



Health Inequalities in Scotland

Trends in the socio-economic determinants of health in Scotland

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An independent review

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Executive summary

Socioeconomic factors are a critical determinant of population health

Socioeconomic factors play a critical role in influencing health and health inequalities.

These socioeconomic factors include the pay, security and nature of the jobs that people do. They include households' financial security, which influences the extent to which people are exposed to stress and anxiety, the time and resources people have to adopt healthy behaviours, and their ability to secure a decent standard of living generally. They also include the physical environment in which people live, both in terms of housing – poor quality or overcrowded housing can affect health in various ways – and neighbourhoods more generally (which influence opportunities for work, play and exercise, and exposure to pollution).

The aim of this report is to examine trends in key socioeconomic determinants of health in Scotland since 1999, the year of the establishment of the Scottish parliament. The report is based on six thematic chapters which examine trends in: the labour market; household income and financial security; education and social mobility; housing; public services; and neighbourhoods. A seventh chapter examines trends in socioeconomic determinants of health during the Covid-19 pandemic and the emerging cost-of-living crisis.

The health of Scotland's population since 1999 is characterised by two key trends: persistently high health inequalities, and an unprecedented stalling in health improvement

A companion report to this by the University of Glasgow has examined trends in health and health inequalities in Scotland since 1999 (Miall et al. 2022). In broad terms, the report makes two particularly striking points:

- First, there are large and persistent inequalities in health between the most and least deprived neighbourhoods in Scotland. These inequalities are observed across a wide range of health outcomes, but are particularly striking in relation to mortality rates and healthy life expectancy. Despite a prolonged focus by policymakers on the issue, health inequalities generally show little sign of narrowing over time.
- Second, since around 2012, the long-run trend for population health to improve year-on-year has stalled. Life expectancy was no higher in 2019 – for males or females – than it was in 2014. This represents an unprecedented and abrupt stalling of progress over a five-year period. Healthy life expectancy decreased by two years between 2011 and 2019, following many years of steady improvement.

Similar broad trends are seen in the socioeconomic data

The key findings of this report, which examines trends in the socioeconomic determinants of health in Scotland, have similarities with the findings from Miall et al. In particular, we find that:

- There are large and persistent inequalities in the socioeconomic determinants of health in Scotland. Inequality of household income has remained high throughout the period. Inequalities of wealth, earnings and educational attainment are also high. While for some

indicators there have been periods of falling inequality, these periods have tended to be short-lived and resulted in fairly small reductions in inequality.

- There was an unprecedented stagnation of earnings and household incomes in Scotland (as in the UK) in the decade following 2010. Median weekly earnings were around £80 per week lower in 2021 than they would have been had earnings growth followed its long-run trend after 2010. Median household income in Scotland was no higher in 2015 than it was in 2007.

The two key trends in Scotland's population health thus share similarities with the key trends in socioeconomic determinants of health in Scotland. There are wide inequalities in health and the socioeconomic determinants of health; and the post-2010 period has seen a slowdown in improvement in life expectancy and living standards.

The fact that similar trends are observed in the health and socioeconomic data does not necessarily mean that one causes the other – the slowdown in health improvement may not be entirely caused by the slowdown in socioeconomic improvement. But given what we know about how socioeconomic factors influence health, we should not be surprised that trends are similar.

The focus of this report is to set out those socioeconomic trends in more detail.

Earnings growth has stagnated and earnings inequality is relatively high

The nature of work can affect people's health in a variety of ways: the nature of the work itself, the level and security of earnings it provides, and the extent to which it provides autonomy and flexibility for employees.

The most significant development in the labour market of the past 22 years has been the unprecedented wage stagnation during and following the financial crisis. Inequality of earnings in Scotland has if anything tended to fall slightly since 2010, although earnings inequality remains higher in Scotland than in many European comparators (and substantially higher than in the Nordic countries).

The past decade has seen some increase in less secure contract types and low-paid self-employed work. However there is little evidence of any widespread increase in subjective job-insecurity, or a fall in job satisfaction across the workforce as a whole.

Another measure of dissatisfaction from work is underemployment, i.e. the proportion of workers who want to work longer hours. Underemployment rates in Scotland increased sharply after the financial crisis (from 7% to 11%), but have now returned to around 8%. Insecure work and underemployment are much more likely to be experienced by younger and lower-paid workers.

Additionally, in-work poverty in Scotland has increased. Over 60% of adults living in poverty live in a household where at least one person works, up from 48% in 1999. This trend largely reflects changes to factors that affect household income, rather than a growth in the proportion of people in low-paying jobs.

Health reasons for economic inactivity have changed over time

The proportion of working age people in Scotland who are economically inactive because of long-term health problems declined from around 7.5% in the mid-2000s to around 5% in the mid-2010s. This decline reflects a fall in the prevalence of musculoskeletal and cardio-vascular problems. However, since the mid-2010s the proportion of working-age people in Scotland who are

economically inactive because of health reasons has begun to increase. This is driven by a rise in the prevalence of depression and mental health problems as causes of inactivity.

The trends over time in Scotland mirror those in the UK. But the proportion of working age people who are inactive for health reasons has consistently been around 1-2 percentage points higher in Scotland than in the UK as a whole. However, this does not mean that inactivity rates in Scotland have been higher, but merely that people in Scotland who are inactive are more likely to cite health as the main reason for inactivity, and less likely to cite other factors, such as caring responsibilities, as the main reason for inactivity.

Household income in Scotland since 1999: a tale of two halves

The income and financial security of households is arguably one of the most critical socioeconomic determinants of health. Income affects health directly by influencing the extent to which households can engage in healthy behaviours and through its effect on mental health. Income also affects health indirectly via its role in shaping inequalities in other socioeconomic determinants of health, such as housing and educational attainment.

Trends in household incomes in Scotland in the period since 1999 can be considered in two parts. Over the first decade to 2009, household incomes generally grew reasonably robustly year on year, and there was some modest increase in inequality of household income. The distinguishing feature of the second decade to 2019 was an unprecedented stagnation in incomes.

Household income and wealth inequalities remain persistently high

The period since 1999 has seen only modest, if any, increases in household income inequality in Scotland across most of the population. This observation however needs to be seen in the context of two important factors.

- First is that income inequality in Scotland is relatively high in an international context. This is largely a legacy of big increases in inequality in the 1980s and early 1990s.
- Second, whilst household inequality across most of the population has remained largely unchanged since 1999, inequality has increased at the tails of the distribution. In other words, the very poorest have become poorer than everyone else, and the very richest have become richer than everyone else. This detachment of the very poorest in society from everyone else has interesting parallels with findings from the companion report from the University of Glasgow (Miall et al. 2022) which showed that on some measures, the health of people in the most deprived areas of Scotland has become detached from that of people in less deprived areas.

Furthermore, there are large and persistent inequalities in income and financial security between different groups. Household incomes are lower amongst ethnic minorities, amongst people with a disability, amongst the lower-qualified, than average. These differences are reflected in other measures of income disadvantage. Food insecurity is much more likely to be experienced by lone parents than for other household types.

Most of these inequalities between groups have remained remarkably persistent over the past 20 – 25 years, mirroring the persistence of health inequalities in Scotland.

Our report also finds extremely high levels of wealth inequality in Scotland. 92% of household wealth is owned by half of households, and 45% of wealth is held by just ten per cent of households. There

is little evidence that the distribution of wealth has become more dispersed over the last 10 years, despite a substantial increase in the overall value of wealth held by households.

Having fallen, poverty is on the rise again

If there is some good news, it is in the fact that the proportion of the population living in relative poverty fell significantly during the period from 1999 until around 2012, from around 23% to 18%. The relative poverty rate in Scotland is not too dissimilar from the average observed in European countries.

However, more recently – since about 2015 – the proportion of the population in both relative poverty and extreme poverty has been on a slow but persistent upward trend, mainly reflecting changes to working age social security benefits. The recent upward trend is particularly marked for child poverty. The relative poverty rate is slightly lower in Scotland than in the UK as a whole, largely because housing costs tend to be somewhat lower.

Large socioeconomic gaps in educational attainment exist from the first year of school through to higher education

Educational attainment is associated with better health outcomes, partly since education is associated with income security, and more secure employment.

Inequalities in educational attainment in Scotland are high, and exist at all levels of education, from Primary 1 through to higher education. At primary level for example, the proportion of pupils from the most deprived neighbourhoods reaching the expected level on the Curriculum for Excellence is around 15-20 percentage points lower than amongst pupils from the least deprived neighbourhoods. Attainment gaps are even higher at senior levels, and in terms of access to higher education.

To the extent that international comparisons are possible, pupils' socioeconomic background is slightly less important in influencing pupils' attainment in Scotland than is the case in England and in many other countries. But socioeconomic background is more important in determining outcomes in Scotland than in several comparator countries.

Inequalities in educational attainment in Scotland have generally remained fairly persistent over time. This persistence is arguably not surprising, given the persistence of broader socioeconomic inequalities of income, wealth and financial security. Inequalities in households resources and financial circumstances are a major determinant of the socioeconomic gap in educational attainment. It seems unlikely that we will make significant progress in closing the socioeconomic gap in attainment until these broader socioeconomic inequalities are addressed.

Intergenerational social mobility in Scotland is low

The existence of these poverty-related attainment gaps reflects the way that parents from relatively more advantaged backgrounds are able to transfer these advantages to their children in a variety of ways. These may include financial mechanisms (better-off parents are better able to provide their children with resources that support learning and development), and non-financial (whether that is through connections to schools or employers, or simply through being able to spend more time with children to support their development).

Another way of looking at the transfer of opportunity across generations is through the concept of social mobility, which measures the extent to which people's education, income or jobs are

associated with those of their parents. In Scotland, the occupations that people have as adults are strongly associated with those that their parents had. We find for example that people whose parents worked in higher paid managerial or professional occupations are over two times more likely to work in similar occupations as adults, compared to people whose parents did not work in those occupations. There is no evidence that intergenerational occupational mobility is improving for younger cohorts compared to older cohorts.

People in Scotland who grow up in a household where nobody was in work are more likely not to work as adults than those who grow up in a household where at least one person is employed. One of the mechanisms that accounts for this result is ill-health, with adults who grow up in a household where nobody is in work much more likely to suffer activity-limiting health problems as adults.

Housing inequalities are shaped by changing tenure patterns

The quality and affordability of housing can affect health in a variety of ways, from the stress that high-cost or poor-quality housing imposes on occupants, to the physiological impacts of living in over-crowded, damp or cold homes.

A key theme over the past twenty years has been the growth in the share of households in the private rental sector. This continues a trend that started pre-devolution. In general, the private rented sector is associated with higher costs and lower quality compared to owner occupation and social housing.

Housing-related benefits played a key role in limiting the impact of higher housing costs on lower-income households, but since 2010, reforms have reduced the protection offered, meaning that housing costs as a proportion of income have risen for the lowest-income households.

There is a clear income gradient with regard to the quality of housing. Lower-income households are more likely to live in houses with damp and mould, are less likely to be able to keep their home warm in the winter, and are more likely to have to deal with external noise, which can contribute to stress and anxiety, and disrupt sleep. People's perceptions of their immediate neighbourhood have also worsened over the past ten years, with experiences of antisocial behaviour increasing.

Air quality has improved...

The characteristics of the places where people live can influence health. One way in which places affect health is through environmental quality.

A more positive development during the past 25 years has been a reasonably consistent improvement in air quality in Scotland, with concentrations of health-harming pollutants including particulate matter and nitrous oxide tending to fall.

...but there remain large spatial disparities in health and the socioeconomic determinants of health

However, the story on some other place-based aspects of the socioeconomy is less positive. People's perceptions of their immediate neighbourhood have worsened over the past ten years, with experience of antisocial behaviour increasing. Worsening perceptions of local neighbourhoods are concerning, as it may lead to people being less likely to socialise or exercise in their neighbourhood, with negative impacts on health.

More broadly there is significant variation in the socioeconomic determinants of health across Scotland's local authority areas. For example, recent data shows that typical weekly earnings range

from £390 in Inverclyde to closer to £600 in East Dunbartonshire. The majority of such variation is attributable to differences in the characteristics and attributes of the people living in those areas, rather than the effect of 'place' itself. But even if spatial variation is attributable largely to 'people' rather than 'places', the resulting spatial variation in socioeconomic factors is important. This is in part because it can further accentuate other forms of inequality, such as education or employment, due to the way it concentrates advantage or disadvantage in particular places.

There is huge variation in rates of child poverty across Scottish local authority areas, from 10% in Shetland and East Dunbartonshire to 30% in Glasgow in the most recent data. In this context it is not surprising that health also varies so markedly across local authority areas.

Austerity policies have contributed to the stalling of longterm health improvement

The financial crisis of 2007/8 preceded, as we noted above, an unprecedented period of stagnation in earnings and living standards. This coincided with the era of 'austerity' – a fiscal consolidation, achieved largely through public spending reductions, at a time of economic weakness.

The fact that the post-2010 period has seen the coinciding of an unprecedented period of real-terms public spending retrenchment (austerity), an unprecedented stagnation of household incomes, and an unprecedented stalling in improvements in mortality and life expectancy, naturally leads to questions about the degree of causality between these things.

Public spending constraint in the period since 2010 is undoubtedly an important contributory factor to the slowdown in health improvement since then.

Arguably the most obvious immediate channel through which this occurred was in terms of the slowdown in public spending on health and social care. Whilst spending on health and social care was 'protected' from cuts during the austerity period, spending increased much more slowly than it had done in previous years, and did not increase in line with the needs associated with a growing and ageing population and increases in treatment costs. In Scotland, spending on health increased by less than one percent a year in the decade after 2009, compared to 3-4% per annum in the previous decade. By 2019/20, health spending was over £3bn less than it would have been had the trend prior to 2010 continued. This slowdown in funding of health and social care services is likely to have increased mortality rates, in turn impacting on life expectancy.

The impact of austerity policies on health is likely to be lagged, so it is possible that some of the impact of austerity may be yet to reveal itself in data. This could be the case of any number of policies that support population health, wellbeing or social inclusion more generally.

Austerity policies may also affect health in the short-term on dimensions other than mortality and life expectancy. For example, there is evidence that changes to working-age social security since 2010, including a greater emphasis on conditionality in the years immediately after 2010, and real terms cuts in the period 2015-19, have been linked to increased prevalence of anxiety and mental health issues. This in turn may make those affected more vulnerable to other health problems in future. (It is too early to assess the effect of more recent benefit changes, including the devolution of some social security payments to the Scottish parliament). Cuts to local government services may have similar effects.

More generally, it is difficult to separate the effects on health of changes in household income associated with cuts to social security benefits, from changes in income associated with the unprecedented earnings stagnation. Austerity arguably did contribute to weak earnings growth post-

2010 via its impact on aggregate demand. But factors other than just austerity have been at play in shaping the slowdown in earnings.

The unequal health impacts of Covid-19 were shaped by socioeconomic inequalities

The health impact of the Covid-19 pandemic was extremely unevenly felt. Age-standardised Covid-19 mortality rates were over twice as high amongst people living in the most deprived fifth of neighbourhoods compared to those living in the least deprived fifth of neighbourhoods. They were also notably higher amongst the most deprived neighbourhoods compared to the second-most deprived quintile of neighbourhoods.

These inequalities in health impact were strongly determined by socioeconomic factors. Lower income households were more exposed to the virus given that workers in those households were less likely to be able to work from home. Lower-income households were also more vulnerable to the virus as a result of their housing circumstances, and because people living in those households were more likely to have pre-existing health conditions.

The pandemic is also likely to leave a legacy of higher socioeconomic inequality, but the future persistence of the pandemic's effect is uncertain

The Covid-19 pandemic, and its associated restrictions, also resulted in significant increases in inequalities in educational attainment. It seems likely that it has also resulted in an increase in wealth inequality.

What we do not know at the moment is the extent to which the impact of the pandemic on educational inequalities will persist for the cohort of pupils affected, and the extent to which the impacts might prove transitory.

So far, the impact of the pandemic on labour markets appears to have been less significant than many people thought it would. By mid-2022, the structure of the labour market does not look too different from how it looked pre-pandemic. However, the employment rates of some groups – particularly those with few qualifications and older men - has not yet returned to pre-pandemic rates.

Economic inactivity remains slightly elevated compared its pre-pandemic rates, but only marginally so. There is an ongoing debate about the extent to which heightened inactivity reflects early retirement for voluntary reasons or withdrawal from the labour market for health reasons.

The cost-of-living crisis poses a significant threat to population health

The cost-of-living crisis, which emerged fairly abruptly at the beginning of 2022, will result in large falls in household disposable incomes during 2022 and 2023. The crisis is clearly affecting low-income households proportionately more than high-income households. This reflects the greater share of poorer households' spending on energy and food, the items which are seeing the largest price rises, combined with poorer households' more limited access to savings, and more limited ability to absorb the effects of price rises by substituting onto cheaper product lines.

The UK government interventions to mitigate the cost-of-living crisis announced in September 2022 are substantial and despite some changes in policy since then, they will go a long way towards mitigating what would otherwise have been a catastrophic fall in livings standards for those with the lowest income.

But even with this intervention the forthcoming winter will be extremely challenging for many households. Households facing rising food and energy costs within the context of a limited budget will have to make difficult decisions about where to cutback, with negative consequences for health.

Conclusions: addressing socioeconomic inequality and stagnation in living standards is essential to reverse stalling health improvements and reduce health inequalities

The health of the population, and health inequalities within the population, are shaped by social and economic circumstances.

The health of Scotland's population during the past 25 years has been characterised by two key issues: persistently high health inequalities, and an unprecedented stalling of improvements in health since around 2012.

These two health trends have similarities in the socioeconomic data: persistently high socioeconomic inequalities, and an unprecedented stagnation of earnings and incomes since around 2010. It cannot be said that these socioeconomic trends are the sole cause of the contemporaneous health slowdown. But these trends in Scotland's socioeconomy, combined with a prolonged funding squeeze on public services, have undoubtedly contributed to the recent stalling in improvement in health. Socioeconomic factors are likely to effect health with a lag, so it is possible that some of the impacts of the last decade's slowdown in economic improvement will continue to affect mortality trends in future years.

Only by addressing these socioeconomic challenges can we expect to make meaningful progress in reducing Scotland's wide health inequalities, and in reversing the recent stalling in mortality improvement.

Addressing these issues will be challenging but is feasible given sufficient political will. Indeed the period from 1999 to around 2010 did witness a number of improvements in the socioeconomic determinants of health in Scotland. Poverty fell, incomes grew, employment increased. In recent years however, more indicators have had a tendency to move in the wrong direction.

The aim of this report has been to describe the nature of inequalities in the socioeconomic determinants of health in Scotland, but not to make specific recommendations about how those inequalities should be addressed. A subsequent report, produced by The Health Foundation, advised by a group of leading experts on public health and the economy, will consider how Scotland can build on strong policy intent to reverse stubbornly high inequalities in the socio economic determinants of health, and create a sustainable approach to closing the gap in health outcomes.

As reiterated in the Marmot Review, health and health inequalities are good measures of how well society is doing: how well it is creating the conditions for people to lead lives they have reason to value. Scotland can, and should, do better.

1. Introduction

Aims and scope

The recently published University of Glasgow report on health inequalities in Scotland examines trends in health and health inequalities in Scotland since 1999 (Miall et al. 2022). In broad terms the report makes two particularly striking points:

- First, the report finds large and persistent inequalities in health between the most and least deprived neighbourhoods in Scotland. These inequalities are observed across a wide range of health outcomes, but are particularly striking in relation to mortality rates and healthy life expectancy. Despite a prolonged focus by policymakers on the issue, health inequalities show little sign of narrowing over time. In fact, there is a case for saying that health inequalities are more likely to have increased than decreased over time.
- Second, the report finds that, since about 2012, the long-run trend for population health to improve year-on-year has stalled. Life expectancy was no higher in 2019 – for males or females – than it was in 2014. This represents an unprecedented, and abrupt, stalling of progress over a five-year period. Healthy life expectancy increased markedly until 2011, but then decreased by two years between 2011 and 2019.

It is widely acknowledged that socioeconomic factors play a substantial role in influencing health, and health inequalities. These socioeconomic factors relate to the circumstances in which people live, including but not limited to their financial resources and security of resources; the extent to which they have control over their lives, and the nature of the physical environment in which they live. These factors influence the time and resources that people have to adopt healthy behaviours, and the extent to which they are exposed to stress and anxiety.

This report, funded by The Health Foundation, examines trends in the socioeconomic determinants of health and health inequalities in Scotland since the establishment of the Scottish Parliament in 1999. It aims to provide an in-depth analysis of a wide range of socioeconomic determinants of health over the intervening 22 years, and to consider how those determinants have evolved differently for different groups in society. It discusses in broad terms the extent to which key trends are likely to have been influenced by particular types of policy change or wider economic issues.

Whilst the report's focus is on describing trends since 1999, it also examines trends over a longer period, where the data allows this, and where that longer timeframe is useful in providing context. We also, where we can, provide analysis of trends in comparative data for either the UK as a whole, or the rest of the UK apart from Scotland (we refer to this as rUK). Occasionally, where data permits, we also provide comparative data for countries outside the UK, which can provide useful context.

The report takes inspiration from the Marmot review of health inequalities in England, 'Fair Society, Health Lives' published in 2010, and the subsequent report 'Health equity in England: the Marmot Review 10 years on' published in 2020. Indeed, the motivation for this report is to provide a Scottish perspective on the issues highlighted in these previous reports.

Whilst we might expect many similarities between trends in the socioeconomic determinants of health in Scotland with those in England, it is reasonable to expect differences too. Policy on issues including health and social care, education, housing, and (in recent years), some aspects of social security, are devolved to the Scottish Parliament (albeit within a macroeconomic and fiscal context

set by the UK government). And whilst the Scottish economy is inextricably bound up in the fortunes of the UK economy, some aspects of the Scottish economy – such as the sparsity of some remote areas, the historic significance of manufacturing employment, and historic differences in the housing market – might influence trends in socioeconomic determinants of health differently in Scotland compared to other parts of the UK.

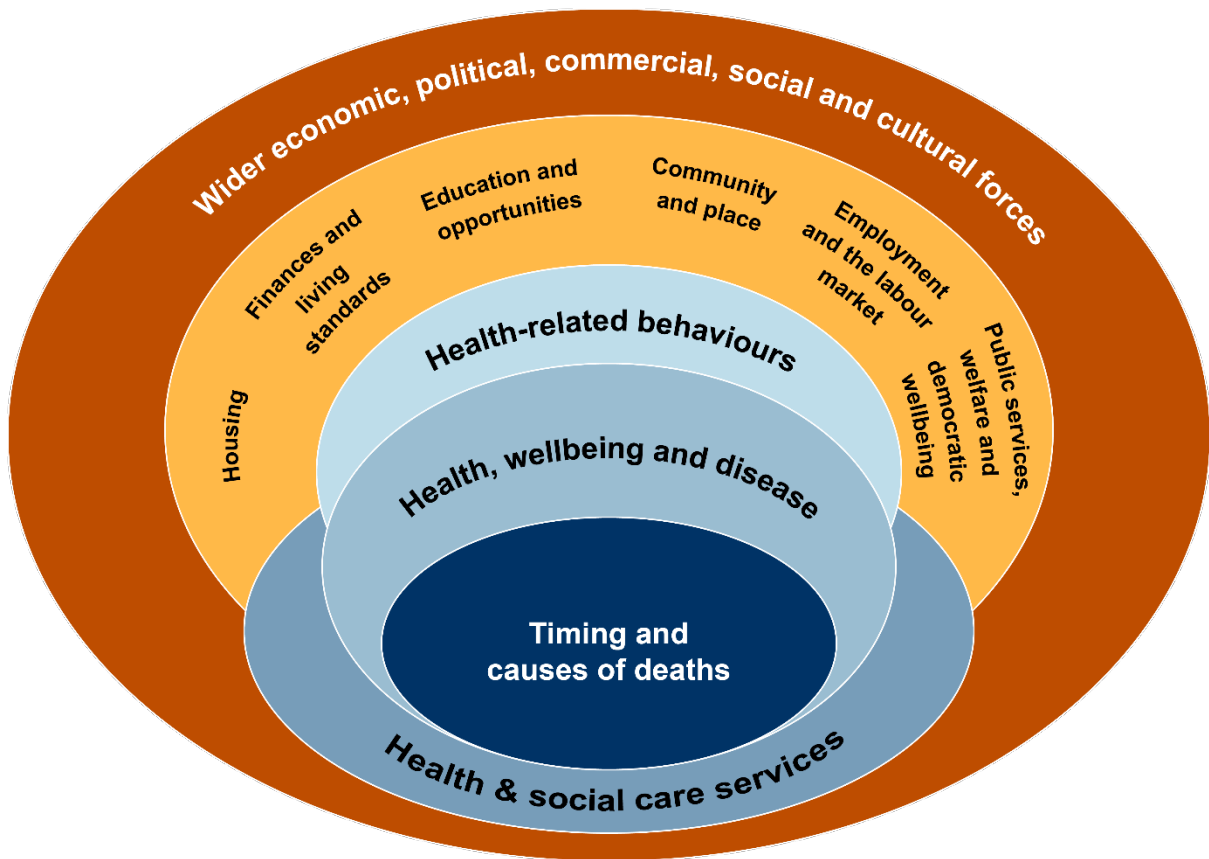
This report should be read in conjunction with the companion report from the University of Glasgow (Miall et al. 2022), also funded by the Health Foundation as part of its wider review into health inequalities in Scotland. That report sets out trends in health inequalities in Scotland since 1999; this report considers trends in the socioeconomic determinants of health inequalities.

Figure 1.1 illustrates how the scope of this report interrelates with the scope of the companion report from the Glasgow team. The Glasgow report (Miall et al. 2022) describes trends in health inequalities, with a central focus on timing and causes of death and health and wellbeing outcomes, alongside health-related behaviours and health and social care services. These are the domains shown in blue in Figure 1.1.

This report describes trends in the socioeconomic determinants of health in Scotland, divided into the six thematic areas shown in amber in Figure 1.1.

It is not the intention of these reports, individually or in combination, to quantify the extent to which particular socioeconomic factors have caused particular trends in health or health inequalities. But where we have evidence to do so, we discuss the extent to which various trends in the socioeconomic determinants of health are likely (or not) to have contributed to particular health trends.

Figure 1.1: Interrelation between this report and the University of Glasgow report on health inequalities in Scotland (Miall et al. 2022)



Structure

This report discusses the socioeconomic determinants of health in six domains, with a chapter dedicated to each domain. The six domains are:

- Employment and work – including issues such as earnings inequalities and the quality and security of work.
- Financial security and wellbeing – including trends in household incomes and inequality, poverty, and wealth and debt.
- Education and social mobility – including trends in educational inequality at different levels, and intergenerational transfer of opportunity.
- Housing – including inequalities of access, cost and quality.
- Public services and democratic wellbeing – including funding of public services, satisfaction with public services, and trust in and engagement with democratic institutions.
- Neighbourhoods, community and place.

These six domains were identified through a review of the existing evidence on the socioeconomic determinants of health, particularly in a Scottish context, and consultation with stakeholders and the Expert Advisory Group that has supported this work.

Additionally, Chapter 8 examines the way that trends in these socioeconomic determinants of health have been shaped in recent years by the Covid-19 pandemic, and considers how these trends might be shaped in the immediate future, given emerging economic trends and policy priorities.

2. Employment, work, and the labour market

Being unemployed is associated with poorer health than being in employment. But the pay, conditions and quality of work can also influence health. This chapter examines trends in employment, earnings, and several measures of job quality and satisfaction with work.

Key points

- Since 1999 there has been a steady increase in female employment, particularly for those aged 50+. The overall male employment rate is little different today than it was in 1999, although this masks a higher employment rate amongst older men and lower rate amongst younger men than 20 years ago.
- The decade since 2009 witnessed an unprecedented fall and then stagnation in real earnings. By 2021, male earnings were around £100 per week lower than they would have been had they continued the pre-2010 trend, whilst female earnings were around £60 per week lower than we might have expected on the basis of the pre-2010 trend.
- Inequality in weekly earnings amongst both men and women in Scotland increased between 1999 and the aftermath of the financial crisis in 2011/12. Since then, earnings inequality has fallen slightly. This reflects real terms increases in the minimum wage (affecting female earnings in particular) and a reduction in the trend of increased part-time employment amongst men.
- By 2021, earnings inequality was at a similar level as it had been in 1999. Earnings inequality in Scotland is on a par with average earnings inequality in European countries.
- The period since 2010 has seen an increase in some types of insecure work in Scotland, including zero-hours contracts and low-paid self-employment. In the context of the overall growth in employment since 2010, growth in these employment types has been significant.
- Younger workers, less qualified workers and low-paid workers are much more likely to be employed in insecure forms of contract than older or better paid workers. They are also more likely to be underemployed, where underemployment measures the extent to which someone would like to work longer hours, and can be interpreted as a proxy for dissatisfaction with earnings.
- Across the workforce as a whole, however, there is little evidence that subjective measures of job satisfaction have worsened over the decade.
- The poverty risk for families with at least one adult in work has increased throughout the period since 1999. This trend reflects increased employment together with a growth in the incomes of pensioner families relative to working age families. How the trend matters for health outcomes is complex, since it depends in part on the question of whether being employed on a low income offers any advantage over being unemployed and on a low-income.
- A slightly higher proportion of working age people in Scotland are economically inactive (i.e. not in work or able to start work) because of long-term health issues than in the rest of the UK (equivalent to around 40,000 people). But a slight paradox is that people in Scotland are not much more likely to be economically inactive – they are just more likely to give health as the reason for inactivity, and less likely to give other reasons, such as caring responsibilities, as explanation for inactivity.

- The proportion of working age people in Scotland who are inactive for health reasons fell during the decade from 1999 to 2010, reflecting reduced prevalence of musculoskeletal and cardiovascular problems as causes of inactivity. But in the decade after 2010, there was no further fall in the proportion of the working age population inactive for health reasons as depression, anxiety and other mental health issues became more significant as reasons for economic inactivity.

Work, employment and health

Employment, or the lack of it, can have considerable influence on health and wellbeing.

Being in employment is associated with better health than being unemployed. Whilst the direction of causation is difficult to assess (does being in employment affect health, or are the less healthy more likely not to work?), a reasonable body of evidence points to job loss as a cause of ill health (e.g. Kromydas et al. 2021). The nature of employment doesn't just affect health contemporaneously, but can also affect an individual's health over the longer-term.

The nature of a job itself can also influence health. The pay and earnings associated with a job can influence health and wellbeing via its link to financial security. This is true both for pay in real terms, but also relative to others (i.e. inequality of earnings matters as well as what earnings allows someone to consume in absolute terms). The relationship between earnings and health is not necessarily linear, but might plausibly be stronger at lower levels of earnings – for example, at low levels of earnings, increases in earnings might have material effects on health, but at higher levels of earnings, subsequent increases may have a more muted impact.

As well as earnings itself, the degree of volatility, uncertainty and insecurity of earnings also has impacts on health (e.g. Akanni et al. 2021; Henly and Lambert, 2014). Being underemployed (having fewer hours of paid work than desired) is also associated with higher levels of stress, anxiousness and depression (Bell and Blanchflower, 2019).

Non pecuniary aspects of a job can affect health too. These include aspects such as the degree of autonomy a worker has over their job, the flexibility they have over when and how they do their job, and other job conditions such as safety and comfort of the environment. Sense of control, and status, are also important factors (Whitehead et al. 2016).

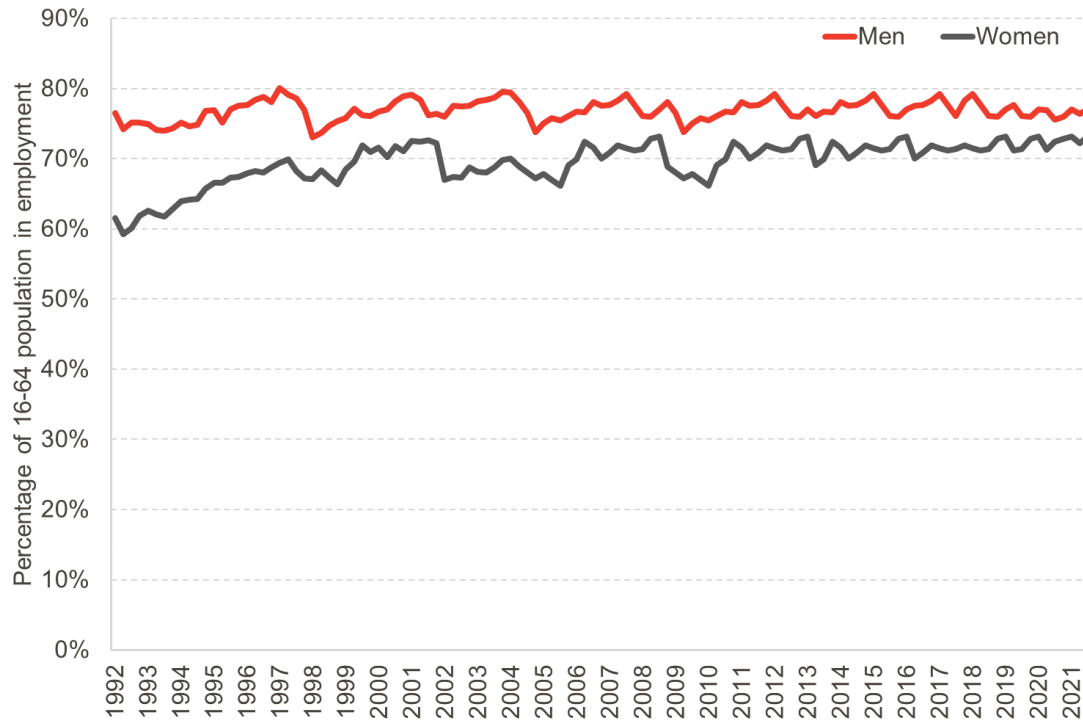
Labour market law and regulation (e.g. around working time or the use of particular contract types) are determined at UK level, and the role of labour market institutions (such as the national minimum wage) are also determined at UK level. The Scottish government therefore has limited direct ability to influence trends in aspects of work and employment, although it can and does influence labour market practices (through initiatives such as the Living Wage), and training and employability initiatives are devolved.

Employment rate changes vary significantly by age and sex

To provide some context for what follows, we first examine broad changes in employment rate. Employment rates for working age men in Scotland have followed a cyclical pattern since 1999. The rate increased from 75% in 1999 to 80% in 2008, before falling to 73% in 2010 following the financial crisis. It then increased back to 80% in 2019, before falling again during the Covid-19 pandemic (Chart 2.1).

For women, whilst the impact of the financial crisis and subsequent recession can be seen in the employment rate figures, there has also been a more obvious systematic upward trend in the employment rate over the past 25 years. Most recent data indicates an employment rate of 73%, up from 60% in the mid-1990s. The immediate impact of the pandemic seems to have been to further narrow the historic employment rate gap between men and women.

Chart 2.1: Male and female employment rates have been converging
16-64 employment rates, Scotland



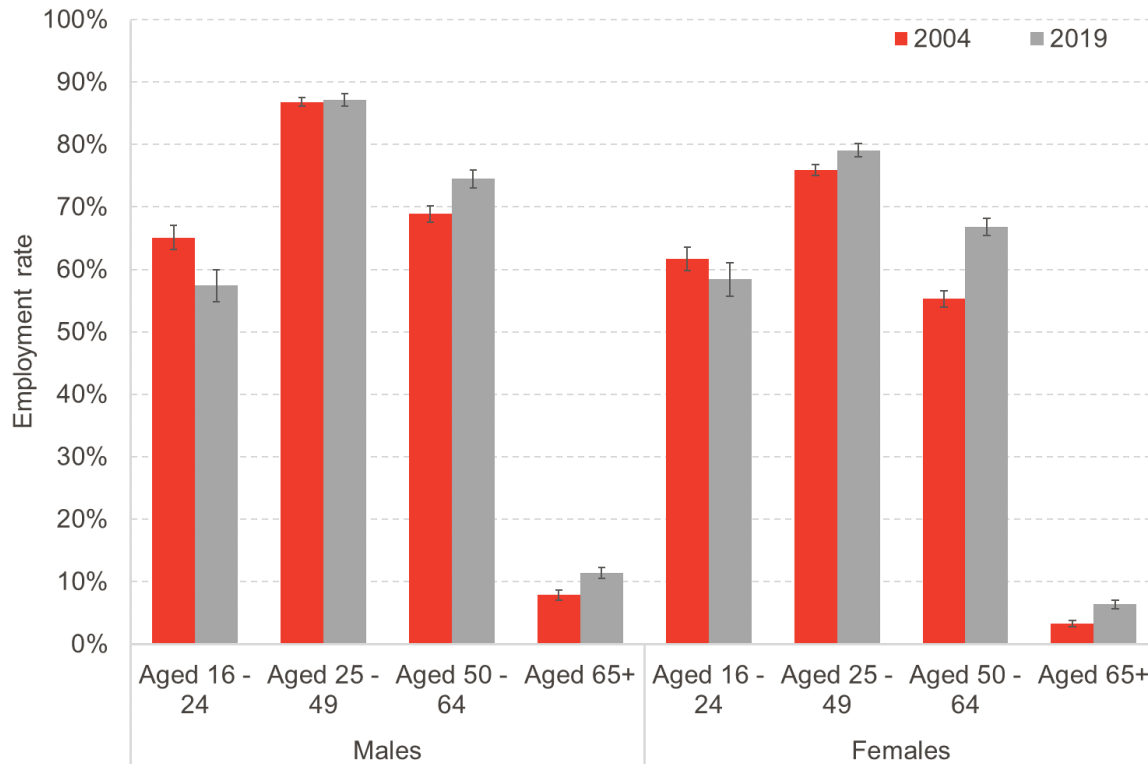
Source: ONS Regional Labour Market Statistics

However, one issue that is not apparent from Chart 2.1 is significant changes in employment rate by age group. As seen in Chart 2.2, employment rates for those aged under 25 have fallen markedly between 2004 and the eve of the pandemic in 2019. This largely reflects increasing participation in further and higher education, a trend we discuss further in Chapter 4.

Whilst the employment rate of those aged under 25 has declined, employment amongst older age groups has increased, reflecting later retirement. The trend towards increased employment rates amongst older age groups is particularly marked amongst women, which of course in part reflects increases in the State Pension Age.

Chart 2.2: Employment rates have declined amongst the young and increased among older groups

Employment rates, Scotland



Source: ONS Regional Labour Market Statistics. Notes: error bars show 95% confidence intervals

A decade of earnings stagnation

In the decade up to 2009, median real weekly earnings (that is to say, earnings after the effects of price inflation) grew relatively healthily each year (Chart 2.3). This reflected a longer period of robust annual growth in median real earnings.

The decade since 2009 witnessed an unprecedented fall and then stagnation in real earnings. Male earnings have recently returned to their 2009 real terms level. Female earnings recovered to their 2009 level slightly more quickly. But both male and female earnings remain well below where we would expect them to be had they continued their long-run trend. By 2021, male earnings were around £100 lower than they would have been had they continued the pre-2010 trend, whilst female earnings were around £60 lower than we might have expected on the basis of the pre-2010 trend.

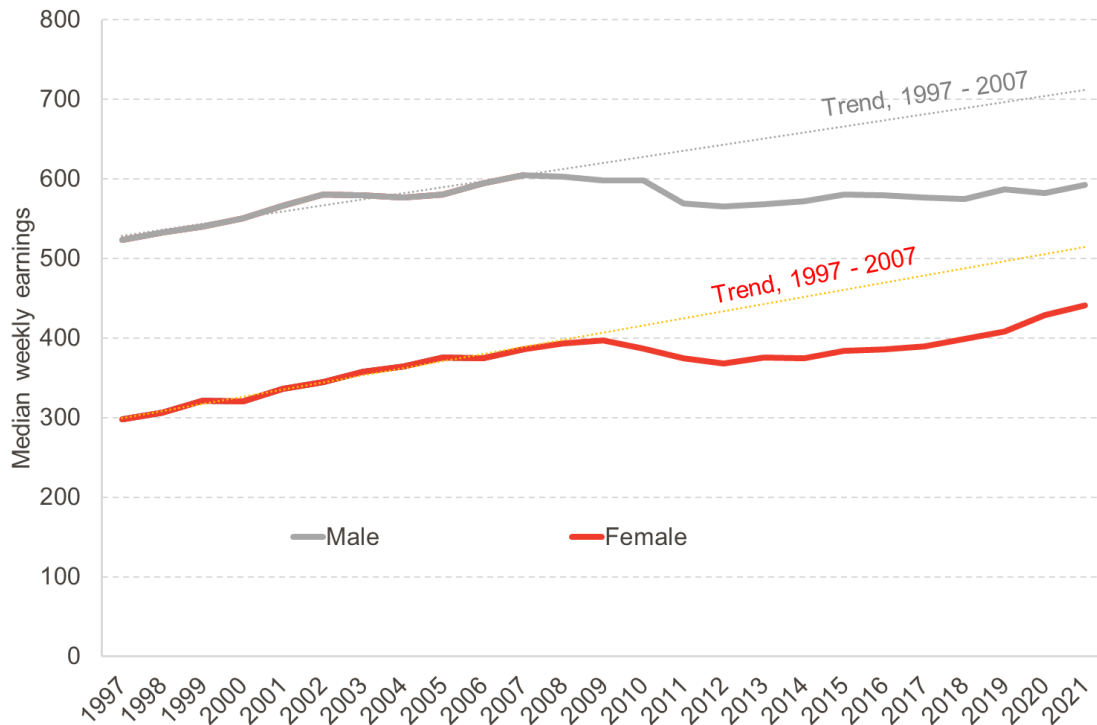
Chart 2.3 shows the trend in real weekly earnings for the median worker. But the decade long period of earnings stagnation is observed across virtually the whole of the earnings distribution (i.e. for lower and higher earners alike).

The decade long period of real earnings stagnation is observed across the whole of the UK; Scotland's experience is not materially different from what has happened across the UK as a whole (Machin et al. 2014). Its precise causes are still debated, but include weak growth of GDP and hence productivity, in part because of a sustained lack of investment; a weakening of labour bargaining power; a widening of inequality which breaks the link between average and median earnings

growth; and growth in non-pay forms of remuneration (e.g. employer pension contributions) as a share of total remuneration.

Chart 2.3: The post-2009 period has seen an unprecedented decade of earnings stagnation for the typical worker

Median weekly earnings (£), all in employment (Scotland)



Source: Annual Survey of Hours and Earnings, accessed from nomisweb. Note: wages are deflated by the CPIH.

Earnings inequalities are high, but have not risen in the last decade

We have just seen that real earnings stagnated for most workers from 2009 onwards. Real earnings are likely to influence health via their impact on incomes and financial security. But evidence suggests that relative income is likely to matter too as a determinant of health. So what can we say about earnings inequality in Scotland?

There are of course many different ways of looking at inequalities in income from employment. Income itself can be measured on the basis of hourly pay, or weekly or annual earnings; and it can include or exclude overtime and bonus payments. For any given measure of income, inequality itself can also be measured in different ways.

In this analysis, we focus on inequality in weekly earnings including overtime, since this gives a more reliable picture of the financial reward to work, taking into account both the hourly wage and hours worked. We measure inequality by looking at the earnings ratio of a worker at the 90th percentile relative to one at the 10th percentile, which gives a useful and easy to understand overview of the dispersion of earnings.

This particular measure of earnings inequality increased throughout the 1990s and 2000s (Chart 2.4). The increase was particularly apparent for men – a man at the 90th percentile earned four times as

much per week as one at the 10th percentile in 1999, and this had increased to five times by 2012. For women the increase was less marked.

The increase in male earnings inequality was partly because of increased inequality in hourly wages. But it was also the result of changes in hours worked. There were two aspects of this story.

- First, a rise in part-time working – this in itself widened the dispersion of weekly earnings, but the increase in part-time working was concentrated amongst lower paid men.
- Second, a fall in the proportion of low-paid men who worked long hours. In the late 1990s, low-paid men typically worked longer hours than higher paid men, offsetting some of the effect of hourly wage inequality. But by 2010, low-paid men no longer worked longer hours than higher paid men (Fraser of Allander Institute, 2021).

It is fair to say that we still do not know exactly what has caused the trends, and the extent to which they reflect voluntary and involuntary factors. For some, the ability to work part-time to supplement income perhaps whilst fitting around other unpaid activities is likely to be viewed positively. For others, part-time working may reflect an absence of full-time positions (we return to the underemployment issue subsequently), or working under 16 hours per week to avoid an impact on some benefits.

After 2010, male earnings inequality fell in Scotland. This reflects a similar trend documented for the UK as a whole (e.g. Giupponi and Machin, 2022; Cribb et al. 2022). The trend reflects two things in particular: relatively steep increases in the minimum wage, which have reduced inequality of hourly wages; and a tapering off in the trend towards increased part-time work.

Amongst women, trends in earnings inequality have been broadly similar, with inequality increasing in the lead up to the financial crisis, and falling since then. The fall in female earnings inequality has been particularly steep since 2010 in part because the effect of rises in the minimum wage have a more marked effect on female earnings than male earnings (since women are more likely to be employed in jobs that pay at or just above the legal minimum).

It is also worth noting that the 90-10 ratio measure of earnings inequality is higher among women than men. The reason for this relates to hours worked – women work a much more diverse pattern of hours, and thus the 10th percentile of earnings is significantly lower than the 90th percentile, because the earnings of a worker at the 10th percentile is low as a result of working relatively few hours.

Although the readily available data on wage inequality in Scotland is only available since 1997, it is important to put the trends discussed here into a longer-term context. For the UK as a whole, substantial increases in earnings inequality were observed during the 1980s, and to a lesser extent the early 1990s. We can be confident that this observation will also hold for Scotland (Bell and Eiser, 2014). Thus although earnings inequality has fallen during the 2010s, this is really only the first decade in which earnings inequality has fallen since the start of the 1980s. By the end of the 2010s, earnings inequality remained substantially higher than it did at the end of the 1970s, despite the recent falls.

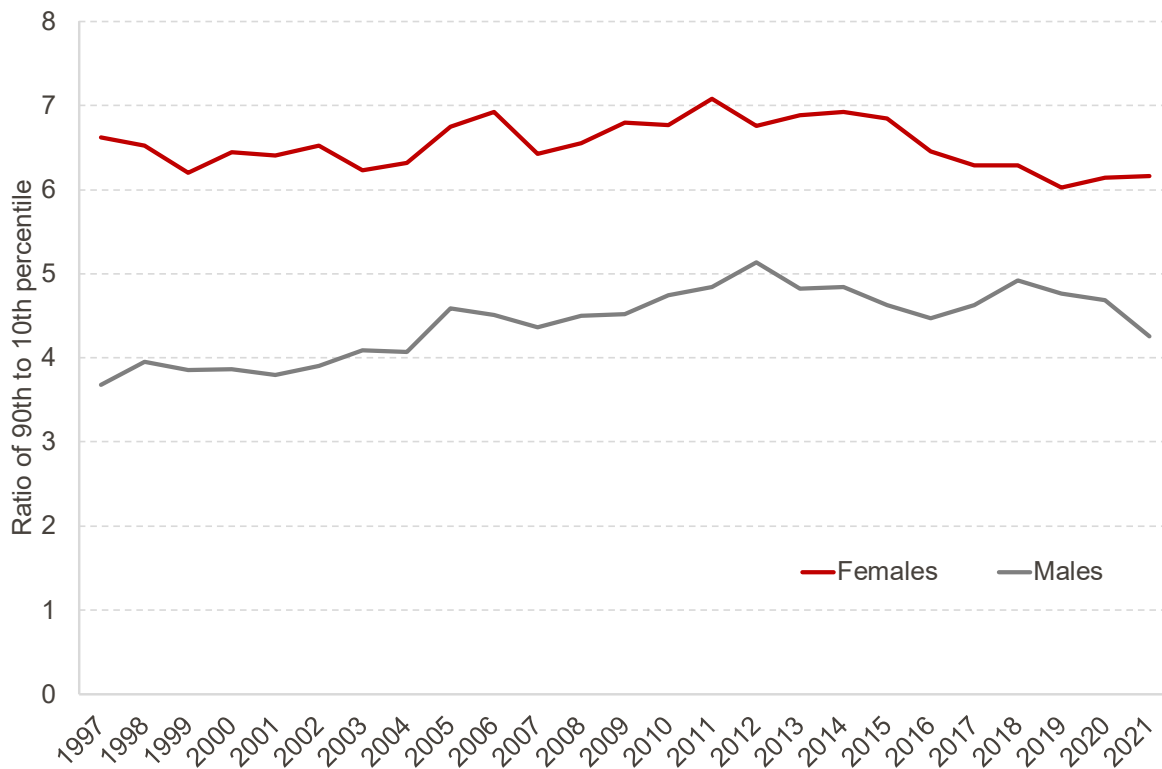
We can also place earnings inequality in Scotland in an international context. Chart 2.5 shows the 90:10 ratio of earnings inequality amongst full-time workers in a selection of comparator countries. In 2018, the 90:10 measure of inequality in Scotland was marginally higher than the equivalent measure in France, similar to the measure in Australia and Spain, and marginally lower than the measure in Germany. Earnings inequality is lower in Scotland than in England (largely because of

high levels of earnings inequality in and around London). But earnings inequality is significantly higher in Scotland than it is in Nordic countries, Belgium and Italy.

Note however that this measure of earnings inequality has fallen in the UK nations since 2002, whereas it has tended to increase in the Nordic countries as well as Ireland and Germany. In 2002, Scotland was noticeably higher in the earnings inequality rankings, above Ireland, Germany and Australia.

Chart 2.4: Earnings inequality rose in the decade until 2010, but has not increased since then

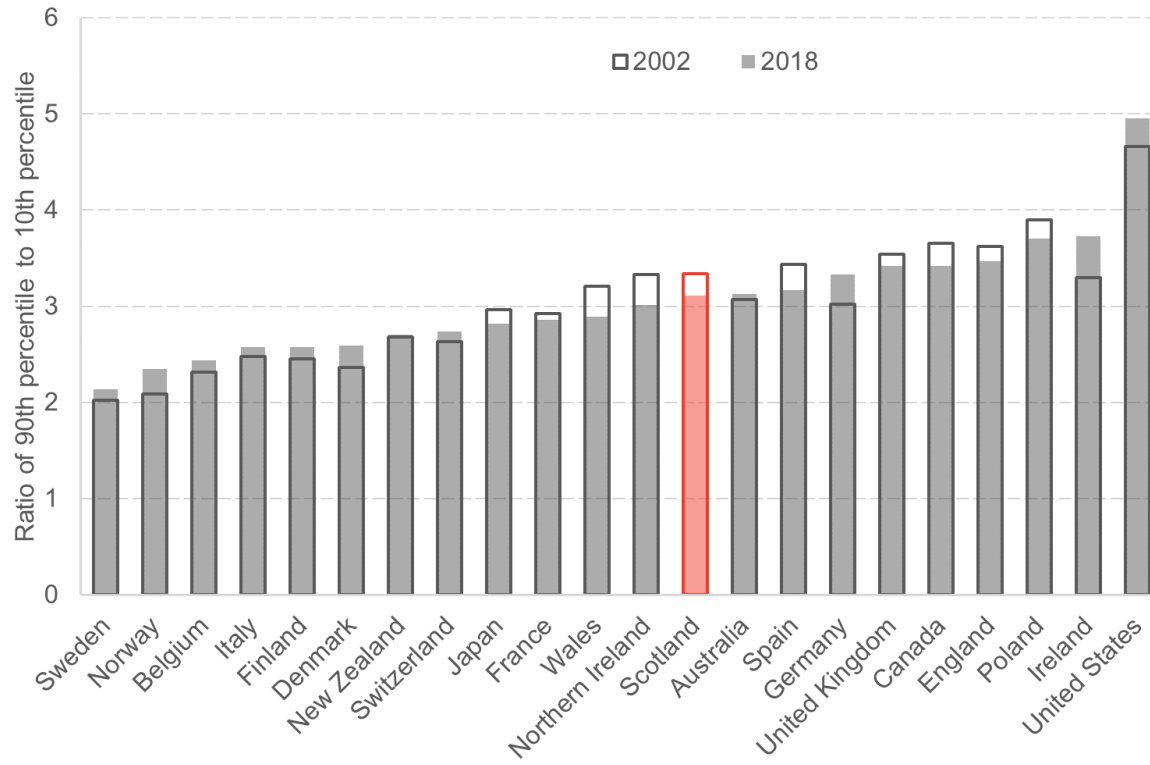
Ratio of 90th to 10th percentile of weekly earnings, all in employment (Scotland)



Source: Annual Survey of Hours and Earnings, accessed from nomisweb.

Chart 2.5: Earnings inequality in Scotland is higher than in Nordic countries, but on a par with major European economies

Ratio of 90th to 10th percentile of weekly earnings for full-time employees, selected OECD countries, 2002 and 2018



Source: OECD earnings statistics.

Has there been growth of insecure or low-paid work?

The story up until this point has been mixed. The last decade has seen employment growth and some decline in earnings inequality, albeit from a relatively high level in historic terms. Nonetheless, there has been a lot of concern, particularly in the period since 2010, that recent employment growth has been undermined by a growth in jobs that are insecure or low-paid.

There are two specific aspects of this:

- First, the notion that many new jobs offer fewer hours and hence lower pay than individuals would like (which might reflect employers' business models requiring greater flexibility to manage fluctuations in demand).
- Second, the notion that work itself is becoming more insecure or precarious. A job might be perceived as insecure if it provides uncertain and volatile hours and/or earnings from one week to the next. Or the job itself might be insecure in the sense of being temporary, or being associated with high probability of termination.

We now look at each of these issues – underemployment and insecurity – in turn.

Underemployment increased following the financial crisis, particularly amongst the lowest paid

The post-financial crisis period saw a period of relatively strong growth in part-time jobs, particularly for men. This gave rise to concerns that many of the jobs created in the aftermath of the crisis were not providing the level of income that workers desired.

We can measure the extent of this issue by looking at trends in underemployment.

Underemployment measures the extent to which workers want to work longer hours than they do currently, either in their existing job, a new job with longer hours, or through securing an additional job¹. It is a self-reported, subjective measure of the extent to which people are satisfied with their current working hours. The measure of underemployment we use here should not be confused with skills underutilisation, which is sometimes also referred to as underemployment.

Underemployment can be seen as a proxy for dissatisfaction with the financial reward from work. Bell and Blanchflower (2019) show that the underemployed are more likely to suffer from depression, and are more likely to be anxious and unhappy, compared to workers who are not underemployed. They point out however that this does not necessarily imply that underemployment is the cause of these associations: it may be that depression affects underemployment, or that other unobserved variables affect both depression and underemployment.

The underemployment rate in Scotland – the proportion of workers who are underemployed – rose significantly in the aftermath of the financial crisis (Chart 2.6). It has since fallen, but it remains higher than it was pre-financial crisis. In this sense it mirrors the underemployment trend for the UK as a whole.

The increase in underemployment post financial crisis – which is common to men and women and different age groups - lends weight to the argument that underemployment rate is a proxy for dissatisfaction with the financial rewards from work, because the increase in underemployment mirrors the timing of the decline in real wages (Bangham, 2020). Faced with declining real terms earnings, workers expressed a desire for more hours, in order to offset earnings decline.

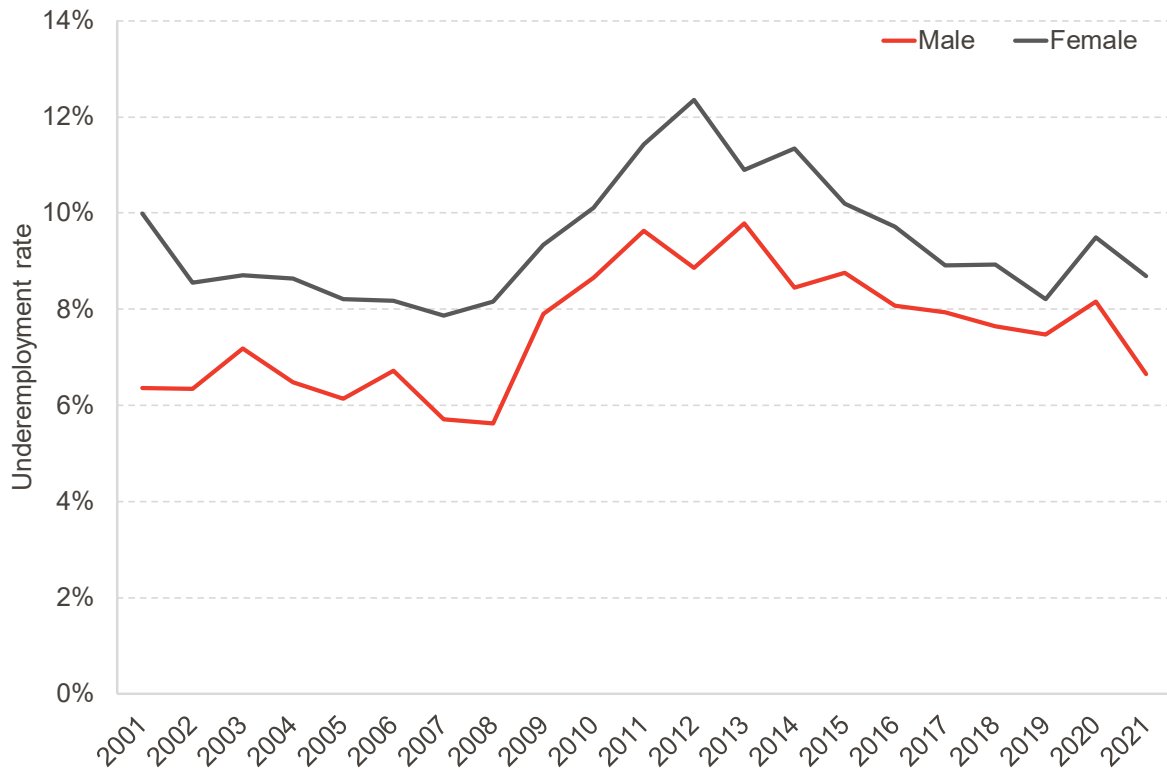
For the UK as a whole, the increase in underemployment following the financial crisis was much more pronounced amongst low-paid workers than amongst high-paid workers (Fraser of Allander Institute, 2021). One potential explanation is that the low-paid had less of a buffer between their income and expenditures when the financial crisis hit. The subsequent income shock had a more immediate impact on their consumption than was the case for better paid workers, and this expressed itself in a more significant rise in underemployment.

More generally, it is important to note that underemployment rates vary significantly across different types of worker. Underemployed workers are consistently more likely to be young, working in low-paid jobs, be less well qualified (Chart 2.7). These findings are very much in line with others (e.g. Bell and Blanchflower, 2013). Underemployment is also higher amongst those working on a zero hours contract or in a temporary position, even after controlling for the fact that these positions pay lower wages and offer fewer hours on average than other jobs (Fraser of Allander Institute, 2021).

