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Implications of hours worked for inequality and poverty

Final Report

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Standard Life Foundation has supported this project (reference 201911-GR000011) as part of its mission to contribute towards strategic change which improves financial well-being in the UK. The Foundation funds research, policy work and campaigning activities to tackle financial problems and improve living standards for people on low-to-middle incomes in the UK. It is an independent charitable foundation registered in Scotland (registered charity number: SC040877).

Executive summary

Hours worked are an important determinant of inequality

Discussion and analysis of earnings inequality and in-work poverty often focusses on hourly wages. But the number of hours that workers spend doing paid work each week also has a big influence on earnings and household incomes.

This report, funded by the Standard Life Foundation, examines patterns and trends in weekly hours worked in the UK over the past two decades. It considers the factors that influence those trends, and it examines the role that hours worked play in influencing inequality and poverty. It also considers what role policy can and should play in shaping patterns of working hours.

Average weekly hours worked by males had been falling until the financial crisis came along

The average weekly hours worked by UK male employees declined by around three hours per week (6%) between the late 1990s and the onset of the financial crisis in 2009. The fall in male average hours to 2009 was a continuation of a longer term trend of decreasing average hours of work throughout the 20th century (the only age group to buck the trend are the over 65s, who've seen their average hours of work increase).

The decline in average hours has been explained in part by the desire to trade-off time in paid work for more leisure as real pay, and living standards, improve. But changes to labour market institutions and regulations – such as the EU Working Time Directive – and changes in social norms, have also contributed.

In the ten years since the financial crisis, male average hours per week have remained largely unchanged, breaking a decades long downward trend. A key explanatory factor is likely to be the unprecedented stagnation in real wage growth that took place from 2009 to 2015. This line of argument is that workers sought longer hours (or to maintain existing hours) to offset the fall in living standards that they had experienced.

Female hours worked have been increasing slowly

The trend of working hours for women is quite different. Average weekly hours worked have increased over the past 25 years. The rate of increase was very slow until 2008, but has been slightly faster in the period since the end of the financial crisis. Average paid hours worked by female employees increased from 30 in 2011 to 31.5 in 2019, largely reflecting a fall in the proportion of females working part-time.

The rise in hours worked by females are thought to reflect changing social norms around gender and work (combined with improvements in childcare provision), the falling gender pay gap, and increases both in women's educational attainment and service sector employment. The increased pace of change post 2010 may reflect earnings stagnation in the following decade.

UK employees tend to work longer hours than European counterparts, but this is not the case for all labour market groups

UK prime-aged males (aged 25-54) work similar hours as those in the US on average, but more than those in France, Germany and Sweden. Differences in average hours worked in the UK relative to

European countries reflect differences in labour market institutions and regulation. Unions in Germany and France placed an emphasis on negotiating reduced hours during the 1970s and 80s, and more recently, differences in the implementation of the EU Working Time Directive have helped to cement cross-country divergence in hours worked.

Among full-time female employees, the country differences paint a similar story to that for males – the UK and US post markedly higher average working weeks than the three continental European countries. But UK females in couples with children tend to work shorter hours than those in the US and France. The availability and costs of childcare, and the structure of working tax credits, have been put forward as explanations for this.

Changes in hours worked during the past 25 years have acted to increase male earnings inequality.....

Inequality in weekly earnings is influenced by three factors: inequality in hourly pay, inequality in hours worked, and the correlation between pay and hours worked. If the low-paid work longer hours than the high paid, this will offset inequality in hourly pay.

Inequality in prime age male weekly earnings has increased over the past 25 years. A large proportion (four fifths) of this increase can be accounted for by changes in patterns of hours worked. Specifically, average hours worked by male employees in low-paying jobs fell substantially between 1994 and 2009, whilst the average hours worked by male employees in better paid jobs fell much less markedly.

.....and reflect similar trends in other countries

Other countries, notably including France and Germany, have also seen increases in earnings inequality as a result of hours changes. As in the UK, low-paid workers in France and Germany used to work longer hours than higher paid workers, but this correlation has tended to ‘flip’ in recent years, with higher paid workers now tending to work longer hours on average than the less well paid.

Why did hours worked fall by more for low-paid than better paid men in the UK until 2009? We rule out the idea that rising female employment incentivised men to work shorter hours. But we do observe that low-paid men were disproportionately likely to work long (48+) hours prior to the introduction of working time regulation in 1998. To the extent that working time regulation reduced long-hours working, it therefore had a larger impact on average hours amongst low-paid than high-paid men.

But this is unlikely to be the only explanation. As a consequence, the welfare implications of these important changes are unclear – do the larger proportionate falls in hours worked by low-paid workers reflect choice on the part of those workers, or do they reflect an inability to secure as many hours as desired?

Hours changes have reduced inequality of female earnings

In contrast, inequality of female weekly earnings has declined substantially over the past 25 years. This is mainly accounted for by a fall in the proportion of women working very short hours (i.e., less dispersion of hours worked amongst women). But there has also been – in contrast to the picture for men – a relatively faster rise in hours worked amongst low-paid relative to higher-paid women.

A significant minority of employees are underemployed...

Not everyone is able to work the number of hours that they would ideally like. The underemployed are those who would like to work longer hours at their current rates of pay (in their current job or a new or additional job).

The young, the less well qualified, and those working in low-paid jobs are more likely to be underemployed than other workers. The underemployed are more likely to suffer from poorer psychological wellbeing: depression and greater anxiety, compared to workers who are not underemployed.

In 2019, around 8.5% of female employees and 7.5% of male employees were underemployed. These underemployment rates are lower than during the aftermath of the financial crisis (when they reached 10% and 11.5% for men and women respectively), but remain above the rates seen in the mid-2000s. Underemployment does not appear to be systematically higher in the UK than other European countries, in fact the UK has lower underemployment rates than France and Sweden.

...indicating a dissatisfaction with earnings from employment

Looking over time, the underemployment rate bears little relationship with hours worked. Since the mid-2000s the underemployment rate has increased substantially and then fallen most of the way back to where it started. But over the same period, hours worked have remained largely unchanged.

This suggests that the underemployment rate is really a proxy for a more general dissatisfaction with the level of income from work – or the security of that income. It indicates that the rise in underemployment after the financial crisis was not due to a fall in hours worked, but falling real wages (and probably also, falling real benefit incomes for low-income families).

The increase in underemployment following the financial crisis was concentrated amongst the lowest-paid half of employees; better paid employees experienced relatively little increase in underemployment, despite also being affected by falling real earnings. This might be because the low-paid had less of a buffer between their income and expenditures when the financial crisis hit, or might reflect the added challenge for low-paid workers of falling benefit income during the austerity period.

Overemployment is also a problem in the UK labour market

Being overemployed can also have negative impacts on wellbeing. The overemployed are those who would like to work fewer hours, even if that meant a loss of pay. Around 11% of UK employees were overemployed in 2019, meaning there were actually more overemployed than underemployed (and implying that almost one fifth of UK workers were dissatisfied with their working hours one way or another).

Whilst women are more likely to be underemployed than men, they are also more likely to be overemployed. The presence of young children has particular divergent impacts on male and female overemployment – in families with young children, women are much more likely to be overemployed, whereas males are slightly less likely to be so (compared to equivalent co-habiting people without children).

As well as the hours that an employee works on average, the regularity and predictability of hours matter too, both for income security and for well-being.

Most if not all OECD countries have seen growth in ‘atypical’ employment in recent years, where ‘atypical’ or ‘nonstandard’ employment refers to employment that diverges from a standard full-time, permanent, regular and single employer set-up.

Concern about the growth in such forms of employment arises because nonstandard forms of employment are more likely to expose workers to a greater degree of insecurity and precarity than standard employment forms. But not all of those employed in nonstandard employment necessarily feel that their positions – or their working patterns – are insecure or precarious.

Disentangling, in data, insecure or precarious work from nonstandard employment more generally can be problematic. The extent to which a particular job exposes a worker to feelings of insecurity or precarity is likely to depend in part on characteristics of the individual, as well as the job itself.

Workers on zero-hours or temporary contracts are more likely to be underemployed, even after controlling their shorter hours and lower pay

It is in fact not obvious from labour market data that job insecurity has been increasing. Nor is there evidence that perceived job insecurity has increased in either the US, Germany or the UK since the 1990s. But regardless of the trend, it is clear that insecurity of working hours affects a large proportion of UK workers.

And one thing that is clear is that the UK has seen significant growth in the use of zero-hours contracts over the past decade. We find that workers on zero-hours contracts, or working on temporary contracts, are more likely to be underemployed than workers not on those types of contract, even after controlling for the fact that workers on zero-hours or temporary contracts are more likely to work fewer hours for less pay.

These results are consistent with the idea that these types of contract do impose undesired constraints on hours, or that these contract types are associated with higher levels of insecurity that manifests itself through a desire to work longer hours.

Different countries are taking very different approaches to the regulation of zero-hours contracts, ranging from outright bans in countries including France to light touch regulation in the UK and US, and various conditions attached to their use in Germany.

Employees in higher income households work longer hours on average than employees in lower-income households

For example, in households in the bottom 10% of UK households ranked by income, employees who are the main earner in their household work 33 hours per week on average. But in households in the top 10% of the income distribution, the main earner works 40 hours per week on average.

There is a similar story for second earners, although the difference in hours worked by second earners in low-income households compared to second earners high-income households is not quite as pronounced as it is for main earners.

Similarly, employees in households in poverty work fewer hours on average than employees living in households who aren't in poverty.

But hours worked are not a strong indicator of household income – many employees in low-income households work long hours, and many in high-income households work fewer hours

The variation in working hours across the household income distribution might in itself suggest that hours worked by individual workers play an important role in determining the position of that workers' household in the income distribution. However, it is important to remember that there is significant variation around the average relationships just described.

In other words, whilst employees in higher income households work longer hours on average than those in lower-income households, many workers in low-income households work long hours, and many in high income households work relatively shorter hours.

Statistically, hours worked are not a very good predictor of whether a household is in poverty or not, even for the main earner in a household. And there is no guarantee that working longer hours will provide a route out of poverty. Ultimately, hourly pay and household composition are more important than hours worked in influencing a workers' position in the household income distribution.

Underemployment is higher in low-income households, but underemployment is not just a poverty problem

Employees living in households in poverty are more likely to be underemployed (11%) than employees who do not live in poverty (6%). This in itself is intuitive, in that employees living in poverty tend to be more likely to be employed in low-paid jobs, or work short hours. But the majority of underemployed employees do not live in poverty – underemployment is certainly not just a poverty problem given there are many people in low-earning, short-hours jobs not in households below the poverty line.

In-work poverty is on the rise, but changes in hours worked do not explain this trend

In-work poverty has been on the rise in all of our European comparator countries, and in-work poverty rates are not dissimilar in the UK to other countries. Employment factors contributing to heightened risk of in-work poverty are common across countries, and include part-time work, self-employment, and temporary work. But the increase in in-work poverty in the UK is not attributable to changes in hours worked. Despite the fact that hours changes have increased earnings inequality amongst men, for example, the majority of low-paid men do not live in households in poverty.

Workers value flexibility but they want stability and security

Qualitative research with workers shows that many need the ability to fit their working time and shifts around non-work commitments in further and higher education and domestic caring responsibilities. Consequently, they find themselves in jobs that provide unstable or shorter hours than they would like, leading to feelings of financial insecurity. Workers also find themselves in these jobs as a result of job loss. Most workers we spoke to wanted permanent work offering stable hours.

Some employers we spoke to avoided using some forms of non-standard employment contract because of concerns about their 'reputation'. Most service sector employers we spoke to argued that non-standard contracts are essential to manage time-specific and seasonal demands.

Our qualitative research confirmed the argument that underemployment and income insecurity are influenced not only by the specific features of a job, but by the worker's broader circumstances – including the income status of partners, the presence of dependent children, and support through the social security system.

The pandemic has had huge short-term impacts on working hours, but the longer-term impacts are difficult to predict

Patterns of hours worked changed substantially during 2020 as a result of the pandemic and associated lockdowns. The impact has been very unequally shared across employee groups and households. It remains unclear to what extent some of these changes will persist and become permanent, and to what extent they might 'unwind' as restrictions are eased and the economy returns to 'normal'. The policy implications that we consider in this report are likely to be very relevant in a post-pandemic world, regardless of the specifics of the labour market recovery.

Policy must balance competing objectives in a wide-range of areas

Patterns of hours worked can be affected by a wide range of social and economic factors that go well beyond 'labour market policy' narrowly defined.

The challenge for policy-makers is not to try to second guess the hours that people want to work and attempt to legislate for that. Instead, it is to ensure that labour markets operate fairly and smoothly in ways that ensure workers have sufficient control over when, where and how much they work. And it's to ensure that employers cannot simply transfer the effects of a needlessly/excessively precarious business model onto the shoulders of their employees.

There are roles for policy in regulation, facilitating bargaining, and enhancing social security

Policy has a critical role to play in giving workers, particularly low-paid workers, sufficient control over their hours. Workers should also have a right to a contract that reflects the actual hours they work, adequate advance notice of work schedules, and to compensation where shifts are cancelled or changed without reasonable notice. As well as a floor on hourly wages (the minimum wage), considering floors on working conditions might also be a channel through which secure work can be promoted. It was anticipated that the forthcoming Employment Bill would provide an opportunity to establish some of these measures, but the Bill – which was initially proposed in the Queens Speech 2019 – was delayed by the pandemic and then not included in the Queens Speech in 2021. It would be a real concern if this falls of the agenda completely.

Bargaining between employers, unions and government plays an important role in agreeing and upholding agreed working standards and practices. However, collective bargaining structures in the UK are weak. There is a need to reinvigorate collective bargaining institutions in the UK, and strengthen their coverage of 'new' forms of work.

Perceptions of job and income security are conditioned by the availability, and rates of, out-of-work and low-income benefits. The UK has low rates of unemployment insurance, combined with a high element of contingency attached to those benefits. This heightens' employee perceptions of insecurity, and weakens their ability to challenge poor working practices via an implicit threat to leave a given employer. The case for more generous and less contingent low-income benefits is a strong one.

A four-day working week is a worthwhile policy ambition to frame policy-making, but is unlikely to be achieved in the short-term

There is growing policy interest in the idea of a 4-day week. The policy is motivated by the idea that it would enhance productivity and increase wellbeing. But the increase in productivity that would be required to ensure no loss of earnings, no losses for employers and no additional public funding, is extremely unlikely to materialise in the short term.

So whilst a 4-day week is a worthwhile policy ambition, it is not one that seems realistic at the moment. But governments should do whatever they can to help those who want to transition to a different configuration of working hours realise that. After all, a 4-day working week is arguably the destination that society has been heading towards for many decades.

1. Introduction

The importance of hours worked

The amount of time that people spend in paid work has a major influence on both individual earnings and household incomes. As such, differences in hours worked across different groups of worker or types of household can have a major influence on income inequality and poverty.

Changes in patterns of work over time have also been a major driver of trends in inequality within and between different groups of workers.

But what determines the patterns of working hours that we see today? And why has the distribution of hours worked changed over time? Does it reflect changes in the requirements of employers, or changing preferences of workers? And what are the implications for wellbeing, job satisfaction, inequality and poverty?

The objectives of this project are to analyse changing patterns of working hours, consider what drives changes, examine how they affect inequality, poverty and wellbeing, and explore how policy might respond.

A legitimate question to ask at this point would be: what do we mean by 'hours worked'? The hours worked by a given individual could be measured per day, week or year; and the measure of hours worked could include or exclude both paid or unpaid overtime.

In this report we focus on weekly hours worked, partly because the weekly measure is more reliably captured in household income and labour market surveys than an annual measure, and partly because measures of inequality and poverty are generally based on weekly measures of income. But the focus on weekly rather than yearly hours means we abstract from situations where people experience an erratic pattern of hours worked over the year – perhaps because they have seasonal work or perhaps they move into and out of employment, or between different employers. We do however examine how uncertainty in people's future work patterns – either because their contract does not guarantee hours or because it is temporary - affects incomes and wellbeing.

When measuring weekly hours, we include paid overtime – as this reflects formal labour market arrangements – but usually exclude unpaid overtime, an approach consistent with that taken by others working in this field such as Blundell et al. (2018). We do however flag where results would be materially different if unpaid overtime was included. Much of our analysis focuses on employees (given that we are often interested in the relationship between hours and pay), but some of our analysis also covers the self-employed.

The project has been led by the Fraser of Allander Institute (FAI) and the Scottish Centre for Employment Research (SCER) at the University of Strathclyde, and has been generously funded by the Standard Life Foundation.

The anticipated outcomes are to raise understanding and awareness of the role that changing patterns of working hours play in determining poverty and inequality, and to equip policy makers – and business leaders – with a more in-depth understanding of the causes of those trends and the ways in which policy can and does influence those trends.

Analytical approach

The research project, which started in January 2020 and completed in May 2021, has involved three broad work phases:

- First, a rigorous analysis of several UK-wide socio-economic surveys that contain information on hours worked, alongside information on job, individual and household characteristics. Analysis of this data is combined with a review of the literature on the determinants of hours worked, hours insecurity and underemployment. Together, this data and literature review informs an in-depth overview of explanations for trends in hours worked, hours insecurity, underemployment and in-work poverty.
- Second, an international comparative analysis reviewing trends in hours worked, hours inequality and underemployment in a selection of comparator countries. The countries considered are Germany, France, Sweden and the US; the reasons for choosing to focus on these four comparators are described in Box 2.1. The findings from this comparative research are integrated into relevant chapters throughout the report, rather than being presented as a standalone section.
- Third, in-depth qualitative interviews with employers and employees. This qualitative research provides further insight on the factors influencing employees' hours worked and experience of underemployment or hours insecurity, and employers approaches to balancing their own and their employees' requirements for both flexibility and stability.

The outcomes from these three work stages is used to inform practical implications for policy, both in relation to labour market regulation, and social security.

Report structure

The structure of this final report is as follows:

- Chapter 2 reviews trends in hours worked in the UK and comparator countries over the past 25 years;
- Chapter 3 examines the contribution of hours worked to earnings inequality;
- Chapter 4 explores trends in underemployment and overemployment in the UK and comparator countries, and considers explanations for those trends;
- Chapter 5 considers the significance of uncertainty or insecurity about hours worked, and the way that policy in different countries has attempted to balance employers' desire for flexibility with employees' requirement for predictability or certainty;
- Chapter 6 examines the significance of hours worked in influencing trends in in-work poverty;
- Chapter 7 describes the results of qualitative research;
- Chapter 8 concludes and makes recommendations.

Box 2.1: The choice of comparator countries

A key aim of this report is to consider the extent to which trends and patterns in hours worked in the UK are common to, or differ from, those seen in a number of other countries. Rather than examine trends across a large number of countries, which might mean that lessons are difficult to discern, we focus on four countries that might be seen as useful comparators in one way or other for the UK. These four are France, Germany, Sweden and the US.

We choose these four because, whilst they are not too dissimilar in relation to broad measures of national income or headline measures of labour market performance, they do differ in terms of both the institutional settings that regulate working time and in terms of labour market and welfare state institutions more generally.

Take working time regulation first. In terms of the typologies of working time institutions (Eurofound, 2016), France is characterised as belonging to a group of countries (known as following an ‘adjusted-mandated’ process of working time regulation) in which statutory legislation is the most important institutional level in determining working time standards, (although adjustments may take place through sectoral collective agreements). Germany and Sweden form part of the group of countries adopting a ‘negotiated’ approach to work time arrangements. In these countries, working time standards are set mainly by collective bargaining agreements, usually at sectoral level, with legislation setting the general framework for these negotiations. The UK and the US follow the ‘unilateral’ model, where legislation plays hardly any role in the definition of working time standards and bargaining structures are highly decentralised; instead, working time duration and organisation are usually stated in individual employment contracts, and tend to reflect the conditions determined and offered by employers.

The countries differ too in other institutional aspects of labour market regulation and social welfare policy.

- Sweden, like other Nordic countries, is characterised by strong, universal social benefits. Dual-earner households are encouraged in part through generous family policies (childcare and generous career interruption benefits), and well-developed active labour market policies. Industrial relations are organized with trade unions and employer associations that are highly self-regulating.
- France and Germany, whilst distinct in many specific aspects, are often characterised as belonging to the ‘continental European’ institutional model. They are generally characterized by high spending on both investment-related and compensatory social policies (unemployment benefits and old age insurance). But in contrast to the Nordic countries, French and German welfare systems are more oriented towards a single-earner model, with less focus on common employment rights. Welfare benefits and labour market regulations privilege those who are already employed and adequately paid (via contributory social security systems), at the expense of labour market outsiders such as young people, women and migrants, who are more typically found in part-time or temporary forms of work.
- The UK’s labour market is comparatively deregulated, and collective bargaining is weak. The UK’s social protection system is aimed at minimum income protection only, offering a very low ‘replacement rate’ compared to most European countries, and state support for family policies has generally been weak. The UK’s approach to alleviating poverty emphasises labour market activation, combined with relatively generous in-work benefits (and increasing minimum wage).
- The US tends to be characterised as an extreme version of the anglo-saxon model, with lower levels of employment protection, weaker in-work benefits.

Our belief is that these varying institutional models offer helpful comparisons in considering the outcomes of the UK’s labour market.

When presenting data on labour market trends for these five countries, we largely focus on trends among ‘prime age’ employees, those aged 25-54. It is well established that employment patterns for younger and older workers differ substantially across countries, driven by policy factors including education and pensions (for example, state pension ages and the generosity of state pensions vary across countries; there are also significant differences between countries in relation to the percentage of students who engage in part-time work while studying). Whilst these are

important and interesting topics, we unfortunately do not have space to do them justice in the international comparative review, so we focus largely on those of 'prime age' in order to abstract from differences in the education system and retirement possibilities.

2. Recent trends in UK hours worked

This chapter examines trends in weekly hours worked in the UK over the past 25 years. It considers possible explanations for the trends observed, and goes on to consider how average hours worked in the UK compare to those in other countries.

Key points

- Average weekly paid hours worked by UK male employees trended downwards between the late 1990s and the onset of the financial crisis in 2009, declining by around three hours per week, or 6%. In the ten years since then, average hours worked by men have barely changed.
- In contrast, average hours worked by female employees trended upward, relatively slowly until 2008, and slightly more rapidly in the post financial crisis period of 2011-2019.
- Trends in hours worked differ by age group, with average hours decreasing amongst younger employees (both males and females), but tending to increase amongst older employees.
- The decline in average weekly hours worked by males over the period to 2009 is thought to reflect the desire to trade-off paid working time for more leisure time as pay and living standards improve, combined with changes in social norms and labour market institutions. In turn the cessation of the long-run decline in average hours since 2009 may reflect stagnating real wage growth.
- The increase in female hours worked reflects changing social norms around gender and work, improvements in childcare provision, the falling gender pay gap, and increases both in women's educational attainment and service sector employment.
- UK males work fewer hours than those in the US, but more than those in France, Germany and Sweden. These differences reflect historic differences in the policies of the unions in the 1970s, 1980s and 1990s and differences in the regulation of working hours.
- UK females working full-time tend to work longer hours than those in continental European countries. But UK women with children tend to work shorter hours than those in other countries, reflecting childcare costs and aspects of the design of Working Tax Credits.

Average hours worked by male employees declined until 2009, but has remained unchanged since then

Between the late 1990s and the onset of the financial crisis in 2009, the average weekly paid hours worked by men declined by around three hours per week, a decline of 6% (Chart 2.1). In the ten years since then, average hours per week have remained fairly constant at just over 39.

Mechanically, the decline in average hours is explained by a reduction in the proportion of men working long hours (45 or more), offset by an increase in the proportion of men working a more standard 40 hour week, and an increase in the proportion of men working part-time (see chart 3.1 in

the next chapter). But the hours worked by the typical (median) male have remained unchanged at 40 per week over the past 25 years.

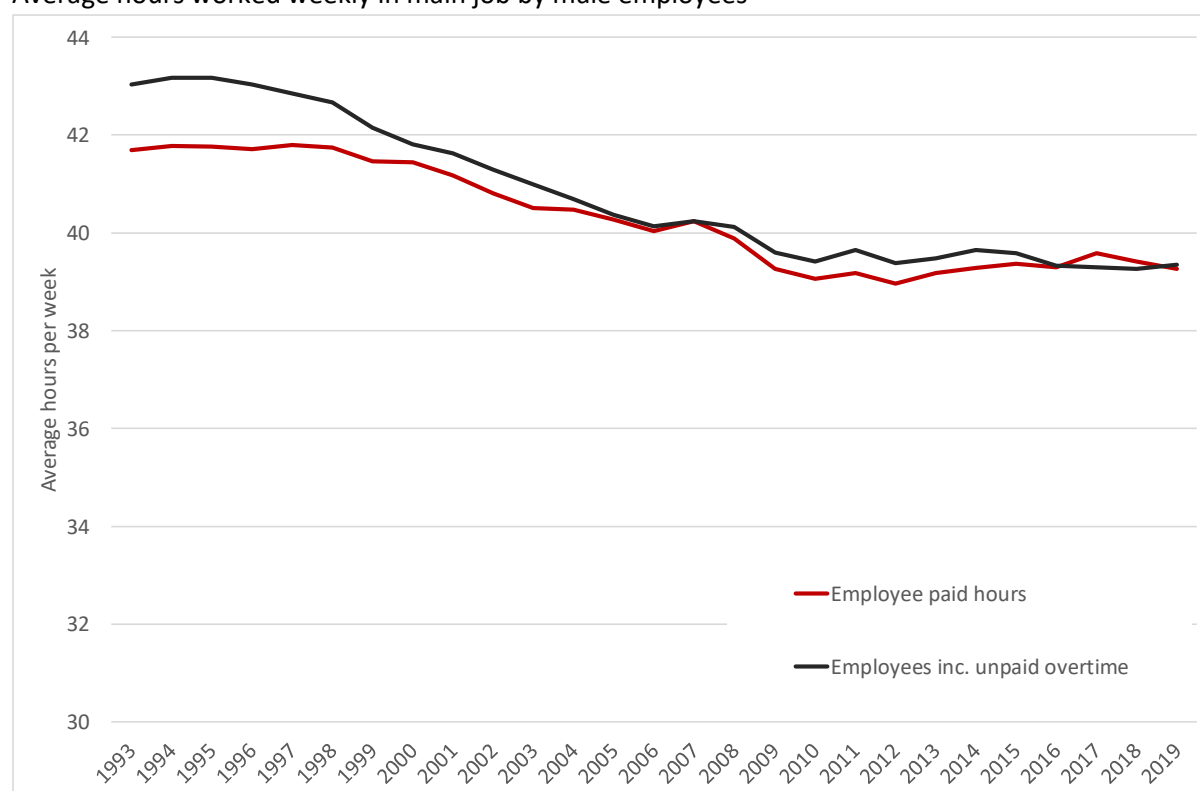
The decline in male hours worked to 2009 was a continuation of a longer trend dating back to the industrial revolution. By the beginning of the 20th century, average weekly hours worked were around 56; by the late 1940s they were 46; and they then declined throughout the second half of the 20th century¹.

The results described here (and in the female analysis below) are for hours worked in an employee's main job. Incorporating hours worked in second or subsequent jobs makes no difference to the trend.

The broad trends outlined here are common across three major UK administrative surveys classified as National Statistics – the Labour Force Survey, the Annual Survey of Hours and Earnings, and the Family Resources Survey.

Chart 2.1: Average male employee hours declined until 2009

Average hours worked weekly in main job by male employees



Source: FAI analysis of LFS

Average hours worked by females have been on an upward trend

The trend in weekly hours worked by women is quite different (Chart 2.2). Average paid hours trended upward, albeit slowly – from 1993 until 2008. After a slight dip between 2008 and 2011, average hours worked increased from 30 in 2011 to 31.5 in 2019.

¹ These figures are from the Bank of England's 'A millennium of macroeconomic data'. Unfortunately, separate breakdowns for men and women are not available, and some of the observed decline in 'average hours' reflects the compositional affect of more women entering the labour force.

The increase in hours largely reflects a fall in the proportion of females working part-time. There has been relatively little change in the average or median hours worked by a full-time female.

Chart 2.2: Hours worked by female employees have been on an upward trajectory

Average hours worked weekly in main job by female employees



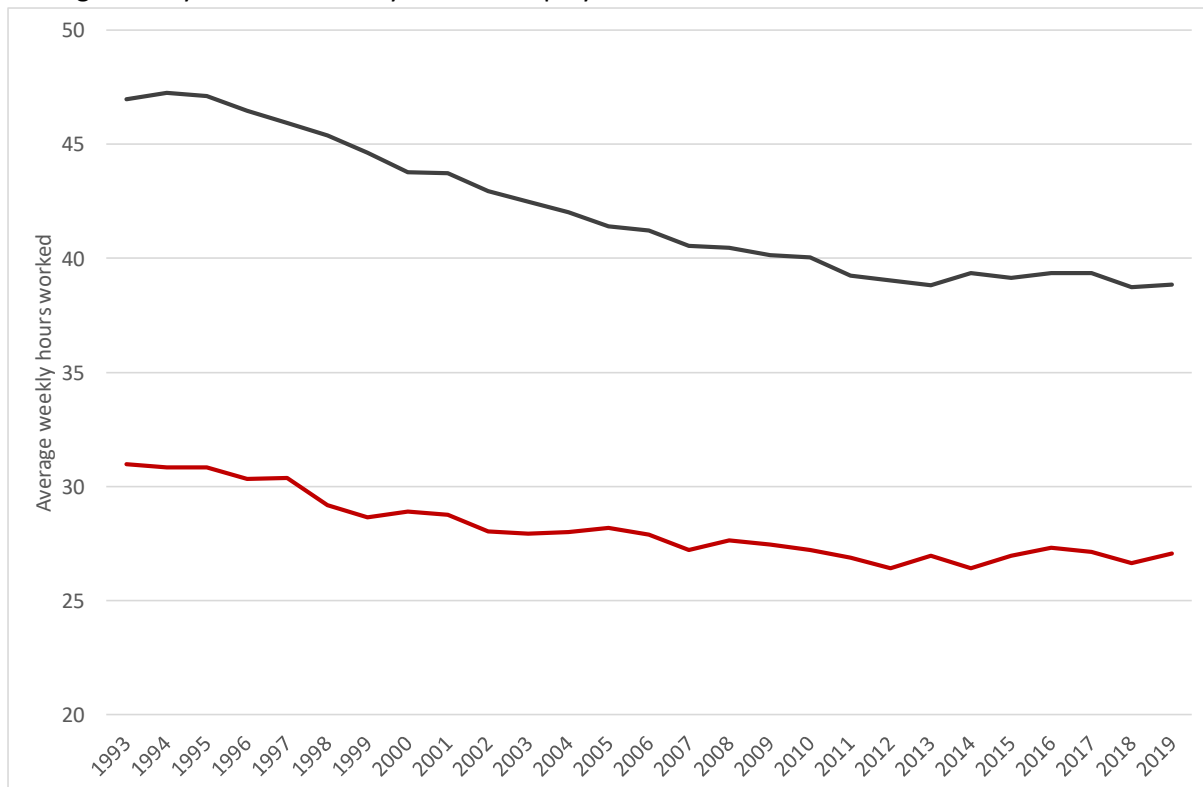
Source: FAI analysis of LFS

Average hours worked by the self-employed have declined for both males and females (Chart 2.3). For men, the decline between the mid-1990s and 2010 was substantial – a decline of 6 hours per week, bringing average hours worked by the self-employed into line with employees. Since 2010, average hours worked by the male self-employed have remained largely unchanged, mirroring the position for male employees.

