero by 2050, as we discussed in Section 2. That said, decisions at the margins around the scale of public sector involvement will be made – and governments may choose an approach that involves higher spending by individuals and/or higher private sector investment.

54 M Brewer et al., Social Insecurity: Assessing trends in social security to prepare for the decade of change ahead, Resolution Foundation, January 2022.
55 See NATO, Information on defence expenditures, for data on current and historical defence spending.
56 D Allan and I Bond, A new Russia policy for a post-Brexit Britain, Chatham House, January 2022.
57 R Hughes et al., Euston, we have a problem: Is Britain ready for an infrastructure revolution?, Resolution Foundation, March 2020.

FIGURE 28: **UK public sector investment is not high by international standards**

Public sector investment as a share of GDP: G7 economies, 2000 to 2020



NOTES: Gross fixed capital formation (GFCF). Public Sector Net Investment is GFCF less depreciation, add other capital grants. GFCF is available on an internationally comparable basis.
SOURCE: OECD, National Accounts at a Glance.

Additional borrowing is not a sustainable way to cope with fiscal pressures in the 2020s

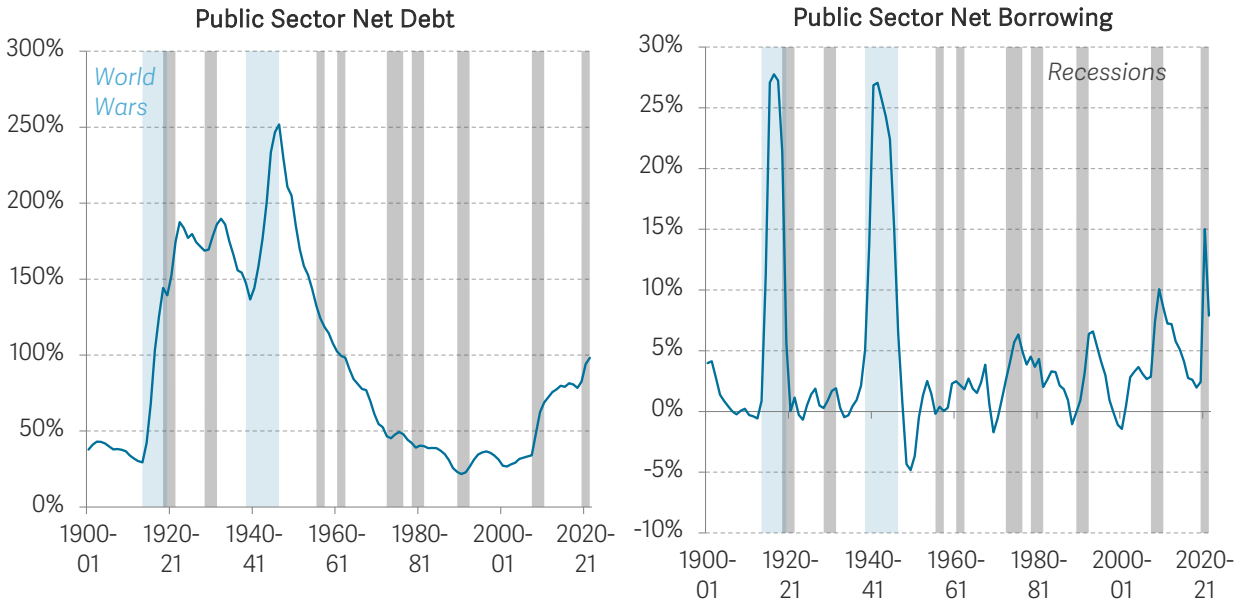
If there is limited capacity for future governments to ease pressures on public spending, then some may look to higher borrowing to take the strain in the 2020s. But this is not a sensible way to fund additional spending, particularly on current spending – such as social security and day-to-day public services – as such an approach is fundamentally unsustainable. It is much easier to make the case for borrowing to spend on investment spending,[58] but such a strategy must be mindful of the overall level of debt to GDP, and the need to preserve fiscal space to respond effectively to future economic shocks. Debt is already elevated after two 'once-in-a-century' economic shocks – the financial crisis and the Covid-19 pandemic: public sector net debt has risen from around a third of GDP before the onset of the financial crisis and is now expected to peak at around the same size as national income (98.2 per cent) this year (Figure 29), a level not seen since the aftermath of the Second World War. It is far from clear at what point a government will be unable to borrow more, but rising debt will only ever increase that risk. So, to ensure we

58 For a discussion, see: L H Summers, What is the social return to capital investment?, pages 113–141, in "Growth, Productivity, and Unemployment, Essays in honor of Robert Solow", Peter Diamond editor, MIT Press,1990.

have the fiscal space to meet future crises, debt will need to be reduced from its current levels, limiting the role that borrowing can play in accommodating the pressures of the 2020s.[59]

FIGURE 29: **Public sector debt has nearly tripled since the before the financial crisis**

Public sector net debt and net borrowing as a proportion of GDP: UK



SOURCE: Analysis of OBR, Fiscal Risks Report – July 2021; and OBR, Public Finances Databank – December 2021.