¹ Moreover, to be classified as underemployed, an individual must be available to start working longer hours within the next two weeks, and must be working less than 48 hours per week currently (or less than 40 hours per week if aged under 18).

Chart 2.6: Underemployment increased during the financial crisis, probably reflecting weak earnings growth

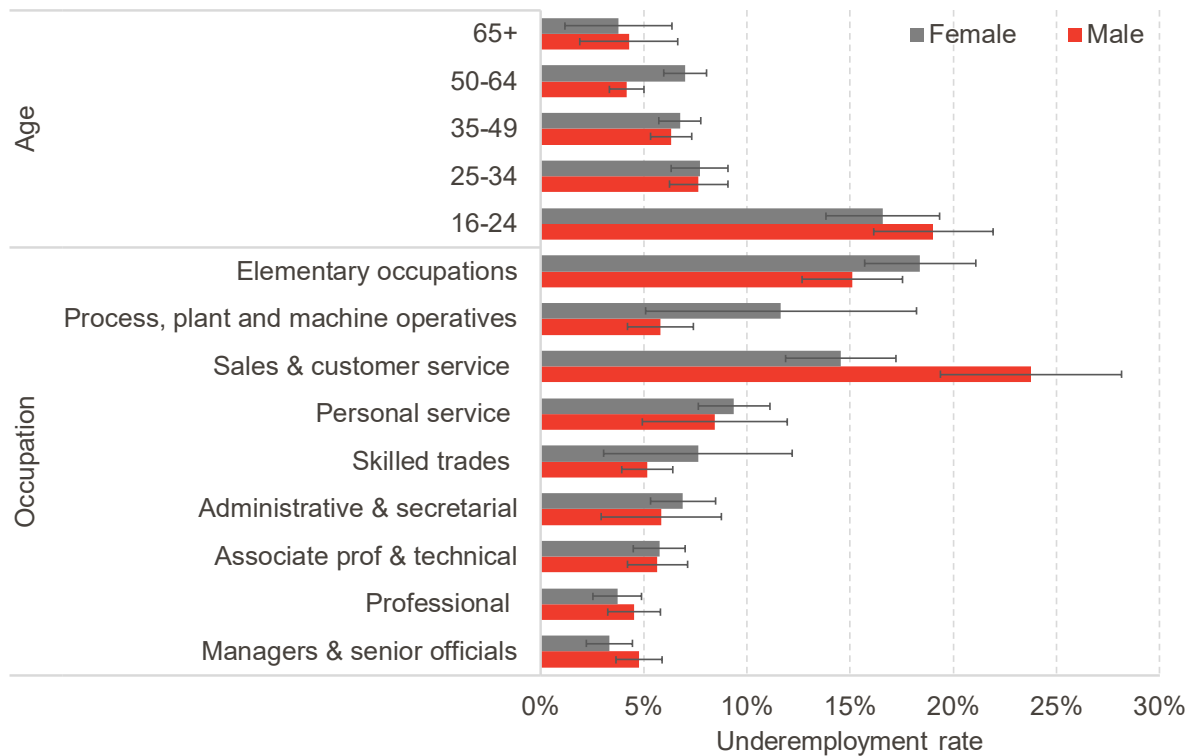
Proportion of workers who are underemployed in Scotland



Source: Author analysis of Quarterly Labour Force Survey. Unweighted N = 357,449

Chart 2.7: Underemployment is highest amongst the young and those in low-paid occupations

Proportion of workers who are underemployed in Scotland, by age, occupation and sex



Source: Author analysis of Quarterly Labour Force Survey. Error bars show 95% Confidence Intervals. Unweighted N = 13,674

Prevalence of some types of insecure work have increased since 2010

Recent years have seen a great deal of debate and concern about a perceived rise in insecure or precarious work. Work that is insecure can include where the job itself is insecure (e.g. if the possibility of termination or redundancy is real, or if the contract is temporary); or where the hours and/or income associated with a particular job is uncertain and volatile over time. These two dimensions, job insecurity and hours insecurity, are not mutually exclusive (i.e. a job can be both insecure in itself, and provide insecure income).

Precarious work can affect worker health and interfere with family schedules and parenting responsibilities, putting strain on family relationships and jeopardizing children's well-being (e.g. Henly and Lambert, 2014).

It is surprisingly difficult to quantify the extent to which insecure or precarious work is on the rise. This is partly because the key labour market datasets often do not do a good job of capturing power relations between employees and their employers, nor of capturing volatility or uncertainty of income over time (as opposed to at a snapshot in time). But it is also because the extent to which a given job is perceived as insecure or not is likely to depend on the characteristics of the worker as well as the job itself.

For example, a part-time retail job with variable hours would generally be thought of as insecure, but may be perceived as less problematic for a student who has other sources of financial support

than the same job would be perceived by say a single parent with greater constraints on their time and finances (Campbell and Price, 2016).

Similarly, the extent to which a given job exposes a worker to feelings of insecurity may depend on what alternatives are available to a particular individual. This explains why the adequacy of out-of-work support provided through the social security system has been identified as an important determinant of individuals' perceived job security (Hipp, 2016).

Given these caveats, how can we quantitatively assess trends in job insecurity? One approach is to examine trends in the number of jobs distinguished by their contractual nature. For example, trends in jobs that offer no guaranteed hours (zero hours contracts), that are temporary, or that are contracted through an agency. The other approach is to examine trends in workers' subjective perceptions of their job security.

In terms of some facts about how employment has changed over the past decade, we can make the following points:

- **The use of zero-hours contracts has expanded significantly.** In 2010, fewer than one per cent of people in employment in Scotland were on a zero hours contract. The use of zero-hours contracts increased substantially over subsequent years. By 2021, just over three per cent of those in employment, or around 70,000 people, were employed on a zero hours contract in Scotland, according to ONS analysis. Zero hours contracts are particularly prevalent amongst those working in caring, leisure and other service operations, and elementary occupations; the young are particularly likely to be employed on a zero-hours contract. Analysis indicates that almost one third of zero hours contract workers are underemployed, and those that are underemployed would like to work an additional 14 hours per week on average if they could (Fraser of Allander Institute, 2021). Farina et al. (2019) argue that the prevalence of ZHCs is underestimated in official data. They also point out that ZHCs have become increasingly concentrated among young workers, full-time students, migrants, black and minority ethnic workers, in personal service and elementary occupations, and in the distribution, accommodation and restaurant sector over time.
- **There has been no statistically significant change in proportion of employment in Scotland that is temporary rather than permanent,** which has hovered around 6%. This however is likely to be a poor indicator of job insecurity, since some temporary jobs are relatively secure, whilst some permanent jobs may involve uncertain scheduling or be subject to change at short notice.
- **Low-paid self-employment has increased.** The number of self-employed in low-paid occupations – which can be used as a proxy for insecure or involuntary self-employment - has increased in Scotland from around 200,000 in the years prior to 2010 to around 270,000 in recent years. Another proxy for insecure self-employment is to look at the number of self-employed who are paid via agency, or work as freelancers or sub-contractors. But the numbers involved here for Scotland are too small to have statistical confidence in the size of increase.

There is no evidence of a general increase in perceived job insecurity

Another way of examining trends in job insecurity is to consider people's subjective experience of insecurity, i.e. to ask them how secure they feel in their job. Workers' subjective experience of job security is a useful measure, given that standard measures of job 'type' do not necessarily tell us a great deal about how an individual worker perceives his or her job security, and the psycho-social implications of those perceptions. There is evidence that self-perceived job insecurity, whether or not a termination is realised, has a detrimental impact on the worker's psychological health, stress levels, and job attitudes (e.g. Benach et al.).

The Understanding Society survey asks workers how likely they think it is that they will lose their job over the next 12 months, as a result of being sacked, made redundant, laid off, or not having one's contract renewed. Chart 2.8 shows that for workers in Scotland, there has certainly not been any increase during the 2010s in the proportion of workers who feel it is likely or very likely that they will lose their job in the next 12 months. In fact this measure of job insecurity was highest in 2010 and 2011, which is perhaps not surprising since this coincided with the direct aftermath of the financial crisis (data is not available, at the time of writing, for the pandemic years, which would be interesting to see).

That there has been no increase in perceived job insecurity in Scotland during the 2010s might come as a surprise given some of the policy narrative around the labour market. In fact this result is consistent with more in-depth analysis by Manning et al. (2020) who find no evidence that perceived job insecurity has increased in the UK since the 1990s, nor indeed in other European countries. Manning et al. note that perceived job insecurity amongst temporary and part-time workers is higher than amongst full-time workers, but there has been no rise in perceived job insecurity, even among these non-standard employment forms. Manning et al. also find no evidence of a deterioration in job satisfaction more broadly over time.

Manning et al. (2020) conclude 'there simply is not enough evidence that workers are more likely to feel insecure today than they did a few decades ago to support the claims made by those who promote narratives that emphasize the rise of the "precariat" as a new, highly-insecure strata of workers on flexible contracts'. Nonetheless, they acknowledge that one potential reason for the absence of any increase in perceived job insecurity over time may simply be that workers have become more accepting of insecure working arrangements. It is also important not to lose sight of the fact that 1.7 million UK workers report feeling anxious about their working hours changing unexpectedly (Felstead et al., 2017).

Others have similarly concluded that there is limited evidence in data that indicates a rise in insecure work. The Work Foundation recently developed a new index based on three dimensions: contractual insecurity, financial insecurity and access to workers' rights (Florisson, 2022). The research finds that insecurity remains a persistent feature of the UK labour market, with 20% of the UK labour market (6.2 million workers) experiencing severely insecure work in 2021. But the authors find no evidence that the proportion of workers facing severe insecurity has increased since 2000; indeed the proportion has fallen slightly since 2012.

Chart 2.9 looks at a range of other emotions that workers in Scotland feel about their jobs, notably the extent to which they feel tense, uneasy, worried, depressed, gloomy or miserable about their jobs. There does not appear to be evidence of a consistent trend over time in these emotions.

The mixed picture that emerges when considering changes in job quality in Scotland in recent time mirrors similar work for the UK. For example, Bourquinn and Waters (2021), looking at the period

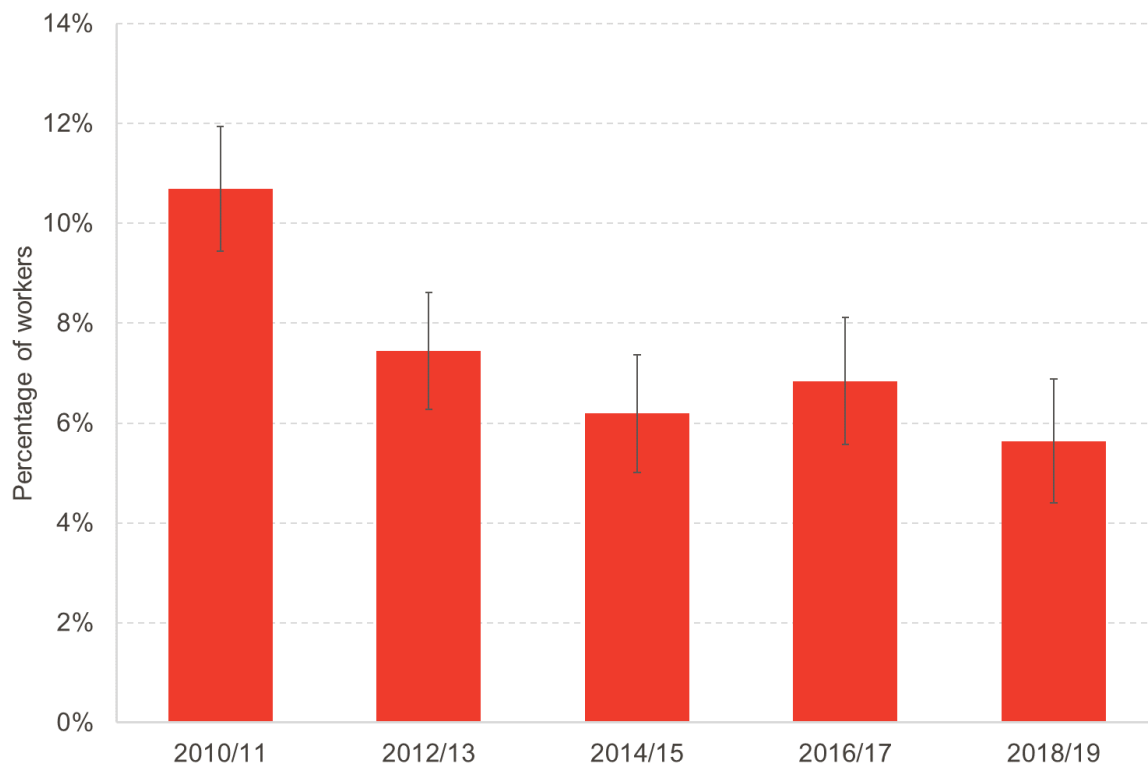
from 2005 to 2015, find some dimensions of job quality have improved, whilst some have worsened. Workers were more likely to consider their job interesting and valuable in 2015 than they were in 2005, and there was some evidence that their relationship with the firm they work for improved. However, workers were more likely to report difficulties at work, including stress.

The key takeaways here are:

- The past decade has seen some growth in forms of employment that are likely to provide less security than standard forms of permanent work with guaranteed hours.
- There is however no obvious increase in perceived job insecurity across workers generally. Nonetheless, the proportion of workers that feel anxious about aspects of their job – including the financial security associated with it – remains high.

Chart 2.8: Little obvious increase in perceived job insecurity in recent years

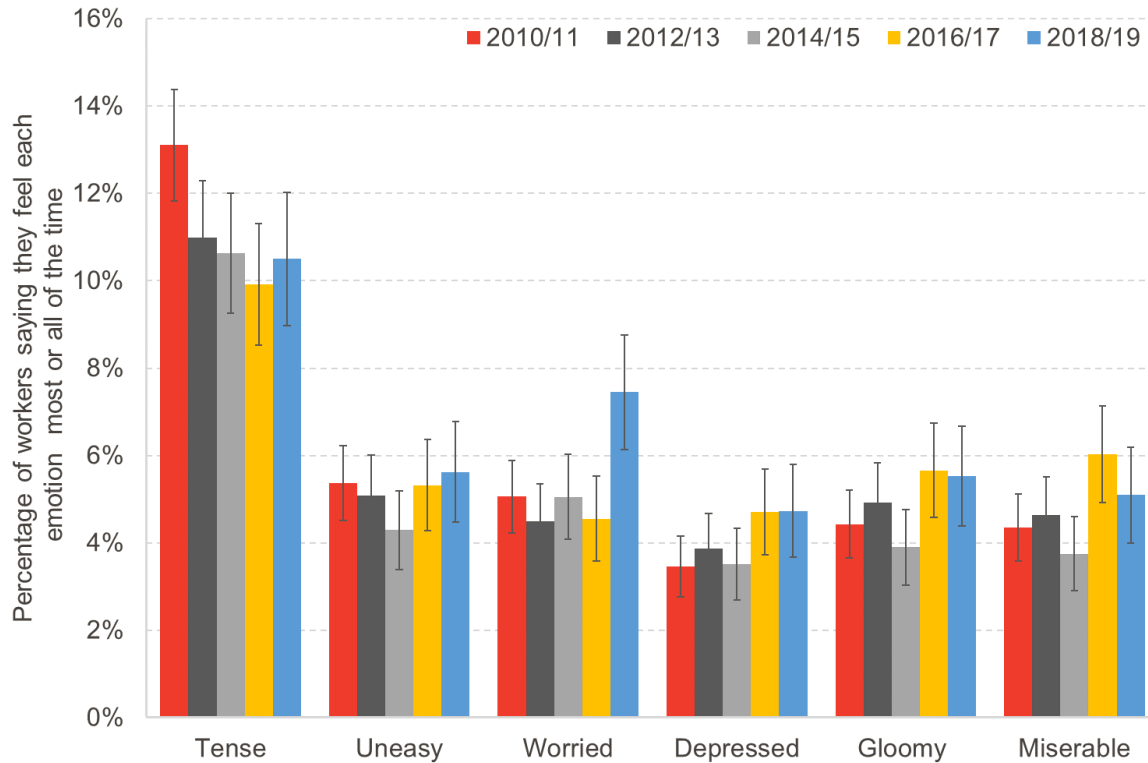
Proportion of workers responding that they think it is likely or very likely that they will lose their job during the next 12 months



Source: FAI analysis of Understanding Society. Unweighted N = 8,750. Note: years refer to two full calendar years, not single financial years

Chart 2.9: Relatively few workers feel negative emotions about their job

Proportion of workers responding that their job has made them feel a variety of emotions during the past few weeks, Scotland



Source: FAI analysis of Understanding Society. Unweighted N = 10,164

In-work poverty has increased

The last two decades have seen a well-documented rise in the 'in-work' poverty rate. The proportion of the working age population in poverty who live in a benefit unit where at least one person is in work has increased from 48% in 1996-99 to 61% in 2016-19. In other words, well over half of adults living in poverty live in a working household (Chart 2.10).

The poverty risk for working age people has increased from 10% to 14% of the same period (this is the proportion of the working age population living in a working benefit unit which is below the poverty line).

The rise in in-work poverty is sometimes interpreted as evidence for there having been a substantial rise in low-paying, poor quality work. However, it is important to bear in mind that household incomes, and poverty rates, are determined by factors other than just earnings from work, notably including benefit income and housing costs.

In fact, a large part of the rise in in-work poverty can be attributed to factors relating to these wider dimensions of household income, including (Bourquin et al. 2019):

- First, the incomes of pensioner households have increased consistently more rapidly than those of working age households. This is the result of faster uprating of pensioner relative to working age benefits, and slower growth in the housing tenures more often occupied by pensioners. The rise in incomes of pensioner households raises median incomes and hence

the poverty line, naturally bringing more working age households into poverty as pensioners move out.

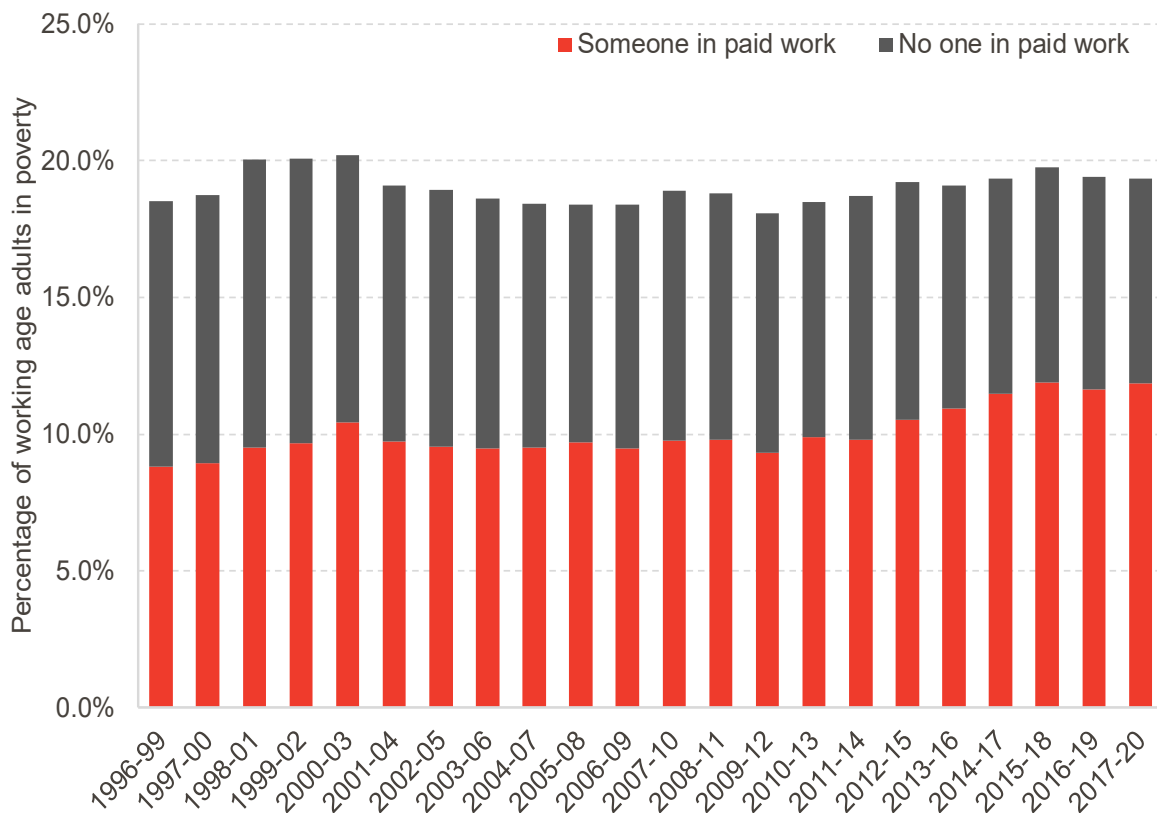
- Second, low income households tend to occupy housing tenures, (notably private-rented accommodation) whose costs have increased relatively more than the costs associated with those households further up the income distribution, and this has also tended to raise poverty rates for working age households.

Nonetheless, whilst the majority of the rise in in-work poverty is not due to growth in low-earning jobs, a smaller part of it is due to a rise in relatively low-paid employment amongst those living in low-income households (Bourquin and Waters, 2021). It is important to bear in mind however that, although in-work poverty has risen, the poverty rate itself might be even higher if it hadn't been for the growth in employment.

The rise in in-work poverty does matter in the context of health outcomes, but the way in which it matters is complex. The rise in employment and in-work poverty implies that some people who were previously not working and in poverty are now in work and in poverty; the question in those cases is whether being in-work can bring health benefits even if it doesn't change ones absolute or relative income. Some evidence suggests some scope for improved health outcomes in such circumstances (e.g. Kromydas et al. 2021).

Chart 2.10: The proportion of working age adults in poverty who live in a working household has increased

Working-age adults in relative poverty after housing costs by household work status, Scotland



Source: FAI analysis of Scottish government poverty analysis <https://data.gov.scot/poverty/2021/#Poverty>

People in Scotland are more likely to be inactive for health reasons

This chapter has considered the pay and conditions of employment as determinants of health. Health status might also affect the ability to be in work, and the type of work that people can do.

Chart 2.11 shows the proportion of all working age males and females in Scotland and the UK who are economically inactive for health reasons. The proportion of the population who are inactive for health reasons declined throughout the 2000s until about 2014. Since then, there has been no further decline. The past few years have seen an uptick in the proportion of the working age population who are economically inactive for health reasons – trends during the recent Covid-19 period are discussed in more detail in Chapter 7.

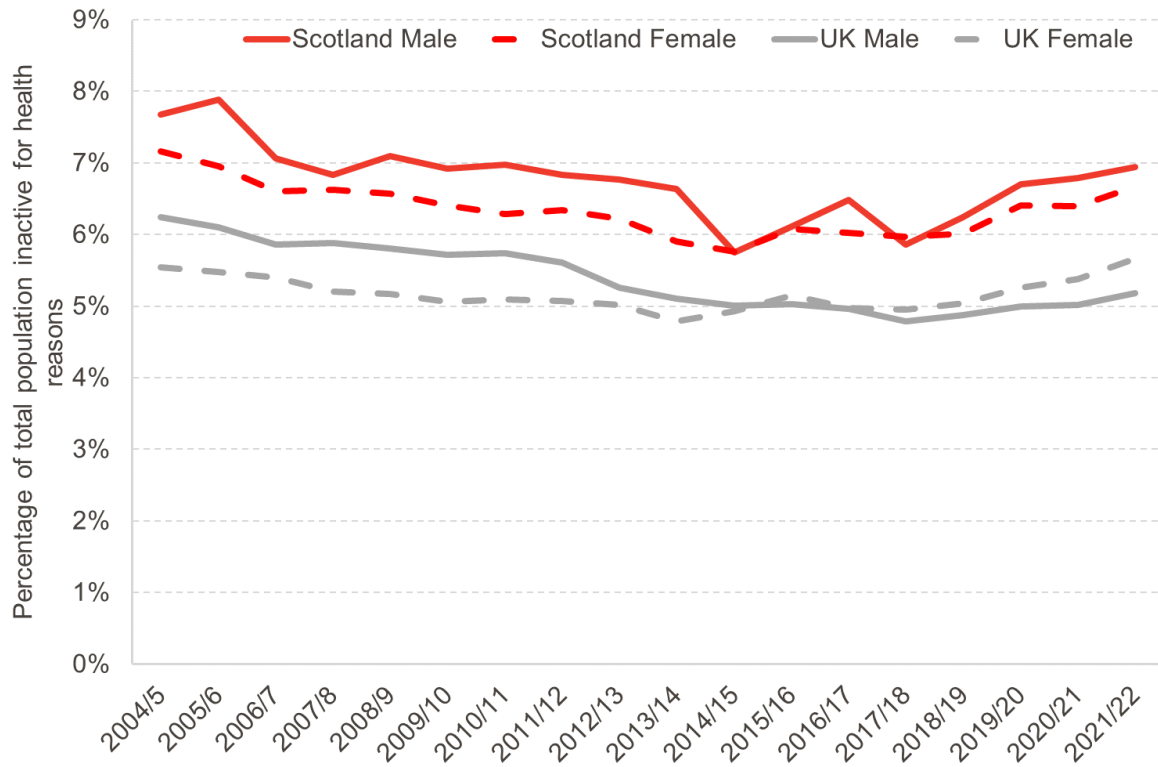
What Chart 2.11 also reveals is that a larger proportion of people in Scotland are inactive for health reasons. This is true for both males and females. The gap between Scotland and the UK as a whole has remained fairly consistent over time, although there is some evidence that the gap for males has widened slightly in the past few years. In the year prior to the pandemic, 6.7% of Scottish men and 6.4% of Scottish women were economically inactive for health reasons, compared to 5% and 5.3% respectively for the UK as a whole.

One might expect that the fact that a higher proportion of people in Scotland are inactive because of health reasons would result in higher overall rates of inactivity in Scotland. But historically this has not been the case. The inactivity rates of Scottish men were, throughout the 2000s and early 2010s, no higher than those in the UK as a whole; whilst the inactivity rates for women in Scotland were consistently lower than those in the UK (Chart 2.12).

The implication is that, whilst inactive people in Scotland are more likely to give health problems as the *main* reason for their inactivity, they are simultaneously less likely to give other explanations – including caring responsibilities and being a student – as the *main* explanation for inactivity. This raises an interesting question about whether people in Scotland are more likely to have health problems than those in the UK as a whole, or whether they are simply more likely to give health as the main explanation for being economically inactive. There is certainly some evidence to suggest that questions about self-reported health can be reported using different implicit scales across different countries or regions (Kapteyn, 2007).

Chart 2.11: A greater proportion of people in Scotland are inactive because of long-term health problems than in rUK

Proportion of working age (16-65) adults inactive because of long-term health problem, Scotland and UK



Source: FAI analysis of Annual Population Survey (accessed via Nomisweb)

Whilst the proportion of those who are economically inactive for health reasons has evolved over time, the health reasons causing inactivity have also changed (Chart 2.12). Musculoskeletal issues have become less and less likely to be cited as the main health problem for the inactive throughout the period since 1999, for men and women. Chest and breathing issues have also become less important, particularly since the early 2010s.

In contrast, depression and anxiety are increasingly likely to be cited as the main health problem amongst the economically inactive. The significance of depression and anxiety has been increasing since 1999, but the rate at which its significance has increased accelerated in the years after 2010. Of those economically inactive for health reasons, cancer and other non-mental illnesses have also increased in significance throughout the period.

The trends just described are broadly similar for males and females in Scotland. Our analysis (not included here) also reveals that the trends just described for Scotland essentially mirror those for the UK as a whole.

People with higher levels of qualifications are less likely to be inactive for health reasons than those with no or lower levels of qualifications. For example, around 1.5% of working age graduates have been inactive for health reasons on average of the last five years, compared to around 8% of the non-graduate working age population. The proportion of the working age population in Scotland that has a degree has roughly doubled since 2005, from around 16% to around 30%. One might

hypothesise that as the proportion of the working age population with a graduate level qualification increases over time, this may contribute to a gradual reduction in the proportion of the total population who are inactive for health reasons. Unfortunately the sample size for Scotland is too small to test this hypothesis robustly.

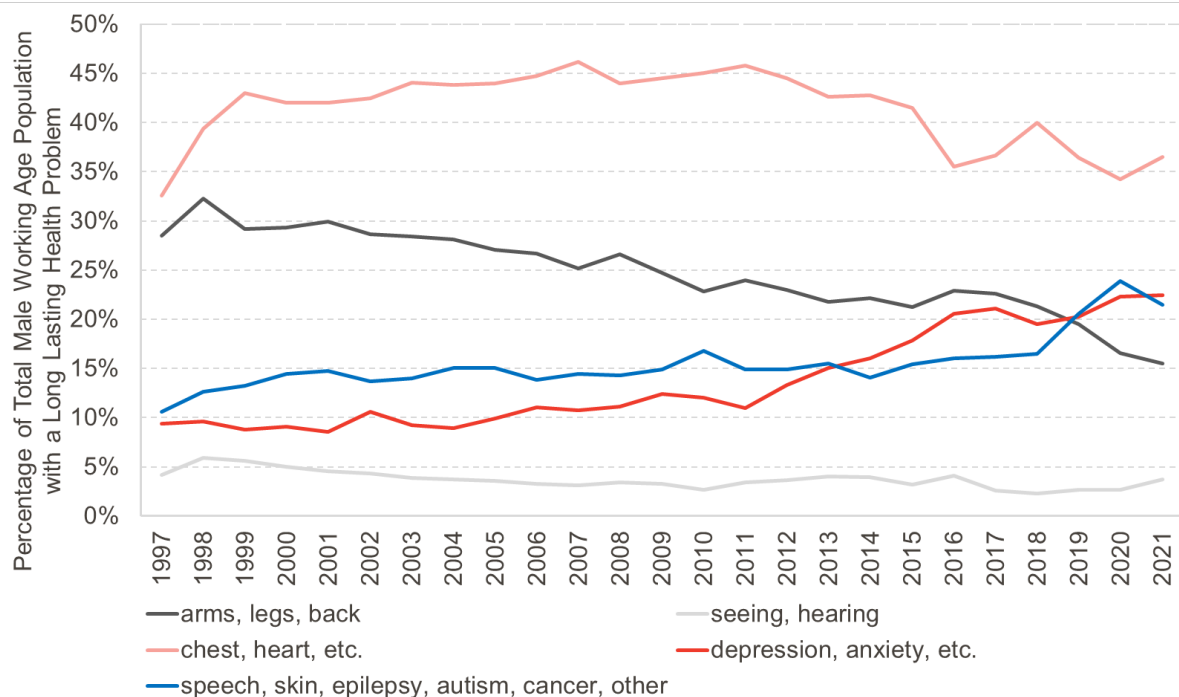
What we can say however is that the rise in the proportion of the population who say they have a longterm limiting health problem since 2010 (regardless of their economic activity status) has increased by a similar magnitude amongst graduates and non-graduates. Whilst graduates are less likely to report having a long-term health problem than non-graduates, it is not the case that recent increases in prevalence of health problems has been concentrated amongst non-graduates.

The overall picture then is that people became less likely to be economically inactive because of health reasons over the period to 2010 – driven in particular by falls in those inactive because of musculoskeletal problems – but this downward trend stalled after 2010 as further falls in the prevalence of musculoskeletal and chest and heart problems were offset by a rise in prevalence of mental health problems.

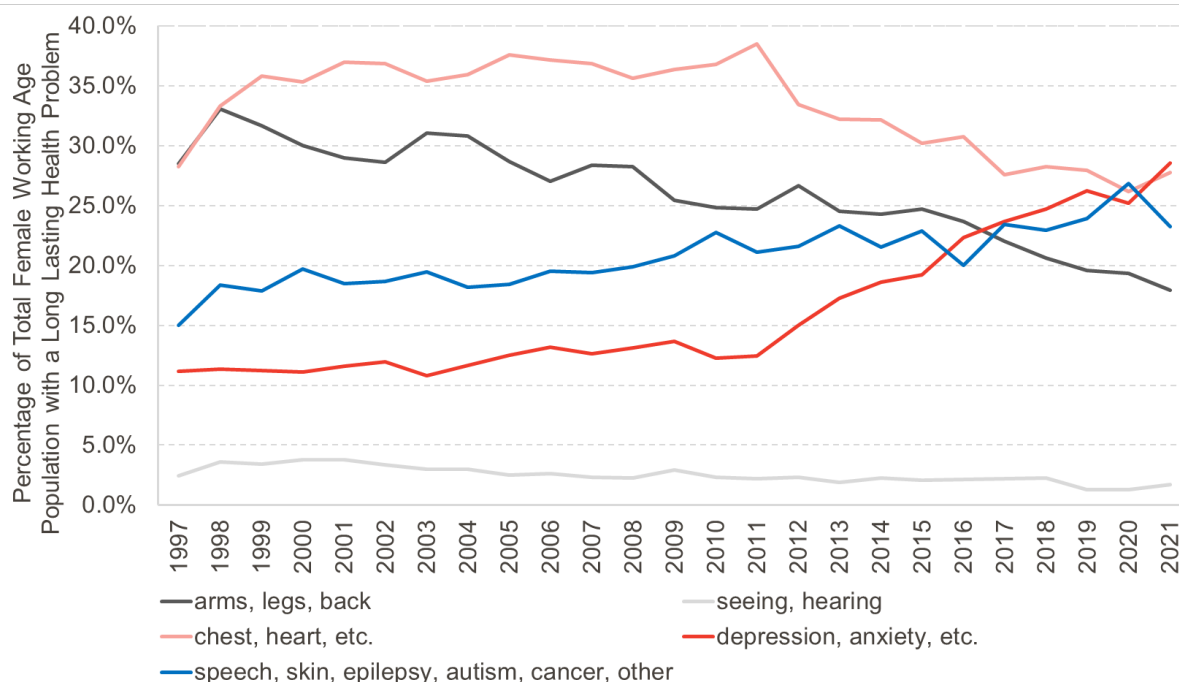
The second part of the picture is that people in Scotland are consistently more likely to be inactive for health reasons, but somewhat less likely to be inactive for other reasons, with the implication that the impact of differences in health on inactivity is somewhat ambiguous. Additional analysis we have undertaken (not reported here) reveals that inactive people in Scotland have a higher likelihood of citing health as the reason for inactivity is mainly accounted for by a higher prevalence of mental health problems, and to a lesser extent, musculoskeletal problems.

Chart 2.12: The main health problem of the economically inactive has changed over time

Main health problem for those economically inactive because of a long-term health problem, Scotland, males



Main health problem for those economically inactive because of a long-term health problem, Scotland, females



Source: FAI analysis of Quarterly Labour Force Survey.

Conclusions

Arguably the most significant development in the labour market of the past 22 years has been the unprecedented wage stagnation during and following the financial crisis. By 2021, earnings were around £80 per week lower than they would have been had earnings growth continued its pre-2010 trend. This is likely to have implications for health, via its effect on financial security, even if earnings inequality may have narrowed slightly at the same time.

Labour market inequalities in Scotland have evolved in a variety of ways since 1999. The employment rates of older workers, women and single parents have increased, narrowing employment gaps.

Earnings inequality, whilst high, has not increased since 2010, and indeed has tended to fall somewhat. Earnings inequality in Scotland is lower than it is in England, and broadly in line with earnings inequality in major European economies including France and Germany. But earnings inequality is significantly higher in Scotland than in Nordic countries.

There has been concern about growth in work insecurity during the past decade, both in terms of security of jobs themselves, and security of income from those jobs. Employment in less secure contract types and low-paid self-employed work has increased over the past decade. In the decade after 2010, the number of workers in Scotland doing low-paid self-employed work increased by around 70,000, and the numbers employed on zero-hours contracts increased by a similar amount. The increase in employment in these insecure job types, around 140,000, is significant in the context of total employment growth, about 270,000, over the same period. However, at aggregate level there is no evidence of an increase in subjective job-insecurity, or a fall in job satisfaction across all employees.

Another way to measure financial insecurity at work is to consider underemployment. Underemployment rates did increase following the financial crisis, but have largely returned to pre-2010 levels. However, underemployment remains significantly higher amongst younger workers and lower-paid workers than it does for workers on average.

Overall then, the labour market story is that there has been growth in some forms of insecure work, affecting the young in particular, and a large minority of the workforce feel financially insecure in their job. But job insecurity doesn't appear to have increased in general, and earnings inequality, whilst relatively high, is not markedly higher than in 1999.

This chapter has also looked at the association between health and economic activity. Economically inactive people in Scotland are significantly more likely to say that they are inactive due to health reasons than economically inactive people in the UK as a whole. But a slight paradox is that people in Scotland are not much more likely to be economically inactive – they are just more likely to give health as the reason for inactivity, and less likely to give other reasons, such as caring responsibilities, as an explanation for inactivity.

The proportion of working age people in Scotland who are inactive for health reasons fell during the decade from 1999 to 2010, reflecting reduced prevalence of musculoskeletal and cardiovascular problems as causes of inactivity. But in the decade after 2010, there was no further fall in the proportion of the working age population inactive for health reasons. This largely reflected large increases in the proportion of the working age population inactive because of depression, anxiety and mental health issues, which offset continued declines in the prevalence of musculoskeletal and cardiovascular issues.

3. Household financial circumstances and living standards

Household financial circumstances can affect health in a variety of ways: an inadequate income is stressful, and can make it more difficult to adopt healthy behaviours. This chapter examines how financial circumstances and living standards have evolved in Scotland since 1999, and earlier in some circumstances. It considers household incomes, inequality of income, poverty, subjective measures of financial wellbeing, and wealth.

Key points

- From a low base in the 1960s and 1970s, household income inequality in Scotland, as in the UK, increased substantially throughout the 1980s and early 1990s. Since the early 1990s it has not increased further, but it remains high in the context of most western European countries.
- Despite the fact that overall household income inequality in Scotland has not increased since 1999, the first decade of devolution saw the very highest income households pull away from the rest, and the lowest income households lose ground to the median, reflecting a similar trend in the UK as a whole.
- The key trend of the second decade of devolution has not been a change in the distribution, but an unprecedented stagnation in the growth of household incomes across the whole distribution.
- There is huge variation in the typical household income of different groups within Scotland – for example between those in different housing tenures, with different educational qualifications, and of different ethnicities. There has been surprisingly little change in the incomes of these groups relative to each other over the past 20 years. A key exception to this statement is the difference between typical pensioner incomes relative to the incomes of working age households. Median pensioner household incomes were 17% lower than the population as a whole in 1999, but only 5% lower by 2019.
- Many households in Scotland experience regular fluctuation in their position in the income distribution from one year to the next, and some households experience significant movement across the income distribution over a 10-year period. But a minority of households experience substantial persistence in their relative income position over prolonged periods.
- The prevalence of problem debt is much higher amongst low-income households than amongst typical households. Levels of food insecurity are also higher amongst those with low incomes, and are particularly high amongst lone parents.
- The poverty rate in Scotland increased substantially during the 1980s, before a prolonged fall in the rate until 2011. By 2019/20, the poverty rate of 19% was significantly below its early 1990s peak of 25%, but above the pre-1980s rate of around 15%. Relative poverty in Scotland is on a par with the European average, but has been on an upward trend since the mid-2010s
- Household wealth in Scotland is extremely unevenly distributed relative to income. 45% of household wealth is held by the top 10% of households ranked by wealth, and 92% of wealth is held in the top half of households. The period from 2006/8 to 2018/20 saw the

value of household wealth in Scotland grow by over £400bn. But this increase merely maintained existing inequalities, rather than being more equally shared.

Incomes, living standards and health

There is a strong association between financial security and health. Financial security is normally measured by considering income (typically at a household or family level), often in combination with information on other factors that influence financial security (or its converse, financial stress), including the level of unavoidable expenses, household debt, and wealth.

Anecdotally, there is a strong association between household income and self-reported health in Scotland. Around 15% of women living in the lowest income fifth of households in Scotland rated their health as bad or very bad, compared to less than 2% of women living in the highest income fifth of households. For men, the association between household income and self-reported health is even stronger.

The fact that there is an association between household income and health does not necessarily mean that all of the variation in health is caused by differences in income. But income is undoubtedly an important determinant of health status.

Why might higher income be associated with improved health? The Health Foundation notes that: 'An adequate income can help people to avoid stress and feel in control, to access experiences and material resources, to adopt and maintain healthy behaviours, and to feel supported by a financial safety net' (Lawson, 2018). Having more limited resources, particularly where that results in financial strain or insecurity, can lead to stress and anxiety, increasing the risks of mental health problems, and again potentially encouraging less healthy behaviours as part of a coping mechanism.

Indeed, a UK-wide survey in May 2022 found that half of people in the UK think that their health has deteriorated as a result of the cost-of-living crisis (Royal College of Physicians, 2022). Increased costs associated with heating, food and transport in particular have led people to feel more stressed about their financial circumstances.

The causative impact of income on health is more difficult to identify (Thomson et al. 2022). Debates also continue as to whether it is absolute income or relative income that matters most. There are certainly theoretical grounds to believe that relative income (i.e. inequality) will matter – partly because one's perspective of one's standard of living relative to others may be a source of stress and anxiety, but partly too from a macro-perspective because higher inequality might enable the better-off to 'capture' the political system to their advantage, and to the detriment of the least well off. In practice the empirical evidence is mixed (Monheit, 2022).

Increased financial strain at household level is associated with increased risk of unhealthy outcomes in children (McKenna et al. 2017). Being in poverty is also associated with worse health outcomes (Cooper and Stewart, 2017). There are generally thought to be two reasons why poverty and/or financial strain more generally may affect child outcomes (Cooper and Stewart, 2017):

- One is 'investment': money affects children's outcomes via parents' ability to invest in goods and services that contribute to healthy child development
- One is 'family stress': emotional pathways through which money can affect outcomes. Living with limited resources is stressful, and that stress can manifest itself in a stressful home environment, that in turn can affect children's health and emotions.

Household income is largely determined by earnings from work, pensions and benefits. Policy directly relating to these elements is largely determined at UK level. Household incomes are often measured after housing costs however, and some aspects of housing policy are determined directly by the Scottish government (discussed further in section on housing).

Inequality of household income is high but has not increased since 1999; the notable feature of the last decade has been an unprecedented stagnation in income for all

In order to provide context for discussions about how household incomes have evolved since 1999, it is useful to consider the evolution of household income over a longer period. Chart 3.1 shows how disposable household income for Scottish households has evolved since the 1960s, in different parts of the distribution.

The measure of household income we use here is ‘net, equivalised, after housing costs’. Income is ‘net’ because it is measured after direct taxation (income tax, national insurance contributions and council tax). It is ‘equivalised’ in the sense that it has been adjusted to reflect the composition of a household. Equivalisation recognises that an income of say £300 per week goes further – and allows a higher standard of living – for a single adult than it does for a couple with children for example. We measure income after housing costs (rents, mortgage interest payments, service charges, etc.) since these costs are often significant, and are difficult for households to change, at least in the short term.

In brief, Chart 3.1 shows that:

- The 1960s were a period of robust household income growth that was, if anything, somewhat inequality reducing – incomes grew relatively more quickly for the bottom fifth of the population compared to the top fifth.
- In the 1970s, incomes grew fairly slowly in real terms but with little change in the distribution – income growth was similar across all quintiles.
- The 1980s witnessed a prenominal rise in the dispersion of household income. The incomes of the bottom fifth of the population were actually lower in real terms by the end of the decade than at the beginning. In contrast the incomes of the top fifth grew by over 3 per cent per annum in real terms. The top pulled away from the median, and the bottom lost ground to the median.
- The 1990s were a decade of relatively robust growth, although with a continued increase in inequality; the 2000s was also a decade of robust growth, and this was in general more equally distributed.
- The standout feature of the 2010s has been the remarkably slow growth of income. Annual income growth for the median household was less than one per cent per annum, slower than it was in any previous decade for which data exists. Income growth was particularly sluggish for the top decile, implying some reduction in inequality.

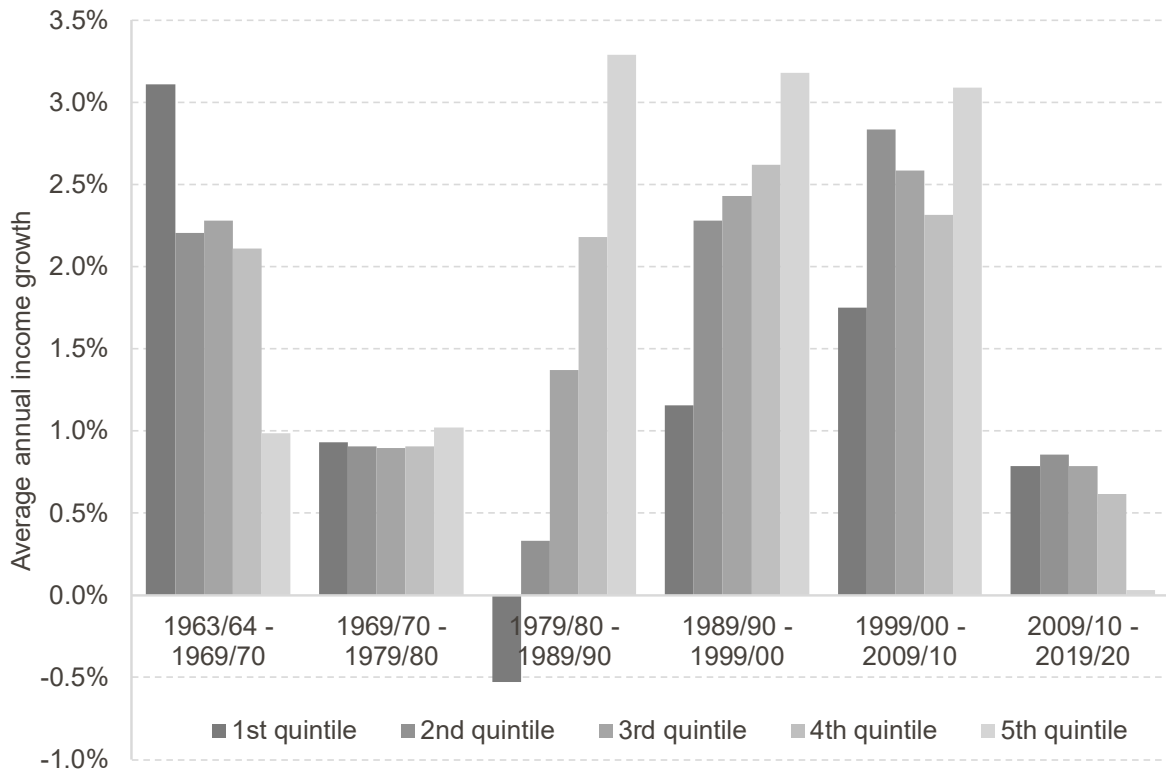
The stagnation of household income growth since 2010 is shown more starkly in Chart 3.2. This shows that throughout the 1980s, 1990s and 2000s, median household income growth remained relatively robust, but stagnated during the 2010s. By 2019/20, median household income was some £70 per week lower than it would have been had the pre 2010/11 trend continued.

Chart 3.3 show what these trends mean for inequality in household income in Scotland over time, here measured by the Gini coefficient. From a low base in the 1960s and 1970s, inequality in household income (whether measured before or after housing costs), increased throughout the 1980s and early 1990s. Since then it has fluctuated somewhat, but remains high.

Scotland’s Gini coefficient for net equivalised income *after housing costs* in 2019 of 0.32 is lower than in the UK as a whole, which measures 0.35 (Chart 3.4). This gap has been broadly consistent over the period since devolution. Others have documented that the difference between Scotland and the UK is driven largely by the special case of London, which includes a large number of high income households which skews the distribution (Bell and Eiser, 2015). Excluding London and the south east, income inequality in the UK is not notably different from Scotland.

Chart 3.1: The pattern of household income growth across the income distribution has varied markedly during the past six decades

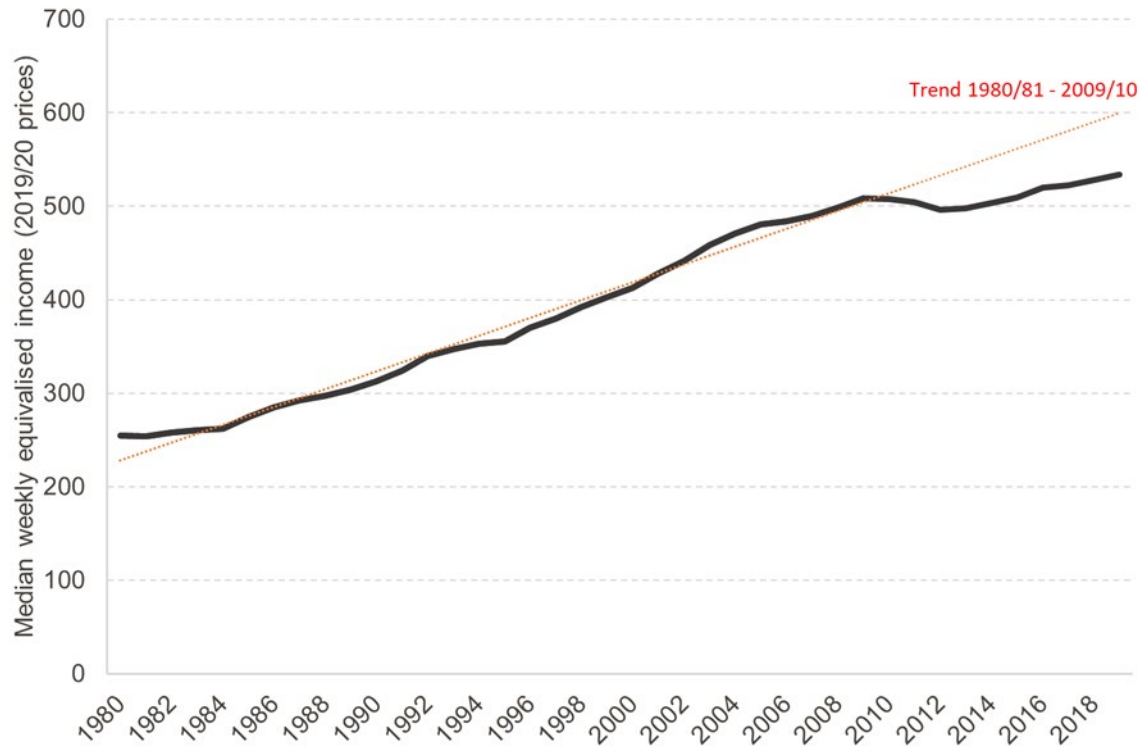
Average annual growth in real After Housing Cost household income in Scotland, by decade



Source: FAI analysis of the Family Resources Survey (Historic Dataset) and Households Below Average Income datasets, various years. Note: data is presented on basis of three year rolling averages for the three years up to the date shown on the x-axis. N = 206,582

Chart 3.2: The longrun growth of household incomes has stalled since 2010

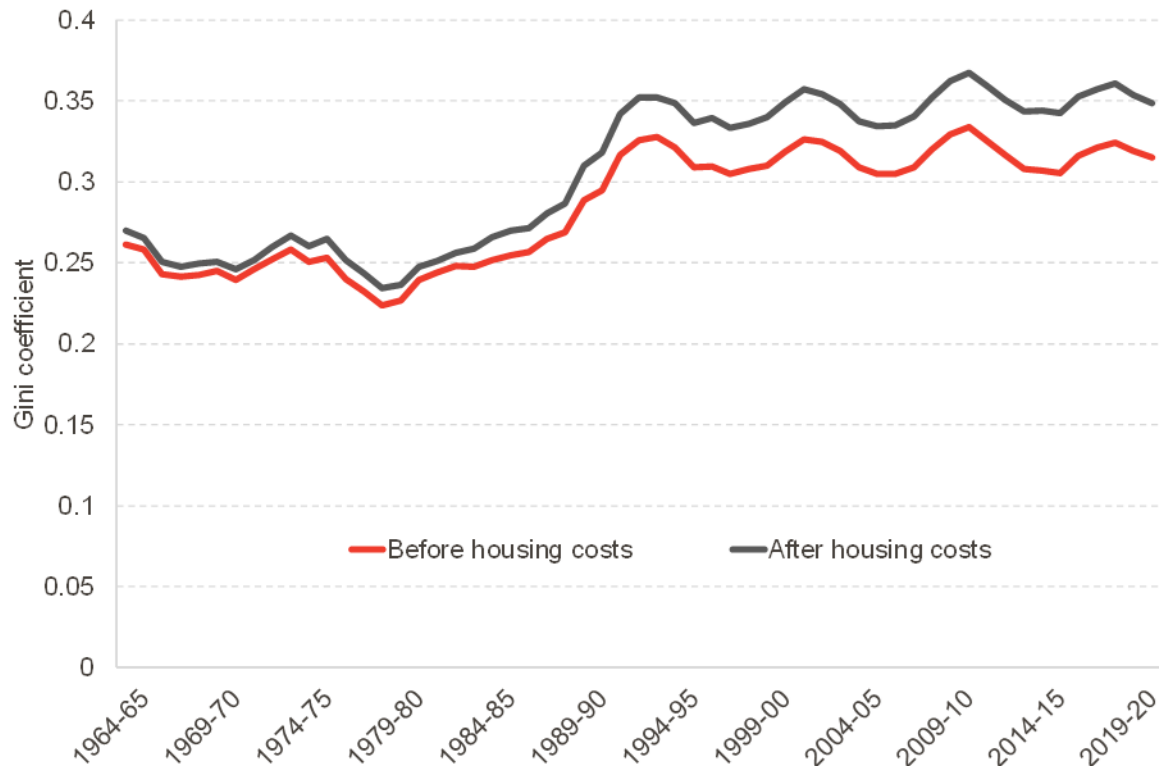
Median household income, before housing costs, Scotland (2019/20 prices)



Source: FAI analysis of the Family Resources Survey (Historic Dataset) and Households Below Average Income datasets, various years. Note: data is presented on basis of three year rolling averages for the three years up to the date shown on the x-axis.

Chart 3.3: Household income inequality rose significantly during the 1980s, and has remained high since then

Gini coefficient of household equivalised income in Scotland, before and after housing costs



Source: FAI analysis of Households Below Average Income datasets. Note: data is presented on basis of three year rolling averages for the three years up to the date shown on the x-axis. N = 206,582

The explanations for the broad trends set out above – which are mirrored for the UK as a whole – are typically described along these lines (e.g. Atkinson, 2015):

- Inequality was relatively low in the 1960s and 1970s because of a combination of: the relatively narrow pay dispersion in the industrial sector which accounted for a high proportion of employment; the role of trade unions and pay boards in regulating pay structures and awards and; a redistributive tax and benefits system.
- The substantial increase in inequality during the 1980s resulted from a multitude of factors. Inequality in earned income increased because of the growth in financial and business services sectors, in which pay is less evenly distributed. This was accentuated by an erosion in the influence of trade unions in regulating pay. In addition to this there were some big increases in unemployment (reaching 11% in the 1980s and again in the early 1990s recession). When combined with real terms reductions in the value of unemployment benefit, the result was an increase in the difference between the average incomes of households in work and those not in work. There were also reductions in the real value of pension benefits (widening the gap between pension and working age households). There was also a substantial reduction in the progressivity of personal taxation. Top income tax rates were reduced from 80% in the 1970s to 40% by the end of the 1980s, boosting the disposable incomes of those with the highest earnings.

- The second half of the 1990s and 2000s saw rising employment. There was some further increase in inequality of employment income, but at household level this was kept in check by an increase in dual earner households and changes to the welfare system. Notably these included the introduction of Working Tax Credits, which raised the incomes of low-income families, particularly those with children. Increases in the generosity of the State Pension and Pension Credit, plus the fact that those retiring tended to have better occupational pensions than predecessors, resulted in a sustained increase in relative position of pensioners, who were previously a relatively poor group.
- During the 2010s, the lowest income fifth suffered substantially through real terms cuts to welfare (although there were big differences between the treatment of working age and pension-age benefits). But those in work suffered just as much through unprecedented wage stagnation, and this, combined with employment growth, meant that the widely anticipated impact of benefit cuts on inequality did not materialise as might have been expected. Tax increases and benefit cuts for those at the top of the distribution (income tax, child benefit and council tax) also kept inequality in check.

Household income inequality in Scotland and the UK is high in an international context

Household income inequality may not have increased substantially in Scotland in recent years, but inequality is high relative to many comparator countries.

Chart 3.4 shows the Gini coefficient of net before housing cost equivalised income in a variety of OECD countries. Household income inequality in the UK is particularly high in an international context. Previous research has shown that this is partly accounted for by the very high disparities of income in London; UK regions and nations outside of London typically have lower levels of income inequality.

Nonetheless, inequality in Scotland, whilst not as high as in the UK as a whole, is high in an international context. This is largely due to the large increases in inequality that occurred during the 1980s and early 1990s, rather than more recent trends.

One might ask what accounts for Scotland's relatively high levels of net income inequality – is it because inequality of pre-tax and benefit income is high, or is it because the UK tax and benefit system redistributes relatively less than tax and benefit systems in other countries?

The answer to this question is 'a bit of both'. The Gini coefficient of pre tax and benefit income in the UK is 0.51, the same as in the US (0.51), slightly above Germany (0.49) and slightly below France (0.52).

But taxes and benefits reduce the Gini coefficient by only 11% in the US, compared to 14% in the UK, 21% in Germany and 23% in France.

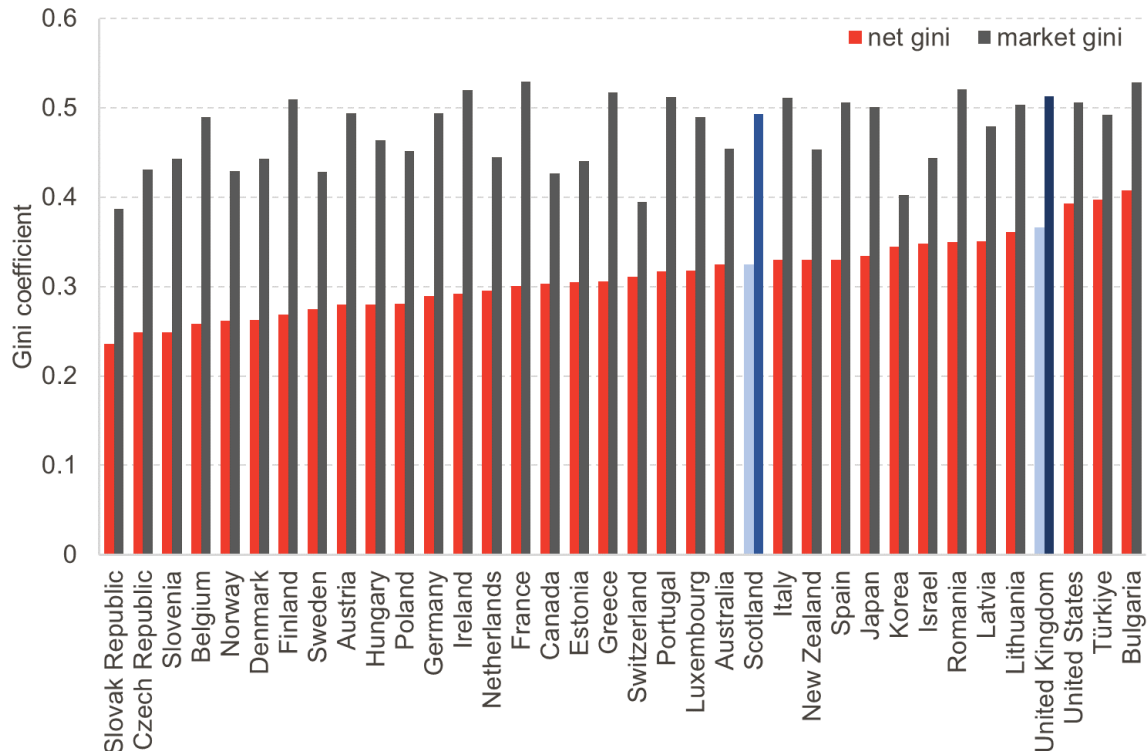
Some countries however have lower levels of income inequality because they have lower pre-tax and benefit income inequality, including Australia, the Netherlands, and the Nordic countries.

