

# The times they aren't a-changin'

Why working hours have stopped falling in London and the UK

George Bangham  
January 2020



## Acknowledgements

Thanks to Laura Gardiner, Maja Gustafsson and Torsten Bell at the Resolution Foundation for their help with the analysis included in this report, to Jonathan Gershuny and colleagues at the UCL Centre for Time Use Research for ideas and advice, and to Bharat Mehta, Manny Hothi and the trustees at Trust for London for their support for the project. Any errors or omissions remain the author's alone.

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January 2020

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## Executive Summary

Today's working patterns are the outcome of 200 years of change

For the typical British adult, paid work takes up more time than any other activity save sleep. How many hours someone works per week is important both for their family's income and for the way they live their lives.

The dominance of the eight-hour day, five-day week norm can make it seem like our current working routines are natural and unchanging. But this has never really been the case. Even today, working hours vary widely across the population and the country, and they rise and fall across people's lifetimes in response to changes of circumstances at home and at work. For example, women on average spend over 9 hours per week less in paid work than men, though they do correspondingly more unpaid work, and adults in the lowest-income tenth of households usually work 15 hours less per week than those in the top fifth (25 hours compared to 40).

In the long run, working hours have been in constant flux. Over the past 200 years they have gradually got shorter, so that the typical worker today works around 32 hours per week, about half as many as their counterpart did in the mid-19<sup>th</sup> century. Part-time work is over five times more prevalent than it was in 1950. For most of history the longest hours were worked by lower-paid, lower-educated workers, while today this group is likely to work some of the shortest hours, not always by choice. Above

all, the long-run trend has been towards growing diversity in the amount and timing of people's paid work. For much of the past 200 years the bulk of the employed workforce consisted of men employed to work full-time weeks of 40 to 50 hours, whereas today this group accounts for less than a tenth of the working population.

In the past decade the long-running trend of falling working time has come to a halt. Policymakers have worried a lot about the stagnation in wages since the 2007-08 financial crisis, but devoted far less attention to the associated fact that people's working hours have stopped getting shorter on average, while increasing for women. The year 2014 marked the first time since the middle of the Second World War that average working hours were longer than a decade earlier. So the price workers have paid for the post-crisis living standards stagnation should be measured not just in the earnings disaster, but also in the fact they are working longer hours than would otherwise be the case. Had hours continued to fall since 2009 at the rate they averaged between 1979 and 2009, Britons would be working one hour per week less than they do at present.

After outlining what the UK's working hours look like today, this paper explains first why working hours were falling over the long term, and second why their decline seems to have stalled over the past decade.

### Today's modal worker works 40 hours per week, though schedules are more diverse than ever before

A snapshot view of working hours today shows that:

- The average working week lasts 32.4 hours, while the single most widespread working week is 40 hours. These figures include all paid work, plus people in employment but working zero hours due to holiday, for example, but do not include travel time or meal breaks.
- Women typically work over nine hours less per week than men, with the average woman working 27.5 hours and the average man 36.9 hours per week (across ages 18-64). This

difference is explained partly by full-time women's hours being slightly shorter than those of full-time men, but mainly by the fact that two-thirds of part-time work is still done by women.

- Hours vary over the life course much more for women than men. Women's hours are longest in their mid-20s, after which they fall to a low point in the mid-30s, before rising again (though not to the previous peak) until the early 50s. Women in households without children, however, do not see much age variation in their average working hours. Men's hours tend to be longest in the middle of their careers, and they neither vary very much between the ages of 25 and 54, nor are strongly affected by the presence of children in the household.
- Job type matters for workers' hours. Among industries, the longest hours are worked in agriculture, forestry and fishing, while the shortest women's hours are worked in hospitality and the shortest men's hours in lower-paid service sectors. Children's playworkers have the shortest hours of any occupation (14.6 hours per week) while the longest hours are worked by large goods vehicle drivers (48 hours). In general, industries with a higher proportion of workers on low hourly pay (below two-thirds of the median) tend to have shorter average hours.
- Nowadays the longest hours are worked by the highest-paid people (and similarly by the highest-educated), a reversal of the historic trend. The gap in weekly hours between the highest-hourly-paid and lowest-paid tenth of workers is 7 for men and 10 for women. The association between hourly pay and weekly hours is stronger among women, as part-time workers (who are disproportionately female) tend to have lower hourly pay.
- Working hours vary considerably by region, with full-timers in Inner London working the longest hours of any sub-region. The gap across regions between the shortest and longest full-time hours is 3.5 hours per week for women (36.5 in Inner London versus 33.0 in Tyne & Wear) and 3.2 hours



for men (40.8 in Northern Ireland versus 37.6 in Tyne & Wear). Just over half of the gap between London and the rest of the UK is explained by the fact that London's workforce is younger and less likely to work part-time.