For women, the decline in average hours by the self-employed has been less substantial, but nonetheless significant – a decline of around 3 hours per week to 2010, followed by a plateauing. The trend amongst female self-employed is thus quite different from the trend for female employees, which have been on an upward trend.

Chart 2.3: Average hours worked by the self-employed declined substantially until 2010

Average weekly hours worked by the self-employed



Source: FAI analysis of LFS

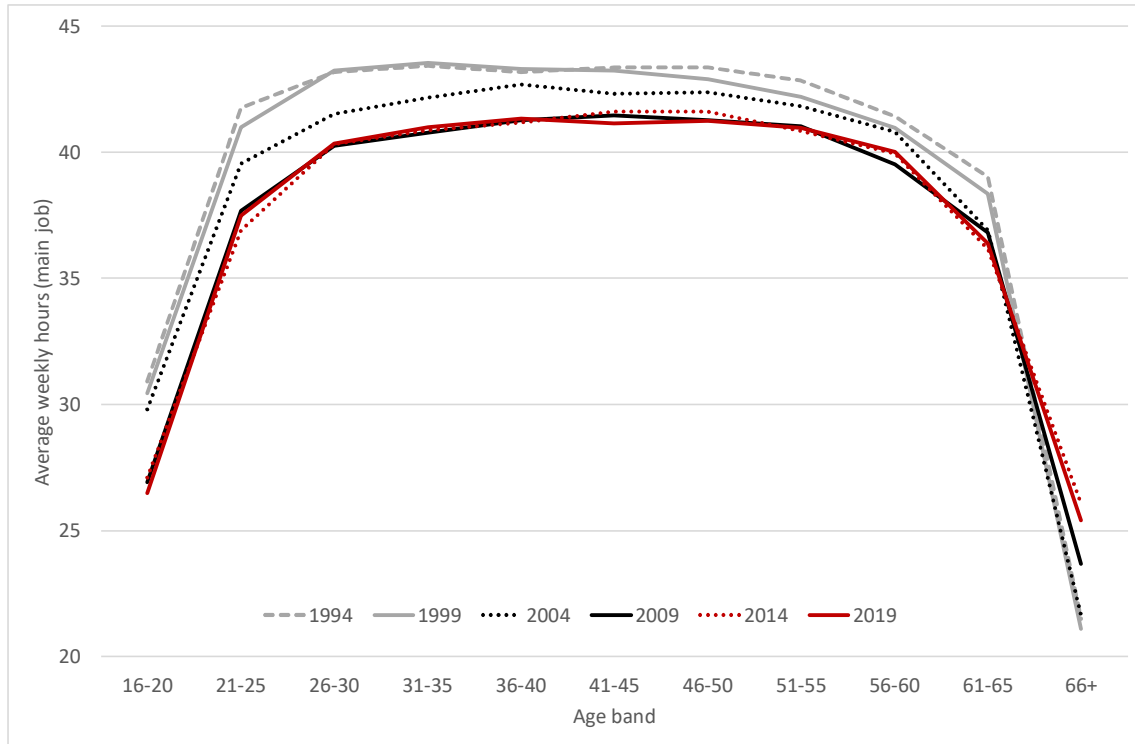
Trends in hours work differ for the young and old

Men work fewer hours on average at the beginning and end of their working lives (Chart 2.4). But the decline in working hours over the 10-year period from the late 1990s to late noughties was common to all men aged under 65 or under. This pattern is different amongst those aged over 65, for whom average hours worked have increased from 21 to 25 over the past 25 years.

The increase in average female hours worked is common to those aged 26 and above. But the pattern is different for the under 26s, whose average hours have fallen. This is particularly the case for those aged 16-20, whose average hours have fallen from 26 to 21 over the course of the last 25 years – a decline of 19%.

Chart 2.4: Hours worked have decreased amongst men aged below 66, but increased for older employees

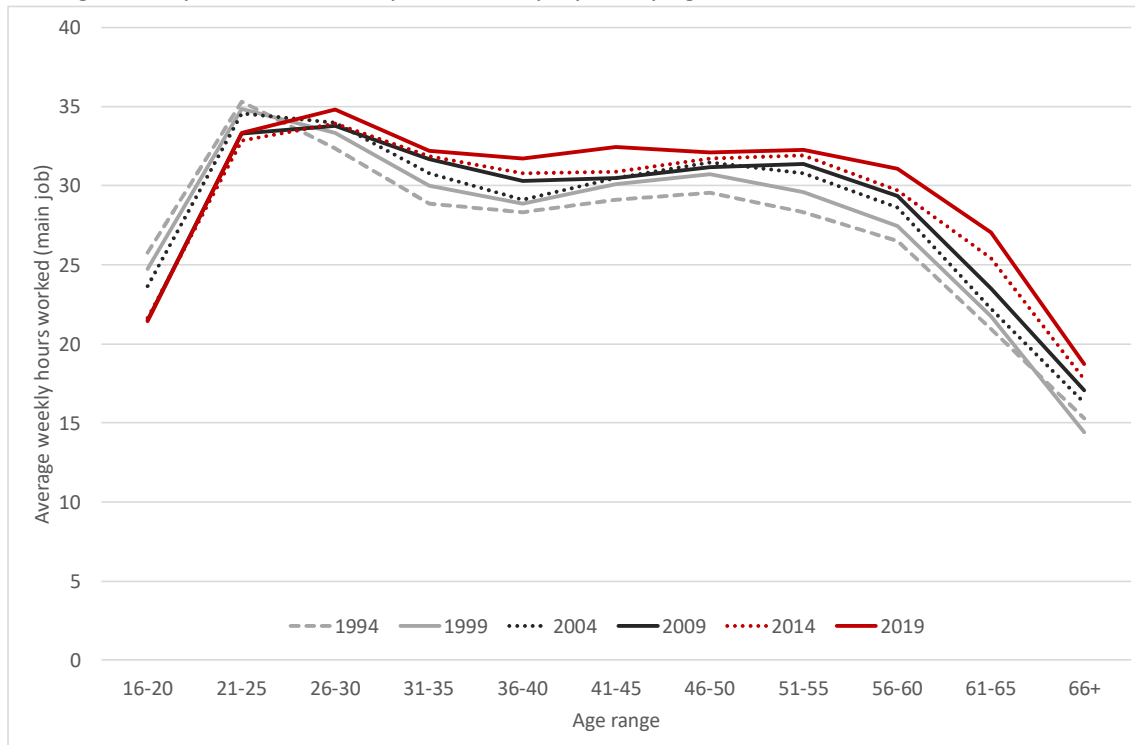
Average weekly hours worked by male employees by age



Source: FAI analysis of LFS

Chart 2.5: Hours worked by younger female employees have decreased

Average weekly hours worked by female employees by age



Source: FAI analysis of LFS

Decreases in male hours worked prior to 2010 are likely to reflect rising household incomes

A variety of different factors influence the hours that individual workers work each week – some of these are set out in Box 2.1.

Which of these factors might help explain the trends we have described thus far in this chapter? The decline in average hours worked by men shown in Chart 2.1 is a continuation of a much longer trend, dating back to the beginning of the 19th century if not before, and common to most developed countries. It is partly explained by the desire to trade-off time in paid work for more leisure as real pay, and living standards, improve. Increases in female labour market participation have supported the trend by raising household incomes. But changes to labour market institutions and regulations – such as the EU Working Time Directive – and changes in social norms – for example around the 2-day weekend – have also contributed. The subsequent discussion on reasons why the trend has been more or less marked in other countries – and discussion in the next chapter on whether the trend has been more or less marked for different types of worker – sheds further light on the trend's potential explanations.

The rise in hours worked by females (and the more general increase in labour market participation) are thought to reflect some combination of changing social norms around gender and work (combined with improvements in childcare provision), the falling gender pay gap, and increases both in women's educational attainment and service sector employment (Bangham, 2020).

The post-2010 pay squeeze is likely to explain hours changes in the past decade

Why then did the long run fall in male hours stall in 2010, and why did women's hours increase more rapidly at that point?

Bell and Gardiner (2019) posit that the key explanatory factor is likely to be the unprecedented stagnation in real wage growth that took place from 2009 to 2015. This line of argument is that workers sought longer hours (or to maintain existing hours) to offset the fall in living standards that they had experienced. In the face of economic uncertainty, some workers may have also sought longer hours (or taken less leave) to signal their 'commitment' to their employer (Bangham, 2020). Bangham (2020) also identifies a negative correlation across countries between hourly pay and hours worked between 2008 – 2018: countries that saw the largest falls in real pay saw increased hours worked, while countries seeing real pay increases tended to see decreases in hours worked.

Among females, hours increases have been most significant amongst those living in couples with and without children. For those with children, this may reflect the fact that this group is less likely to be able to reduce their costs – given reduced flexibility for housing and childcare – and thus more likely to seek to increase income by working more. Among females in couples without children, this may support the hypothesis that women's labour supply is responsive to the higher threat of job loss experienced by partners (Harkness and Evans, 2011), although this argument seems less persuasive in the later part of the 2010s when employment growth was high. Another argument put forward for stronger hours growth amongst females since 2010 is that wage growth has been relatively stronger amongst low-paying jobs (as a result of increases in the NMW), and as females are disproportionately represented in these jobs, it has incentivised longer hours among this group (Bell and Gardiner, 2019).

Box 2.1: What factors influence hours worked?

What factors might influence the number of hours that an employee typically works? This box discusses some of the factors that may be relevant.

One strand of the economics literature has traditionally framed the question of 'labour supply' as a trade-off between consumption and leisure. People like 'consumption' (in the broad sense of being able to afford the goods and services that they desire), and this induces them to work more in order to generate the income required to support that consumption. But people like leisure time – or at least, time not working. The individual workers' decision is therefore a reflection of their preferences for consumption over leisure – and will be influenced by factors such as any non-labour income they have (non-labour income potentially enables consumption to happen without the leisure trade-off), and the wage rate.

One limitation with this framework is that it is not obvious how a change in the (after tax) wage rate might affect a worker's labour supply decision. On the one hand, a higher wage means a worker can achieve a similar level of consumption whilst working less – they may therefore reduce their hours of work (this is known as an income effect). On the other hand, a higher wage means that the rewards from working relative to not working increase – this is known as a substitution effect. The substitution effect of higher wages means workers will give up leisure to do more hours of work because work has now a higher reward. It is an empirical question as to whether the income or substitution effect dominates.

The question is further complicated when we consider that labour supply decisions are often made at the household level rather than the individual level. In a given couple, a change in the hours worked or wage of one may influence the hours of the other.

But of course it is not just the supply-side that matters. Employers are likely to have preferences over the hours that their employees work.

Some have argued that, in theory at least, the number of hours that an employer will wish an employee to work might depend on the extent to which the productivity of that worker diminishes as additional hours are worked, and the costs of hiring and managing staff. The more rapidly that productivity diminishes with hours worked, the shorter the hours that employers are likely to offer, in order to minimise production costs. However, if hiring costs are high, it may make sense for the firm to offer longer hours, rather than having many staff on short hours.

But theoretical considerations about productivity might not be so influential in practice; employers' preferences for working hours are likely to be influenced by practical considerations too. Many organizations require a significant amount of coordination of working hours among employees, and this may constrain the extent to which they feel able to offer variable hours.

Firms may need to vary their labour demand in response to fluctuation in demand for their product or service. Where hiring costs are high, they are more likely to want to do that by varying hours of existing employees, rather than rescaling the workforce. Of course, the ease with which firms can do this depends on a range of institutional and other factors. For example, what are the contractual terms of employment, how much power does the employer have in the labour market (large, single 'monopsonistic' employers likely have more power than smaller employers), and the role of trade unions.

More broadly, institutional and cultural factors can also influence average hours worked at an aggregate level. As discussed subsequently in this chapter, both legislation (notably the EU Working Time Directive) and trade union bargaining have influenced working hours in European countries.

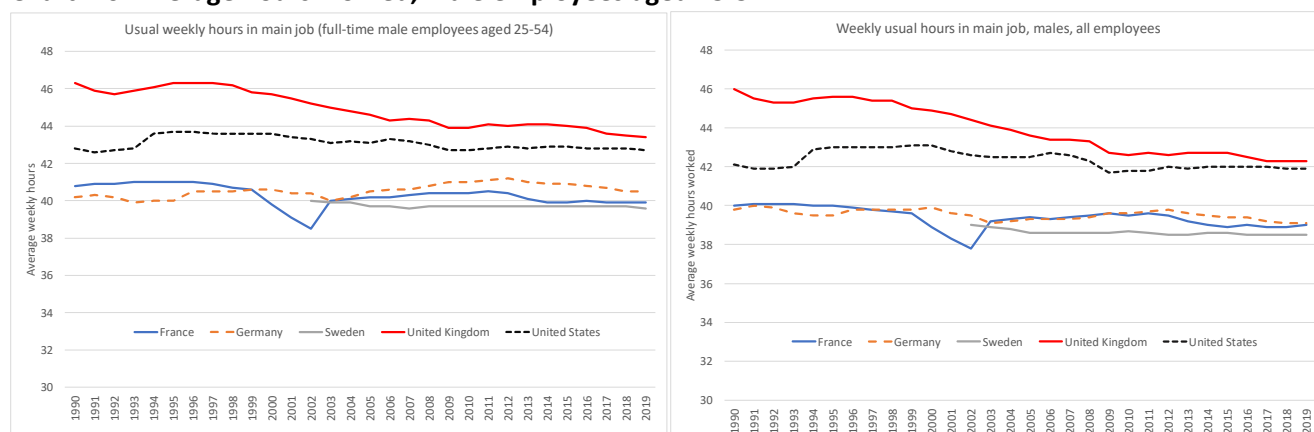
The point of this box is not to explain any specific hours trend, but to make the point that a large variety of factors can influence hours worked. This point is worth bearing in mind throughout the report, as various trends and patterns in working hours are described.

UK males work longer hours than those in France, Germany and Sweden

Chart 2.6 shows trends in average hours worked by men since 1990 across our select group of comparable countries; the left-hand panel shows hours worked by full-time employees only, whilst the right-hand panel shows the results for full-time and part-time employees in combination.

The charts show clearly the decline in average hours worked by UK males from the mid-1990s to the onset of the financial crisis in 2009 discussed above. This decline in hours – which is more marked when we consider all employees, given the increase in proportion of part-time working in the UK – takes the UK much closer to the US in terms of average weekly hours worked. But there remains a clear distinction between the UK and US on the one hand, and the three European countries on the other, in terms of average weekly hours worked. By 2019, average hours worked in the UK and US were 42, compared to 39 in France and Germany, and slightly lower in Sweden².

Chart 2.6: Average hours worked, male employees aged 25-54

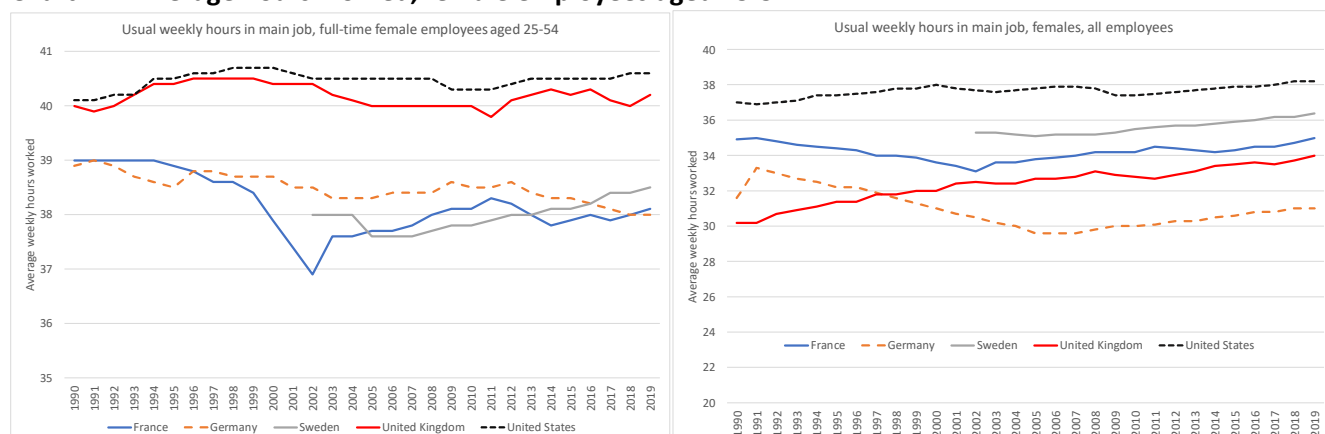


Source: OECD. Notes:- comparable data for Sweden is not available pre-2002

Full-time female employees in the UK work relatively long hours, but this picture changes when we consider all females

Among full-time female employees, the country differences paint a similar story to that for males – the UK and US post markedly higher average working weeks than the three continental European countries (Chart 2.7). But this picture changes when we look at all female employees. Whilst hours worked by US women remain comparatively high, hours worked by UK women are in fact lower than those worked by French or Swedish females.

² Recent research by the Resolution Foundation (Gustafsson et al. 2021) suggests that working hours are similar in the UK to Germany, and in fact lower than average weekly hours worked in France. However, this seeming contradiction with the analysis presented here reflects that their analysis includes males and females, and all age groups, together. Thus higher estimated working hours in France will reflect factors such as greater part-time participation in the UK labour market by students, and lower average working hours of women with children (discussed further below). In summary therefore, there is no contradiction – our study and the Resolution Foundation study are measuring hours worked very differently.

Chart 2.7: Average hours worked, female employees aged 25-54

Source: OECD

Why do UK employees work longer hours than those in Europe?

What factors explain these country differences? We start by examining reasons why weekly hours worked are generally longer in the US and UK than European countries for males and full-time females, and then go on to consider the more specific patterns in relation to female employees.

Some scholars (e.g. Prescott, 2004; Rogerson, 2006) have argued that differences in hours worked between European countries and the US are due to higher rates of labour taxation, and more generous social security policies, in Europe. But these papers have largely been concerned with comparing annual hours worked per person within a country, rather than weekly hours worked by those in employment. The patterns therefore reflect employment rates and annual leave, as well as weekly working hours. Differences in labour taxation might conceivably influence differences in employment rates across countries, particularly towards the end of working life when labour market participation decisions are particularly sensitive to labour taxation and out-of-work income from pensions (e.g. Erosa et al. 2012).

Others have argued, convincingly, that it is institutional differences – particularly in relation to unions, collective bargaining and working time regulation – that is likely to play the dominant role in explaining working hours differences across countries (Alesina et al., 2005). This is particularly the case when it comes to looking at hours worked per worker, rather than per individual of working age.

Indeed, the differences between countries should be seen in a historical context. Between the second world war and 1970s, hours worked were broadly similar across Germany, France and the US (Alesina et al. 2005; Blundell et al. 2013). In France, the union movement focussed heavily on reducing hours worked from the mid-1970s. A series of laws during the 1980s forced or created strong incentives for employers to reduce working hours, culminating in the introduction of the 35-hour week in 2000. Similarly, in Germany, unions followed a policy of ‘work less, work all’ following the 1970s oil price shock and into the 1980s.

Today, many of these historical differences in hours negotiations persist in the way that the EU Working Time Directive is implemented in Europe. In the UK, maximum weekly hours are legislated at 48 hours, the maximum permissible under the EU Working Time Directive. Sweden operates a lower limit of 40 hours, which can be extended up to 48 under certain conditions. In Germany, the statutory maximum is a working day of 8 hours (excluding overtime) instead of a weekly maximum.

France's legislation allows for a 35-hour standard week, with hours above this up to a maximum of 48 counting as 'overtime', although not necessarily associated with any premium.

Are there alternative explanations for differences in full-time working patterns across our five countries? In theory at least, differences in hours worked might be influenced by 'income effects', the idea that as incomes increase, workers might choose to work less and instead consume more leisure. But in practice it seems hard to place much emphasis on this explanation, since it is actually in the US where female labour market participation has increased most significantly (and hence where household level income effects might have led to some hours reductions amongst males of the income effect story were to have mileage). Another alternative was offered by Bell and Freeman (2001), who argued that higher hourly wage inequality in the US might incentivise some workers to work longer hours. This theory is very difficult to test in practice, since the factors that reduce wage inequality in the European countries (unions and collective bargaining) are the same factors that also campaign for shorter hours.

The conclusion is that full-time workers in continental Europe today work much less than Americans because of the policies of the unions in the 1970s, 1980s, and part of the 1990s and because of labour market regulations, with the UK falling somewhere in-between.

Childcare costs and the design of in-work tax credits may explain why UK females work fewer hours than those in comparator countries

Why do UK females work somewhat shorter hours than those in the US in particular, but also Sweden and France, if we consider all employees? Previous research has pointed out that the difference is driven largely by the fact that married women with children, and particularly those with young children (aged under about 7) tend to work shorter hours in the UK than those in both the US and France (Blundell et al. 2013; Jourdain de Muizon, 2018).

In attempting to explain differences in hours worked by married women in the UK compared to France, Jourdain de Muizon (2018) argues that higher childcare costs in the UK are a significant factor, potentially accounting for almost half of the difference in hours worked for this group. Both Jourdain de Muizon (2018) and Blundell et al. (2013) also stress the likely importance of Working Tax Credits in the UK, which have traditionally incentivised women to take-up part-time employment. Jourdan de Muizon also hypothesises that lower rates of labour taxation on prime earners in the UK may provide weaker incentives for second earners to work as many hours as is the case in France.

3. Hours inequality

The previous chapter considered changes in hours worked in very broad terms. But how do hours worked affect earnings inequality? This chapter considers two aspects of hours worked that influence earnings inequality: the variance of hours worked; and the correlation between hours worked and hourly pay.

Key points

- Inequality in male weekly earnings has increased over the past 25 years. A large proportion of this increase has occurred because of changes in patterns of hours worked. Specifically, average weekly hours worked by male employees in low-paying jobs fell substantially between 1994 and 2009, whilst the average hours worked by male employees in better paid jobs fell much less markedly.
- This pattern of changes cannot be explained by offsetting increases in female employment in households in which male hours have declined; nor in any significant way by changes in overtime patterns (although these have influenced more general trends in working time). But the introduction of working time regulation in 1998 does look like a reasonable explanation for part of the trend.
- Inequality in female weekly earnings has in contrast declined. This is largely because of a fall in the proportion of women working very short hours, combined with a relatively faster rise in hours worked amongst low-paid relative to better-paid women.
- Whilst hours changes account for a significant part of recent changes in earnings inequality for both men and women, inequality of hourly pay accounts for a greater proportion of total earnings inequality at any point in time.
- Other countries, notably including France and Germany, have also seen changes in patterns of hours worked that have been associated with inequality rising. As in the UK, low-paid workers in France and Germany used to work longer hours than higher paid workers, but this correlation has tended to 'flip' in recent years, with higher paid workers now tending to work longer hours on average than the less well paid. Explanations for these trends are not yet conclusive.

Inequality of weekly earnings is clearly influenced by people's hourly pay. But hours worked matter too.

How do the hours that people work affect earnings inequality? In a mechanical sense, there are broadly two ways that hours worked can affect inequality of weekly earnings:

- First, the fact that different people work different hours can affect earnings inequality. Even if everyone was paid the same hourly wage rate, there would be earnings inequality if some people worked longer hours than others.
- Second, the correlation of hours worked and hourly pay matters too. If the low paid tend to work longer hours than the more highly paid, then the pattern of hours worked will tend to

be inequality reducing. If on the other hand the relatively lower paid work shorter hours on average, then the correlation of hours and pay will tend to increase earnings inequality.

In this chapter we explore how important these two components – dispersion of hours worked, and covariance between hours worked and pay – are in influencing earnings inequality, and how the relative importance of these factors has changed over time. We also compare these trends with equivalent trends in our comparator countries.

We start by comparing trends graphically, and then use a statistical method to quantify the relative importance of the different factors in determining earnings inequality.

The dispersion of hours worked has narrowed slightly, for both males and females

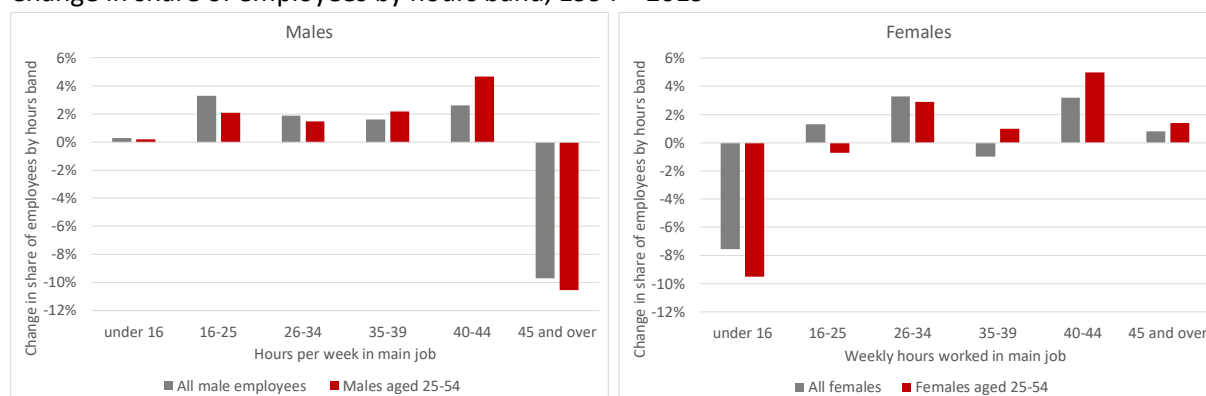
Chart 3.1 shows how the distribution of weekly hours worked has evolved for male and female employees between 1994 and 2019.

Relatively fewer men are working long hours. The share of male employees working 45 hours or more each week has fallen by ten percentage points (from 32% to 22%). The share of men working part-time has increased by about five percentage points (from 5% to 10%), and there has also been growth in the share of men working between 35 and 44 hours (from 60% to 64%). The picture is not particularly different whether we look at all males, or just those aged 25-54. In itself, Chart 3.1 suggests that there has been a small narrowing of the dispersion of hours worked – which we will quantify later on in this chapter.

Amongst women there has been a sizeable fall in the share of female employees working under 16 hours (from 18% to 10%). This has been offset by a rise in the share of females working longer part-time hours, and an increase in the share working 35 hours or more (from 51 to 54%). Again, this picture suggests a narrowing in the dispersion of hours worked, which we will quantify later on.

Chart 3.1: Relatively fewer men are working very long hours, and relatively fewer women are working very short hours

Change in share of employees by hours band, 1994 – 2019



Source: FAI analysis of LFS

The relationship between hourly pay and hours worked has changed significantly for men, increasing earnings inequality....

We've seen that there has been a slight narrowing of the distribution of hours worked among men, which all else equal would be expected to reduce earnings inequalities. But what also matters is what the relationship is between hourly pay and hours worked.

A number of previous studies have in fact found that the decline in average hours worked among men has been proportionately larger among men working in lower paid jobs than those in higher paid jobs (Belfield et al. 2017, Blundell et al. 2018, Clarke and Bangham, 2018).

Our analysis confirms this relationship, but only for the period until 2010 (Chart 3.2). Back in 1994, the relationship between hourly pay and hours worked was negative across most of the distribution – the low-paid tended to work longer hours than the more highly paid. But between 1994 and 2009, the average hours worked by the lowest paid fifth of workers has declined significantly, and far more rapidly than has been the case amongst the more highly paid. By 2009, the lowest paid worked on average the same number of weekly hours as the highest paid, with those in the middle of the wage distribution working the longest hours on average. (Chart 3.2).

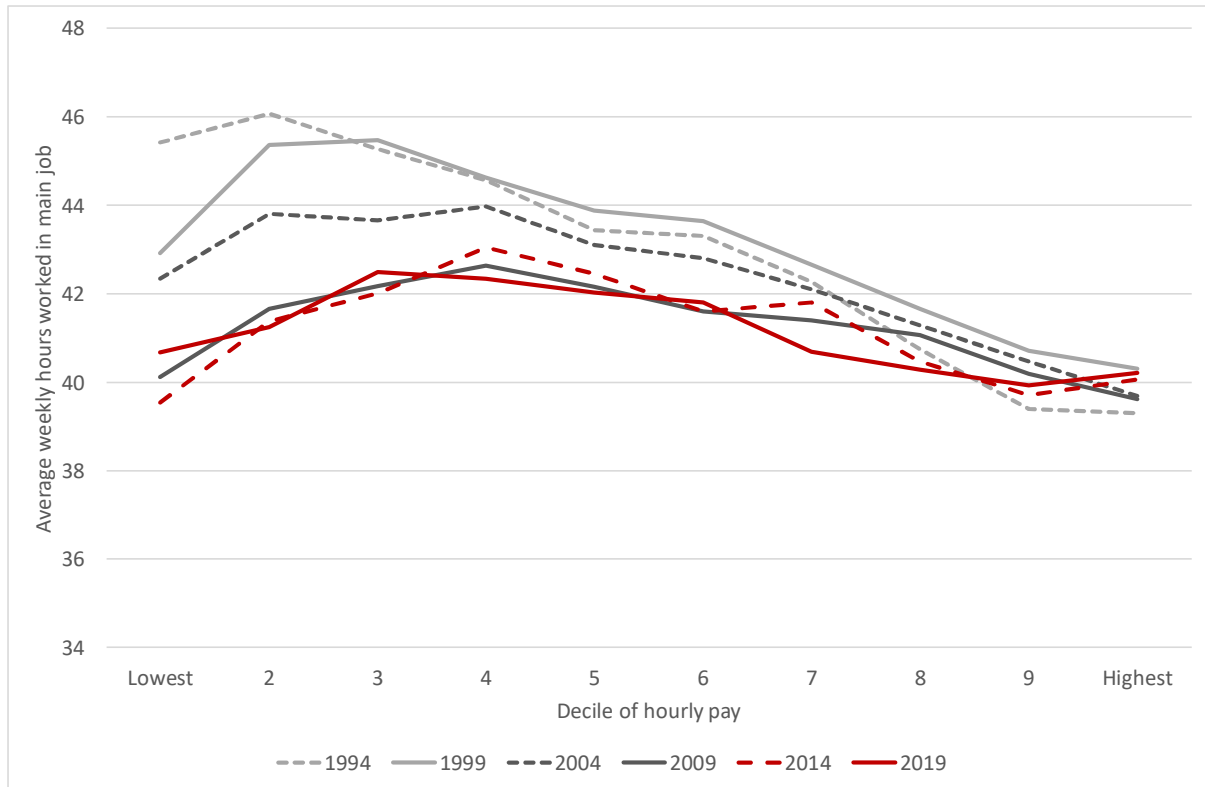
This finding – that hours worked declined more rapidly in low-paying rather than high paying jobs until 2009, but show no real change since then – is consistent when we have looked not only at the Labour Force Survey (LFS) but also at the Family Resources Survey (FRS) and the Annual Survey of Hourly Earnings (ASHE). The trend is also observed whether we look at all males, or focus on those aged 25-54. The general pattern also exists if we look at median rather than mean hours, implying that the trend is not simply driven by a fall in the share of men working very long hours in the lowest pay deciles³.

