

# *Health Inequalities in Scotland*

*Trends in the socio-economic determinants of health in Scotland*

## *Chapter 2: Employment, work, and the labour market*

*November 2022*

## 2. Employment, work, and the labour market

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*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).

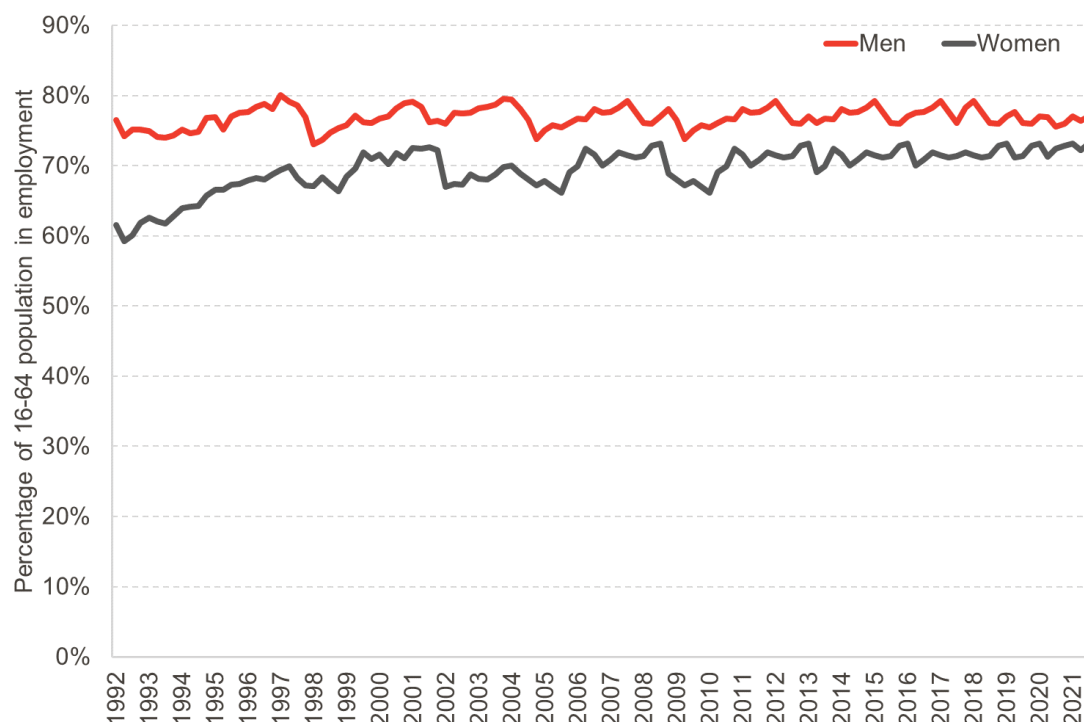
Labour market law and regulation (e.g. around working time or the use of particular contract types) are determined at UK level, and the role of labour market institutions (such as the national minimum wage) are also determined at UK level. The Scottish government therefore has limited direct ability 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



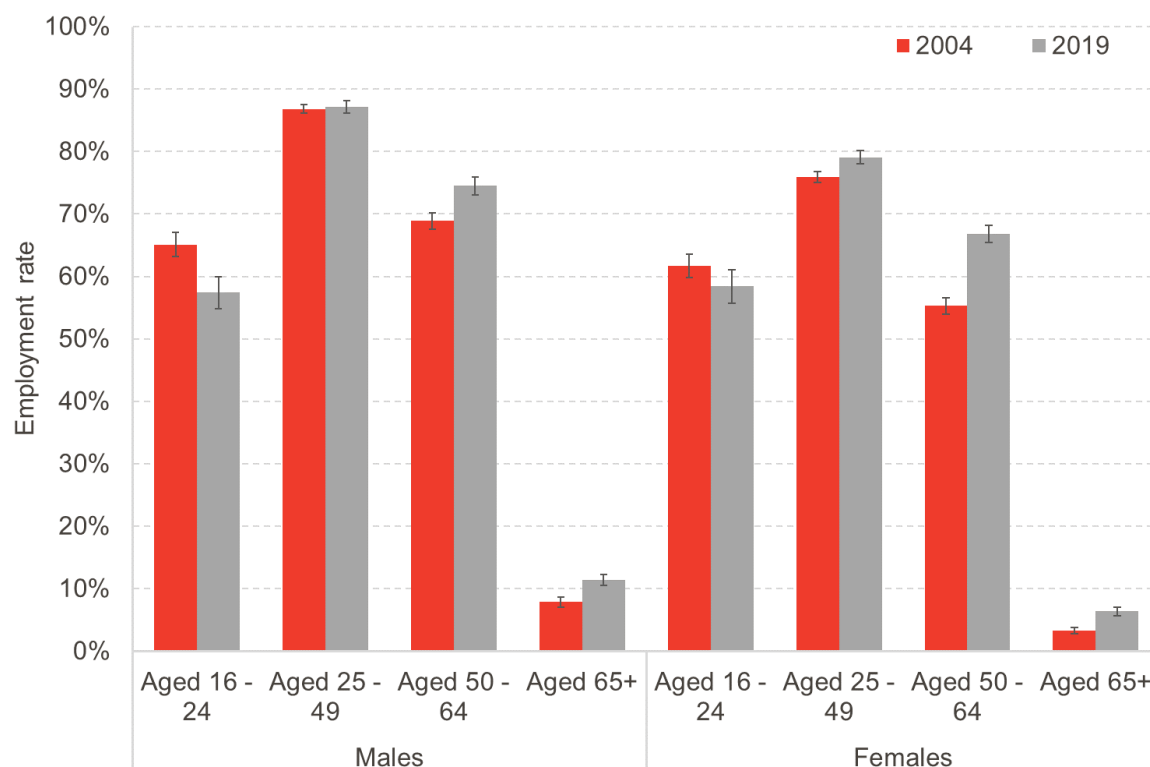
Source: ONS Regional Labour Market Statistics