Some have argued that low levels of longer-term interest rates reduce the need for such a cautious approach.[60] Lower rates do, of course, alleviate some of the fiscal constraints, as we discussed in Section 3 when considering the fall since the 1980s in the fraction of GDP that is devoted to debt interest. As shown in Figure 30, an important change to the economic environment since the financial crisis has been the move to all-time-low, longer-term interest rates. This reduces the costs of servicing debt, freeing up fiscal resources for policy makers to deploy elsewhere. And as long as the cost of government borrowing remains lower than the growth rate of the economy, favourable dynamics will push down on the level of debt, creating more fiscal space.[61] When borrowing costs are lower than growth rates, the existing stock of debt will naturally fall over time as a share of the economy even if the government rolled over all its debts.

59 For more on the issues raised in this paragraph, see: G Bangham et al., Unhealthy finances: How to support the economy today and repair the public finances tomorrow, Resolution Foundation, November 2020.
60 For a discussion, see: N R Mehrotra & D Sergeyev, 'Debt sustainability in a low interest rate world', Journal of Monetary Economics, 124, pages S1-S18, 2021.
61 For more, see: O J Blanchard, 'Public Debt and Low Interest Rates', American Economic Review, vol. 109, pages 1197-1229, April 2019.

FIGURE 30: **Gilt yields start the 2020s at all-time lows**

Medium-term (10-year when available) UK Government bond yields: 1753-2021

SOURCE: Bank of England, A Millennium of UK Data; Bank of England, Yield Curve Data.

But such dynamics cannot be relied upon. Indeed, the prospect of more inflation-driven increases in Bank of England policy rates in 2022 suggests that borrowing costs will begin to edge up from record lows in the coming months.[62] More broadly, interest rates exhibit substantial variability, and a tendency to revert to conditions in which debt-servicing costs rise above growth rates over a medium-term horizon.[63] Relying on borrowing to meet the spending pressures of the decade ahead would, therefore, be unwise.

An increase in taxation as a share of GDP is the most likely path for dealing with spending pressures in the 2020s

If spending pressures look to be difficult to avoid, and increases in debt would be unsustainable and would lower our resilience to future crises, then tax policy will have to be a key part of the answer to the future fiscal challenges. Indeed, as highlighted in Section 3, a rise in the share of the economy taken in tax has been one of the tools used by governments since the 1990s to meet spending requirements.

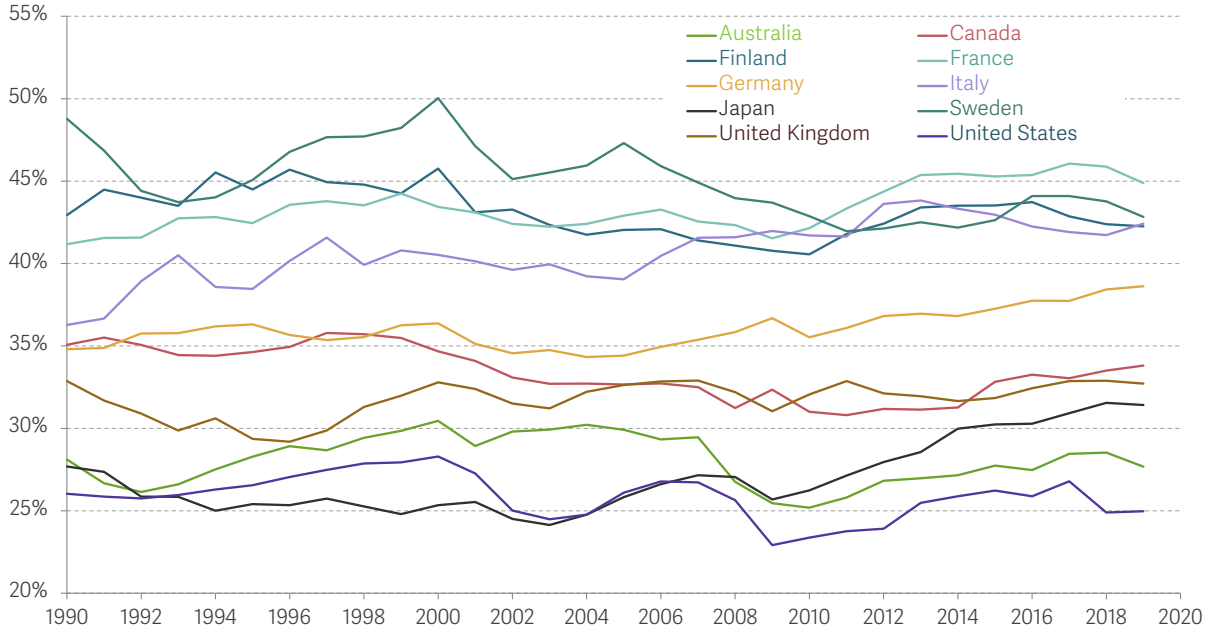
As we showed earlier in Figure 24, although current policies are set to push the tax take to 36 per cent of GDP by 2026-27, but the experience of comparable rich economies tells us that that the UK can go further. Figure 31 shows that the 4-percentage-point rise in tax revenues as a proportion of GDP from the 1996 to 2019 brought the UK closer to

62 The Bank of England's Monetary Policy Committee has signalled that rates are set to rise given in the coming months. See: Minutes of the Monetary Policy Committee meeting ending on 2 February, Bank of England, February 2022.
63 We estimate that, for the UK, the 'half-life' of such reversion is over seven years (based on estimating a simple partial adjustment process using data from 1875 to 2016).