Why might the hours worked by low paid men have declined between 1994 and 2009 so much more rapidly than the hours worked by middle and higher paid men? Box 3.1 discusses some potential explanations. It rules out the idea that reduced working time amongst low-paid men reflects increased female participation in the labour market, but concludes that the introduction of working time regulation is likely to have played some role in the trend.

³ Chart 3.2 shows hours worked including paid overtime but excluding unpaid overtime. How does the picture change if we include unpaid overtime? The key conclusion – about changes in hours worked over time – does not really change. Including unpaid overtime, low paid men have seen large falls in hours, whilst high paid men have seen much smaller falls. But the shape of the pay-hours curves is different when unpaid overtime hours are included, because higher paid men tend to work more unpaid overtime. When unpaid overtime hours are included, the relationship between pay and hours was fairly flat in 1994 – men in the bottom decile of hourly pay worked 46 hours per week on average, whilst men in the top decile worked a similar number of hours on average. But by 2009 the curve had become upward sloping – men in the bottom decile of hourly pay worked just over 40 hours per week, whilst men in the top-paying decile worked 45 hours per week.

Chart 3.2: Hours worked declined much more in low paid than higher paid jobs until 2010

Changes in hours worked by decile of hourly wage, prime age men



Notes: For each year, employees are allocated to deciles based on their hourly pay. We then calculate average paid hours (including paid but not unpaid overtime) worked in each decile of hourly pay. Source: FAI analysis of LFS

Box 3.1: Exploring reasons for the decline in hours worked by low-paid men

Why might low-paying male jobs have been associated with such large reductions in average hours between 1994 and 2009, relative to better paid jobs?

We know that the explanation cannot relate to hours changes amongst younger or older workers, because the pattern holds just as strongly for men aged 25-54 as it does for men of all ages.

It might be hypothesised that the reduction in hours worked by low-paid men might reflect an increase in second-jobbing. However, we find no evidence of an increase in the proportion of low-paid men working a second job during the period in question (nor of an increase in hours worked in a second job by those holding a second job).

One possible explanation that has been put forward in the literature is that the trend might reflect changing patterns of female employment. An increase in female labour supply (i.e. employment or hours worked) might in theory cause some men to reduce their hours worked in response to the household level income effect.

If this was a convincing explanation, we would expect that the hours worked by low paid males would have declined less markedly amongst single males or males with a non-working partner than amongst those with a working partner. However, we find no evidence of this pattern, either in the LFS or in the FRS. (As a household level dataset, the FRS lets us examine hours trends amongst low-paid men whilst taking account of the labour supply of those men's cohabiting partners; when we do this, we find that the decline in hours worked by low-paid men is similar regardless of men's cohabiting status and the labour market status of their partners).

So we discount increases in either second-jobbing or female labour market participation as reasons for the trend.

Another potential explanation relates to the introduction of the European Working Time Directive (WTD). The WTD was implemented in the UK under The Working Time Regulations (WTR) 1998. Amongst its main provisions is the establishment of a 48 hours maximum working time in any 7 day period (Article 6) unless the worker has given their employer their agreement to "opt out" of the 48 hour limit (Article 22).

The proportion of men working more than 48 hours per week declined from 22% in 1998 (when the WTR was introduced) to 13% in 2009. This doesn't say anything about the impact of the WTR in this trend – the decline in long hours working could have reflected a societal trend that would have happened anyway. But interestingly, the proportion of males working longer than 48 hours had been increasing slightly in the years leading up to 1998. So something happened in 1998 to cause the incidence of long hours working to begin to decline, and the WTR is the obvious candidate. Moreover, hours worked in the transport sector, which was initially exempt from the WTR until 2003, only began falling after 2004, when the WTR applied (BIS, 2014). This strengthens the argument for saying that the WTR did have a material impact on long hours working and hence average hours worked.

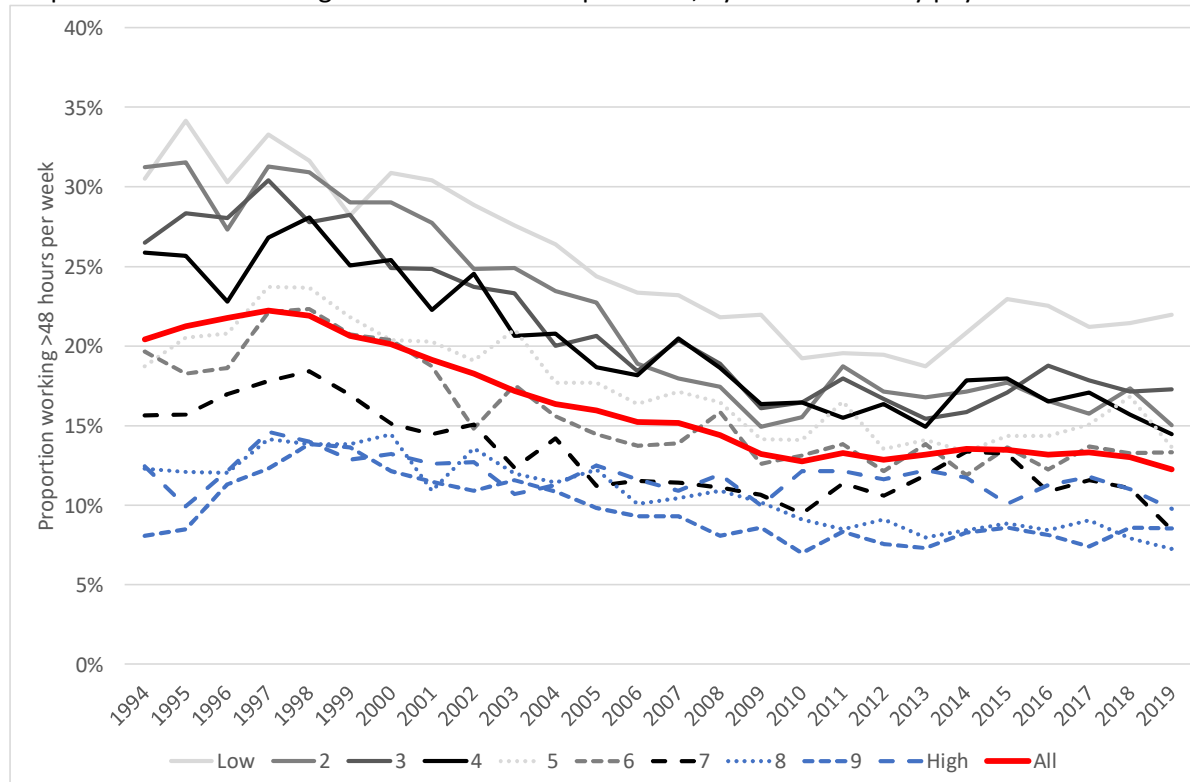
And what is interesting in trying to explain the pattern of working time change across the distribution of pay is the observation that, back in 1998, long-hours working was far more prevalent amongst jobs in the bottom decile of hourly pay relative to jobs further up the pay distribution (Chart B3.1). In other words, assuming the WTR did have an impact on working hours, we would anticipate it to have a bigger impact on working hours in low-paid jobs than high-paid jobs, simply because of the fact that a greater proportion of low-paid jobs would have been affected by it (and this may be accentuated by the fact that some higher-paying occupations, notably various managers, are exempt from the WTR).

We cannot therefore ‘prove’ definitively that the WTR caused the greater proportionate decline in low-paid male working hours compared to high-paid working hours, nor say what proportion of the differential can be accounted for by the WTR. But there is suggestive evidence here that it did play a role.

(As well as the introduction of Working Time Regulation in 1998, the other major labour market development in 1999 was the introduction of the UK’s minimum wage. Some research has linked this to reductions in hours worked – see for example Stewart and Swaffield 2008. This may therefore be a further contributing factor to reductions in hours worked. But the working time regulation seems a more convincing explanatory factor, given that the trend of declining hours of work seems significantly driven by the reduction in long hours working.)

Chart B3.1: Working Time Regulation may account for the greater proportionate fall in average working hours in low-paid relative to high-paid jobs

Proportion of men working more than 48 hours per week, by decile of hourly pay



Source: FAI analysis of LFS

A final potential explanation is on the demand-side, and relates to overtime working. Several scholars have documented a significant decline in the proportion of employees working paid overtime between the late 1990s and 2010 (Bell and Hart, 2019, for example). Bell and Hart (2019) provide a variety of explanations for falling incidence and amounts of overtime, including firms’ attempts to control costs, combined with a decline in collective bargaining (although of course the decline in overtime incidence may also reflect the WTR described above).

We can assess the extent to which overtime changes account for the observed changes in male hours worked by recognising the following identity:

$$\bar{H}_t = \bar{B}H_t + (\sigma_t \cdot \overline{OH}_t)$$

Average hours worked in a given year, \overline{H}_t , are a function of average basic hours worked \overline{BH}_t , plus average paid overtime hours worked \overline{OH}_t , weighted by the share of those undertaking paid overtime, σ_t .

Chart B3.2 decomposes the change in total hours worked between 1994 and 2009, for each decile of hourly pay, into a part due to the change in average basic hours, the part due to a change in average overtime hours, and a part due to change in the share of workers working overtime.

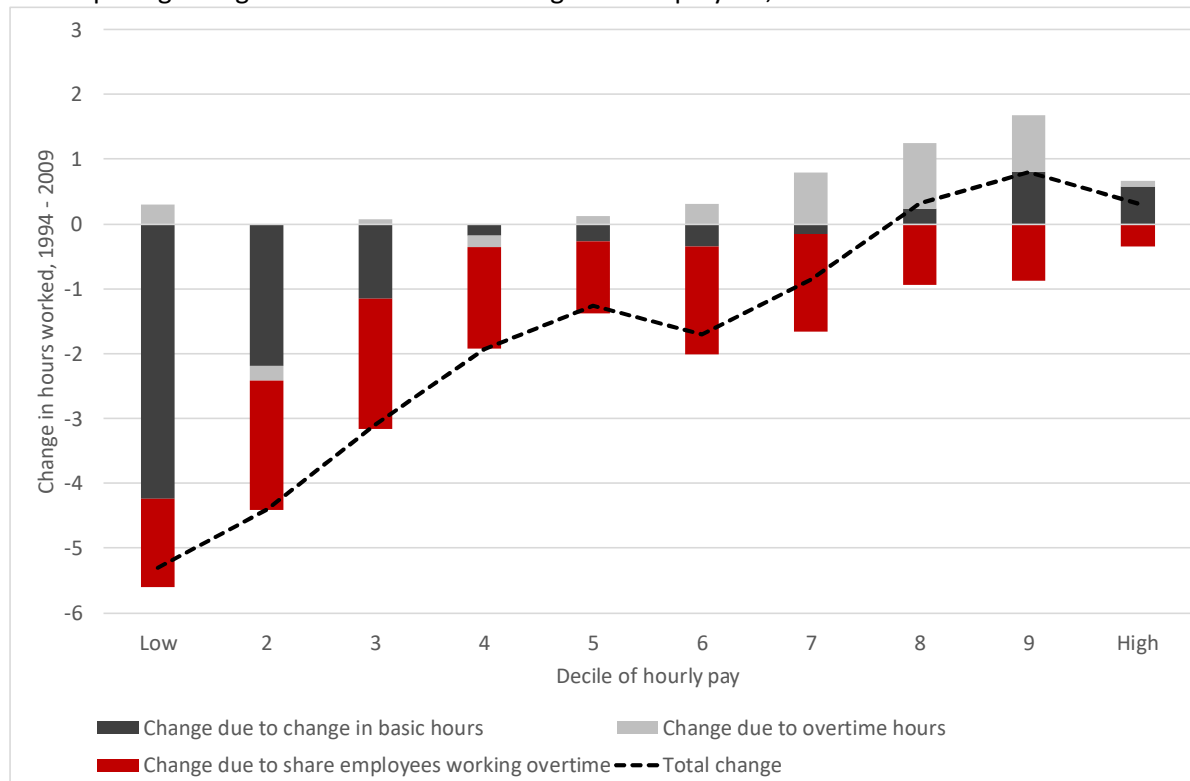
This shows that the fall in the proportion of employees working overtime can explain some of the fall in average hours worked, but that this effect is fairly evenly felt across the bottom seven deciles of hourly pay (less so at the top of the distribution). In contrast, it is the substantial fall in basic hours that explains much of the disproportionate fall in hours worked in the bottom fifth of the distribution.

So whilst overtime changes have been an important source of change in the labour market, they explain only a small part of the disproportionate fall in hours worked at the bottom of the distribution.

In summary therefore, we cannot comprehensively ‘explain’ why hours worked by low-paid men fell by so much more than by better-paid men. But the introduction of working time legislation seems likely to have played a role, given the timing of this legislation relative to the beginnings of the trend itself. Changes in the availability of overtime also play a role in explaining shifts in working patterns, although the extent to which this reflects demand-side (employer) factors or is also an artefact of the working time regulation is not clear.

Chart B3.2: Changes to overtime account for some of the rise in ‘hours inequality’ between 1994 and 2009

Decomposing changes in hours worked among male employees, 1994 – 2009



Source: FAI analysis of LFS

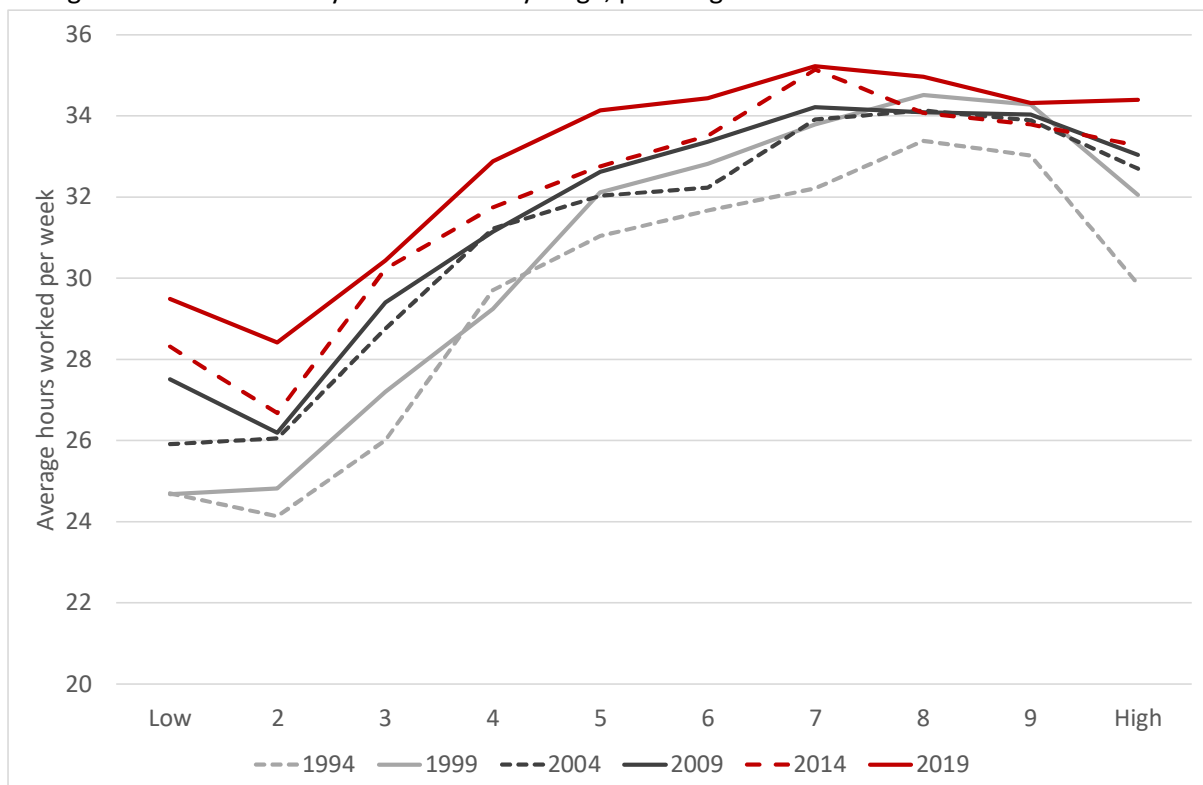
...But amongst women, changes have been less significant, and tended to reduce earnings inequality

Chart 3.3 examines the relationship between hourly pay and hours worked among women. This relationship is positive across most of the distribution – high-paid women tend to work longer hours on average than lower-paid women. The covariance between hours and pay thus serves to increase weekly earnings inequality.

There has been no significant change in the shape of this relationship over time. Average hours worked have increased across the distribution of hourly pay.

However, the slope has become slightly flatter – the average hours worked by low-paid women has tended to increase proportionately more than it has amongst more highly paid women. So, whilst the covariance of pay and hours is still leading to inequality increasing, it serves to increase inequality somewhat less now than was the case 25 years ago⁴.

Chart 3.3: For women, hours worked have increased relatively faster in low-paid jobs
Changes in hours worked by decile of hourly wage, prime age females



Source: FAI analysis of LFS

⁴ As was the case with men, Chart 3.3 includes paid overtime but excludes unpaid overtime. Including unpaid overtime changes the shape of the curves, which become 'steeper' – high paid women tend to work more hours of unpaid overtime than less well paid women. But it does not change the relationship between the curves over time.

Formalising the contribution of hours worked to weekly earnings inequality

The impact on earnings inequality of changes in patterns of hours worked can be formalised. Box 3.2 explains how we can decompose the total change in earnings inequality into parts due to variance in the level of hours worked, variance in hourly pay, and the correlation between pay and hours worked.

Box 3.2: Decomposing the change in earnings inequality

The variance of the log of weekly earnings can be decomposed into a part due to variance in hours (h), a part due to variance of wages (w), and a part due to covariance between wages and hours:

$$\text{Var}(\log(w*h)) = \text{var}(\log(w)) + \text{var}(\log(h)) + 2\text{cov}(\log(w), \log(h))$$

The first part of this equation recognises that variance in weekly earnings is partly a function of the variance in hourly wages, w (greater dispersion in wages will lead to greater dispersion in weekly earnings). The second term recognises that variance in weekly earnings is partly also a function of the variance in hours worked (greater variance in hours worked might be expected to increase variance in weekly earnings, even if it was uncorrelated with hourly pay). Finally, the third term recognises that the covariance of wages and hours is also important – this is the part of the identity which quantifies the contribution of the patterns shown in charts 3.2 and 3.3 to overall earnings inequality.

Chart 3.4 shows the results of this decomposition for males. Variance of weekly earnings was slightly higher in 2019 than in 1994, which much of the increase occurring between 2002 and 2009.

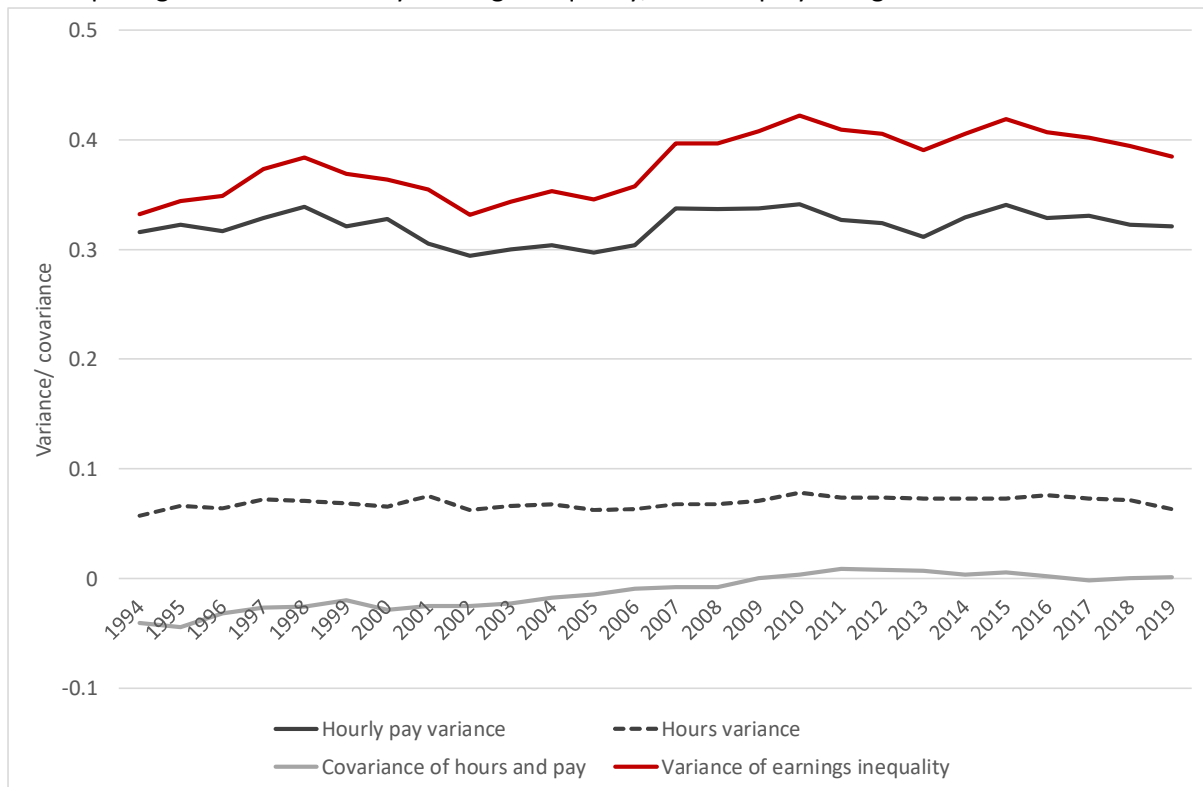
Most of this variance (inequality) in male weekly earnings is due to variance in hourly pay. Variance in hours worked in itself contributes little to earnings variance, reflecting the fact that the majority of men continue to work full time. There have been marginal increases in the variance of hourly pay and the variance of hours worked over the period in question.

What about the covariance of pay and hours worked? In 1994, this made a negative contribution to earnings inequality – in other words, the fact that low-paid men tended to work longer hours than higher paid men offset some of the inequality driven by pay and hours individually. But this inequality offsetting role played by covariance diminished over the next 15 years, becoming positive in 2009.

The changing relationship between male wages and hours worked explains 80% of the rise in male earnings inequality over the past 25 years. But in absolute terms, variance in hourly pay accounts for around 80% of the total variance in male earnings.

Chart 3.4: Changes in hours worked have contributed to growing inequality among men

Decomposing elements of weekly earnings inequality, male employees aged 25-54



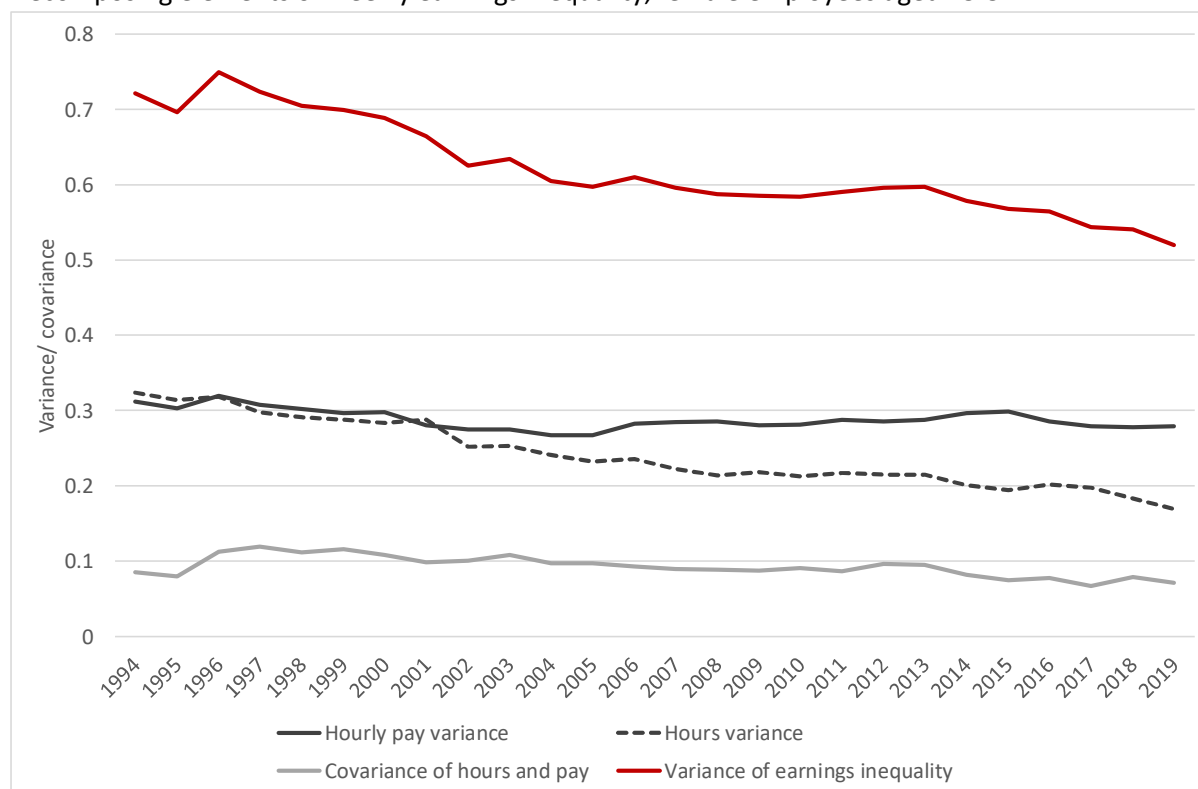
Source: FAI analysis of LFS

Hours changes have reduced earnings inequality among women

Amongst women, the story is very different. Earnings inequality has fallen dramatically (Chart 3.5). Falling variance in hours worked accounts for the lion's share of the overall fall in inequality (recall the reduction in proportion of women working very short hours, as discussed above). But falling variance of hourly pay has also played a role. The slight fall in the covariance between hours and wages has also contributed somewhat to the reduction in earnings inequality amongst women.

Chart 3.5: Earnings inequality has fallen among women, driven mainly by hours changes

Decomposing elements of weekly earnings inequality, female employees aged 25-54



Source: FAI analysis of LFS

The UK is not alone in experiencing an increasing covariance of hours and pay

This chapter has documented that the covariance of hours and pay amongst UK males used to act as a downward force on weekly earnings inequality, but no longer does. At the same time, the covariance amongst women is positive. How do these trends play out in countries other than the UK? Some findings from the literature are discussed in Box 3.3.

The conclusion is that in Germany and France (as in the UK if males and females are considered in combination), hours worked have gone from being an 'equalising force' to an un-equalising one. In other words, a previously negative relationship between hours and wages has given way more recently to neutral or even positive relationship between hours and wages. In the US, the relationship between hours and wages has been positive since at least as far back as 1990.

It remains unclear what might be behind these trends, and explanations have been wide-ranging. Bell and Freeman (2001) for example claim that the pattern could be explained by the fact that wage inequality is greater in high wage occupations, and that this greater wage inequality might encourage working more so as to signal commitment and increase the chances of a promotion. Chechi et al. (2018) favour demand-side explanations, notably including a weakening of institutions (bargaining, trade unions).

But it is fair to say that the causes of this change are far from settled. And as a result, the welfare implications of these important changes are unclear – do the larger proportionate falls in hours worked by low-paid workers reflect choice on the part of those workers, or do they reflect an inability to secure as many hours as desired?

Box 3.3: The relationship between hours and wages in other countries

What is the relationship between hourly wages and hours worked in countries other than the UK? Bick et al. (2017) find that hours-wage slopes tend to be negative for most countries, but become positive for richer OECD countries in their sample, notably including the US. This finding, that hours-wage slopes tended to be negative but have become positive over time in several higher income countries, is consistent with other research.

Chechi et al. (2018) examine hours-wage slopes in more detail for four of our five comparator countries: the UK, US, France and Germany. They find that the so-called elasticity of hours with respect to wages is stable and positive in the US over their sample period (from 1990 to 2015). For France and Germany, the elasticity of hours with respect to wages has increased over the sample period, as it has for the UK. The increase in the hours elasticity is found to be particularly strong for Germany, where it shifted from a negative elasticity equivalent to that found in France to one of the same magnitude as that in the US. In France, whilst the elasticity increased, it remains only slightly positive by 2015. In all countries, the elasticity is somewhat higher for women than for men.

Chechi et al. conclude 'Our results suggest that the changes in the hour-wage elasticity are an important driver of earnings inequality in the UK, France, and, most notably, in Germany. The covariance between the two variables was negative at the start of our period of study, thus providing an equalizing force that has been eroded as the covariance became positive or nil.

4. Underemployment and overemployment

The previous chapters have shown some quite significant changes in weekly working patterns by different labour market groups. But how do employees feel about these changes – would they prefer longer or shorter hours on average? This chapter considers the extent to which hours changes have been associated with changes in underemployment, a measure of dissatisfaction with hours worked. It also examines overemployment – the extent to which workers work longer hours than they would like.

Key points

- Employees may often not be in a position to specify exactly how many hours per week they work. Employers are likely to exert significant influence on working patterns, potentially driving a wedge between an employee's actual and desired hours.
- Underemployment measures the proportion of employees who would like to work longer hours – whether in their existing job, a new job, or via an additional job.
- Consistent with the findings of others, we find that the underemployed are consistently more likely to be young, working in low-paid jobs, and less well qualified.
- Looking over time, the proportion of workers who are underemployed is not correlated in any way with changes in hours worked. Instead, the rate of underemployment seems to be driven by changes in real net income. The underemployment rate increased substantially in 2009/10 and increased to 2013/14, coinciding with falling real pay and household incomes but largely unchanging patterns of hours worked. Since 2014, underemployment has been falling gradually, coinciding with weak growth in real pay.
- This suggests that underemployment is really a proxy for a more general dissatisfaction with the level of income from work – or the security of that income.
- The increase in underemployment following the financial crisis was concentrated amongst the lowest-paid half of employees; better paid employees experienced relatively little increase in underemployment, despite also being affected by falling real earnings. This might be because the low-paid had less of a buffer between their income and expenditures when the financial crisis hit.
- Underemployment does not appear to be systematically higher in the UK than other European countries, in fact the UK has lower underemployment rates than France and Sweden.
- Being overemployed (working more hours than desired) can also affect wellbeing. There are in fact more people overemployed than underemployed in the UK in 2019 (almost 3 million). The overemployed are more likely to be older, better paid, and work long hours. We find that single women are less likely to be overemployed than single males, but that co-habiting women are more likely to be overemployed than co-habiting men. The presence of young children has particular divergent impacts on male and female overemployment – in families with young children, women are much more likely to be overemployed, whereas males are slightly less likely to be so (compared to equivalent co-habiting people without children).