- Unsociable hours are worked mainly by low- and middle-paid workers. On an average Saturday, a worker in the bottom fifth of the hourly pay distribution is almost six times more likely to be working than one in the top fifth. In contrast, night shifts are most prevalent in the upper middle of the hourly pay distribution (among employees), in occupations such as transport and nursing.

### Decisions at the household rather than individual level are key in driving changes to working hours

Why did average hours decline so much historically? For individual workers, rising productivity has led to rising hourly wages in the long run, and some of this rising prosperity has been 'cashed in' in the form of less work time. In the 1950s and 1960s labour productivity grew by an average of 3.4 per cent per year, while each year weekly working hours got shorter by an average of 15 minutes. Compare that with the past 10 years, when productivity change slowed down to an average annual rise of only 0.5 per cent per year, weekly wages are only just recovering to the level they were at pre-crisis and working hours have in fact gone up. Outside of the ups and downs of the economic cycle, reductions in working hours are more likely to happen if workers desire them on the back of income growth.

In this paper, we focus on the detailed drivers of change in working hours over the period from 1979 to 2009. Crucially, while most of the discussion around working hours focuses on individual workers, an insight of this paper is that workers typically form a preference for the hours they would like to work by considering the income and working patterns of their household as a whole.

This perspective means examining the income boosts at the household level that have resulted from the increasing entry of second earners – usually women – in to the labour force.

Increased female participation directly accounts for 18 per cent of the fall in average hours between 1979 and 2009, since women typically work shorter hours. But it has further driven down average hours because the higher household income it creates is part of the reason that men have reduced their paid hours: the reduction in men's hours accounts for 59 per cent of the fall in average hours over this time period.

The underlying long-run downward trajectory in working hours has resulted from opposite trends among women and men: women's hours have increased, while men's have fallen. Men have always participated in the labour market in larger numbers than women, but a smaller proportion participate now than in the 1970s, and the average working hours of those who do work have gone down. The latter trend in part reflects a big increase in the proportion of men working part-time, with 19 per cent of men working under 30 hours per week in 2009 compared to only 7 per cent in 1979. Women, by contrast, are more likely to be participating in paid work than ever before, and their average paid hours have got longer. Women made up 47.4 per cent of the workforce in 2018, compared to 44.9 per cent in 1992. The joint impact of these trends among men and women has been to drive down the hours of the typical worker.

Other factors determine working hours beside workers' preferences. Often it has been legislated changes on the likes of holidays or trade union collective bargaining that have reduced the amount of time that workers can be required to supply to their employers. They have also made working schedules more flexible over time. For example, the largest ever annual reduction in average hours occurred in 1919, as a result of collective agreements for an 8-hour day secured by trade unions in many sectors, while some of the reduction in average hours in the early 2000s was due to curbs on long-hours work enacted by the 1998 Working Time Regulations.

**In the last decade there has been an unprecedented stalling of working hours**

The stalling of reductions in average hours over the past



decade has been driven above all by the short-run impact of the financial crisis, and has taken place despite the acceleration of the longer-running trend of rising women's participation pushing down on hours. The 2007-08 crisis led to a long stagnation in living standards and productivity. During a downturn there is a tension between firms wanting to reduce hours to avert job losses, and worker having less desire to reduce their hours when real wages fail to grow. In mid-2008 the number of workers wanting more hours pulled ahead of the number wanting shorter hours, and remained higher until mid-2017. Even today, 1 in 13 workers would like longer hours, the bulk of whom are lower-paid workers wanting to increase their income.

The increase in hours has not been uniform, with a household perspective once again shedding light on the changes we have seen. Women, particularly those in couples, have seen the biggest increase in hours while male hours have been broadly flat. Between 2009 and 2019, women's paid work time rose by an hour a week, while men's increased by just over a quarter of that. Looking at singles and people living with partners separately, women living with partners increased their hours the most (by 1.2 per week).