Canadian levels of taxation, but did not mean the UK caught up with levels of European comparators – Germany, for example, increased its own tax take by 3 percentage points relative to GDP. Even factoring the further tax rises expected by 2026-27, the UK tax take would only move above that of pre-pandemic Canada and remain at a relatively lower level than that of most European countries.

FIGURE 31: **The UK raises a low level of tax as a share of GDP relative to comparable European countries**

Total tax revenues as a proportion of GDP, by nation: 1990-2019



NOTES: Figures for the UK are not directly comparable to those presented elsewhere in this report.
SOURCE: Analysis of OECD, Global Revenue Statistics Database.

But if taxes are to go up, a better and fairer approach to raising taxes is required

As the state raises a bigger amount of tax relative to GDP, it becomes more important to think carefully about how this burden falls on the economy, and the efficiency of the system as a whole.

The UK tax system has a large number of inefficiencies.[64] Taxes on work are more complicated than they need be with different allowances, rates and coverage between the Income Tax and National Insurance (NI) systems. The new Health and Social Care Levy adds a further wrinkle, with employees over State Pension Age paying this – and

64 For more on the issues in this sub-section, see: G Bangham et al., Unhealthy finances: How to support the economy today and repair the public finances tomorrow, Resolution Foundation, November 2020, and Dimensions of Tax Design: the Mirrlees Review, Institute for Fiscal Studies, 2010.

only this – element of NI.[65] At the same time, the new levy exacerbates the already large problem of different tax rates for employees vs. the self-employed. Taxes on wealth are also in need of reform. Both the flatness of Council tax and the fact that (in England and Scotland) it's set according to property prices in 1991 means it is starting to resemble the Poll Tax, which it was initially designed to replace.[66] Stamp Duty, although a welcome revenue raiser, discourages home moves. Corporation Tax's headline rate is increasing, but there's little in the way of planning for a long-term strategy to incentivise business investment using the tax system – even if the 'super deduction' will assist with this in the short-term.[67]

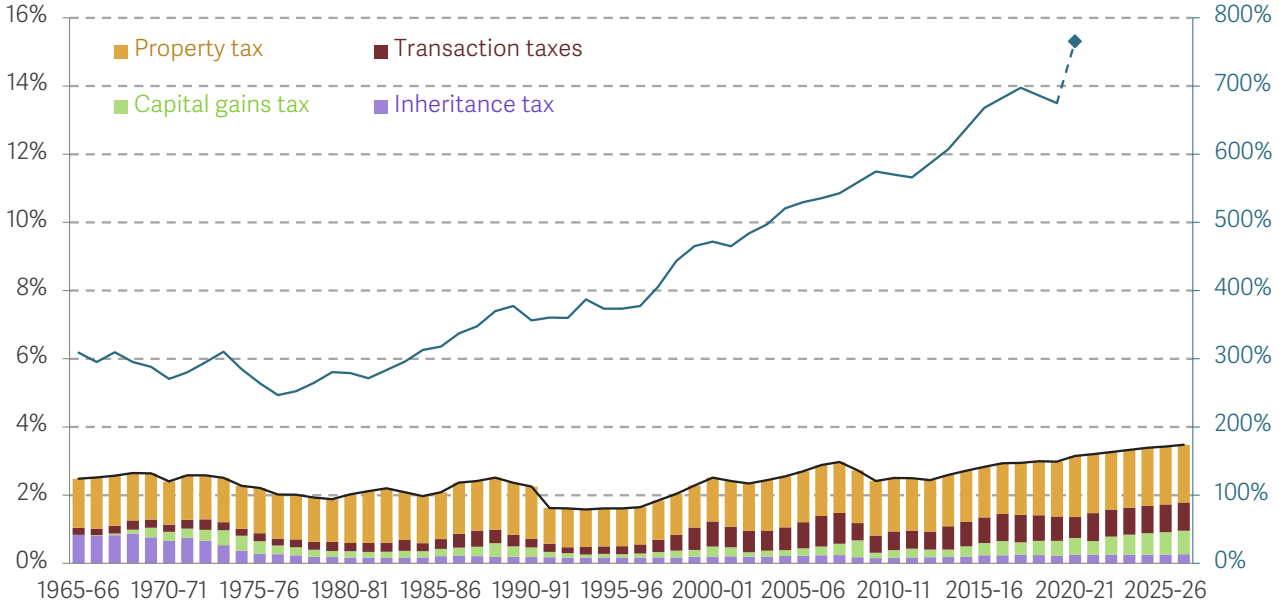
The Government has chosen to turn to the tax system to deal with one of its current spending pressures, announcing the new Health and Social Care levy which is linked to an increase in spending first on clearing pandemic backlogs in the NHS and then to reducing the cost to households of social care. By turning to NI as a source of higher revenues, this move follows the political economy of the last three decades on tax. But it also highlights the problem that this strategy brings. From an international perspective, the UK collects relatively little through social security contributions,[68] but there clearly needs to be a limit on tax rises on earnings after more than a decade of weak wage growth, compounded by a further fall in real earnings post-pandemic.[69]