Underemployment is associated with higher rates of depression and unhappiness

Analysing patterns of hours worked or changes in those patterns over time does not in itself tell us anything about how satisfied workers are with those hours. Workers may wish to work longer hours (they are underemployed) or they may wish to work fewer hours (they are overemployed).

The fact that workers may desire working a different number of hours relative to their current pattern indicates that workers are not necessarily free to choose the number or pattern of hours that they work – employers' preferences matter too. For an employer, it is easier and more cost-effective to vary hours in response to fluctuations in demand than it is to vary employment. Having some employees underemployed may help employers respond to surges in demand or control wage demands (see Bell and Blanchflower, 2019a for further discussion).

The extent to which employers can determine employee hours – in such a way that may create a wedge between employees' desired and actual hours – is likely to depend on an employer's labour market power, relative to their employees. In turn, this relative power will reflect the degree of monopsony⁵, and labour market institutions that determine the ability of employers to set and vary working conditions.

In this section we consider trends in under and over employment, although we focus on underemployment, as this tends to be more prevalent among those with low-incomes.

We adopt the definition of underemployment used by the ONS⁶. Specifically, the underemployed are those who are either:

- Looking for an additional job
- Seeking a new job with longer hours than their current job
- Seeking longer hours in the current job at the same basic rate of pay.

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).

Bell and Blanchflower (2019a) 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 underemployed are more likely to be young, less qualified, and low-paid

Who are the underemployed? Our analysis shows that underemployed workers – those who are working fewer hours than they would like to – are consistently more likely to be young, working in low-paid jobs, be less well qualified (Chart 4.1). These findings are very much in line with others (e.g.

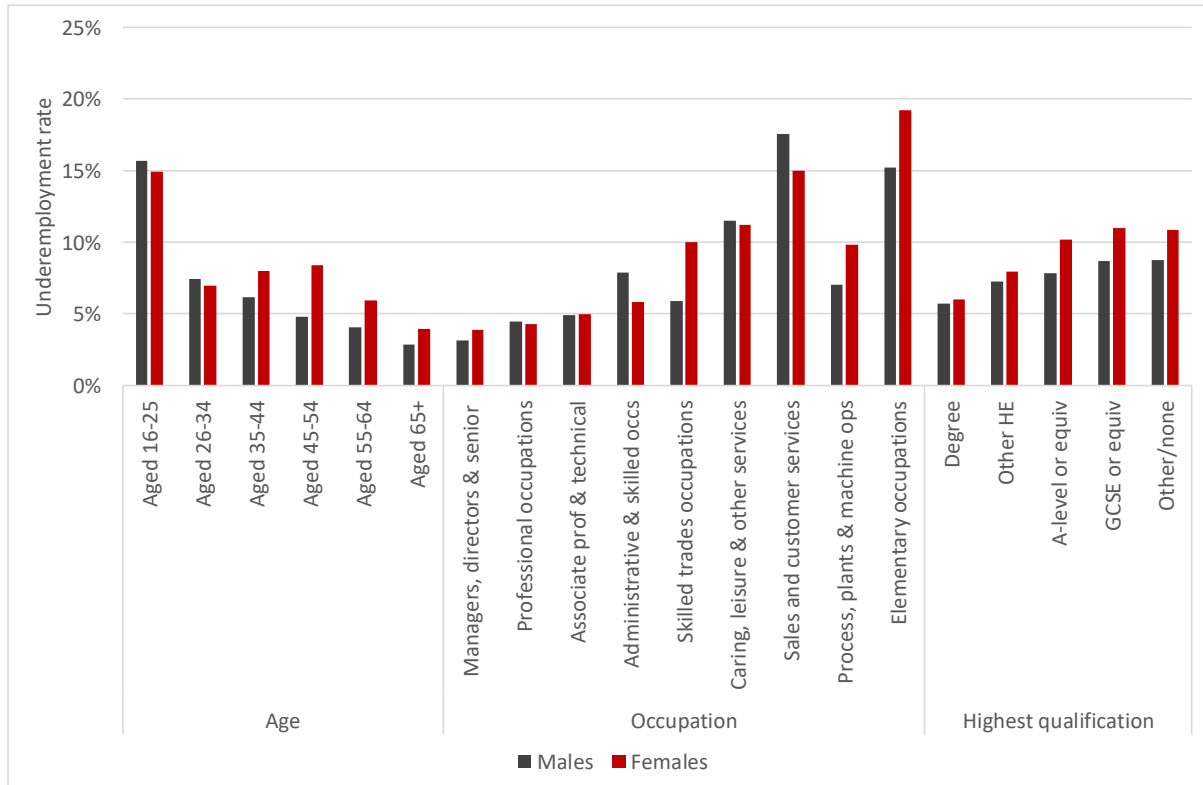
⁵ A monopsonistic labour market is one dominated by a single, or a small number of, dominant employers. The resultant lack of competition in the market for labour can provide a monopsonistic employer with greater power and control over working conditions.

⁶ The measure of underemployment we use here should not be confused with skills underutilisation, which is sometimes also referred to as underemployment.

Bell and Blanchflower, 2013). As we show in the next chapter, underemployment is also higher among those in various forms of insecure work.

Chart 4.1: Underemployment is highest amongst the young and those working in low-paid occupations

Underemployment rate, by age, occupation and highest qualification, 2019



Source: FAI analysis of LFS

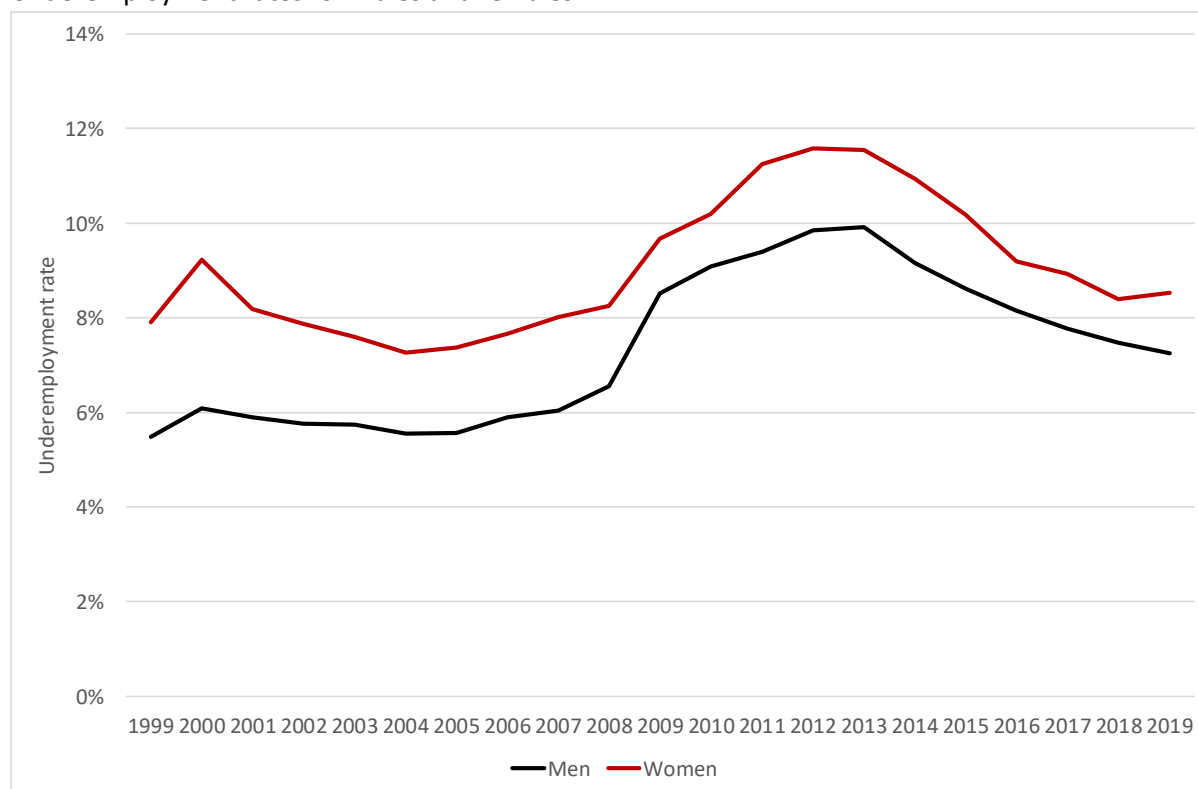
Underemployment peaked following the financial crisis, but remains elevated

What is perhaps more interesting is to consider trends in underemployment over time (Chart 4.2). From 1999 (when comprehensive data on underemployment is first available from) until the mid 2000s, the underemployment rate was fairly constant for men, and declined slightly for women.

For both men and women, the underemployment rate began increasing gradually until 2008, before increasing substantially in 2009, and eventually peaking in 2013. Since then the rate has been declining for both men and women, but remains above the early noughties low (and slightly higher than the pre-financial crisis rate).

Chart 4.2: Underemployment increased following the financial crisis

Underemployment rates for males and females



Source: FAI analysis of LFS

This trend in underemployment over time – low until the mid-2000s, increasing gradually until 2008 before becoming particularly elevated between 2009 and 2015 – is common to all groups of worker: young and old, those with high levels of qualification or few qualifications, and those of different family type.

This trend suggests that, when we look over time, the underemployment rate actually bears little relation to hours worked. Since 2009, underemployment has spiked and then declined again, during a period when hours worked have remained remarkably stable.

The intuitive explanation is that underemployment is really a proxy for a more general dissatisfaction with the level of income from work. Faced with declining real terms earnings, workers expressed a desire for more hours, in order to offset earnings decline. Indeed, Bangham (2020) shows that the initial uptick in underemployment coincided with a slowing of real wage growth, whilst the big increase in underemployment in 2009 coincided with the start of the ‘real pay squeeze’ (negative real wage growth), and that the underemployment rate only began falling in earnest in 2015 once real wage growth turned positive again.

The trend for underemployment to rise substantially in the aftermath of the financial crisis – and for underemployment to remain elevated in 2019 relative to before the financial crisis – is common across the majority of European countries (Bell and Blanchflower, 2019b). The hypothesis that this trend is due largely to trends in wage growth is persuasive. However, it remains unclear in which direction causation might travel. Bell and Blanchflower (2019b) argue that a high underemployment rate suppresses wage growth by creating slack in the labour market. Others argue that weak wage

growth is likely due to other factors, such as weakening productivity, and high underemployment is the result of this weak real wage growth.

Underemployment has risen most amongst the least well paid

Some interesting patterns emerge when we consider how underemployment has changed over time amongst low-paid rather than better-paid employees. At any specific point in time, underemployment is negatively correlated with the hourly wage – in other words, underemployment is higher amongst the low paid than amongst the high paid.

But the post financial crisis increase in underemployment was disproportionately concentrated amongst the lowest paid. In fact, workers in the top half of the wage distribution (i.e. in the top five deciles) experienced almost no increase in underemployment following the financial crisis. This observation holds for both men and women, but particularly for men.

The fact that underemployment increased most after the financial crisis amongst the least well paid is interesting in the sense that the low-paid were not disproportionately affected by weaknesses in real wage growth – slowing real terms wage growth was fairly ubiquitous across the wage distribution (Gregg et al. 2014).

If we accept the hypothesis that underemployment reflects in part dissatisfaction with the real wage, one must also have an explanation as to why underemployment increased proportionately more amongst the low paid than the better paid, when both experienced a similar slowing in real terms wage growth.

One 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. Another possible explanation is that what matters in determining underemployment is disposable household incomes, net of benefits and housing costs, rather than the gross wage per se.

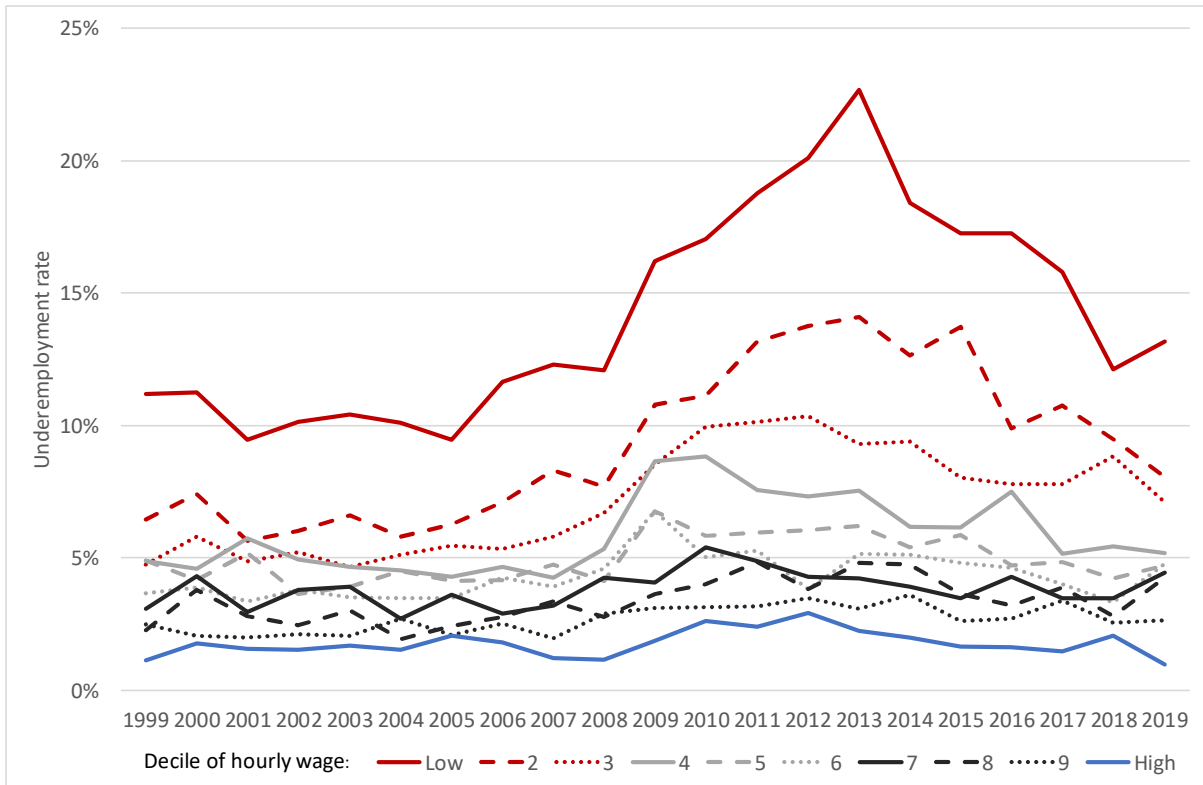
Both of these hypotheses are difficult to test, as none of the major household level surveys include data on underemployment.

Note however that there is no evidence from Chart 4.3 that underemployment increased amongst low-paid males between 1999 and the mid-2000s, despite the fact that, as we showed in Chapter 3, hours worked for this group declined quite significantly during this period.

Further work to determine the determinants of underemployment would be a useful avenue for future research.

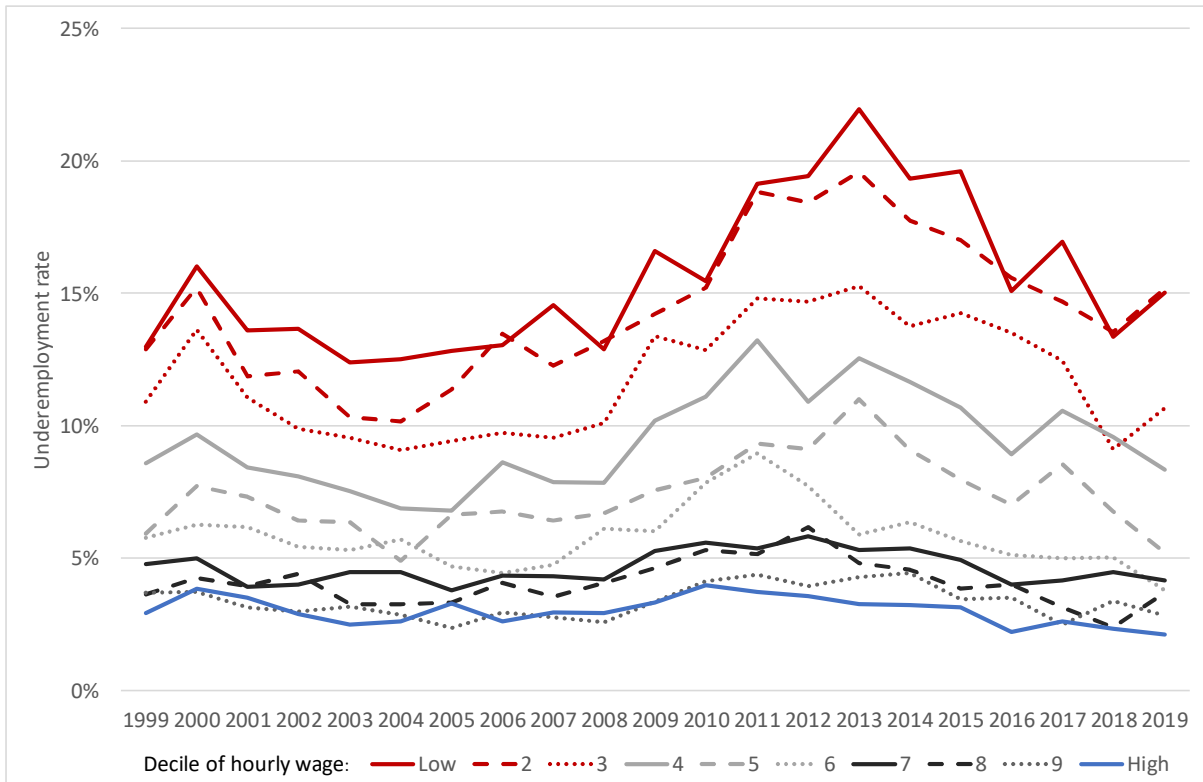
Chart 4.3: Underemployment increased most in lower-paying jobs

Male underemployment rate by decile of hourly wage (aged 25-54)



Source: FAI analysis of LFS

Female underemployment rate by decile of hourly wage (aged 25-54)



Source: FAI analysis of LFS

The UK is not unique in having an underemployment problem

Comparing underemployment rates across countries is somewhat problematic, given a lack of meaningful, comparative data. Box 4.1 discusses trends in involuntary part time employment across our comparator countries, and a more robust measure of underemployment that is unfortunately unavailable for the US.

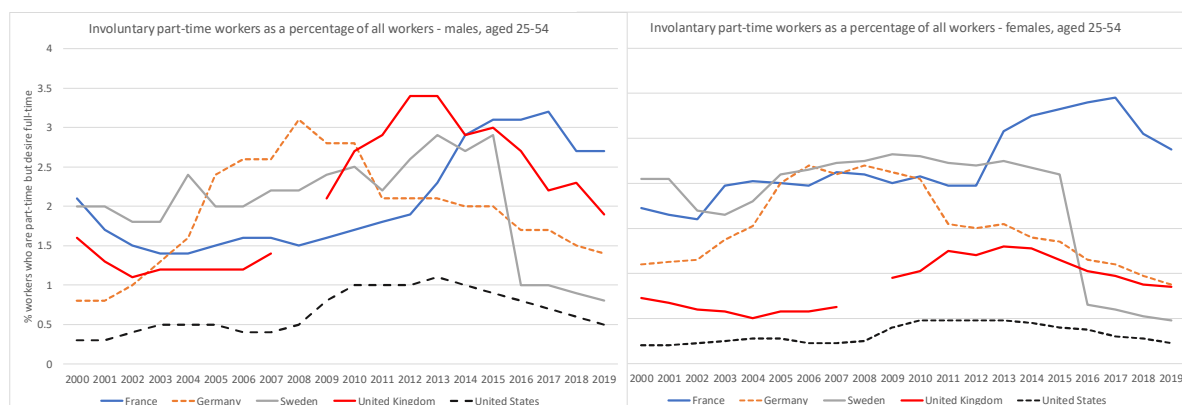
The tentative conclusion is that the UK does not appear to have any more of a problem with underemployment than the other European comparators. In fact, underemployment appears to be significantly higher in France, and to a lesser extent, Sweden.

Higher underemployment rates in France can perhaps be rationalised in the context of the strong emphasis on legislation in determining hours patterns, and the emphasis on the Working Time Directive. It is perhaps more of a surprise that underemployment rates in Sweden appear at least as high if not higher than in the UK, at least in the context of the view that the emphasis on employer – employee bargaining should produce labour market outcomes that are more aligned with employee preferences. But what is also revealed from the evidence in Box 4.1 is that underemployment is correlated with unemployment – a tighter labour market makes it more likely that employees can match their actual hours with their desired hours.

Box 4.1: Underemployment in comparator countries

Comparative and meaningful cross-country measures of underemployment are few and far between. The most widely available measure of underemployment estimated by statistical agencies around the world is the share of involuntary part-time workers in total employment – the involuntary part-time rate (IPTR). This measure only captures the number of part-time workers that wish to extend their hours. It carries no information on the number of additional hours these workers wish to work, nor the hours changes desired by full-time workers. Furthermore, since the share of part-time workers in the workforce varies by country for a wide variety of reasons, the IPTR measure of underemployment can vary for reasons that are not necessarily very indicative of underemployment itself.

The IPTR measure of underemployment is consistently lower for the US than it is for the European countries (Chart B4.1). For the UK, we see the rise in underemployment from the Great Recession before a decline starting in around 2013-2014, as discussed in the main text. Germany exhibits a different trend, with underemployment beginning to rise in the early 2000s and declining from the start of the 2010s. France sees a different trend again, with underemployment continuing to rise until 2017 and falling slightly since them, but remaining at a high level compared to the other countries. Sweden seems to show slightly above underemployment until an abrupt break in the data series in 2016.

Chart B4.1: Involuntary part-time workers as a share of all workers

Source: OECD. NB: UK data is missing for 2008

Bell and Blanchflower (2019b) calculate a more robust measure of underemployment from European labour force surveys. This measure takes into account the number of additional hours that workers desire, and the number of hours fewer that the overemployed would like to work. Unfortunately, they cannot estimate this measure for the US given that no major US survey asks questions about desired hours. They estimate the index for males and females in combination, across all age groups.

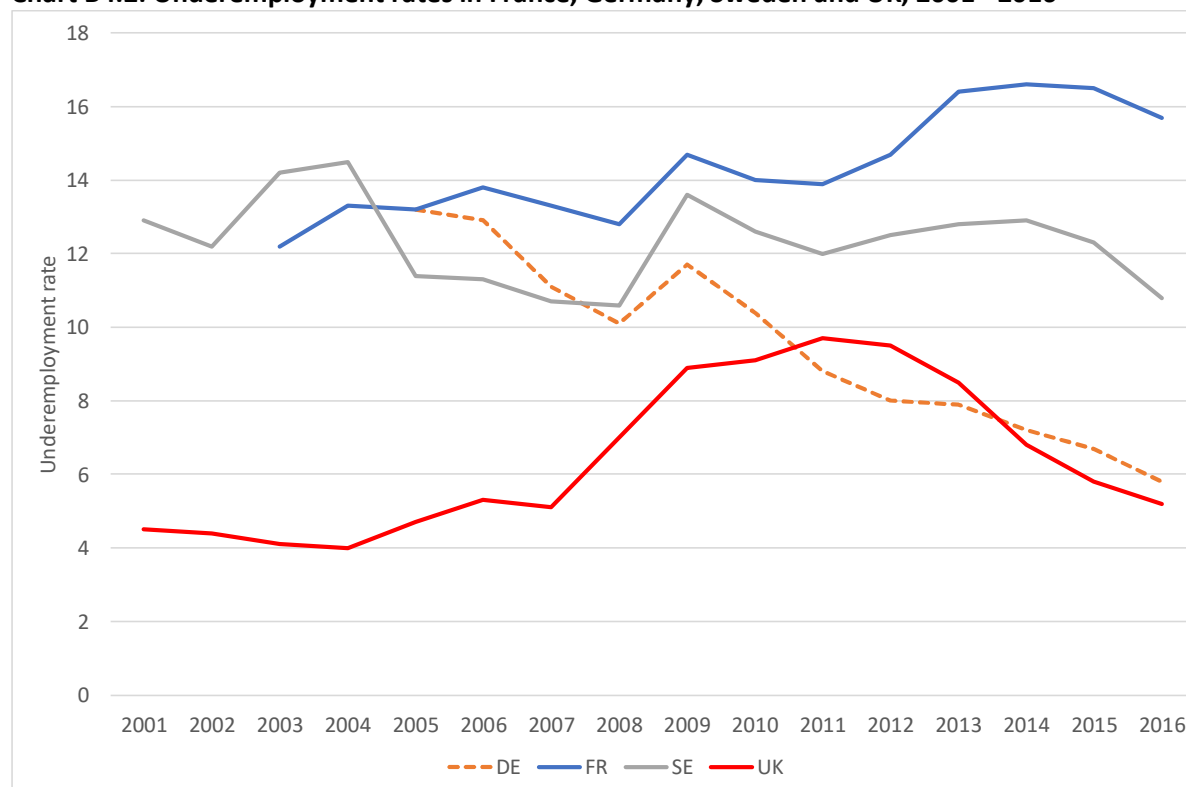
The Bell and Blanchflower index suggests that Germany, Sweden and France each had a similar rate of underemployment in 2004 – which was significantly higher than the UK’s – but have diverged since then (Chart B4.2). Germany has seen a persistent fall in underemployment, ending up with a rate similar to the UK’s. Sweden’s rate has declined marginally but remains high relative to Germany and the UK. The rate in France has increased.

The marked divergence in underemployment rate in France, Germany and Sweden since the mid-2000s cannot be explained by different trends in hours worked, which as we saw previously have been very similar across these countries. But the trend mirrors trends in unemployment over the period. Unemployment in Germany has followed a downward path more or less continuously

from 2004 (when it was 10%) to below 4% on the eve of the Covid pandemic. France and Sweden on the other hand have seen unemployment fluctuating around a higher average (around 9% and 7% respectively) over the same period. This supports a hypothesis that underemployment is correlated with unemployment – a tightening of the labour market, as well as helping people to find work, also enables workers to more closely match their actual and desired hours of work.

Whilst it has been difficult to reach definitive conclusions in this section, the evidence presented here does indicate that the UK is certainly not alone in facing an underemployment challenge.

Chart B4.2: Underemployment rates in France, Germany, Sweden and UK, 2001 - 2016



Source: Bell and Blanchflower (2019)

Overemployment is higher amongst women than men

Being overemployed can also have negative impacts on wellbeing (Bell and Blanchflower, 2019)⁷. The overemployed are those who would like to work fewer hours, even if that meant a loss of pay (in this context, it has nothing to do with concepts of being over-qualified or working beyond a certain number of hours, or working unpaid overtime – it refers simply to people who would like to work fewer hours than they do, even if that entailed less pay).

Around 10% of male employees and 11% of female employees were overemployed in 2019 (Chart 4.4). Thus overemployment is actually more prevalent than underemployment, affecting around 1.4 million men and 1.5 million women.

⁷ A separate strand of research considers ‘work intensity’ where intensity refers to work perceived as being ‘hard work’ or involving high speed or deadline critical work. Green et al. (2021) find evidence that work intensity in the UK increased between 2001 and 2017. The links between work intensity and overemployment have not been explored, as far as we are aware.

The rate of overemployment has not varied as significantly over time as the underemployment rate. It declined slightly, by around two percentage points, during the 2000's until the financial crisis in 2009, a time when underemployment was also trending downwards. The decline in underemployment stalled during the financial crisis and its aftermath – this possibly reflects the effect of stagnating real wages in reducing a desire to work fewer hours. Since about 2013 the overemployment rate has been increasing again, and by 2019 was back at 2002 rates.

We showed earlier that underemployment is higher amongst the low-paid than the high-paid, and higher among the young than the old. Perhaps unsurprisingly, the relationship between pay, age and overemployment is the inverse of this – the overemployed are more likely to be high paid, work longer hours, and more likely to be older. For men and women in the top decile of their respective hourly pay distributions, the overemployment rate is around 16%; compared to around 5% amongst those in the bottom decile of hourly pay. The overemployment rate amongst those aged 16-25 is around 3-4% for both men and women, but this rate increases to 17% - 19% amongst those aged 56-65.

In fact, we find that, even after controlling for hourly pay and weekly hours worked, the young are significantly more likely to be overemployed than older workers. This may be because older workers have higher accumulated savings, and so are more willing to trade-off reduced earnings for more leisure time, compared to the young.

Another interesting fact to note is that women are consistently more likely to be overemployed than men (Chart 4.4). This might be seen as something of a surprise – after all, women work fewer hours on average for less pay – and recall that underemployment rates are also higher amongst women.

In fact it turns out that single women without children *are* less likely to be overemployed than single men. It is amongst women in couples (either married or in civil partnerships) for whom overemployment is higher than men. This is true for women generally, but is particularly the case for mothers with young children.

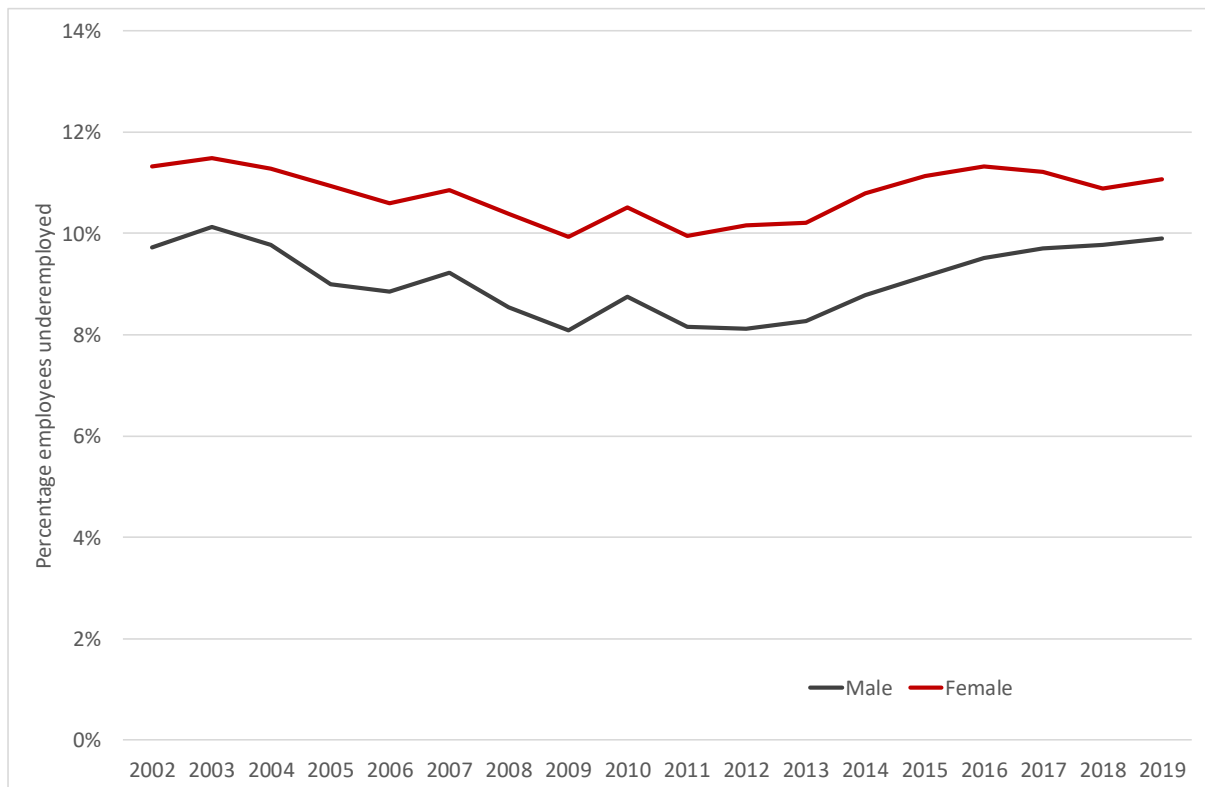
Indeed parenthood seems to have a strong impact on overemployment, but the direction of its effect is different for women relative to men. Overemployment amongst mothers of young children (aged under 5) is much higher than amongst mothers of older children or women without children. But fathers of young children are *less* likely to be overemployed than men without children or fathers with older children⁸.