Scotland's inequality of pre-tax and benefit income is 0.49, so slightly (two percentage points) lower than it is for the UK as a whole. Scotland's inequality of net household income, at 0.31, is just over two percentage points lower than it is in the UK. The fact that taxes and benefits have a very similar

effect on redistribution in Scotland as in the UK is not surprising given that the structure of taxes and benefits was very similar in 2018, the year for which the comparative data is available.

Chart 3.4: Household income inequality in Scotland and the UK is high in an international context

Gini coefficient of household equivalised income in selected OECD countries, 2018



Source: OECD income distribution database and FAI analysis. Household income is measured net of taxes and benefits before housing costs and is equivalised.

Incomes have compressed across much of the distribution, but the top has pulled away and the bottom has fallen behind

The analysis so far has considered income inequality in a broad sense. But it is important to consider how inequality has evolved at a finer level of detail.

Chart 3.5 shows the average annual growth in net equivalised household income for each percentile of the income distribution in Scotland. It divides the analysis into two periods, broadly corresponding to the first and the second decades of devolution.

The first decade showed robust annual growth for most households. Across much of the income distribution, the distribution of income compressed – income growth at the 20th percentile was almost 3.5% per annum, whereas at the 80th percentile it was 2.5%.

But there is a different story at the tails of the distribution. The lowest income tenth of the population saw much slower growth than the rest. On the other hand, the top couple of percent pulled away from the rest. So the story is complex – compression across most of the distribution, combined with polarisation at the tails. This story is very similar in the UK as a whole.

The contrast with the second decade is remarkable. Since 2009/10 disposable income growth has been completely sluggish across the entire distribution (albeit slightly inequality-reducing). The picture here for Scotland is very similar to the picture for the UK as a whole.

The companion report on health inequalities in Scotland from the University of Glasgow (Miall et al. 2022) finds evidence that, for some measures of health inequality, the health of people living in the most deprived quintile of neighbourhoods in Scotland has, over time, deteriorated relative to the health of people in less deprived neighbourhoods. This widening has in some cases been brought about not simply by a widening of the gap between those from the most deprived relative to the least deprived areas, but also a widening of the gap between the most deprived and second most deprived quintile of neighbourhood deprivation. This is particularly the case for drugs deaths, and to a lesser extent avoidable mortality. The authors hypothesise that this may reflect a worsening of social deprivation among particular neighbourhoods and groups.

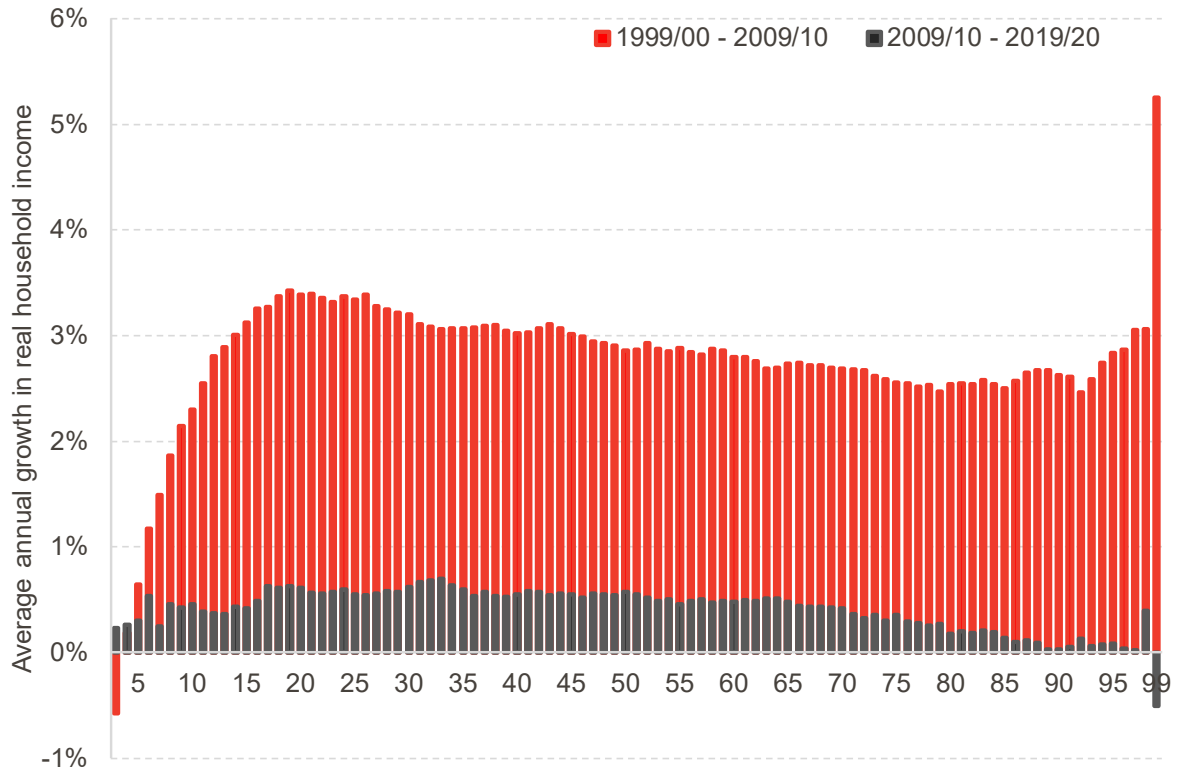
Chart 3.5 provides indicative evidence of a worsening of the social position of those with the lowest incomes, relative to those with incomes slightly further up the distribution. We can formalise this by expressing the average income of households in the bottom quintile of the distribution, to the average income of households in the second-bottom quintile of the income distribution, or to the average income of households in the middle fifth of the distribution.

What this reveals is that the average income of the second lowest quintile of the income distribution was around 1.8 times the income of the lowest quintile in 1999, and this had widened to a gap of 2 times by 2019. Similarly, the gap between the middle quintile and the bottom quintile increased from 2.5 times to 2.7 times.

On this measure of After Housing Cost income there therefore does seem to be some evidence that the lowest income households have become slightly detached from those with slightly higher income over time. However, we do not find the same widening of the gap in relation to Before Housing Cost income. This implies that unequal effects of changes in housing costs have been important in influencing this pattern. We discuss housing costs further in Chapter 5.

Chart 3.5: The first decade of devolution saw strong income growth for most coupled with an increase in inequality; the second decade of devolution saw weak growth across the whole distribution

Average annual growth in After Housing Cost equivalised income in Scotland at different points in the income distribution



Source: FAI analysis of Households Below Average Income datasets. Note: data is presented on basis of three year rolling averages for the three years up to the date shown on the x-axis. N = 58,775

Some groups have much lower incomes than others; but there has been relatively little change over time in groups' income relative to each other

There is substantial variation in the typical level of weekly AHC income across various subgroups in Scotland (Chart 3.6). For example:

- By family type: Chart 3.6 shows that the median weekly equivalised income of people living in couples without children is over £600 per week, almost double the equivalent figure of just over £300 per week for single parents. The median equivalised household incomes of pensioners, single adults and couples with children is broadly similar.
- By tenure: The median weekly household income of those occupying their own home vastly outstrips the typical income of those living in social rented accommodation or private rented accommodation.
- By ethnicity: The median income of ethnic minority groups is substantially lower than that of the population as a whole (limited sample size precludes us being able to look at specific ethnic groups other than 'Asian/ British Asian', even when we aggregated over three years).

- By education status: Households where at least one adult has a degree have substantially higher incomes (£630) than households where nobody has a degree (£420)².
- By disability: Households containing at least one person with a disability have a typical household income of £423 per week, compared to £524 for households with no person with a disability – remember too that these figures include the value of any benefits received by households to help address the additional costs associated with disability.

One might be interested to know how the relative fortunes of these different groups have fared over time. If there is a pattern here however, it is how little the income gaps between groups have evolved. For example, the differences in median income by tenure are little changed in 2019/20 than they were 20 years previously. By degree status, there was some closing of the income gap between households with and without a degree in the early to mid-2000s, but the gap has remained unchanged for the last 15 years, with households where at least one person has a degree having an income over 50% higher than those without a degree.

If there is one area where there has been some convergence in the household income gaps over time it is in relation to family type. Over the past 20 years, household incomes have grown relatively faster for the two groups that had the lowest household income in 1999: pensioners, and single parent families:

- Median household income for pensioners was around 17% below the population median in 1999, and was around 5% lower by 2019/20. This reflected more generous uprating of the State Pension and other pensioner benefits than working age benefits, combined with an improving generosity of occupational pensions.
- Median household income for single parents was almost 50% below the population median in 1999, but had risen to ‘only’ 35% below the population median by 2019/20. This reflected an increased generosity of state benefits for single parents in the 2000s, together with increased employment throughout the whole period.

There are relatively small differences in average, or median, household incomes in different parts of Scotland. Following an approach developed by the Scottish Government’s RESAS (Rural and Environmental Science and Analytical Services) division, we identified seven different area types in Scotland, exploiting both the characteristics of local authorities and the urban/rural nature of settlements within those local authorities. The seven areas are:

- Major urban centres (Glasgow, Edinburgh, Aberdeen, Dundee)
- Urban areas in mainly urban local authorities (North Lanarkshire, South Lanarkshire, Fife, West Lothian, Renfrewshire, Falkirk, East Renfrewshire, Inverclyde, West Dunbartonshire, Midlothian, North Ayrshire, East Dunbartonshire, Stirling)
- Rural areas in the above ‘mainly urban’ local authorities
- Urban settlements in mainly rural local authorities (East Ayrshire, Aberdeenshire, Clackmannanshire, East Lothian, South Ayrshire, Moray, Angus, Perth and Kinross, Highland, Dumfries and Galloway, Scottish Borders)
- Rural areas in the above ‘mainly rural’ local authorities
- Urban settlements in remoter and island authorities (Argyll and Bute, Shetland Islands, Orkney Islands, Na h-Eileanan Siar)

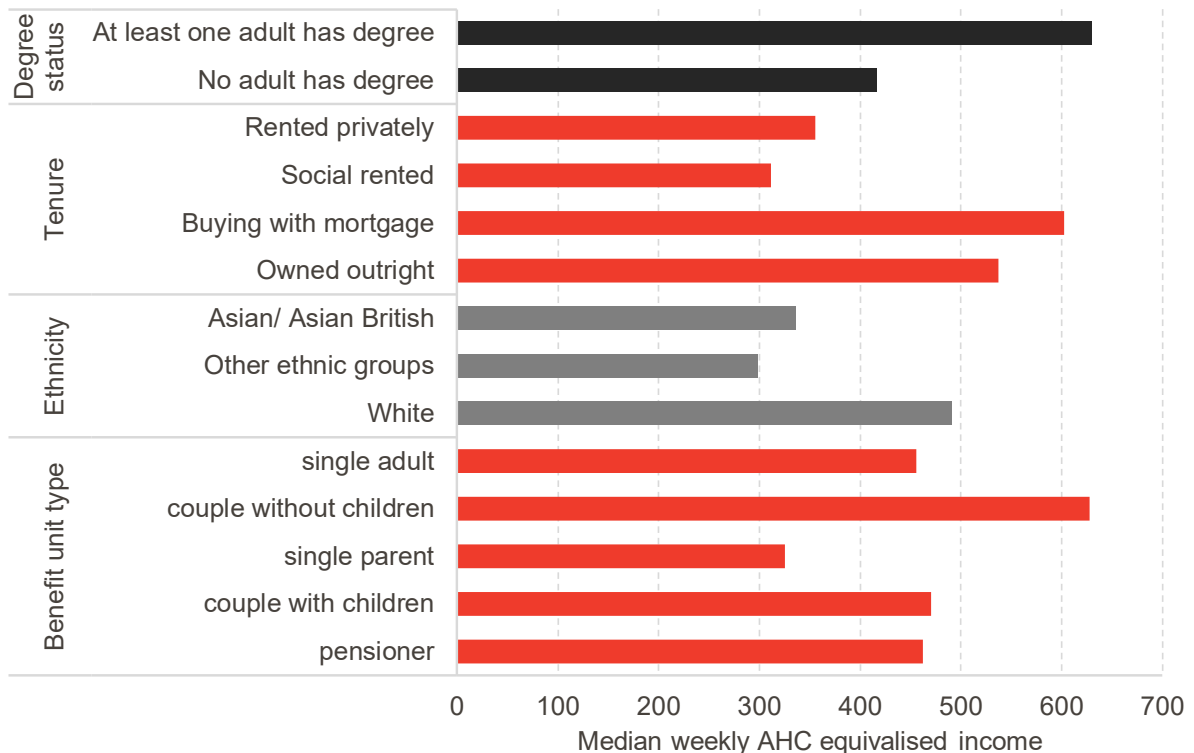
² This result is virtually identical if we exclude pensioners and focus on working age households only. In other words, the difference in household income between those with and without a degree is not simply the result of pensioner households being less likely to have a degree than working age households.

- Rural areas in the above remoter and island authorities.

We find that mean equivalised annual net income is around £27,000 in urban areas in more rural local authorities; around £28,000 in major cities and remoter local authorities, and around £29,000 in rural parts of both urban and rural local authority areas. The income variation within these geographical areas is far more significant than the variation between them.

Chart 3.6: There is huge variation in median income across various sub-groups

Median weekly equivalised after housing cost income for a variety of sub-groups, Scotland, 2017/18 – 2019/20



Source: FAI analysis of Households Below Average Income datasets. Note: income measured at household level, weighted by individual. Unweighted N = 17,113

There is a relatively high degree of income mobility across households over time; but a minority of households experience long periods of persistence at the top or bottom of the income distribution

The analysis we have considered so far is based on people’s position in the income distribution at a snapshot in time. But it is important to consider how much mobility people have over the income distribution over time. For example, are the households in the bottom decile of the income distribution very likely to remain in the bottom of the distribution in subsequent years? Or is there a lot of mobility from one year to the next in households’ position in the income distribution?

Shedding light on these questions requires longitudinal data that tracks the same households over time. We make use of the Understanding Society dataset, a longitudinal dataset that has been operational since 2009/10.

As an initial analysis, we compare the position of Scottish households in the income distribution at two points in time: 2010/11 and 2019/20. Specifically, we map which decile of the income distribution a household was in in 2010/11, and compare that to the decile that the same household was in in 2019/20.

To make the analysis more tractable, we group deciles in a particular way. We consider the lowest and highest income deciles individually. We then combine deciles 2 and 3 into one category, and deciles 8 and 9 into one category. Finally, we combined deciles 3, 5, 6 and 7 into one category. The rationale for this is that the deciles in the middle of the distribution are relatively close together in income terms. Assessing the extent to which households move from one specific decile to another therefore risks creating a somewhat spurious sense that there is a lot of income mobility, when in fact that ‘mobility’ is not material to people’s lives.

The results are shown in Table 3.1. This tells us that:

- Of the households which were in the bottom decile of the income distribution in 2010/11, one quarter of those remained in the first decile of the income distribution nine years later. A further 39% had moved out of the bottom decile into deciles two and three, one quarter had moved into the middle of the distribution, and 10 per cent had moved into the upper third of the distribution.
- There is slightly less mobility at the top of the distribution. 40% of the households who were in the top income decile in 2010/11 were also in the top decile of the distribution nine years later. But a quarter of those in the top income decile in 2010/11 were in the middle of the distribution nine years later, and over ten per cent were in the bottom third of the distribution.

Table 3.1: There is a large degree of income mobility over a 10-year period, but income persistence for a minority

Households’ position in income distribution in 2010/11, v. position of same household in income distribution in 2019/20, Scotland

	Decile Band in 2019/20					
		<i>Lowest decile</i>	<i>Deciles 2-3</i>	<i>Median deciles</i>	<i>Deciles 8-9</i>	<i>Highest decile</i>
Decile band in 2010-11	<i>Lowest decile</i>	26%	39%	25%	7%	3%
	<i>Deciles 2-3</i>	16%	32%	41%	10%	2%
	<i>Median deciles</i>	7%	17%	52%	20%	4%
	<i>Deciles 8-9</i>	4%	11%	30%	35%	19%
	<i>Highest decile</i>	6%	7%	25%	24%	39%

Source: FAI analysis of *Understanding Society*. Note: income measured after housing costs, equivalised. Unweighted N = 1,846

The degree of income mobility may be surprising. One explanation is that the income measure is equivalised, after housing costs. There is therefore a lot that can change a households’ income circumstances – not only income from work and other sources, but also housing costs and the

composition of the household (the fact that incomes are equivalised means that people could experience quite abrupt changes when additional children enter the household, or when older children leave the home).

As well as comparing mobility between two distinct periods of time, its also useful to consider how mobile households are across the income distribution from one year to the next, over a prolonged period.

Chart 3.7 covers the whole ten year period from 2010/11 to 2019/20. For each decile cluster, where those decile clusters are defined as above, it asks: for households that spent at least one of the ten years in this decile cluster, how many years did those households spend in that decile cluster?

What the data shows for example is that, of all households that spent at least one year in decile 1, 67% spent one or two years in that decile, 21% spent three or four years in that decile, and 13% spent seven or more years in that decile. The conclusion from Chart 3.6 is that most households who spend some time in the top or bottom decile of the income distribution over a ten year period spend less than half of that period in the top or bottom decile, and a majority of time closer towards the middle of the distribution. Nonetheless, a minority of households do find that their position at the either tail of the income distribution is fairly persistent.

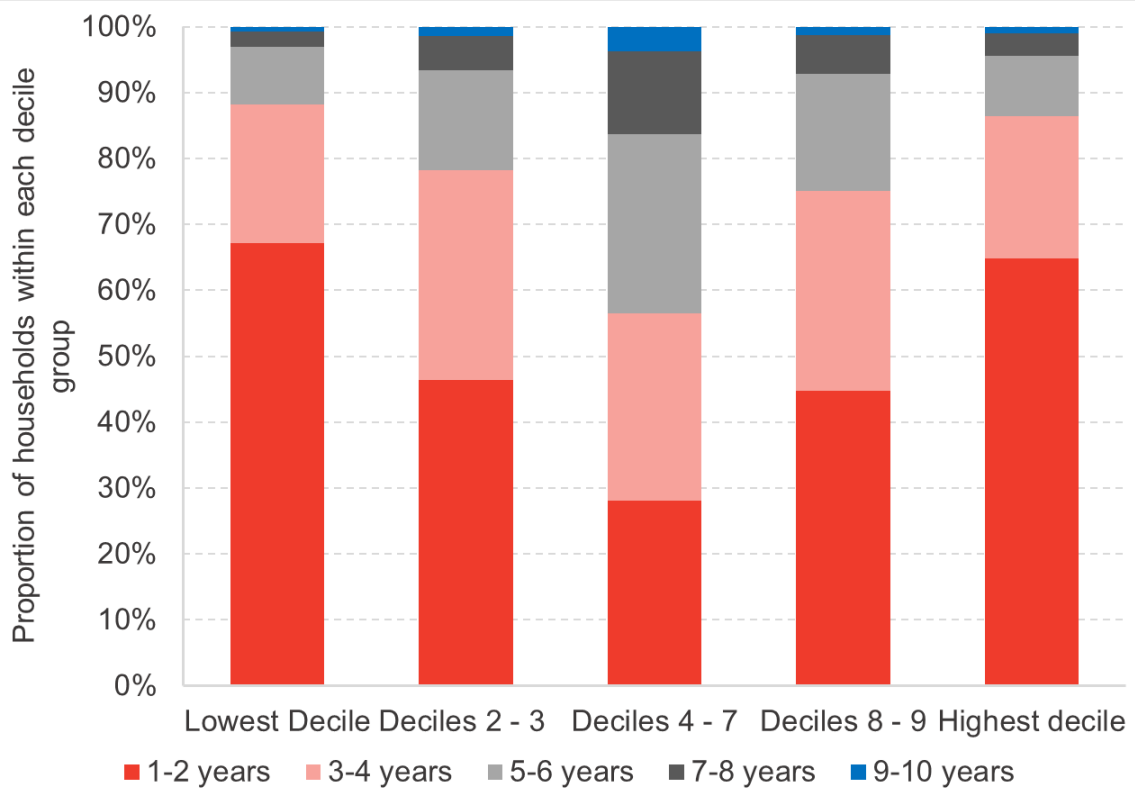
A slightly different way of considering this question is to look at the percentage of the whole population that spends different amounts of time in each decile. Chart 3.8 does this for a shorter, four year period from 2016/17 to 2019/20.

What this tells us is that 17% of the population spent at least one year of the four in the bottom decile of the income distribution, 5% spend 2 or more years in the bottom decile, and one per cent were in the bottom income decile in all four years. Similarly 13% of the population spent at least one year in the top decile and 2% spent all four years in the top decile.

Taken all together, what does this analysis tell us? It shows that on one level there is a lot of mobility around the income distribution, and a reasonable proportion of households move a long way up or down the distribution over a nine year period. But at the same time, the analysis also reveals that the income circumstances of some households – at the bottom and the top of the distribution – are deeply persistent over time.

Chart 3.7: There is a large degree of income mobility over a 10-year period, but income persistence for a minority

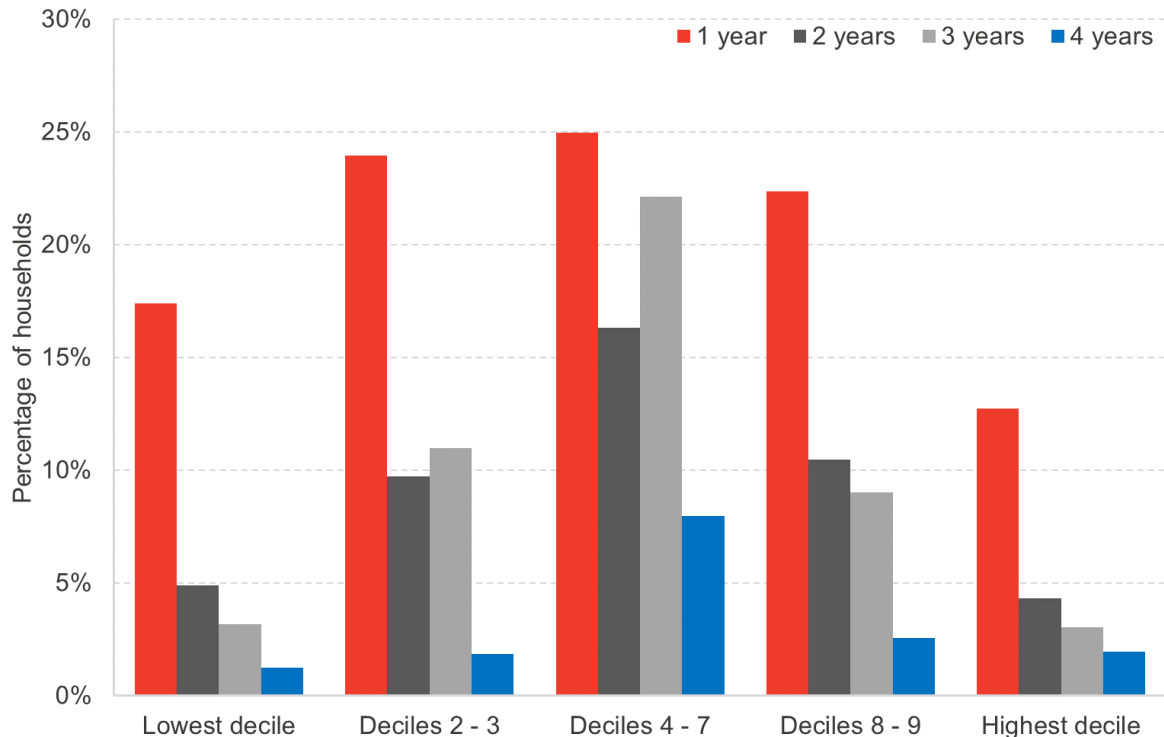
Number of years spent in each decile, for each household that spends at least some time in that decile



Source: FAI analysis of Understanding Society. Note: income measured after housing costs, equivalised. Unweighted N = 1,846

Chart 3.8: There is a large degree of income mobility over a 4-year period, but income persistence for a minority

Percentage of Scottish population spending given number of years in each decile cluster of the income distribution



Source: FAI analysis of *Understanding Society*. Note: income measured after housing costs, equivalised. Unweighted N = 2,193

The proportion of households who are struggling financially has declined significantly during the past 20 years

So far in this chapter we have considered household income. Household income is likely to be a fairly good proxy for a household's financial security more generally (especially when the income measure is after housing costs and equivalised). But the extent to which a household feels financially secure is likely to depend on other factors too. These might include for example how variable or uncertain a household's income is from week to week; the level of savings the household has (since these provide a buffer against unexpected expenses, or a temporary shortfall in income); the extent of unpaid bills and other problem debts; and other unavoidable expenses (such as for childcare or disability for example).

It is difficult to design a single measure which encapsulates all these elements of financial security. This is partly because no survey contains robust information on all elements, and partly because it is very difficult to know how to weight the different dimensions against one another.

One way to get at the broader question of financial security therefore is simply to ask households how well they manage financially. The Scottish Household Survey has asked this question since its inception in 1999.

Chart 3.9 shows the distribution of responses to this question from 1999 – 2019. We can distinguish three periods in the chart: two periods of improving financial security before and after the financial

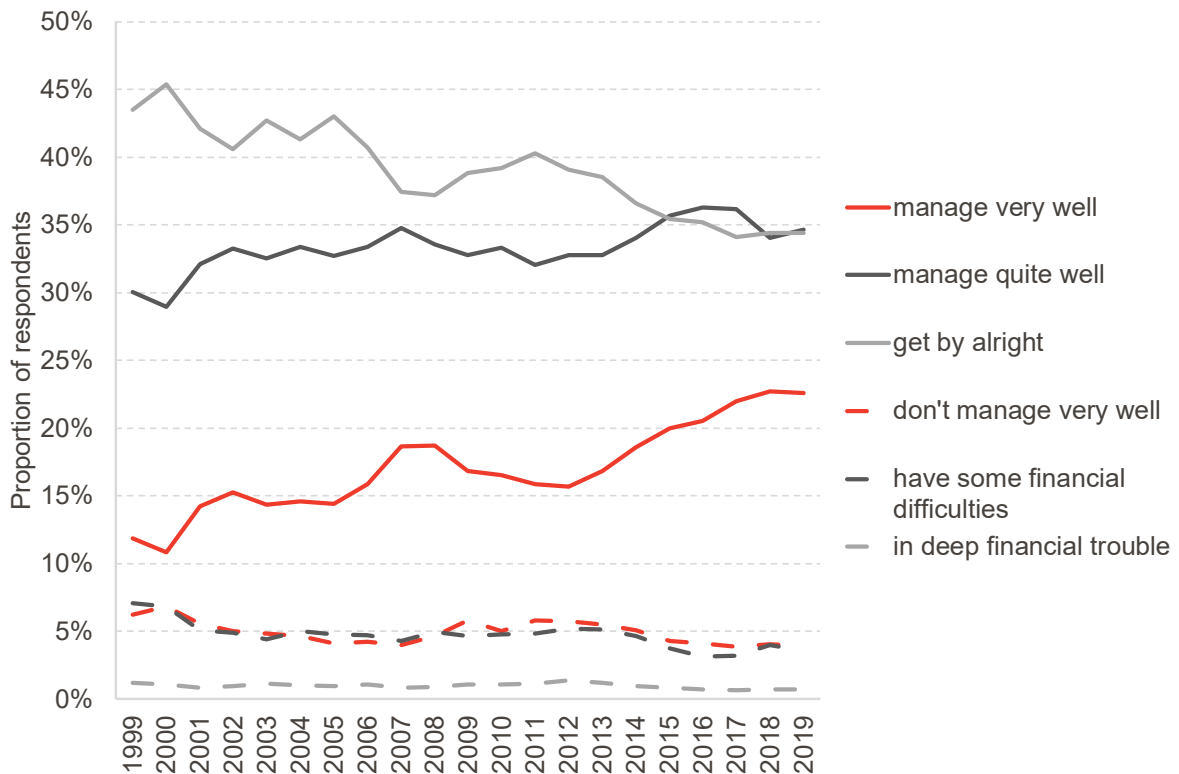
crisis and its aftermath, and a period of heightened financial insecurity for the five-year period in the middle:

- Between 1999 and the onset of the financial crisis in 2007 the proportion of households saying that they manage either 'very well' or 'quite well' increased. This was offset by a fall in the proportion saying that they 'get by alright' as well as falls in the proportion saying that they 'don't manage very well' or have 'financial difficulties'.
- This strong improvement in financial security partially reversed between 2007 and 2012, coinciding with the financial crisis and the prolonged period of income stagnation in the years afterwards.
- A subsequent strong period of improving financial security from 2012 to 2018.

Over the 20-year period from 1999 to 2018, the proportion of households who say they manage well or very well has improved from 42% to 57%, whilst the proportion saying that they do not manage very well, have financial difficulties or are in deep financial trouble has declined from 15% to 9%.

Chart 3.9: The proportion of households saying that they struggle financially has declined since 1999

Proportion of Scottish households agreeing with various statements about how well they manage financially



Source: FAI analysis of Scottish Household Survey. Unweighted N = 231,547

Unsurprisingly, the proportion of households who struggle financially is much higher amongst low income households than high income households; and is higher amongst households in the bottom quintile of households ranked by neighbourhood deprivation than those in the top quintile.

Chart 3.10 looks more closely at the trend in our financial security indicator for various different groups: those in urban and rural areas; those in the lowest fifth of the distribution of net equivalised household income; and those in the bottom fifth of neighbourhoods ranked by deprivation. The measure we focus on here is the proportion of households saying that they either do not manage very well, have financial difficulties, or are in deep trouble.

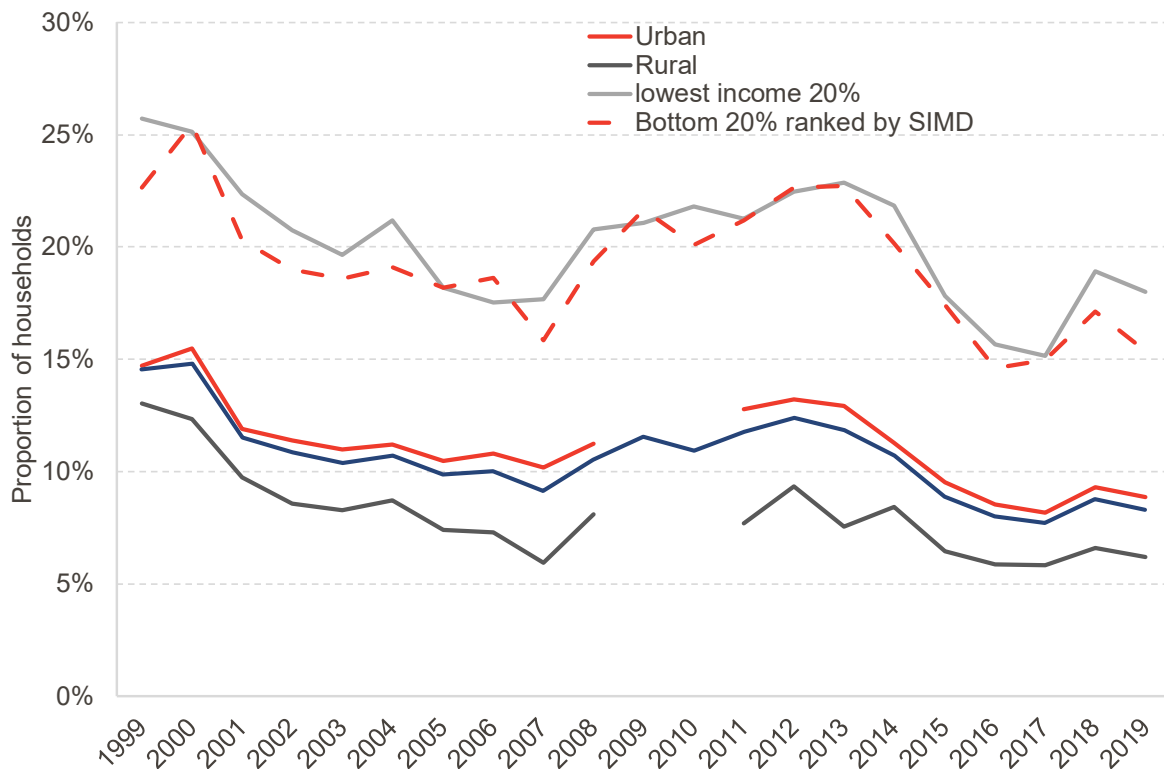
The general trend of a fall in financial insecurity until 2007, a subsequent rise, and then a fall again after about 2012 or 2013 is seen across all subgroups. Comparing 2019 with 1999 there clearly has been a decline in financial insecurity. But most of this decline can be attributed to the early part of the period. The falls in the second part of the 2010s merely offset the rise following the financial crisis. If we compare 2019 with 2007, there has been little if any improvement in this measure.

The decline in financial insecurity between 2012/13 and 2017/18 is somewhat surprising given that this was a period of ongoing sluggishness in earnings growth, and especially given that working age benefits were frozen in cash terms from 2015 -2019. It might simply reflect the fact that, although this was not objectively a ‘good’ period of household income growth, it was better than the years that had immediately preceded it, potentially combined with a more positive media narrative about the economic outlook. Or it might disguise subtler differences between those who may have benefited from (small) interest rate falls versus those who were reliant on working age benefits.

Chart 3.10 also shows that the proportion of households who say they struggle financially is consistently slightly lower in rural areas than in urban areas.

Chart 3.10: The proportion of households saying that they struggle financially has declined since 1999

Proportion of Scottish households agreeing with various statements about how well they manage financially



Source: FAI analysis of Scottish Household Survey. Unweighted N = 231,547

Relative poverty fell markedly between the mid-1990s and mid-2010s, but it fell much more for some groups than others

What is poverty? In broad terms, it is not having enough income or resources to meet some notion of 'basic needs', and when these circumstances exclude people from taking part in activities which are an accepted part of daily life in that society.

The Joseph Rowntree Foundation says of poverty: *"Poverty means not being able to heat your home, pay your rent, or buy the essentials for your children. It means waking up every day facing insecurity, uncertainty, and impossible decisions about money. It means facing marginalisation – and even discrimination – because of your financial circumstances. The constant stress it causes can lead to problems that deprive people of the chance to play a full part in society."*

The British Medical Association (BMA) notes that poverty can affect the health of people at all ages. It notes that: 'In infancy, it [poverty] is associated with a low birth weight, shorter life expectancy and a higher risk of death in the first year of life. Children living in poverty are more likely to suffer from chronic diseases and diet-related problems. Poverty can affect children's cognitive development, and those living in poverty are over three times more likely to suffer from mental health problems. Poverty has long term implications on children's 'life chances' and health in adulthood.' (BMA, 2017).

The extent of poverty in a society can be measured in a number of ways. Most commonly, those whose household income is below 60% of the median are deemed to be the most 'at risk' of poverty. The size of this 'at risk' population relative to total population is often used as a proxy for the population living in poverty.

Some people object to using relative measures of poverty. The argument that is used is that absolute income matters more than relative income, since it is income in absolute terms that determines how far the household's income goes, and what they can buy with it. But this argument misunderstands the notion of poverty, as set out above, about what can be afforded in relation to societal norms. Adam Smith understood this in 1776, when he described poverty as the inability to afford, 'not only the commodities which are indispensably necessary for the support of life, but whatever the custom of the country renders it indecent for creditable people, even of the lowest order, to be without' (Smith, 1776). We should not expect poverty today to look like the sort of poverty described in a Charles Dickens novel; as societies' norms and expectations have moved on, so has the notion of what poverty entails. This is why the frequent focus on the relative poverty measure makes sense.

When thinking about how relative poverty has changed in Scotland, it makes sense to provide context for this by looking at the data over as long a period as possible, as we did when considering income inequality more broadly.

Chart 3.11 shows that relative poverty in Scotland hovered around 15% throughout the 1960s and 1970s. The 1980s and early 1990s witnessed a substantial increase in poverty, up to as much as 25%. Relative poverty then fell during the 2000s to around 17% by the aftermath of the financial crisis. But in recent years it seems to have begun to increase again.

The explanations for the large rise in poverty during the 1980s and 1990s are very similar to those for the big rise in household income inequality that took place during the same period. Earnings inequality increased as a result of economic structural change - the dominance of industries with relative flat pay structures giving way to a growth in sectors with greater variance in pay – combined with a weakening of labour market institutions that regulated pay. This increase in earnings

inequality was accentuated by an increase in unemployment in the early 1990s combined with the effects of the previous decade's cuts to unemployment benefit. Pensioner poverty was high too, as a result of a decades long squeeze on the state pension.

The subsequent fall in child poverty over the period to the early 2010s is typically attributed to a combination of the introduction of more generous benefits for families with children on low-incomes, and an increase in employment amongst lone parents and second earners within a household. Parental employment increases have been enabled both to the introduction of Working Tax Credits which aimed to improve the financial incentives to work for those on low incomes, and to improvements in the provision of childcare (Brewer et al. 2020).

The large falls in pensioner poverty from 2000 are particularly striking, and reflect policy decisions to reverse cuts made to the state pension during the 1980s and the more recent emphasis on the 'triple lock'. But it also reflects increased retirement of the cohort who benefitted from particularly generous defined benefit occupational pension schemes.

Since the mid-2010s poverty shows signs of beginning to increase again. In the case of working age families this likely reflects the four-year freeze in working age benefits introduced in 2015, together with policies including the benefit cap and the two-child limit. Why pensioner poverty rates should increase is somewhat more puzzling.

The trends over time described here mirror trends observed for the UK as a whole. But measured after housing costs, the poverty rate in Scotland has typically remained around three percentage points lower than in the UK. This is generally attributed to Scotland's lower costs of housing, particularly social housing. This is not just driven by a London effect – even if London is excluded, the AHC poverty rate is typically around two percentage points lower in Scotland than other parts of the UK.

The fact that poverty rates have changed so much over time suggests that some cohorts may have had a higher risk of ever experiencing poverty, or a risk of spending longer in poverty. Both of these factors could have significant implications for health.

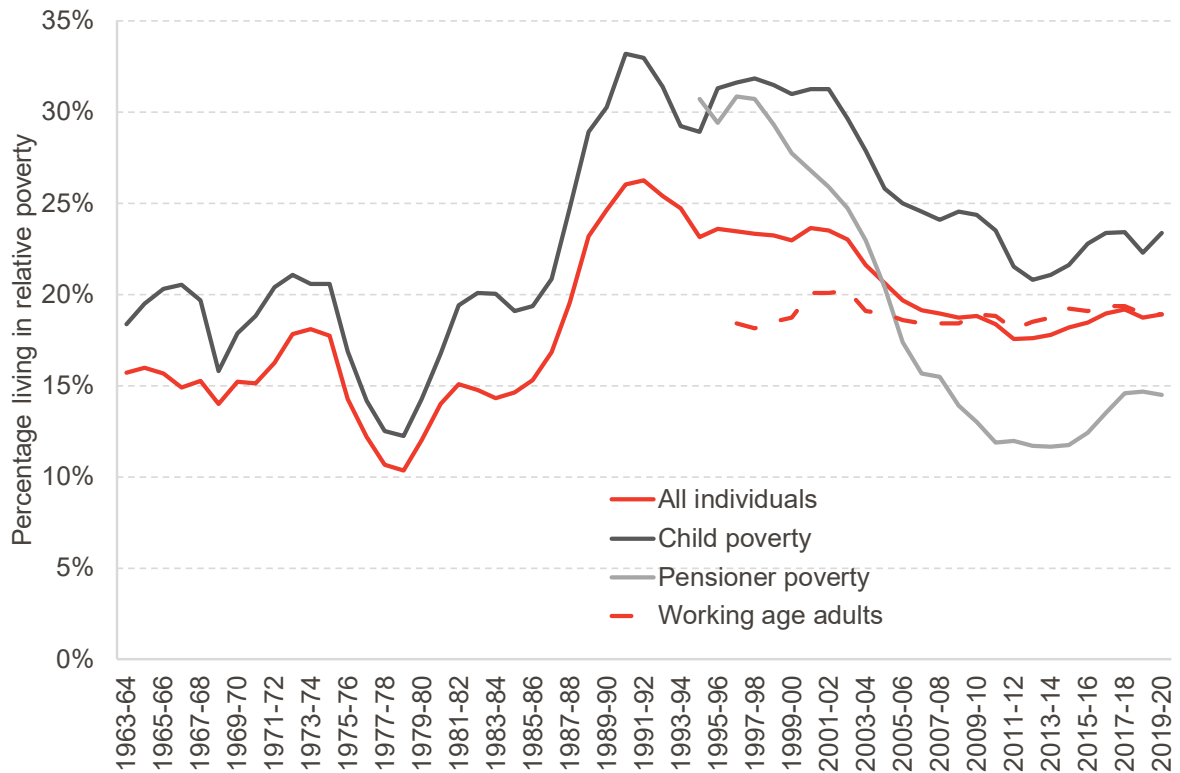
Poverty rates differ substantially between various sub-groups. Scottish Government analysis for example shows that, compared to a Scotland-wide poverty rate of 19% in 2017-20, the poverty rate was:

- 41% for Asian or Asian British people and 43% for people in black and other ethnic groups; compared to 19% for the population as a whole.
- 52% amongst Muslim adults compared to 18% for the adult population as a whole (some but by no means all of this can be attributed to the lower age profile of Muslim households compared to the average)
- 23% amongst people living in households with a disabled person, compared to 17% for people living in a household without a disabled person. The disabled poverty gap has not changed significantly over time.

These figures are similar to those for the UK as a whole. For example, recent research for the UK shows that black and minority ethnic minorities are significantly more likely to be in poverty and deep poverty than white people (Edmiston, 2022).

Chart 3.11: After falling significantly until the mid-2010s, poverty has begun to increase again

Relative poverty rates in Scotland



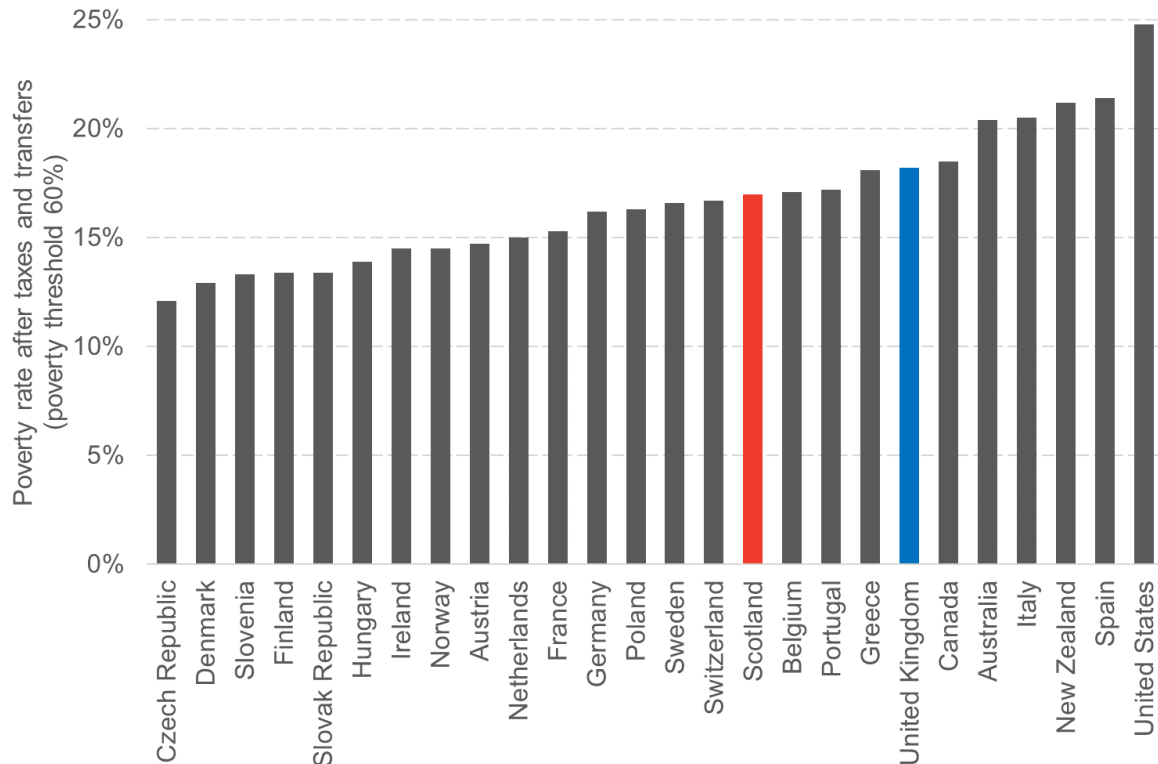
Source: FAI analysis of Households Below Average Income datasets. Note: data is presented as three year rolling averages for the three years up to the date shown on the x-axis. N = 206,582

The poverty rate in Scotland is broadly average in a European context

It is possible to compare *before housing cost* poverty rates in Scotland with those in OECD countries (Chart 3.12). The poverty rate of 17% in Scotland in 2018 was in line with the average for EU countries (which, including the Baltic countries not included in Chart 3.11, was 16.7%). Poverty rates are lowest in some of the former planned economies of Eastern Europe, and some of the Nordics.

Chart 3.12: Scotland's before housing cost poverty rate is in line with the average of EU countries

Before housing cost poverty rate, selected OECD countries and Scotland, 2018



Source: OECD Income Distribution statistics, and FAI analysis of Households Below Average Income datasets.

Extreme poverty is on the rise

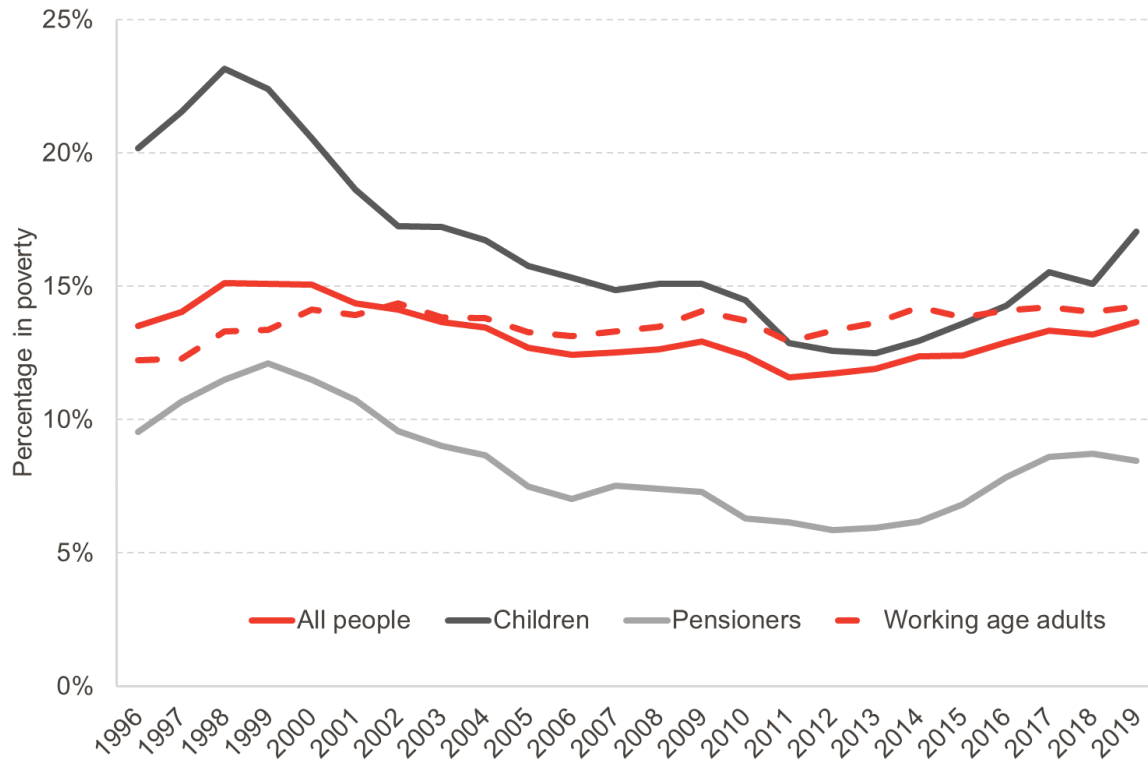
We can also look at a measure of 'extreme poverty' – this is defined as households whose income is below 50% of the median, rather than below 60% of the median.

This shows a similar overall trend as for the 60% of median measure of poverty, with extreme poverty tending to decline during the 2000s and early 2010s, but beginning to increase from 2012 onwards (Chart 3.13). The increase in the extreme poverty rate for children seems particularly stark, and is likely to reflect the introduction of policies such as the benefit cap and two-child limit that have had the most impact on large families.

The proportion of pensioner households living in extreme poverty is substantially lower than the proportion of working age adults or children living in extreme poverty.

Chart 3.13: Extreme poverty was on the rise in the lead-up to the pandemic

'Extreme' poverty rates in Scotland



Source: FAI analysis of Households Below Average Income datasets. N = 181,558

Food security is lowest amongst single parents and those with the lowest incomes

Food insecurity or 'Food poverty' – an inability to afford a diet of sufficient nutritional value – has a range of adverse effects on health. Poor diet is associated with a range of adverse outcomes including obesity, diabetes and cardiovascular disease. It can also affect social and emotional wellbeing, and can have negative developmental consequences for children.

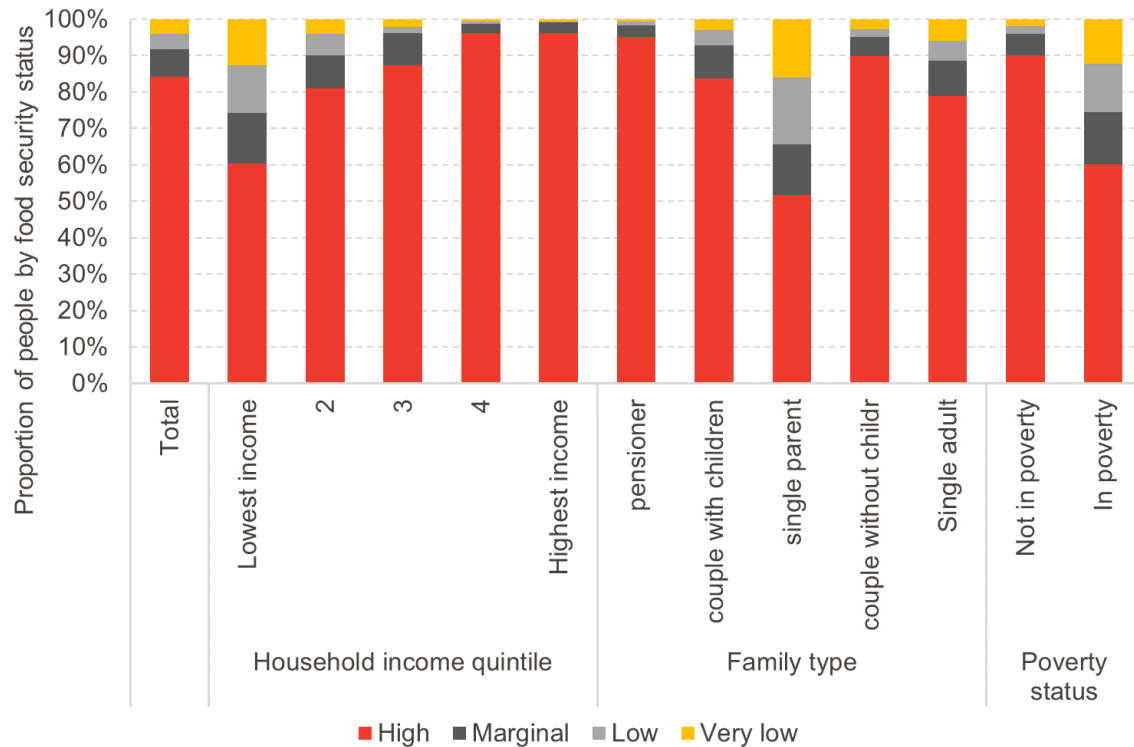
The Family Resources Survey recently began collecting data on households' food security. To identify food security, the survey asks households a number of questions about how often the householder does not have enough of the right types of food, goes hungry, or has to skip meals or reduce portion sizes because of a lack of resources. The responses to these questions are used to allocate households to one of four categories: high food security, marginal food security, low food security, or very low food security.

For Scotland as a whole, 84% of people live in households that have high food security (in 2019/20) and 16% live in households with marginal, low, or very low food security. 4% live in households with very low food security. The figures are not dissimilar from the UK as a whole, where 86% have high food security, and 4% have very low food security.

Single parent families are far less likely to experience food security than other family types, and pensioners are the most likely to experience food security (Chart 3.14). Unsurprisingly, the likelihood of experiencing food security is strongly associated with household income; only 60% of households in the lowest income quintile have high food security, compared to 96% in the top two quintiles.

Chart 3.14: Single parents and those on low incomes are least likely to experience food security

Rates of food security in Scotland, 2019/20



Source: FAI analysis of Households Below Average Income datasets. N = 5,525

Problem-debt is concentrated amongst low-income households

Household financial security is not just about income. Financial security might also be affected by factors such as the regularity and predictability of income, as well as the level of savings (which can help buffer unexpected expenditures) and wealth.

A pertinent indicator of financial situation is problem debt. An individual is said to be in problem debt if they live in a household which has liquidity problems (it is struggling to pay bills now), solvency problems (it is at risk of future problems due to current levels of debt) or both.

It is important to distinguish problem debt from debt more generally. Better-off households are likely to have higher levels of debt than low-income households, but this largely reflects the ability of high-income households to leverage their income to borrow to support purchases of housing and other assets. Debt in this sense is unlikely to be associated with higher levels of financial stress or insecurity.

In contrast, the Health Foundation notes that 'Being in problem debt can harm people's physical and mental health by acting as a source of strain and stress, reducing income available for health-promoting goods and services or increasing health-harming behaviours such as problem smoking'³. People with problem debt are more than twice as likely to self-report their health as being bad or

³ <https://www.health.org.uk/evidence-hub/money-and-resources/debt/relationship-between-self-rated-health-and-problem-debt>

very bad compared to those without problem debt. Research in Glasgow has found that financially vulnerable individuals often rely on informal lending to avoid short-term illiquidity, but that informal loans can strain relationships and prevent people from building up a formal credit footprint (Biosca et al. 2020).

The Wealth and Assets Survey has collected information on households' problem debt since 2014. The latest data covers the period from 2018 to 2020, and shows that 4% of Scottish households had 'problem debt', not dissimilar to the 5% of households across Great Britain who reported having problem debt.

Unsurprisingly, low income households are much more likely to report having problem debt. 11% of households in the lowest fifth of households ranked by income reported having problem debt in Scotland, compared to 4% in the second quintile, 3% in the third quintile, 2% in the fourth quintile and just 1% in the top quintile ranked by income. The figures for GB as a whole are essentially the same.

There is no obvious sign that the proportion of households with problem debt was either increasing or decreasing over the period from 2014, and unfortunately consistent data is not available for periods before this.

Household wealth is extremely unequally distributed

A household's wealth and assets is another financial factor that is likely to influence health. Having wealth and savings helps to address short-term cost pressures facing a household, making it less likely that unexpected events cause stress and anxiety. Wealth, whether in the form of financial wealth, housing or pensions, also conveys a sense of financial security more generally. And holding wealth in the form of housing is likely to make it more likely that one feels secure in one's home, and that the home is of a decent standard.

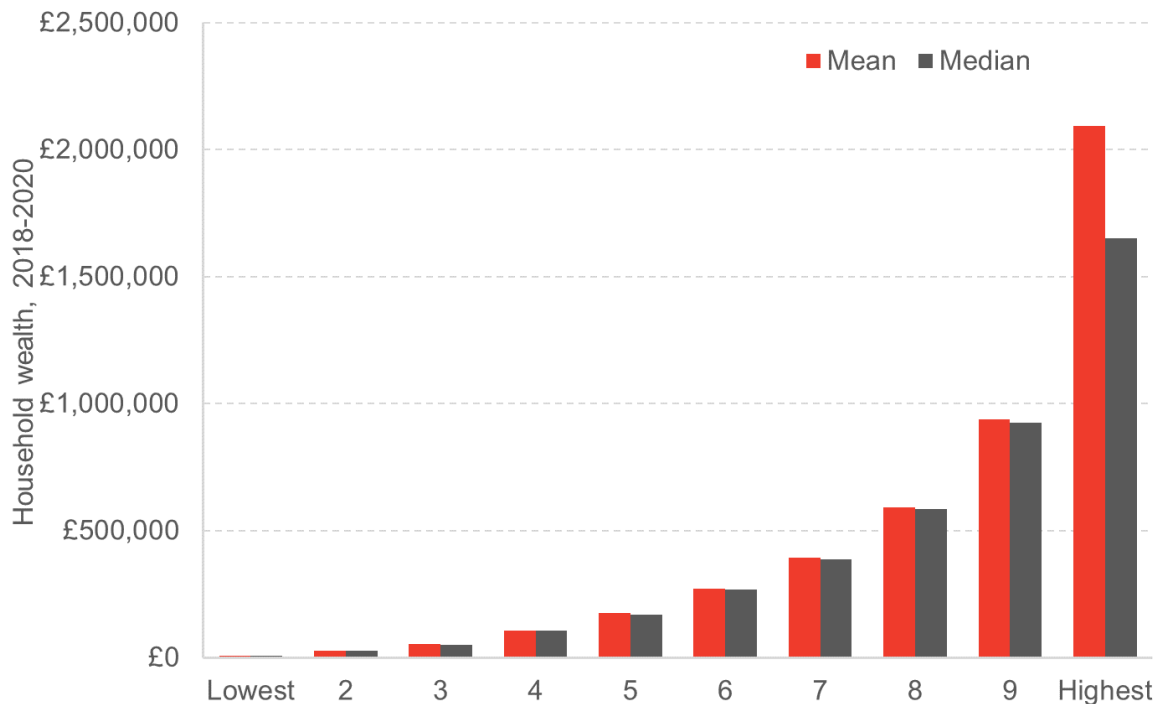
The Wealth and Assets Survey, which has been running since 2006, provides the most comprehensive source of wealth data in Great Britain. The survey collects self-reported data on wealth from households over periods of two year 'waves'. The Scottish sample includes around 1,500 households per wave and is designed to be representative of Scottish households (although no households north of the Caledonian canal are surveyed). Wealth surveys are likely to suffer from two main sources of bias. The first is non-response from the very wealthiest households; the second is under-reporting of some assets by households, and the third is biased valuations of assets by households (not necessarily deliberately, but simply reflecting the fact that many assets do not have an observable price). For these reasons, the WAS is likely to underestimate the extent of wealth inequality.