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.

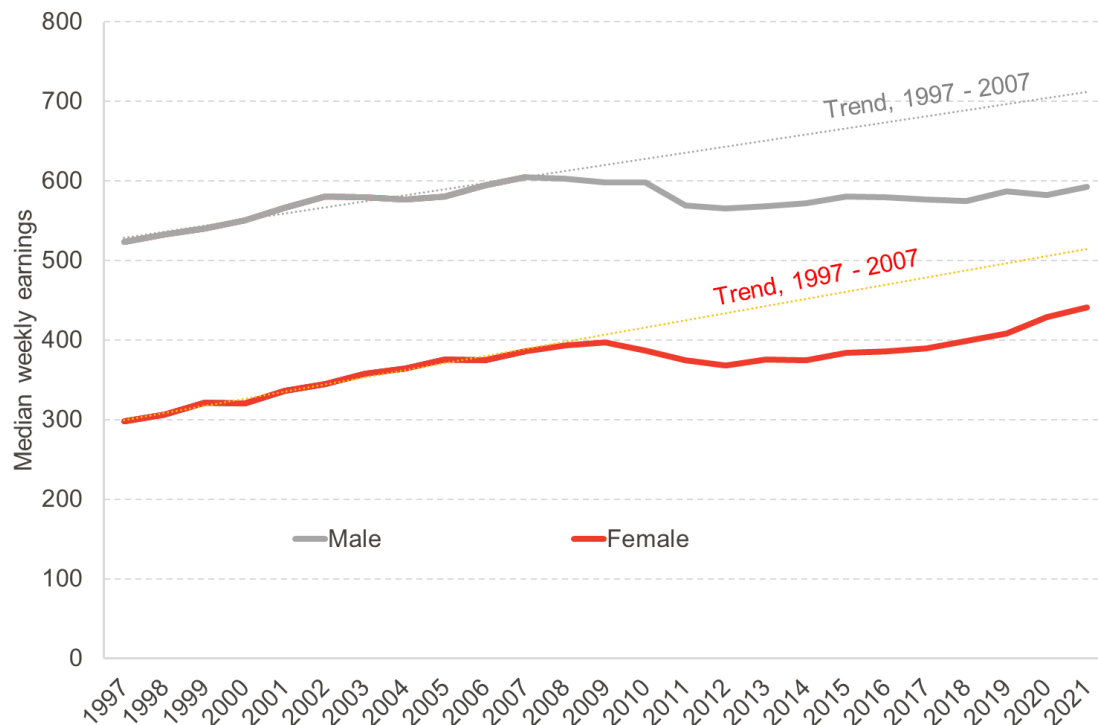
Chart 2.3 shows the trend in real weekly earnings for the median worker. But the decade long period of earnings stagnation is observed across virtually the whole of the earnings distribution (i.e. for lower and higher earners alike).

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 90<sup>th</sup> percentile relative to one at the 10<sup>th</sup> 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 90<sup>th</sup> percentile earned four times as

much per week as one at the 10<sup>th</sup> 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 10<sup>th</sup> percentile of earnings is significantly lower than the 90<sup>th</sup> percentile, because the earnings of a worker at the 10<sup>th</sup> 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.