This finding – that the presence of young children reduces overemployment amongst men but increases it amongst women – is consistent with the idea that women take on more of a role for childcare and thus have a stronger preference for reducing hours further, with men to an extent compensating this by being less inclined to want to reduce their hours.

⁸ This finding can be seen 'descriptively' or 'statistically'. Descriptively, women in couples with young children have an overemployment rate of 19%, around double the rate of women in couples with older children; whereas men in couples with young children have an overemployment rate of 6.5%, compared to 7.5% amongst those with older children. Statistically, we modelled the probability of employment as a function of hours worked, hourly pay, age, sex, marital status, and the number of children in the family by age, which is interacted with the variable for sex. The result of this regression reveals that males with young children are less likely to be over employed after controlling for hours and pay, whereas women with young children are more likely to be overemployed after controls.

Chart 4.4: Women are more likely to be overemployed than men

Proportion of employees wanting to work fewer hours per week



5. Hours insecurity

Up until now the report has considered trends in hours worked on the assumption that hours worked remain relatively stable throughout the year. But the regularity and predictability of hours matter too. This chapter examines trends in 'atypical' or 'precarious' forms of employment contract that provide work that is either temporary or uncertain, unpredictable and/or insecure from one week to the next.

Key points

- 'Atypical' or 'nonstandard' employment refers to employment that diverges from a standard full-time, permanent, regular and single employer set-up. Nonstandard employment includes a variety of working practices including part-time, agency, contract, short fixed term, and zero-hours contracts.
- Nonstandard employment may be more likely to expose workers to a greater degree of insecurity and precarity than standard employment. But disentangling insecure or precarious work from nonstandard employment more generally can be problematic.
- Whether a particular job exposes a worker to feelings of insecurity or precarity is likely to depend in part on characteristics of the individual and the alternatives available to them, as well as their current job itself.
- It is difficult to find evidence in data that job insecurity – or insecurity of hours from week to week – is increasing over time. Moreover there is limited evidence that subjective measures of job insecurity have increased in recent years. But regardless of the trend, it is clear that insecurity of working hours affects a large proportion of UK workers.
- In the UK, workers employed on temporary contracts and zero-hours contracts work less on average than those not employed on those sorts of contract, are paid less, and are more likely to be underemployed.
- We find that temporary contracts and zero hours contracts are associated with lower pay, fewer hours and higher underemployment, even after controlling for a wide range of job and individual characteristics.
- Specifically, we find that underemployment is significantly higher for workers on zero hours contracts and temporary contracts even after controlling for the fact that workers on these contracts are typically younger, less well paid and work fewer hours. This suggests that for a significant proportion of workers on these types of contract, any benefits of increased flexibility are offset by increased inconvenience and insecurity which manifests as a higher rate of underemployment.
- Different countries are taking very different approaches to the regulation of zero-hours contracts, ranging from outright bans in countries including France to light touch regulation in the UK and US, and various conditions attached to their use in Germany.

It can be challenging to disentangle insecure or precarious work from non-standard types of employment

So far, this report has simply considered weekly hours worked. But the regularity and predictability of work matters too – for household incomes, and for job satisfaction and broader measures of wellbeing.

There has been much commentary and concern in recent years about the apparent growth in ‘atypical’ employment. Most if not all OECD countries have seen growth in ‘atypical’ employment in recent years (OECD, 2019), where ‘atypical’ or ‘nonstandard’ employment refers to employment that diverges from a standard full-time, permanent, regular and single employer set-up. Nonstandard employment includes a variety of working practices including part-time, agency, contract, short fixed term, contingent and independent contracting. Bell et al. (2021) report that zero hours contracts, agency work, temporary work and low-paid self-employed roles accounted for two-thirds of UK net employment growth from 2008 to 2015.

Concern about the growth in atypical forms of employment arises because nonstandard forms of employment are more likely to expose workers to a greater degree of insecurity and precarity than standard employment forms. But not all of those employed in nonstandard employment necessarily feel that their positions are insecure or precarious. For example, 56 per cent of workers on a zero hours contract report being satisfied with the hours that they work (Bell et al. (2021)). Disentangling insecure or precarious work from nonstandard employment more generally can be problematic.

The extent to which an individual feels insecure in their job is likely to depend on characteristics of the job, the individual, and the broader economic and policy context

Broadly speaking, there are two dimensions to job insecurity: a job itself might be perceived as insecure, if the possibility of termination or redundancy is real, or if the contract is temporary; and the hours and/or income associated with a particular job may be subject to unpredictable variation from one week to the next. 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).

Whether a particular job exposes a worker to feelings of insecurity or precarity is likely to depend in part on characteristics of the individual, as well as the job itself. Campbell and Price (2016) distinguish between precarious jobs and precarious workers. A student working part-time in retail may have a precarious job, but to the extent that many associated risks are cushioned by alternative income sources and future career paths, the same individual may not be considered a precarious worker.

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. Hipp (2016) points out that individuals’ perceptions of their ‘job insecurity’ can be characterised in different ways, for example, job security could be thought about in terms of worries of losing one’s job, and/or in terms of the perceived availability of alternative job opportunities. Looking across 23 OECD countries, she finds that the level of generosity of unemployment support is a key determinant influencing the extent to which individuals feel job secure, whereas dismissal protection legislation is generally less effective at reducing perceptions of job insecurity. However, she does not consider the factors that lead workers to feel more or less secure about their work schedules.

Given the challenges in distinguishing insecure work or insecure workers, cross country comparative approaches often rely simply on comparisons of non-standard employment itself, or look at underemployment as a proxy for insecurity. Neither approach is ideal however. In reality, whether a worker feels insecure will depend on the detail of their employment arrangement, combined with a range of personal circumstances (which might include non-avoidable expenses, dependents, savings, alternative income sources, etc.), wider policy and institutional context (adequacy of out-of-work income protection for example), and broader economic context (it is accepted that job insecurity increases during recessions).

What is clear is that 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).

There is limited evidence that job insecurity (as opposed to non-standard employment more generally) is increasing

Despite widespread concern about job insecurity, it is in fact difficult to find hard evidence of increasing job insecurity in labour survey data, if job insecurity is measured by factors such as turnover rates or tenure (Manning and Mazeine, 2020). In terms of hours insecurity, we compared differences between 'actual' hours worked and 'usual' hours worked as a proxy for hours variation from one week to the next (excluding cases where the difference was the result of annual leave, sick leave, parental leave, industrial action, etc.). But we found no evidence that the proportion of employees whose actual hours differed from their usual hours had changed over time.

As indicated in the above discussion however, it may be that insecurity is something that is perceived by a worker – partly as a function of factors other than job characteristics, such as the perceived ease of finding alternative work or the level of unemployment benefit. In theory at least, job insecurity could increase over time, even if jobs themselves do not appear to be becoming less secure in themselves.

However, Manning et al. (2020) find no evidence that perceived job insecurity has increased in either the US, Germany or the UK since the 1990s. 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 among these non-standard employment forms. Manning et al.'s analysis focuses largely on job security rather than hours security, and it would be interesting to know more about trends in security of hours, as opposed to security of the job itself (although Manning et al. find no evidence of a deterioration in job satisfaction more broadly over time).

Nonetheless, even if there is limited evidence that job or income insecurity is increasing over time, it is clearly a major issue in the UK. Felstead et al. (2017) for example found that 1.7 million UK workers were anxious that their working hours could change unexpectedly. More recently, research by the Living Wage Foundation (2021) found that almost two-fifths (37%) of UK workers in full or part-time employment are given less than a week's notice of their shifts or work patterns, and that amongst workers whose job involves variable hours or shift work, over three-fifths (62%) reported having less than a week's notice of their work schedules. So regardless of the direction of trend, it is clear that a substantial minority of workers face significant uncertainty in elements of working life, such as the number of hours of work they are offered and the notice of shift timings they are given.

The UK has seen growth in use of zero-hours contracts, affecting younger and older workers in particular

In this report we consider two specific types of 'atypical' work: temporary work and zero-hours contracts (ZHCs). It is worth bearing in mind that workers on these sorts of contracts may not necessarily feel particularly insecure; and it does not rule out the possibility that workers on more 'standard' forms of employment may feel insecure about some aspect of their employment.

ZHCs are an employment contract under which a worker is not guaranteed any hours and is only paid for work carried out. ZHCs can offer flexibility to both the employer and the employee, and, as a result, some workers may prefer them to typical fixed hour employment contracts. Conversely, due to the lack of security and guaranteed income, they are unlikely to be suitable for many workers (Datta et al. 2018). ZHCs feature in many other countries' employment structures (Datta et al. 2018).

ONS analysis of the Labour Force Survey shows that the prevalence of zero-hours contracts rose from 0.5% of those in employment in the mid 2000s to 3% (974,000 jobs) by 2019. Women are more likely to be on a zero hours contract than men (3.6% of women v. 2.4% of men in 2019). The young and the old are much more likely to be on a zero-hours contract than those of prime age. Zero hours contracts are particularly prevalent amongst caring, leisure and other service operations, and elementary occupations.

Why might the prevalence of ZHCs have increased over time? On the one hand, it has been speculated that many low-paid workers entering such arrangements do so out of necessity rather than choice, given a lack of bargaining power to secure more stable contracts. On the other hand, ZHCs offer advantages to employers in reducing wage liabilities and coping with demand fluctuations.

Datta et al. (2018) find that increases in the UK minimum wage have resulted in an increased use of ZHCs in the social care sector, and in low wage sectors more generally, suggesting that firms exploit the flexibility of ZHCs in order to buffer the wage cost shock induced by the minimum wage increase. This finding may have implications for policy proposals to establish a higher minimum wage for ZHC workers. In theory, a higher minimum wage may also mean that employees are more willing to work shorter hours, but whether it compensates them for both shorter hours and increased uncertainty for those hours is unclear, but probably doubtful (discussed further below).

Workers on temporary contracts work fewer hours per week than those on permanent contracts

Temporary work can include seasonal or casual work, being contracted for a fixed period or task, and undertaking work on behalf of an agency. There were 1.5 million temporary employees in the UK at the beginning of 2020. Females are consistently more likely to work temporary contracts than males. The proportion of males and females working on a temporary contract increased somewhat following the 2008 recession until around 2013 (to 4% and 5% of prime age males and females respectively), but since then has fallen back to the 2008 level.

Males and females on temporary contracts consistently work fewer hours than their counterparts on non-temporary contracts. But trends over time are very similar for those on temporary contracts: for males, average hours worked declined 6% between 2002 -2010 and have remained broadly stable since then. For women on temporary contracts, average hours increased slightly (2%) between 2002-10, and more significantly (5%) between 2010-19.

Employees on temporary contracts and ZHCs are more likely to be employed in low-paying jobs, work fewer hours, and be underemployed

Table 5.1 shows average hours worked, hourly pay and underemployment for workers on temporary contracts and zero-hours contracts, compared with workers not on those forms of contract.

Workers on temporary contracts work on average eight hours less per week than those on permanent contracts, their typical hourly pay is 17% less, and they are much more likely to be underemployed: almost a fifth of workers on temporary contracts are underemployed (i.e. would like to work longer hours) compared to 8% of those on permanent contracts. Furthermore, workers on temporary contracts who report being underemployed would like to work more additional hours than the underemployed on permanent contracts.

The differences between those on zero hours contracts and not on zero hours contracts is even more stark. Workers on zero hours contracts work 13 hours fewer per week than those not on zero hours contracts, they are paid on average a third less, and 29% are underemployed.

Table 5.1: Temporary contracts and ZHCs are associated with lower pay, fewer hours and higher underemployment

Hours worked, hourly pay, and underemployment for two types of 'atypical' work

	Temporary contract comparison		Zero hours contract comparison	
	Not temporary contract	Temporary contract	Not zero hours contract	Zero hours contract
Usual weekly hours worked	36.7	29.0	36.5	23.6
Hourly pay	£15.6	£13.0	£15.6	£10.3
Percentage underemployed	8%	19%	8%	29%
Additional hours desired by those underemployed	10.8	13.1	11.0	14.2

Notes: each analysis compares the hours/pay/underemployment status of employees with the contract in question to all other employees. This means that the 'not temporary' group may include some employees on zero hours contracts, whilst the 'not zero hours contract' group may include some employees on temporary contracts. Source: FAI analysis of LFS

Employees on temporary contracts and ZHCs are more likely to be underemployed, even after controlling for their pay and hours

Of course, it is likely that the types of worker who has a temporary or zero hours contract are systematically different from the 'average' worker. In this sense, it might be more instructive to consider how hours, pay and underemployment differ for these contract types for similar types of worker.

Table 5.2 shows average hours worked, hourly pay and underemployment for workers on temporary contracts and zero-hours contracts, compared with workers not on those forms of contract, after having controlled for workers' characteristics. The characteristics controlled for include age, sex, qualifications, region, family type (e.g. single/couple and with/without children), occupation, and for underemployment, hours worked and hourly pay.

Table 5.2: Temporary contracts and ZHCs are associated with lower pay and higher underemployment even after controlling for characteristics of the job and employee

Hours worked, hourly pay, and underemployment for two types of 'atypical' work, controlling for characteristics of job and employee

	Temporary contracts		Zero hours contracts	
	Raw differential	With controls	Raw differential	With controls
Hours	-7.7	-5.5	-12.6	-6.7
Log pay	-0.23	-0.08	-0.43	-0.10
Underemployment	10.0%	2.9%	19.8%	5.1%

Source: Labour Force Survey. N=78,000. Controls include sex, age, highest qualification (6 categories), occupation (9 categories), family type (4 categories), region (12 categories). The underemployment regression also controls for hours worked and hourly pay. The hours regression controls for hourly pay; the log pay regression controls for whether individual works full or part-time.

This analysis reveals that temporary contracts and zero hours contracts are associated with lower pay, fewer hours and higher underemployment, even after controlling for a wide range of individual characteristics. Underemployment is 3 percentage points higher amongst those on temporary contracts, and 5 percentage points higher amongst those on zero-hours contracts, than it is among employees not on those types of contract, even after controlling for hours worked, pay, and other characteristics⁹.

These results are consistent with the idea that these types of contract do impose undesired constraints on hours, or that these contract types are associated with higher levels of insecurity that manifests itself through a desire to work longer hours.

The finding that underemployment is higher for workers on zero hours contracts mirrors the findings from Canada that hours worked are lower and underemployment is higher among workers on ‘unstable’ work schedules (McCrate et al. 2019). By using longitudinal data that enables them to track how hours and underemployment change when employees move from a ‘stable’ to an ‘unstable’ hours schedule, McCrate et al conclude that ‘underemployment and hours worked are heavily influenced by employers’ labour flexibility practices that create unstable work hours, not just by employees’ characteristics and personal responsibilities’. The authors find no evidence that employers reward employees on ZHCs with more hours or higher pay – despite the fact that it is the employees who absorb the inconvenience and insecurity associated with unstable hours but the employers who benefit from the enhanced flexibility.

Different countries are taking markedly different approaches to addressing concerns around insecure work

As highlighted by OECD (2019), it is clear that many of the challenges are similar across countries, and similar to those being grappled with in the UK. For example, a common concern is around self-employment, and the challenge of classifying workers who fall between the traditional definitions of dependent employment (employees) and self-employment, resulting in some individuals missing out on key aspects of labour and social protections. Addressing differences in tax treatment of employees and the self-employed, and firming-up distinctions in law between different employment statuses are common issues across many countries. Related to this, many countries are also grappling with the issue of how to regulate the working conditions of platform workers, those who acquire their work through a platform such as Uber or Deliveroo.

In terms of temporary contracts, within our sample of countries, France and Germany in particular are taking action to reduce the use of short-term temporary contracts. Germany’s 2018 Coalition Deal included an agreement to limit the number of fixed-term contracts concluded without an objective reason per firm. France also has penalties in terms of unemployment insurance contributions for a certain type of short-term contract in certain sectors¹⁰.

⁹ It might be expected that workers on zero hours contracts could also be likely to be overemployed than workers not on zero-hours contracts (given that they have little ability to control their hours of work). However, we did not find that workers on zero-hours contracts are statistically more likely to be overemployed than workers not on zero hours contracts, after controlling for pay, age, and hours worked.

¹⁰ It is worth pointing out that temporary contracts are more commonly deployed in continental European countries than in the UK or US. According to the OECD, the proportion of prime age male employees on temporary contracts was 12%, 9%, 11%, 3% and 3.5% in France, Germany, Sweden, the UK and US respectively. Temporary contracts tend to account for slightly higher shares of female employment, but the pattern across countries is largely the same. Of course the lower use of temporary contracts in the UK and US may simply reflect weaker employment protection legislation in those countries.

Finally, given widespread attention given to ‘zero-hours contracts’ and other forms of on-call working, we summarise here some of the approaches taken by our comparator countries to these forms of nonstandard employment:

- France is exceptional within our selection of comparator countries in that zero-hours contracts are effectively outlawed in most cases (there are some exceptions for young workers aged under 26 in education and temporary agency workers). Part-time contracts must include the number and distribution of hours, and a minimum of 24 hours per week must be provided (although this can be reduced at the request of the employee) (Datta et al. 2018; D’Arcy and Rahman, 2018).
- In Germany, legislation specifies minimum rules for the operation of ‘on call’ contracts. In general, contracts must specify weekly and daily working hours, unless there is the agreement of both the employer and employee (or employee representative), in which case a contract can avoid specifying weekly working hours. But any contract which does not specify minimum hours must nonetheless pay 10 hours’ worth of work each week. (Datta et al. 2018). In addition, on-call workers are required to receive notification of their working hours at least four days in advance, and any shift that is offered must consist of a minimum of three consecutive hours.
- Germany has also put measures in place to raise the cost to employers of hiring employees on ‘mini-jobs’. Mini-jobs are a form of employment introduced in the early 2000s, intended to boost employment rates, particularly of married women. Mini-jobbers can only earn a maximum of €450 per month as part of the contract but pay no social security contributions and lower income tax, whereas employers pay a premium on employers social security contributions. There have been concerns however that compliance on wider conditions for mini-jobbers (on annual leave and sick pay for example) have been less strictly enforced than for full-time workers, continuing to expose these workers to some disadvantage relative to more standard employment forms (D’Arcy and Rahman, 2018).
- Sweden, like the UK and the US, places no legislative constraints on hours worked (or notice given for) on-call contracts. However, whilst the US has no federal legislation relating to on-call working, a small number of states operate “show-up pay” laws, where employers are required to pay workers for a minimum number of hours (no matter how long they work), if they have been called to work. Moreover, some cities operate fair scheduling ordinances. These vary from city to city, but may require employees to receive a written estimate of their expected days and hours of shifts, or require minimum notice periods for shift changes, or entitle employees to compensation if they are ‘on call’ but not working.

6. Hours worked and in-work poverty

Up until now the report has largely considered the hours worked by individuals. But household level measures of inequality and poverty are influenced by the ways in which hours worked are distributed across and within households. This chapter considers how hours worked are distributed across households, and how important hours worked are in influencing whether a working household is in relative poverty.

Key points

- Employees in the lower deciles of the household income distribution tend to work fewer hours on average than those in the top half of the income distribution. This is true both for the main earner in a household and the second earner (where there is one).
- However, there is lots of heterogeneity in hours worked by people in households in different parts of the income distribution. In other words, there are plenty of employees who live in poverty and do work long hours (and vice versa).
- Hours worked is therefore not a strong predictor of whether a working household will be in poverty or not. This is true for both the main earner in a household, and even more so for second earners.
- Consequently, whilst employees in households in poverty work fewer hours per week on average than those not in poverty, there is no guarantee that working longer hours will provide a route out of poverty. Hourly pay and the presence of children or non-working adults are stronger predictors of poverty status than hours worked.
- Employees living in households in poverty are more likely to be underemployed than employees who do not live in poverty. This in itself is intuitive, in that employees living in poverty tend to be more likely to be employed in low-paid jobs, or work short hours, and hence receive below average earnings. But the majority of underemployed employees do not live in poverty – underemployment is certainly not just a poverty problem.
- Changes in hours worked over time do not seem to play any role in accounting for the increase in in-work poverty. Changes in average hours worked over time have tended to be fairly consistent across employees living in and not in poverty. One reason for this is that low paid male workers – who have seen disproportionate declines in average hours worked – are just as likely to be found living in households above the poverty line as below it.
- In-work poverty has been on the rise in all of our European comparator countries, and in-work poverty rates are not dissimilar in the UK to other countries. Employment factors contributing to heightened risk of in-work poverty are common across countries, and include part-time work, self-employment, and temporary work. But the composition of in-work poverty by household type does differ across countries, reflecting labour market and institutional factors.

Up until now we have mainly considered patterns of hours worked at an individual level. But how do hours worked influence the distribution of household incomes? And to what extent do patterns of hours worked influence the likelihood of a working household being in poverty?

When considering household incomes, it is standard to look at income from all sources (including social security payments as well as earnings from work and income from other sources such as investments and pensions), and to consider income after (i.e. net of) direct taxes – income tax, national insurance and council tax. It is also standard practice to equalise household income, in other words to adjust it for the composition of the household¹¹.

The factors determining net equalised household income are therefore quite complex. There is a relationship between an individual's hourly pay and the decile of net household income that the individual finds themselves in, but it is clearly not a perfect correlation. Relatively low-wage workers can be found in households across the distribution of household income – in other words, in both higher and lower income households. A relatively higher wage individual might occupy a household in the bottom part of the household income distribution, particularly if they are the sole earner in the household and work relatively few hours. In contrast, some relatively low-waged are found in households quite high up the distribution of household income, particularly if they are the second earner in the household.

Households who are in income poverty are usually defined as being those whose net equalised income is below 60% of the median. Recent years have seen growing concern over rates of in-work poverty, both in the UK and in comparator countries (trends in in-work poverty in comparator countries are discussed later on in this chapter).

Rates of in-work poverty are determined by a broad range of interrelated factors. Broadly these factors encompass individual, household and institutional aspects (Eurofound, 2017).

Individual factors include employment patterns, including the nature of pay and employment conditions. Working part time, having a temporary contract or being self-employed have consistently been shown to increase the risk of in-work poverty. Individuals who move into and out of employment also face significant risks. In fact, some research indicates that in-work poverty is mainly an unemployment problem, as the risk of poverty among individuals who are full-time employed without interruption is very low (Halleröd et al, 2015). Indeed, differences in in-work poverty risks for workers on temporary as opposed to permanent contracts are largely explained by the fact that temporary workers face periods between contracts out of work (rather than the fact that they are paid less) (Horemans (2019)).

But these individual factors are strongly moderated by issues of household composition. While most individuals at risk of in-work poverty are low paid, relatively few low-paid workers experience in-work poverty. What particularly influences the risk of in-work poverty is the number of adults working in the household and the household's overall work intensity, as well as the ratio between the number of working adults and the number of dependants in the household (Eurofound, 2017). Because of this, cross-national studies consistently find that the risk of in-work poverty is relatively large among households with children, especially among households with many children, among single parent households, and amongst single earner households (Halleröd et al. 2015).

¹¹ Equalisation takes into account the fact that a weekly household income of say £400 'goes further' for a single person household than a 2-adult household, and further still than for a household with 2 adults and one or more children.

Institutional factors influencing in-work poverty include social security policy and other family policies, such as availability of childcare.

With this context in mind, this chapter now considers the importance of hours worked in influencing the distribution of household income in the UK, and in determining in-work poverty (i.e. to what extent are households in in-work poverty in that status as a result of the hours that they work, as opposed to other factors). The chapter concludes by looking at some of these issues within our comparator countries.

Higher income households tend to work longer hours

To begin shedding light on these issues, chart 6.1 shows how hours worked vary across the distribution of household net income, for both the main earner and the second earner (where there is one).

There is a clear correlation between the decile of household net income and average hours worked for the main earner. Average paid hours worked by the main earner increase from around 33 hours per week in the bottom decile to 40 hours in the top decile.

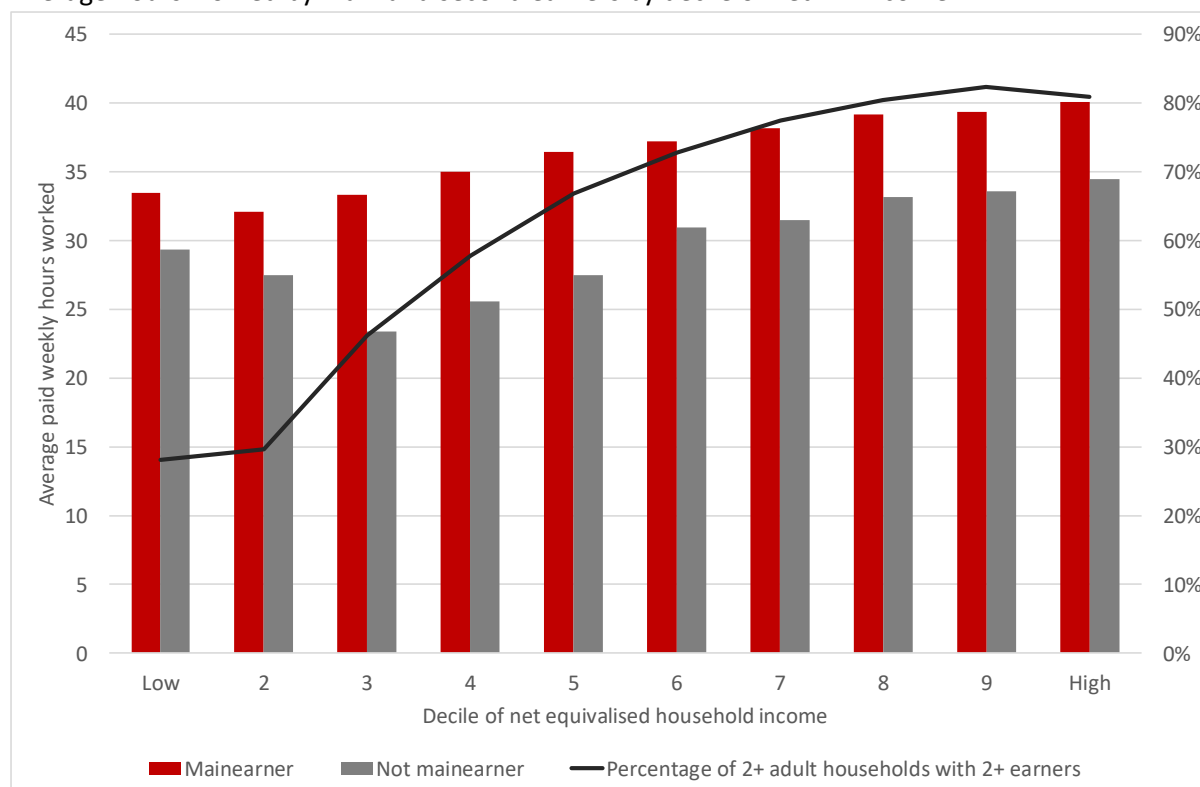
Second earners' hours also increase throughout most of the distribution, from 23 per week in decile 3 to 34 in the top decile¹². Unsurprisingly, the proportion of households with at least two earners is also an increasing function of net income.

Gustafsson et al. (2021) show that this spread of hours across the distribution of household income is wider in UK than Germany or France. They suggest that this reflects higher levels of part-time working at the lower end of the income distribution. Compared to the Germany and France, the UK is thus characterised by higher employment but higher rates of part-time employment, particularly amongst the low-paid.

¹² It may look odd that average hours worked by second earners are higher in deciles 1 and 2 than decile 3. This appears simply to reflect some statistical volatility in the bottom deciles given the relatively low numbers of second earners in these households. In fact, the same analysis for the previous year, 2016/17 shows a more intuitive picture, with average hours worked by second earners in deciles 1 and 2 in line with (rather than above) those in decile 3.

Chart 6.1: Higher income households work longer hours

Average hours worked by main and second earners by decile of net HH income



Notes: All households (including working and non-working, working age and pensioner households) are divided into deciles according to net equivalised income. Chart 6.1 then calculates average hours worked by the main earner for all working households, and second earners for all households which have second earners. The main earner is defined by identifying the individual in the household with the highest weekly earnings, including both income from self-employment and employee earnings.

Source: FAI analysis of FRS/HBAI

Households in in-work poverty are characterised by shorter working hours

Households in in-work poverty work shorter hours on average than those not in poverty. On average, main earners in households in in-work poverty work 34 hours per week, compared to 38 hours per week for those not in poverty. Second earners living in in-work poverty also tend to work less on average than those not in poverty.

This average result could be driven by compositional factors. It is well known that households with children are more likely to be in poverty than those without (partly as a result of the equivalisation process – given two households with the same household income, equivalisation reduces the income of the household with children relative to a household without children). But households with children might systematically work fewer hours than those without, and this could drive the results described above.