Household wealth is typically defined to encompass four elements: net property wealth, physical wealth, private pension wealth, and net financial wealth. Net property wealth consists of self-valuations of any property owned by the household, net of any loans or mortgages secured on the property. Physical wealth includes the estimated value of all household contents, including antiques, artwork, and vehicles. Private pension wealth is the value of all occupational and personal pensions. Financial wealth includes the value of formal investments such as bank or building society current or savings accounts, ISAs, endowments, stocks and shares, informal savings, and children's assets, less financial liabilities.

The stock of wealth owned by Scottish households is large – around £1.4 trillion in 2018-20. It is also distributed extremely unevenly (Chart 3.15). The top 10% of households in Scotland ranked by wealth had an average wealth of over £2 million (although the median wealth of the top decile is £1.65 million, indicating substantial inequality of wealth within the top decile). The median wealth of Scottish households was £214,000, whilst those in the bottom decile had wealth of £7,600 on average. This distribution corresponds to a Gini coefficient of 0.64, much higher than the Gini coefficient for net household income in Scotland of 0.35. Scotland’s Gini coefficient for total wealth inequality in 2018-20, at 0.64, is actually slightly higher than the UK equivalent of 0.61. Subsequent analysis could ascertain the reasons for this difference.

Chart 3.15: Household wealth is distributed extremely unevenly

Mean and median wealth for each decile of the household wealth distribution, Scotland, 2018-20



Source: FAI analysis of Wealth and Assets Survey. Unweighted N = 1,514

Of course part of the reason that wealth inequality is much higher than income inequality is that wealth is a stock that typically accumulates over people’s working lifetimes. It is arguably more instructive to compare the distribution of wealth within a cohort than across the population as a whole. Nonetheless, even if we just consider wealth inequality for households in which the ‘household reference person’ is aged 45-54, the Gini coefficient is 0.54. This still corresponds to a very unequal distribution: the average wealth of the top decile, at £973,000 is 130 times higher than the average wealth of the bottom decile, at £7,450.

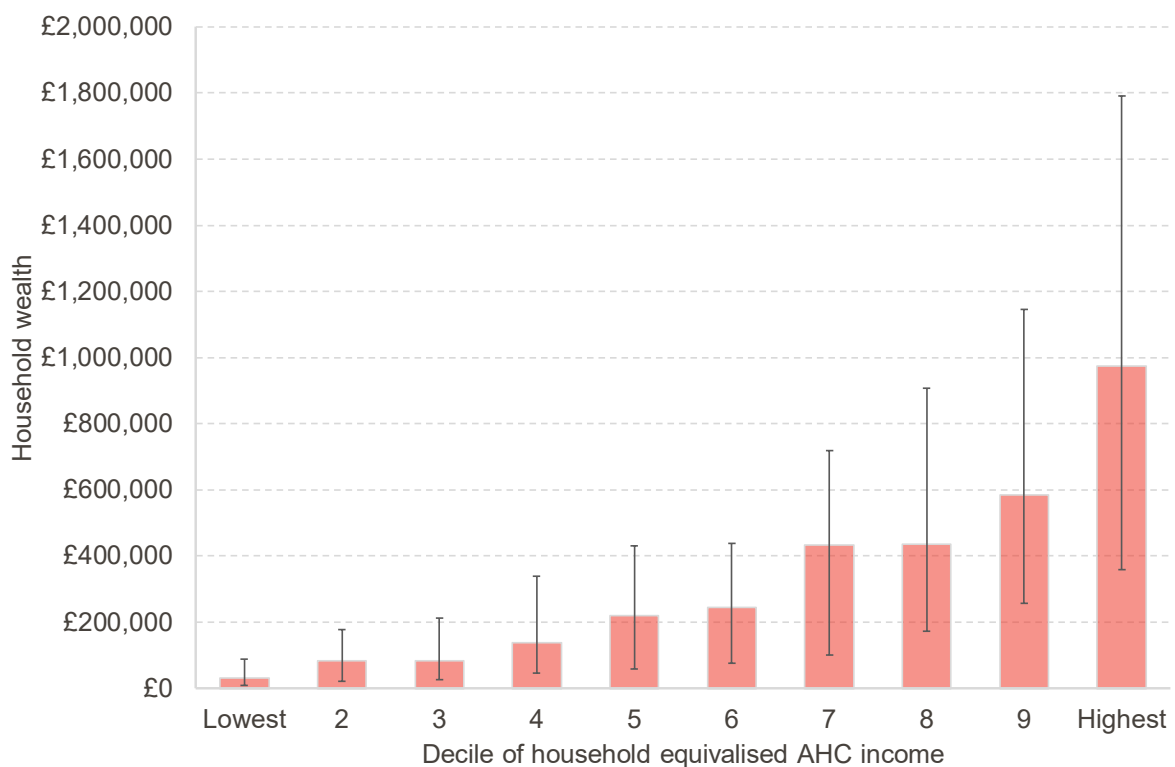
Is a household’s wealth correlated with its income? As might be expected, higher income households tend to have higher levels of wealth on average. But there is also significant variation around this relationship. Chart 3.16 shows the median level of wealth for each household in the distribution of household net income; higher income households tend to have higher levels of wealth. The error bars in Chart 3.14 show the 25th and 75th percentile of wealth for each decile of household income.

The interpretation of these is as follows. Median wealth of a household in the fifth income decile is around £200,000. But the 25% of households in this decile have wealth below £60,000, and 25% have wealth above £430,000. Chart 3.15 thus reveals that one quarter of households in the fifth income decile have higher wealth than one quarter of households in the top income decile.

The data we have access to does not allow us to examine wealth across many other dimensions of inequality. But Advani et al. (2020) show, using a special data licence, that across the UK as a whole, ethnic minority groups are typically much less likely to have relatively high levels of wealth than average.

Chart 3.16: Household wealth is positively correlated with household income, but very imperfectly

The distribution of wealth by decile of the net income distribution, Scotland, 2018-20



Source: FAI analysis of Wealth and Assets Survey. Note: the top and bottom of each bar denotes the 75th and 25th percentile of household wealth for each income decile. Unweighted N = 1,514

Household wealth has grown substantially since 2006/8, but there has been little change in its distribution

How have things changed over time? We only have data since 2006/8. The total stock of household wealth in Scotland has expanded hugely in that time: from £667 billion in 2006/8 to £1.1 trillion in 2018/20. The vast majority of this increase – 70% - is accounted for by increases in pension wealth (which itself arises in part because of the fall in interest rates over this period, which raises the current value of a pension pot). The value of property wealth increased by £56 billion, financial wealth (e.g. current and savings accounts) by £48 billion, and physical wealth (e.g. household contents) by £41 billion.

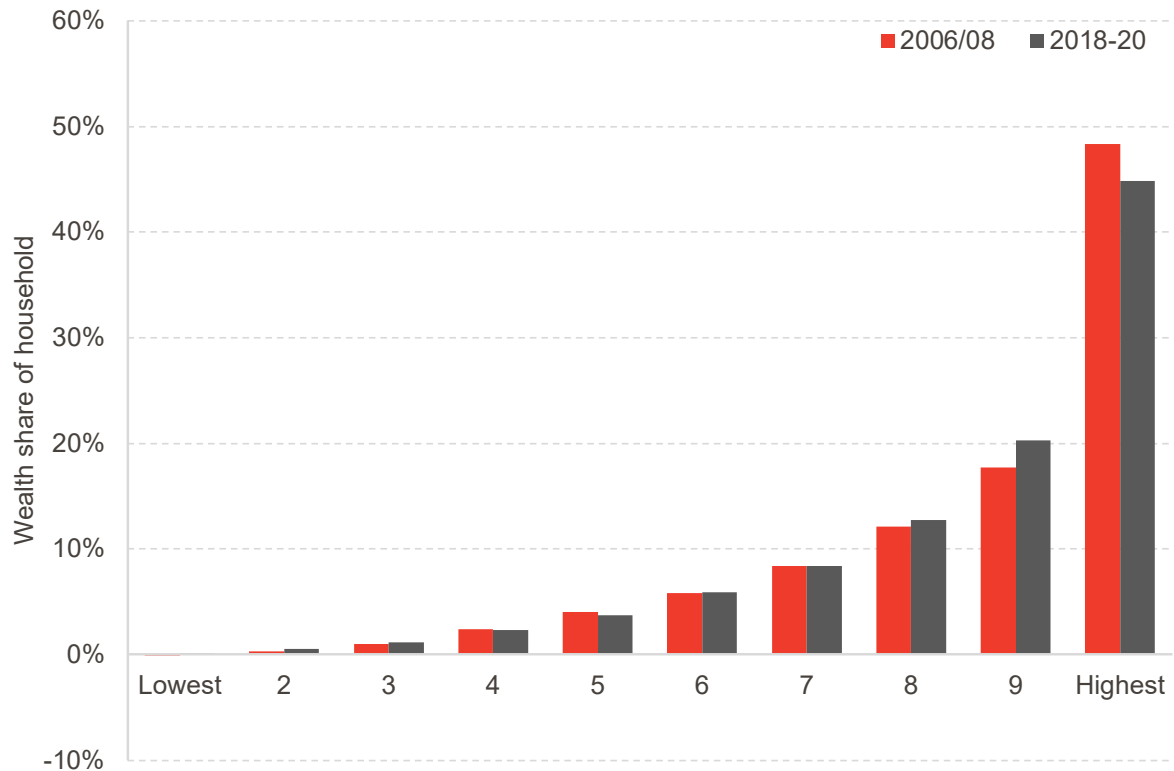
Perhaps surprisingly, there has been very little change in the inequality of household wealth in this time. The share of total wealth held by the top 10% did fall slightly, offset by a small increase in the shares held by the 8th and 9th deciles (Chart 3.17). But the share of total wealth held by the top half of households remained unchanged, at 92%. As a result, the Gini coefficient of household wealth fell fractionally, from 0.65 to 0.64.

We can conclude that, despite a substantial increase in the stock of household wealth between 2006/8 and 2018/20, that increase did nothing to share the stock of wealth more evenly across the distribution. The increase in wealth by decile was proportionate to the existing very unequal pattern of wealth stocks by decile.

Looking at housing wealth specifically over a slightly longer timeframe, Bangham and Judge (2019) conclude that inequality of housing wealth in Scotland has increased between 2006 and 2016, after having fallen during the 12-year period prior to that. The explanation for the fall in household wealth inequality between 1994-2006 and the rise in inequality in the decade afterwards relates mainly to patterns of home ownership. Between 1994-2006, home ownership in Scotland increased, thanks to the right to buy initiative (the scheme that enabled council house tenants to purchase their property from the local authority) and relatively easy access to credit. The subsequent decade saw a fall in the proportion of people who own their own home, but a rise in the proportion of people who own two or more properties. This concentration of residential properties across fewer households, combined with some increases in property values, drove the increase in housing wealth inequality.

Chart 3.17: Despite a substantial increase in the value of household wealth, there has been little change in how it is distributed

Share of wealth held by each decile of household wealth distribution in Scotland, 2006/8 – 2018/20



Source: FAI analysis of Wealth and Assets Survey. Unweighted N = 4,347

Conclusions

Greater financial security is associated with better health. The channels include the way that financial security helps to avoid stress and feel in control, and the importance of financial security in enabling households to access experiences and material resources, to adopt and maintain healthy behaviours.

The period since devolution is one of two distinct halves when it comes to household incomes. The first decade was a period of relatively buoyant income growth that was broadly shared across most of the distribution, apart from at the tails – the top one or two per cent pulled away, and the bottom tenth fell behind. The second decade, from 2010, was not one of increasing inequality, but of a dramatic slowdown in living standards.

Scotland's rate of income inequality remains relatively high in the context of most western European countries, this being the historical result of policy and institutional change in the 1980s. As well as having a relatively high overall rate of inequality internationally, income inequalities in Scotland are also high between groups. Income differences between households by ethnicity, disability and education status are high, and have remained persistently so over the period since 1999.

There is quite a high degree of income mobility in Scotland. Over a ten year period, a majority of households will move at least one quintile up or down the distribution, and some will experience large moves up or down the income distribution. But for a minority of households at the top and

bottom of the income distribution, their position in the income distribution can remain persistent for long periods.

The poverty rate fell quite substantially during the first decade of devolution, largely the result of increases in the generosity of benefits paid to families with children, and pensioners. The relative poverty rate in Scotland is not significantly above the European average. But the more worrying trend is that the poverty rate has begun increasing since the late 2010s. This largely reflects the below inflationary increases in social security rates for the working age population.

Wealth inequality is also high in Scotland, and has remained unchanged over the period since 2006-08 for which we have comparable data. This is despite large increases in the stock of wealth over the period, which have served mainly to maintain existing wealth gaps, rather than having resulted in a more equal sharing.

4. Education and social mobility

Education matters for health because it influences income, employment and social networks throughout our life. But our circumstances as adults are not just influenced by our educational attainment and qualifications, but also by the circumstances at birth and during our early years. Parents from more advantaged backgrounds are often able to pass on these advantages to their children. The transfer of advantage can reduce social mobility and opportunity, which can have an impact on health by contributing to feelings of despondency and helplessness.

Key points

- There is a significant poverty-related attainment gap amongst primary school pupils in Scotland: attainment of pupils living in the most deprived fifth of neighbourhoods have lower levels of educational attainment than those from less deprived neighbourhoods. Attainment is highest amongst those living in the least deprived fifth of neighbourhoods.
- A similar gap exists amongst secondary school pupils. There was some evidence that these poverty-related attainment gaps were closing in the years immediately prior to the pandemic, but the pandemic resulted in a substantial reversal of progress.
- Poverty-related participation gaps also exist when it comes to higher education participation in Scotland. Despite a large increase in higher education participation in Scotland since 1999, children from more deprived communities remain much less likely to go on to participate in higher education compared to those from more affluent communities.
- The existence of these poverty-related attainment gaps reflects the way that parents from relatively more advantaged backgrounds are able to effectively transfer these advantages to their children in a variety of ways, both financial and non-financial.
- Another way of looking at the transfer of opportunity across generations is through the concept of social mobility. Social mobility measures the extent to which people's education, income or jobs are associated with those of their parents. In Scotland, the occupations that people do as adults are strongly associated with those that their parents did – and this association is as strong as in other parts of the UK. There is no evidence that intergenerational occupational mobility is improving for younger cohorts compared to older cohorts.
- People in Scotland who grow up in a workless household are more likely to be out-of-work as adults compared to those who grow up in a working household. One of the mechanisms that accounts for this result is ill-health, with adults who grow up in a workless household much more likely to suffer activity-limiting health problems as adults. Intergenerational persistence of worklessness appears slightly higher in Scotland than in the rest of the UK (rUK) which is in turn partly because growing up in a workless house is associated with a greater likelihood of ill-health in Scotland than in rUK.

Education, social mobility and health

Education is associated with improved health. As a simple example, data from the 2019 Scottish Household Survey shows that 43% of people whose highest qualification is a degree report that their health is very good; for those whose highest qualification is at Higher level, 34% report having very good health; this falls to 30% for those whose highest qualification is Standard Grade, and to 14% for those with no qualifications.

There are several mechanisms, or explanations, as to why education is associated with better health. Higher educational qualifications are associated with higher incomes, better and more stable jobs. As we have seen in previous chapters, financial and job security are strong determinants of health because they influence the ability to maintain a decent physical standard of housing, and provide the resources necessary to support healthy behaviours.

Education is also associated with broader social and psychological benefits arising from the tendency of people with better education to have more social contacts and greater self-esteem. There is also of course an effect in the other direction – poor health, particularly during childhood and adolescence, can affect educational attainment.

So education is important because of the way that it influences the prospects for our employment and income circumstances throughout our lives. But those prospects are not just affected by our education. They are also influenced by our background more generally, and the circumstances of our early years.

The concept of social mobility concerns the extent to which someone's circumstances are influenced by where they started in life. One measure of social mobility is the extent to which people's educational attainment is linked to that of their parents. Most countries observe some association between parents' educational attainment and the educational attainment of their children. Better educated parents tend to have higher incomes and resources to invest in supporting their own children's education, and can support their children in other ways too – such as through connections to better schools or work experiences.

There are other measures of social mobility – such as the extent to which the jobs that people do are associated with the types of job their parents did; or the association between the incomes of people today with those of their parents.

So whilst inequality in educational attainment itself might contribute to inequality in health, low social mobility might have further negative consequences on health inequalities. When social mobility is low, i.e. where education or life chances more generally are strongly determined by circumstances of birth and early years, this may contribute to a sense for some people that the odds are stacked against them, creating a sense of despair and futility. However, the empirical link between social mobility and health inequalities – and the direction of this link – is disputed (Simons et al., 2013).

Most aspects of education policy itself are devolved, including the design of the curriculum, policy and regulation on schools (including funding allocations, and the degree of local authority or headteacher control, limits on class sizes, and policy on free school meals), and the funding of higher education.

This chapter first looks at trends in educational inequalities through the lens of the poverty-related attainment gap. These inequalities are interesting in their own right, but also provide insights into the importance of background in influencing educational attainment. It then goes on to quantify

social mobility more formally by examining the association between the labour market status of people today with the labour market status of their parents.

Measuring differences in educational attainment

Recent years have seen a large amount of political and media interest in educational attainment gaps in Scotland. Attainment gaps are in essence differences in educational attainment (or sometimes, participation) between two groups. Attainment gaps exist between sex, ethnic groups, geographical areas, between pupils with and without experience of being in local authority care. The gap that has received most attention is the gap between pupils from relatively better off and less well off backgrounds, often known as the poverty-related attainment gap.

Ideally, we would measure the poverty-related attainment gap by reference to characteristics of pupils' own families. On the whole however, published attainment statistics do not contain information about family circumstances and characteristics. As a result, the poverty-related gap in educational attainment is typically measured as the difference in attainment between pupils from the most and least deprived neighbourhoods. Neighbourhoods are ranked by deprivation, and data on educational attainment is published for each of the five quintiles of deprivation across Scotland as a whole.

This approach does have obvious limitations. Some neighbourhoods, particularly those in rural areas, contain a diverse mix of households with a diverse range of characteristics and circumstances. In other words, a neighbourhood that is ranked as a relatively more deprived neighbourhood can feasibly contain households that are socioeconomically relatively advantaged, and vice versa. Nonetheless, neighbourhood-based measures are the best way we have of measuring the poverty-related attainment gap. And whilst not perfect, they are instructive about the scale of the issue and trends over time⁴.

The poverty-related attainment gap at primary level is wide and shows little sign of closing

What's happened to the poverty-related attainment gap in Scotland at primary level? Unfortunately, changes in the way that data is collected make comparisons over time somewhat problematic.

Until 2017, the Scottish Survey of Literacy and Numeracy collected data on reading, writing and numeracy ability from a sample of Scottish schools at P4 and P7. From 2017 onwards, the SSLN was replaced with the Achievement of Curriculum for Excellence (ACEL) assessment. The results from SSLN and ACEL are not directly comparable for a number of reasons. Most particularly, the SSLN was based on a standardised and externally marked assessment, whereas ACEL relies on teacher judgements of pupils' ability.

Drawing on the SSLN data for the 2010-2016 period, Chart 4.1 shows a significant poverty-related attainment gap for pupils at the P4 stage. In 2010/11 for example, 70% of P4 pupils from the most

⁴ In the past, when eligibility for Free School Meals was determined by the benefit status of a child's family, it has been instructive to compare the attainment of pupils eligible for Free School Meals with those not eligible for Free School Meals. The rollout of Free School Meals universally across primary age groups negates the utility of this measure and it is no longer routinely published.

deprived fifth of neighbourhoods were performing well or very well at mathematics, compared to 82% of pupils from the least deprived fifth of neighbourhoods – a gap of 12 percentage points.

Over the period covered in the charts, attainment has tended to fall slightly across all pupils, with the fall being slightly more pronounced amongst pupils from the most deprived neighbourhoods compared to those from the least deprived neighbourhoods.

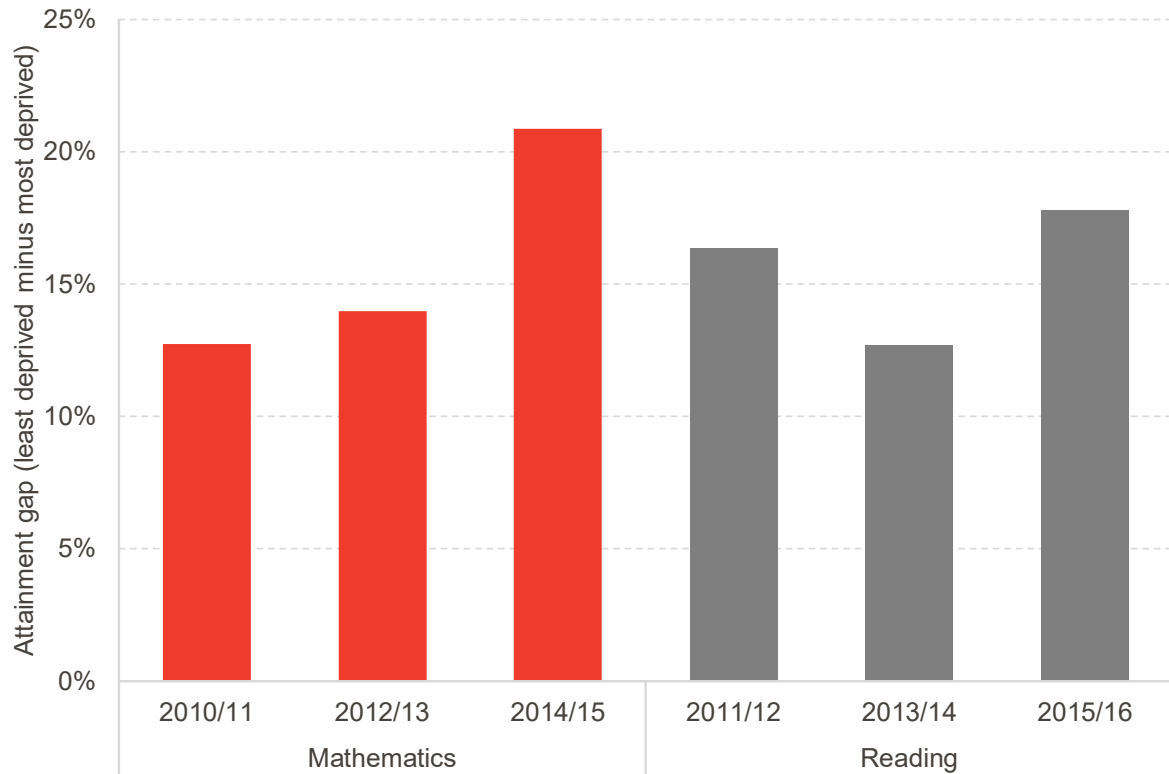
The political and media attention given to educational attainment gaps in recent years has sometimes given the impression that the attainment gap can be closed significantly or even eliminated within a relatively short timescale. In reality, the nature of the socioeconomic determinants of the poverty-related gap probably means that closing the gap will require sustained action over a longer timeframe. Nonetheless, the fact that the gap showed no meaningful sign of closing over this six-year period is a cause for concern.

More recent data from the ACEL shows some more positive news, in the sense that the poverty-related attainment gap did decline slightly for a period of time leading up to the pandemic (Chart 4.2). This was driven by marginally faster growth in attainment by pupils in the bottom decile compared to the top decile. Perhaps the emphasis on reducing the attainment gap, via the government's Attainment Fund, was making some progress.

However, the impact of the pandemic can be seen starkly. The poverty-related attainment gap increased substantially in 2020/21, across all areas of assessment. Attainment fell across all pupils, but the fall in attainment was more significant amongst pupils from the lowest quintile of neighbourhood deprivation. This negated all improvement in closing the gap in the years leading up to the pandemic. How quickly this worsening of the gap will reverse for the affected cohorts remains to be seen.

Chart 4.1: The poverty-related attainment gap at primary level showed no sign of declining between 2010 and 2016

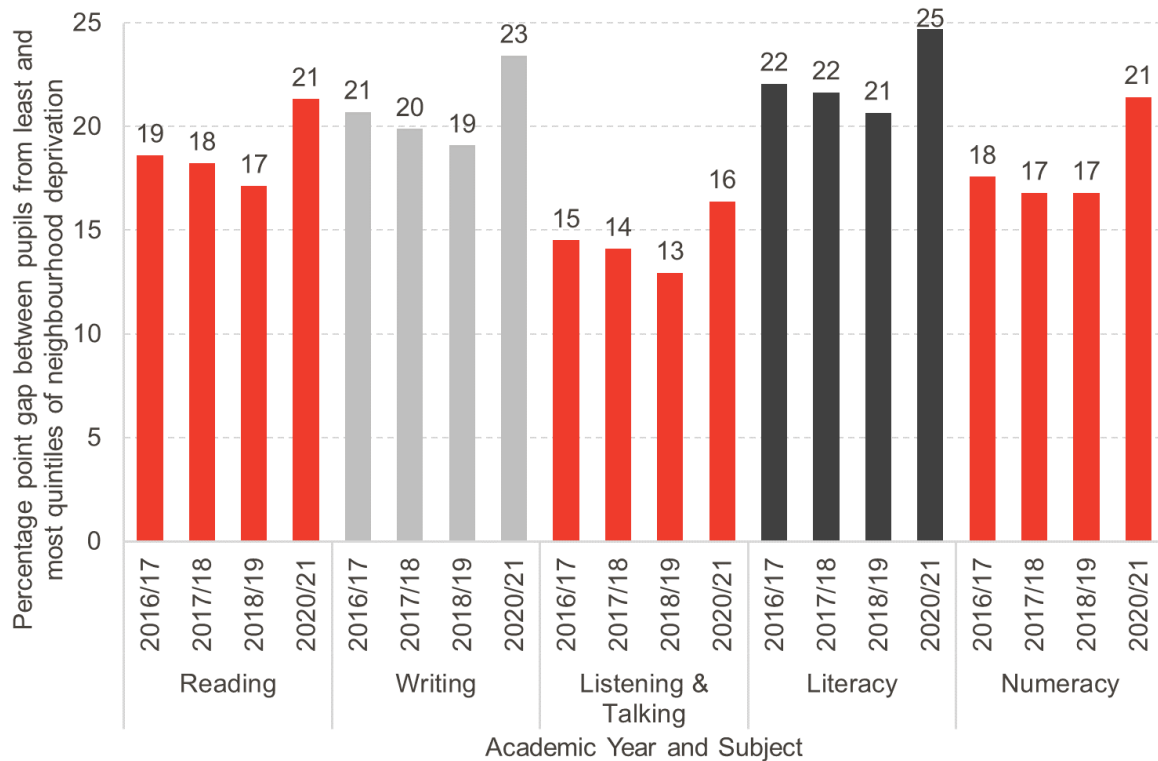
Percentage point difference in proportion of pupils at P4 performing well or very well between least and most deprived quintiles of neighbourhood deprivation



Source: FAI analysis of Achievement of the Scottish Survey of Literacy and Numeracy (Scottish Government)

Chart 4.2: The pandemic reversed recent progress in narrowing of poverty-related attainment gap at primary level

Percentage point gap in proportion of primary pupils (P1, P4, P7 combined) achieving expected level, between least and most deprived neighbourhoods



Source: FAI analysis of Achievement of Curriculum for Excellence Levels (Scottish Government)

There is some evidence that the poverty-related attainment gap at senior level may be declining... but there are important gaps in the evidence

When it comes to the senior school phase, we can consider attainment gaps in formal qualifications. The Scottish Government's preferred measure of the attainment gap is the proportion of pupils who leave school with one or more qualifications at a particular level. Level 6 is most frequently the focus, since this is where Highers sit.

On this measure there is a positive story to tell (Chart 4.3). The proportion of pupils leaving with at least one Level 6 qualification has increased since 2009/10. The increase has been more rapid amongst pupils in the most deprived quintile of neighbourhoods compared to the least deprived. As a result, the 'poverty-related' attainment gap has fallen significantly on this measure, from about 46 percentage points to 34.

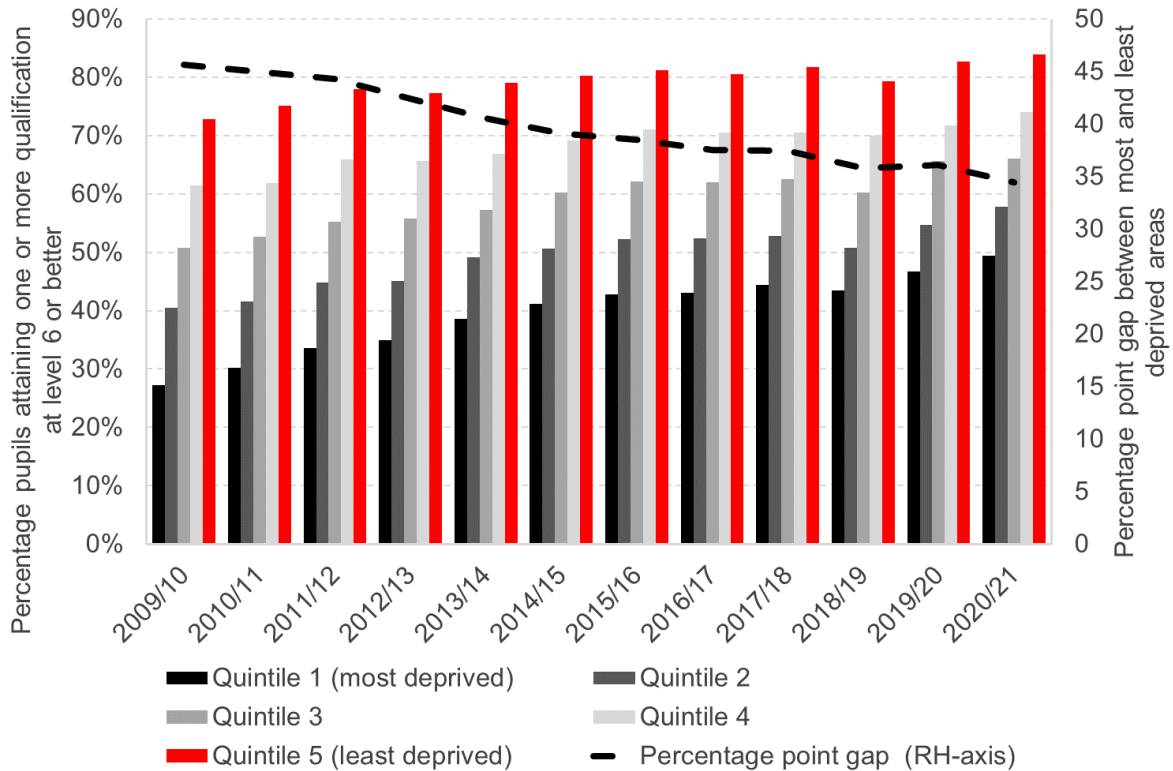
However, as discussed by McEnaney (2021), a measure like this gives a very partial assessment of the attainment gap. It does not tell us how many qualifications a pupil achieved, at what grades, or in what subject. McEnaney shows that substantial gaps exist between pupils from the most and least deprived neighbourhoods in terms of the number of qualifications attained, and in the grade distribution of those qualifications.

Unfortunately, this more thorough analysis of attainment gaps for school leavers is not available over time. But the clear conclusion is that, whilst progress on at least one measure of the attainment

gap has been made, substantial attainment gaps exist between pupils from more and less deprived neighbourhoods; and these gaps may in fact be starker than the government’s preferred measure suggests.

Chart 4.3: On one measure, the poverty-related attainment gap in school qualifications has fallen substantially

Proportion of school leavers attaining one or more qualifications at Level 6 or better



Source: Summary Statistics for Attainment and Initial Leaver Destinations (Scottish Government)

Economic and social background plays less of a role in determining educational performance in Scotland than in many OECD countries

Given that publicly available data on the poverty-related attainment gap at senior level is only available since 2010, alternative sources are required if we wish to consider trends over a long timeframe. The Programme for International Student Assessment (PISA) assesses 15-year olds’ abilities to use reading, maths and science knowledge and skills to meet real life challenges. PISA is overseen by the OECD and is carried out in most OECD countries. The PISA assessments were carried out in a sample of over 100 schools in Scotland from 2006 until 2018, at which point the Scottish Government regrettably decided to withdraw from the initiative. As with any standardised testing regime, PISA has been criticised on a number of grounds relating to the design and interpretation of results (McEnaney, 2022). But it remains useful.

Scotland’s overall score on PISA has declined over the period since devolution, for reading, maths and science. For reading and maths at least, most of this decline occurred before the introduction of Curriculum for Excellence in 2010. By 2018, Scotland’s overall PISA score was around the OECD

average for maths and science, and slightly above the average in reading. Nonetheless, deterioration in the overall score over time has been the main focus of public scrutiny.

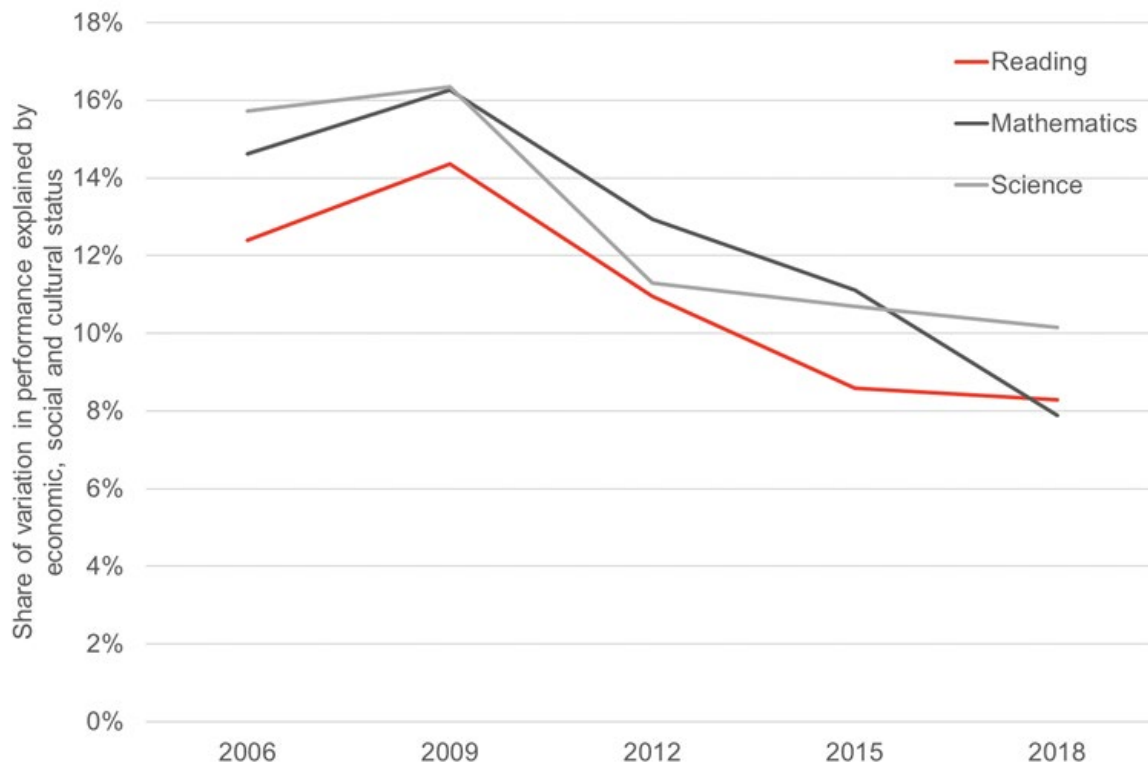
In general, the gap in PISA achievement between pupils from the most and least socioeconomically deprived is somewhat lower in Scotland than it is for the OECD average, and slightly lower in Scotland than in England.

The PISA data also provides an estimate of the extent to which variation in test scores is attributable to pupils' economic, social and cultural background (ESCS), where ESCS is a measure of the pupil's parents' background, resources, and education. The share of test score variation attributable to ESCS fell in Scotland between 2009 and 2018 (Chart 4.4). Moreover, by 2018, the share of score variation explained by ESCS was lower in Scotland than the OECD average for reading (8.3% v. 12%), maths (7.9% v. 13.8%) and science (10.1% v. 12.8%). The share of variation explained by ESCS was also lower in Scotland than in the UK as a whole, where ESCS explained 12% of variation in maths scores (v. 8% in Scotland) and 11% of variation in science scores (v. 10% in Scotland).

What this tells us is that there is slightly more variation in test scores, amongst pupils with similar socioeconomic background, in Scotland than in the OECD average (and therefore socioeconomic background is less likely to be indicative of ability). However, socioeconomic background does explain relatively more variation in Scotland than in several other countries, including Canada, Ireland and Finland (OECD, 2019). Some caution does need to be applied to the international comparative statistics given challenges around measuring ESCS consistently across countries.

Chart 4.4: Economic, social and cultural status became less strongly correlated with assessment score variation between 2006 and 2018

Share of variation in assessment performance explained by economic, social and cultural status, Scotland



Source: Programme for International Student Assessment (PISA), Scottish Government analysis

Huge increase in higher education participation, but poverty-related access gaps remain large

There has been an almost continual expansion in the proportion of Scottish school leavers whose initial destination is higher education (Chart 4.5). In 1999/00, 31% of school leavers went on to higher education (representing just under 18,000 pupils); by 2020/21, this proportion had risen to 45% (23,000 pupils).

There is a steep socioeconomic gradient in HE access. In 2014, First Minister Nicola Sturgeon established the Commission on Widening Access to advise on steps required in order to realise her ambition that *'a child born today in one of our most deprived communities will, by the time he or she leaves school, have the same chance of entering university as a child born in one of our least deprived communities'*.

The Commission's final report noted that this is a 'challenging objective'. In its final report, the Commission on Widening Access argued that reducing inequalities in HE access was necessary on moral, social and economic grounds.

- Morally, it is not fair that *'this predominantly publicly funded asset disproportionately benefits those in our most affluent communities, meaning that, through accident of birth,*

those in our most disadvantaged communities have nothing like an equal chance to realise their potential’.

- Socially, the report noted that *‘Graduates are healthier, live longer and enjoy better employment outcomes. We know too that the social, cultural and financial benefits of higher education can be transmitted between generations, breaking cycles of deprivation and contributing to a fairer, more prosperous and inclusive Scotland.’*
- Economically, the global shift towards knowledge-based economies is placing a premium on innovation and high-end skills. The report argues that *‘In this context, the key economic asset of any nation is the talent and skills of its people. Yet, by failing to fairly distribute the opportunities necessary for all of our people to flourish, Scotland is missing out on the economic potential of some of our finest talents’.*

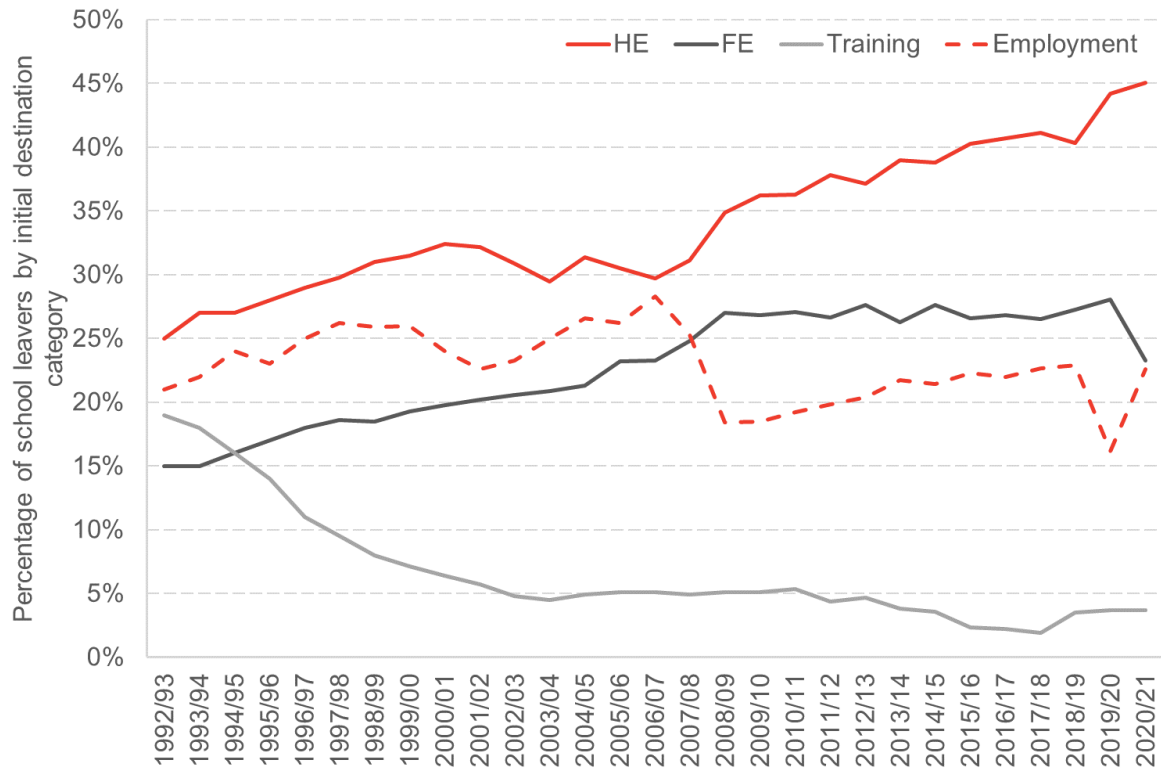
Has there been an improvement in socioeconomic access to higher education in recent years? Chart 4.6 shows that the proportion of school leavers entering higher education has increased in all five quintiles of neighbourhood deprivation between 2009/10 and 2020/21. Over the period as a whole, the access gap between the most and least deprived communities has closed slightly. What this data does not give us is a clear steer on the destinations of those graduating from higher education, and this will be an important metric to consider in addition to participation itself.

The latest annual report from the Commissioner for Fair Access (2021) notes that there has been some progress towards meeting the government’s fair access targets. But it also noted three areas of concern. These were: complacency resulting from recent progress, when in reality ‘the hardest work lies ahead’; the impact of Covid-19 which has disproportionately affected those from the most deprived areas because of school disruptions, financial insecurity and challenges for university outreach services; and the increased strategic focus of HE in relation to economic development rather than social justice (Commissioner for Fair Access, 2021).

The higher education participation gap between pupils from the most and least deprived neighbourhoods has narrowed slightly in both Scotland and England in recent years (Chart 4.7). However, the higher education participation gap between pupils from the most and least deprived neighbourhoods is somewhat higher in Scotland than it is in England. Policy differences between the two countries mean that caution should be applied in reading too much into this finding. The data in Chart 4.7 shows HE participation in UK universities. But note that there are more opportunities for studying higher education in further education establishments in Scotland than there are in England. Since this route may be more attractive to those from more disadvantaged backgrounds (and from rural areas), this policy difference may explain in part the finding that the university participation gap is steeper in Scotland.

Chart 4.5: The proportion of school leavers going on to Higher Education has increased throughout the past 20 years

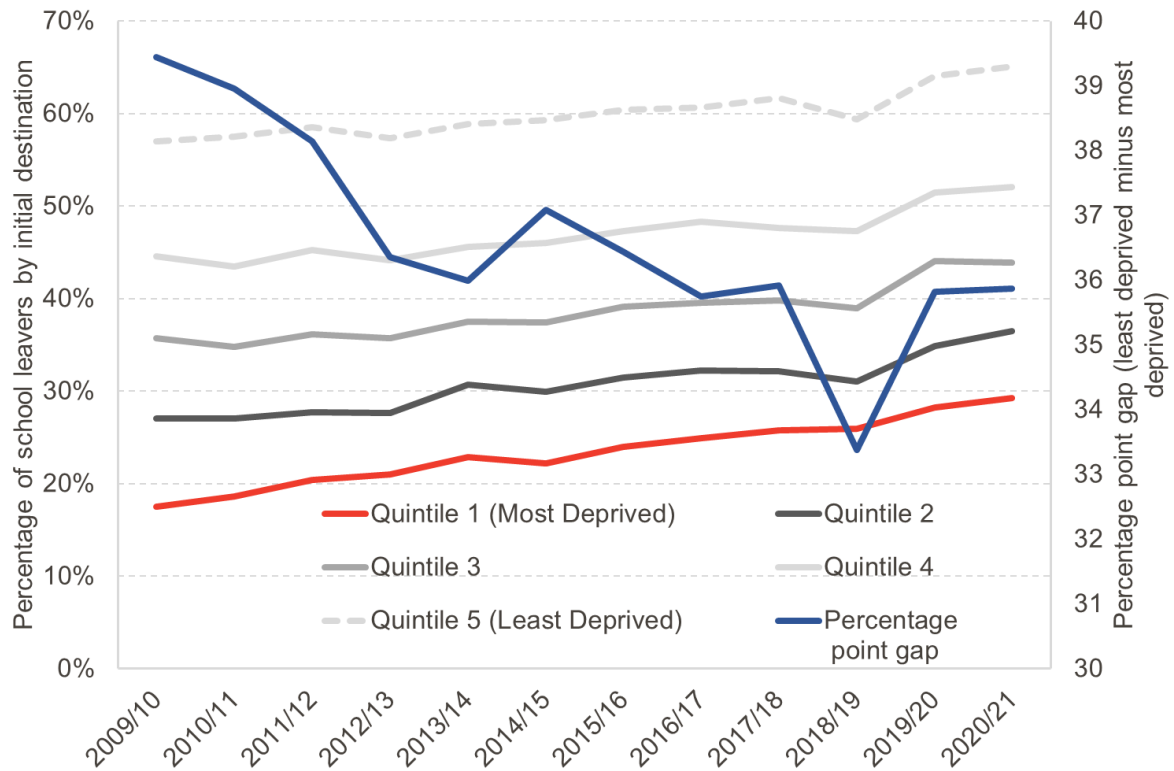
Percentage of leavers from publicly funded schools by initial destination



Source: Scottish Government, Summary Statistics for Attainment and Initial Leaver Destinations 2022

Chart 4.6: The HE poverty-related attainment gap has fallen but remains high

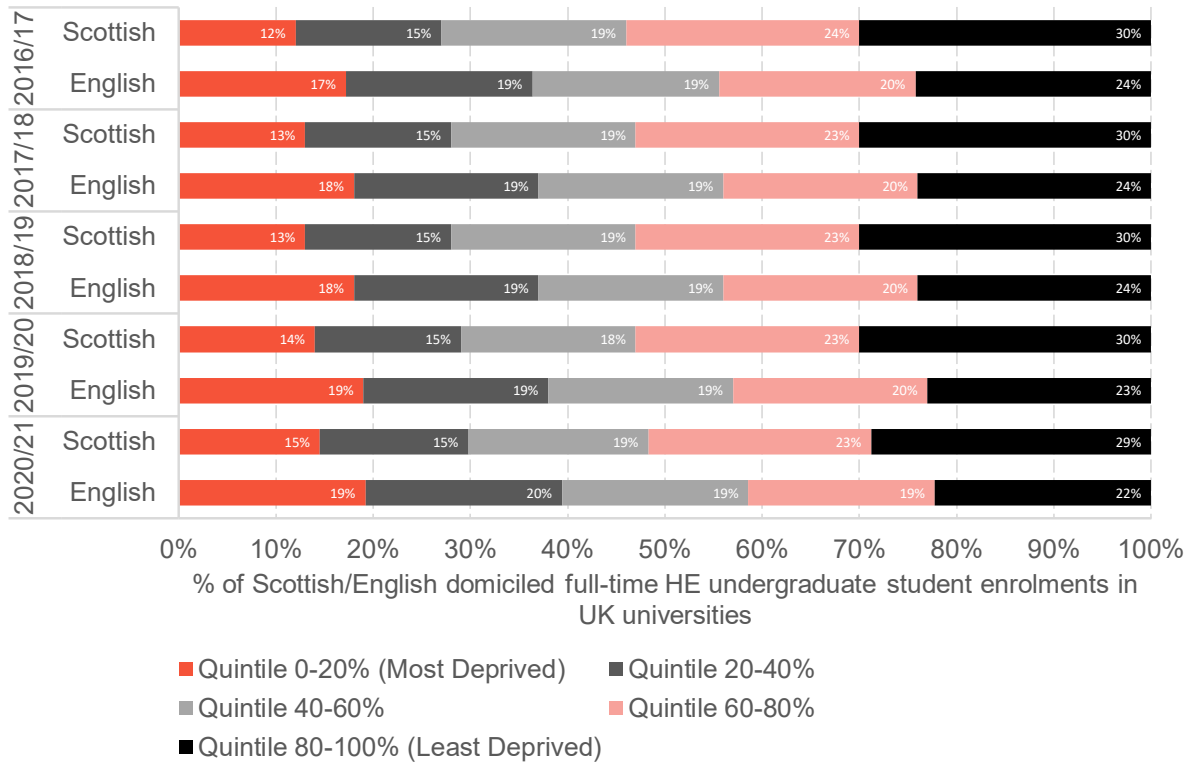
Percentage of leavers from publicly funded schools entering HE, by quintile of neighbourhood deprivation



Source: Scottish Government, Summary Statistics for Attainment and Initial Leaver Destinations 2022

Chart 4.7: The HE poverty-related attainment gap is somewhat higher in Scotland than England

Percentage of English/Scottish domiciled full-time HE undergraduate enrolments in UK universities



Source: Higher Education Statistics Agency (HESA)

There are large gaps in educational attainment across social, cultural and ethnic groups at primary level...

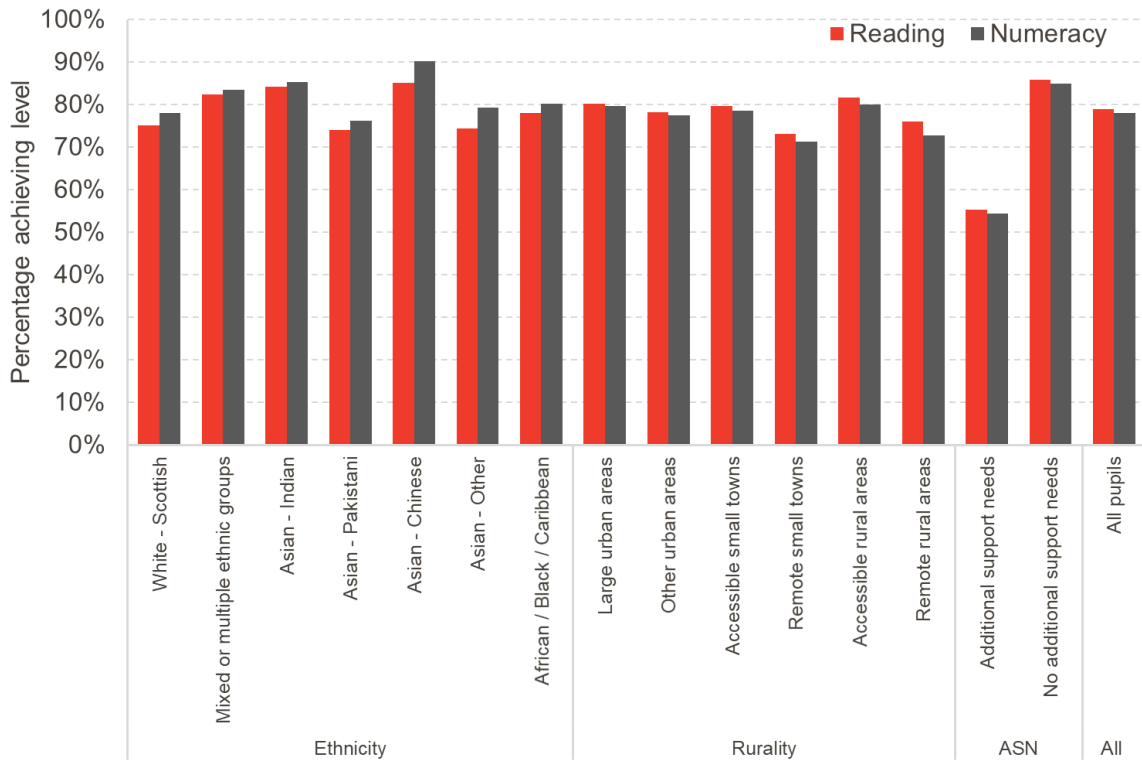
Up until now we have considered the poverty-related attainment gap in education. Attainment gaps can also be considered in relation to other groups.

Chart 4.8 shows that educational progress at primary level is often somewhat higher amongst ethnic minority groups than it is for the population as a whole, and this is particularly the case for pupils of Chinese or Indian ethnicity.

In terms of rurality, progress at primary level is somewhat lower in remote areas than it is in either more accessible rural areas or in urban areas. Those with additional support needs (ASN) have significantly lower attainment than those who do not.

Chart 4.8: Attainment gaps can be seen across a number of dimensions

Percentage of primary students achieving expected level, 2016/17 – 2018/19



Notes: pupils are assessed at three primary stages, P1, P4 and P7; chart data is an average of attainment across these stages. Data is combined across three years, 2016/17 – 2018/19 (no data available for 2019/20). Source: FAI analysis of Achievement of Curriculum for Excellence Levels (ACEL) data, Scottish Government

... and in terms of access to higher education

Significant gaps in higher education participation are also apparent. Table 4.1 shows, in the top row, the proportion of the school leavers going to higher education in Scotland since 2009/10. Subsequent rows show the deviation, in percentage points, from this population mean – a positive number implies that the participation rate for a particular group is higher than the population average, whereas a negative number implies that the participation rate is lower.

Table 4.1 shows that:

- There is a significant gender gap in higher education participation, and this has widened over time. By 2020/21, the difference between male and female participation rates in higher education was a staggering 16 percentage points, with women much more likely to study in higher education than men.
- Pupils from remote areas are less likely to go on to study higher education than average. This gap appears to have grown over time (and is not just a pandemic effect).
- School leavers from ethnic minorities are significantly more likely to go on to higher education, mirroring the pattern observed for primary attainment.
- School leavers with a disability are much less likely to go on to study higher education, with a participation gap of 20 percentage points relative to the population as a whole. This gap has not changed over time.

Table 4.1: Participation gaps in higher education are large and more likely to be growing than falling

Percentage point gap in higher education participation rate of school leavers, by group

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Total participation rate	36	36	38	37	39	39	40	41	41	40	44	45
Sex												
Male	-4	-4	-4	-5	-5	-5	-6	-7	-7	-7	-8	-8
Female	4	4	4	5	5	6	6	7	7	7	8	8
Urban Rural Classification of School												
Large Urban Areas	0	0	0	1	0	1	1	2	2	3	3	3
Other Urban Areas	-1	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-2
Accessible Small Towns	2	3	2	2	3	3	2	2	3	0	1	2
Remote Small Towns	0	-2	-3	-1	-4	-3	-3	-6	-7	-5	-7	-6
Accessible Rural	3	2	3	0	5	5	3	2	2	1	2	2
Remote Rural	2	-1	1	1	0	-2	-3	0	-4	-3	0	-5
Ethnic Background												
White - Scottish	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-2	-2
White - non-Scottish	4	3	4	4	1	1	1	1	3	2	2	2
Mixed or multiple ethnic groups	11	9	7	9	8	9	11	9	9	12	8	13
Asian - Chinese	29	38	36	42	36	37	34	38	33	38	38	37
Asian - Indian	19	15	22	20	18	17	19	26	26	29	26	27
Asian - Pakistani	13	13	19	16	16	15	19	19	19	20	24	23
Asian - Other	10	17	11	10	20	17	19	16	17	20	19	20
African/ Black/ Caribbean [note 8]	16	13	12	14	14	10	19	16	17	14	18	19
Disability Status												
Declared or Assessed Disabled	-21					-21	-21	-21	-22	-20	-22	-21

Notes: Top row shows proportion of all school leavers going on to study higher education. Subsequent rows show difference in participation rate between each group and the population average; a positive number implies higher participation, a negative number implies lower participation. Source: FAI analysis of School Leaver Destination data (Scottish Government)

Measuring intergenerational social mobility

What is intergenerational social mobility? The OECD defines it broadly as being where parents' fortunes and advantages play a major factor in people's lives (OECD, 2019). The Social Mobility Commission (2019) sets out the conditions for a socially mobile society as follows:

“Social mobility is fundamentally about ensuring that a person’s occupation and income are not tied to where they started in life. Yet it is about much more than that. It is about fairness across society and ensuring that people of all backgrounds get equal opportunities and choices in early years, at school, in further education, in universities and at work.”

Social mobility thus refers to the extent to which inequalities are passed from one generation to the next.

There are in principle a number of different ways in which we can try to measure social mobility:

- Intergenerational social mobility concerns changes in social space between parents and children, i.e. the extent to which the socioeconomic class of parents is correlated with that of children
- Intergenerational educational mobility assesses the extent to which people's level of education is associated with the education of their parents
- Intergenerational occupational mobility measures the extent to which the jobs that people do are associated with the jobs that their parents did
- Intergenerational earnings mobility concerns the extent to which the income of parents is correlated with the income of children

In measuring social mobility in Scotland, we are constrained by the availability of data. By far the most comprehensive recent data on social mobility in Scotland is provided by the Labour Force Survey (LFS). Since 2014, the LFS has asked respondents what the occupation was of the main earner in the respondent's household when the respondent was aged 14 years old.

If we know what type of occupation a respondent works in today, and the type of occupation that the main earner of the household worked in when the respondent was 14 years old, we can assess the association between jobs that people do today and those that their parents did. This is a specific type of occupational mobility, namely intergenerational occupational mobility.

To measure the extent of intergenerational occupational mobility in Scotland we use the concept of odds ratios. Odds ratios are explained in Box 4.1.

Box 4.1: Odds ratios

To illustrate this concept of odds ratios, imagine that we can divide occupations into two groups, high-skill and low-skill. Odds ratios tell us:

‘the chance of an individual who grew up in a household where the main earner worked in a professional occupation working in a professional occupation themselves relative to

the chance of an individual who grew up in a household where the main earner did not work in a professional occupation working in a professional occupation themselves.’

If this odds ratio is equal to one, this implies that there is no association between the jobs that workers do now and the jobs that their parents did. The higher that the odds ratio is above one, the greater the association between the occupation of parents and those of their children as adults.

Table 4.2 illustrates this concept using real data for Scotland. We divide occupations into two groups – those in professional and managerial occupations, and all other occupations.