Beside the productivity and pay squeeze of the past decade, the recent stagnation in hours has longer-running drivers too. Rates of productivity and pay growth had been gradually falling since the 1970s, for around the same length of time as the decline in hours had been slowing down. Households', and particularly women's, wish to increase hours has also been contingent on how exactly the post-crisis pain has been felt. If in 2009 the labour market had experienced a job-led rather than predominantly wage-based recession then a smaller proportion of workers would have sought to increase their hours. Households with workers who kept their jobs during a job-led recession would not have felt so strongly compelled to raise their hours, while the combination of weak overall pay growth with stronger growth for lower earners lies behind the strength of the gender divergence in hours trends post-crisis.

## How working hours could change in the future

Should working hours return to their long-run trend of gradually getting shorter each year? If this is the outcome of workers getting what they desire and can afford, then they should. Public policy will have an important role in enabling the return to this trend. If workers are to want to reduce their hours in the future, it will require favourable economic fundamentals (rising productivity and pay) and further increases in labour market participation – particularly for women. Legislation, and in some sectors trade unions, might well play a role in both enabling workers to fulfil their preferences and shaping the form in which any reduction in working hours takes place. This paper has also pointed to the importance of considering how working hours are changing for whole households as well as for individuals, since a decline in average hours may in principle coincide with divergent trends in hours between members of the same household. Many households may wish the current trend to continue, of an increasingly equal division of hours between primary and secondary earners.

The second paper in this series will analyse the impact of past falls in working hours, by measuring the extent to which shorter paid work time has translated into more free time for different groups of workers, and what people do with that time. In light of the general consensus that individuals being able to work shorter hours is desirable, there is remarkably little work on what that fall means for our lives considered in the round. Given the importance of working hours in determining workers' living standards, it is welcome that they are once more becoming a focus for public policy.

## Section 1

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### Introduction

Each week, every one of us has 168 hours to use as we wish. The largest part of this time is spent asleep, while (for most) the next biggest is taken by paid work.<sup>1</sup> The time people spend working matters for their living standards not only because it pays, but also for its own sake. Work time can add to wellbeing or lessen it, and spending longer in paid work gives people less time to devote to care, other unpaid but necessary tasks, and leisure.

Working time has risen up the political agenda over the past few years. Several companies around the world have been publicly experimenting with shorter working hours, in some cases – though not most – trying to do so without substantial reductions to their employees' pay. In 2018 major trade unions in Germany won their members the option to reduce their hours from 35 to 28 per week. And discussions about a shorter working week were an important feature of the 2019 General Election campaign. In a sense, the recent return to media debate about working hours reduction is a reversion to a 200-year-old norm. For 100 years until 1919 the eight-hour day was one of the best-known demands of labour movements around the globe, and working hours continued to be contested over much of the 20<sup>th</sup> century.

This report is the first of two in a Resolution Foundation research project looking at time use, supported by Trust for London. It focuses on the time that people devote to paid work, while the second report will look at how people spend all 168 hours of their week: in paid work, unpaid work and in leisure. This first report aims to inform the current debate on working time by looking at how working hours today vary around the country, according to people's sex, jobs, age, location and other characteristics. It then looks at how hours have changed over time, and seeks to explain two central phenomena. First, why did average working hours fall over a very long time period from the mid-19<sup>th</sup> century until the turn of the millennium? Second, why have hours recently stopped getting

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<sup>1</sup> This report focuses on 'hours actually worked' by workers during a reference week for which survey data was collected. Several other measures of working hours are often used, such as usual hours of work – which are more likely to be the hours set out in employment contracts – and hours of work including travel time. For a summary of how working hours are measured and defined by statisticians, see: J Cabrita, S Boehmer & C Galli da Bino, [Working time developments in the 21<sup>st</sup> century: Work duration and its regulation in the EU](#), European Foundation for the Improvement of Living and Working Conditions, March 2016

shorter? A proper understanding of how we have got to our current working patterns is essential to deciding how working hours might evolve in the future.