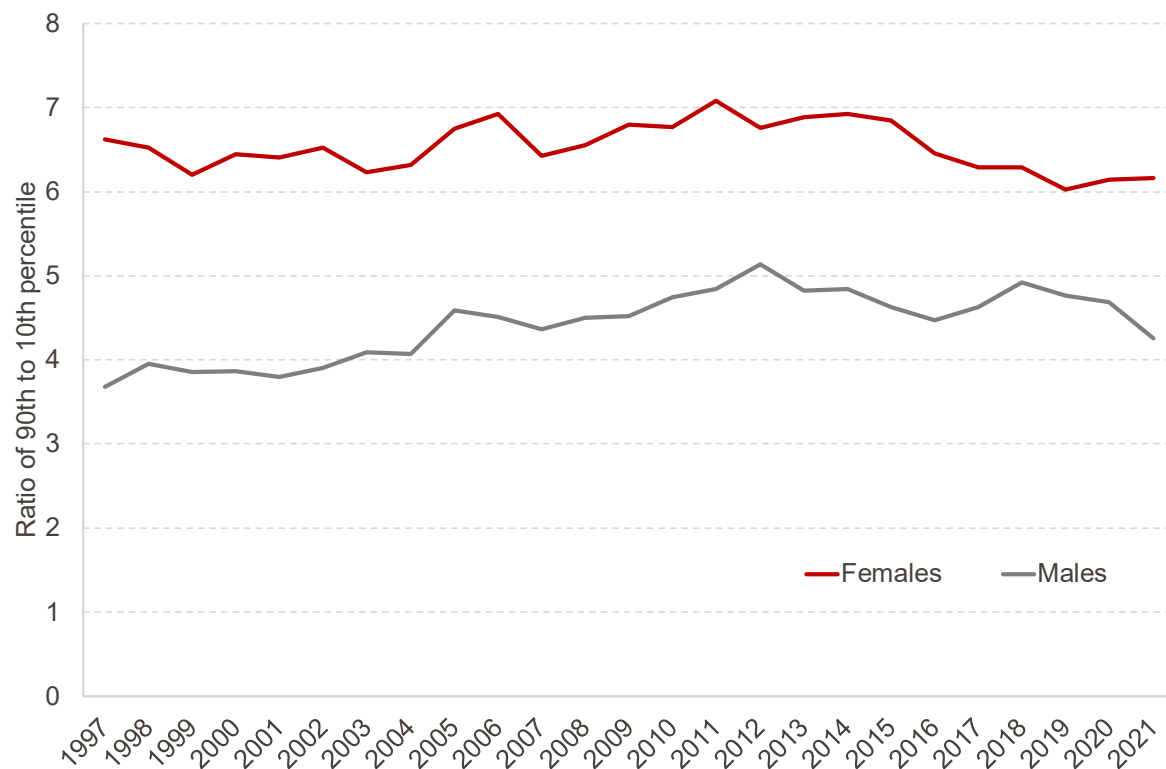
We can also place earnings inequality in Scotland in an international context. Chart 2.5 shows the 90:10 ratio of earnings inequality amongst full-time workers in a selection of comparator countries. In 2018, the 90:10 measure of inequality in Scotland was marginally higher than the equivalent measure 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 90<sup>th</sup> to 10<sup>th</sup> percentile of weekly earnings, all in employment (Scotland)