The table divides the sample of those currently in employment into four groups: whether they themselves work in a professional occupation or another occupation; and whether the main earner in the household when they were growing up worked in a professional occupation or another occupation. The data shows that 14% of the population work in a managerial/professional occupation and grew up in a household where the main earner worked in a managerial/professional occupation; 20% of the population work in a managerial/professional occupation and grew up in a household where the main earner did not work in a managerial/professional occupation; 17% grew up in a household where the main earner worked in a managerial/professional occupation but do not work in a managerial/professional occupation themselves, and 49% grew up in a household where the main earner did not work in a managerial/professional occupation and do not work in a managerial/professional occupation themselves.

We can calculate the odds ratio as follows:

$$\text{Odds ratio} = \frac{14\%/17\%}{20\%/49\%} = 2.00$$

Table 4.2: The occupation of workers today is strongly associated with the occupation of their parents

Intergenerational transition matrix to assess upward occupational mobility, Scotland, 2016 - 2020

		Worker’s occupation today		Odds ratios
		Managers and professionals	Other	
Occupation of main-earner at age 14	Managers and professionals	14%	17%	83%
	Other	20%	49%	41%
Odds ratio				2.00

Source: Labour Force Survey. Notes: Individuals aged 25-60 reporting a current occupation and a main parent occupation at 14, from Q3 LFS in 2016, 2017, 2018, 2019 and 2020. Unweighted N = 7,843

Intergenerational occupational mobility in Scotland is low

The calculation of odds ratios in Box 4.1 tells us that the odds of an individual with a parent working in a professional/managerial occupation ending up in professional/managerial employment themselves are two times higher than the odds of someone whose parent did not work in professional/managerial employment ending up in professional/managerial employment themselves.

Unfortunately, we are not able to say how intergenerational occupational mobility may have evolved over time. The LFS has only asked the social mobility questions since 2014, and we would expect social mobility to evolve slowly over time.

What we can do is ask whether social mobility is different across different cohorts of workers. In other words, we divide the population of current workers into groups depending on their decade of birth.

Chart 4.9 shows intergenerational occupational mobility odds ratios for Scotland and the UK. The first two columns show the result for those aged 25-60 (we exclude the youngest and oldest workers since their inclusion may introduce bias – this is particularly the case for the younger group, where educational participation and the fact that workers are unlikely to have reached occupational maturity may skew results). The odds ratio for the UK of 2.17 is not materially different from that for Scotland.

The subsequent columns examine how intergenerational occupational mobility varies by birth cohort. We cannot include workers born before the 1950s since this group has largely retired from the labour market, and the social mobility questions are only asked of those in employment.

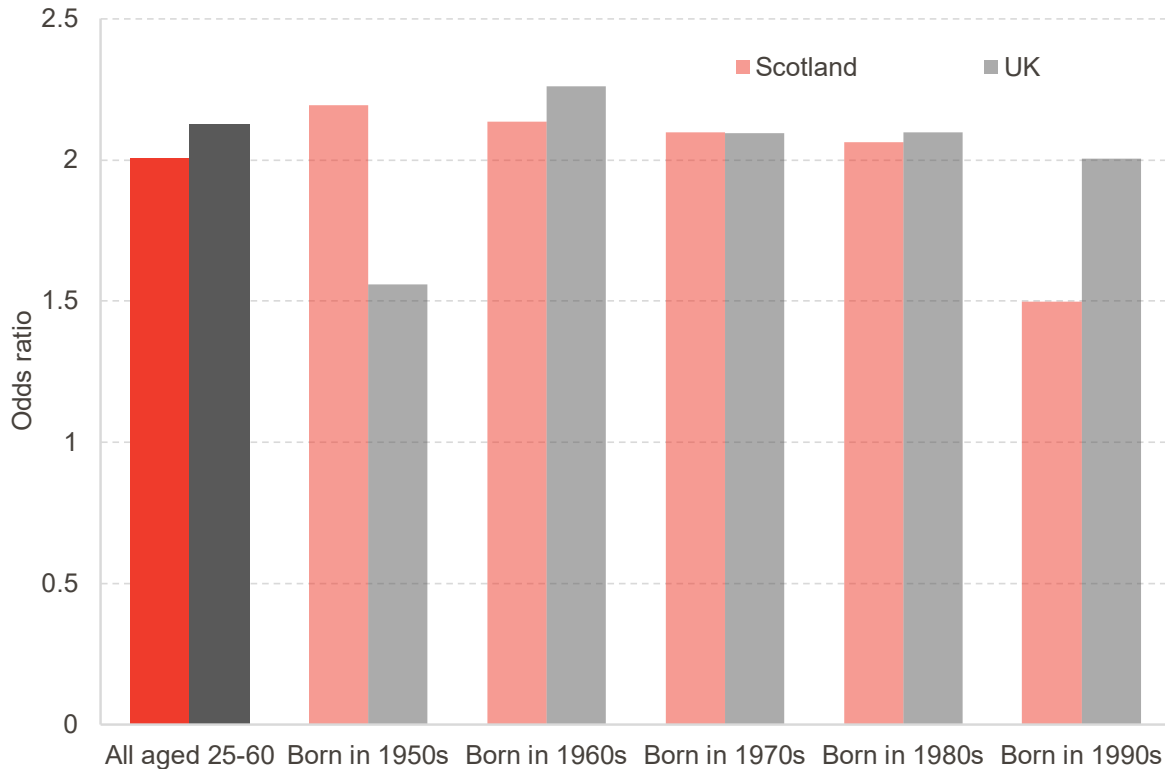
For Scotland, the results indicate that the odds ratio is slightly higher (i.e. intergenerational occupational mobility is slightly lower) for the cohort born in the 1950s than for the 1960s cohort, which is in turn slightly higher than the 1970s or 1980s birth cohorts. However, we cannot say that these differences are statistically significant. For the cohort born in the 1990s the odds ratio is noticeably lower but it is worth being cautious in reading too much significance into this result, since these respondents are yet to reach occupational maturity.

On the basis of this analysis, we can derive three conclusions:

- Intergenerational occupational mobility in Scotland is low – the odds of working in a professional or managerial position are strongly associated with whether your main-earning parent worked in a similar occupation.
- Measured in this way, intergenerational occupational mobility is little different in Scotland compared to the UK.
- There is no meaningful evidence that intergenerational occupational mobility in Scotland is improving for more recently born cohorts.

Chart 4.9: Intergenerational occupational immobility is high, and similar in Scotland as the UK

Intergenerational occupational mobility odds ratios by birth cohort, Scotland and UK



Source: Labour Force Survey. Notes: Individuals aged 25-60 reporting a current occupation and a main parent occupation at 14, from Q3 LFS in 2016, 2017, 2018, 2019 and 2020. Unweighted N = 7,843 (Scotland); 97,741 (UK)

Intergenerational unemployment

Are people who grew up in a household where nobody worked less likely to be employed themselves as adults? The LFS data allows us to examine this question in a somewhat rudimentary way. Specifically, we can look at whether people who lived in a household where nobody was in work when they were 14 years old are any less likely to be employed as adults.

Table 4.3 shows the results of this analysis. The rows show the labour market status of current workers; the columns show how the labour market status varies according to the labour market status of the household when the current worker was aged 14. The analysis in Table 4.3 excludes workers who were born outside the UK (since their inclusion may skew results about intergenerational transition of employment status within the UK labour market), and it also focusses on current workers aged 25-59.

Table 4.3 shows that the employment rate of adults in Scotland who grew up in a working household is just over 81% (row 1, column 1). In contrast, the employment rate of adults in Scotland who grew up in a household where nobody was in work is much lower, just 63% (column 2).

People who grow up in a household where nobody was in work are therefore much less likely to be employed as adults. The employment rate gap between those who did and did not grow up in a non-working household is 18 percentage points.

The last three columns show equivalent information for rUK. The total employment rate in rUK is higher than it is in Scotland. The rUK employment rate is higher both for people who grew up in a working household and people who grew up in a non-working household than the employment rate for the same groups in Scotland.

However, people living in rUK are more likely to be employed if they grew up in a non-working household than are people in Scotland who grew up in a non-working household (68.9% in rUK v. 63.4% in Scotland). The employment rate gap (the difference in employment rate between those who did and didn't grow up in a non-working household) is higher in Scotland (18 percentage points) than in rUK (14 percentage points).

To give a sense of scale, it is important to note that less than 5% of the working age population in Scotland grew up in a non-working household (around 170,000 people). If the employment rate of those who grew up in a non-working household in Scotland matched the employment rate of those who grew up in a non-working household in rUK, that would equate to around an extra 10,000 in employment in Scotland, boosting the overall employment rate by approximately 0.3 percentage points.

Table 4.3: People who grew up in a non-working household are much more likely to be unemployed as adults than those who grew up in a working household

Labour market status of adults by labour market status of household at aged 14, Scotland and rUK

	Scotland			rUK		
	Working household	Non-working household	Total	Working household	Non-working household	Total
Employed	81.4%	63.4%	80.6%	83.7%	68.9%	83.0%
Unemployed	2.7%	5.5%	2.8%	2.4%	4.1%	2.4%
Inactive	16.0%	31.2%	16.7%	14.0%	27.0%	14.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Labour Force Survey. Notes: Individuals aged 25-59 and who were born in the UK reporting a current occupation and a main parent occupation at 14, from Q3 LFS in 2016, 2017, 2018, 2019 and 2020. Unweighted N = 9,213 (Scotland); 98,773 (rUK)

What are the mechanisms through which those who grew up in a non-working household are less likely to be employed themselves as adults? There are of course several. One might relate to place effects, and the idea that, where people grow up in places where unemployment is relatively high, it may be relatively harder for those people to find employment as adults, given persistence of economic opportunity across places.

Another related mechanism is the way that employment status is linked to health.

In Scotland, 23% of adults aged 25-59 who grew up in a non-working household report having a health problem that limits their activity 'a lot', compared to 10% of adults in Scotland who grew up in a working household. This suggests that one of the mechanisms through which growing up in a non-working household is associated with higher unemployment as an adults is through ill-health.

Key takeaways from this are that:

- People who grow up in a non-working household are more likely to be out-of-work as adults.

- One of the mechanisms that accounts for this result is ill-health, with adults who grow up in a non-working household much more likely to suffer activity-limiting health problems as adults.
- Intergenerational persistence of being unemployed appears slightly higher in Scotland than in rUK which is in turn partly because growing up in a non-working household is associated with a greater likelihood of ill-health in Scotland as in rUK.

Conclusions

Education matters for health because it influences income, employment and social networks throughout our life. Our circumstances as adults are not just influenced by our educational attainment and qualifications, but the circumstances at birth and during our early years. Children born to better educated parents are more likely to gain more advanced qualifications themselves, since their parents tend to have more resources to invest in them – including through location in neighbourhoods with better schools and better opportunities for health behaviours (Corak, 2013).

In Scotland, background plays a significant role in influencing educational attainment. Recent years have seen substantial emphasis on the aspiration to close the poverty-related attainment gap. Prior to the pandemic at least there was evidence of some progress on some measures of the poverty-related attainment gap. But it is also clear that poverty-related attainment gaps, and poverty-related participation gaps in higher education, remained high even before the pandemic. The pandemic has reversed some of the more recent progress in closing these gaps.

Intergenerational occupational mobility in Scotland is low. Those whose parents worked in a managerial or professional job are twice as likely to end up working in a managerial or professional job themselves, compared to someone whose parents worked in some other occupation.

Addressing these types of poverty-related attainment gaps and social immobility is not easy. It is often argued that the most effective way to improve social mobility is to reduce income inequality. This is because it is partly inequality of resources today that permits households to transfer advantage across generations. Indeed, across countries, higher income inequality is associated with lower social mobility (Corak, 2013), inviting the conclusion that *'the best way to increase movement between rungs on a ladder is to reduce the distance between them'* (Swift, 2020).

But this does not mean that reducing income inequality will automatically improve social mobility. Landersø and Heckman (2021) point out that whilst income inequality is much lower in Denmark than the US, intergenerational educational mobility is similarly low in both countries. They argue that despite much lower income inequality in Denmark, more advantaged families in Denmark are *'better able to access, utilize, and influence universally available programs'* to shape child outcomes, so that *'equality in access to services is not the same as equality of opportunity'*.

5. Housing

The housing in which people live can have an impact on health via a variety of channels. This chapter explores three key themes: cost; quality; and the immediate neighbourhood.

Key points

- Experience of housing relates strongly to tenure, with owner-occupiers facing lower costs and better quality and security than tenants. Those in the social rented sector appear to face fewer issues with regard to cost and quality than those in the private rented sector.
- Over the past fifty years there have been significant changes in the proportion of people living in different tenures in Scotland. In more recent years, the private rented sector has become a larger part of the housing mix in Scotland.
- Housing costs, both in absolute terms and as proportion of income, for those in the social and private rented sector have increased since devolution. The impact of this has fallen most on those in lowest income groups. Indeed, as a proportion of income, housing costs have fallen for all except the lowest income quintile.
- Older age groups typically face lower housing costs on average than younger age groups. Minority ethnic households have much higher costs than the population average and mainly live in the private rented sector. Disabled people face slightly lower than average housing costs and are most likely to live in owner occupied or social housing.
- Housing quality is generally worse in the private rented sector although by some measures, local authority owned social housing performs poorly. Housing association owned housing does better than the private rented sector on measures of quality.
- Housing insecurity is difficult to evidence in the data that is available. There are no clear trends with regards to social sector evictions, and no robust data for private sector evictions. New regulation is likely to improve security of tenure in the private rented sector, but this may be hard to monitor.
- Issues in the immediate neighbourhood around antisocial behaviour, noise and safety at night have not improved in the last ten years, and levels of antisocial behaviour have risen over time.
- Government policy aims to improve housing conditions across a variety of dimensions which should have a longer-term impact on health. However, there are embedded inequalities in the housing system that could take decades to shift.

Housing and health

Studies have found that housing affordability can impact mental health, and this relationship is bi-directional: financial stress due to difficulties in meeting housing costs can affect mental health but prior poor mental health can lead to people living in less affordable types of housing (e.g. Preece & Bimpson 2019).

High housing costs can also limit the amount of money available for other essentials such as food, as well as contribute to overcrowding as households seek to share rental costs (Tinson & Clair 2020). As seen during the recent Covid pandemic, there are concerns over links between overcrowding and the spread of illnesses (e.g. Nielson et al. 2020).

Housing affordability is part market-driven, but the state also plays a role in terms of welfare protection through housing benefits and support payments. The Scottish Government and local government policies around planning and housing supply are also part of the longer term drivers of housing affordability.

Housing quality has clear and direct links to both physical and mental health. For example, studies have linked damp to a wide range of health-related issues, particularly affecting children. The main health issue linked to housing is respiratory health issues such as asthma (e.g. Shaw 2004). Difficulties in keeping a home adequately heated during cold periods can also link directly to poorer health, and whilst difficult to link conclusively to socioeconomic status, studies have found that the absence of central heating is associated with higher excess mortality (Aylin et al. 2001). Other factors that impact on both physical and mental health include noise, overcrowding and the immediate neighbourhood (Bonney, 2007).

Security of an individual's housing situation is understood to be important for health and wellbeing. Studies have found that frequently moving home is associated with a range of child and adult mental health issues, as well as child emergency hospital admissions (Tinson & Claire 2020).

The existence of many of these factors that link to poor health is linked to tenure, which has a strong relationship with income. It is this issue that we turn to first before looking at the evidence on the prevalence of high cost, low quality and insecurity of housing for different groups and localities of people in Scotland.

There is a mixture of devolved and reserved policy in this area. Planning and building regulation, land and property taxation, and investment in and financing of social housing, are devolved responsibilities. But policies that affect house prices such as interest rates and financial regulation are reserved, as are policies on housing benefit.

The type of housing that people live in has changed significantly over time

The proportion of housing of different tenures has changed markedly over the past 50 years and it makes sense to view housing over this time period before examining the past twenty years more closely. There are a number of trends that Chart 5.1 identifies.

The proportion of people who live in owner-occupied housing has doubled over the past 50 years with the 1970s and 1980s the key growth period for social housing. The deregulation of mortgage lending during the 1980s helps to explain the growth in this sector at this time.

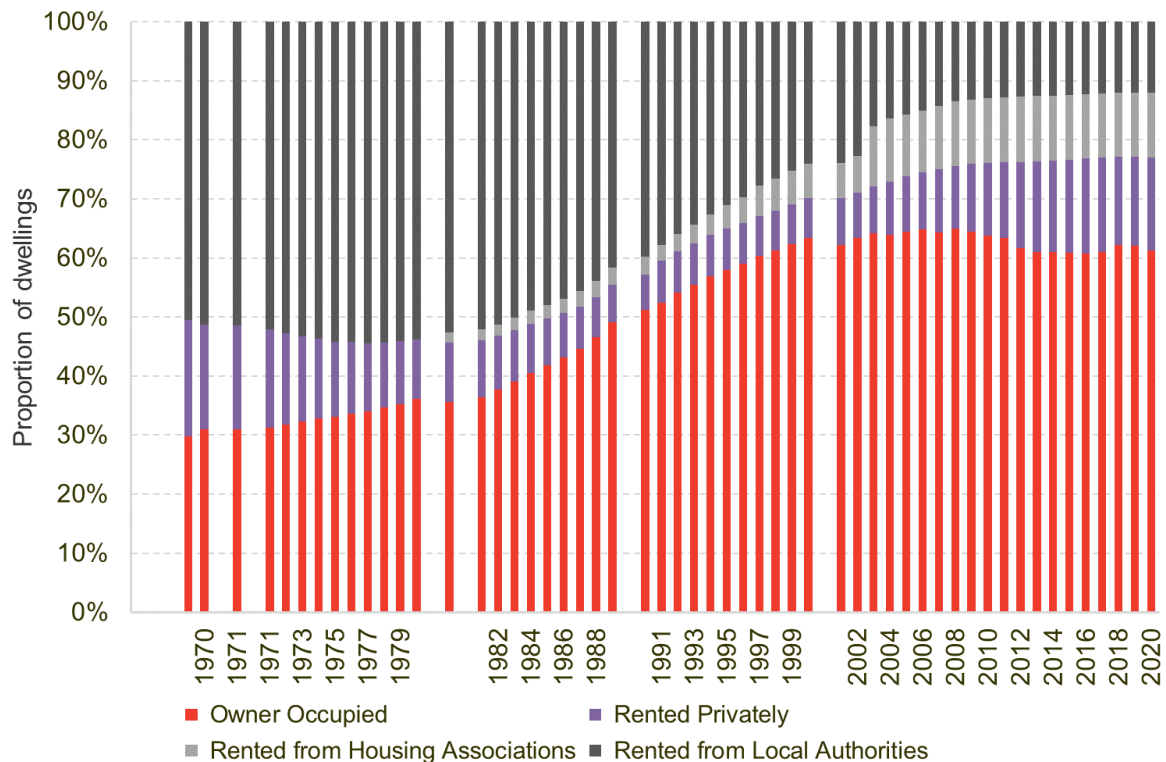
The Right to Buy is scheme also responsible for growth in owner-occupation through the 1980s and 1990s, at the expense of the social rented sector. The number of social rented homes fell in absolute terms from a high of just over 1 million in 1980 to a low of 600,000 by 2009. It is estimated that 485,000 homes were sold through Right to Buy over that period (Scottish Government 2022).

The social housing sector, which accounted for over 50% of housing stock in the 1970s has declined since then to just under 25% of the housing stock. Legislation has slowed Right to Buy acquisitions since 2001, with the scheme removed entirely in 2014. More recently, there has been a concerted effort to increase social housing supply (Serin et al. 2018).

The private rented sector went through a period of decline during the 1970s and 1980s continuing a trend that had been ongoing since the end of WWII, attributed to a range of factors including demolition of substandard housing, the building of social housing, and increasing regulation in the sector. Since the early 2000s however the sector has grown and now accounts for a similar proportion of the housing stock as was the case in the early 1970s.

Chart 5.1: Housing tenure has shifted over the last 50 years with the private rental sector declining at the start of the period and growing again in recent years

Proportion of dwellings by tenure over time



Source: DCMS and Scottish Government. Breaks in the time-series show where there is a minor discontinuity in the data due to data being collected in different months of the year and from different sources.

There are differences in tenure profile across Scotland as shown in Chart 5.2. Cities tend to have a lower proportion of owner-occupied homes, and this is particularly the case in Glasgow and Dundee

where only 44% and 46% respectively of properties are owner occupied. East Renfrewshire has the highest proportion of owner occupation (82%).

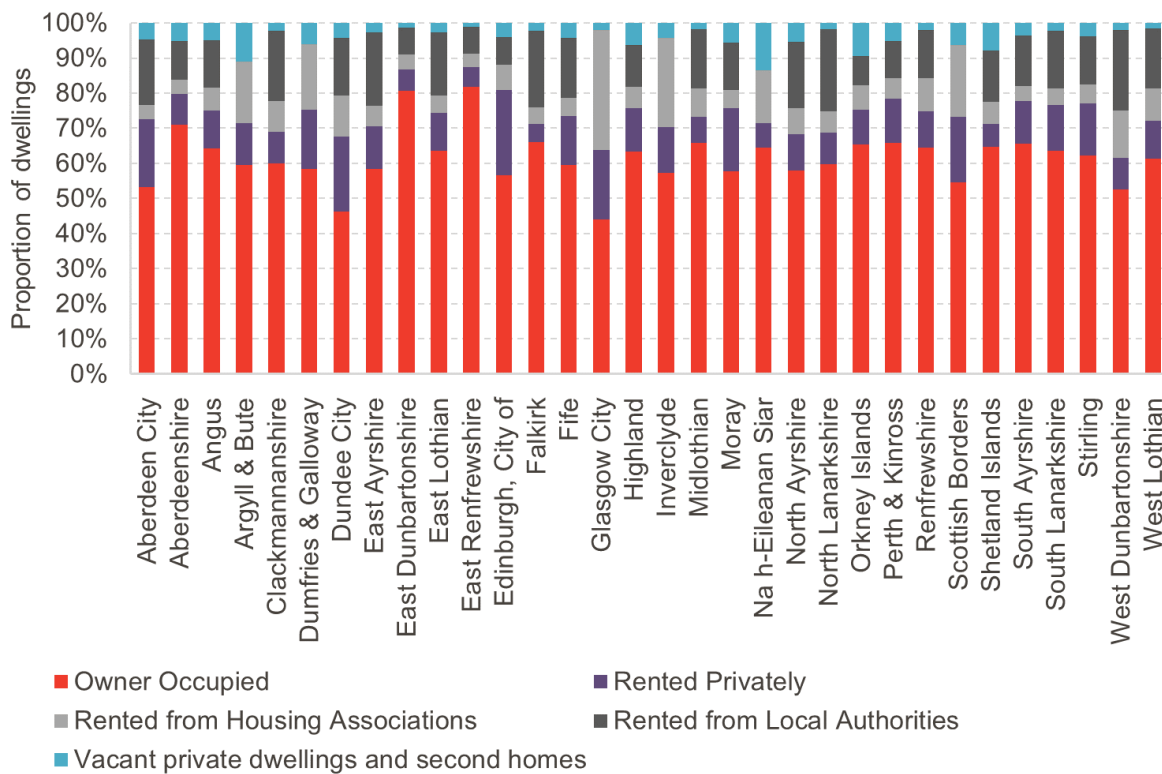
Cities also have larger private rented sectors. Edinburgh, Glasgow and Dundee all have private rented sectors accounting for more than 20% of properties.

The areas with the largest proportion of housing for social rent are in West Dunbartonshire and Glasgow, with rates around 35%. The make-up of social housing differs significantly across the country. Six local authorities, including Glasgow, have no local authority housing, with all social housing provided by housing associations.

Rural areas have higher numbers of vacant private dwellings, many of which are likely to be second homes. Na h-Eileanan Siar and Argyll and Bute both have around 10% of properties in this category.

Chart 5.2: Cities are more likely to have higher numbers of people in the private and social rented sectors

Proportion of dwellings by tenure by local authority in 2019



Source: Scottish Government

Housing tenure and trends in housing tenure have a clear link with income

The likelihood of living in owner occupied housing increases with income. Currently, over 90% of people in the top income quintile (top 20% of incomes) live in owner occupied housing and this has stayed consistent over the past 20 years. Currently, just over 30% of people in the bottom income quintile (bottom 20% of incomes) live in owner occupied homes. This has varied slightly over the past twenty years, rising from 25% in 1996-1999 to a high of 36% in 2006-2009. Over the past

twenty years, quintiles 2 to 4 have seen a rise in owner occupation on average, with a peak in the mid-2000s that has now fallen back slightly.

The likelihood of living in the social rented sector declines with income. Very few people in the top income quintile live in the social rented sector and this stayed true over time. In the bottom income quintile, 65% of people lived in social housing 20 years ago, falling to a low of 38% in 2011-2014 since recovering slightly to 43% in the most recent data. Other quintiles have seen a steady decrease in social rented sector occupation over time.

The likelihood of living in the private rented sector also declines with income but the proportions of people living in the sector has risen markedly over time. All quintiles had a low proportion of people living in private rented accommodation 20 years ago. For the bottom quintile, this had risen to 29% by 2011-14, and has since fallen back to 24%. The top income quintile has seen a marginal increase over time from 4% to 6%. Other quintiles have seen at least a doubling of rates of occupation in this sector in the last twenty years.

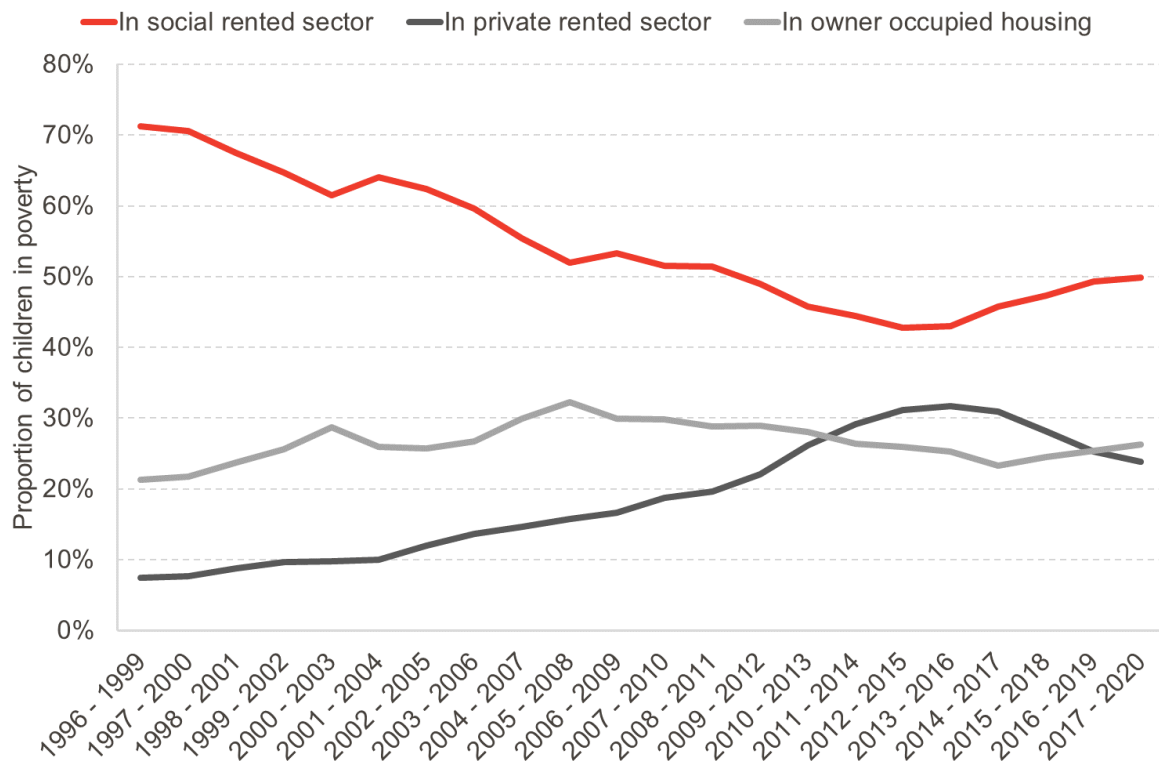
In summary, the vast majority of people in the highest quintile live in owner occupied homes and this has barely changed over twenty years. The bottom income quintile has seen significant changes, with larger reductions in social rented sector occupation, largely explained by a shift to private renting.

The growth of the private rented sector is not, in itself, concerning. For example, it may suit younger people who are more likely to move around for work. However, since the early 2000s, there has been a marked growth in the number of children living in the private rented sector, and particularly children in low income households (Gibb et al. 2019).

Chart 5.3 shows that between the late 1990s and 2012-2013, there was a reduction of 28 percentage points in the proportion of children in poverty living in the social rented sector and a 24 percentage point increase in the proportion of children in poverty living in the private rented sector. Encouragingly, since 2012-2013, there has been a slight reversal in these trends. Whilst this does not coincide directly with the Scottish Government policy drive to improve social housing supply, this policy emphasis may be contributing to this trend in later years.

Chart 5.3: There has been an increasing proportion of low income children living in the private rented sector over time

Proportion of children in poverty by tenure



Source: FAI analysis of Households Below Average Income datasets. N = 84,397

Housing costs as a proportion of income have fallen for all but the lowest income households

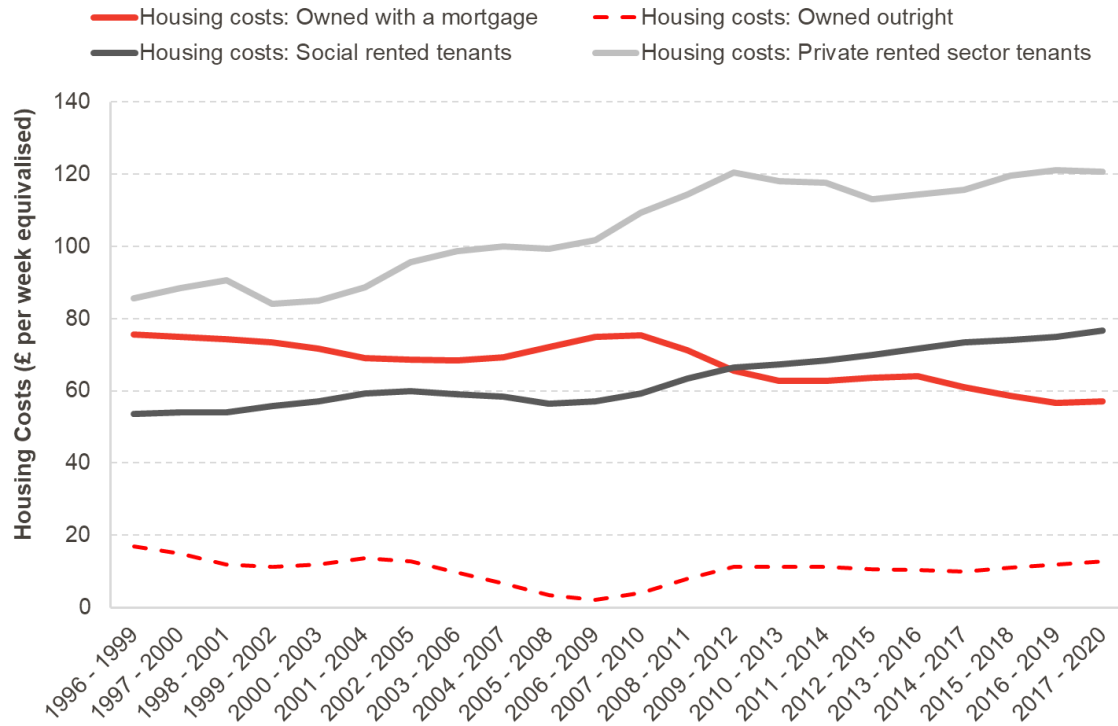
Housing costs⁵ in each tenure have seen large changes over time. Prices have risen in real terms in the social rented and have soared in the private rented sector. Conversely, housing costs for those with a mortgage have fallen over the same and have stayed very low for those who own their home outright (chart 5.4).

Lower income households have always spent more of their income on housing but the inequality between lower and higher income households has risen over time. As shown in Chart 5.5, for most of the 2000s, housing costs as a proportion of income fell for every part of the income distribution. For quintiles 2 – 5, some of these falls were partially reversed in the early parts of the 2010s, but have levelled off or declined further in recent years. The bottom quintile only saw marginal falls in the 2000s, but this was more than offset by a rise in the early 2010s, with housing costs peaking at 28% of income on average in 2012-15. This has fallen slightly since.

⁵ Housing costs cover rent and the cost of financing mortgages, but not the mortgage capital repayments themselves which are seen as an accumulation of wealth rather than 'consumption' of housing. Housing costs can also mean leasehold charges (uncommon in Scotland) and any service charges, but not the cost of utilities or Council Tax.

Chart 5.4: Rents have increased and mortgage servicing costs have decreased over the past ten years

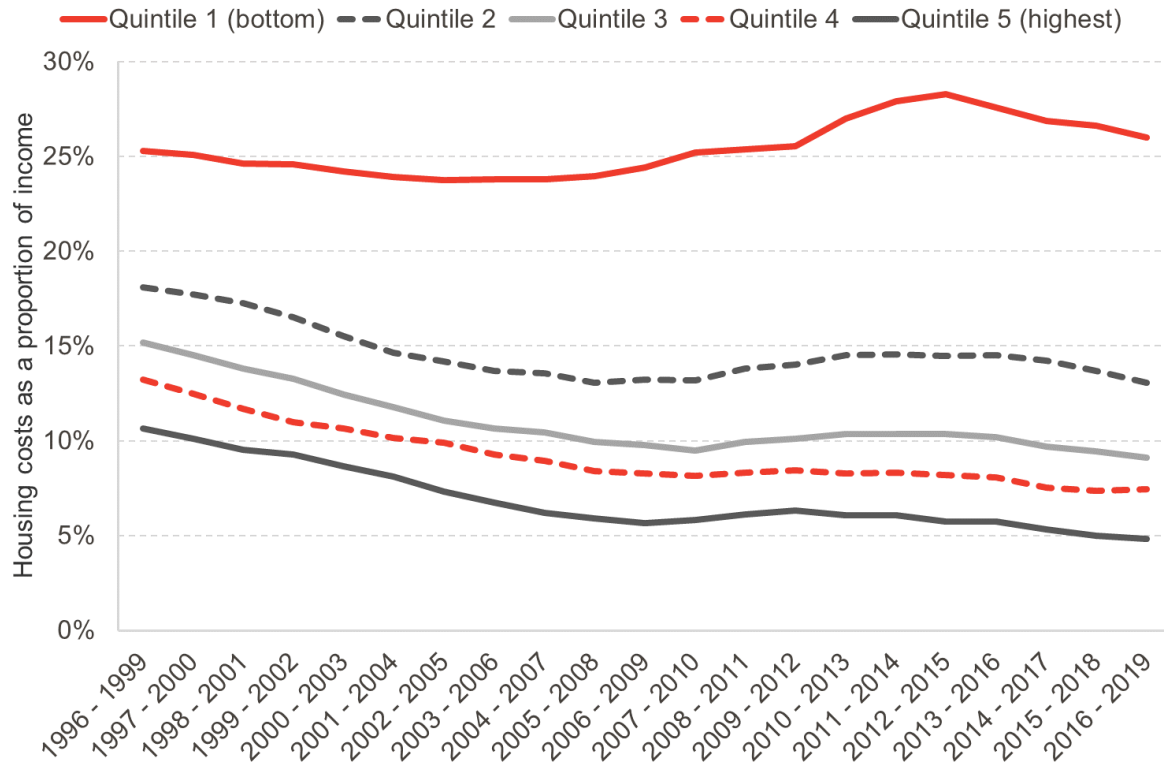
Housing costs by tenure



Source: FAI analysis of Households Below Average Income datasets. Unweighted N = 184,192

Chart 5.5: The gap between the proportion of income spent on housing costs has widened between lower and higher income households over time

Housing costs as a proportion of income by income quintile



Source: FAI analysis of Households Below Average Income datasets. Unweighted N = 184,192

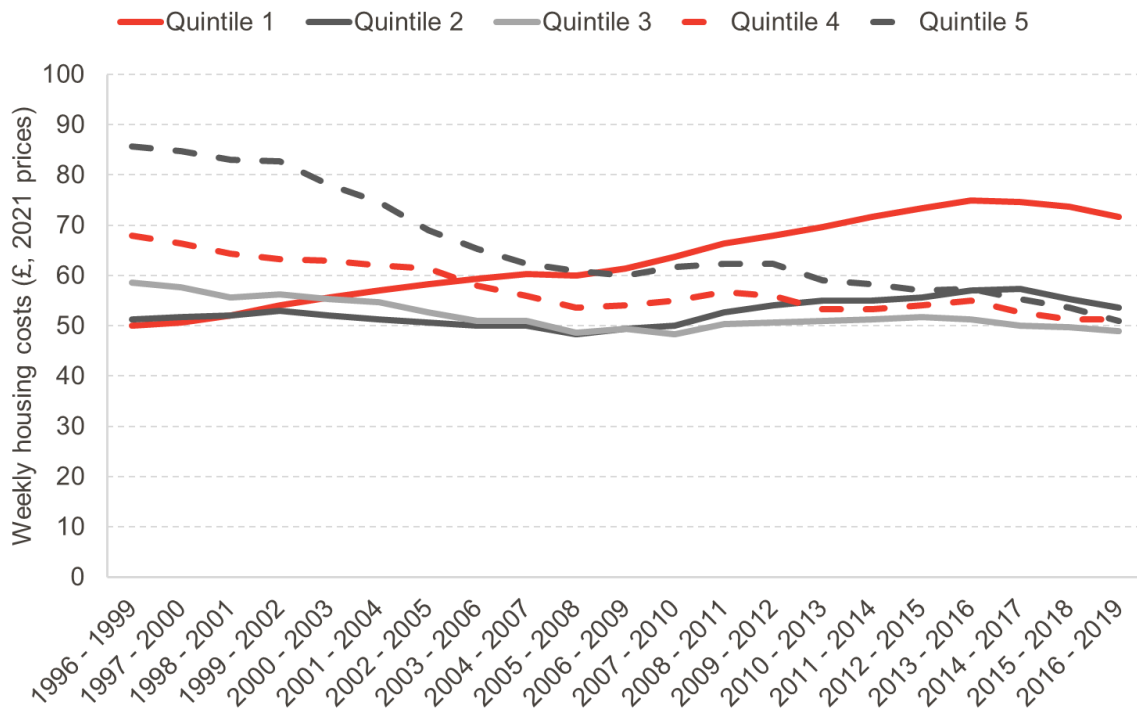
There are two drivers at play in these the figures on housing costs as a proportion of income: before housing-cost-income, and housing costs. A rise in income may offset rises in housing costs and vice versa. Chart 5.6 shows housing costs in isolation. The reduction over time in the costs of financing mortgages, as well as a greater number of households paying off mortgages entirely, explains reductions in costs for higher income households who are most likely to own their home.

For lower income households, and in particular the bottom 20%, the experience of renters who have shifted out of the social rented sector into the more expensive private rented sector is clear in the large increase in housing costs.

The remarkable upwards trend of housing costs for the lowest income quintile in Chart 5.6 is not as apparent in Chart 5.5 where housing costs are shown as a proportion of income. Why is this the case? The main explanation comes from Housing Benefit. Rising housing costs have required higher Housing Benefit (paid for by the UK Government) to compensate. For most of the 2000s, Housing Benefit looks to have been enough to cover increases in housing costs which kept housing costs as a proportion of income relatively steady. This relationship appears to have faltered from around 2010 onwards, coinciding with the start of welfare reforms which limited the value of Housing Benefit (and subsequent housing support that is paid through Universal Credit), particularly in the private rented sector (see box 5.1). However, without Housing Benefit/UC housing element, the impact on low income households during this period would undoubtedly have been worse.

Chart 5.6: Housing costs for lower income households have risen significantly over time, in clear contrast to higher income households

Absolute housing costs by income quintile



Source: FAI analysis of Households Below Average Income datasets. Unweighted N = 184,192

Box 5.1 Housing benefits – reforms have reduced support for those on the lowest incomes

The lowest income households (those who have no earned income) will usually qualify for the highest level of housing benefit (or its equivalent in Universal Credit) which, in the social rented sector, will cover their entire rent. In the Private Rented sector, the Local Housing Allowance limits the amount of housing benefit that can be paid out which is benchmarked to rents in the Broad Rental Market Area (BRMA). These BRMAs are indeed broad: Edinburgh, which has some of the highest rental costs in Scotland, is located in a Lothian BRMA, which includes areas of Mid- and East-Lothian with much lower levels of rent.

LHA policy is set by the UK Government, and has gone through a number of changes (House of Commons Library 2021):

2008: LHA rates were first set at the 50th percentile of local market rents

2012: LHA rates were reduced to the 30th percentile of local market rents with year-on-year increases pegged to CPI, removing the direct link to local rents. At the same time, the Shared Accommodation Rate (which limited the amount of LHA a claimant aged 25 or under could receive) was extended to people aged between 26 and 35.

2015: LHA rates set at the lower of the previous year's level, or the 30th percentile of newly advertised rents

2016 to 2020: LHA rates were frozen

2020: In response to the pandemic, LHA rates were reinstated at the 30th percentile of BRMA rents.

2021 & 2022: LHA rates again frozen

LHAs were scheduled to be introduced for the social housing sector as well, but this has since been dropped. The spare room subsidy (otherwise known as the Bedroom Tax) does apply in the social rented sector but has been mitigated in Scotland through Discretionary Housing Payments.

Housing costs as a proportion of income are lower in Scotland than in the rest of the UK and this has offered some protection to those on the lowest incomes

Housing costs in Scotland have always been lower than the UK average and although this margin has widened slightly over time, trends over the last 20 years have looked broadly similar north and south of the border. Even though incomes are lower on average in Scotland compared to the rest of the UK, housing costs as a proportion of income are still lower on average in Scotland.

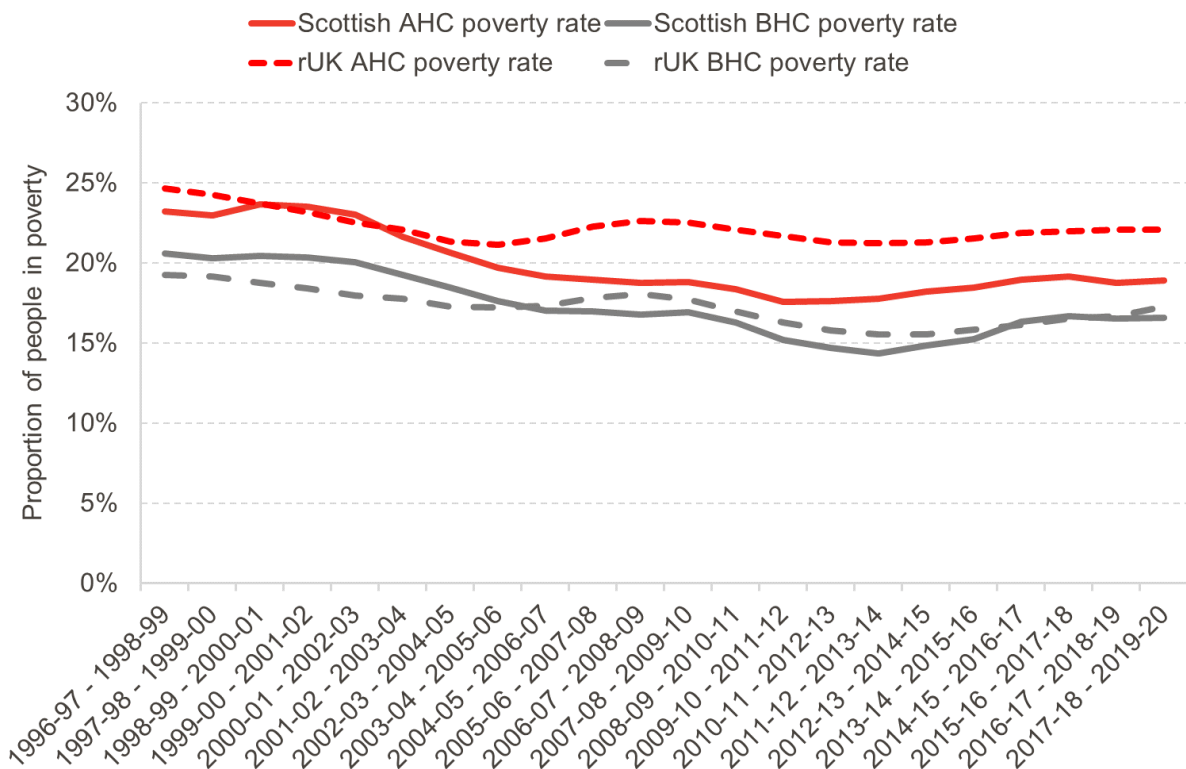
Relatively lower housing costs means that, on an after-housing cost measure, metrics such as poverty rates are lower in Scotland. A paper by the Joseph Rowntree Foundation (2019) showed that before housing costs poverty was broadly the same in Scotland compared to the rest of the UK, but there has been a divergence since the early 2000s in the after-housing cost measure (Chart 5.7).

The difference in after housing cost poverty rates between Scotland and the rest of the UK in recent years was shown by the Joseph Rowntree Foundation to be statistically significant and driven by

lower rents in the social rented sector (where rates have always been set independently of government) compared to rUK where the UK Government had driven rents up. A complementary factor was the higher proportion of people in Scotland living in the social rented sector.

Chart 5.7: Poverty Rates AHC diverged in Scotland compared to the rest of the UK in the early 2000s

Proportion of people in poverty before and after housing costs, Scotland and



Source: FAI analysis of Households Below Average Income datasets. Unweighted N = 184,192 (Scotland); 1,258,073 (rUK)

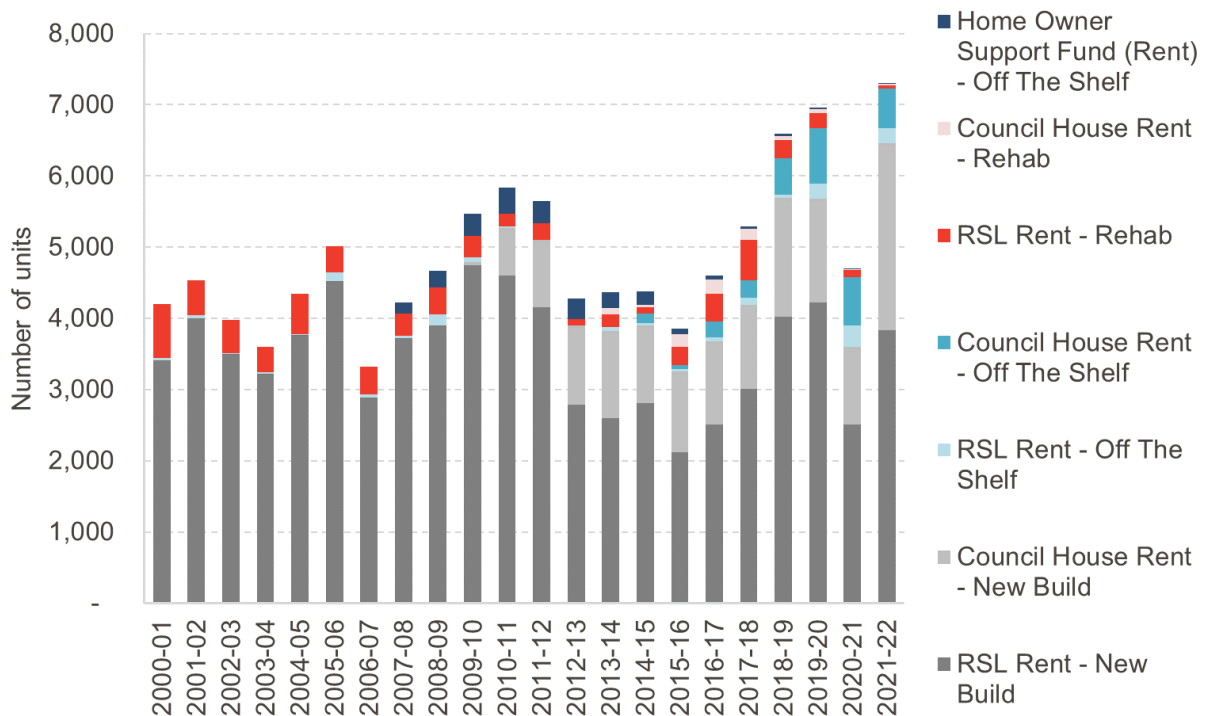
The reason for this divergence was not wholly driven by Scottish Government policy (rather its absence in contrast to a strong UK policy direction) although the winding down of Right to Buy has helped keep social housing stock at higher levels than in the rest of the UK.

The Scottish Government has determined to increase the supply of social housing and, excepting the worst year of the pandemic, there have been encouraging signs of an uptick in completions following a dip between 2020-13 through to a low in 2015-16 (Chart 5.8). These completions are not all new builds, as they also include second hand homes bought from the private sector (termed ‘off the shelf’ in chart 5.8), and the refurbishment and improvement of existing social housing stock (termed ‘refurb’ in chart 5.8).

It is not possible to net off demolitions from these figures so not all these completions will mean a net increase in supply. However, the pandemic shutdown notwithstanding, these numbers do appear to show a marked change in the scale of social housing completions in Scotland.

Chart 5.8 In recent years completions of lower cost housing have increased

New social housing completions⁶ that have been supported by the Scottish Government⁷



Source: Scottish Government

⁶ The figures in this chart refer to completions where the Scottish Government has provided financial support. Traditionally, councils have funded their own new build developments, and some properties continue to be built with no input from the Scottish Government

⁷ Home Owner Support Fund (rent) refers to the Mortgage to Rent scheme, explained here: <https://www.mygov.scot/home-owners-support-fund>

Identifying the impact of housing costs on low income households and people with protected characteristics

The predominance of groups living in particular tenures leads to some interesting findings. Chart 5.9 shows how housing costs compare for different groups in a heatmap that also shows how costs relative to the population average have changed as a proportion of income.

Chart 5.9: Housing cost affordability (measured as a proportion of before housing cost income) differs across protected characteristics

	1996 - 1999	1997 - 2000	1998 - 2001	1999 - 2002	2000 - 2003	2001 - 2004	2002 - 2005	2003 - 2006	2004 - 2007	2005 - 2008	2006 - 2009	2007 - 2010	2008 - 2011	2009 - 2012	2010 - 2013	2011 - 2014	2012 - 2015	2013 - 2016	2014 - 2017	2015 - 2018	2016 - 2019	2017 - 2020
Average	16%	15%	14%	14%	13%	12%	12%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	10%	10%	10%	9%
Disabled	16%	15%	14%	14%	12%	12%	11%	11%	10%	9%	9%	8%	9%	9%	10%	10%	11%	10%	10%	10%	10%	9%
Minority Ethnic	27%	26%	24%	20%	18%	16%	16%	19%	18%	17%	17%	17%	18%	17%	18%	19%	18%	18%	19%	19%	19%	19%
Aged 20-30	16%	16%	16%	15%	15%	14%	13%	13%	14%	15%	15%	15%	15%	15%	16%	16%	16%	16%	16%	15%	14%	14%
Aged 31-40	16%	16%	15%	15%	14%	13%	12%	12%	12%	12%	13%	13%	12%	12%	12%	13%	13%	12%	12%	11%	11%	11%
Aged 40-50	16%	16%	15%	14%	13%	13%	13%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	11%	11%	11%	10%	10%
Aged 50-60	12%	11%	11%	11%	10%	10%	9%	8%	8%	7%	7%	7%	7%	8%	8%	8%	9%	9%	8%	8%	8%	8%
Aged 60 - 70	9%	8%	7%	6%	5%	5%	4%	4%	3%	2%	1%	2%	2%	3%	3%	3%	3%	3%	2%	3%	3%	3%
Aged 70 - 80	9%	8%	7%	5%	5%	4%	4%	3%	2%	1%	1%	1%	2%	3%	2%	2%	2%	2%	2%	2%	2%	2%

Source: FAI analysis of the Family Resources Survey, DWP

People aged over 60 have relatively low housing costs as a larger proportion are homeowners compared to people under 30 whose housing costs have always been above average and have diverged further away from the average over time.

Minority ethnic groups have higher housing costs than the population average, with costs getting better, then worse again over the past 20 years. These higher costs can be explained by the predominance of people from minority ethnic groups living in the private rented sector.

Households with a disabled person have lower costs than the national average, which is partly explained by their older age profile, and also due to a higher likelihood of these households living in the social rented sector.

Recent legislative change could improve security of tenure in the private sector, but measuring actual or perceived precarity of tenure is difficult

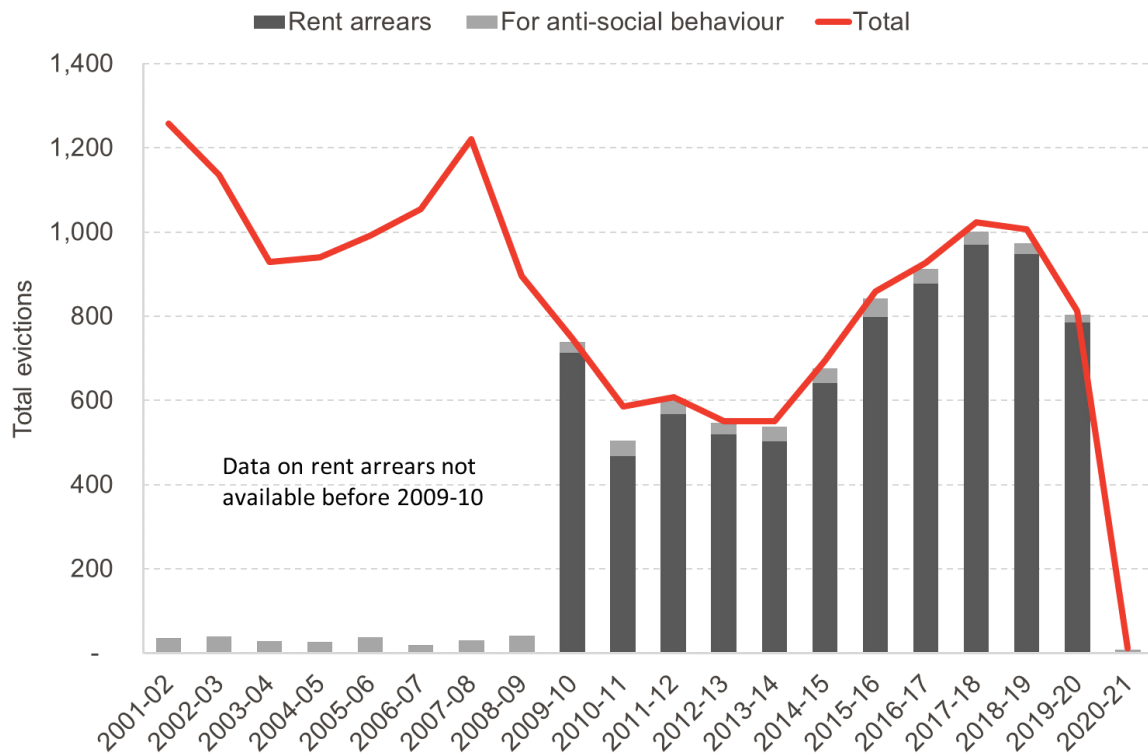
The term ‘perceived risk of housing precarity’ captures the idea of the fear of being asked to leave a property both real and imagined leading to feelings of worry, concern, stress, and anxiety. Studies have found that these are reported commonly by low income renters, but also by high and mid-income renters (Harris & McKee 2021).

This type of precarity is mainly an issue for renters in the private rented sector. Grounds for eviction in the social rented sector are fairly limited with clear evidence required of the tenant being at fault. Evictions in the social rented sector have varied since 2001-02 (the earliest period for which we have data) with the majority of evictions (since 2009-10) due to rent arrears. Regulations brought in

during the pandemic meant there were no eviction orders for reasons other than anti-social behaviour in 2020-21 (chart 5.10).

Chart 5.10: Evictions from the social rented sector were rising pre-pandemic but were lower than 20 years ago

Number of cases proceeding to court that result in an eviction in the social rented sector



Source: Scottish Government

Data on evictions from private sector tenancies is limited as it is thought in relatively few cases will tenants take their landlord to Tribunal (SPICe 2022). Recent legislative changes have provided more rights to tenants, and effectively brought to an end so called ‘no fault evictions’ with the Private Housing (Tenancies) (Scotland) Act 2016 introducing open ended tenancies with a more limited range of grounds for eviction.

There has long been a gap between the social rented sector and other tenures when people are asked in surveys whether they expect to leave their home in the next few years. However, it is difficult to isolate the reason why. It could be due to a range of factors, including perceived precarity but also an expectation of needing to move for work, or in anticipation of moving in with a partner or buying a house.

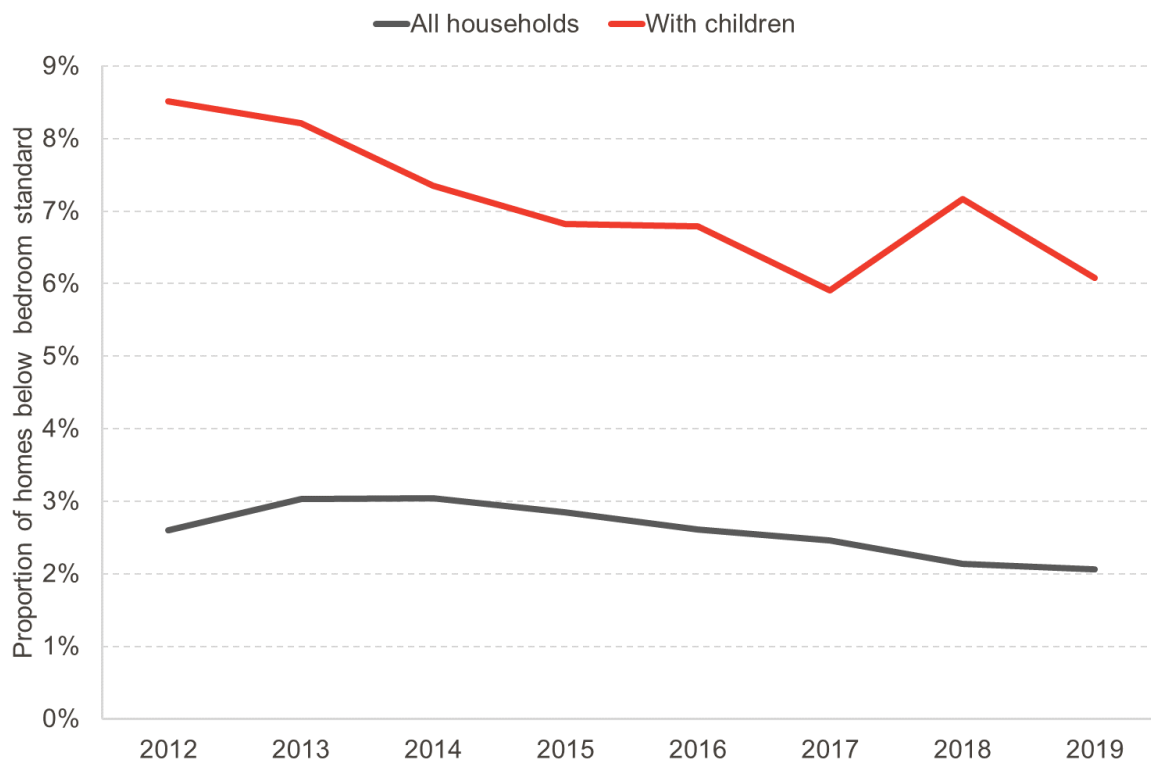
Overall, we have not found evidence to allow us to satisfactorily understand the impact of precarity from living in particular tenures. That is not to say that there is not an issue, just that we have not found data to evidence the impact or measure it over time.