The remainder of the report is set out as follows:

- Section 2 provides a snapshot of how working hours vary around London and the UK today;
- Section 3 describes and explains the decline in average working hours that took place in the decades before the 2007-08 financial crisis; and,
- Section 4 explains why average working hours have stalled over the past decade.

## Section 2

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### A snapshot of paid working hours today

The hours that people spend in work are always changing, and vary considerably across the workforce. This section presents a snapshot of what hours look like today, before later sections move to the ways in which working hours have changed over time.

The most common working week consists of 40 hours of paid work. Men work longer paid hours than women, with men working the longest at ages 35-50 and women in their mid-twenties. Higher-educated workers tend to work longer hours, while the presence of children in the household is associated with women, but not men, working significantly shorter hours.

The industry and occupation in which somebody works is strongly associated with their working hours. Today, higher hourly-paid workers tend to work longer hours, while lower-paid workers are much more likely to work at weekends. Lastly, working patterns differ substantially across regions: London is an outlier in that part-time work is much less prevalent there among women, meaning that its average hours are among the longest in the UK. London's workforce also differs in composition from that of the rest of the UK in ways which tend to push its hours upwards: workers in the capital tend to be younger, higher-educated and clustered in industries with average hours above the national norm.

### The modal Briton works 40 hours per week, though hours differ substantially between men and women

Ask a randomly-selected British worker how many hours of paid work they did last week, and the most widespread response will be around 40. Beyond considerations of how this time is defined, recalled and measured (see Box 1), this reflects the fact that much of society still considers an eight-hour day, five days per week as the 'normal' pattern of work.

## BOX 1: The challenge of defining and measuring working hours

Most of the analysis in this report uses a particular definition of working hours: the number of hours that an average worker actually worked in the week before they were interviewed in a social survey.<sup>2</sup> If the worker was on holiday, on leave or unwell their hours are reduced, potentially down to zero, so in aggregate, 'actual' hours are always lower than 'usual' hours, the other main definition of working hours collected in surveys. There is evidence that actual hours are closer to how workers typically spend their time, when cross-referenced with other datasets.<sup>3</sup>

Many other decisions must be made when defining and measuring working hours. Are breaks or commuting time included? Do we exclude overtime, whether or not it is paid? If for example a carer travels frequently between short stints of paid work should we count all of this time as work? What about people on zero-hours contracts or those who are self-employed, who may pass many hours in the week either being potentially ready to work or looking for work, even if this time is not remunerated? For the sake of simplicity, many social surveys either simplify or ignore these questions, so our analysis

is constrained by the way in which data was collected.

The reason that working hours are usually studied at the level of the week is that workers can reasonably be expected to recall their weekly hours when they are asked. Statisticians will also sometimes look at annual hours, but very few workers can easily recall how many hours they worked last year.

Our data in this report is drawn from two main sources: surveys of workers and surveys of employers. The *Labour Force Survey* is a continuously-running household survey which asks people about their working lives. It is used by the government to produce employment statistics. The *Annual Survey of Hours and Earnings* collects data each April from employers, who are asked to supply details about employees who are selected via a random sample of 1 in 100 employees registered in a PAYE scheme.

The advocates of time-use surveys raise doubts that even the standard labour force survey question about a worker's hours last week can be accurate. Several recall biases may intrude: for example, workers working under 30 hours per week tend to under-

<sup>2</sup> To be precise, we mainly use the Labour Force Survey derived variable TTACHR, defined as the total hours that an individual in work worked in their reference week, including overtime (paid or unpaid) if they reported it. The main question asked is: 'Thinking now about the seven days ending Sunday the ..., how many hours did you actually work in your main job/business – please exclude meal breaks?' This is amended if the respondent reports overtime work.

<sup>3</sup> H Frazis & JC Stewart, '[Is the workweek really overestimated?](#)', Monthly Labor Review 137, 2014



estimate their hours, and those working over 45 hours tend to over-estimate them.<sup>4</sup> Time-use surveys get around this problem by asking participants to record what they are doing every ten minutes in a 'time diary'. The second paper in this series makes extensive

use of such time diary data, while this one focuses on other social surveys since these are the usual tools used by economists when studying issues such as labour productivity and potential output.