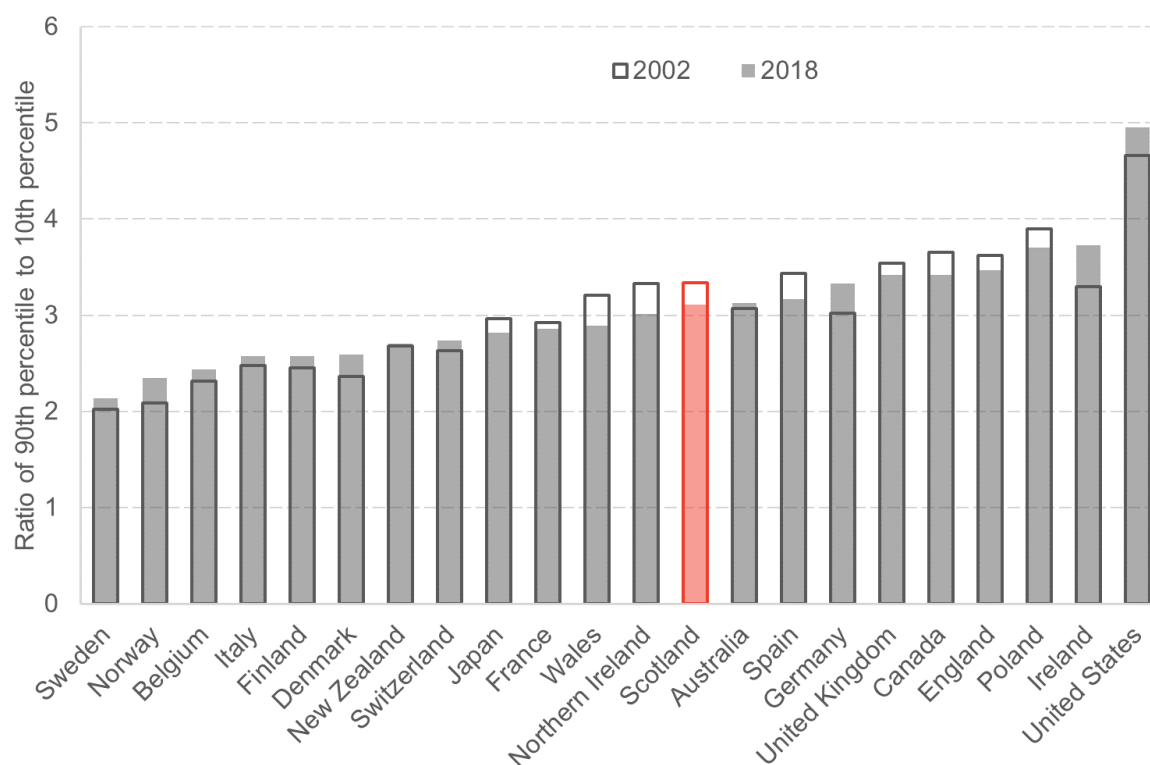


Source: Annual Survey of Hours and Earnings, accessed from nomisweb.



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

Ratio of 90<sup>th</sup> to 10<sup>th</sup> 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 job<sup>1</sup>. 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.

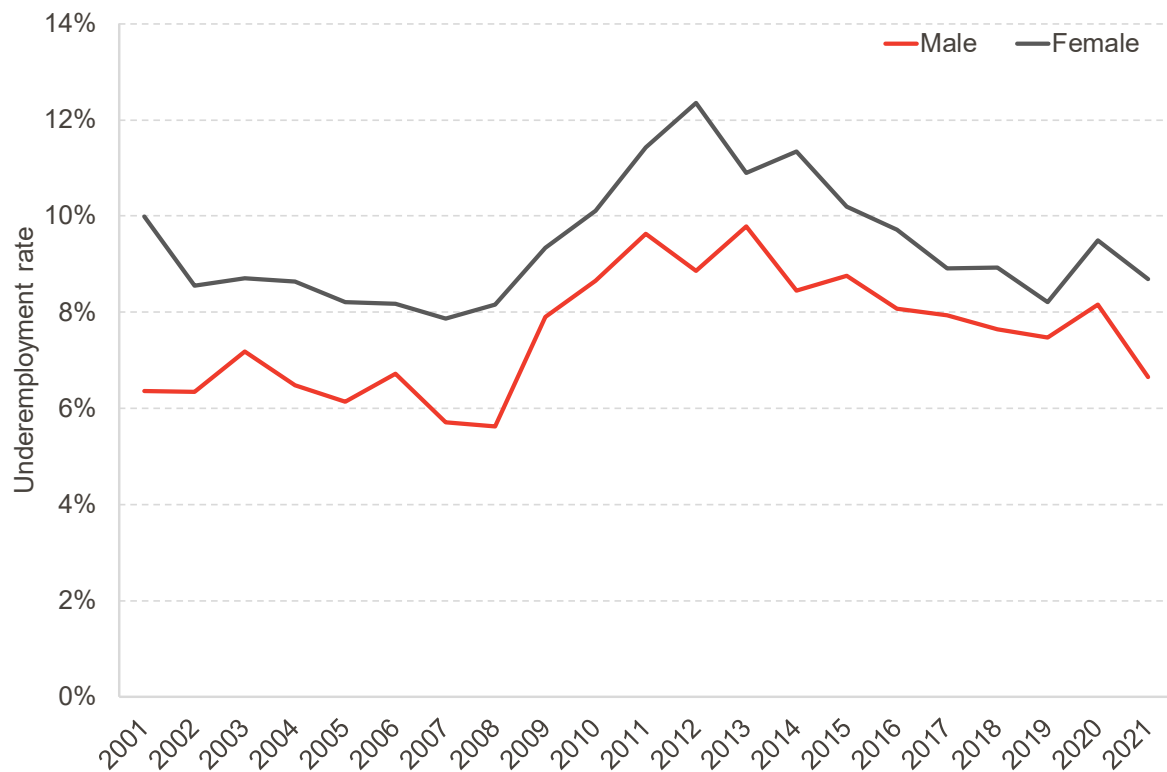
More generally, it is important to note that underemployment rates vary significantly across different types of worker. Underemployed workers are consistently more likely to be young, working in low-paid jobs, be less well qualified (Chart 2.7). These findings are very much in line with others (e.g. 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).