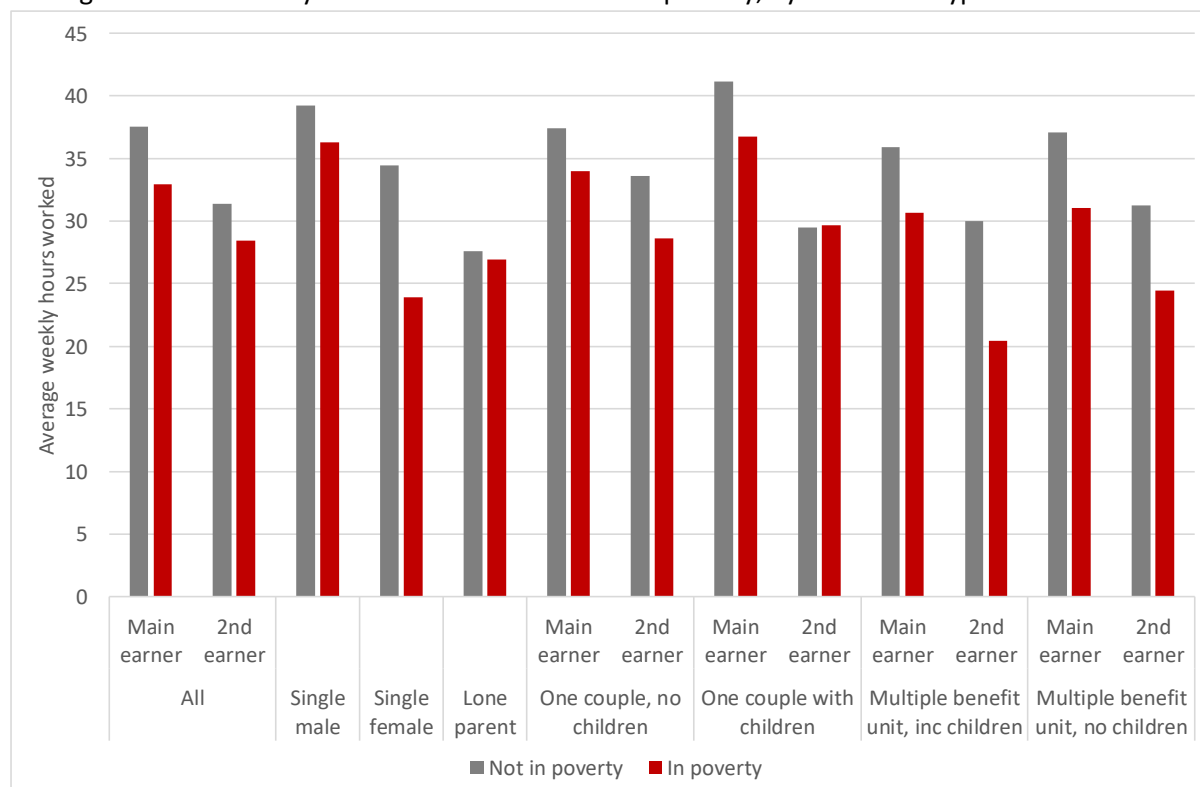
One way to examine this is to compare average hours worked for households in and not in poverty for different household types (Chart 6.2). This shows that the trend for workers in poverty to work fewer hours than those not in poverty is observed across nearly all household types.

The exceptions to this are lone parents, and second earners in couple households with children, where there is no difference in average hours worked between those in and not in poverty. In other words, amongst lone parents in employment, those living in-poverty do not work fewer hours on average than those not in-poverty.

So we can conclude that workers in households in poverty generally work fewer hours than workers not in poverty. But that doesn't necessarily tell us anything about whether working fewer hours is a significant determinant (i.e. cause) of poverty. We will explore that point later in the chapter.

Chart 6.2: Working fewer hours is a feature of in-work poverty across all household types

Average hours worked by workers in and not in HHs in poverty, by household type



Source: FAI analysis of FRS/HBAI

Workers in poverty are more likely to be underemployed...

Are workers living in poverty more likely to be underemployed than those not in poverty?

It is not possible to look at the relationship between household income status and underemployment directly. This is because none of the UK's major surveys on household income – notably the Family Resources Survey, but also Understanding Society – include questions on underemployment.

In order to shed light on the relationship between household income and underemployment, we therefore undertook a data matching exercise to match individual employees in the Labour Force Survey to equivalent employees in the Family Resources Survey. The methodology is described in more detail in Box 6.1.

Box 6.1: Data matching

To do so we use statistical matching techniques that uniquely pair individuals in one dataset with those in another. In short, this method takes an individual record from the FRS and finds the individual most similar to them in the LFS, based on the common information in both datasets.

The characteristic we use to define similarity between individuals are:

- age [13 categories]
- wage [10]
- whether they are married/cohabiting versus not [2]
- gender [2]
- whether they have dependent children [2]
- major occupation class [9]
- banded usual hours of work [4]
- whether or not they have a degree [2]

We also experimented with a variable on housing tenure, but we dropped this as it did not improve the robustness of the match.

Matching individuals in this way then allows us to, for example, match two 35 year old, single females with a degree and no dependent children who are senior managers on roughly the same hours of work and wage, one of whom was in the LFS and the other who was in FRS. Given they are observationally identical (or extremely similar), we then assume that if the LFS individual is underemployed her FRS counterpart will also be unhappy with her current working hours.

If we were to take it as completely accurate, matching in this way implicitly assumes that the above variables exclusively determine whether or not an individual is underemployed. In other words, we would be ignoring the partially subjective nature of underemployment – it is after all based mainly on questions regarding satisfaction with working hours.

Using the matched FRS data to analyse underemployment across the household income distribution also assumes that the variables we use do a good job of defining the type of household or partner an individual will have. For example, is it reasonable to assume that both our 35 year old females discussed above will have similar partners, at least economically? This is hard to know, but given we match on marital status, education, age, number of children and occupation it is conceivable that this might, on average, be the case.

Nonetheless, this matching allows us to examine the relationship between underemployment and household income at an aggregate, descriptive level. In all analysis that follows, when we refer to underemployment or its relationship with household income it is important to keep in mind that we have in a sense *estimated* whether individuals in the FRS are underemployed. As a result, there is a degree of uncertainty around the accuracy of this estimation, and so any figures should be read as illustrative.

Overall, we successfully matched 95.9% of employees (15,462) in the FRS to a similar individual in the LFS. Some employees were not used in the matching exercise because they were missing information on the characteristics we used to define similarity (110 employees, 0.68%), and a close enough match could not be found for 3.5% (558).¹³

¹³ The method we use for matching is *without replacement* – it randomly selects an individual in the FRS, matches them to an individual in the LFS, then randomly selects another individual to be matched excluding the individual in the LFS selected in to be matched in the previous step. This is then repeated until a match has been attempted for all individuals in the FRS. A match is “not found” if, for any FRS individual, there is no LFS individual who is sufficiently similar. “similar” or “close enough” is somewhat arbitrarily defined, but we opt for strict criteria given our aim is to eventually analyse the relationship between the donated measure of

The resulting underemployment rate in the FRS is 6.8%, compared with a higher rate among employees in the LFS of 7.8% between January and March of 2019. Our estimates of underemployment by decile of the individual wage distribution are very similar with our matched data as they are in the 'real' LFS data (figures available from the authors on request).

Our matching analysis reveals that the underemployment rate among employees is much higher towards the lower end of the distribution of household income than in the middle or top (Chart 6.3). Among households in poverty, the underemployment rate is 11%; compared to an equivalent rate of 6% among workers in households not in poverty.

Higher underemployment rates among lower income households are not in themselves particularly surprising. Higher rates of underemployment amongst lower income households are explained by the fact that employees in low-income households are more likely to be employed in less well paid or part-time jobs – which are themselves key factors determining the likelihood of underemployment at an individual level.

...But the majority of underemployed employees are not in poverty

However, despite the fact that the likelihood of a worker being underemployed is higher amongst lower income households, underemployment is certainly not just a problem observed in low income households, or just amongst households in poverty. In fact, we estimate that of all underemployed employees, a large share of them are concentrated in the middle of the income distribution. Just 10% of all underemployed employees are found in households in income poverty (Chart 6.3).

This finding of course reflects the fact that there are large numbers of low-paid and/or low hours employees in households not in poverty. This is similar to the explanation for why a rise in the minimum wage – whilst it might reduce earnings inequality amongst employees, tends not to reduce household income inequality, or in-work poverty (Joyce and Waters, 2019).

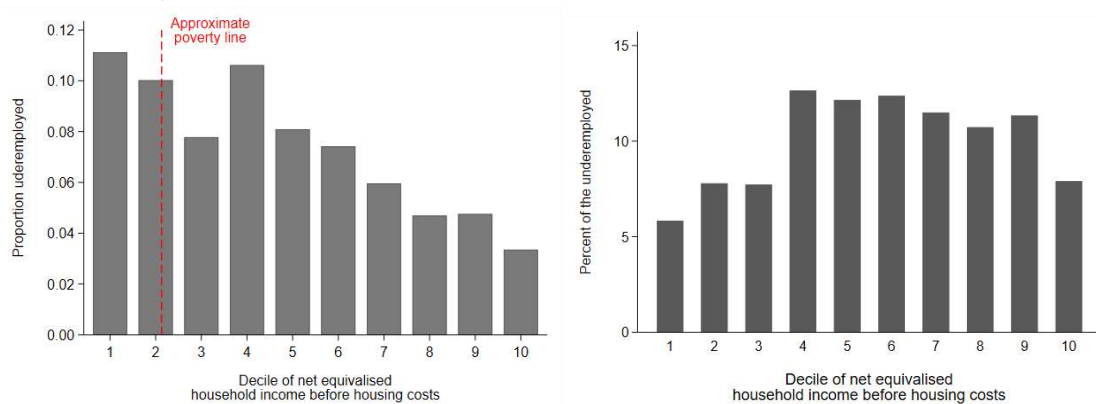
Our results are predicated on an assumption that the distribution of underemployment across households can be approximated by the factors set out in Box 6. These factors do include some household level characteristics (marital status and children), but don't explicitly take account of household income other than through the earnings of the individual. A limitation therefore is that our analysis does not allow for the possibility that the risk of underemployment for a given individual may be influenced by the income of other members of their household.

Given two individuals with the same age, family type, hourly pay and hours worked – but where one individual is the main earner in a low-income household, and the other is a second earner to a high earning spouse – we might hypothesise that the likelihood of underemployment is higher for the former individual. Unfortunately, this is not a hypothesis that we can test or incorporate within our analysis. In other words, we have estimated the likely distribution of underemployment across households, on the assumption that that risk of underemployment is independent of the earnings of other members of the household (and independent from other sources of income beyond the earnings of the individual to be matched). This is a limitation of the approach, and worthy of further investigation.

underemployment and household characteristics. The criteria condense the matching variables outlined in the text to a statistical measure of similarity, and we specify how similar these measures must be in terms of a percentage difference to be considered a close match.

Chart 6.3: The underemployment rate is higher among employees living in poverty; but most underemployed employees do not live in poverty

Underemployment rate by household income status; and share of underemployed employees by income status, Q1 2019.



Notes: the chart on the left shows underemployment rates for employees in each decile of the household income distribution. The chart on the right shows how all underemployed employees are distributed across deciles of household income. Source: FAI analysis of Family Resources Survey and Labour Force Survey

Working longer hours will often not, in itself, be enough to move out of poverty

The fact that households in in-work poverty tend to work fewer hours than those not in poverty is clearly established. By how important are hours worked in influencing poverty status?

We can try to formalise the importance of hours worked in determining in-work poverty by modelling the probability of a working household being in poverty as a function of hours, hourly pay, and characteristics of the household. This is described in Box 6.2.

The results imply that hours worked are statistically significant in determining in-work poverty, but the size of the effect is relatively small. For the main earner, working an additional ten hours would reduce the likelihood of being in poverty by 2%, holding all other household factors (hourly pay, work status of a second earner, number of children) constant. For a second earner, working extra hours has even less of an effect (unsurprisingly, given the likelihood that second earners will have lower pay).

The finding that hours worked might make little difference to probability of poverty can be understood more intuitively if we step away from looking at average hours worked and instead look at the distribution of hours worked. Chart 6.4 shows hours at the 25th percentile, median, and 75th percentile of hours worked, for workers in poverty and those not in poverty. The interpretation of the percentiles is as follows. If the 25th percentile of hours is say 30, it means that one quarter of workers work 30 hours or less per week. If the 75th percentile of hours is say 40, it means that a quarter of workers work above 40 hours per week.

What Chart 6.4 shows is that the 75th percentile of hours worked by main earners is 40, for both households in and not in poverty. The 75th percentile of hours worked by second earners is 40 for those in poverty, which is actually slightly above the 39 amongst those not in poverty.

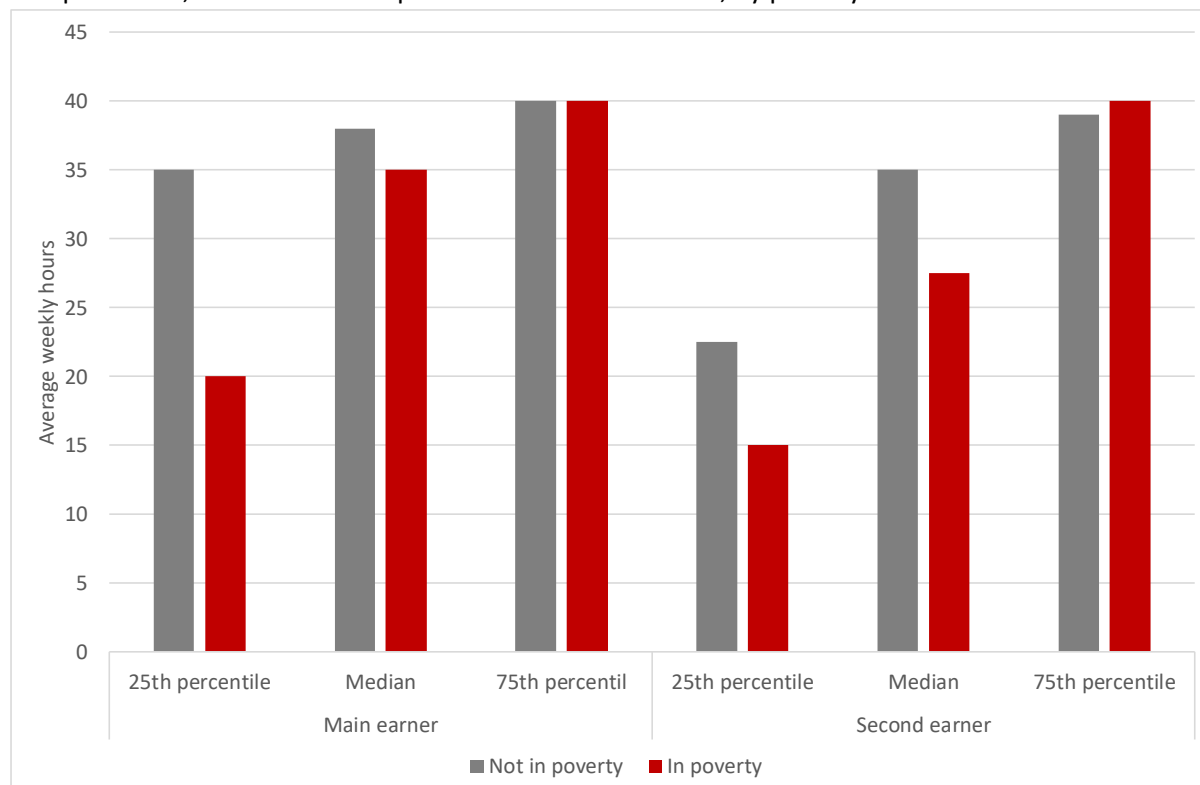
In other words, a large proportion of workers – both main earners and second earner – who live in poverty work relatively long hours. And half of main earners in poverty work over 35 hours per

week. It is the case, as we saw earlier, that hours worked are lower on average amongst those in poverty, but this seems mainly to be due to a higher proportion of part-time work.

This in itself is clear evidence that hours worked in themselves are no guarantee that a household will not be in poverty. Low hourly wages combined with children and/or a non-working adult are the big risk factors for in-work poverty.

Chart 6.4: A large proportion of workers in poverty work relatively long hours

25th percentile, median and 75th percentile of hours worked, by poverty and earner status



Source: FAI analysis of Family Resources Survey and Households Below Average Income dataset

Box 6.2: Modelling the probability of a working household being in relative poverty

We model the following equation, using data from the 2017/18 financial year:

$$Pov_i = \alpha_0 + \alpha_1 Mainhours_i + \alpha_2 Mainpay_i + \alpha_3 Child_i + \alpha_4 Children_i + \alpha_5 Sec_i + \alpha_6 Sec * SecHours + \alpha_7 Sec * SecPay$$

The probability of a household being in poverty Pov_i is modelled as a function of:

- The hours worked by the mainearner, $Mainhours_i$
- The log of the hourly wage of the mainearner, $Mainpay_i$
- A dummy variable $Child_i$ equal to one if the household contains one child
- A dummy variable $Children_i$ equal to one if the household has two or more children
- A dummy variable Sec_i equal to one if the household has more than one adult
- Variables measuring the hours and log hourly wage of the second earner.

We would expect the coefficient on the hours and pay variables to be negative: more hours and higher wage should reduce the probability of poverty.

The coefficient on the child and children dummy variables are expected to be positive, and larger on the children coefficient than the child coefficient: all else equal, the more children a household has, the more likely it is to be in poverty (as children do not contribute income to the household, but implicitly reduce the equivalised income).

The coefficient on the Sec variable should also be positive – a second adult all else equal will reduce household equivalised income, but some of that effect could be offset if the second adult contributes earned income.

The results of the regression are shown in Table B6.1. The coefficients are all of the expected sign (although the coefficient on 'child' is not statistically significant). The coefficients show for example that a working household with children is around 4 percentage points more likely to be in poverty than a working household with no children. The risk is higher for a household with two or more children. A second adult not in work increases the probability of poverty by around 11 percentage points%.

Table B6.1: Modelling the probability of a household being in poverty, marginal effects

	Dependent variable: probability of household being in poverty
Hours of main earner	-0.003*** (0.0002)
Log of main earner's hourly wage	-0.158*** (0.0052)
Hours of second earner	-0.0008*** (0.00027)
Log of wage of second earner	-0.045*** (0.0042)
Child	0.008 (0.0079)
Children	0.040*** (0.0067)
Second adult in household	0.11*** (0.0071)
Observations	8,449

Standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$

What about the hours variables of interest? The main earner hours variable is negative and statistically significant. But quantitatively the coefficient is small in size: working an additional 10 hours per week would reduce the probability of poverty by three percentage points.

The coefficient on second earner hours is also statistically significant and of the expected sign, but the size of the effect is small. Working an additional ten hours per week is associated with a 0.8 percentage point fall in probability of being in poverty. The implication is that hours worked by a second earner make even less of a difference to the probability of poverty than the hours worked by a main earner.

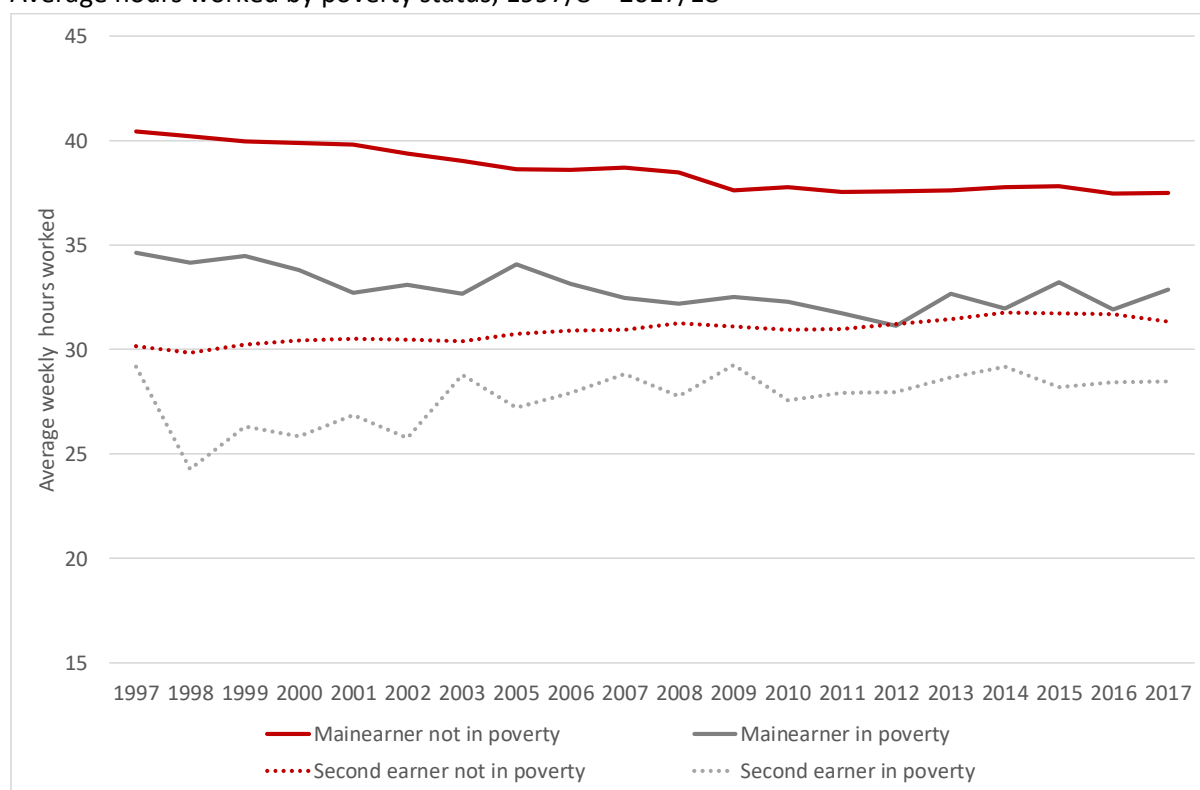
Changes in hours worked over time have not been different for households in poverty relative to those not in poverty

Have changes in hours worked played any role in influencing trends in in-work poverty over time?

In short, the answer appears to be ‘no’. Trends in average hours worked are no different amongst households in poverty compared to those not in poverty. Chart 6.5 shows this in the case of a before housing cost measure of poverty, distinguishing between main earners and second earners. But the finding is the same if we consider after housing cost measures of poverty, and if we look in further detail into hours trends for males and females, main earners and not main earners.

Chart 6.5: Trends in hours worked over time are similar amongst workers in and not in poverty

Average hours worked by poverty status, 1997/8 – 2017/18



Source: FAI analysis of Family Resources Survey and Households Below Average Income dataset

The finding that changes in hours worked have played no role in influencing trends in in-work poverty over time might initially appear hard to reconcile with trends discussed previously in the report – notably the more significant fall in hours worked amongst low-paid men.

The relevant point here is the way that low-paid workers are distributed across the distribution of household income. Low-paid men do not always live in households in poverty; in fact that majority of low-paid prime age men do not live in poverty.

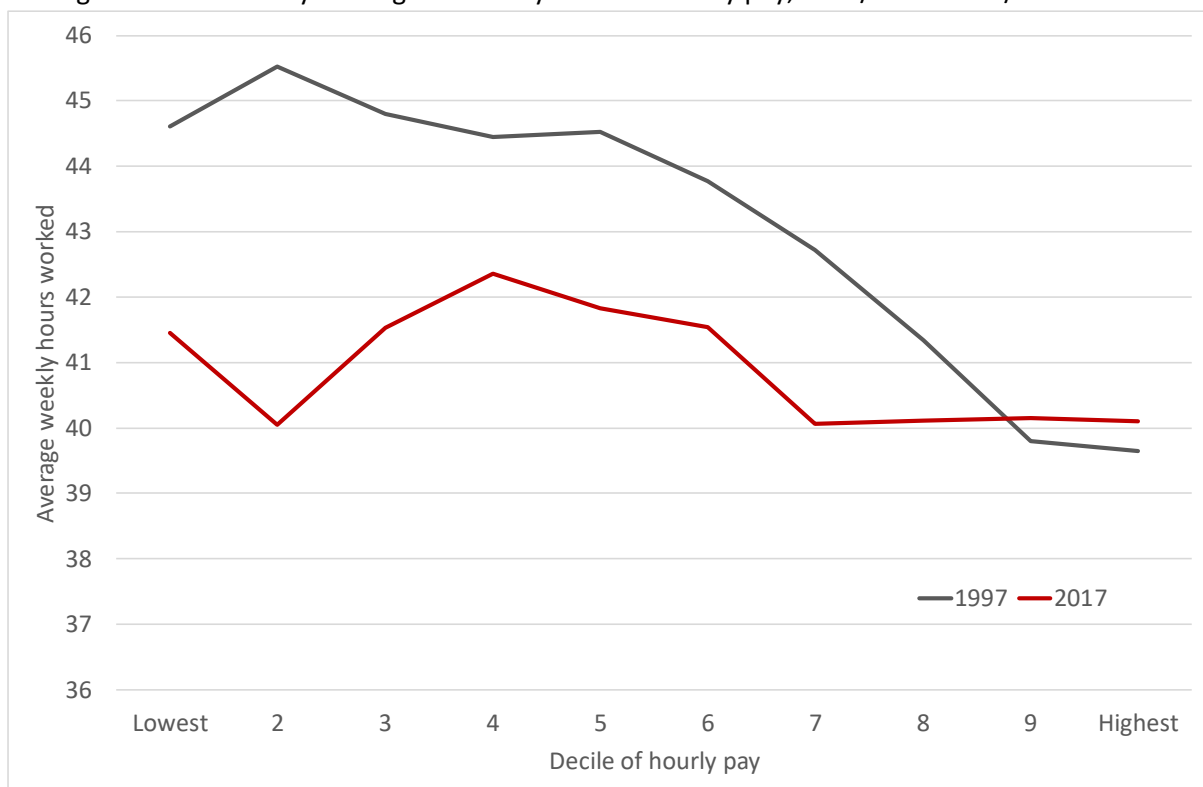
Chart 6.6 shows data from the FRS on hours changes amongst men by decile of hourly pay, simply to reiterate that the FRS data shows the same broad trend that we saw from the LFS in Chapter 3 – hours of low-paid men have fallen more than those of high paid men.

Chart 6.7 then shows how prime aged males, by decile of hourly pay – are distributed across deciles of household net equivalised income in 1997. Whilst nearly all men in the bottom two deciles of the household income distribution are low-paid, there are in fact relatively more low-paid men in the middle of the distribution of household income than there are in poverty. This is why hours trends affecting low-paid men do not result in differential hours trends when we compare those in and not in income poverty.

The finding that trends in hours worked have not played a role in influencing trends in in-work poverty is also consistent with work by Bourquin et al. (2019) who show that rising in-work poverty is largely due to the relatively stronger increases in the incomes of pensioner relative to working age households (which raise the median household income and hence the level of the poverty line), and, in the case of after housing cost (AHC) poverty, the fact that low income households tend to occupy housing tenures, (notably private-rented accommodation) whose costs have increased relatively more than the costs associated with owner occupied housing (Bourquin et al. 2019).

Chart 6.6: Hours worked have declined more amongst low-paid than high paid men

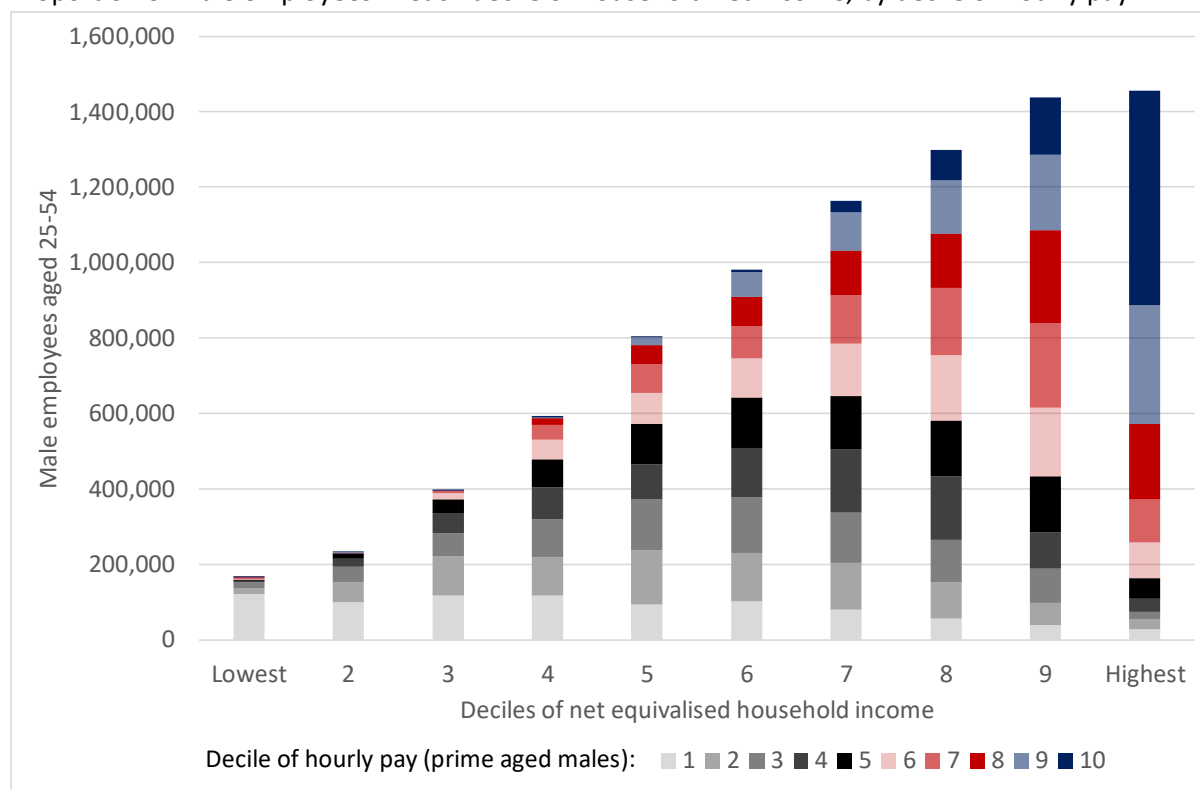
Average hours worked by men aged 25-54 by decile of hourly pay, 1997/8 and 2017/18



Source: FAI analysis of Family Resources Survey and Households Below Average Income dataset

Chart 6.7: There is significant heterogeneity of hourly pay across deciles of net equivalised household income

Proportion of male employees in each decile of household net income, by decile of hourly pay



Source: FAI analysis of Family Resources Survey and Households Below Average Income dataset. Notes: the interpretation of this chart is as follows. Of all prime age male employees living in the bottom decile of the distribution of net equivalised household income, just over 70% of those employees are employed in a job which pays in the bottom decile of all prime aged male jobs ranked by pay.

Rates of and trends in, in-work poverty are common across our comparator countries

Given the diversity of factors influencing in-work poverty, it might be expected that differences in in-work poverty, or the composition of in-work poverty, might differ significantly across countries given differences in pay structures and social welfare policies.