Overcrowding is highest for households with children, and has fallen over the last ten years

Overcrowding is measured by the bedroom standard which determines how many rooms a household should have based on the age, sex and relationship status of those that live there.

In Scotland, data since 2012 shows that the proportion of households below the standard is relatively low at just over 2% in 2019. Rates are higher in households with children (6%) and are higher in rental sectors (average of 4% in the social rented sector and 5% in the private rented sector over 2017-19). The proportion below standard has fallen over time, and although there is an income gradient, this has narrowed slightly since 2012 (chart 5.11).

Chart 5.11: Rates of overcrowding, measured by the bedroom standard, have reduced since 2012



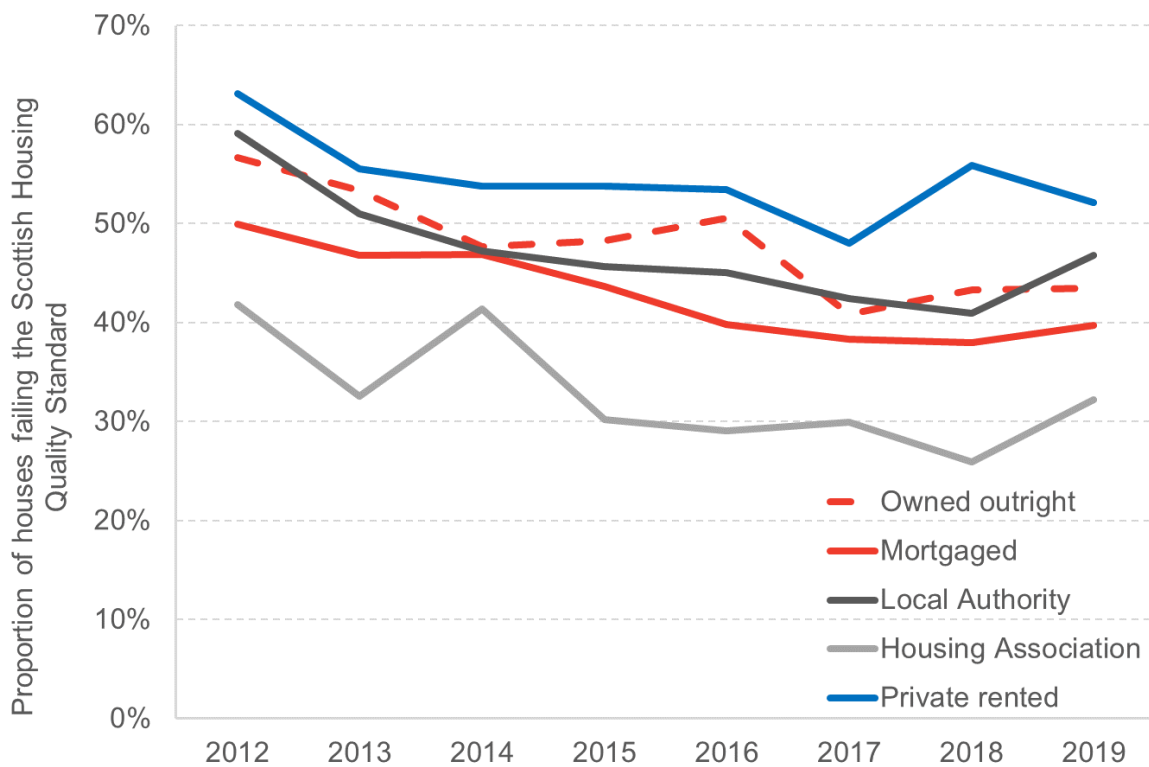
Source: Scottish Housing Conditions Survey. Unweighted N = 22,761

Housing quality has a clear income gradient, but housing associations help to buck some of this trend

Housing quality determines whether or not your home is safe to live in and the extent to which it can fulfil basic needs such as adequate heat and sanitation. Unfortunately, data on housing quality produced by the Scottish Government is only available since 2012 on consistent basis (chart 5.12).

In Scotland, measures such as the Scottish Housing Quality Standard⁸ have been introduced to try and monitor whether improvements are happening over time. The private rented sector currently has higher failure rates based on the Scottish Housing Quality Standard.

Chart 5.12: The private rented sector has a higher Scottish Housing Quality Standard failure rate than other sectors with housing associations performing the best



Source: Scottish Housing Conditions Survey. Unweighted N = 22,761

This data also disaggregates between local authority (LA) owned and Housing Association (HA) housing and we see a large difference here. LA owned social housing had a failure rate of 47% compared to 32% for HA housing. Encouragingly, all tenures appear to be generally improving. HA housing has performed the best over the period for which we have data.

⁸ The Scottish Housing Quality Standard assesses the quality of homes based on 5 categories: Tolerable Standard (A), Serious Disrepair (B), Energy Efficiency (C), Modern Facilities and Services (D) and Healthy, Safe and Secure (E)

Chart 5.13 shows the breakdown by a range of characteristics including income⁹. An income gradient is apparent, with higher failure rates for lower income households, but it is less clear cut at the bottom and middle of the income distribution, most likely due to the relatively good performance of housing associations on this measure. Performance has improved over time in all quintiles and inequality between the top and bottom has narrowed. The failure rate for disabled people has remained close to the average, as has the rate for urban areas. For rural areas, the failure rate remains much higher than the urban failure rate and quite a way above average: Shetland Islands, Na h-Eileanan Siar and Orkney Islands were the three worst performing local authorities in recent years and Clackmannanshire, Stirling and West Lothian the best (Scottish Government, 2021).

The main reasons for failures were on grounds of energy efficiency (30%) and the Healthy, Safe and Secure condition (12%), issues that we now go on to look at.

Chart 5.13: Failure of the Scottish Housing Quality Standard does not follow the usual income gradient

Proportion of households whose home fails the Scottish Housing Quality Standard

	2012	2013	2014	2015	2016	2017	2018	2019
Average	54%	49%	47%	45%	45%	40%	41%	43%
Income quintile 1	60%	53%	50%	52%	49%	43%	45%	45%
Income quintile 2	56%	55%	49%	47%	46%	40%	44%	48%
Income quintile 3	54%	45%	50%	46%	48%	41%	39%	42%
Income quintile 4	51%	50%	48%	46%	44%	41%	36%	44%
Income quintile 5	48%	44%	40%	35%	38%	37%	40%	35%
Disabled	51%	48%	49%	45%	46%	42%	42%	44%
Urban	53%	48%	46%	45%	43%	39%	39%	42%
Rural	59%	55%	54%	48%	51%	46%	49%	49%

Source: Scottish Housing Conditions Survey. Unweighted N = 22,761

Incidence of damp and condensation have reduced but remain highest in the private and local authority rented sectors

The trends for damp, condensation and mould show improvements since 2012 across all tenures, with a reduction in the gap between rates in the best and worst performing sector. Again housing associations perform better than other rented tenures, but unlike with the SHQS, not as well as owner occupied tenures.

Mould is likely to indicate a more serious issue than the presence of damp and condensation alone, and hence we focus on this data (chart 5.14)

⁹ Only unequivalised income quintiles can be calculated from the data available in the SHCS and no breakdown for ethnic minorities is available.

Chart 5.14 The likelihood of having mould present in a home decreases with income

Proportion of households with mould present

	2012	2013	2014	2015	2016	2017	2018	2019
Average	12%	10%	9%	9%	8%	8%	10%	9%
Income quintile 1	16%	12%	13%	10%	13%	14%	13%	12%
Income quintile 2	11%	12%	8%	10%	9%	8%	11%	11%
Income quintile 3	12%	8%	11%	10%	7%	8%	9%	9%
Income quintile 4	12%	10%	7%	10%	7%	6%	9%	9%
Income quintile 5	8%	7%	6%	7%	6%	5%	6%	5%
Disabled	10%	10%	10%	9%	8%	9%	10%	10%
Urban	12%	10%	9%	10%	9%	8%	10%	9%
Rural	10%	10%	9%	9%	7%	8%	8%	8%

Source: Scottish Housing Conditions Survey. Unweighted N = 22,761

The incidence of mould follows an income gradient, with higher incidence of mould for lower income households. Although the gap has narrowed slightly over time, a clear inequality remains. There has been no improvement over time for disabled people, with 10% of people living in a home with mould in 2019, the same as in 2012. Urban households appear to do marginally less well on this measure than rural households, although both are close to the average.

The downwards trend in damp, condensation and mould is mirrored in an upward trend in those reporting that they can keep their home sufficiently warm in the winter, but similar inequalities persist.

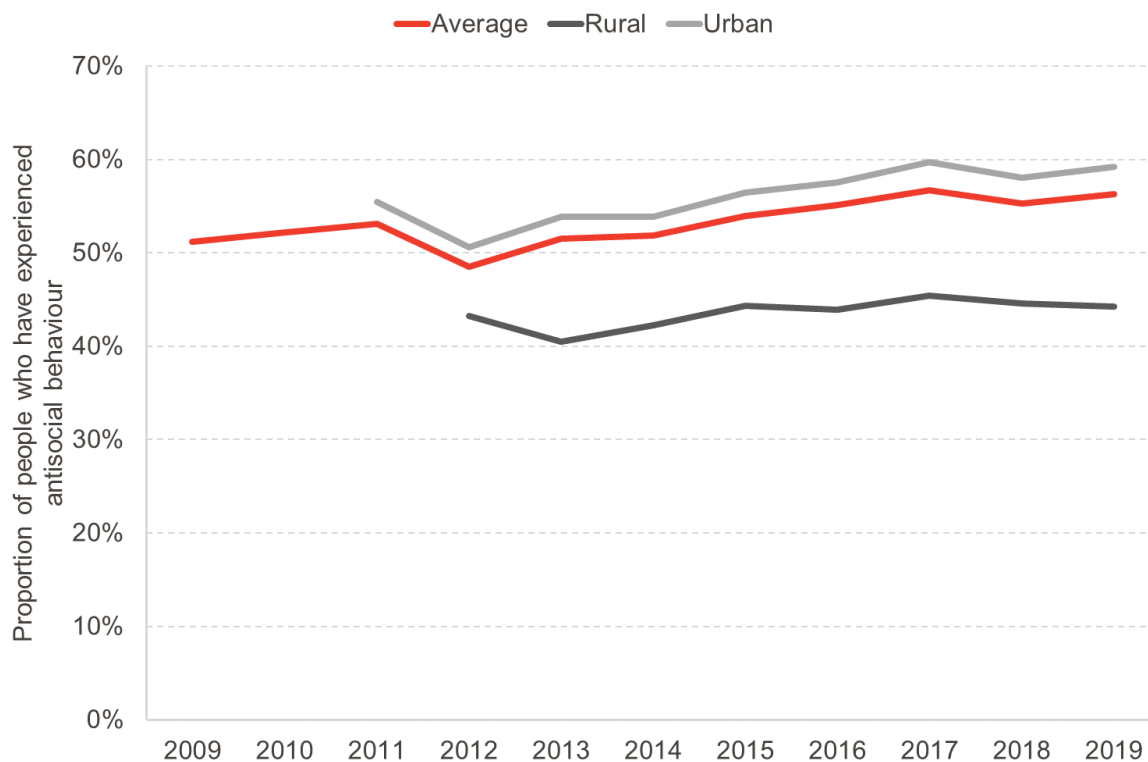
Since 2012, there has been an increase in the number of people saying they can keep their home warm enough in the winter reaching 81% by 2019. 13% say they sometimes can, and 3% say they never can. These figures are likely to reflect both incomes of respondents and housing quality. In the latest year of data (2019) there was a clear income gradient with 77% of people in the lowest income households reporting that they can always keep their home warm enough, compared to 87% of people in the highest-income households. There are clear differences across tenure. Under this measure, housing associations and local authority owned social housing are similar in their performance, but again, the private rented sector performs worst. As expected, these tenure trends map over into analysis by income quintile, with those in higher income households more likely to be able to heat their home sufficiently, and those in the lowest income households least likely to be able to.

Issues in immediate neighbourhoods have worsened or at best stayed the same since 2012

There are a range of other reasons beyond cost and security of tenure that will influence the experience of your home. These factors overlap with neighbourhood, which is looked at later in this paper. The Scottish Household Survey has asked since 2013 whether the interviewee has personally experienced antisocial behaviour in their neighbourhood over the past year¹⁰ (chart 5.15).

Chart 5.15: Number of people who have experience antisocial behaviour has generally been on an upwards trend

Proportion of people who say that they have experienced some form of antisocial behaviour



Source: Scottish Household Survey. Note: data for rural and urban splits not available for all periods. Unweighted N = 178,314

Instances of antisocial behaviour have increased over the 10 year period. Rates are just above average for urban areas, and slightly below average in rural areas. These have increased over the period. Perhaps surprisingly, there is little difference when the data is looked at by income quintiles.

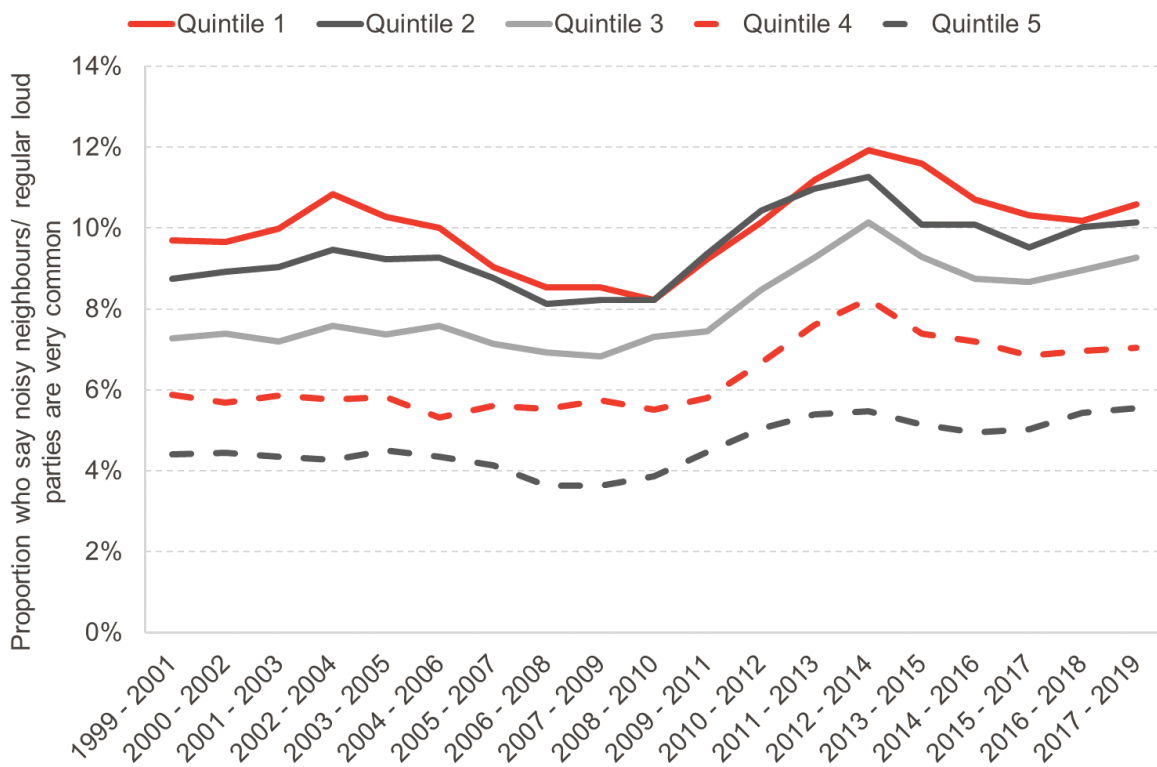
¹⁰ Antisocial behaviour includes: noisy neighbours or regular loud parties; vandalism, graffiti or other deliberate damage to your property; rubbish or litter lying around; neighbour disputes; groups or individuals intimidating or harassing you; witnessed instances of drug misuse or dealing; rowdy behaviour e.g. drunkenness, hooliganism or loutish behaviour; abandoned or burnt out vehicles; animal nuisance such as noise or dog fouling

The Scottish Household Survey also asks a question on whether people feel safe in their homes at night. On average, the proportion of people who answer “a bit unsafe” or “very unsafe” is very low, at only 2% and this has stayed fairly steady. The rates for disabled and minority ethnic groups are quite a lot higher than the average. Rates are slightly higher for younger age groups as opposed to older age groups and rates for those on lower incomes are slightly above the population average.

The incidence of noise from neighbours or locally held parties has risen and fallen at different points over the last 20 years. Overall, the incidence is higher than 20 years ago. Incidence of nuisance noise was at its lowest in the late 2000s, rising post-2008 before reducing a little from the mid 2010s onwards. As shown in chart 5.16, the pattern has been similar across income quintiles. The only notable change is a coming together of the experience of those in the first and second income quintiles.

Chart 5.16: Issues around noise from neighbouring properties are worse now compared to 20 years ago with a noticeable rise after 2008

Proportion who say noisy neighbours/loud parties in their neighbourhood occur fairly or very regularly



Source: Scottish Household Survey. Unweighted N = 276,972

Conclusions

The experience of housing is a major factor in determining both mental and physical health. This chapter has shown how lower income households are more likely to live in higher cost and lower quality housing than lower income households. This trend has roots back to the 1970s and 1980s,

with decisions made by government in those decades still having serious ramifications today. On the whole, older people are more likely to be in owner occupied sectors and have a better quality of housing, but there will of course be exceptions to this.

The private rented sector has posed a big challenge over the past twenty years, with a growing proportion of low income households renting in the private sector due to a reduction in the social rented stock and owner occupation becoming increasingly unachievable due to the well documented rise in house prices. There are some indications that the trend for private renting to grow as a share of tenure types has started to reverse, and this may be due to the Scottish Government's drive to increase the number of homes for social rent, although in reality it is too soon to understand this fully.

Rents in both the private and social rented sector have risen in real terms over the past twenty years but tenants on the lowest incomes have been protected, on the whole, by Housing Benefit that, until 2010, was compensating for much of the rise in housing costs. Since 2010, reforms to housing benefit and equivalent support under Universal Credit have meant that the protection has waned a little. This means that the gap in housing costs as a proportion of income has grown wider between the bottom and top of the income distribution. One consequence of this is that if more income is being spent on housing, less is available for other goods and services, widening the gap in living standards.

Housing quality can also directly affect health via respiratory conditions and poorer mental health. Higher-income households are more likely to live in better quality housing with lower levels of damp and mould. They are also more likely to be able to keep their homes warm in the winter. Housing quality tends to be higher in the social housing sector, in particular those owned by housing associations, relative to the private rented sector.

Housing quality has improved over the last ten years. However, issues with the immediate neighbourhood have not, with indicators of antisocial behaviour, safety and noise either getting worse or staying the same.

This chapter provides a mixed bag in terms of progress. Clearly, social housing provides some protection from the high rental prices and poor quality, and the Scottish Government is seeking to increase the supply of social housing which could lead to (and possibly could already be leading to) improvements. However, it's clear that change will take time, and embedded inequalities are likely to remain unless something significant happens to change the tenure mix. Quality, most likely driven by regulation is slowly improving. At the same time, experience of immediate neighbourhoods as measured by antisocial behaviour appears to be worsening, although as shown later in this report, there are signs that perception of neighbourhoods is improving. Whether this demonstrates a difference between perception and reality, or a downgrading of expectations over time is difficult to know.

6. Public services, welfare and democratic wellbeing

The quality and availability of public services and design of the social security system can affect health directly, in the case of health services, or indirectly via the way it influences broader socioeconomic determinants of health. The responsiveness of public services to people's needs, and the way in which these services are designed, can also influence peoples' perceptions about the influence they have over their circumstances, and hence their lives more generally. This chapter looks at the funding and design of public services and the welfare system, and trust in the political system more generally.

Key points

- In the ten years from 2010/11 to 2019/20, Scottish Government real terms spending on health increased by only one per cent per annum. Health spending had increased by almost 5% per annum in the decade prior to this. The spending increase of one per cent per annum is well below what would be required to maintain service quality in the face of growing need. By 2019/20, spending on health was £3bn - £4bn lower than it would have been had it grown at 3-4% per annum over the previous decade.
- The relatively slow increase in health spending after 2010 largely reflected the funding constraints faced by the Scottish Government as a result of the UK Government's austerity programme. But it also reflected Scottish Government decisions as to how to prioritise its budget. Spending on health in Scotland increased more slowly than in England in the decade after 2010.
- The decade after the financial crisis also witnessed significant change to the social security system, particularly working age social security. Most of these changes have eroded the value of the safety net provided by the UK welfare system, and at the same time have increased the requirements on claimants to meet eligibility criteria.
- The financial impact of the reforms on the lowest income households has been substantial. There is growing empirical evidence that some of the welfare reforms did increase the prevalence of mental health problems and anxiety.
- The UK Government's austerity programme – and its impacts on spending on healthcare, on social welfare, on investment in local services, and its contribution to the wider slowdown in earnings growth – was undoubtedly a major contributory factor to the slowdown in the improvement in mortality and life expectancy in Scotland and the UK after 2010, as well as more slowdown in health improvement more generally. The significant slowdown in health spending is arguably the channel through which austerity made its most contemporaneous contribution to the slowdown in mortality improvement. Changes to social security and various aspects of local services may have contributed to a rise in prevalence of mental health issues, but may have a long-term impact on health.
- Between 2006 and 2016, people in Scotland became increasingly less likely to trust the UK Government to take 'fair' decisions. This decline in trust was only partially offset by an increase in trust in the Scottish government to take fair decisions.
- Levels of dissatisfaction with public services have increased during the past decade, but only marginally. Dissatisfaction with public services has not obviously increased more rapidly in more deprived communities compared to less deprived communities.

Public services, democratic wellbeing, and health

Government policy plays a key role in influencing population health, both directly, and via influencing the socioeconomic determinants of health. Throughout this report we have drawn attention to some of the key ways in which policy has affected the socioeconomic determinants of health, whether that is through policies towards the minimum wage and wider labour market regulation and institutions, social security, education, and so on.

This chapter considers the impact of public policy more specifically. We start by looking at government spending on health. Whilst total spending on health is a somewhat blunt proxy for the quality and distribution of health services, there is undoubtedly a link between spending on health and the adequacy and quality of health outcomes, via the range and quality of treatments and the severity of waiting times. Health spending primarily includes spending on the NHS, but it also includes spending on a variety of programmes delivered by local authorities and some third sector providers, for example in relation to some programmes around mental health services, and alcohol and drugs policy. The chapter also examines trends in social care spending, the funding for which comes from both health and local government budgets.

The chapter then examines trends in local government spending by service area, as a proxy for the quality of various local services that might affect health indirectly in various ways – notably in terms of the provision of various community services that might be important for psychosocial health. It then considers changes to the UK welfare system, and the way that these may have influenced socioeconomic determinants of health such as financial security and loss of control over circumstances.

As well as the design of public services and the welfare system, democratic well-being may also influence health. One of the explanations as to why health is relatively worse in Glasgow than cities with similar levels of socioeconomic deprivation is because of a higher democratic deficit in Glasgow – which manifests as feelings of despondency, disempowerment, and lack of sense of control, which are recognised psychosocial risk factors with links to health outcomes (Walsh et al. 2016). This chapter therefore examines trends in trust in government as a proxy for the level of democratic deficit.

In this chapter we will talk about trends in perceptions of, and funding for, public services that are both reserved (notably social security) and devolved (health, and services delivered in large part by local government, including social care and education).

Real terms spending on health and social care stagnated between the financial crisis and the pandemic

From 1999/00 to 2009/10, UK government departmental spending increased robustly. The Scottish government's resource budget increased by an average of around 4.1% per annum. Scottish government spending on health per capita increased by around 4.7% per annum on average¹¹.

Following the financial crisis, the UK government embarked from 2010 onwards on a programme of 'austerity' to reduce the government's fiscal deficit from 10% of national income. We don't in this

¹¹ In this chapter, spending on 'health' is taken from HM Treasury statistics which define health spending in broadly comparable way to that set out in the UN's 'Classification of the Functions of Government (COFOG) classification.

report engage with the macroeconomic arguments for and against the austerity programme. There were of course choices that could have been made to reduce the fiscal deficit more slowly, or to rely more on tax increases rather than spending cuts to finance the fiscal consolidation. But rather than considering these issues, this chapter examines how the policy choices taken may have affected the socioeconomic determinants of population health.

The UK government's programme of fiscal consolidation relied heavily on cuts to public services spending. Spending on some areas of public services were 'protected' – notably including health care, international development and defence – but most other areas experienced real terms cuts between 2010 and 2018.

As a result, the Scottish government's budget – the annual change to which is determined by the UK government's spending decisions – stagnated for almost a decade. By 2016/17 the Scottish government's resource block grant was 6% lower in real terms than it had been in 2010/11, and it had only just returned to the 2010/11 level by 2019/20.

The Scottish government can allocate its resource budget across its devolved competencies as it sees fit. Faced with a declining or stagnating budget for the best part of a decade, the Scottish government made similar but not identical decisions about how to allocate its budget across spending areas as the UK government.

In particular, the Scottish government chose, like the UK government, to 'protect' health care funding. 'Protecting' health care spending in this sense means that spending on health care continued to increase in real terms, in contrast to other areas of public spending, which often experienced cuts.

But the fact that health care spending was 'protected' does not mean that health care spending increased sufficiently to meet needs. Between 1999/00 and 2009/10, spending increases by the Scottish government on health care had averaged almost 5% per annum in real terms. In the following decade, between 2010/11 and 2019/20, the real terms increase in health care spending in Scotland averaged just 1 per cent per annum. This rate of annual increase is a long way short of the 3-4% annual real terms increases that the Scottish government estimated would be required to maintain services in the face of demographic change and other cost pressures (Scottish Government, 2018).

So yes, health care spending was 'protected' relative to the spending of other departments, but it is very unlikely that the annual increases in health care spending post financial crisis were sufficient to meet 'need', i.e. to maintain service quality in the face of growing demand. The difference between a 1% annual growth in spending and a 3 or 4 per cent annual growth in spending may not sound huge, but over a ten-year period that accumulates to a large number. By 2019/20, health spending in Scotland was £3-£4bn lower than it would have been had it grown at 3-4% per annum from 2009/10.

Where the Scottish government's spending decisions differed from those of the UK government was in relation to how much health care spending was 'protected' relative to other areas of spending. The UK government chose to increase health care funding in England by relatively more than the Scottish government did in Scotland. The Scottish government chose to cut funding for non-health areas, including local government and justice, by relatively less than in England. It also allocated relatively more resources to higher education than the UK government did in England, reflecting its desire to maintain universal free higher education whilst the UK government significantly increased the level of tuition fees for English students (Gallagher, 2017).

The implication of these choices was that health care spending per capita grew less quickly in Scotland than it did in England for most of the decade following the financial crisis (Chart 6.1). Per capita spending on health care in Scotland was 10% higher than in England in 2009/10, but by 2019 the gap had fallen to just 4%. Previous research has estimated that Scotland's relative spending needs for health – taking into account demographics, deprivation and sparsity – are at least around 10% higher than England's (Ball et al., 2015).

There have been efforts in Scotland and England in recent years to integrate health and social care services, with one aim of this being to reduce pressure on NHS services from people who could be being cared for in a social care setting. It is possible that slower growth in healthcare spending in Scotland post-2010 was offset by relatively faster growth in social care. However, there is little evidence that the slower growth of spending on health care in Scotland in the decade following the financial crisis was offset by relatively stronger spending growth on social care (Chart 6.2).

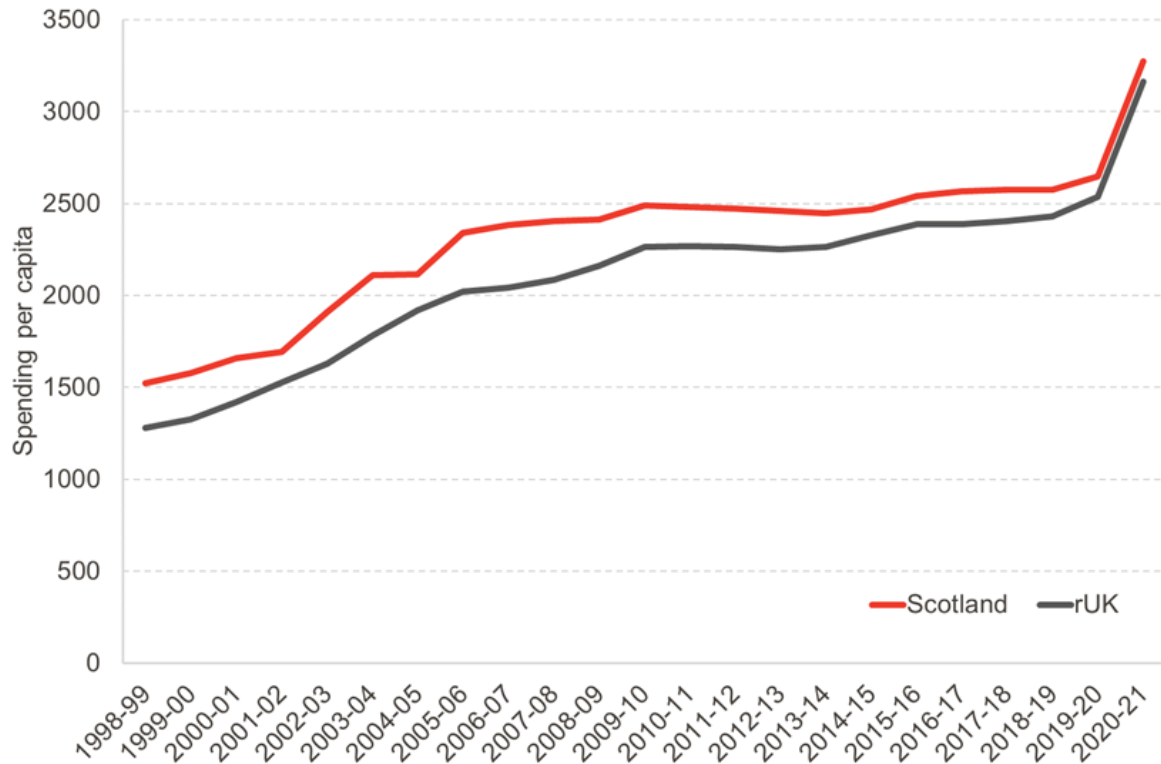
It is possible that, although total spending on health care in Scotland increased more slowly than in England after 2010, the health budget in Scotland could have been reallocated during this period in such a way as to mitigate health inequalities more explicitly. However we do not have any evidence on the extent to which this might have been the case.

It is clearly true that austerity was a political choice by the UK government, and it is also true that the way in which the UK government went about achieving fiscal consolidation – with an emphasis on departmental spending cuts – was also a political choice. But within the constraints of its own budget, the Scottish government has made choices too, and these have resulted in slower growth of per capita health care spending than observed in other parts of the UK¹².

¹² The relatively slower growth of Scottish health spending per capita is a choice that is implicitly bound up in the Scottish government's spending commitments, and the operation of the Barnett Formula which determines the Scottish block grant. The Barnett Formula allocates the Scottish budget a population share of spending increases in England. The Scottish government frequently commits to 'pass on' health related consequential to the health budget in Scotland. But if Scotland starts with a higher level of spending per capita on health, a commitment to 'pass on' health consequential will reduce the size of the relative per capita spending differential over time.

Chart 6.1: Real terms per capita spending on health stagnated after the financial crisis – and more so in Scotland than in rUK

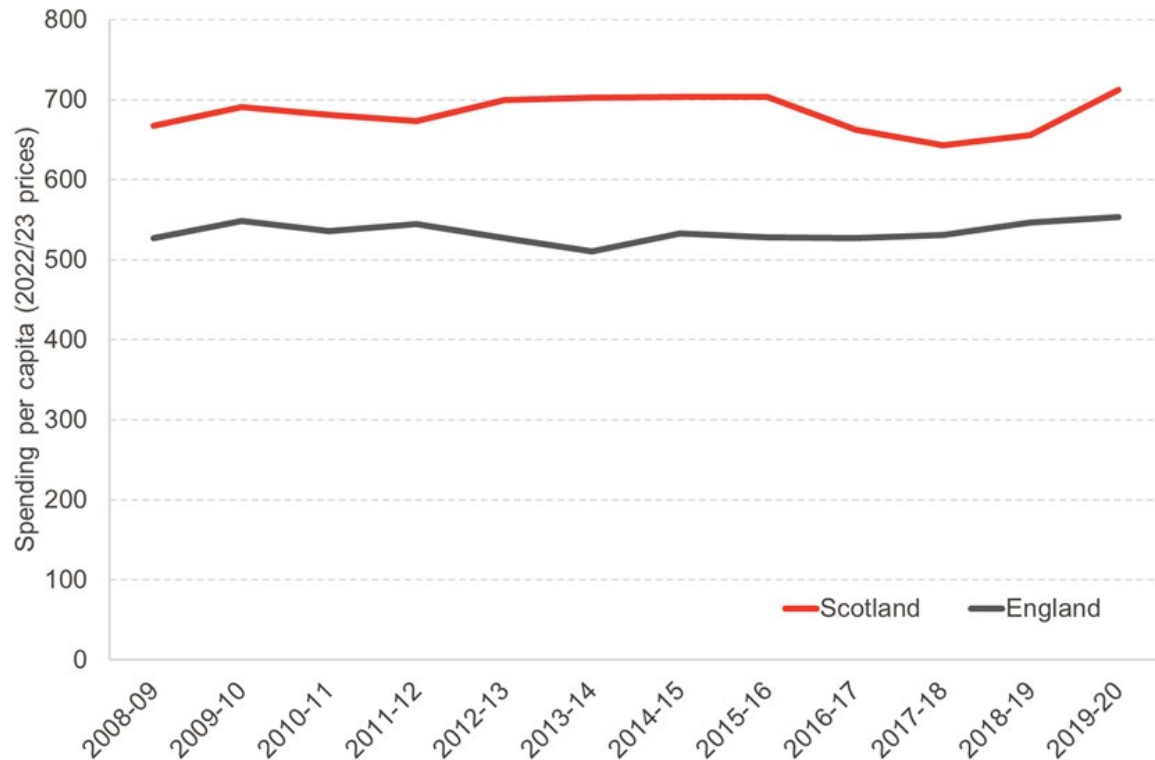
Per capita spending on health (£million), Scotland and rUK



Source: FAI analysis of Government Expenditure and Revenue Scotland (Scottish Government, 2021). Notes; chart shows resource spending, capital investment spending is excluded

Chart 6.2: Real terms per capita spending on social care has remained unchanged since the financial crisis

Per capita spending on social care, Scotland and rUK



Source: FAI analysis of Public Expenditure Statistical Analysis (PESA), HM Treasury (various years). Notes: social care spending is identified as 'Personal Social Services' spending in documentation, and amounted to £3.6bn in Scotland in 2019/20

Local government spending has been cut, but the cuts have not been distributed evenly across local government services

Whilst health care has been 'protected' from funding cuts during the last decade, at least relatively, the same cannot be said of local government. Between 2013/14 and 2017/18, the core local government revenue settlement declined by £750 million in real terms, which is equivalent to a 7% real terms reduction in its budget (Burn-Murdoch, 2018). Between 2017/18 and 2019/20 the local government settlement was broadly unchanged in real terms. It then increased substantially in 2020/21 in response to the pandemic, although much of this funding increase merely offset loss of revenues from non-domestic rates revenues, and fees and charges, and a large part of the remainder was passed on to businesses as grants – there was not therefore a substantial change in public services spending in 2020/21.

The real terms funding reductions for local government have resulted in a reduction in local government spending on public services, including schools. However, the cuts have not been passed on evenly (Chart 6.3). Spending on social work has remained unchanged in real terms, whilst cuts to local government schools spending in the early part of the austerity period have largely been reversed.

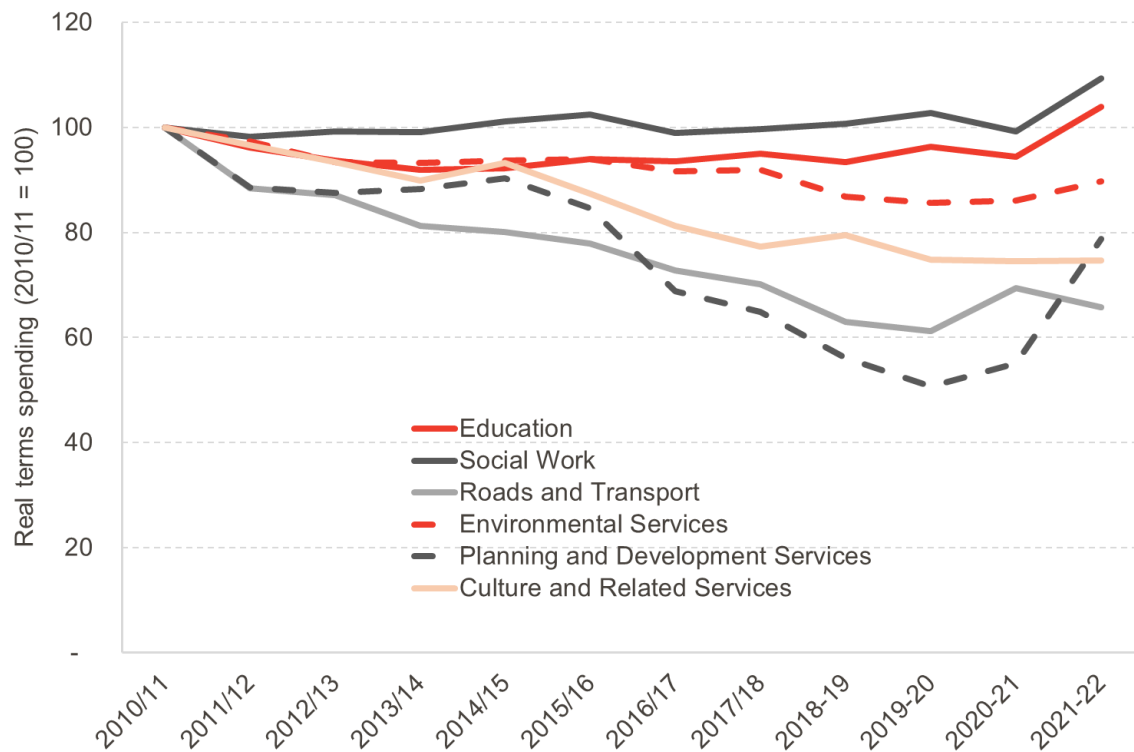
But if spending on these two significant areas has been largely protected in real terms, then it follows that spending on other service areas must have declined substantially. Indeed, spending on environmental services has declined by 10% in real terms since 2010/11, while spending on roads and transport, planning and economic development, and cultural services has declined by over 20%.

Local authorities have often reconfigured operations to try to ensure that frontline services are protected from cuts as much as possible. But funding cuts of 20% or more will inevitably result in some loss of service quality – which might include reduced opening or complete closure of community facilities for example, or reduced maintenance of public spaces.

These reductions in service quality might not impact health as directly or immediately as a decline in the quality of health services, but they may well affect health indirectly. Community facilities can play an important role in providing a base for activities that support psychosocial wellbeing in a variety of ways. Community-based services are also likely to be becoming increasingly important in providing support to people in need, given backlogs in NHS and social care support, until those services can respond. And education can affect health indirectly, as discussed in Chapter 4.

Chart 6.3: Real terms spending on cultural services, planning and development and environmental services has shrunk by over a fifth since 2010/11

Local government net spending by service area (2010/11 = 100)



Source: FAI analysis of Provisional Outturn and Budget Estimates, Scottish Government (various years)

UK welfare changes have increased stress and anxiety

As well as the changes to departmental spending, the decade after the financial crisis also witnessed significant change to the social security system, particularly working age social security. Some of these changes, but not necessarily all of them, were motivated and framed as part of the austerity agenda. The changes included:

- A 1% cap on increases in most working-age benefits and tax credits from April 2013 to 2015, and then a four-year freeze in most working age benefits from 2015 to 2019 – these resulted in significant real terms cuts in the value of most working age benefits over the period.
- An emphasis on increased welfare conditionality, and increased use of benefit sanctions. Use of sanctions increased particularly strongly from 2011 to 2013 but declined subsequently.
- Reduction of local housing allowance rates from the median to the 30th percentile of the Broad Rental Market Area, and subsequent real terms cuts
- The introduction of an arbitrary cap on the maximum benefit that a family can receive, followed by a reduction in that limit in 2016.
- The gradual replacement of six working age benefits into a new ‘Universal Credit’ from 2013. Under UC, some claimants are better off than they would have been under legacy benefits, but on average claimants are somewhat worse off. UC also involves longer lags between making a claim and receipt of first payment, and greater emphasis on ‘activation’ (job search requirements) than previous policies.
- The replacement of Disability Living Allowance with the Personal Independence Payment. PIP was introduced expressly with the aim of reducing the overall costs associated with disability and ill-health, in part by placing greater onus on claimants to prove their eligibility.

Many of these changes have either reduced the real terms value of the typical claim, or limited the eligibility criteria for a given benefit, thereby excluding some claimants from eligibility. Collectively, cuts to the generosity of the social security system since June 2010 amount to approximately £39 billion across the UK by 2019 (Crawford and Zarenko, 2019).

Both of these factors have weakened the average level of financial support provided to families across the UK. But the impact is relatively much greater on those families with the lowest incomes. Bourquin et al. (2020) show that the welfare reforms introduced between 2010 and 2019 will, once fully rolled out, reduce the incomes of the lowest 10% of UK households by around 10% (equivalent to £1,100 per year), compared to around 2% for the population as a whole. The nature of the changes introduced has tended to affect working age families with children particularly severely.

To the extent that these policies reduce the financial support available to low-income households, heighten the risk of food insecurity, and threaten the adequacy of income, we might expect them to contribute to worsening health amongst that group. Increased stress and anxiety might also result from the greater onus on claimants to undertake ‘activation’ activities, and the greater prospect of being sanctioned if their activities are deemed insufficient. The changes might also increase stress and anxiety amongst those not currently eligible for the benefits, if they realise that the value of the safety net has deteriorated.

Indeed, there is growing empirical evidence that some of the welfare reforms did increase the prevalence of mental health problems and anxiety. For example, Reeves et al. (2020) find that between 2015 and 2018, the prevalence of depression or anxiety increased more amongst those at risk of having their benefit capped than it did amongst those who were not at risk of being capped. Wickham et al. (2020), by exploiting the staged rollout of UC in different parts of the UK, show that

the introduction of Universal Credit was associated with an increase in psychological distress. Brewer et al. (2022) use a similar methodology to examine the effect on mental health of becoming unemployed under UC compared to the legacy welfare system. They find evidence of heterogeneous effects by group – for lone parents and single adults, becoming unemployed under UC is worse for mental health than becoming unemployed under the legacy system. For couples with or without children, the effect of becoming unemployed on mental health is no different under UC than the legacy system (since some improvement in administrative difficulty in claiming offsets somewhat lower income).

A number of austerity-related social security policies that were introduced by the UK government were largely mitigated in Scotland by the Scottish government. The policies that were mitigated included:

- The so-called ‘bedroom tax’, which reduces the level of Housing Benefit for those deemed to have more bedrooms in their property than is strictly necessary given the size of their household.
- Reductions to the level of Council Tax Reduction that were applied in 2013.

The mitigation within Scotland of some of the UK welfare reforms since 2010 is likely to have been significant for some of the households who were directly affected by the policies mitigated. Overall however, it is probably unrealistic to expect that the Scotland-specific mitigations would have an observable impact on Scottish health at population level. This is because the mitigations were fairly marginal in the context of the broader changes that took place. The Scottish government spends around £50m per year mitigating the impacts of the ‘bedroom tax’, but estimates that UK government welfare cuts amount to around £3.7bn annually in Scotland.

Austerity contributed to the slowdown in health improvement

In Scotland, as in the UK as a whole, the almost continual improvement in mortality rate following the second world war stalled in around 2012. Mortality rates affect calculations of life expectancy. The slowdown in mortality improvement was such that, by 2018, life expectancy was 1.3 years lower than it would have been had the previous trends continued. The slowdown in mortality improvement has been more marked for people living in the most deprived neighbourhoods ranked by SIMD than those in less deprived neighbourhoods (Miall et al. 2022).

In 2012 there was a similar – but even more marked – stalling in the long-run improvement in healthy life expectancy (Miall et al. 2022).

There has been a wide debate about the potential causes of this stagnation in mortality improvement. The timing of the stagnation in mortality improvement broadly coincides with the period of ‘austerity’. Inevitably, this has led many people to argue that ‘austerity’ was in some way a material factor behind the stagnation in mortality improvement.

Indeed, it seems almost undeniable that austerity will have played a significant and substantial contributory role. Whilst correlation does not prove causation, the coincidence of such an unprecedented stagnation in mortality improvement with an equally unprecedented slowdown or reduction in public services spending is difficult to explain through alternative mechanisms.

McCartney et al. (2022) investigate a number of explanations for the slowdown in mortality improvement since 2012, and conclude that it cannot be materially accounted for by factors – such

as rising deaths from drugs or dementia, an increased prevalence of weather extremes, or a slowdown in improvement from cardio-vascular deaths – that could feasibly have been dissociated from austerity. They conclude that there is ‘good evidence that austerity has contributed to the stalled mortality trends’.

It is more difficult to identify specifically which aspects of ‘austerity’ contributed to the slowdown in mortality improvement, and hence life expectancy¹³. The decade-long period in which real terms health spending increased much more slowly than health spending ‘needs’ were increasing could plausibly have had a relatively contemporaneous impact on mortality. The fact that the slowdown in mortality improvement is observed across all demographic groups is also suggestive of the idea that the quality of health services may be material to the trends.

Changes to social security spending and conditionality have undoubtedly had negative impacts on mental health, but are arguably less likely to have had a material affect on mortality - yet. The changes to social security have significant impacts on the individuals affected. They have also been linked to suicide in some cases. However, there is a case for saying that, whilst such changes may have contributed to rising prevalence of mental health problems, they seem less likely to have had a contemporaneous impact on the slowing of mortality improvement to date. But they are nonetheless likely to be contributing to a number of other morbidity issues, and may, by reducing the resilience of people to manage changes in their circumstances, be storing up further problems for the future.

This is not to say that austerity has been the only factor that led to the slowdown in mortality improvement, and wider health improvement, post-2010. As we showed in chapters 2 and 3, the post-2010 period has also seen an unprecedented stagnation in gross (pre-tax) real earnings, and as a result in household income. Its difficult to disentangle the role of this more general slowdown in income on health from the effects of ‘austerity’ on household income. Not least, this is because ‘austerity’ is likely to be a contributory factor itself in the slowdown in earnings (via the impact of austerity on aggregate demand in the economy). But austerity is probably not the only factor that contributed to the unprecedented earnings slowdown post 2010 (the start of the slowdown in earnings probably dates to around 2007).

The conclusion that austerity played an important and significant role in causing the slowdown in mortality improvement during the past decade seems undeniable. The immediate channel through which this happened is arguably through constraints on healthcare services. Other policy changes brought in during the austerity period, including changes to social security, and cuts to local government services to vulnerable groups, are also likely to have had an impact on population health more generally, including through contributing to an increase in prevalence of mental health issues.

People in Scotland have become less likely to trust the UK government to make fair decisions

Across countries, poor health and decreased trust in political systems are closely correlated, but it can be difficult to ascertain which one causes the other.

¹³ Life expectancy is calculated as a function of observed mortality rates, and expected changes in mortality rates in future.

When people feel powerless to influence policy and decisions that affect them, this can have negative consequences for health. Carnegie UK has stressed the importance of ‘democratic wellbeing’ as a means both to greater social and economic wellbeing and an end in itself, impacting directly on wellbeing (Heydecker et al. 2022). Democratic wellbeing refers to the extent to which people feel they have a voice in decisions that affect them. Democratic well-being is the sense of satisfaction that individuals and groups get from having the ability to participate and trust in political and governmental structures (Orviska, Caplanova and Hudson, 2014). Engagement and trust are not necessarily the same thing. As Heydecker et al. note, ‘in order for people to feel positive about participating in democratic processes and decision making, it is essential to have public trust in government’.

This concept of ‘democratic wellbeing’ is in a sense the opposite of the concept of a ‘democratic deficit’. It has been argued that a ‘democratic deficit’ was one of the important factors in explaining excess mortality in Glasgow compared to similar cities in England, and more generally in Scotland compared to England, over and above what would be expected given higher levels of socioeconomic deprivation in Glasgow and Scotland. (Walsh et al. 2016).

The broad hypothesis of Walsh et al. is that Glasgow (and Scotland more generally) was made more vulnerable to the socioeconomic and political determinants of health over a prolonged period through the way that various socioeconomic policies were implemented. These included the ‘socially selective’ New Town programme which aimed at relocating business and families to new towns and other areas outside the city, and the nature and scale of urban change in Glasgow in the post-war period, including lower investment in public housing, and a greater emphasis on high-rise developments. The so-called ‘democratic deficit’ of that period, which is characterised by Walsh et al. as ‘feelings of despondency, disempowerment, and lack of sense of control (recognised ‘psychosocial’ risk factors with links to adverse health outcomes)’ is hypothesised to have accentuated the negative health impacts of the policies implemented in Glasgow.

There are a number of ways we might think of trying to proxy democratic wellbeing (or its inverse, democratic deficit). We focus here on responses to questions in the Scottish Social Attitudes Survey which ask respondents: ‘to what extent do you trust the government to make fair decisions?’ The question has been asked in most years since 2006 and is asked specifically in relation to both the UK government and the Scottish government.

The most striking finding from this data is that the proportion of people in Scotland who trust the UK government to make fair decisions ‘not very much or not at all’ has increased fairly substantially between 2006 and 2016 (Chart 6.4). In other words, distrust of the UK government has risen.

In contrast there is evidence that the proportion of people in Scotland who trust the Scottish government to make fair decisions has increased over the period, although there is quite a lot of variation from year to year.

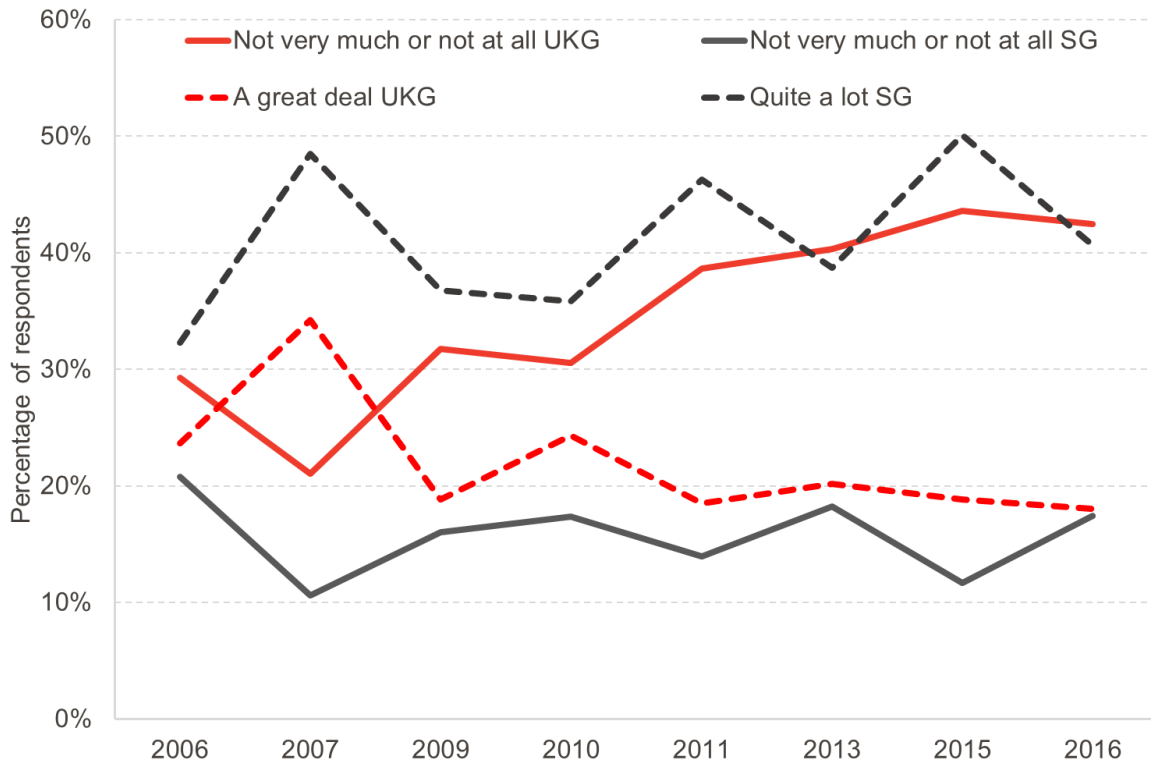
It could be argued that a more relevant indicator is the extent to which individuals trust neither government (to abstract from issues about changing political sentiments). However, having looked at this, it is impossible to conclude that there is any obvious trend over time in the proportion of the population who do not trust either government to make fair decisions – which averages around 12% of the population and varies between 8% and 16% in different years. Incidentally, those who do not trust either government to make fair decisions are twice as likely to self-report their health as bad (12.4% v. 6.8%) or very bad (3.1% v. 1.5%) compared to those who trust at least one government.

We can also look below the surface to see how trust in the two governments to make fair decisions varies by quintile of neighbourhood deprivation. Chart 6.5 shows that levels of distrust in the two governments are similar across quintile of neighbourhood deprivation.

Further analysis of public attitudes towards government and policy institutions will be published as part of the wider Health Foundation project of which this report is part.

Chart 6.4: The proportion of people in Scotland who do not trust the UK government to make fair decisions has increased

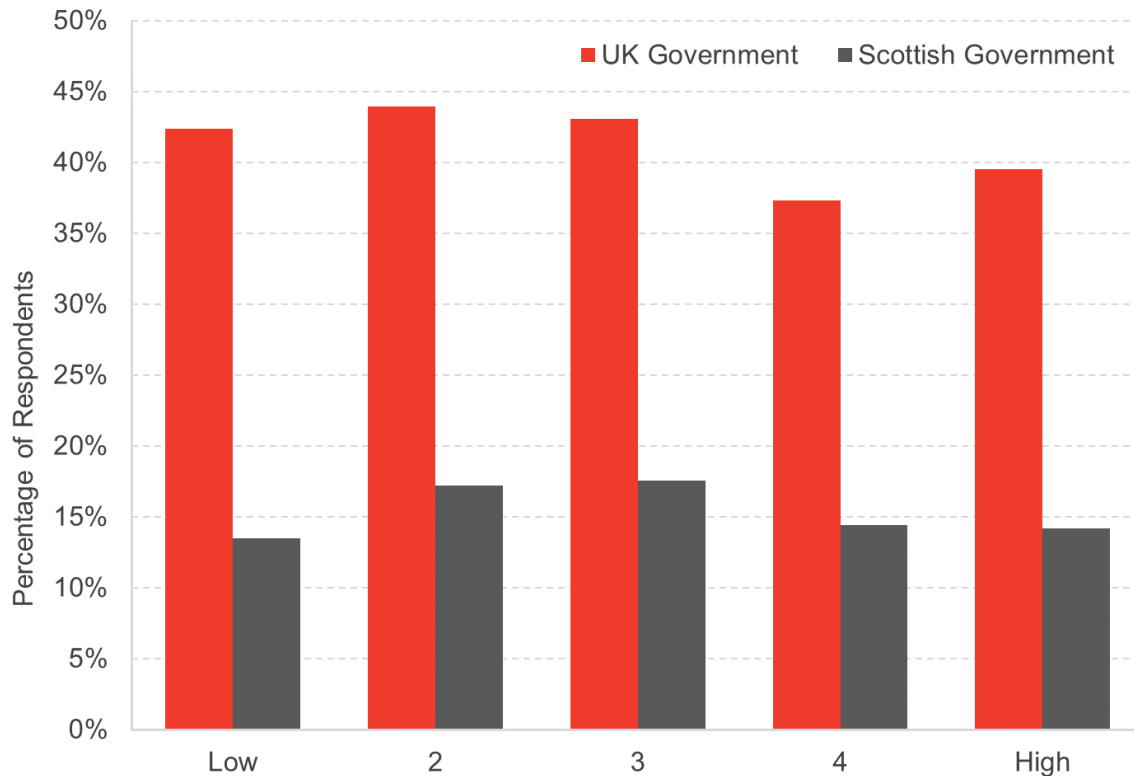
Percentage of respondents who gave particular responses to the questions, ‘do you trust the UK government/ Scottish government to make fair decisions?’



Source: FAI analysis of Scottish Social Attitudes Survey. Unweighted N = 11,032

Chart 6.5: Levels of distrust in the two governments are similar across deprivation quintile

Percentage of respondents who 'don't trust' or 'don't trust at all' the governments to make fair decisions, by quintile of neighbourhood deprivation



Source: FAI analysis of Scottish Social Attitudes Survey. N = 5,118. Notes: responses averaged across 2011-2016 period

Dissatisfaction with public services has increased slightly since the austerity period

Levels of dissatisfaction with public services might proxy their quality and potentially their impacts on health via psychosocial channels.

Chart 6.6 shows that dissatisfaction with local health services declined in the years leading up 2011, but that this improvement reversed during the subsequent austerity years. There is little evidence that levels of dissatisfaction with public services are fundamentally higher or lower for those in less deprived relative to more deprived areas.