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<sup>1</sup> 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**

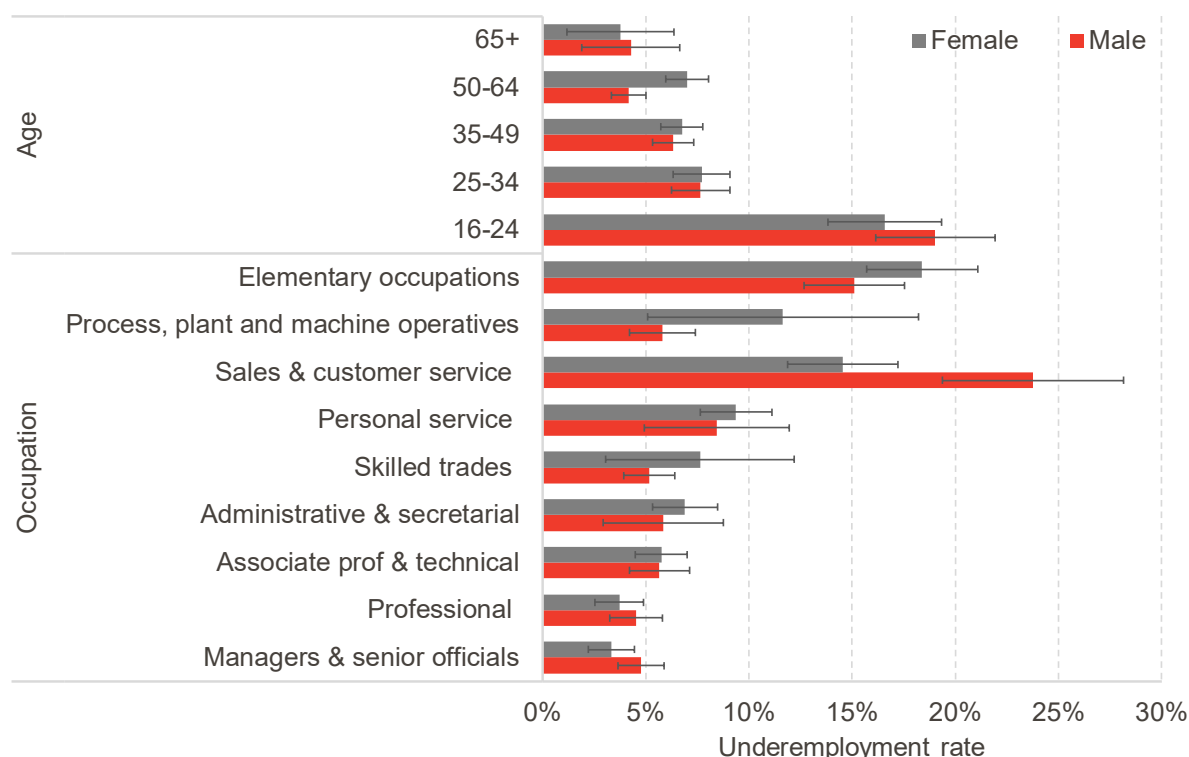
Proportion of workers who are underemployed in Scotland