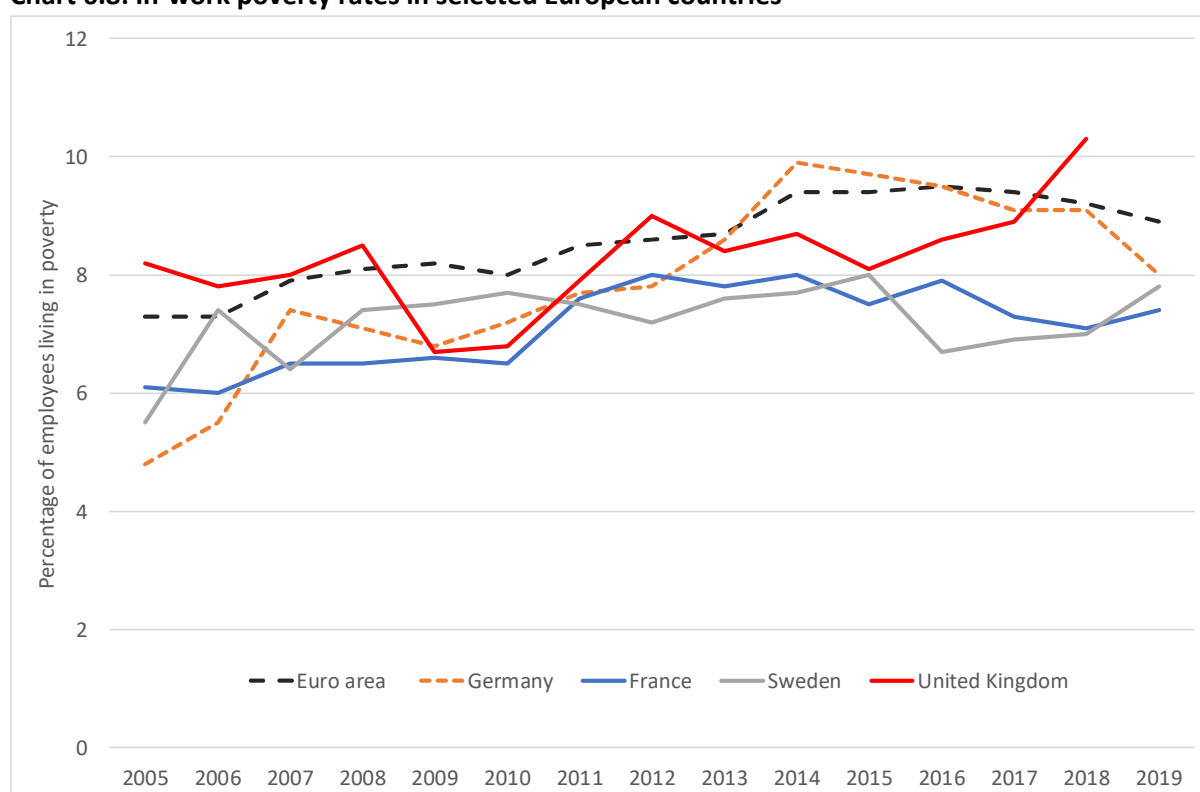
Chart 6.8 shows in-work poverty rates for our four selected European comparators. Note that in-work poverty in European datasets is presented slightly differently from the way it is sometimes presented in the UK. Chart 6.8 shows the proportion of employed persons who live in a household at-risk of poverty, where households at risk of poverty are those with income below 60% of the median. In UK debates, in-work poverty is sometimes measured as the proportion of people below the poverty threshold who live in a household where at least one person is employed.

There are two pieces of information that we glean from Chart 6.8. The first is that in-work poverty rates have been trending up in all countries, with this trend pre-dating the financial crisis. The second is that in-work poverty rates are fairly similar across these comparator countries. This latter point has been observed by others, and is thought to reflect a myriad of often offsetting factors. For example, the fact that Sweden does not have noticeably lower in-work poverty rates than Germany or France has been attributed to the fact that that young people in the Nordic countries tend to

leave the parental home at a relatively early age, before they are fully established on the labour market, which means that they are not protected from poverty by the parental household (Hallerod et al. 2015). Here then is an example of where a positive outcome (the greater tendency of young people in Sweden to be able to financially support themselves) nonetheless can negatively affect the in-work poverty rate in a comparative context.

Unfortunately, we have not been able to access fully comparable data over the same period for the US. But research indicates that the US has in-work poverty rates higher than the European countries we consider here. Stuffolino and Van Winkle (2019) estimates a relative poverty rate of around 10% for white Americans – which has been relatively stable since the 1970s – but significantly higher for non-whites. Previous comparative analysis has also found that the US is characterised by higher poverty rates than Germany and the UK conditional on characteristics, as a result of higher earnings inequality and weaker social security protection (Biewen and Jenkins, 2005).

Chart 6.8: In-work poverty rates in selected European countries



Source: Eurostat

But the composition of in-work poverty does differ across countries

But whilst differences in rates of in-work poverty may not appear to differ very substantially across our sample of comparator countries, there is some evidence that the composition of those in in-work poverty does differ.

For example, Giesselmann (2015) compares in-work poverty in Germany and the UK, and finds that institutional factors mean that in-work poverty affects different socio-economic groups in the two countries. He finds that in Germany, both entrants and re-entrants to the labour market face a relatively greater risk of in-work poverty than those in the UK. This is attributed to the tendency of Germany's labour market institutions to shift in-work poverty to the periphery of the labour market; labour market incumbents are protected through stronger employment protection legislation and

centralised wage bargaining, whereas entry-level positions are characterised by higher concentrations of atypical employment (see also, Brulle, et al. 2019). Particularly noteworthy is the finding that, in the UK, the share of working poor in entry-level positions is only marginally larger than the poverty rate among all employed, while in Germany the poverty risk among entry-level workers is more than one-third above the average rate. In the UK in contrast, in-work poverty is found to be higher amongst older workers than in Germany, as these workers do not share the same sorts of employment or wage protections as their German counterparts.

There are gendered differences between countries too, reflecting differences in family policy. Poverty risks among females are slightly higher in Germany than in the UK, which may reflect the ongoing dominance of the ‘male breadwinner’ model in the German social security system. This disincentivises partnered females from working full-time – and this in turn may then contribute to higher female in-work poverty after a subsequent household separation (Gisselman, 2015).

There are also differences between countries in terms of family types most affected by in-work poverty, with Sweden tending to show lower risks of in-work poverty for families with children than in non-Nordic countries more generally (Eurofound, 2017).

The risks of in-work poverty are consistently higher for those in part-time and temporary employment

These discussions may be interesting, but how does in-work poverty relate to our core questions around working hours and hours insecurity? Here, the picture is very much one of similarity between countries. The risks of in-work poverty are consistently higher for part-time versus full-time workers, higher for temporary as opposed to permanent workers, and decreasing in the degree of ‘work intensity’ of the household (Table 6.1).

Table 6.1 shows that the risks of in-work poverty are particularly high for part-time workers in the UK. This likely reflects a combination of stronger wage dispersion, a higher correlation between hours and pay (discussed previously), and less generous social security systems in the UK.

When it comes to temporary contracts however, in-work poverty rates are somewhat lower in the UK than in the other comparator contracts. This likely mainly reflects the simple fact that temporary contracts are in fact more common in the comparator contracts (UK employers have less need for temporary contracts, given much weaker employment protection legislation), but it could also reflect shorter duration of spells out of work between contracts in the UK.

Work intensity measures the extent to which a household is working to its potential. For example, a two-adult household would have a work intensity of 1 if both adults worked full-time, or 0.5 if both worked part-time (if one worked full-time and one worked part-time, the work intensity would be 0.75). Table 6.1 reveals a stronger gradient between work intensity and poverty in the UK than in other countries, with the risk of in-work poverty slightly lower than average for households with high work intensity, but higher than all other countries for households in low work intensity. In other words, part-time workers in the UK are more likely to find themselves living in poverty compared to part-time workers in other European countries.

It is important as ever to bear in mind that the impact of work status or intensity does differ depending on whether an individual is the main or a second earner in a household. Whilst, for a sole earner, working part-time is clearly associated with a higher poverty risk than working full-time, a second earner is often less likely to be in-poverty working part-time, compared to not working at all (Xavier Jara and Popova, 2019).

Table 6.1: In-work poverty rates by characteristic, 2018

	Work status		Contract type		Work intensity			
	Part-time	Full-time	Employees with a permanent job	Employees with a temporary job	Very high work intensity (0.85-1)	High work intensity (0.55-0.85)	Medium work intensity (0.45-0.55)	Low work intensity (0.2-0.45)
EU	15.6	7.6	6.0	16.2	5.3	10.4	23.1	37.6
Germany	14.3	6.3	7.1	17.8	5.6	9.9	17.0	30.7
France	11.9	5.9	4.5	13.0	3.9	9.2	17.8	38.0
Sweden	8.9	5.6	3.4	17.3	5.3	8.0	22.3	33.7
UK	17.2	7.3	8.0	12.1	5.0	11.8	29.4	43.4

Source: Eurostat

Summarising cross-country differences in in-work poverty and employment status

What can we conclude from this section? First, that whilst employment patterns do matter for determining in-work poverty, household composition and welfare policy matter just as much, if not more. Second, that whilst differences in in-work poverty rates between countries may appear modest, this hides variation in the types of household most at risk. Third, that in terms of employment, the factors contributing to heightened risk of in-work poverty are similar across countries, and include part-time work, self-employment, and those working for part of the year (whether because of temporary contracts, or moving between employment statuses more generally). These factors are often just as significant as hourly pay in determining the risk of in-work poverty. Fourth, that number of children and number of earners in the household are also important determinants of the risk of in-work poverty.

7. The views of employers and workers

Building on the statistical analysis in previous chapters, a third aim of the study is to provide insight on the factors influencing employees' hours worked, their views on and experience of underemployment or hours insecurity, and employers' approaches to balancing their own and their employees requirements for both flexibility and stability. In terms of employers we are interested in how they arrive at decisions about what contracts they offer and make available, and what factors influence these decisions. For employees, we are interested in those working in 'atypical' or 'non-standard' forms of employment contracts such as part-time, agency, contract, short fixed term, and zero-hours contracts: why they take these particular jobs and contracts; benefits and costs of these; why they want more working hours than they currently have, the current constraints on their hours; and what they want from the labour market in the short-term future.

Key points

- Employers offered a range of contracts and rationalise non-standard contracts on the basis of fluctuating service demands and flexibility benefits for employees.
- There are a number of important employer influences on non-standard contracts, including the: business model underlying services (for staffing), an active HR function (for better employee voice) and the availability of jobs in local labour markets.
- Although some employers avoid using some forms of non-standard contracts because of concerns about their 'reputation' and use, they are essential in services with public-facing, time-specific and seasonal demands. In the absence of non-standard contracts some services (and sources of employment and jobs in areas like hospitality, retail and Early Years) would be very different in their scale and operation.
- Employees on non-standard contracts thought that the main benefit of those contracts is their flexibility (i.e. the opportunity to schedule other commitments around their working hours).
- Flexibility benefits, however, were offset by weaker job security. Most workers wanted permanent, stable contracts.
- Underemployment is a complex issue nuanced by a range of factors that sometimes make it difficult to read in terms of its impact on individuals and households. While employees had the contractual features associated with a heightened risk of in-work poverty factors such as household composition (and the presence of a working partner) and welfare support helped to offset household concerns.
- There were a number of individual, household, employer and labour market constraints on working hours. Individual constraints were in health and gender (i.e. females with domestic caring commitments). Although employees try to proactively influence their working hours, there were employer constraints on their availability and some employees felt unable to take on additional jobs (hours) with other employers because of their existing contracts. Employees also pointed to a lack of full-time jobs available in their local labour markets.

Employers offer a range of contracts

We engaged with a number of service sector employer representatives who currently managed people within private and third sector organisations. Our analysis identified a number of themes or factors that shape employers' understandings of employee contracts (and under-employment) and their approaches to workforce planning. The key contractual features of our sample were:

- Employer's offered a range of contracts both standard and non-standard. Non-standard contracts used by employers were part-time, temporary and zero-hours contracts.
- Non-standard contracts were used to provide employee and service flexibility which was built into their business models and approaches to workforce planning.

Business models influence contracts

Our employers were service-sector organisations and operated on business models that shaped their recruitment and workforce planning. These organisations had varied HR capacities: bigger employers were more likely to have an active and dedicated HR function managing their operations and structure. Most of the larger employers spoke about the problems of recruitment and retention: bringing in people with the 'right skills and attitude', and having strategies to retain workers, including addressing their training and development needs in-house. All employers put a strong focus on retaining workers and 'valued people and skills': both in urban local labour markets with relatively high and competing labour demands, and in more rural labour markets where employers spoke about 'scarce' skills and labour. A significant number of our employers spoke about their strategy in terms of a willingness to absorb the costs of having relatively large numbers of employees on permanent secure fixed-hours contracts: avoiding less secure types of contracts. For employers this was consistent with their prevailing ethos and values which reduces the risks of underemployment for workers, ensuring they retain staff. Some contrasted their workforce planning approaches with other employers in their sector. For example:

"...unlike others we don't offer zero-hours, minimum or open hours contracts. We took a decision that we wouldn't go down that route, that it would be unfair to the people we have working here, who need security. We put a strong emphasis on our values as an employer in our recruitment...I meet regularly with others (employers) and they all speak about having these high turnover rates like 30%...our turnover is down in low single figures. Why? Because we invest in our people and we see that as important."

[Employer 01]

However, most employers viewed staff flexibility in their hours as essential for some parts of their services with public-facing, time-specific and seasonal demands. This is largely either because they required a temporary replaceable workforce for peak service demands and/or because their business model was based on minimal or no use of more costly, longer hour permanent staff contracts. One Early Years employer who used a zero-hours contract business model spoke about the 'unaffordability' of other contractual approaches to meet fluctuating parental demands for childcare services. It was rationalised on the basis of having 'tight finances' on staffing and providing flexible hours for workers (mainly female) who need that flexibility in their domestic family lives and commitments. In this approach, employees were also free to take up other part-time locally available work and 'add-up' jobs. For hospitality employers using temporary staff and seasonal staffing models, there was the expectation that workers (mainly students) would simply come and go season to season. This was essential for hospitality businesses in more rural areas. For example:

“We can’t get local labour in here. This area is remote and there aren’t the people available to meet our demand for staff...So our staff are mainly people looking for this kind of seasonal work that we can bring in: students or younger people looking for some work experience. We have the other problem of where we can accommodate them and we’ve had to build staff (accommodation)”

[Employer 05]

This was contrasted with hospitality employers in larger urban settings who experienced annual service demand that required less seasonal fluctuations in labour: higher volumes of part-time workers could be employed on relatively longer hours contracts (e.g. 24 or 30 hours per week). ‘Higher’ wage rates were used to boost staff retention in more competitive labour markets and to ensure they were able to have ‘long-serving’ staff with ‘good skills’ which they saw as bringing advantages in terms of their experience and knowledge of the business. One of these hospitality employers also spoke of actively considering future post-Covid staff initiatives to target older workers for their generally better customer service skills. Others spoke of becoming even more flexible in terms of the re-scheduling of shifts around school hours to encourage greater labour demands. There was an expectation on the part of these employers that staff with the ‘right attitude’ were also those that were willing to be ‘flexible’ around task and shift demands. These employers offered a range of shift schedules and employees could always ‘add-up’ more hours ‘on the job’ to cover for staff sickness and absences, and in other jobs with other employers if they needed more working hours. In other words ‘underemployment’ was also the responsibility of the employee.

Others, however, argued that there was no desire on the part of the organisation to offer more flexible contractual hours working. They argued that ‘valuing staff’ was a key priority for them as an employer: their priority was on offering *all* staff standard set-hours contracts and that their business model was not about cost minimisation through contractual flexibility. These employers only extended this to part-time working (usually at the request of the employee) because it was recognised (as above) that this was particularly valuable to some types of employees (e.g. those with health concerns and domestic caring commitments). Among employers as a whole, there was a view that the volume of work available (outwith Covid-19 restrictions) meant that few employees would report being short of hours, but some acknowledged that fitting shifts for people with caring responsibilities (especially in female-dominated occupations) could be challenging.

Employers in Early Years and in Hospitality and Tourism tended to assume that there was a greater need for flexibility among two key labour groups: students in further and higher education who could work shifts around study and females with childcare or other domestic caring commitments. Employees in both these groups particularly needed or wanted more flexibility, and that they preferred part-time, variable or zero-hours contracts. Non-standard contracts allowed people to achieve a better ‘work-life balance’. To support this view, some employers were able to cite a range of workforce planning practices and specific initiatives to help employees manage the ‘balance’ of their work and domestic demands. For example, one employer speaking about their post-Covid approach to contractual flexibility said:

“We are planning to go even further on flexibility and design our working shifts around school hours. Sometimes shifts at present overlap with school and that can limit the numbers of people who come and work for us, so we plan to design shifts with this in mind and that creates more flexibility for us, and it’s better suited to people coming in who have kids in school hours.”

[Employer 06]

Ultimately, however, there is a balance between meeting business needs and offering flexibility to employees. Context is important and employers face strong challenges to provide longer hourly

contracts while also staffing service demands. Some business models clearly offer relatively little risk to employees in terms of underemployment because they don't offer non-standard contracts. For employers who did, issues such as organisational values and ethos mattered and for many flexibility benefits are central to their practices. Even in cases where there may be questions about the 'profitability' of their business model, it should be clear that without non-standard flexible contracting some services simply may not be able to function as they do at present.

Active HR creates opportunities for hours and voice

Having an active and resourced HR function means that organisations are better at ensuring a good fit between employees' needs and the shifts and hours made available by employers and managers. Most employers could identify avenues and channels through which employees could express their views and where they would constructively listen to staff. While larger organisations tended to use a range of 'listening' and employee feedback channels (e.g. staff surveys, employer representatives, trade unions, employee forums and ongoing manager-staff engagement), smaller ones relied largely on manager/owner-staff interaction. Engagement (of whatever means) was seen as an important for staff being able to voice their concerns, which may include their working hours. For our employers, demand for greater working hours among staff was not claimed to be a prominent concern.

With the exception of one small employer we were given no examples of employers adopting a centralised workforce planning approach that was focused almost entirely on maximising flexibility on the side of the employer and minimising staffing costs. Where most of our employers spoke about having part-time and seasonal temporary staff, these were justified in terms of flexibility, on seasonally-variable 24/7 service demands (e.g. in hospitality and tourism) and using an employee 'bank' for back-up cover for sickness and absence. In one Early Years employer, however, who used zero-hours contracts this 'financialisation' of workforce planning was a core feature of their business operation and the result of seasonal service demands. For example:

"This service couldn't operate without having zero-hours contracts (frontline staff). If it didn't we wouldn't be here. I have a group of ladies that I can use for shifts depending on the demands. We don't operate much over summer anyway because we largely accommodate the school year. On the funding I get (from local authority) for childcare places you couldn't operate in any other way. I couldn't pay staff for shifts that aren't happening. I couldn't have people sitting around and paying them when there's nothing to do, so the business model is quite tight"

[Employer 07]

This employer – along with others – also acknowledged that zero-hours contracts could be a problem if they were used inappropriately:

"They (ZHC's) can get a bad press but although I use them because I have to, it doesn't mean in a bad way. We do get emergencies and we need cover for sickness and holidays but they all (i.e. staff) know the shifts they get and are happy with that flexibility"

[Employer 08]

Local labour markets are important too

Local labour markets shape employer practice. Geography and the availability of labour clearly inform workplace practice. For example, in urban Scotland, some employers struggled to recruit for lower-paid hospitality jobs in competitive labour markets. This had led some to concentrate on retention and building an experienced and established workforce: improve their pay rates and consider new recruitment initiatives among ‘older workers’ and even more flexible shift systems built around potential employee needs. For rural employers who also struggled to recruit this was not because of competition from other employers but a low population base and high levels of out-migration among younger economically-active age groups. In the former there was a greater emphasis on ongoing flexible working and staff retention policies, making investments in people and placing an emphasis on having established long-serving staff. In the latter, there was a heavy emphasis on temporary recruitment to service time-limited seasonal demands.

Our employees were underemployed

From Chapter 5 we know that atypical’ or ‘nonstandard’ employment refers to employment that diverges from a standard full-time, permanent, regular and single employer set-up. Nonstandard employment includes a variety of working practices including part-time, agency, contract, short fixed term, and zero-hours contracts. We had a representative spread of respondents in these groups (see Appendix 1). By definition, all of our respondents wanted more working hours than they currently had, i.e. were underemployed. Consistent with previous research in these labour market groups (e.g. CIPD 2020), some of the key contractual features of our sample were:

- hourly not salaried pay rates.
- access to additional extended hours but not ‘overtime’ rates because where these applied, they were only available to permanent staff.
- access to accrued paid holiday entitlement (i.e. all non-agency respondents) but not pay for sickness and absence, or pension contribution.
- access to furlough arrangements by four of the ten respondents working on zero-hours contracts in the retail and hospitality sectors.

Workers like flexibility too

All respondents identified the main benefit of non-standard contracts in terms of their flexibility for other and domestic commitments¹⁴. This was especially strong in female respondents who described the opportunity of balancing work with domestic childcare and other caring responsibilities: that more time was available to work as domestic commitments decreased when children progressed through school. Having opportunities for flexible non-standard working arrangements and hours was largely viewed positively by all of our respondents. They were viewed as a ‘natural’ working pattern for parents with dependent children and for those respondents in younger age groups in further and higher education to supplement their income. Non-standard working arrangements were also welcomed by four older respondents who had been made redundant (mid-career) during the 2020 Covid-19 pandemic from permanent full-time jobs and careers. Very simply, they recognised the opportunity non-standard contracts provided to continue to have some individual means of bringing in a household income. By comparison, however, for three of these respondents their individual

¹⁴ ‘Flexibility’ was used generally by respondents to describe the non-work time available that they had compared to full-time ‘set hours’.

earnings in non-standard contract work were significantly less than their previous income in full-time employment.

But many wanted permanent full-time jobs with set hours

Although flexibility was identified as the main benefit of non-standard contracts, this was offset by their 'weaker' security aspects. Most of our respondents viewed their current contractual (if not job) status as 'transitory': temporary staff wanted permanent contracts, agency workers wanted one stable job; half of those on zero-hours contracts wanted guaranteed hours and greater contractual security; and, those who were graduates and students anticipated moving into higher-skilled jobs consistent with their training and education, jobs with longer-term career pathways and benefits. There was a feeling among many of the respondents that Covid-19 had significantly slowed new full-time job opportunities. A good example was our four respondents who were made redundant in 2020. Each spoke about 'downsizing' their household finances and expectations to lower-skill temporary, agency and zero-hours contract jobs, and re-evaluating their career aims. They highlighted the problem of 'uncertainty' in the current Covid-19 labour market for trying to re-establishing their previous jobs and careers. Not surprisingly, they anticipated reduced job opportunities in their previous industry and sectors post-pandemic; and spoke about considering whether they should retrain in other skills for job markets with better prospects, with no certainty about what was the best strategy for them at this point in time. For example:

"...plenty of people say that I must have all these transferable skills but there's nothing around at the moment. I'm not sure the industry I was in will have that many jobs in the next few years because of Covid, so I'm totally confused about what to do. Do I wait? Do I re-train in something else and if so, what? I don't know what is best right now but I need to do something."

[Male 40yrs, Agency Worker]

Another example, was another four respondents (on zero-hours contracts in public-facing roles in sectors such as personal services, retail and hospitality) who were currently on furlough. While they appreciated the support they were getting from their employers during Covid-19, they were uncertain about when their work activity would pick up again and what this may mean for their working hours in sectors such as hospitality.

Most respondents clearly wanted more hours and contractual stability than they had at present for a variety of reasons: establishing independent living arrangements (from parents for those in younger age groups) or because they had financial commitments to maintaining mortgages, or wanted to utilise, progress or consolidate their existing levels of labour market skills. A few typical examples that outline the above points are provided below:

"I couldn't afford to rent or buy my own place with my hours just now. I would like more hours and more money but longer-term I know I'll be going into a career after I graduate and not working in a shop."

[Male 21yrs, Retail]

“My aim is to use this experience to move onto a career in nursing. I do these jobs but I want to be a nurse and this is the way I get some money and get more experience to get me into that area.”

[Female 39yrs, ZHC, Health and Social Care]

And they report the experience of unstable working hours and insecurity

In Section 5 we saw how nonstandard employment may be more likely to expose workers to a greater degree of insecurity and precarity but disentangling insecure or precarious work from nonstandard employment more generally can be problematic. This is comparatively easier to do in qualitative research and many of our respondents primarily associated their non-standard contractual working with insecurity (i.e. and not with *their* experience of financial hardship or in-work poverty).

We also saw in Section 5 that for a significant proportion of workers on non-standard contracts the benefits of increased flexibility may be outweighed by increased inconvenience and insecurity. A balance to our respondents' support for the benefits of flexibility of non-standard contracts is evidenced by the fact that all of the respondents reported a level of dissatisfaction with their current level of working hours and many wanted full-time employment. Most spoke of wanting more hours in the context of a desire for more contractually secure permanent employment and more 'stable, guaranteed' hours¹⁵. Respondents generally spoke about their desire for greater contractual predictability in the labour market and greater certainty in their household finances and people's ability to make ends meet. Not surprisingly, when respondents were asked about the main downside and disadvantages of their current employment contract, most spoke of their desire for greater contractual predictability in the labour market and greater certainty in their household finances. Non-standard contracts adversely affected their ability to plan ahead and the 'uncertainty' associated with not knowing what income is coming into the household (i.e. week to week or month-to-month). For example:

“So they (ZHC's) give you flexibility yes but if you don't know what hours you're getting you don't know whether you'll have enough for the bills and running a house, what to spend on food and plan week-to-week so that you have enough at the end of the month...that's the main drawback of zero-hours contracts for me”

[Female 39yrs, ZHC, Health and Social Care]

For our respondents (non-agency workers), insecurity did not appear to be a function of very little advance warning or notice that they received from employers about what hours or shift rota they would be working. Notice of working hours varied across respondents: ranging between one week and up to one month in advance. Where it did arise was in opportunities to work additional hours as cover for sickness and absence, staff 'emergencies' and seasonal demands. Some respondents reported having 'frequent' offers of additional hours because managers/supervisors knew they were willing to work on-demand for shifts as and when these arose. The outcome of this however, was a feeling of uncertainty in their income and planning in their life outside work. For example:

“I've seen me come in for a two-hour shift and still be there six hours later because someone's not turned up, or is called in sick and the manager has come to me and asked me to cover. Can't knock it back - need the money

¹⁵ The desire for income from more stable employment with guaranteed hours was the primary reason for respondents wanting more hours. In this context, eight respondents mentioned that they 'needed more money'. Low pay was not a significant feature of interviews with respondents more likely to talk in terms of hours rather than their current pay rates.

– but I’m then telling my partner that I can’t do other things because I’m still at work. Does cause chaos at times but what can you do, I want the hours and the shift.”

[Male, 39yrs, Minimum Guaranteed Hours, Retail]

Respondents in agency jobs were in a slightly different position concerning advance notice. They spoke of the uncertainty about not knowing how long a particular job would last (in weeks or months) and whether it could translate into a more permanent contract. As a group they spoke of having comparatively short periods (2-3-weeks) between agency contracts and being able to financially manage staggered working periods with different employers.

A desire for less precarity was reflected in how much control respondents felt that they had over their working hours. Although most – not surprisingly - felt that they had comparatively little control of their working hours, which were largely determined by employers, some reported that they did try and exert some degree of influence (and we discuss this in more detail below in terms of labour market ‘constraints’). However, across all of our interviews, only one respondent - an agency worker - felt that they were mostly in control of their working hours. One of the best examples of how our respondents managed their working hours and also proactively tried to exert more control over them came from a zero-hours contract worker who provided private social care for elderly people and relied on client longevity. For example:

“Took a zero-hours job from an elderly gentleman and thought this would last for bit but he sadly died quite quickly and a lot quicker than I had anticipated so had to look for someone else”

[Female, 45yrs, ZHC, Health and Social Care]

Insecure non-standard contracts didn’t mean hardship and in-work poverty

In Section 6 we saw that workers in households in poverty generally work fewer hours than those not in poverty. We also know that those in part-time and temporary employment have a greater risk of in-work poverty. However, despite the fact that the likelihood of a worker being underemployed is higher in lower income households, underemployment is not exclusive to low income households, or just amongst households in poverty. Although there are accounts of financial hardship and circumstances that push people into precarious non-standard contracts to make ends meet, none of our respondents reported individual or household difficulties (e.g. personal debt, missed utility bills, or mortgage repayments). Welfare was an important support for the household incomes of around a third of our respondents, supporting household and childcare costs.

Working households and incomes help ameliorate insecurity and hardship

In Chapter 5, we argued that whether a particular job exposes a worker to feelings of insecurity is likely to depend in part on characteristics of the individual and the alternatives available to them, as well as their current job itself. It was clear from the interviews that insecurity appeared to be most acute in older age groups with dedicated financial commitments: dependents at home and mortgages. Respondents expressed this as an ongoing general concern about what their coming weekly hours would be, where the next hours or wage was coming from and how much it would pay. For example:

“The people who really struggle with zero-hours contracts are those with houses and kids to pay for. They (ZHC’s) suit the young ones without responsibilities but if you’re older, you have a family and with kids, you need to know what money’s coming in and whether you can pay your bills if you know what I mean”

[Female, 36yrs, Variable Hours, Health and Social Care]

It was clear from the interviews, however, that insecurity appeared to be most acute in older age groups with dedicated financial commitments: dependents at home and mortgages. Respondents expressed this as an ongoing general concern about what their coming weekly hours would be, where the next hours or wage was coming from and how much it would pay. Some of the agency workers, however, told us that because of their skill-base they were able to exert some choice about the types of jobs they would take on in terms of their pay rates - avoiding National Minimum Wage (NMW) contracts and trying to take better paid jobs and rates. For example:

"I don't touch minimum wage jobs...I can get higher than that and jobs paying £13-14 an hour"

[Male, 22 yrs, Agency worker, Construction]

"I did take a short job a few months ago on minimum wage but I wouldn't do it again because it felt unfair on me and what I can do, so I'm very reluctant to go down that path again. Felt like I was underselling myself and I don't have to take those jobs"

[Male, 38yrs, Administration, Agency Worker]

A strong moderating influence in those of our respondents who were most concerned about insecurity was the presence of a partner at home in full-time employment. It was also evident in the lack of insecurity among those younger respondents (across SEG groups) who were living at home with parents. Respondents generally recognised the importance of having at least one secure full-time income in the household and the efficacy of this to make ends meet. For example:

"My partner works full-time and things could be a lot worse. I worry about how much money I can bring in because we have a mortgage and I've only got a minimum number of guaranteed hours each week but if push comes to shove I know that my partner can pick that up. But the way I think is that I want to doing as much as I can to help with the bills"

[Male 39years, Minimum Guaranteed Hours, Retail]

"So lucky that my partner works. Some weeks I don't get any hours at all and during the pandemic my hours completely dried up...we rely on his wage coming in to cover everything and anything I get is a bonus. If we didn't have that (i.e. partner's wage) things would be a lot lot different and I'd worry even more than I do about not having more hours"

[Female, 32years, ZHC, Education]

Individual and households factors also constrain and limit working hours

Our evidence suggests that the presence of a partner in full-time employment in the household ameliorates the experience of insecurity and hardship. This feeds into a wider discussion of some of those individual and household factors that shape and help explain the working patterns of some of our respondents. There are other factors that also 'constrain' people's working hours. In discussions which look at underemployment as a proxy indicator of 'spare capacity' in the labour market or missing pieces of potential labour market productivity, a discussion about constraints feeds directly into policy narratives about addressing these and helping to get people more hours.