And this weak wage growth has coincided with a continued increase in wealth, which is relatively under-taxed. Figure 32 highlights the stark difference between the growth in total household wealth and the change in tax revenues from this wealth. In the early-1980s, wealth was three times larger than output, but by 2020-21 we estimate that this was closer to 7.6 times. Meanwhile wealth tax take as a proportion of GDP has increased from 2.2 per cent to 3 per cent: an increase of just 46 per cent compared to the 156 per cent increase in total wealth. This means that the revenue the tax system generates from £100,000 of wealth has almost halved from £780 in 1982 to around £410 in 2020. Making more efforts to tax wealth will increase revenues but should also help address important intergenerational and housing-related inequalities.[70]

65 T Bell at al., Nationally Insured?: New taxes and new spending to address key Department for Health and Social Care priorities, Resolution Foundation, September 2021.
66 A Corlett & L Gardiner, Home affairs: options for reforming property taxation, Resolution Foundation, March 2018.
67 See J Smith, Macro Policy Outlook Q1 2021, Resolution Foundation, April 2021.
68 H Miller, Cutting taxes on income would make UK more unusual relative to other countries, Institute for Fiscal Studies, July 2019.
69 T Bell et al., Labour Market Outlook Q4 2021: Wages and the cost of living in 2022, Resolution Foundation, December 2021. The Bank of England is projecting the weakest growth in real household disposable income on record in 2022 - see Fig. 8 in A Corlett et al., The price is right?, Resolution Foundation, February 2022.
70 For a discussion of the extent of these inequalities see K Henehan et al., An intergenerational audit for the UK 2021, Resolution Foundation, October 2021.

FIGURE 32: **Wealth tax revenues remain low despite high levels of wealth**

Total wealth and wealth taxes as a proportion of GDP: UK, 1965-66 to 2026-27



NOTES: Final data point for total household wealth is for 2020 and uses a projection based on national accounts data.
SOURCE: Analysis of OBR, Economics and Fiscal Outlook; IFS TaxLab, Revenue composition spreadsheet; ONS, Wealth and Asset Survey; D Blake and J Orzag "Annual estimates of personal wealth holdings in the United Kingdom since 1948", Applied Financial Economics 9, 1999.

Without reform, motoring tax revenues will collapse, compounding the pressures facing the state

The switch to electric vehicles is set to wipe out £35 billion of annual tax revenues within the next two decades. If this revenue is to be maintained without taxes having to rise elsewhere, then reform to motoring taxation to replace these revenues directly is required.[71]

The latest evidence suggests that the switch to Battery Electric Vehicles (BEVs) is taking place at a faster pace than even recent forecasts suggest. The Climate Change Committee's (CCC) forecast for BEV take-up published in December 2020 projected that BEV sales would comprise 8 per cent of total sales in 2021. By contrast, official data showed that BEVs accounted for 9 per cent of sales in the first three quarters of 2021, with industry data from late-2021 suggesting that BEVs accounted for 15 per cent of sales in October 2021, 19 per cent in November 2021 and 26 per cent in December 2021.[72]

71 Fuel duty revenue in 2018-19 was £27.9 billion. Revenue fell very slightly in 2019-20 and sharply in 2020-21 as a result of the pandemic. £7 billion in Vehicle Excise Duty revenues will also decline over the coming decades unless action is taken.

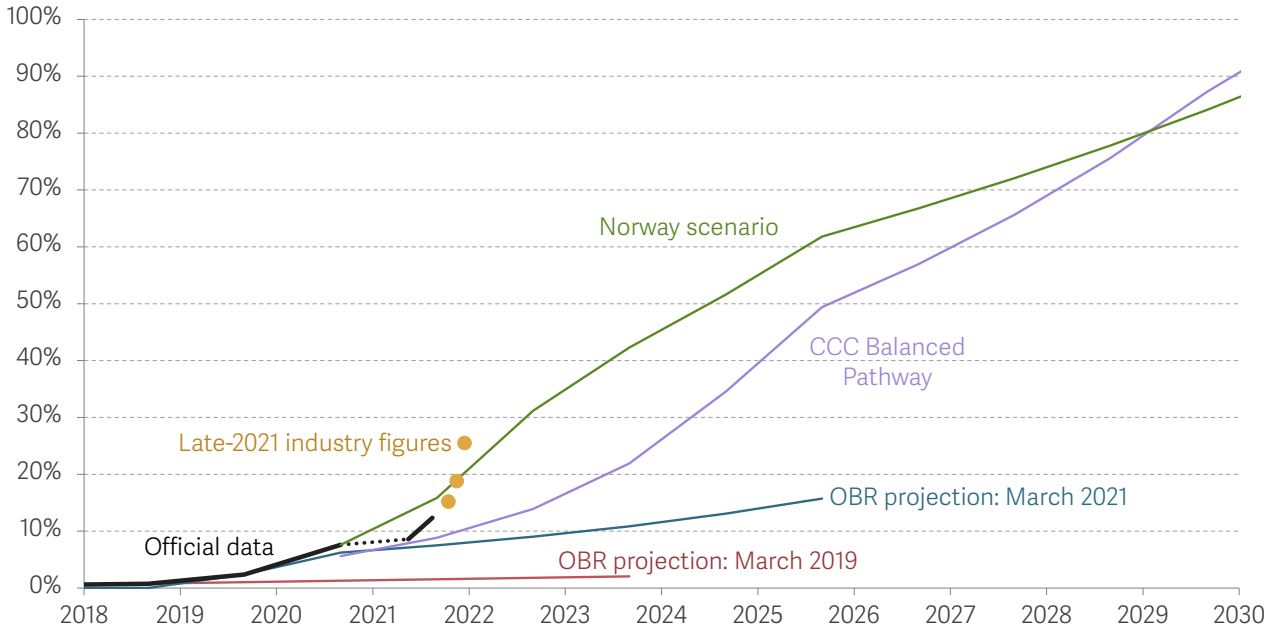
72 Official data is: Department for Transport, Vehicle Statistics, January 2022. Latest industry data is: Society of Motor Manufacturers and Traders, Car Registrations, January 2022. Part of the reason for BEVs increasing sharply as a share of total car sales in 2021 is a fall in total sales as a result of the pandemic and associated supply constraints. Our calculations account for a low number of sales this year and assume a rebound to closer to pre-pandemic sales levels from 2022-23. To the extent that the pick-up in overall sales results in a turn back toward petrol and diesel vehicles the speed of the transition will be slower than modelled here.