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

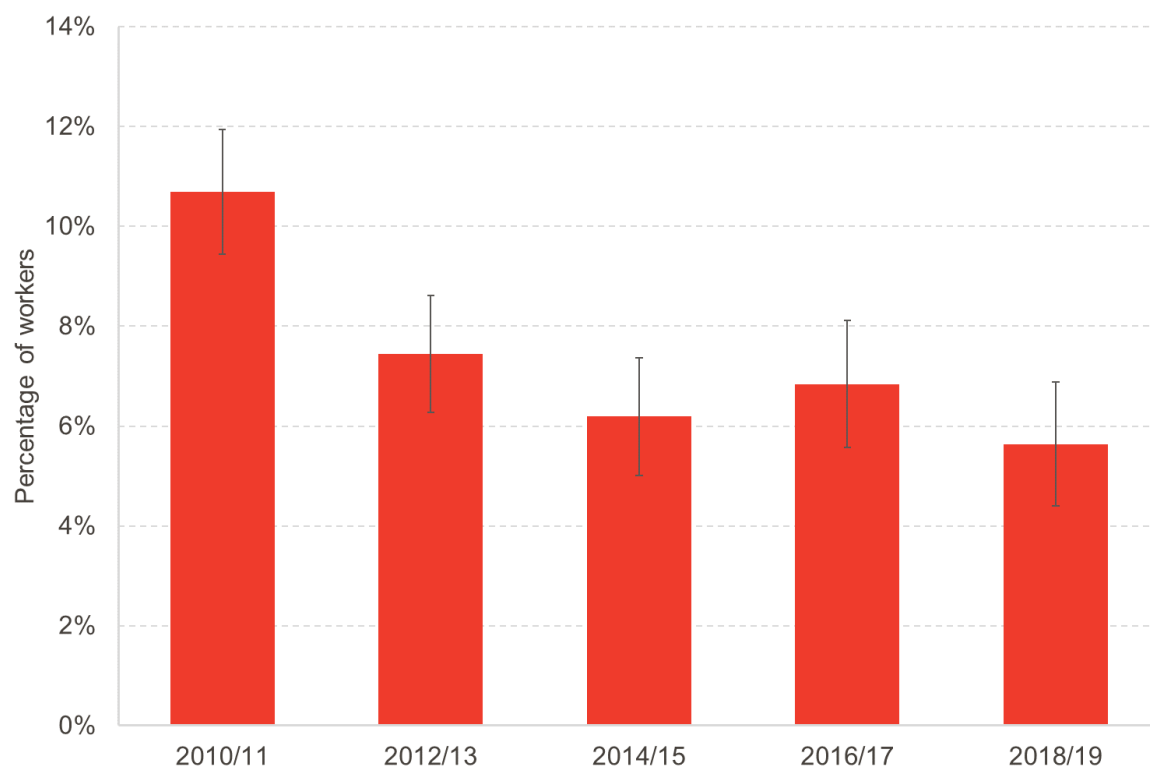
from 2005 to 2015, find some dimensions of job quality have improved, whilst some have worsened. Workers were more likely to consider their job interesting and valuable in 2015 than they were in 2005, and there was some evidence that their relationship with the firm they work for improved. However, workers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

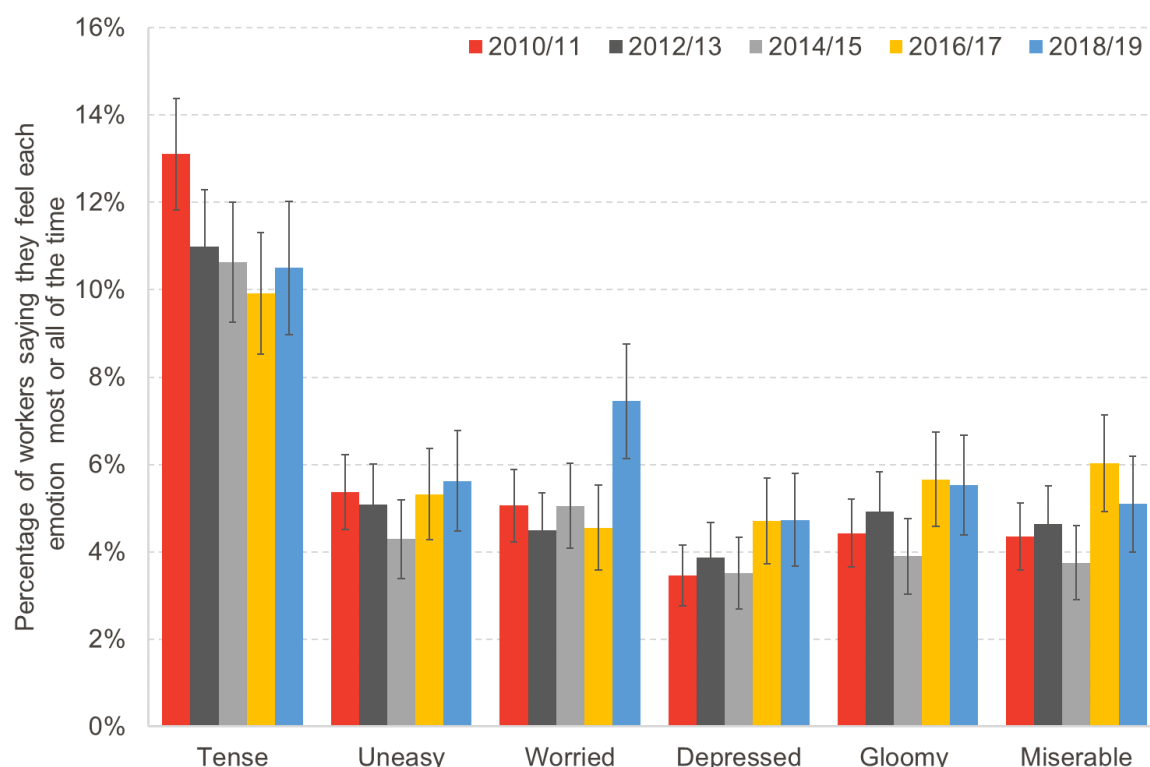
Proportion of workers responding that they think it is likely or very likely that they will lose their job during the next 12 months



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 one's 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.