Household and individual constraints on working hours largely concerned health issues and the presence of dependent children. These are both longstanding and relatively familiar labour market 'barriers'. Given the age and household profile of our respondents, it was perhaps not surprising that health was a relatively weak constraint for our respondents. It was only discussed by one person. Much more prevalent, were the constraints arising from dependent children and domestic childcare commitments. These were exclusively cited by female respondents, who used part-time and flexible

contracts as a means to continue to work while still being able to meet these commitments. For example:

“At first when (child) was born my partner at the time didn’t want me working, made a big man thing about him bringing the money but when she (child) went into nursery I took one late hours shift up at (retail company). Then when we split up I took a weekend shift when she went to school. She’s (child) now going into High School so that frees me up even more.”

[Female, 30yrs, Part-time contract, Retail]

“I’ve always worked except when they (children) were really young, you know before they went to the school. I just took what hours I could get but then I took a zero-hours tutoring contract with (employer). Not too demanding but my youngest just went to school last year so I can work more hours now and I’m looking for something else, for longer and more set hours”

[Female, 35years, ZHC, Education]

For working mothers there was a clear expectation that they would increase their working as their childcare commitments reduced. All were looking to increase their working hours in the short-term and others planned to return to work and careers more and more fully once their domestic childcare commitments had further reduced. In labour market studies, the profile of our working mother respondents is demographically consistent with the wider population of female ‘labour market returners’ (e.g. Paull 2018). While none of our sample of mothers were economically inactive they all reported that they had curtailed their previous and current working hours, and careers because of young children. Most of them had a partner in full-time employment living at home and while they wanted more working hours, their current employment activity wasn’t viewed as imperative to make ends meet. Others received childcare supports from parents and families. Their current economic activity is entirely consistent with the wider population of females who return to work after or during childcare. In general, these groups tend to have poorer work characteristics than the general working population and relative to other workers, they tend to have lower working opportunities, lower weekly hours, were in part-time work and underemployed, lower hourly wages, lower weekly earnings and lower proportions in permanent work or supervisory positions. They are also more likely to work at or from home (Paull 2018).

And there are employer and wider labour market constraints as well

Although many respondents reported that they tried to proactively influence the hours they had at work, most felt that these were largely determined by factors outwith their individual control. In this sense, respondents were able to identify a number of workplace and local labour market constraints and barriers to getting more hours. These largely concerned the following issues.

Availability of hours at work. Respondents outlined a number of ways in which they tried to influence the number of hours that they worked, or improve their contractual security by demonstrating ‘commitment and motivation’ at work. For ZHC respondents, this involved making managers and supervisors aware that they wanted extra hours and shifts when they became available either as cover for staff sickness and absence, ‘emergencies at work’ or meeting seasonal demands. For around a half of these respondents, however, this meant that they felt that they felt unable to refuse extra hours and shifts even in situations when these were unsuitable. This was because of concerns they had about the consequences and whether managers/supervisors would then see them as ‘less available’ to work and offer available hours/shits to other workers.

"I don't feel that I can knock back the offer of a shift. My manager knows I want the hours and if I say I can't make it then next time maybe he goes to someone else. Too risky."

[Male 39years, Minimum Guaranteed Hours, Retail]

For agency and temporary-contract respondents a 'commitment and motivation' strategy involved ensuring their performance was satisfactory during their period with an employer in an attempt to be retained for longer periods than they expected at the start of the contract, or be offered a permanent job.

Inability to take on other part-time or zero-hours jobs to complement their existing hours. This issue was highlighted by most respondents on zero-hours and 'minimum guaranteed hours' contracts. They spoke about the problems of taking on other jobs when their current employer expected them to make themselves available on-demand, and the problem of having other employers who would then also expect them to be available when needed. Only two of our respondents reported that they had taken on a second job to supplement their income: one construction worker who worked on regular 'homers' at weekends, and one part-time retail worker who took irregular 'cash-in-hand' shifts from a cleaning company.

The lack of suitable full-time employment and jobs in their local labour market. This was the biggest barrier cited by most respondents when asked about what was stopping them getting a full-time permanent job. The lack of full-time job opportunities (and of the number of labour market opportunities more generally) was especially cited by respondents living in more rural labour markets in Argyll and the Highlands. They spoke about the lack of local employment opportunities in these areas outside of seasonal demands in tourism. It was also cited as the main factor by those in more urban settings with more job opportunity, although there was an expectation that more full-time jobs would become available post-Covid-19 in these labour markets.

Summarising employer and employee views

We draw a number of conclusions from this section. First, that employers offer a variety of contracts and rationalise non-standard contracts on the basis of fluctuations in service demands and the flexibility benefits for employees. Factors such as the business model, the presence of a HR function and the characteristics of the local labour market all influence the types of non-standard contracts that are offered to employees. The views of underemployed employees on non-standard contracts do offer support for the employee flexibility benefits mentioned by employers but this is not the only feature of non-standard contracts. Flexibility benefits need to be balanced against the desire of many respondents for a full-time job and alongside insecurity, and concerns about individual and household finances. Underemployment is a complex issue nuanced by a range of factors that sometimes make it difficult to read in terms of its impact on individuals and households. While our employees possessed all the part-time and temporary contractual features associated with a heightened risk of in-work poverty, factors such as household composition (and the presence of a working partner) and welfare support helped offset concerns. There were a number of individual, household, employer and labour market constraints on working hours that were identified in our interviews. Individual constraints were in health and gender (i.e. females with domestic caring commitments). Although employees try to proactively influence their working hours, there were employer constraints on their availability and some employees felt unable to take on additional jobs (hours) with other employers because their hours were unpredictable. Employees also pointed to a lack of full-time jobs available in their local labour markets.

8. Implications for policy

In this final section of the report we discuss the implications of the report's findings for policy.

Key points

- Patterns of hours worked changed substantially during 2020 as a result of the pandemic and associated lockdowns. The impact has been very unequally shared across employee groups and households. It remains unclear to what extent some of these changes will persist and become permanent, and to what extent they might 'unwind' as restrictions are eased and the economy returns to 'normal'. The policy implications that we consider in this chapter are likely to be very relevant in a post-pandemic world, regardless of the specifics of the labour market recovery.
- The idea of a '4-day week' is gaining traction, motivated by the argument that it will enhance productivity, improve wellbeing, and help share the proceeds of economic recovery. There are ways in which policy can facilitate a transition to shorter working weeks, although questions over the timescales and costs involved. But the concept of a 4-day week is sensible aspiration around which to frame labour market and wider economic policy.
- It is important to remember that patterns of hours worked can be affected by an extremely diverse range of social and economic factors that go well beyond 'labour market policy' narrowly defined. Enhancements in productivity (the amount that is produced per hour worked) are ultimately what drives real wage increases over time and thus facilitates a reduction in working time to happen – without any deterioration in living standards.
- Policy has a critical role to play in giving workers, particularly low-paid workers, greater control over their hours. Workers should have a right to a contract that reflects the actual hours they work, a right to two weeks' advance notice of work schedules, and a right to compensation where shifts are cancelled or changed without reasonable notice. The forthcoming Employment Bill should be used as an opportunity to introduce these rights.
- Bargaining between employers, unions and government plays an important role in agreeing and upholding agreed working standards and practices. However, collective bargaining structures in the UK are weak. There is a need to reinvigorate collective bargaining institutions in the UK, and strengthen their coverage of 'new' forms of work.
- Perceptions of job and income security are conditioned by the availability, and rates of, out-of-work and low-income benefits. The UK has low rates of unemployment insurance, combined with a high element of contingency attached to those benefits. This heightens' employee perceptions of insecurity, and weakens their ability to challenge poor working practices via an implicit threat to leave a given employer. The case for more generous and less contingent low-income benefits – perhaps in the form of a Minimum Income Guarantee – is a strong one.
- This report has highlighted previous research indicating that increases in minimum wages can have less desirable side-effects – potentially encouraging greater use of zero-hours contracts or reduced use of overtime. But rather than scaling back ambition in relation to

the minimum wage, the presence of these side-effects underlines the importance of the other measures described here. This is precisely why, as well as a floor on hourly wages, we also need a better floor on conditions.

The pattern of weekly hours that people work matters. It influences earnings and household incomes. Differences in patterns of working hours across individuals influence inequality and poverty. And working hours influence work-life balance and well-being.

The hours that people work are driven by a multitude of factors. Labour market regulation, social norms, collective bargaining, the interaction of wages with taxes and benefits, caring responsibilities and employer demands all have a role to play.

Public policy can and does shape patterns of hours worked. We've seen that in the way that hours worked have evolved differently across different countries.

The past 25 years have witnessed some big changes in working hours. Amongst men these changes have increased earnings inequality. But hours changes amongst women have tended to reduce earnings inequality. A reasonably large proportion of people are dissatisfied with their weekly hours of work. And for some workers, there are increasing concerns about the insecurity and instability associated with work hours.

The challenge for policy-makers is not to try to second guess the hours that people want to work and attempt to legislate for that. Instead, it's to ensure that labour markets operate fairly and smoothly in ways that ensure workers have sufficient control over when, where and how much they work. And it's to ensure that employers cannot simply transfer the effects of a precarious business model onto the shoulders of their employees.

In this concluding section we discuss some of the possible policy implications arising from this research. But we begin by considering how the pandemic may influence those implications.

The impact of Covid-19

In looking at trends in working hours, this report has focused on the period up to 2019. Of course, the Covid-19 pandemic in 2020 has led to a significant recession with the outlook for the labour market hugely uncertain.

Almost one third of employees have been furloughed at some point during 2020, and almost five million continue to be on furlough in March 2021. Many employees not officially furloughed have nonetheless seen reductions in their weekly working hours.

We know that the impacts of the pandemic and associated 'lockdowns' on hours worked have been unequally shared across employee groups and households. Younger workers and low-paid workers have been more likely to be furloughed or move out of employment altogether (Williams et al. 2020). Workers on temporary and zero-hours contracts have been more likely to lose hours and pay (Adams-Prassl et al. 2020). Mothers have been more likely to lose hours than fathers (Harkness, 2021), and lone parents have been particularly badly affected. Disabled workers and some ethnic groups have also been disproportionately affected by pandemic-related labour market changes.

At the same time, underemployment did begin to tick-up during 2020 (modestly), and there was an increase in the number of fixed-term positions.

It remains unclear to what extent some of these changes will persist and become permanent, and to what extent they might ‘unwind’ as restrictions are eased and the economy returns to ‘normal’. It is equally unclear to what extent increased homeworking might continue post-pandemic – and if it does, to what extent it will change working patterns and influence work-life balance.

It is beyond the scope of this report to add to the intense debate and speculation over the potential outcome of these future trends. Policy makers must remain vigilant to the needs of the labour market as it evolves. But many of the issues that the labour market faces as it emerges from the pandemic are in any case likely to be very similar with the challenges faced before – with a substantial minority of workers experiencing some combination of: a lack of control over hours, uncertainty and/or insecurity in hours, underemployment, and wide inequality in hours and pay. The policy implications that we consider below are likely to be very relevant in a post-pandemic world, regardless of the specifics of the labour market recovery.

A four day working week?

The proposal for a ‘4-day week’ has been gaining traction for some. In fact, various 4-day week pilots are being embarked upon around the world¹⁶, and the idea has been spoken of favourably by Scottish Government First Minister Nicola Sturgeon¹⁷, and various unions. (Note that the concept of a 4-day week is usually short-hand for a world where a 30-hour workweek is the norm, with those hours worked at a time suitable for the employee).

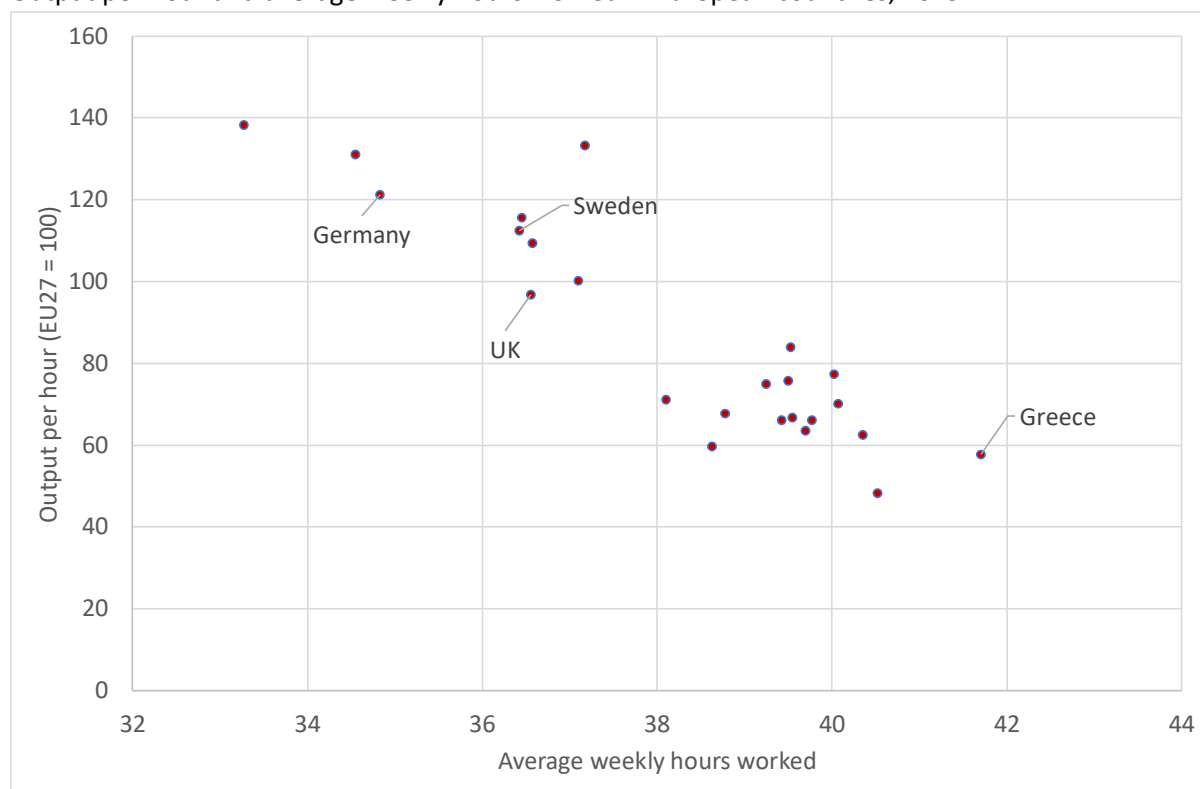
The idea for a 4-day week has often been motivated by two core reasons. First, the observation that, internationally, shorter working weeks tend to be associated with higher productivity (and hence higher wages). This is shown in Chart 8.1. Second, the observation that shorter hours can be associated with higher levels of happiness and improved work-life balance.

¹⁶ Spain for example is embarking on a €50m pilot project that will allow companies to trial reduced hours with minimal risk. <https://www.theguardian.com/world/2021/mar/15/spain-to-launch-trial-of-four-day-working-week>

¹⁷ Speaking at an election debate in March 2021, Nicola Sturgeon said she would like ‘to look at how we pilot and explore things like a four-day working week to get that work-life balance better’. Her party, the SNP declared itself to be strongly in favour of a shorter working week at its annual conference in November 2020.

Chart 8.1: Shorter hours are correlated with higher productivity

Output per hour and average weekly hours worked in European countries, 2019



Source: Eurostat

More recently, shorter working weeks have also been proposed as a means of maintaining high employment in the aftermath of the pandemic – potentially funded through an extended furlough scheme that is tapered away over the course of five years (Coote et al. 2020; Frey et al. 2020).

But of course there are plenty of counter-arguments. Just because countries with shorter average hours of work have, on average, higher productivity, does not mean that shorter working hours *cause* increased productivity. There are also good reasons to believe that the scope for productivity improvements will be very limited in some sectors, particularly those in health, social care, and education.

If the scope for productivity enhancements from shorter hours is limited, then shorter hours would tend to mean employees accepting lower weekly earnings – or, some combination of higher levels of public funding or reduced profits for employers.

Relatively few employees are likely to want to work fewer hours if it means reduced earnings. As we've shown in this report, around 11% of employees are overemployed, i.e. would like to work fewer hours even if it meant less pay, but by implication the remaining 89% do not want to work fewer hours if that does mean less pay. But the employer costs of 'funding' a move to a 4-day week without loss of pay would be substantial, and may well exceed the anticipated benefits.

Moreover, it is not obvious how a move to a 4-day week, in itself, would address concerns around insecurity and inflexibility of working hours. Furthermore, if the scope for productivity enhancements is limited, then a reduction in hours worked by existing workers would require there

to be a pool of underutilised labour to fill the reductions in outputs. The experience of the implementation of the Working Time Directive for doctors is instructive (see Box 8.1).

Box 8.1: The impact of the Working Time Directive on doctors

As discussed previously in this report, the Working Time Directive, introduced in the UK in 1998 sets an upper limit of 48 hours per week averaged over a reference period, although individuals can opt out. Evidence suggests that the WTD caused a reduction in senior doctors' hours of 8 per week (Dolton et al. 2015). The regulation required the government to respond by recruiting more doctors – both through increasing training within the UK, and greater hiring from overseas – combined with reorganisation of working practices in hospitals.

But what evidence is there of benefits? Based on survey evidence, a majority of doctors appear to agree that the directive has improved doctors' work-life balance (Lambert et al. 2016). Evidence on whether it has benefited doctors' health is less clear cut (Rodriguez-Jareno, 2014).

There is limited evidence that it has benefitted the NHS more generally, or patients. Doctors are more likely to think the directive has had a negative than a positive effect on patient care, and a majority believe it has a negative impact on continuity of patient care (Lambert et al. 2016). A government-backed review in 2014 found that whilst the directive had some positive impacts for patient safety and doctors' wellbeing, it also limited time available for doctors training, could increase risk of errors as a result of increased handovers, and sometimes resulted in cancellation of clinics given enforced rest breaks. The review's recommendations (accepted by the government), included to raise awareness of the 'opt-out', and classify 'training' more explicitly from 'working' (Independent Working Time Regulations Taskforce, 2014).

So on one level, the Working Time Directive did have its intended consequence (a reduction in doctors' working hours and an improvement in work-life balance), and the NHS managed to 'cope', although at substantial cost, through recruitment and reorganisation. But the impact of the directive on patient care has been ambiguous at best.

For these reasons, we're less convinced by the idea that governments should mandate or directly fund a move to shorter working weeks in the near future without further consideration of all the implications (good and bad).

But governments should do whatever they can to help those who want to transition to a different configuration of working hours realise that. After all, a 4-day working week is arguably the destination that society has been heading towards for many decades. And we saw earlier in the report that the role of regulation and bargaining played an important role in explaining why hours worked are typically lower in continental Europe than in the UK.

That means policies to boost productivity and hence wages, a continued focus on addressing low pay, measures to give employees greater control over and stability of hours (where that is desired) to reduce insecurity, an enhanced social safety net, and a reinvigoration of collaborative partnership working between employers, employees and representatives to agree and uphold working arrangements. In the rest of this chapter we set out the sorts of policies that could be considered in each of these areas.

Productivity enhancements are key

It may seem odd to begin a discussion of policy implications by talking about productivity. But enhancements in productivity (the amount that is produced per hour worked) are ultimately what drives real wage increases over time. And it is these real wage increases that facilitated the gradual reduction of hours worked throughout the 20th century, enabling workers to exchange working time for leisure time, without reducing economic growth. And it is likely to be the weakening in productivity growth since the financial crisis that has subdued wage growth and caused the downward trend in hours worked to stall.

It is not within the scope of this report to make recommendations in relation to productivity growth. But this point is made as a reminder that patterns of hours worked can be affected by an extremely diverse range of social and economic factors that go well beyond 'labour market policy' narrowly defined. It is also important to focus attention on all aspects of job quality more broadly – beyond underemployment – and to understand its links to productivity (Carnegie, 2020)

Improving workers' control of working hours

Our qualitative research found unanimous support amongst the employees we spoke to for more security and stability in relation to patterns of work. This tallies with broader research suggesting widespread insecurity of the hours of work and hence pay that might be associated with a job from week-to-week, and anxiety about last minute changes in shifts. Consistently with others, we find that it is not straightforward to detect this anxiety and insecurity in formal labour market data, because that data cannot capture the nature of employees' power (O'Connor, 2020).

Policy has a critical role to play in giving workers, particularly low-paid workers, greater control over their hours. Six million UK employees are 'very' or 'fairly' anxious about an unexpected change to their hours of work (Bell et al., 2020). Our research has shown that underemployment (a desire for more hours) is substantially higher amongst employees on temporary and zero-hours contracts, and among the low-paid and those in poverty. For underemployed workers, hours worked are a constraint rather than a choice.

How can employees be given greater control over working hours? In some cases, changes to employment regulation can help. We endorse the recommendations made by the Resolution Foundation (2020): Workers should have a right to a contract that reflects the actual hours they work, a right to two weeks' advance notice of work schedules, and a right to compensation where shifts are cancelled or changed without reasonable notice; Part-time workers should have the right to request a contract with longer hours. Flexibility can, of course, be beneficial to businesses and employers. Importantly, these recommendations are not suggesting forcing all working agreements to be fixed and permanent, but rather that they should represent a middle ground in the trade-off between the benefits to the employer and the costs to the employee.

Provisions along these lines were anticipated to be included in the government's Employment Bill. The Bill was promised in the Queen's Speech in December 2019 but was delayed due to Covid-19. The Bill had been expected to introduce a new right for all workers with variable hours to request a more stable and predictable contract after 26 weeks' service. But it remains unclear whether the Bill will go far enough in establishing the more stable contract as a right, or merely as something that employees can request but that is relatively easy for employers to decline. It has also been unclear whether or not the Bill will include provisions relating to notice periods for working hours

and shift cancellations. Concerningly however, the Bill was not included in the Queen's Speech in May 2021, and appears to have slipped down – or maybe slipped off completely – the government's agenda.

Issues around hours instability and insecurity are particularly acute in relation to workers on 'digital platforms' such as Uber and Deliveroo, or the gig economy more generally. There was much coverage recently of the recent Supreme Court decision that Uber drivers are 'workers' not self-employed 'contractors'. Workers are a middle status in UK employment law between employees and the self-employed. The law provides a basic floor of rights including the national minimum wage and paid annual leave – but they certainly do not benefit from the full scope of employment legislation that employees receive.

The Supreme Court's decision is welcome in recognising flexible and precarious labour as work, rather than independent entrepreneurship, irrespective of complex contractual arrangement. But this decision on worker classification in and of itself does not change the underlying challenges of precarious, contingent work (Adams-Prassl et al. 2021). Whilst the decision means that Uber's drivers will be entitled to holiday pay and to automatic enrolment in a workplace pension scheme, the decision is unlikely to make much difference to drivers' headline earnings. Uber will ensure drivers earn at least the statutory minimum wage, after expenses, for the time they are assigned to trips – but will not include any time when they have not been paired with a customer.

The Uber decision is thus not by any stretch a solution to issues of work insecurity, and therefore reinforces the case for strengthening regulations – and improving enforcement with existing regulations – more generally.

Reinvigorating collective bargaining

As we have highlighted in this report, the UK's approach to labour market relations is very much based on individual negotiations between employees and employers. In other European countries, bargaining between employers, unions and government plays an important role in agreeing and upholding agreed working standards and practices.

In principle, a strong case can be made for much improved collective institutional structures within the UK.

The OECD (2019) has argued that the quality of the working environment – including working hours and training – is higher on average in countries with well-organised social partners and a large coverage of collective agreements. Consistent with findings from our qualitative research, it finds that both "direct" and "mixed" forms of voice (where workers' representatives coexist with direct dialogue between workers and managers) are associated with a higher quality working environment. The OECD argues that collective bargaining "should be mobilised to help workers and companies face the transition and ensure an inclusive and prosperous future of work".

But arguing for changes to institutional structures is easier said than done. Union membership has followed a long-term declining trend in the UK, with the decline particularly marked amongst younger workers. There are big questions for unions too about how they engage with workers in sectors which have traditionally had limited union representation and the emerging gig economy.

The OECD provides some useful, although broad, suggestions about how that goal might be achieved in practice. More specifically, the Resolution Foundation has argued for 'a new phase of institutional

experimentation' (Bell et al. 2020). It makes the case for the establishment of 'Wage Boards' in a small number of industries that are in clear need of improved standards, starting with social care. These Wage Boards would have the power to set sectoral minimum standards, police the blurred boundary between employment and self-employment, and drive up training, and would be based on tripartite engagement between workers, employers and independent representatives to drive up standards. The Resolution Foundation recognises that the approach would be experiential, but the potential benefits are real.

An enhanced social safety net

This report has discussed findings from previous research showing that workers' perceptions of job and income security are conditioned by the availability, and rates of, out-of-work and low-income benefits that they are entitled to.

In other words, 'insecurity' is not necessarily a measurable characteristic of a job, but for a given job can vary depending on the level of financial support that an individual can fall back on.

The UK has one of the lowest 'unemployment replacement rates' of any EU country. The unemployment replacement rate is the proportion of earned income that an individual can expect to receive in unemployment insurance if they become unemployed. Low rates of unemployment insurance, combined with a high element of contingency attached to those benefits, also weakens employees' power in relation to employers – when the social safety net is weak, an employee is less likely to be able to use the threat of resignation implicitly to challenge inadequate working practices.

Many of the aims of the UK's Universal Credit are sensible, particularly in relation to the way it removes a distinction between whether a recipient is in or not in work. But the rate is too low, and there remains a question about whether the balance between activation/conditionality and support is right.

Some would argue that a move to a universalist type approach would be the answer here, but we are not persuaded that a universal, non-means tested benefit would offer value for money. Nonetheless, scope for exploring ideas around a Minimum Income Guarantee – a more generous and less conditional, but nonetheless means tested form of support as proposed by IPPR Scotland – merit further exploration (Stratham et al. 2021).

Maintaining a focus on low-pay

In all of this, we should not lose sight of the fact that hourly pay remains a hugely significant factor in driving earnings inequality and in-work poverty. The government should retain its commitment to extend the real living wage to two thirds of median pay by the middle of this decade. Targeting the living wage as a percentage of median pay, rather than a set amount, makes sense – it ensures it keeps pace with living standards if wage inflation picks up, and ensures it doesn't become 'uncompetitive' if wider pay were to fall.

This report has highlighted previous research indicating that increases in minimum wages can have less desirable side-effects – potentially encouraging greater use of zero-hours contracts or reduced use of overtime.

But rather than scaling back ambition in relation to the minimum wage, the presence of these side-effects underlines the importance of the other measures described here, including enhanced

measures to enable employees to have control over their hours. This is precisely why, as well as a floor on hourly wages, we also need a better floor on conditions, in order to limit practices that increase working insecurity, and in order to fully realise the benefits of the minimum wage policy.

We also must recognise that in low-paying sectors that rely heavily on public funding – the obvious example being social care – it is imperative that the sector is adequately resourced to be able to pay the minimum wage without needing to drive down labour costs by transferring insecurity onto workers. Employers we spoke to as part of our research indicated that some transfer of insecurity was an inevitable part of the sectoral business model, and this feels particularly wrong in sectors reliant on public sector funding.

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Appendix 1 Methodological Note: Qualitative Interviews

We conducted eight semi-structured depth interviews with business leaders and HR managers in Scotland and twenty five interviews with workers who reported that they wanted/needed more working hours than they had at present. Interviews were conducted using telephone/digital methods and a purposive sample frame was used to recruit for both samples. For employers this involved recruiting (by e-mail and telephone) in sectors and areas of work that we know from the wider literature have relatively higher numbers of workers on non-standard contracts, such as hospitality and early years. We sought to engage with employers for whom challenges of offering contract hours and different types of non-standard contracts were of interest/concern. Consequently, some interviewees argued that while different non-standard contractual practices were not an issue for their organisation, they were interested in sharing their views and examples of workforce planning and HR practice that helped to explain why they have not gone down this route. Interviews focused on workforce planning and broader HR practices, broader issues of business models and organisational priorities and the extent to which the COVID19 pandemic had affected the contractual context around flexible working.

As a complement to the employer interviews we also conducted twenty five interviews with workers on non-standard contracts who reported that they wanted/needed more hours than they had at present. We wanted to hear about people's experiences of working with different types of non-standard contracts - temporary (e.g. full or part-time positions and/agency working) and zero or minimum guaranteed hours. We went through a number of 'gateway' organisations to try to identify workers with non-standard contracts who wanted/needed more hours and conducted interviews with a sample of these individuals. As an incentive to participate (and to counter any bias arising from 'volunteer' samples) we offered £50 per interviewee to take part in the research. Interviews focused on a number of issues and people's: recent employment history, their current contractual arrangements and the strengths and weaknesses of these, and what they currently wanted and were looking for in the labour (and why).

This research, like much other work and labour market-related activity, was significantly affected by the Covid-19 pandemic. The fieldwork was delayed in the early-mid part of 2020 because of the first 'lockdown' but was ongoing during the second period of formal lockdown in October 2020 and the third lockdown from early January 2021. This meant that the sample of employers and workers were, like many members of the population, working from home and subject to a set of new, multiple and competing demands on their working and domestic lives. This created challenges stimulating interest in the research, accessing research participants and scheduling fieldwork. Consequently, recruitment was extremely challenging in a context where decisions about contract hours were not, for example, a priority issue for employers given the scale of some of the other staff challenges they were facing during the pandemic.

A summary of the organisations and the key characteristics of the individuals participating in the qualitative research is provided overleaf.

Employers

Organisation	Service	Sector	Size	Text Ref
Charity	Retail	Third	Medium	01
Contact	Business Support	Third	Medium	02
Hospitality	Hospitality	Private	Large	03
Hospitality	Hospitality	Private	Large	04
Hospitality	Hospitality	Private	Small	05
Early Years	Childcare	Private	Small	06
Early Years	Childcare	Private	Small	07
Early Years	Childcare	Private	Small	08

Workers

Sample Characteristics	n	%
Sex		
Male	12	48
Female	13	52
Age (yrs)		
18-24	7	28
25-34	7	28
35-44	8	32
45-54	3	12
Household Type		
Single Adult (no dependents)	6	24
Single and Living with Family	3	12
Single Adult (with dependents)	4	16
Two Adults (no dependents)	4	16
Two Adults (with dependents)	8	32
SEG		
ABC1	12	48
C2DE	13	32
Contract Type		
Full-time (Temporary)	3	12
Part-time (Temporary)	3	12
Part-time (Permanent)	4	16
Variable Hours	5	20
Zero-Hours	10	40
Sector		
Administrative	2	8
Arts	3	12
Construction	3	12
Education	2	8
Health & Social Care	6	24
Hospitality	3	12
Retail	6	24