Forecasting the sale of BEVs is clearly a challenging task, but there does seem to be a persistent forecasting error with the pace of uptake being under-estimated: Figure 33 shows the OBR's 2019 and 2021 projections and the CCC's 'Balanced Pathway', all of which have under-estimated sales of new BEVs thus far.[73]

If BEV sales do continue to grow at a fast pace, then tax revenues will fall more quickly than is currently anticipated. We model this effect by constructing a new higher adoption scenario with new sales moving in line with the trends observed in Norway since 2016.[74] This is shown by the green line in Figure 33, where new sales reach around 60 per cent of total sales by 2025-26, compared to 50 per cent in the CCCs Balanced Pathway (for more detail on this forecast, see Box 3).

FIGURE 33: **Battery electric vehicle sales are outpacing forecasts**

Outturn and projections for battery electric vehicles as a share of new car sales: UK, 2018 to 2030



NOTES: Data points plotted at mid-point of relevant time period. Latest industry figures as published by SMMT, monthly data for October, November and December 2021. Official data as published by the Department for Transport, annual data for financial years 2017-18 to 2020-21 and quarterly data for Q2 2021 to Q4 2021. CCC forecast is published in calendar years, an estimated financial year forecast is shown here.
SOURCE: OBR, Fiscal Risks Report, July 2021; Department for Transport, Vehicle Licensing Statistics, 13 January 2021; Society of Motor Manufacturers and Traders, Car Registrations, various; CCC, Sixth Carbon Budget, December 2020.

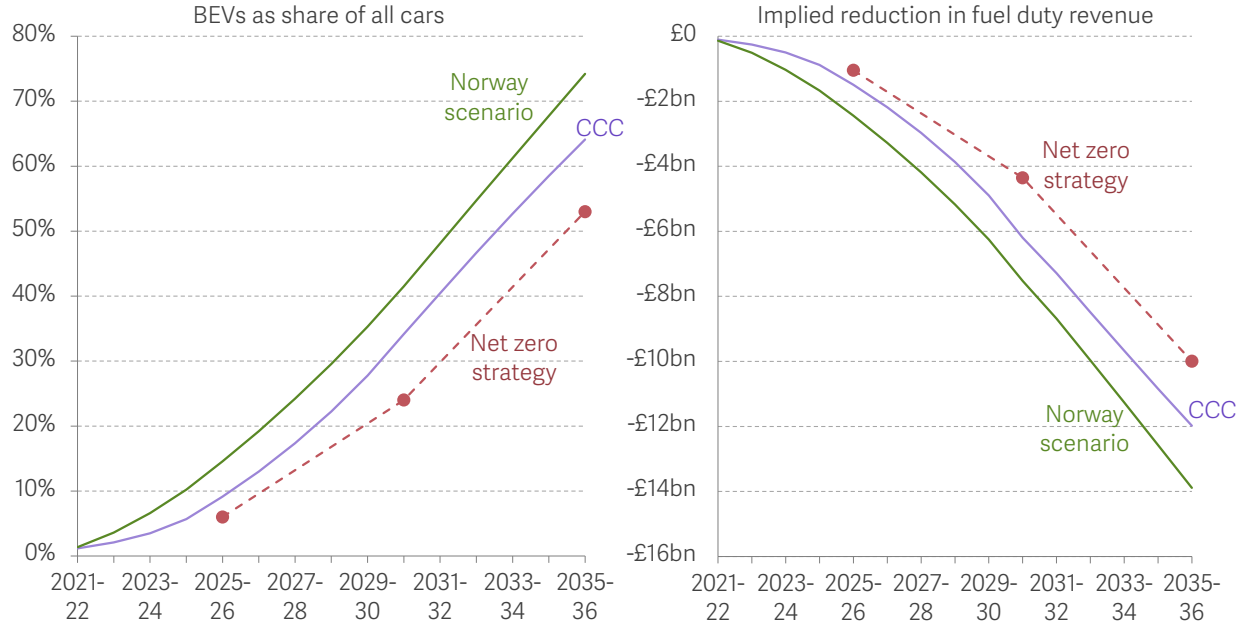
73 In large part, earlier forecasting errors were the result of policy moving faster than expected. The 2019 forecast was published well ahead of the Government announcing the ban on the sale of petrol and diesel cars and vans from 2030. The CCCs Balanced Pathway assumed phase-out date of 2032.