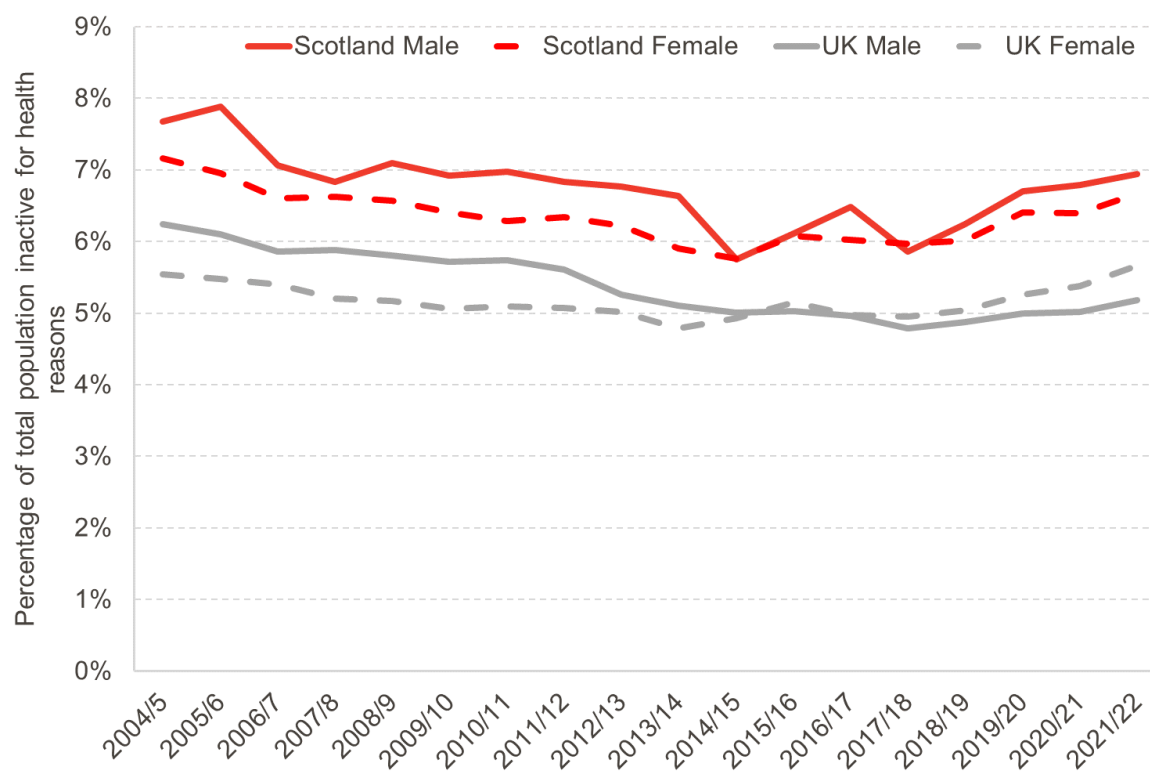
What Chart 2.11 also reveals is that a larger proportion of people in Scotland are inactive for health reasons. This is true for both males and females. The gap between Scotland and the UK as a whole has remained fairly consistent over time, although there is some evidence that the gap for males has 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.