Despite a 40-hour full-time week being seen as the norm, only a minority of people work these exact hours, and sizeable groups of workers report working weeks as far apart as 16 and 60 hours. Workers in the UK have a more diverse range of working schedules than those in countries like the USA or France.<sup>5</sup>

Figure 1 gives us a sense of the diversity in men's and women's actual working hours in their main jobs. It shows that only 19 per cent of men and 10 per cent of women work exactly 40 hours per week.<sup>6</sup> Women tend to do fewer hours of paid work, with 19 per cent of men working 30 hours or fewer, compared to 46 per cent of women. One-in-five women works fewer than 20 hours per week, as opposed to one-in-ten men. At the other end of the distribution, one-in-fifteen women works over 48 hours per week, compared to just over one-in-five men.

Figure 1 also shows that women's hours are quite widely dispersed, with notable clusters at 16, 20 and 30 hours, whereas men's are more concentrated between 38 and 40 hours, with clusters at 45, 50 and 60 hours. In 2018, the Gini coefficient for men's hours was 0.17 while that for women was 0.24, which confirms that women's working hours are more dispersed than men's.<sup>7</sup>

<sup>4</sup> P Walthery & J Gershuny, 'Improving Stylised Working Time Estimates with Time Diary Data: A Multi Study Assessment for the UK', Social Indicators Research 144, 2019

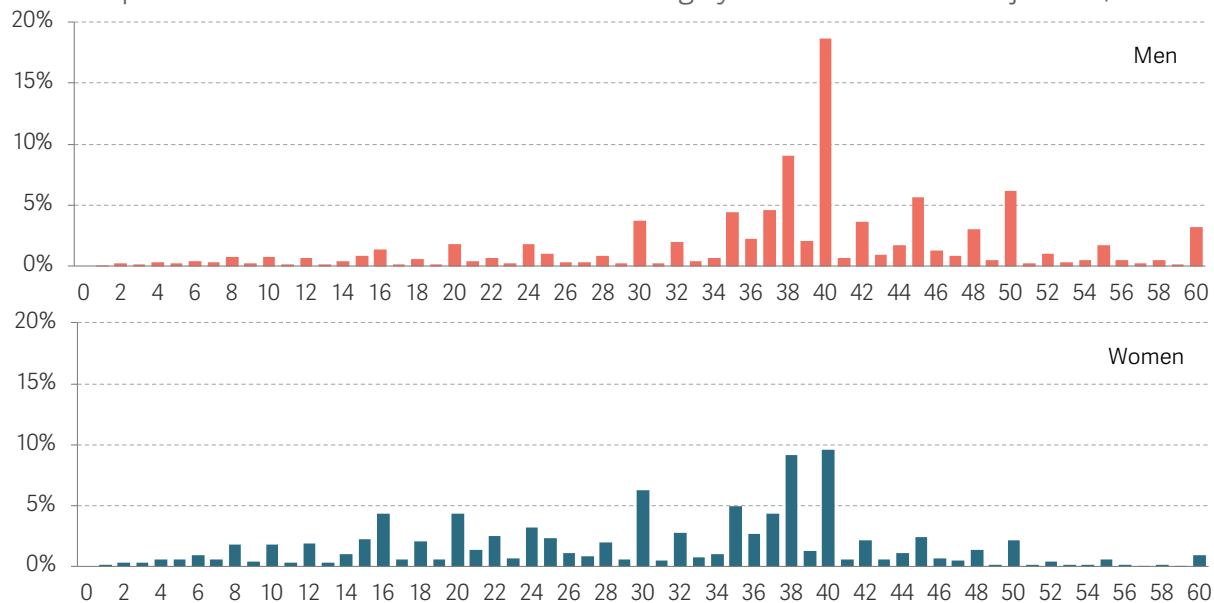
<sup>5</sup> D Checchi, C García Peñalosa & L Vivian, *Hours Inequality*, ECINEQ Working Paper, October 2018

<sup>6</sup> Although this chart excludes time spent on second and additional jobs, including this time does not change the distribution very much.

<sup>7</sup> The Gini coefficient is a formal measure of the dispersion of a particular variable, where 0 equals maximum equality and 1 equals maximum inequality.

FIGURE 1: **Weekly hours are widely dispersed, although more so among women than men**

Proportion of female and male workers working by actual hours in main job: UK, 2018



Note: Chart excludes workers who worked no hours in reference week.