74 Norway has significantly more generous tax incentives for the purchase and running costs of BEVs than in the UK. It provides a useful comparator all the same in so far as the impact of lower BEV prices, well known phase-out dates of diesel and petrol vehicles and roll out of electric chargers could combine to lead to a similar pace of adoption in the UK as has taken place in Norway over the past five years.

The 'Norway scenario' shown above translates into BEVs accounting for 43 per cent of all cars on the road in 2030-31, compared to the CCC estimate of 34 per cent in 2030, and the Government's Net Zero Strategy 'deployment assumption' of 24 per cent in 2030.[75] As such, it implies a reduction in fuel duty tax revenues from cars of £8 billion annually by 2030-31 (in real terms, 2020-21 prices), compared to a £5 billion reduction as implied by the net zero strategy scenario (right-hand side of Figure 34) when calculated on the same basis. Furthermore, although not estimated here, faster adoption of fully electric cars will likely be associated with faster uptake in electric vans and lorries, which would further reduce revenues.

FIGURE 34: **Fuel duty revenue could fall by £8 billion a year by 2030**

Battery Electric Vehicles as a share of all cars and reduction in fuel duty revenue (GDP-deflator adjusted to 2020-21 prices), various scenarios: UK



NOTES: BEVs as share of all cars as published by CCC and in net zero strategy. Fuel duty revenue loss is the amount implied by the same model as used to calculate 'Norway scenario' estimate. Financial years estimates for 'Norway scenario', calendar years for CCC and net zero strategy (e.g. 2030 estimate shown at 2030-31).
SOURCE: Analysis based on: Department for Transport, Vehicle Licensing Statistics, 13 January 2021; Department for Transport, Road Traffic Forecast 2018, September 2018; Society of Motor Manufacturers and Traders, Car Registrations, various; CCC, Sixth Carbon Budget, December 2020; Department for Business, Energy and Industrial Strategy, Net Zero Strategy: Build Back Greener, October 2021; European Alternative Fuels Observatory.

75 See Table 10 in: Department for Business, Energy & Industrial Strategy, Net Zero Strategy: Build Back Greener, October 2021.

BOX 3: Projecting fuel duty revenue loss from the switch to electric cars

Our methodology for our fuel duty revenue loss projections is as follows:

First, we construct a forecast for BEVs as a share of all car sales. Here, we use official outturn data for the first half of 2021-22,[76] industry data for Q3 2021 and assume BEVs will account for 25 per cent of new car sales in Q1 2022.[77] From 2022-23 to 2026-27, we assume that UK BEV sales track the same share as took place in Norway four years previously.[78] From 2027 onwards, we assume a steady increase in the BEV share until it reaches 100 per cent by 2032-33, slightly ahead of the 2035 hybrid phase-out date.

Second, we model how changes in sales translate into changes in the stock of cars. Key assumptions here are that the total number of cars rises from 2022-23 onwards in line with projections provided by the Department of Transport's 2018 road traffic forecasts (growth of 0.9 per cent a year), and that 6 per cent of the stock of cars is replaced each year (in line with inferred trends since 2008).[79] These are important assumptions because they affect how many new cars are added to the UK car fleet each year; slower growth in car numbers or a lower replacement rate of the existing stock would mean a slower transition to BEVs than otherwise.

Third, we forecast the reduction in fuel duty revenue from cars using the results from this flow-to-stock model. Total fuel duty revenue in 2018-19 was £28 billion: we assume 61 per cent of this (or £17 billion) was from cars, in line with estimates of car greenhouse gas emissions as a share of total road transport emissions.[80] We then uprate £17 billion in line with RPI inflation (uprating fuel duty is the stated government policy, and is baked into the OBR's forecasts, even if successive governments have frozen rates since 2010). We then calculate the share of revenue lost in line with the proportion of BEVs within the total stock of cars in each year to 2035-36. The implicit assumption here is that the emissions from petrol and diesel cars will remain flat as the number of vehicles increases over this time period as a result of modal shift away from private vehicles and continued improvements in fuel efficiency.

76 Department for Transport, Vehicle Statistics, 13 January 2021
77 Society of Motor Manufacturers and Traders, Car Registrations, January 2022.
78 European Alternative Fuels Observatory, Vehicles and fleet data. Accessed: 04.02.2022.
79 Department for Transport, Road Traffic Forecast 2018, September 2018
80 Department for Transport, Transport and environment statistics: Autumn 2021, October 2021.