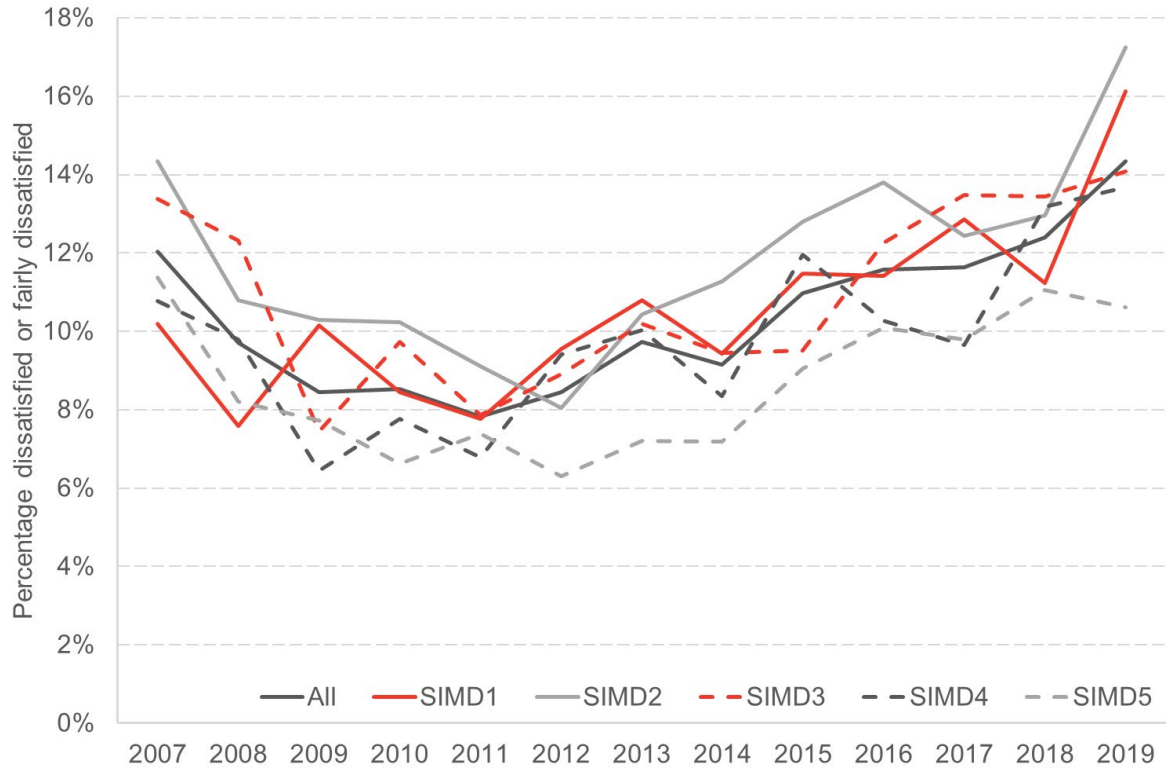
In contrast, the proportion of respondents expressing dissatisfaction with a range of statements about their local authority, whilst higher than those expressing dissatisfaction with health services, has not obviously increased during the decade of austerity (Chart 6.7). Our analysis shows that the trend is similar across the five quintiles of neighbourhood deprivation. Dissatisfaction is generally somewhat higher amongst the more deprived neighbourhoods compared to the least deprived neighbourhoods, but trends over time are similar.

Forthcoming analysis by the Scottish Government's Expert Advisory Group on Population and Migration shows that satisfaction with public services is often higher in remote rural parts of

Scotland than in other areas, but often tends to be slightly lower in more accessible rural areas (Expert Advisory Group on Population and Migration, forthcoming).

Chart 6.6: Dissatisfaction with local health services has increased since the austerity period

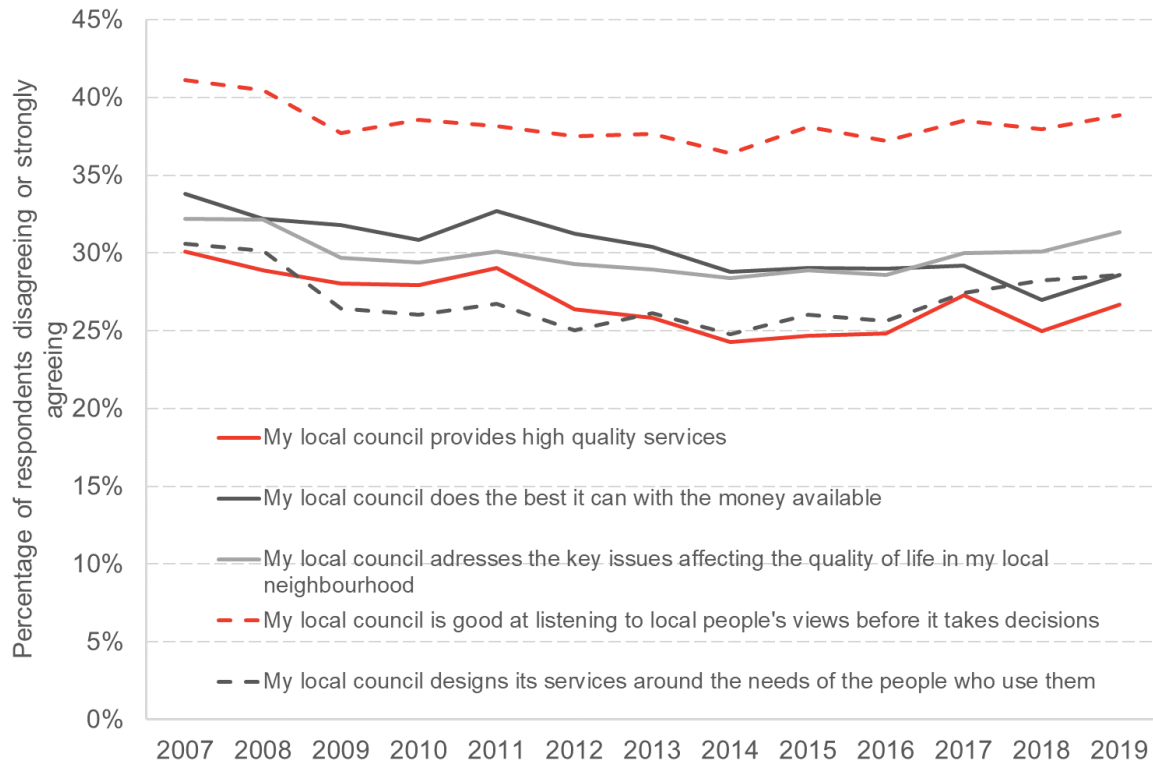
Percentage of respondents dissatisfied or fairly dissatisfied with local health services



Source: FAI analysis of Scottish Household Survey. N = 125,687

Chart 6.7: Dissatisfaction with local authority services has not significantly changed during the austerity decade

Percentage of respondents dissatisfied or fairly dissatisfied with a range of statements about their local authority



Source: FAI analysis of Scottish Household Survey. N = 125,687

Conclusions

The quality and availability of public services and design of the social security system can affect health directly, in the case of health services, or indirectly via the way it influences broader socioeconomic determinants of health.

The period since 1999 can be thought of in three distinct phases. During the first decade, public services spending grew relatively rapidly in real terms, and spending on social security increased. The austerity period from 2010 until the onset of the pandemic has seen huge changes in the funding of public services and in the design and operation of the social security system in the UK. The pandemic itself instigated large temporary spending changes which are discussed further in Chapter 8.

Healthcare spending increased far more slowly in the decade after 2010 than it did during the previous decade. The pace of the funding increase since 2010 has almost certainly not kept up with the increases that would have been necessary to maintain the quality of service delivery, taking into account demographic changes and the costs of health technologies.

Many other areas of public spending have faced real terms cuts. Cuts to local authority funding have resulted in substantial reductions in the funding of community and cultural facilities and discretionary economic development services.

There have also been huge changes in the social security system. In combination these have had the effect of significantly weakening the social safety net, and exposing claimants to greater levels of financial insecurity.

The spending cuts implemented during the austerity period coincide with an unprecedented stagnation in the improvement in mortality rates. Whilst austerity is unlikely to be the only factor determining the slowdown in mortality improvement, it seems difficult to deny that austerity was a major – indeed the most significant single – contributory factor.

The dramatic slowdown in the growth of health spending may be the most direct way that austerity contributed to the contemporaneous stagnation in mortality improvement. More generally, the effects of social security cuts on financial wellbeing and mental health, the impact of cuts to local government services to vulnerable groups, and the more general effects of austerity on earnings growth, are likely to have contributed to a more general stagnation in health improvement, including a rise in the prevalence of mental health issues. To the extent that socioeconomic factors influence health with a lag, these more general factors may continue to weigh on health improvements in coming years.

Perhaps surprisingly, there is limited evidence of a rise in levels of dissatisfaction with public services over the past decade. Levels of trust in government have declined slightly, with a large decline in trust in the UK government partially offset by a growth in trust in the Scottish government.

7. Neighbourhoods, community and place

The characteristics of the places where people live can influence health. Environmental quality, the physical attributes of neighbourhoods, the accessibility of public services – these are all examples of socioeconomic determinants of health that vary spatially. This chapter considers trends in the spatial pattern of public funding, residents views of the neighbourhoods that they live in, and air quality.

Key points

- There is huge variation in self-reported health across Scottish local authority areas, even after accounting for variation in demographic and economic characteristics of the people who live in those areas. This provides further support, if any were needed, that place matters for health.
- There is also vast spatial variation in the socioeconomic determinants of health, including in earnings, and in rates of child-poverty.
- There has been large spatial variation in public funding changes since 2010. But unlike in England, these changes have not obviously disadvantaged the relatively more deprived parts of the country. Furthermore there is no evidence of an association between the spatial pattern of public funding changes and the spatial pattern of changes in health outcomes.
- For much of the past 20 years, perceptions of neighbourhood quality have improved, particularly amongst those living in the most deprived neighbourhoods. But this trend reversed slightly in 2018 and 2019. This coincides with a statistically significant decline in a broader measure of social capital in this period. Social capital measures aspects of community cohesion, community empowerment, social networks and social participation that are grounded in place.
- Emissions of several key health-harming pollutants, including particular matter and nitrous oxide, have been falling in Scotland, and there is some evidence of improving air quality since 1999. However, pollutant levels continue to exceed legal limits and recommended guidelines on a fairly regular basis in some places, so policy-makers should not be too complacent on this issue.

Place and health

Stark geographical variations in health outcomes across Scotland have been well documented. Geographical variation in health outcomes can be observed at a variety of different spatial scales. There is geographical variation in health outcomes across broad regions, sometimes expressed in relation to an East-West split, and sometimes framed as a contrast between Greater Glasgow and other parts of the country. There are also substantial variations in health inequalities within regions and indeed within individual towns and cities. The gradient in life expectancy across wards in Glasgow has been well documented.

But what are the impacts of place itself on health? This is a tricky question to answer. Some of the observed variation in health in different places clearly reflects the fact that the socioeconomic characteristics of people living in those places differs. On the other hand, some of the variation in health is likely to reflect genuinely place-related characteristics, such as climate, pollution, or accessibility to health care services.

Separating the observed variation in health across places into these different elements is challenging, particularly when we take into account factors such as peer effects – the idea that peoples’ behaviours can be influenced by the behaviours of others living in their neighbourhood – and confounding factors, such as the possibility that higher economic activity and employment in one area might be associated with higher levels of pollution at the same time. It is also the case – and indeed likely – that over time, socioeconomic differences between places can be accentuated by migration or what economists call ‘sorting’. Economically strong-performing places can attract high-skilled workers, which motivates more high-wage firms to locate in those locations, potentially leading to virtuous cycles of in-migration of higher-waged, higher skilled workers; whilst the reverse can happen in weaker areas.

Despite these challenges, a range of recent research indicates that where you live does influence your health (for example, Deryugina and Molitor, 2021). The mechanisms here can include:

- Characteristics of the physical environment – including the extent to which the attributes of an area encourage or disincentivise exercise, the quality of the natural environment.
- Characteristics of the economic and social environment – The characteristics of the local retail market can influence health. Recent research in Glasgow for example has shown that ‘environmental bads’ – such as alcohol, fast food, tobacco, and gambling outlets cluster in more deprived parts relative to less deprived parts of Glasgow (Macdonald et al. 2018). Currie et al. (2010) find that the presence of a fast-food restaurant near a school raises the probability of obesity among the students.
- Peer effects – the influence of peers in influencing one’s own health behaviours
- The availability of and access to healthcare services – potentially encompassing everything from waiting times to see your GP through to the availability of advice at a local pharmacy – and other public services.
- Environmental quality – ranging from the effect of climate through to ambient air quality.
- Crime and anti-social behaviour – areas suffering from high rates of crime or anti-social behaviour can affect mental and physical health through the general impact of stress, a sense of helplessness or of being ignored,

This chapter considers evidence of how place-based determinants of health have evolved in Scotland since 1999.

There is significant variation in health across places in Scotland, even after accounting for differences in the socioeconomic characteristics of residents

To provide context, and build on the points made above, Chart 7.1 shows how one measure of self-reported health varies across 14 areas of Scotland. The variation in self-reported health is substantial. In 2009-11, twice as many people in Glasgow (12%) were likely to rate their health as fairly bad or very bad, compared to Edinburgh (6%).

Between 2009-11 and 2017-19, the proportion of people rating their health as bad or very bad increased significantly in almost all areas of Scotland. During this period, most parts of Scotland became more like Glasgow, with a higher proportion of people likely to say their health was poor. The increase in prevalence of poor self-reported health in some areas is quite striking. In contrast, Edinburgh experienced a small decline in the proportion of the population self-reporting ill-health, and in Lothian the increase was very small.

It is important to bear in mind when doing this sort of analysis that variation in health at neighbourhood level within each of these areas is even more significant than the variation between the areas themselves. This is illustrated in Chart 7.2. The bars show the proportion of the population of the area rating their health as bad or very bad in 2017-19. The top of each error bar shows the proportion of the population living in the fifth most deprived neighbourhoods in each area who report their health as bad or very bad; the bottom of each error bar shows the proportion of the population living in the least deprived fifth of neighbourhoods in each area who report their health as bad or very bad.

Chart 7.2 shows for example that, in the most deprived neighbourhoods in Edinburgh, 12% of people rate their health as bad or very bad. Conversely, in the least deprived parts of Glasgow, 3% of people rate their health as bad or very bad. This variation at small area level needs to be borne in mind when making generalisations at regional level.

In the context of the discussion at the start of this chapter, it might be asked how much of the variation in self-reported health between areas is because the characteristics of people living in those areas is different. To examine this question, we used a simple statistical method to explore how much of the variation in self-reported health between areas in 2017-19 could be explained by differences in population characteristics. The characteristics we controlled for were age, sex, employment status, educational qualifications, and household income.

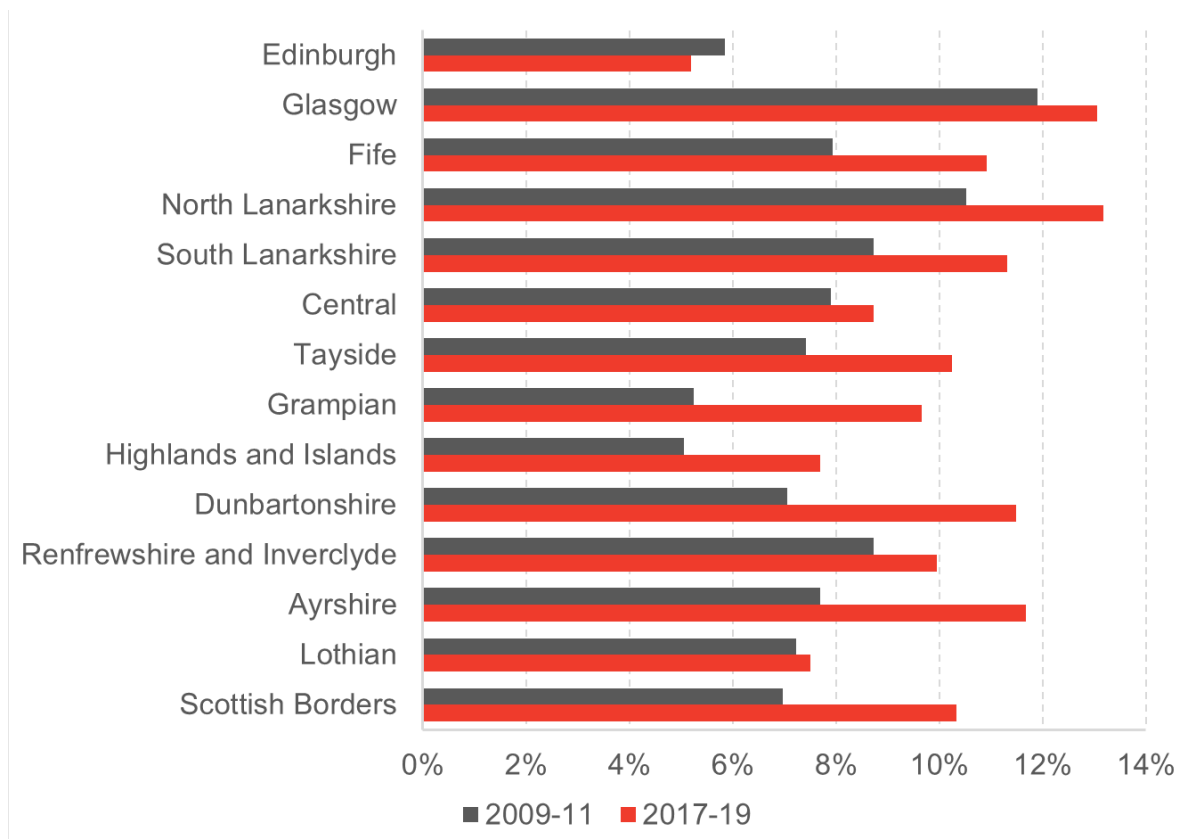
After controlling for individual characteristics, the variation in self-reported health across areas was smaller, but only marginally so. Without controls, the coefficient of variation in the proportion of the population reporting their health as bad or very bad was 0.21; after controlling for the demographic and socioeconomic circumstances of the population, the coefficient of variation fell to 0.19.

The result that controls only reduced the geographical variation in health marginally is slightly surprising. It may simply indicate that our controls were insufficient to capture individual factors influencing health. But the simplistic and somewhat naïve statistical approach - whilst it cannot in any way be taken as evidence that where you live has a causal effect on health - suggests that significant variation in health remains even when controlling for some of the most important socioeconomic determinants of health. It confirms that place matters when thinking about population health.

The reasons why health tends to be poorer in Glasgow and the west of Scotland than the rest of the country – even after controlling for socioeconomic deprivation – has been studied extensively. One of the explanations as to why health is relatively worse in Glasgow than cities with similar levels of socioeconomic deprivation is because of a higher democratic deficit in Glasgow – which manifests as feelings of despondency, disempowerment, and lack of sense of control, which are recognised psychosocial risk factors with links to health outcomes (Walsh et al. 2016).

Chart 7.1: There is substantial variation in self-reported health in different areas of Scotland

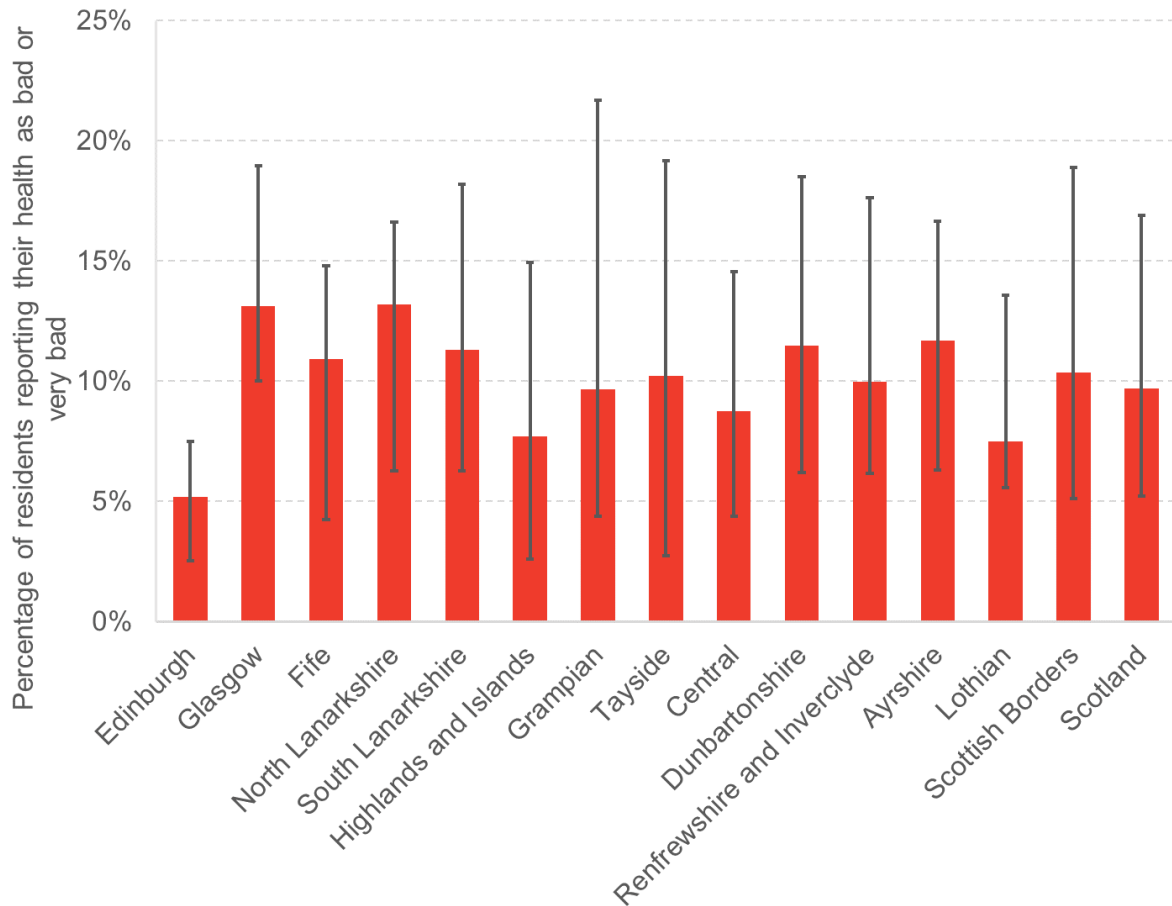
Proportion of respondents rating their health as fairly bad or very bad, by area



Source: FAI analysis of Scottish Household Survey (Unweighted N = 67,060)

Chart 7.2: There is substantial variation in self-reported health between *and within* different areas of Scotland

Proportion of respondents rating their health as fairly bad or very bad, by area, and in the most and least deprived neighbourhoods in each area



Source: FAI analysis of Scottish Household Survey (Unweighted N = 31,669). Note: the top and bottom of the error bars show the proportion of the population living in the most and least deprived neighbourhoods respectively reporting their health as bad or very bad.

There is significant variation in the socioeconomic determinants of health

There is significant variation in the socioeconomic determinants of health. For example, in 2019, the median weekly earnings of residents of Inverclyde was £390; it was £450 for residents of Glasgow; and £560 for residents of East Dunbartonshire; and £670 for residents of East Renfrewshire. Previous research on Scottish earnings differentials argues that the majority of such variation is attributable to differences in the characteristics and attributes of the people living in those areas, with only a small amount being attributable to 'place' effects (Melo, 2015).

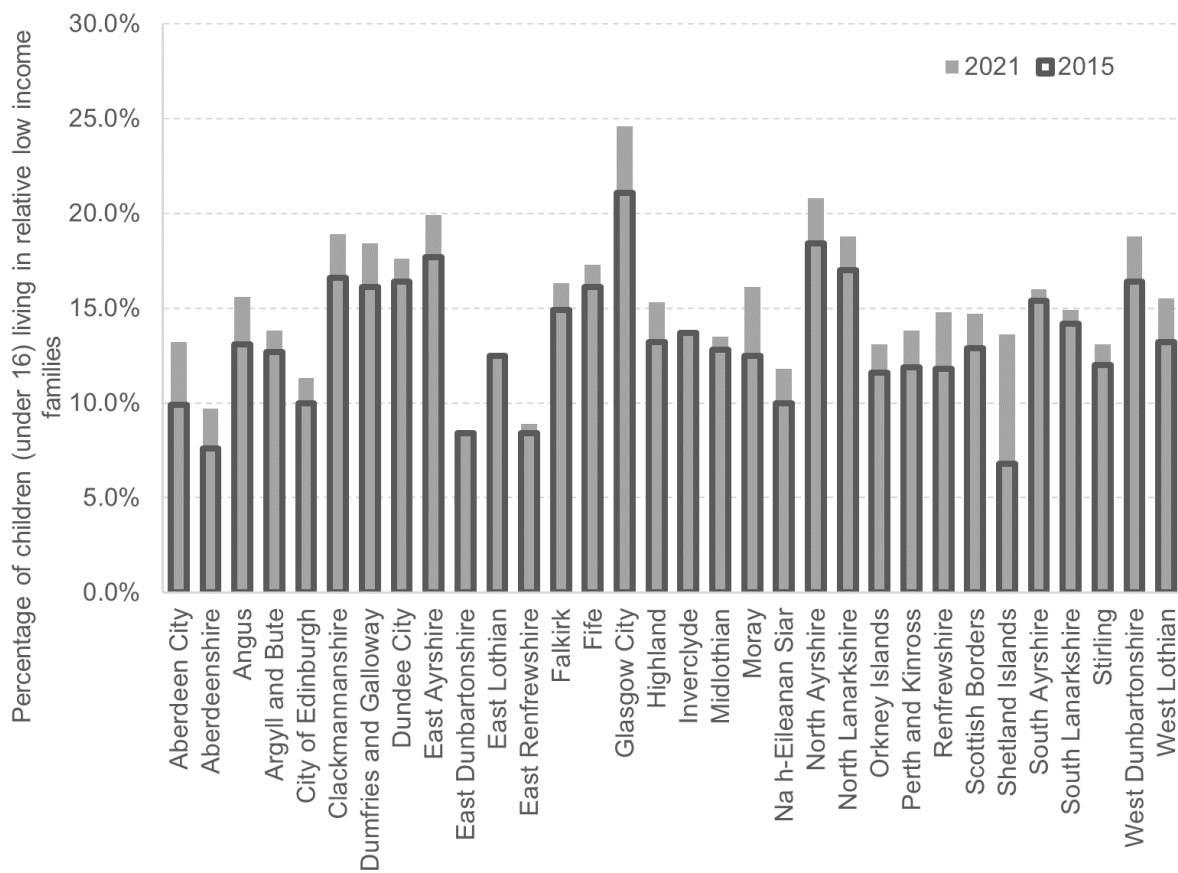
But even if spatial variation is attributable largely to 'people' rather than 'places', the resulting spatial variation in socioeconomic factors is important, in part because it can further accentuate other forms of inequality, such as education or employment, because of the way it concentrates advantage or disadvantage in particular places.

Chart 7.3 shows that there is huge variation in rates of child poverty across Scottish local authority areas, from 10% in Shetland and East Dunbartonshire to 30% in Glasgow. In this context it is not surprising that health also varies so markedly across local authority areas.

There is also of course wide variation within each local authority area. Chart 7.4 allocates each of Scotland’s 354 wards to ten deciles ranked by their child poverty rates. The highest concentrations of child poverty are generally seen in the major cities, but the cities and their hinterlands also contain many of the areas of lowest child poverty rates. It is also apparent that many pockets of high child poverty exist in more peripheral rural parts of Scotland, both in the north and south.

Chart 7.3: There is substantial variation in child poverty across Scotland’s local authority areas

Proportion of children living in relative income poverty, before housing costs, 2015 and 2020



Source: FAI analysis of DWP ‘Children in low-income families: local area statistics’.

Chart 7.4: There is substantial variation in child poverty across Scotland

Proportion of children living in relative income poverty by ward, before housing costs, 2015 and 2020



Source: FAI analysis of DWP ‘Children in low-income families: local area statistics’. Notes: Map contains data for 354 wards which are divided into decile according to their child poverty rate. Decile 1 contains wards with the lowest poverty rates; decile 10 contains wards with the highest poverty rates.

Scotland’s index of social capital has declined

Having discussed how self-reported health and socioeconomic determinants of health vary across broad areas of Scotland, we now consider the evolution of some of the socioeconomic determinants of health at neighbourhood level.

As part of its ‘national outcome’ framework, the Scottish Government has developed a measure of social capital. It defines social capital as ‘the resource of social networks, community cohesion, social participation, trust and empowerment, that collectively provide an important part of personal and social wellbeing now and in the future’.

The government's measure of social capital is derived from questions asked in the Scottish Household Survey. The social capital index consists of 18 variables covering four themes, which are:

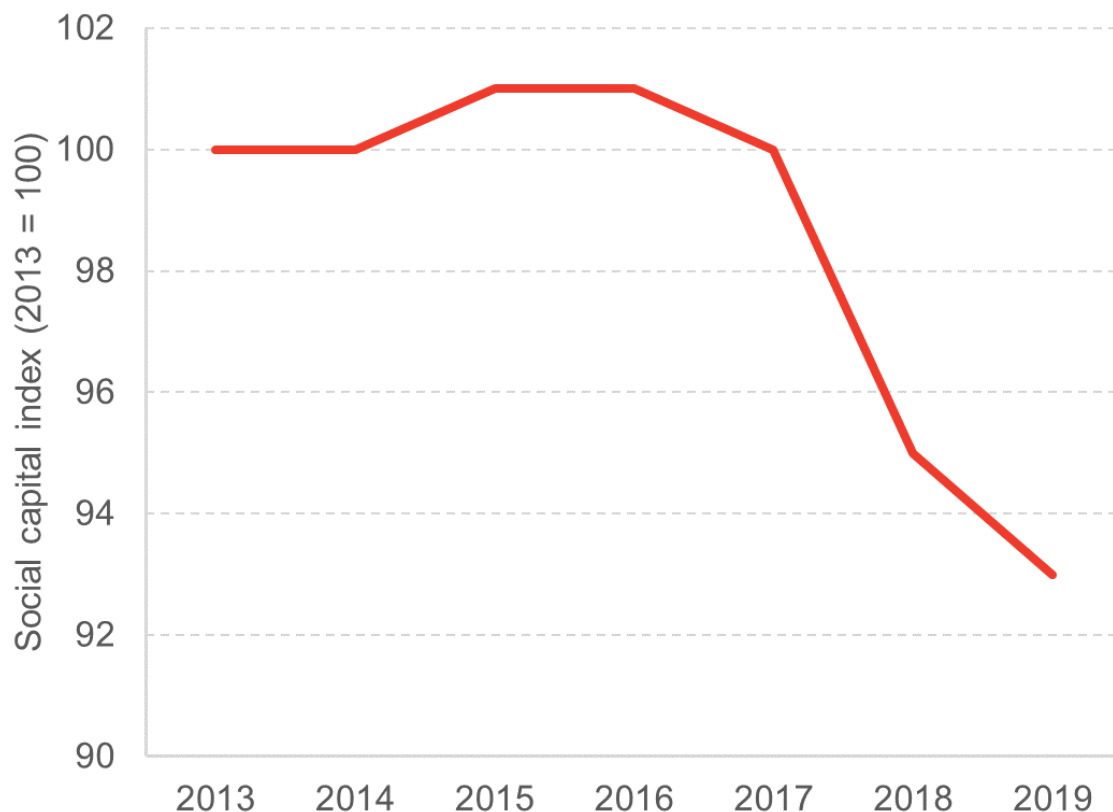
- Social networks – including extent to which people trust and could rely on neighbours, the frequency of social contact, and loneliness;
- Community cohesion – including perceptions of neighbourhood, feelings of safety, ratings of neighbourhood trust and kindness;
- Community empowerment – including perceived ability to influence decisions; and
- Social participation – in community groups and clubs.

Unfortunately, due to data constraints, the index is only available from 2013 to 2019. The evolution of the index in this period is shown in Chart 7.5. Having remained fairly constant from 2013 to 2017, it declined in 2018 and 2019. By 2019, the index was 7% lower than it had been in 2013, and this difference is statistically significant.

According to the Scottish government, this decline was due to decreases in 'empowerment' (feeling able to influence decisions), 'networks' (neighbourhood help and support), and 'participation' (volunteering).

Chart 7.5: The social capital index for Scotland has declined

Social capital index, Scotland



Source: Scottish Government, National Indicator Performance

<https://nationalperformance.gov.scot/measuring-progress/national-indicator-performance>

Perceptions of local areas has improved, particularly amongst those from the most deprived neighbourhoods

Given that the social capital index – and several of the indicators that are part of it – are not available over a long period, in this section we focus on indicators of perceived neighbourhood quality that are available since 1999.

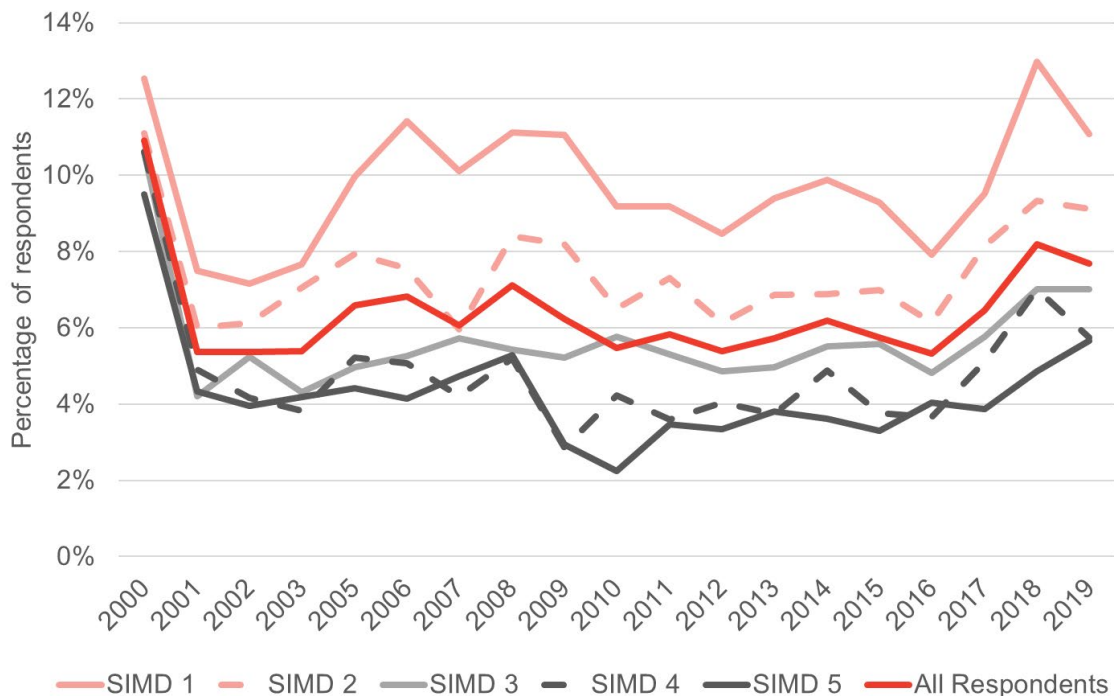
People who live in more deprived neighbourhoods are more likely to rate their area as ‘fairly poor’ or ‘very poor’ compared to those who live in less deprived areas (Chart 7.6). The good news is that the period since 2006 has seen a marked decline in the proportion of those from the most deprived quintile of neighbourhoods who rate their area as poor or very poor. Over one fifth of those in the most deprived 20% of neighbourhoods rated their area as fairly poor or very poor in 2006, and this had fallen to 14% by 2019.

Whilst the improvement is welcome, it is not obvious what may have driven this trend. It is to an extent difficult to reconcile with what we might have expected to observe, given the the likely impacts of austerity policies on the most deprived places, and indeed given evidence in the housing chapter that the proportion of people who have experienced antisocial behaviour where they live has increased in the most deprived neighbourhoods.

Despite this improvement there remains a large gap between the most and least deprived neighbourhoods. Fewer than 2% of people living in the least deprived fifth of neighbourhoods think that their area is fairly poor or very poor.

Chart 7.6: Respondents in more deprived areas are more likely to rate their neighbourhood as poor... but the gap has fallen substantially

Percentage of respondents rating area as a fairly poor or very poor place to live



Source: FAI analysis of Scottish Household Survey (Unweighted N = 115,654)

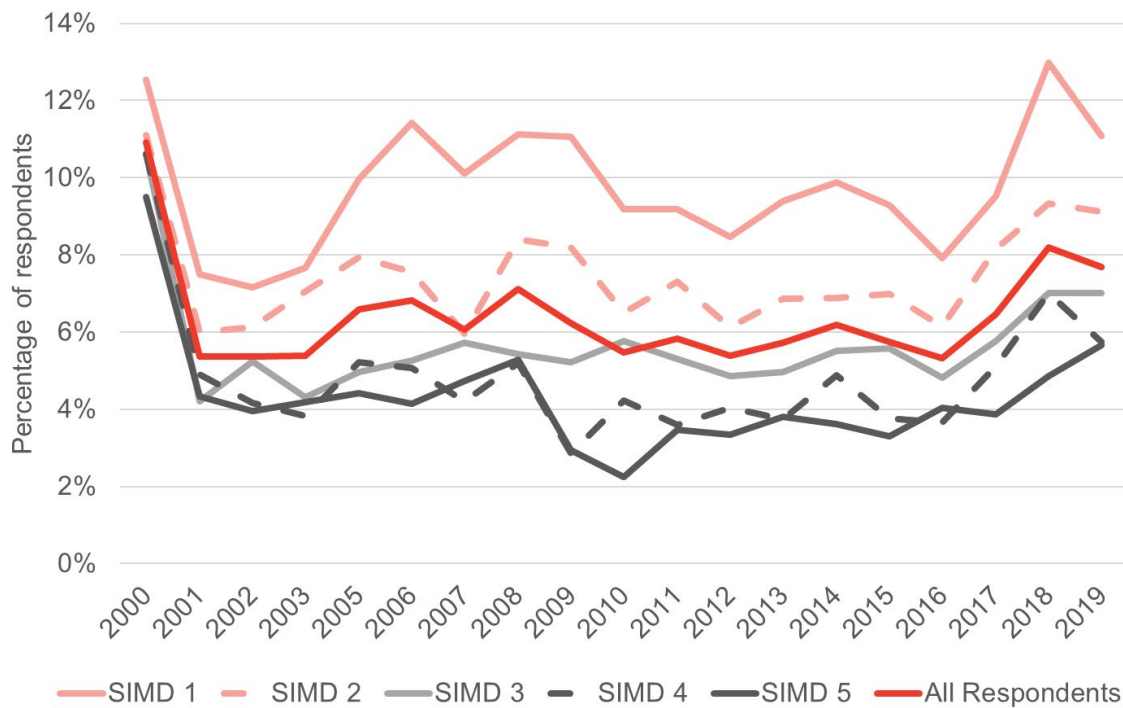
Residents of the most deprived neighbourhoods are less likely to feel able to turn to others for help or advice

Residents of the most deprived neighbourhoods are less likely to feel able to turn to others in their local area for help (Chart 7.7) or advice (Chart 7.8).

It is difficult to detect any obvious trend in terms of the proportion of residents who feel able to turn to others for help. However, when it comes to advice/support, there is some evidence that the proportion of residents who do not feel able to turn to friends or relatives for support increased in the late 2010s, reaching its highest level ever in 2018.

Chart 7.7: Respondents in more deprived areas are less likely to feel able to rely on others in their neighbourhood for help

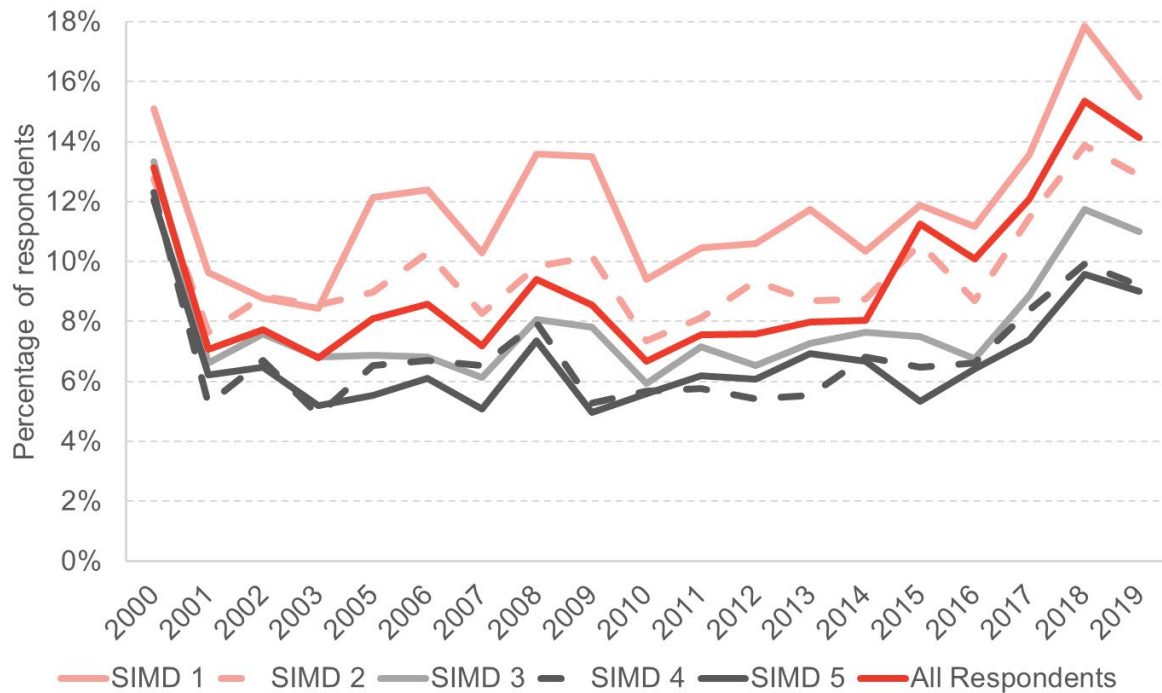
Percentage of respondents who disagree or strongly disagree that they could rely on friends or relatives in neighbourhood if they need help



Source: FAI analysis of Scottish Household Survey (Unweighted N = 115,654)

Chart 7.8: Respondents in more deprived areas are less likely to feel able to rely on others in their neighbourhood for advice or support

Percentage of respondents who disagree or strongly disagree that they could turn to friends or relatives in their neighbourhood for advice or support



Source: FAI analysis of Scottish Household Survey (Unweighted N = 115,654)

There has been large spatial variation in public funding changes since 2010, but unlike in England these changes have not obviously disadvantaged the relatively more deprived parts of the country

One factor that might influence changes in population health across areas over time is through the way that public funding is allocated to those areas, via local authorities and health boards. Previous IFS research (Harris et al. 2019) found that, in England, cuts to local spending since 2010 had disproportionately affected the relatively more deprived areas of England. Such patterns could underpin a widening in health inequalities.

In Scotland (as in England), the allocation of funding to local authorities and health boards is determined by complex formulae that aim to assess areas' relative spending needs. The health allocation formula for example take into account the demographic structure of the population; area-based measures of deprivation, mortality and morbidity; and measures of geographic 'sparsity' that can affect the costs of delivering health services (Ball et al. 2015). The local government allocation formulae take into account an even broader range of indicators, reflecting the determinants of spending needs across different public services that local authorities are responsible for.

But whilst the funding formulae are based on quantitative needs formulae, the assessment of need is ultimately quite subjective depending on which indicators are used and how they are weighted. Moreover, the formulae are not necessarily updated each year, so they can be slow to respond to changes in circumstances. Furthermore, the funding formulae used for calculating 'core grant' can be circumvented by the establishment of discrete policy programmes associated with their own

discretionary funding formula. What all of this implies is that politicians have a great deal of discretion in determining the way that funding is targeted spatially.

In England, it has been well-documented that funding cuts to the most deprived local authorities have been proportionately greater than those in the least deprived areas (Harris et al. 2019). It has been speculated that the regressive nature of the cuts is likely to have contributed to a widening of health inequalities in England (Marmot et al. 2020). Indeed, there is evidence that in England, there is an association between the areas that saw the largest reductions in local government funding, and the areas that saw that largest slowdown in mortality improvement (e.g. Alexiou et al. 2021; Lewer and Bibby, 2021). It is difficult to prove that the spatial variation in local government funding cuts caused the spatial variation in health outcome (the funding cuts were greater in the more deprived areas, but these areas may have been more at risk of worsening health outcomes for reasons other than local government funding).

In Scotland, the pattern of local government funding cuts has been less obviously correlated with the deprivation status of local authorities than in England, although it has certainly not been progressive. Chart 7.9 replicates the analysis of Eiser et al. (2019) for the period 2009/10 – 2019/20. Note that this excludes education funding, but the pattern or results were similar when education funding was included.

Analysis for a more recent period (2013/14 – 2020/21) shows slightly more evidence of a regressive pattern of local government per capita funding cuts (although the scale of the cuts was smaller than in the earlier period) – Chart 7.10. Looking under the surface of this, the pattern of cuts across individual local authorities is highly variable by deprivation status. Glasgow saw the second largest percentage terms cut (11.3%) followed by Edinburgh (10.2%). At the other end of the spectrum, North Ayrshire (relatively deprived) saw a slight increase in its funding per capita, as did Aberdeenshire (relatively less deprived).

In other words, there was no clear pattern between the deprivation status of local authorities, and the level of funding cuts experienced by authorities - funding cuts were observed in both more and less deprived local authorities, whilst funding increases were also seen in both more and less deprived local authorities. It is not entirely clear what has driven this vastly differing patterns of funding changes, although the Scottish Government has indicated to us that population change is likely to play a big part in the explanation. If this is true it implies that funding formulae are not being regularly updated to account for population change – a decision that will clearly result in funding inequities if it is allowed to persist.

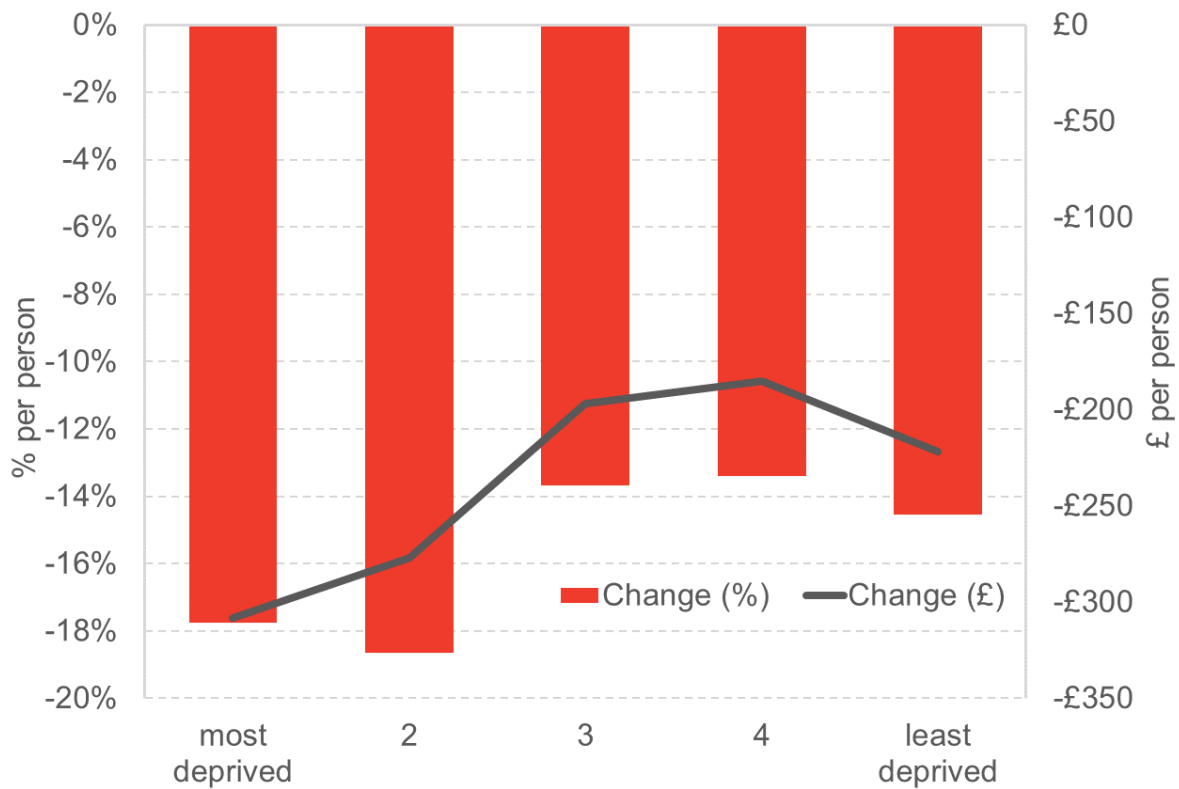
Chart 7.11 shows changes in real per capita funding allocations to Health Boards in Scotland between 2010/11 and 2018/19. There is substantial variation in the change in funding across Health Boards, with clear evidence of funding prioritisation towards the major population centres, and a relative deprioritisation of remoter rural areas. This may reflect the trend towards greater specialisation in healthcare delivery, and possibly a decline in relative costs of delivering healthcare in sparsely populated areas. There is no obvious evidence that funding in broad terms has been increased relatively less in more deprived areas.

So, unlike in England, there is no clear evidence that spatial funding changes in Scotland have been consistently regressive with respect to socioeconomic deprivation. But it is still legitimate to ask whether the spatial pattern of funding changes is associated in any way with the spatial pattern of health changes over the past decade.

Wraw et al. (2022) examine the association between the percentage change in Age-Standardised Mortality Rates (ASMRs) across local areas in Scotland between 2012 and 2018, and the percentage change in health and social care spending across local areas in the years prior to this. They find ‘little association between variation in changes in health or social care spending and variation in changes in ASMR across Scotland’. In some ways the lack of any obvious association is not surprising – the relatively few local authorities and health boards in Scotland, the aggregated nature of the spending data, the diverse nature of the local authority areas, and the fact that some spending decisions are likely to reflect patterns in the health outcome variable of interest – all mitigate against the likelihood of identifying a statistical relationship. However, this clearly does not mean that public services spending is not an important determinant of population health.

Chart 7.9: Local authority spending cuts have been fairly evenly distributed by deprivation

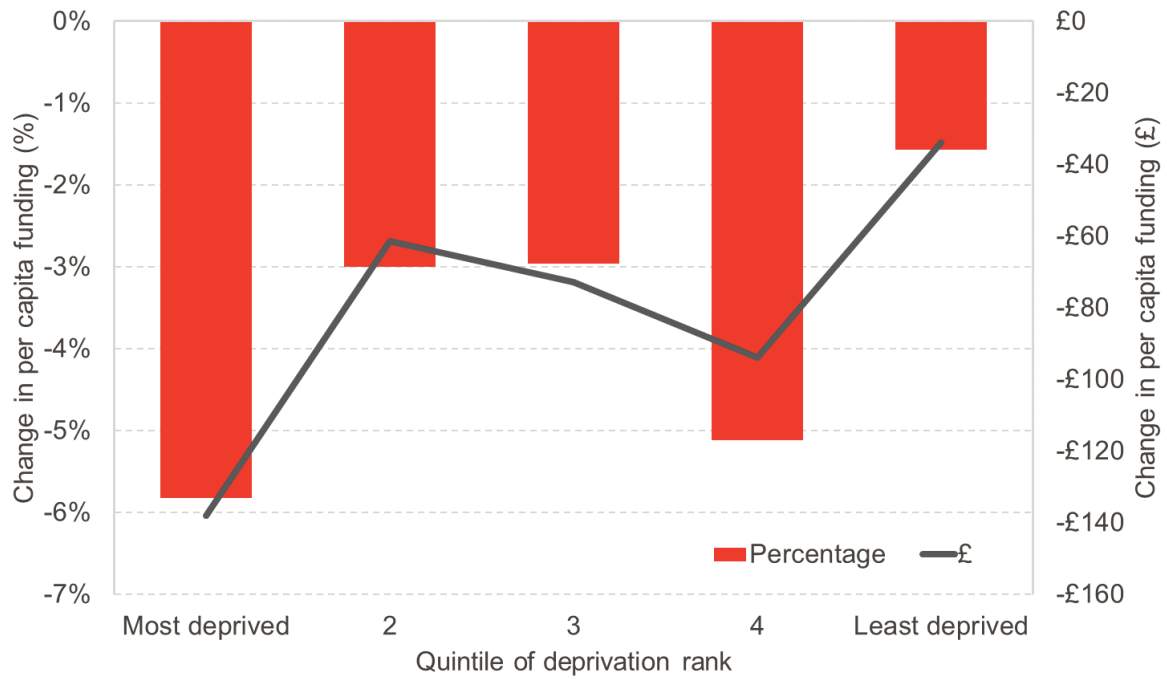
Change in fiscal revenues (excluding education spending) for Scottish councils between 2009–10 and 2019–20, by quintile of deprivation



Source: Eiser et al. (2019)

Chart 7.10: There is little association between local authorities spending cuts and deprivation

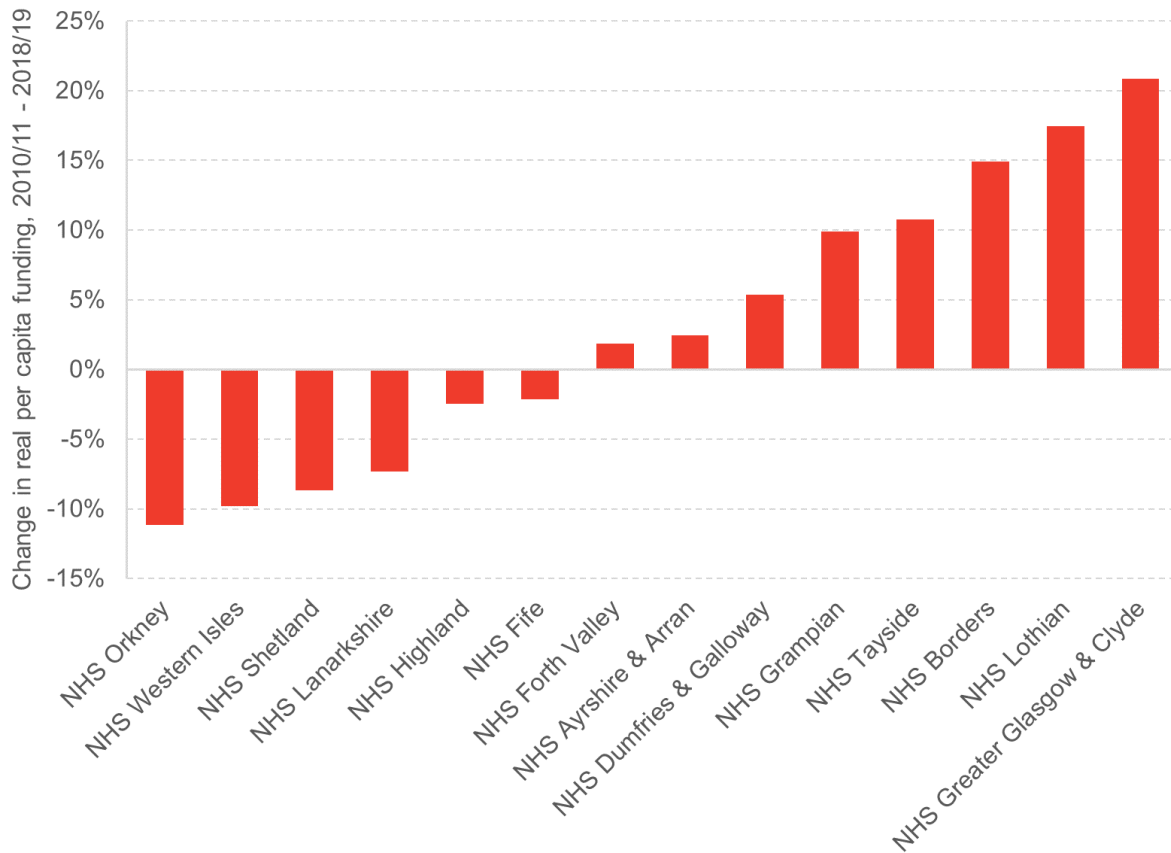
Change in local government revenue funding per capita, 2013/14 – 2021/22



Source: Analysis of data contained in Liddell (2021)

Chart 7.11: Health board per capita funding allocations have varied significantly

Change in Health Board total funding per capita, 2010/11 – 2018/19



Source: Analysis of ISD Scotland Costbook, various years

In the remainder of this chapter we consider trends in socioeconomic determinants that are embedded in place.

Air quality affects health

Poor air quality can cause both short and long-term adverse health outcomes, in particular cardio and respiratory problems. It can be difficult to isolate the health impact of air pollution because it occurs alongside other health determinants. However, it has been shown that long term exposure to air pollution increases the risk of earlier death in adults. In 2010, the Committee on the Medical Effects of Air Pollutants (COMEAP) estimated that long-term exposure to PM_{2.5} (particulate matter 2.5 microns or less in diameter) accounted for the equivalent of roughly 1,500 deaths per year. This was roughly 2.8% of the annual mortality in Scotland, implying that poor air quality accounted for more deaths in Scotland than Road Traffic Accidents (Cowie et al., 2015). While air pollution affects everyone's health, the impact is more severe on vulnerable groups, including the elderly and those with pre-existing health conditions (Health Protection Scotland, 2014).

Air pollutant sources differ between urban and rural areas. In urban areas the key sources are road transport and residential and commercial combustion processes for heat and power generation. However, a key rural pollution source is ammonia emissions from agriculture (Cowie et al., 2015). Air

quality is not necessarily better or worse in urban areas compared to rural areas – what is ultimately important is the proximity to major sources of pollution.

Of many pollutants that have implications for human health, particulate matter (PM), nitrogen oxides and ammonia are among the most harmful pollutants (Scottish Government, 2020). We therefore focus on these in this report.

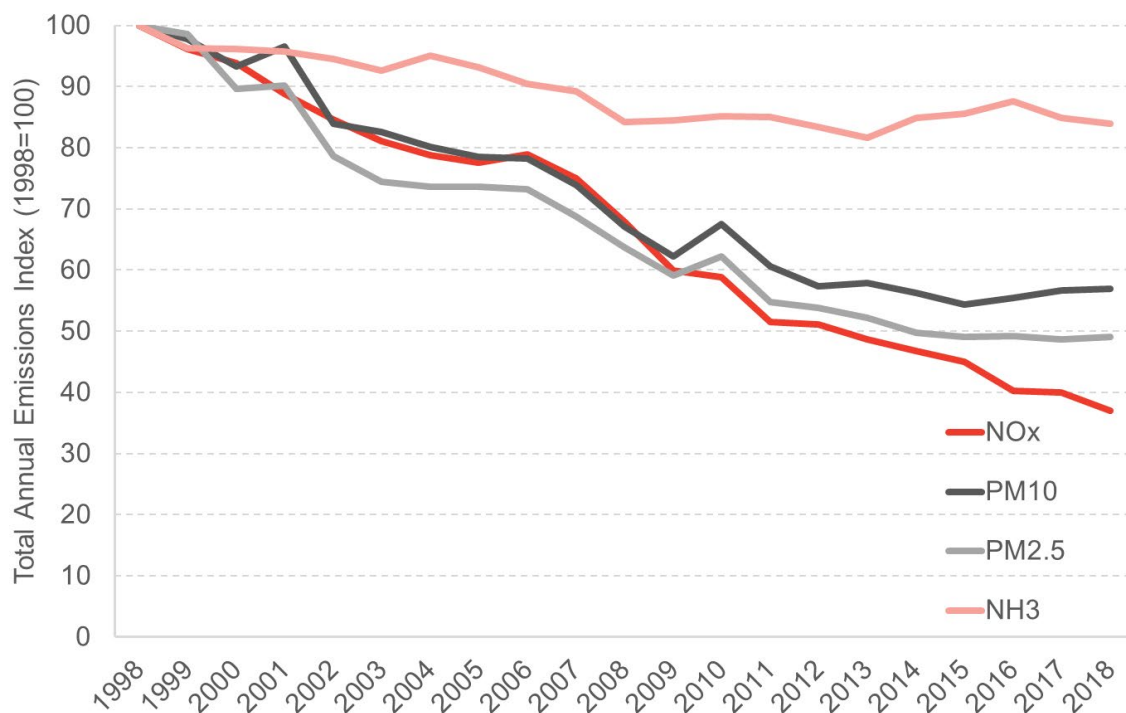
Emissions of key pollutants in Scotland have been falling

Tracking general trends in air quality for Scotland as a whole is difficult – air quality varies geographically, and so trends over time at an aggregated level are influenced by the number and location of monitoring sites.