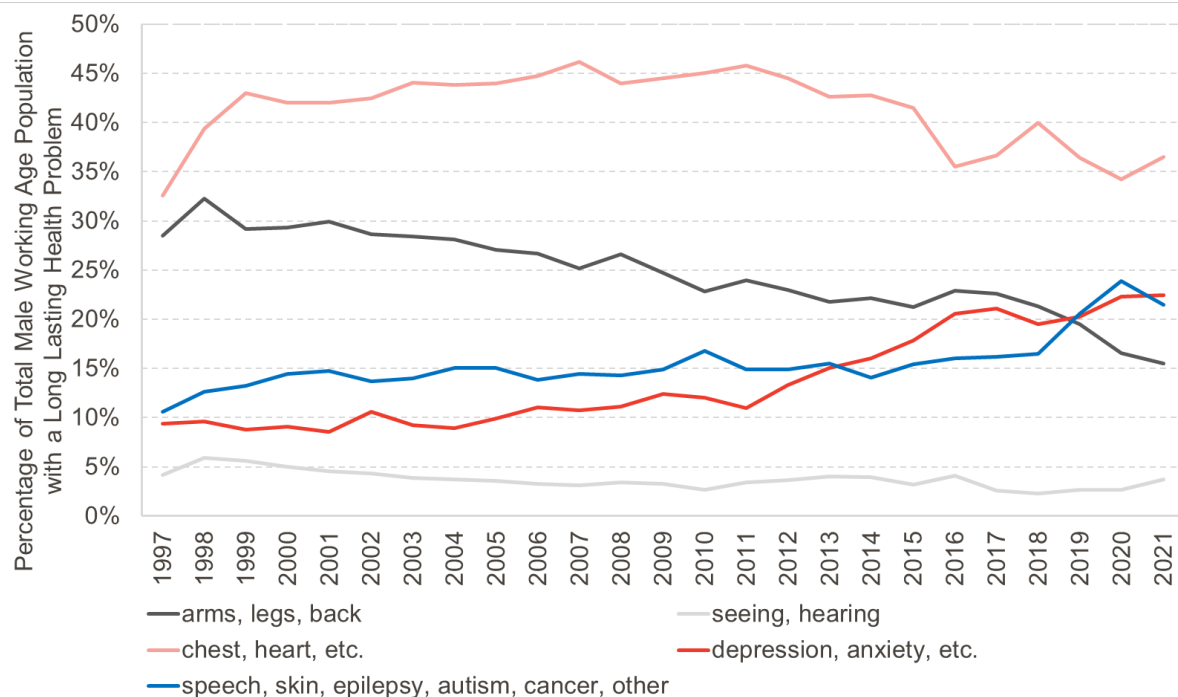
What we can say however is that the rise in the proportion of the population who say they have a longterm limiting health problem since 2010 (regardless of their economic activity status) has increased by a similar magnitude amongst graduates and non-graduates. Whilst graduates are less likely to report 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.

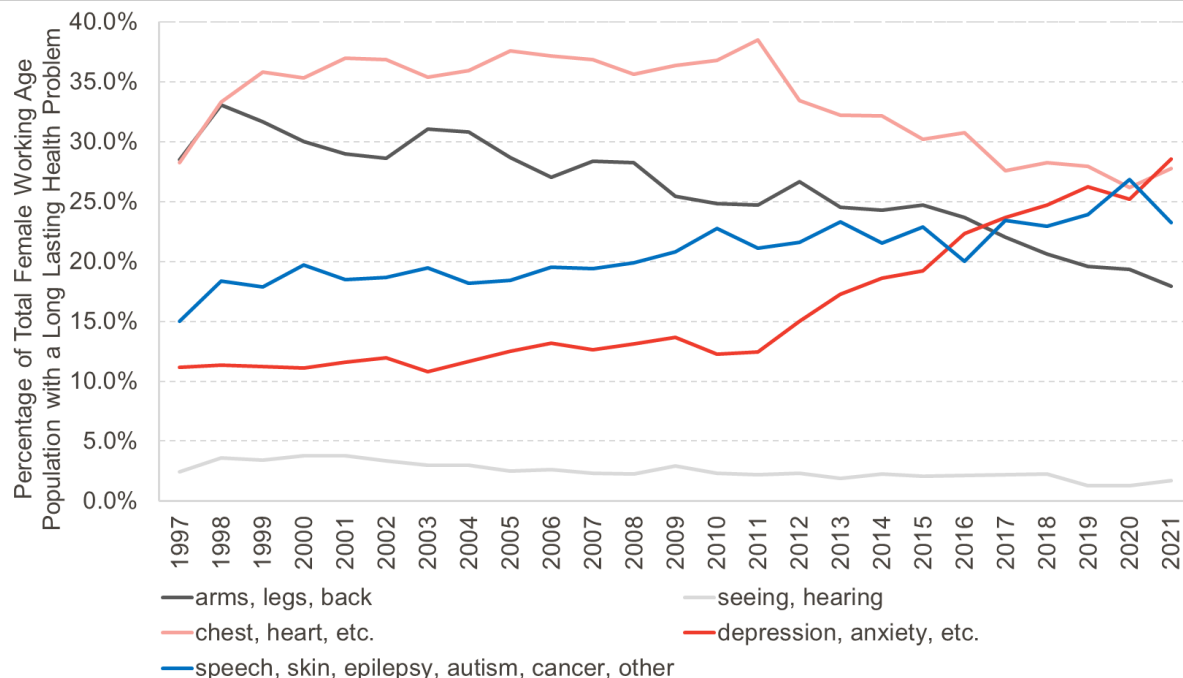
The second part of the picture is that people in Scotland are consistently more likely to be inactive for health reasons, but somewhat less likely to be inactive for other reasons, with the implication that the impact of differences in health on inactivity is somewhat ambiguous. Additional analysis we 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.

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