The scenario mapped out here is more 'bullish' than official plans and the latest industry projection for BEVs to account for 30 per cent of all cars by 2030.[81] But with the recent outturn consistently surprising on the upside, the national and international commitments to net zero, and continued evidence on technological improvements (BEV range, charge speed and battery price are all improving) it seems prudent for policy makers to envision an outcome in which tax revenues fall faster than expected.[82]

Ultimately, fuel duty and Vehicle Excise Duty revenues will fall to zero over the coming decades regardless of how fast adoption speeds up in the 2020s. Policy makers will have to choose either to tackle this problem head-on with a new tax on driving or increase taxes elsewhere to the tune of £35 billion.[83]

If the economic growth rate could be raised, it would provide a large tax boost in the 2020s

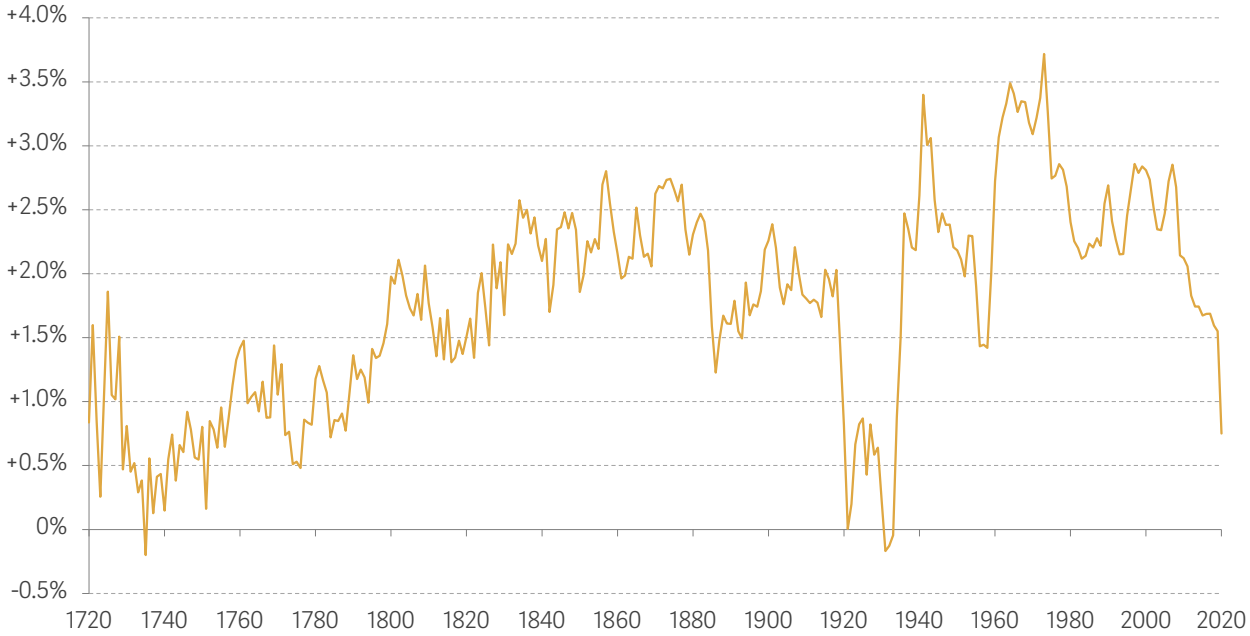
Growth performance in recent years has been dismal, and anything that increased it would play a huge role in reducing the pressures of the next decade. Over the past 15 years since the financial crisis, average growth has been the weakest of any similar period since the Great Depression (Figure 35) and the 15-year average has been weaker in just 10 years in the past two centuries. As a result, higher growth – which is by far and away the most desirable method by which the UK state could accommodate fiscal pressures – has been a policy priority for successive governments. But, despite the attention of policy makers, more rapid growth has, so far at least, proved elusive.

A simple thought experiment illustrates how transformational higher growth could be to the fiscal challenges of the next decade. We estimate that GDP in current prices in 2019 – i.e. even before the economic hit from the pandemic – was around 20 per cent below a continuation of its pre-financial-crisis trend. If we map that into TME using its long-run relationship (right panel of Figure 36) spending is around £200 billion – or around £7,500 per UK household – below the continuation of pre-crisis trends in 2019-20.[84] It is worth stressing that this is a naïve counterfactual – it doesn't attempt to quantify the influence of policy, such as the impact of the period of austerity, or other economic changes over the past 15 years; nor does it attempt to adjust for the fact that increased affluence could increase demand for certain sorts of public spending. But it makes the point that consistent growth of the sort we saw pre-financial crisis would make a colossal difference to the scale of the fiscal challenges facing the governments of the 2020s.

81 Society of Motor Manufacturers and Traders, SMMT new car market and parc outlook to 2035 by powertrain type, June 2021.
82 BloombergNEF, Zero-Emission Vehicles Factbook, November 2021.
83 The Resolution Foundation has previously proposed a road pricing pilot applied to home delivery drivers, see: G Bangham et al., Unhealthy finances: How to support the economy today and repair the public finances tomorrow, Resolution Foundation, November 2020.
84 The relationship between the size of the economy in cash terms and the TME estimate of total spending is estimated (in logs) using ordinary least squares. This relationship can be interpreted as a long-run (or cointegrating) relationship between these two trended variables. In practice, this relationship is equivalent to holding the proportion of TME in nominal GDP fixed over the period of the counterfactual thought experiment.