We therefore start by looking at trends in air pollution emissions data for Scotland. These trends, presented in 7.12, indicate a reduction in emissions across PM2.5, PM10 (particulate matter 10 microns or less in diameter), nitrogen oxides (NOx) and ammonia (NH3). This downward trend is most noticeable for nitrogen oxides, falling by 146.10 kilotonnes (63%) between 1998-2018.

Chart 7.12: Emissions of health-harming pollutants have generally been falling

Index of annual emissions, Scotland (1998=100)



Notes: Chart shows the declining trends in annual emissions of NOx, PM10, PM2.5 and NH3. These are expressed as an index of the 1998 emissions values, where the 1998 value = 100. In 1998 these values were 232 kilotonnes (NOx), 27 kilotonnes (PM10), 17 kilotonnes (PM2.5) and 37 kilotonnes (NH3). Source: National Atmospheric Emissions Industry (2020)

Air quality has in broad terms improved, but legal limits are sometimes still exceeded

When it comes to air quality itself, whilst it is not possible to consider trends at an aggregate level for Scotland, data from specific monitoring sites can be used to describe trends observed across three broad types of area: rural monitoring sites, urban monitoring sites, and sites situated alongside major roads. This site-specific data shows¹⁴:

- Concentrations of NO₂ have generally fallen across all three types of monitoring site since 1999. While levels have not fallen year on year across all individual monitoring sites, all sites tend to be recording lower concentrations in the latest data compared to when they started monitoring. Despite this, the legal air quality limit of 40 micrograms per cubic metre, set by the EU and legalised in the Air Quality Standards (Scotland) Regulations 2010, was breached reasonably frequently in several urban traffic locations between 2010-2021. These levels are also significantly higher than the WHO recommended level of 10 micrograms per cubic metre (WHO, 2021).
- Concentrations of PM_{2.5} have tended to fall across most monitoring sites since 2008, although this has not unambiguously been the case. The legal limit of 25 micrograms per cubic metre (Air Quality Standards (Scotland) Regulations 2010) was not exceeded by any monitoring sites. However, the WHO recommended level of 5 micrograms per cubic metre has been exceeded by all sites in the last five years (WHO, 2021), although generally only by a small amount.
- In general, both urban and urban traffic sites (i.e. sites in urban areas not next to major traffic arteries and sites in urban areas next to major traffic arteries respectively) have shown an overall decrease in PM₁₀ concentrations since the early 2000s. The legal limit of 40 micrograms per cubic metre (Air Quality Standards (Scotland) Regulations 2010) was not exceeded by any monitoring sites, and excluding a few sites, generally, the WHO recommended level of 15 micrograms per cubic metre has not been exceeded in the last five years (WHO, 2021).

Air quality is one socioeconomic determinant of health where there appears to have been some improvement in the past 20 years. This is clearly good news, although pollutant levels continue to exceed legal limits and recommended guidelines on a fairly regular basis.

Conclusions

There is significant variation in the socioeconomic determinants of health in Scotland, for example in relation to both gross earnings from employment, and child poverty rates. It is not surprising that this wide variation in socioeconomic determinants is associated with wide variation in health.

It is likely that some of this spatial variation in socioeconomic factors and health reflects the 'sorting' of people with particular characteristics into particular places, rather than the places themselves having a causative impact on socioeconomics and health. But place itself also matters for health, in a variety of ways.

What we try to do in this chapter is consider trends in factors that firmly grounded in place. These include the perceived quality of neighbourhoods, measures of neighbourhood trust and cohesion, spatial targeting of public funds, and air quality.

¹⁴ The source for this data is the Air Quality in Scotland database <https://www.scottishairquality.scot/data/data-selector>

For much of the past 20 years, perceptions of neighbourhood quality have improved, particularly amongst those living in the most deprived neighbourhoods. But this trend reversed slightly in 2018 and 2019 – and this coincides with a decline in a broader measure of social capital in this period. Other measures of neighbourhood, presented earlier in this report, also point to an increase in antisocial behaviour over the past ten years.

We find that in Scotland, unlike in England, there is no evidence that changes in public funding have prioritised less deprived areas differentially from more deprived areas. Other research has found no clear association between spatial funding changes and spatial changes in mortality outcomes.

One important determinant of health that does vary spatially is air quality. There is some good news here, with evidence of improving air quality over the past 20 years for pollutants including particular matter and nitrous oxide. However, pollutant levels continue to exceed legal limits and recommended guidelines on a fairly regular basis in some places, so policy-makers should not be too complacent on this issue.

8. The impacts of Covid-19 and the cost of living crisis

This report is largely focussed on changes in the socioeconomic determinants of health observed over the long run. But events since 2020 have had, and are likely to continue to have, significant impacts on the socioeconomic determinants of health across several dimensions. This chapter considers the impacts that the Covid-19 pandemic has had on several dimensions of inequality in Scotland, including the labour market, household income and wealth, and education. It then considers how the current cost-of-living crisis may affect household incomes.

Key points

- There was a marked socioeconomic gradient in the health impact of Covid-19. Aged standardised mortality rates from Covid-19 were over twice as high in the most deprived neighbourhoods compared to the least deprived neighbourhoods.
- Differences in Covid-19 infection rates, hospitalisations and deaths were significantly influenced by socioeconomic inequalities, including inequalities in working and living arrangements. There is emerging evidence of a socioeconomic gradient in the prevalence of long-Covid.
- The pandemic also saw a deterioration in mental health. The deterioration in mental health was larger amongst women than men, and larger amongst the young relative to the old.
- School closures during the pandemic drove a large increase in inequalities in educational attainment, as those from more advantaged backgrounds had access to better learning materials, facilities and support. The extent to which the pandemic has a permanent impact on attainment inequalities for the Covid-cohort remains to be seen.
- Inequalities in wealth seem very likely to have increased, both because of the increased savings of higher income households, and the appreciation in asset values.
- The pandemic itself saw huge disruption to the labour market as restrictions were imposed. However, the permanent impact of Covid on the labour market has not been as significant as many people anticipated. There was no significant rise in unemployment when the furlough scheme was withdrawn. Structurally, the share of employment across different sectors of the economy has demonstrated remarkable stability given the length of the pandemic-related restrictions and the risks that these caused permanent shifts in consumer behaviour.
- Nonetheless, economic inactivity rates did increase during the pandemic, partly due to health-related reasons and partly due to increases in early retirement. The extent to which these changes is temporary or becomes more permanent remains to be seen. The pandemic has also had differential labour market impacts by age and sex. Employment rates of men, particularly older men, and men with lower levels of qualifications, remain slightly lower than pre-pandemic. For women, employment exceeds pre-pandemic rates.
- During the pandemic itself, inequality of household income declined slightly, as did the relative poverty rate. This reflected to a large extent the temporary, £20 per week uplift in Universal Credit, together with the effect of the furlough and self-employed income support schemes in

supporting incomes. It seems reasonable to assume that, by early-2022, the distribution of household income did not look markedly different from how it looked pre-pandemic.

- The pandemic has had a devastating impact on the NHS. Waiting times and waiting lists remain significantly elevated on pre-pandemic levels, in large part due to the backlogs that built-up during the peak of the pandemic.
- Interventions by the UK government should go a long way to ensuring that the impact of rising inflation and energy bills on household disposable incomes is significantly mitigated. Despite these interventions, cost increases will make for a difficult winter for households on the lowest incomes. The lowest income households in Scotland already spent ten per cent of disposable income on fuel before the pandemic, and fuel poverty affected a majority of low-income households.
- Living in a cold home is associated with higher risk of cardio-vascular and respiratory diseases, higher risk of respiratory infections and a variety of mental health stressors.

The health impacts of Covid-19 were shaped by pre-existing socioeconomic inequalities

The health impact of the Covid-19 pandemic was extremely unevenly felt. Aged standardised mortality rates from Covid-19 were over twice as high in the most deprived neighbourhoods compared to the least deprived neighbourhoods (Chart 8.1). The gradient in age-standardised mortality rates for Covid by deprivation quintile is somewhat steeper than the gradient for all deaths.

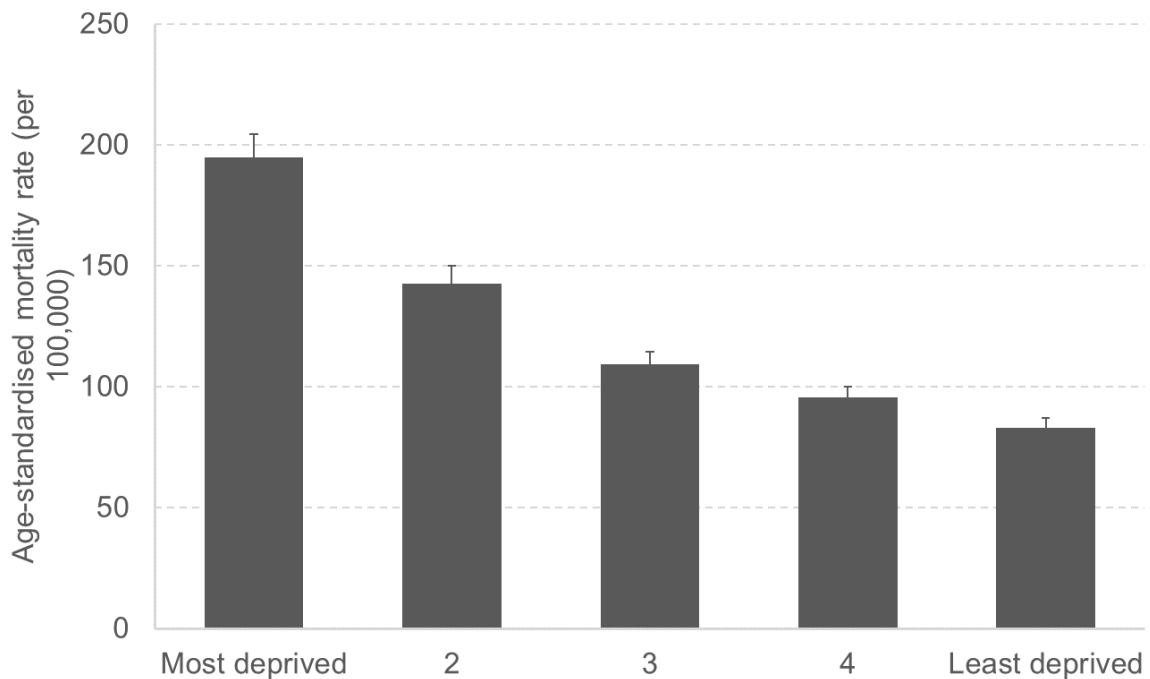
Differences in Covid-19 infection rates, hospitalisations and deaths were significantly influenced by socioeconomic factors. People working in lower-paid occupations, including those associated with retail, logistics and caring, were unable to work-from-home, and thus were much more heavily exposed to the virus, particularly during the first year of the pandemic, when vaccines were unavailable. Higher exposure to the virus amongst low-income households is likely to have been exacerbated by the fact that lower-income households are more likely to be over-crowded and include multiple benefit units in the same household. Individuals in low-income households are also more likely to suffer from additional illnesses (comorbidities), increasing the risks associated with Covid-19 once one is infected.

These factors also contributed to significant divergence between different parts of Scotland in relation to Covid-19 infections and deaths. For example, age-standardised death rates from Covid-19 were 158 per 100,000 in NHS Greater Glasgow, 107 in NHS Lothian, 70 in NHS Grampian, and 53 in NHS Highland¹⁵.

¹⁵ Source: National Records of Scotland, Deaths involving Covid-19 in Scotland, weekly data, accessed 25 August 2022.

Chart 8.1: Covid-19 mortality rates were much higher in more deprived areas than less deprived areas

Age standardised rates of mortality by SIMD, for deaths involving COVID-19



Source: National Records of Scotland, deaths involving Covid-19. Notes: Error bars show 95% confidence intervals

The pandemic and the associated restrictions had wider impacts on health beyond deaths and illness of those infected. A number of studies have documented a sharp deterioration in mental health during the pandemic itself (Banks and Xu 2020, Daly et al. 2020, Pierce et al. 2020). The deterioration in mental health was larger amongst women than men, and larger amongst the young relative to the old. In both cases this may reflect the size and importance of social networks to these groups, which meant that their mental health was disproportionately affected by the pandemic.

The initial deterioration in mental health during the height of the pandemic did largely reverse as restrictions were eased. The specific impact of Covid on mental health may thus largely prove temporary, although as noted in Chapter 2, the longrun trend is of an increase in the proportion of the population who say they have a long-lasting mental health issue.

The pandemic may leave an enduring legacy in the form of ‘long-Covid’

Potentially a more permanent legacy of the pandemic will come in the form of ‘long-Covid’. The ONS estimates that 2 million people living in private households in the UK (3.1% of the population) were experiencing self-reported long-Covid in July 2022¹⁶. Long-covid is defined as symptoms continuing

¹⁶ Source:

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/prevalenceofongoingsymptomsfollowingcoronaviruscovid19infectionintheuk/1september2022>

for more than four weeks after the first suspected Covid-19 infection that were not explained by something else.

Long-Covid symptoms adversely affected the day-to-day activities of 1.5 million people (73% of those with self-reported long-Covid), with 384,000 (19%) reporting that their ability to undertake their day-to-day activities had been "limited a lot".

As a proportion of the UK population, the prevalence of self-reported long-Covid was greatest in people aged 35 to 69 years, females, people living in more deprived areas, those working in social care, those aged 16 years or over who were not working and not looking for work, and those with another activity-limiting health condition or disability – demonstrating again a socioeconomic gradient in the health impact of Covid. One study estimates that one in ten long-Covid sufferers go onto sick leave, which implies reduced earnings for those affected (Waters and Wernham, 2022).

Not unrelated to the issues around long-Covid is the possibility that having had Covid may increase individuals' susceptibility to subsequent serious illness, such as heart disease and stroke (Neville, 2022).

There clearly remains, at this stage, much uncertainty about what the scale of the long-run impact of Covid might be, in relation to mental health, long-Covid, and susceptibility to subsequent illness. But there is certainly evidence that Covid is continuing to have a significant legacy on health in 2022.

Inequalities in educational attainment increased during the pandemic, and is likely to have some permanent effects

The pandemic resulted in significant disruption to schooling. There were two major periods of school closures, the first in spring 2020 and the second in winter 2021. The shift to 'remote' learning challenged all pupils, but those from more disadvantaged backgrounds were likely to experience greater difficulty in engaging with learning delivered remotely. This was due to a variety of factors, including having home environments less suitable for learning, reduced ability to access learning resources and materials at home, and relatively less support from parents (in part because of the disproportionate impacts of home working).

In Chapter 4 we detailed how the pandemic had resulted in a significant widening of the poverty-related attainment gap in 2020/21 compared to previous years. At the time of writing, statistics for the 2021/22 year are yet to be published. The expectation is that the poverty-related attainment gap in 2021/22 will fall back towards its historic level. But it also seems likely that the disproportionate impact of the pandemic on learning progress for those from more disadvantaged groups will have a longer legacy for the cohort of 'pandemic pupils'.

Wealth inequalities are likely to have increased since the pandemic

Comprehensive data on the size and distribution of household wealth in Scotland since the onset of the pandemic is not yet available. Our expectation would be that household wealth inequality will have increased since 2020, for two reasons.

First, an increase in ‘active’ wealth accumulation as a result of increased saving by households. The pandemic saw a significant increase in household saving, as lockdown and other restrictions curtailed households’ ability to spend. But higher income households, whose incomes were relatively more protected and whose discretionary spending was more likely to be curtailed, were more likely to increase their savings than lower income households (Leslie and Shah, 2021). Indeed lower income households were relatively more likely to become more indebted during the pandemic than higher income households, since they more often needed to drawdown savings to offset the effects of income loss.

Second, ‘passive’ increases in wealth holdings as a result of rising asset prices which benefit existing holders of those assets. House prices in particular have increased significantly during the pandemic, helped by low interest rates, transactions tax ‘holidays’, the increase in household saving mentioned above, and shifts in demand for housing reflecting different working arrangements. The average house price in Scotland increased from £150,000 in the first three months of 2020 to an average of £185,000 in the first six months of 2022, an increase of 23%¹⁷. Rising house prices are likely to increase the wealth stocks of homeowners, who are largely in the middle and upper part of the income distribution.

It is hard to know exactly how these changes will have affected the distribution of wealth until better data is available. For the UK as a whole, Leslie and Shah (2021) speculate that the increases in active and passive wealth accumulation will increase wealth gaps between the middle and bottom of the wealth distribution, but potentially reduce the gaps between the middle and the top of the wealth distribution (this largely reflects the importance of housing wealth for those in the middle of the distribution, as opposed to pension and financial wealth, the value of which has not increased by quite as much during the pandemic).

It is even harder to know what the longer term impacts of the pandemic on wealth might be. Some (but probably not all) of the increased household saving observed during the pandemic is likely to be reversed. And at some point, higher interest rates and falling real incomes could slow, or even reverse, house price increases. But we can only really speculate at this point.

The labour market was disrupted hugely during the pandemic, but the extent of permanent impacts has been surprisingly muted

The pandemic itself saw huge disruption to the labour market. Almost half a million jobs in Scotland were furloughed in summer 2020. People in low-paid sectors were more likely to lose their jobs, and more likely to be furloughed on reduced hours, than those in high-paid sectors. In contrast, the relatively high-paid were more likely to see their pay and hours maintained whilst they worked from home (Blundell et al. 2022).

¹⁷ Source: UK house price index, HM Land Registry

Groups who are more likely to work in low-paid occupations, including ethnic minorities and younger workers, were disproportionately affected. Employment rates of younger workers in particular fell markedly during the pandemic itself.

Throughout the pandemic, there was an expectation that the eventual withdrawal of the furlough scheme would lead to a significant rise in unemployment. The common assumption was that the pandemic would result in substantial, permanent structural changes in the labour market, which would render some jobs unviable in the 'new' post-Covid economy.

In fact, the speed with which the labour market returned to something very similar to its pre-pandemic 'normal' was remarkable. The extent of permanent structural change appears to have been much less significant than many had anticipated. The substantial increase in online retail during the pandemic rapidly returned close to its pre-pandemic trend. Activity in the leisure and tourism sectors returned strongly, in part helped by an initial increase in staycationing. In fact, comparing employment by industry in Scotland pre- and post-pandemic reveals remarkable stability.

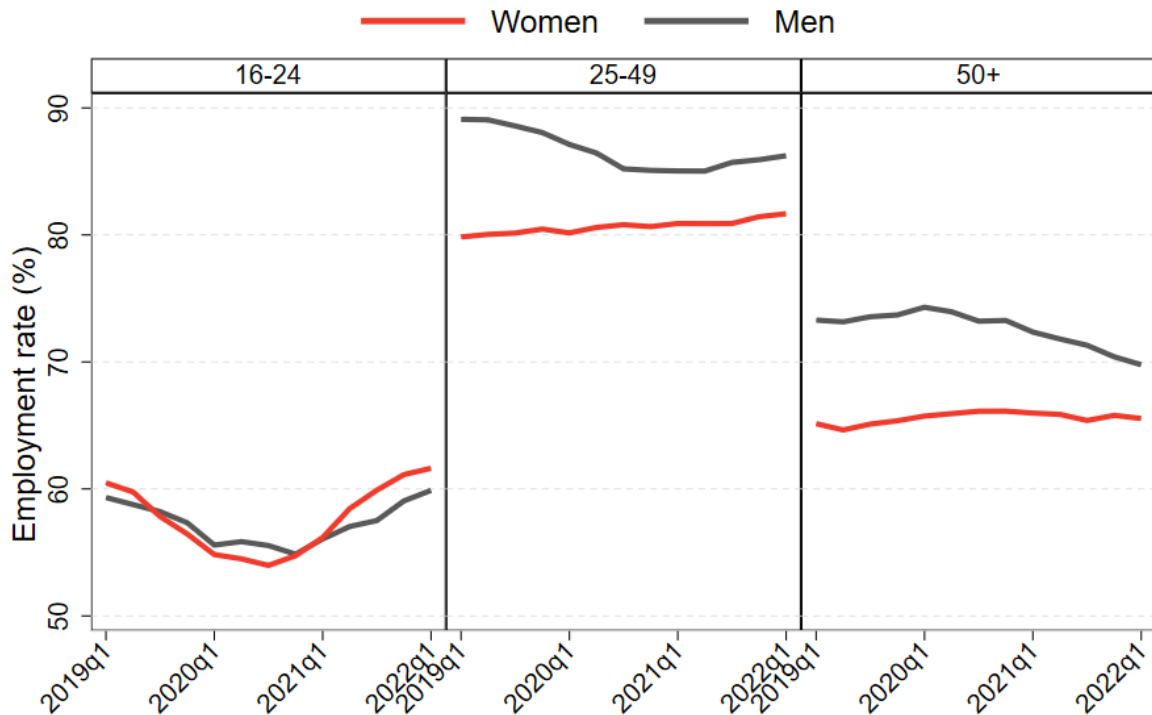
Comparing the period April 2019-March 2020 to April 2021-March 2022 reveals that employment in retail, construction and manufacturing is somewhat lower in the latter period compared to the former. But the differences are fairly marginal in the context of the disruption of the pandemic itself. None of the aforementioned sectors have seen their share of total employment in Scotland fall by more than one percentage point over the period. In aggregate, reductions in employment in these sectors have been almost entirely offset by increased employment in the public sector and professional services.

The expected rise in unemployment following the withdrawal of the furlough scheme in September 2021 did not happen, and in fact unemployment continued to fall. By the second quarter of 2022, the working age employment rate in Scotland had returned to 75%, in line with its pre-pandemic rate (having fallen to just below 74% during the pandemic). The unemployment rate was 3.2%, slightly lower than it was immediately prior to the pandemic.

Closer inspection of the data does reveal some differences in employment patterns by group pre- and post-Covid. Employment rates for men are slightly below pre-pandemic rates, whilst being somewhat above pre-pandemic rates for women (Chart 8.2). The decline in male employment rate from pre-to-post pandemic is particularly noticeable among older men, and amongst men with no qualifications – although the latter observation in particular is as much a continuation of a longer-term trend as it is of a 'Covid' effect.

Chart 8.2: The post-pandemic labour market looks similar to the pre-pandemic labour market for most groups

Employment rates by gender and age, Scotland



Source: FAI calculations from quarterly LFS data. Notes: All figures are smoothed using an annual moving average to account for seasonality.

The conclusion is that the pandemic itself appears to have had a much more muted permanent impact on the labour market, including employment and the distribution of hours and pay, than many had anticipated. One trend that has been observed during the pandemic is a modest uptick in economic inactivity – potential explanations for this are discussed in Box 8.1.

Whilst it is clearly positive that the pandemic did not result in elevated unemployment, the return to ‘normality’ in the labour market implies a return to the pre-existing features of the UK labour market, including relatively high levels of earnings inequality, and significant insecurity for a significant minority of workers (the percentage of people in employment who are on a zero-hours contract was 3.1% by the first quarter of 2022, compared to 3.0% in the first quarter of 2020).

Furthermore, whilst the labour market looks relatively unchanged at an aggregate level, this hides some deterioration in the fortunes of older males, particularly those with lower qualifications. Individuals who stopped working for an extended period during the pandemic, even if they spent some of this time ‘furloughed’, may face challenges in returning to the labour market if they have missed the opportunity to acquire new skills. In this respect, the pandemic may have an enduring legacy.

Box 8.1: The impact of the pandemic on economic inactivity

At the UK level, the onset of the pandemic coincided with an abrupt reversal of the 10-year trend of falling inactivity rates among the working age population.

The issue is shown in Chart 8.3. The working age inactivity rate fell steadily from 23.5% in 2010 to 20.5% in the first quarter of 2020. Once the pandemic hit, the inactivity rate increased abruptly to 21.5%, and shows little signs yet of returning to the pre-pandemic rate.

At UK level, some have attributed the rise in economic inactivity to rising rates of chronic illness, combined with backlogs in NHS diagnostic and treatment times (e.g. Burn-Murdoch 2022¹⁸).

Others have argued that rising working age inactivity is more likely attributable to early retirement for voluntary reasons. Research at the UK level (Boileau and Cribb, 2022¹⁹) concludes: ‘the rise in economic inactivity among 50- to 69-year-olds does not look to be driven primarily either by poor health or by low labour demand leading to people being unable to find work and becoming discouraged. It looks more consistent with a lifestyle choice to retire in light of changed preferences or priorities, possibly in combination with changes in the nature of work post-pandemic (in particular more remote work) which reduce the appeal of staying in employment.’

Existing research finds no evidence that long-Covid itself accounts for the rise in economic inactivity. Waters and Wernham, 2022²⁰ for example find that people suffering from long-Covid are more likely to be on sick leave than people who are not suffering from long-Covid, but not that long-Covid is associated with job loss. This research was undertaken using data from 2021. Caution needs to be applied in extrapolating the results into 2022 given the changing nature of long-Covid. But on the basis of this research, long-Covid is not a significant factor in the increase in inactivity since the pandemic (since those on sick leave are still technically in employment rather than being ‘inactive’).

Scotland’s trend in economic inactivity during the past few years has been slightly different from the UK’s. In particular, Scotland’s inactivity rate ceased falling in about 2015, several years before the pandemic. By late 2019 and Q1 2020, the working age inactivity rate in Scotland was almost two percentage points higher than in the UK as a whole. But the period of the pandemic itself witnessed a less marked change in the working age inactivity rate in Scotland compared to the UK.

There is no single explanation as to why the working age inactivity rate in Scotland increased relative to the UK rate. Since 2015, the inactivity rate in Scotland has grown relative to the UK because of a combination of relative growth in the proportion of the working age who are retired, students and long-term sick. The explanation for the relative rise in inactivity in Scotland before the pandemic is thus difficult to pin on a single factor, or a particular demographic group. However, the gap in inactivity rate is now mainly an issue for Scottish men, with inactivity for Scottish women broadly in line with the UK.

What can we conclude from this? At the UK level, the pandemic knocked the long-term trend of declining economic inactivity off-course. Explanations relate to both an increase in early retirement and an increase in health problems, and it remains to be seen to what extent either of these issues might ‘reverse’ in the near future.

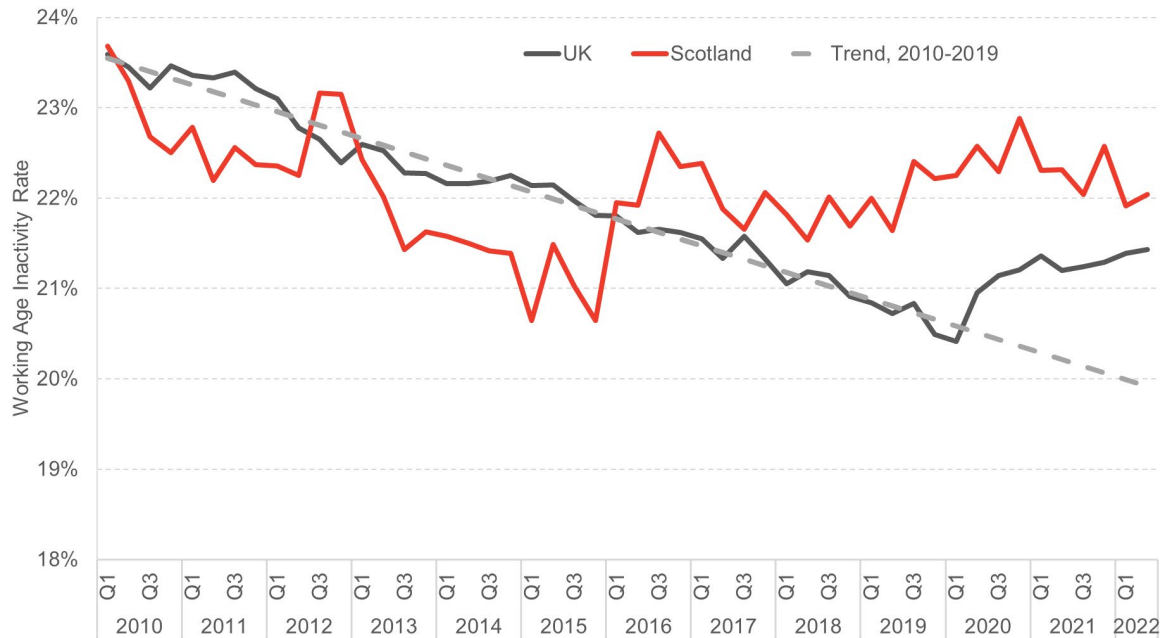
¹⁸ Chronic illness makes UK workforce sickest in developed world <https://www.ft.com/content/c333a6d8-0a56-488c-aeb8-eeb1c05a34d2>

¹⁹ <https://ifs.org.uk/publications/rise-economic-inactivity-among-people-their-50s-and-60s>

²⁰ Source: <https://ifs.org.uk/publications/long-covid-and-labour-market>

We can assume that similar issues underpin recent modest increases in inactivity post-pandemic in Scotland. But inactivity in Scotland had actually begun ticking up relative to the UK before the pandemic, and it is not immediately obvious what might lie behind this.

Chart 8.3: UK and Scottish working age inactivity rate, Q1 2010 – Q2 2022



Source: FAI analysis of quarterly labour force survey

Poverty and household income inequality fell during the pandemic itself

During the pandemic itself, inequality of household income actually declined slightly, as did the relative poverty rate. This reflected to a large extent the temporary, £20 per week uplift in Universal Credit, together with the effect of the furlough and self-employed income support schemes in supporting incomes. (The data on household incomes in Scotland in 2020/21 has not been designated as official statistics, given the challenges of collecting data during that year; but the general conclusion that poverty and inequality fell during the pandemic itself is intuitive in the context of the policy changes, and borne out by findings for the UK as a whole from a variety of different sources – see Blundell et al. 2022 for discussion).

Data on the distribution of household income in 2021/22 is not yet available. It seems reasonable to assume that, by early 2022, the distribution of household income does not look markedly different from how it looked pre-pandemic. The temporary uplift to Universal Credit has been unwound, leaving the social security system broadly unchanged. And, as noted above, the labour market in broad terms looks fairly similar to what it looked like pre-pandemic.

But whilst the picture on household income in early 2022 probably looks fairly similar to the picture in early 2020, that story is likely to change substantially as 2022 progresses. Later in this chapter we discuss the significant impact that rising inflation, and energy bills in particular, are likely to have on household incomes through 2022 and into 2023.

The pandemic has left a challenging legacy for the NHS

The NHS was under huge pressure before the pandemic. Workforce challenges and increasing demand – as a result of demographic change and increasing costs – were straining the achievement of targets and delivery of outcomes.

The pandemic has accentuated many of those challenges. NHS activity declined dramatically during the first wave of the pandemic to enable the NHS to cope with the direct effects of the virus, the impact of staff absence through illness with the virus, and the need to maintain distancing restrictions within NHS premises. As restrictions were lifted, NHS activity increased, but in many cases it remains below pre-pandemic levels, resulting in an increase in treatment backlogs and waiting times.

As one example, Chart 8.4 shows the number of patients waiting for various diagnostic tests in Scotland. The number of patients awaiting a test has been increasing steadily since the start of the pandemic. Additionally, a growing proportion of patients are waiting longer for those diagnostic tests. The risks that testing delays pose for the subsequent health of the population are fairly self-evident.

Another indicator of the challenges facing the NHS can be seen in Accident and Emergency waiting times. Chart 8.5 shows that the percentage of emergency department attendances admitted, discharged or transferred within four hours has declined significantly since pre-pandemic. This reflects a similar trend in England. Research using English data shows that delays to hospital inpatient admission for patients in excess of 5 hours from time of arrival at the emergency department are associated with an increase in all-cause 30-day mortality (Jones et al. 2022). This association has been posited as an explanation for increased excess death rates in England in 2022 (Burn-Murdoch, 2022).

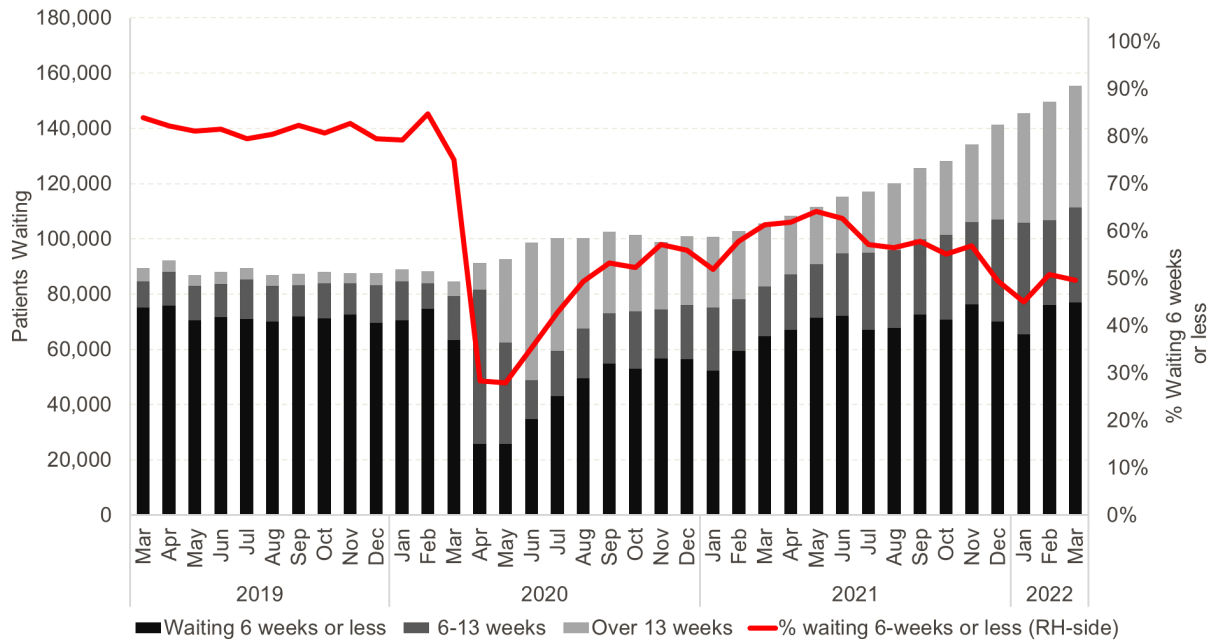
Potential explanations for increased delays in treatment of emergency cases include a lack of capacity, both in terms of NHS staff, and physical capacity within hospitals. Lack of capacity may in part be due to a rise in the number of hospital spaces occupied by people who no longer need to be in a hospital – so-called ‘delayed discharges’. Between September 2021 and January 2022, an average of 1,600 hospital beds in Scotland per day were occupied due to delayed discharges, somewhat higher than the figure of 1,500 for the same 5-month period in 2019/20²¹.

NHS Scotland funding is higher now than it was pre-pandemic. The health budget is on course to be 15% higher in real terms in 2022/23 than it was in 2019/20. However, in the context of the scale of the challenges facing the NHS – in combination with pre-existing challenges including demographic change and more complex treatments – further substantial funding increases will be required over a prolonged period if these challenges are to be addressed.

²¹ Source: Public Health Scotland, delayed discharges monthly statistics <https://publichealthscotland.scot/publications/delayed-discharges-in-nhsscotland-monthly/delayed-discharges-in-nhsscotland-monthly-figures-for-june-2022/#section-1>

Chart 8.4: There is a growing backlog of diagnostic tests, and more people are waiting longer for those tests

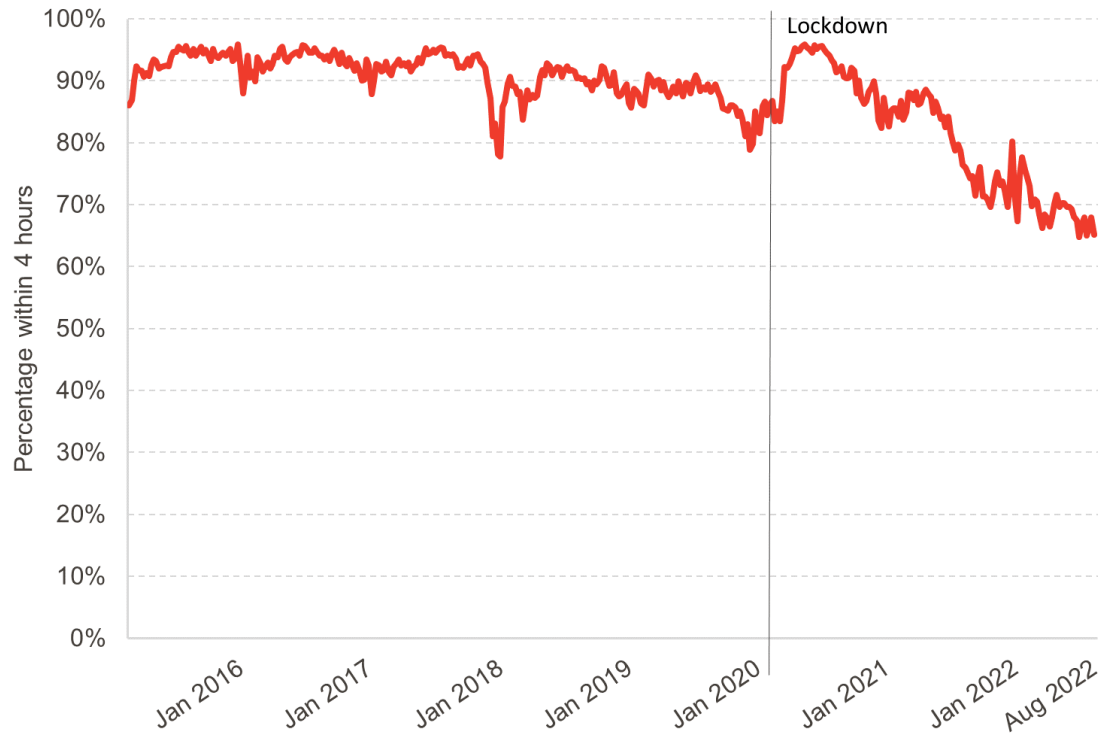
Number of patients waiting and percentage waiting six weeks or less for one of eight key diagnostic tests



Source: Public Health Scotland. Notes: The eight key tests and investigations are upper endoscopy, lower endoscopy (excl. colonoscopy), colonoscopy, cystoscopy, CT scan, MRI scan, barium studies and non-obstetric ultrasound.

Chart 8.5: A&E calls are much less likely to be answered within four hours than three years ago

Percentage of emergency department attendances seen and admitted, discharged or transferred within four hours



Source: Public Health Scotland, Emergency Department activity and waiting time statistics.

The cost-of-living crisis will have a regressive impact on disposable household incomes; a majority of low-income households were already in fuel poverty before the current crisis

The speed at which the cost of living crisis has emerged is striking. In September 2021, annual CPI inflation was running at 3.1%. In its October 2021 forecasts, the OBR expected CPI inflation would peak at 4.4% in 2022, as the effect of global supply-chain blockages fed through to general prices. By March 2022 the impact of the war in Ukraine on energy and food prices, plus bigger than anticipated supply-chain blockages, had caused the OBR to revise up its inflation forecast to a peak of 8.7% in late 2022. By June 2022, inflation had reached 9.4%, and by August, the Bank of England was projecting that inflation would peak at 13% in 2022, before gradually falling back to closer to 2% by 2024.

Price inflation erodes real disposable incomes. In its Monetary Policy Report of August 2022, the Bank of England estimated that real post-tax incomes would fall by 1.5% in 2022 and by 2.25% in 2023.

A fall in real household income of almost 4% in two years, if it comes to pass, would represent an even steeper fall in incomes than observed during the height of the post financial crisis living standards crisis. Between 2009/10 and 2011/12, real disposable incomes fell by around 3.5% in the UK and Scotland.

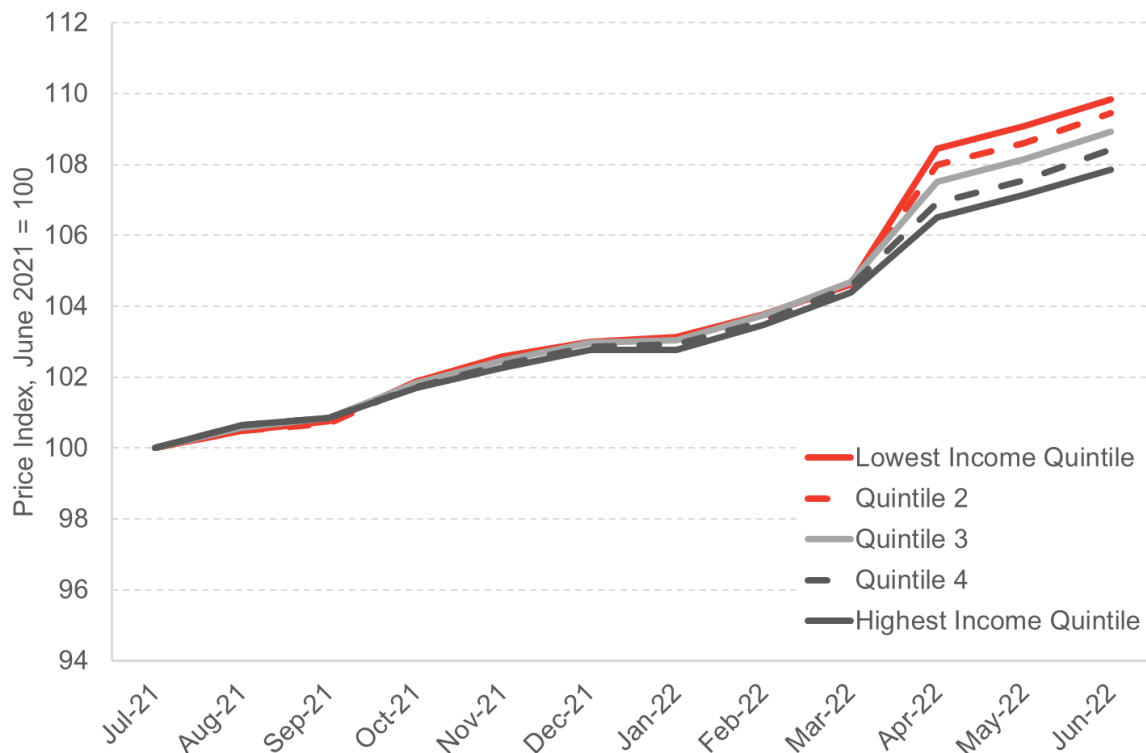
But there is one critically important difference between what happened to household incomes post financial crisis and what is likely to happen in 2022 and 2023, and this relates to the distributional effects of the living standards change.

Falling household incomes post the financial crisis were fairly evenly felt across the distribution of household income. But the current crisis is likely to be much more regressively felt. Rising inflation is particularly devastating for low-income households. This is particularly true in the current crisis given that a larger proportion of low-income households' spending is on essential energy and food items that are seeing the biggest price rises. It also reflects the fact that low-income households are typically already spending all their income and hence have no buffer, that they have little ability to substitute towards cheaper product lines, and they have fewer savings to fall back on to tide them over for a temporary period.

The ONS has produced estimates of the inflation rates faced by different groups, given the different baskets of goods and services that those households typically consume. Chart 8.6 shows that, in the year to June 2022, the effective inflation rate experienced by households in the lowest income quintile was 10%, compared to 9% for households in the middle of the income distribution and 8% for households in the highest income quintile.

Chart 8.6: Low income households have been exposed to a higher rate of inflation than high income households

Price indices by equivalised disposable income quintiles, July 2021 to June 2022, UK, June 2021 = 100



Source: Office for National Statistics, CPIH-consistent inflation rate estimates for UK household groups

.These inflation rates are what has been experienced during the 12 months to June. The distributional consequences of inflation over the next six months are likely to be even more pronounced as inflation picks up further.

A major component of increases in inflation during the past year has been energy bills. The effect of rising energy wholesale prices on consumers has been slightly lagged as a result of the operation of the price cap. Nonetheless, the impact of energy bills is stark. During the winter of 2021/22, the default energy price cap set by Ofgem equated to a bill of £1,277 for a 'typical household with medium use'. By summer 2022 this cap had increased to £1,971.

The cap was on course to reach around £3,500 in October 2022 before this was superseded by the UK government's 'Energy Price Guarantee'. This effectively caps the typical household dual fuel energy bill (for a customer paying by direct debit) at £2,500.

The intervention complements previously announced policy measures to mitigate the impact of rising energy bills, including a £400 rebate to all consumers, a £150 rebate to households in council tax bands A-D (a policy replicated in Scotland and England), additional payments of £650 to households on means-tested benefits, and an additional £300 payment to pensioner households.

These interventions will go a long way towards avoiding what would otherwise have been a catastrophe in living standards, with potentially huge implications for wellbeing amongst lower-income households.

At the same time, it needs to be remembered that the impact of rising energy bills, and inflation more generally, is likely to make the coming winter a difficult one. Many low-income households do not receive means tested benefits. Households who have come off a fixed rate deal in the last year onto the default tariff are likely to see their expenditure on energy rise significantly, even after the effects of the Energy Price Guarantee and other interventions.

Households in Scotland typically spent around 5% of their disposable income on energy before the pandemic. But low income households typically spent twice this amount, and a reasonable proportion of low-income households spent significantly more than this (Chart 8.7).

In fact, one quarter of Scottish households were already in 'fuel poverty' before the current crisis, according to official data. The official definition of fuel poverty in Scotland was set out in the Fuel Poverty (Targets, Definition, Strategy) (Scotland) Act 2019. That Act determines that a household is in fuel poverty if two conditions hold:

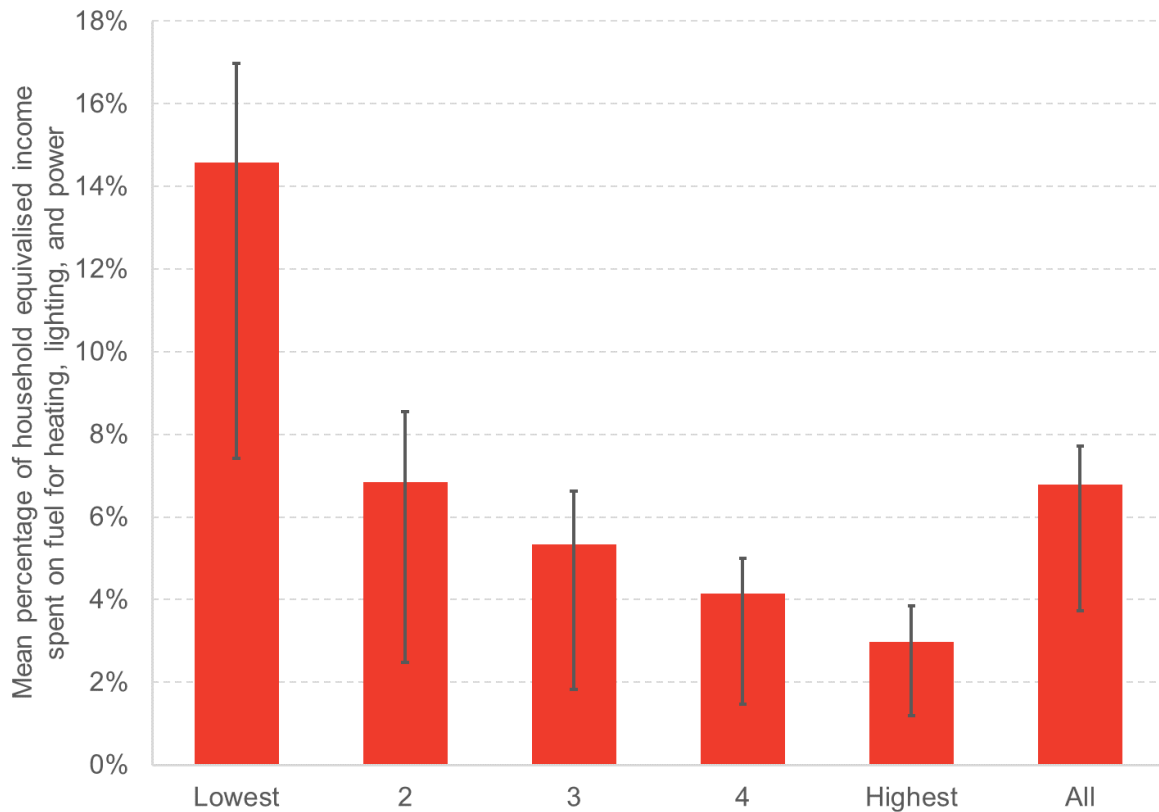
- First, that in order to heat the home to a satisfactory level, the household would need to spend more than 10 per cent of its net income on fuel; and
- Second, if, after deducting those fuel costs, and other essential costs associated with disability, care needs or childcare, the household's income is below 90% of the UK Minimum Income Standard.

The definition therefore is not based on what a household actually spends on fuel, but on what they need to spend to heat their home to an acceptable level.

In 2019, the most recent year for which data are available, a quarter of Scottish households were in fuel poverty according to this definition. Fuel poverty was unsurprisingly higher amongst the lowest income households (96% of those with weekly incomes below £200 were in fuel poverty). Fuel poverty was also higher for those on a pre-payment metre, 36% of whom were in fuel poverty.

Chart 8.7: Low income households spend proportionately more of their income on fuel

Household expenditure on fuel as a percentage of income by income quintile, Scotland, 2019



Source: FAI analysis of Scottish Household Survey 2019. N = 2,757. Notes: error bars do not show confidence intervals, but show spending on fuel as a percentage of income at the 25th and 75th percentiles within each income quintile. For the first quintile for example, median expenditure on fuel is just over 10 per cent of income, but one quarter of households in the first quintile spend less than four per cent of income on fuel, and one quarter spend more than 15 per cent of income on fuel.

Conclusions

There was a marked socioeconomic gradient in the health impact of Covid-19. Mortality rates were over twice as high in Scotland's most deprived fifth of neighbourhoods relative to the least deprived fifth. There is emerging evidence of a socioeconomic gradient in the prevalence of long-Covid.

The pandemic thus provides another stark demonstration of the way that socioeconomic inequalities influence the risks of ill-health and premature death.

The pandemic itself, and the restrictions on daily lives that it necessitated, also influenced existing socioeconomic inequalities. School closures drove a large increase in inequalities in educational attainment, as those from more advantaged backgrounds had access to better learning materials, facilities and support. The extent to which some of the pandemic has a permanent impact on attainment inequalities for the Covid-cohort remains to be seen.

Inequalities in wealth seem very likely to have increased, both because of the increased savings of higher income households, and the appreciation in asset values.

The height of the pandemic saw huge disruption to the labour market as restrictions were imposed. However, in many ways the permanent impact of Covid on the labour market has not been as significant as many people anticipated. There was no significant rise in unemployment when the furlough scheme was withdrawn. Structurally, the share of employment across different sectors of the economy has demonstrated remarkable stability given the length of the pandemic-related restrictions and the risks that these caused permanent shifts in consumer behaviour.

The most significant permanent impact of the pandemic on the labour market may be the increase in home-working. Since it is among higher paid jobs that home-working is most commonly feasible, this shift will have some implications for inequality, since home-working can help avoid the cost and time implications of commuting. The pandemic may also have induced a modest cohort of (mainly older, less qualified) men to leave the labour market, and some of this effect may become permanent.

The pandemic has had a devastating impact on the NHS. Waiting times and waiting lists remain significantly elevated on pre-pandemic levels, in large part due to the backlogs that built-up during the peak of the pandemic. Addressing the challenges will require sustained investment in resources, staffing and systems over coming years.

The Scottish economy was barely returning to something resembling normality in early 2022 when the Ukraine war turned a modest inflationary problem into a full-blown cost-of-living crisis. UK government intervention to mitigate the worst of the impact of rising energy costs should avoid what would otherwise have been a major catastrophe for living standards.

But it will still be a difficult winter for many households. A quarter of Scottish households were in fuel poverty in 2019, well before the sharp rise in costs observed this year.

The potential impacts of the current crisis on health are serious. Living in a cold home is associated with higher risk of cardio-vascular and respiratory diseases, and higher risk of respiratory infections (Marmot Review Team, 2011). Living in a cold or damp home is also associated with a variety of mental health stressors, including persistent worry about debt and affordability, physical discomfort and worry about the consequences of cold and damp for people's health (Liddell and Guiney, 2015). Cold housing also negatively affects children's educational attainment, emotional well-being and resilience, whilst fuel poverty negatively affects dietary opportunities and choices (Marmot Review team, 2011).

It is difficult to foresee how the socioeconomic determinants of health might evolve longer-term, especially given current levels of volatility in both economic and political circumstances. At the time of writing, the UK government is openly discussing the possibility of making real terms cuts to working age benefits, and seeking further 'efficiency savings' from public services spending.

Both these policy responses, if enacted, would widen socioeconomic inequalities, and reduce access to support services for those most in need. This review has shown that improvements in the socioeconomic determinants of health can and have been achieved at times in the past when the political will exists to enact the type of policies that matter for the right reasons.

9. Conclusions

As documented in the companion report to this one, from the University of Glasgow, the health of Scotland's population has been characterised by two key features during the past 20 years.

The first of these is stark and persistent inequalities in population health. As the University of Glasgow report shows, people living in Scotland's most deprived neighbourhoods have higher rates of death from all causes. These inequalities in mortality rates are established in infancy and persist throughout the life-course.

As well as differences in mortality, there are significant differences in healthy life-expectancy too. Babies born in the least deprived neighbourhoods are forecast to live 24 years longer in good health than their more disadvantaged peers. Many indicators of health inequalities have been widening since 2012-13.

The second key feature is a notable stalling in improvements in life-expectancy in recent years. Over a very long period since the mid-19th century, life expectancy in Scotland has generally increased at times outside of pandemic disease (e.g. influenza in 1918-1919) and war (1940-1945). However, around 2012-2014, these improvements stalled across both sexes, all ages and almost all causes of death. This stall masks considerable inequality, with life expectancy not just plateauing but falling for the least well off in Scotland.

The health of the population, and health inequalities within the population, are shaped by social and economic circumstances. As reiterated in the Marmot Review, health and health inequalities are good measures of how well society is doing: how well it is creating the conditions for people to lead good lives. Stalling improvements in health combined with widening inequalities in health outcomes are not signs of a successful society.

This report has described the evolution of social and economic factors in Scotland since 1999 that are likely to have influenced the health outcomes set out in the University of Glasgow report.

From the perspective of the evolution of the socioeconomic determinants of health, the period since 1999 can be divided into three distinct periods.

The first decade, from 1999 to 2009, was characterised by reasonably robust annual growth in earnings and household incomes. The improvements in living standards were broadly felt across almost all of society. There were modest increases in earnings inequality. These were offset by rising employment and increases in the generosity of the social security system, the outcome of which was a modest fall in the poverty rate (albeit from a high base).

Whether inequality in household income is seen to have increased or decreased during this period depends on how it is measured. Across most of the middle of the distribution (from the 20th to the 90th percentile), income inequality fell slightly. But the very richest pulled away from the rest, and the very poorest fell further behind.

The central feature of the second decade, from 2010 to 2020, was an unprecedented stagnation of earnings and household incomes. By 2021, median weekly earnings were around £80 per week below their expected value had the pre-2010 trend continued. Average annual real household income growth was less than one percent per annum, representing the most prolonged period of stagnation in living standards in living memory.

The causes of the stagnation in earnings and living standards growth are still being debated. The fiscal austerity policies of the decade clearly did play a role. But it is difficult to disentangle the contribution of austerity from a more general slowdown in productivity and earnings growth (the beginnings of which pre-date austerity).

Income, and the distribution of those incomes, is a key socioeconomic determinant of health. An adequate income supports people to avoid stress, feel in control, and adopt and maintain healthy behaviours.

In the context of the dramatic stagnation of earnings and living standards, combined with the effects of austerity in public services, the slowdown in mortality improvement over the same period is less of a puzzle. Austerity policies, whilst they are not the only cause of the slowdown in mortality improvement during the past ten years, have undoubtedly played a significant role, both in influencing the stagnation of living standards, and in affecting health directly via the quality of public services.

The arrival of the Covid-19 pandemic in 2020 and its aftermath constitutes a third distinct period. The lockdowns and restrictions of 2020 and 2021 acted as a series of unprecedented shocks to the labour market, the economy and society.

In certain respects, the pandemic's impacts on some dimensions of inequality have been more transitory than many people expected. This is the case for many aspects of the labour market, and household incomes. But on other dimensions, including educational attainment and wealth inequality, the pandemic's impacts may be both more pronounced and more prolonged.

Across the whole of the period since 1999, a general conclusion is that on many dimensions, socioeconomic inequalities have increased only fairly modestly. However, whilst often justifiable as a general conclusion about the post-1999 period, such a conclusion must be caveated by an important point: socioeconomic inequalities in Scotland were already high in 1999.

It would be complacent to seek solace in a view that inequality has increased only slightly in recent years. It is more appropriate to point out that inequalities have remained persistently high throughout the past 23 years. Inequalities of earnings, income, educational attainment, wealth show large disparities across groups and society as a whole.

Over the period since 1999 there has been little evidence of improvement in the socioeconomic determinants of health in Scotland. Exceptions are a general improvement in air quality, and falling poverty rate during the first decade. This demonstrates that policy can make a difference when concerted efforts are made.

Unfortunately however, improvements in the socioeconomic determinants of health have been the exception rather than the rule during the past 23 years.

- Income inequality has remained broadly unchanged, at a level that puts Scotland in the top half of the European inequality league table.
- Earnings inequality has fallen since 2010, but remains relatively high, whilst use of insecure work contracts is increasing.
- Inequalities in educational attainment, whilst not the highest amongst comparator countries, are certainly not the lowest, and show little sign of falling.
- Social mobility is low – and on at least one measure, somewhat lower in Scotland than in the rest of the UK.

The aim of this report has been to describe the nature of inequalities in the socioeconomic determinants of health in Scotland, but not to make specific recommendations about how those inequalities should be addressed. A subsequent report, produced by The Health Foundation, advised by a group of leading experts on public health and the economy, will consider how Scotland can build on strong policy intent to reverse stubbornly high inequalities in the socio economic determinants of health, and create a sustainable approach to closing the gap in health outcomes.

This will reiterate the importance of putting social justice at the heart of all policy-making to improve health and reduce health inequalities.

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