FIGURE 35: **Growth over the past 15 years has been the weakest since the Great Depression**

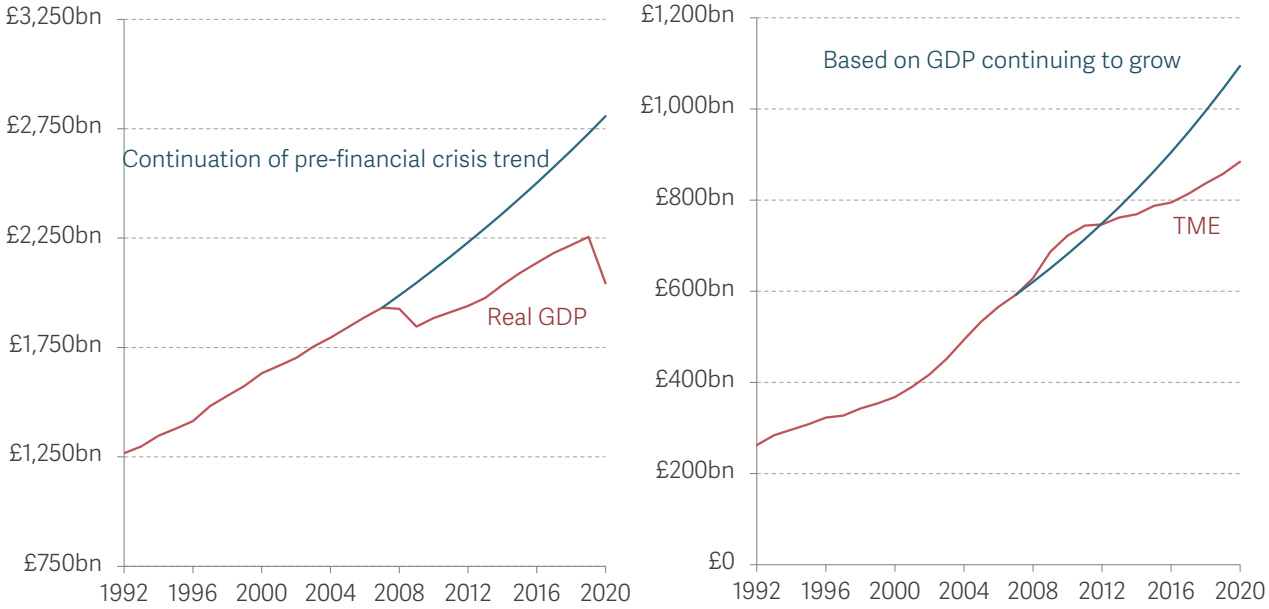
Real GDP growth, 15-year averages: UK



NOTES: From 1949 to 2020 the data are official ONS data, prior to that they are taken from Bank of England, A Millennium of UK Data.
SOURCE: Analysis of ONS; Bank of England, A Millennium of UK Data.

FIGURE 36: **The spending envelope could have been £200 billion larger if growth had continued at pre-financial crisis rates**

Real GDP (outturns and continuation of pre-financial crisis trend) and TME (outturns and based on GDP continuing at pre-financial crisis trend): UK



NOTES: The pre-financial crisis trend is defined here as the 10-year average percentage change in real GDP, three years prior to the pre-financial-crisis peak and for 5 per cent growth in nominal GDP. The mapping to TME is estimated based on the long-run (cointegrating) relationship with nominal GDP.
SOURCE: Analysis of ONS, National Accounts and Public Sector Finances.

The extent to which different policy levers might be able to drive a resurgence in growth following the weakest 15 years since the Great Depression will depend on the extent to which such low growth is a structural phenomenon. That is a subject for future work.

But all governments and all Chancellors say they want higher growth, and the fact it has proved elusive for such a long period illustrates that it would reckless to rely on it. This underlines the importance of the other tax and spending strategies discussed above, and, given that cutting spending seems infeasible, and increasing borrowing would be unwise, then that points to the inevitability of higher taxes in the decade ahead.

Section 5

Conclusion

This paper has evaluated the size of the fiscal pressures in the decade ahead, demonstrating how rising healthcare costs, the State Pension and net zero-related public investment are all set to increase in the coming years. If accommodated in full without reductions in spending elsewhere, these pressures would imply the size of the UK state growing to around 45 per cent of GDP.

There are range of strategies available to governments that wish to absorb these spending pressures in a way that limits the growth in the size of the state.

Trying to resist the pressures caused by ageing and health care directly can be done, but none of these strategies is politically appealing, and all will leave the vast majority of pressures still to be addressed. The approach taken in the 2010s, of holding down social security and day-to-day departmental spending, seems to have reached its limits. The huge reductions in defence spending seen since the war cannot be repeated. Cutting back on investment spending – which fell sharply during the 1970s and 1980s – would be very unwise in the context of prolonged under-investment in the UK and the need to get going on key net zero infrastructure in the 2020s. Higher borrowing is not a sustainable solution to the long-run financing of the spending pressures identified in this report, so policy makers will have to look to tax rises as large component of any 'coping strategy' in the 2020s, at the same time as they will need to reform the structure of the tax system to replace the loss of £35 billion of motoring taxes which is declining rapidly due to the successful decarbonisation of cars.

A return to strong economic growth would limit the increase in tax required, but this cannot be relied on, and so policy makers should look instead at the need to have an effective tax system, alongside one that taxes sources of income fairly. Higher taxation on wealth and non-employment income are very likely to be part of the answer for governments seeking to cope with fiscal pressures in the 2020s.

Reports published as part of The Economy 2030 Inquiry to-date

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2. Levelling up and down Britain: How the labour market recovery varies across the country
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4. The Carbon Crunch: Turning targets into delivery
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For more information on The Economy 2030 Inquiry, visit economy2030.resolutionfoundation.org.

For more information on this report, contact:

Krishan Shah
Economist
Krishan.shah@resolutionfoundation.org

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