SOURCE: RF analysis of ONS, Labour Force Survey

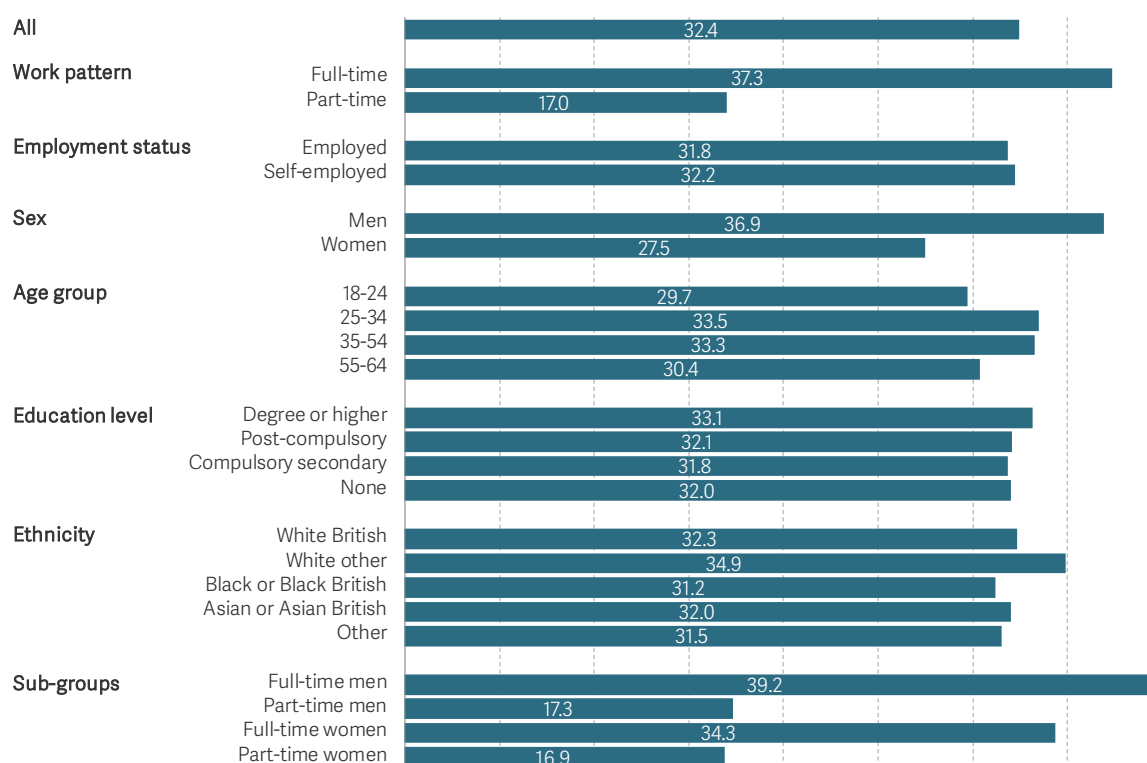
Average working hours vary substantially between population sub-groups, with sex the personal characteristic that most strongly predicts how many hours someone works. Figure 2 shows the average hours actually worked by a variety of sub-groups of the labour force. Some key patterns to note are the distributions of working hours by age and education level: it appears that hours are inverse U-shaped over the life course, while higher levels of education appear to be associated with working longer hours. We will look further at these characteristics later on.

It is worth noting that although employed men spend 9.4 hours more per week in paid work than employed women of the same age, women do correspondingly more non-paid work, so the total amount of paid plus non-paid work is much more equally shared between the sexes, the so-called 'iso-work' hypothesis.<sup>8</sup> Our next paper looks in more detail at the distribution of non-paid work, and tests how far this hypothesis applies to different demographic groups.

<sup>8</sup> M Burda, D Hamermesh & P Weil, 'Total work and gender: facts and possible explanations', *Journal of Population Economics* 26, January 2013. Interestingly, in the comparative literature, the 'iso-work' phenomenon is observed in wealthy, non-Catholic countries. In those with a Catholic cultural background, women spend more time in total work (paid plus non-paid work).

**FIGURE 2: Working hours vary by characteristics like age, sex and education level**

Average actual hours in main job, workers aged 18-64 by group: UK, 2018-19



NOTES: Includes all workers including those working no actual hours in reference week. Figures given are raw averages, without any controls applied.

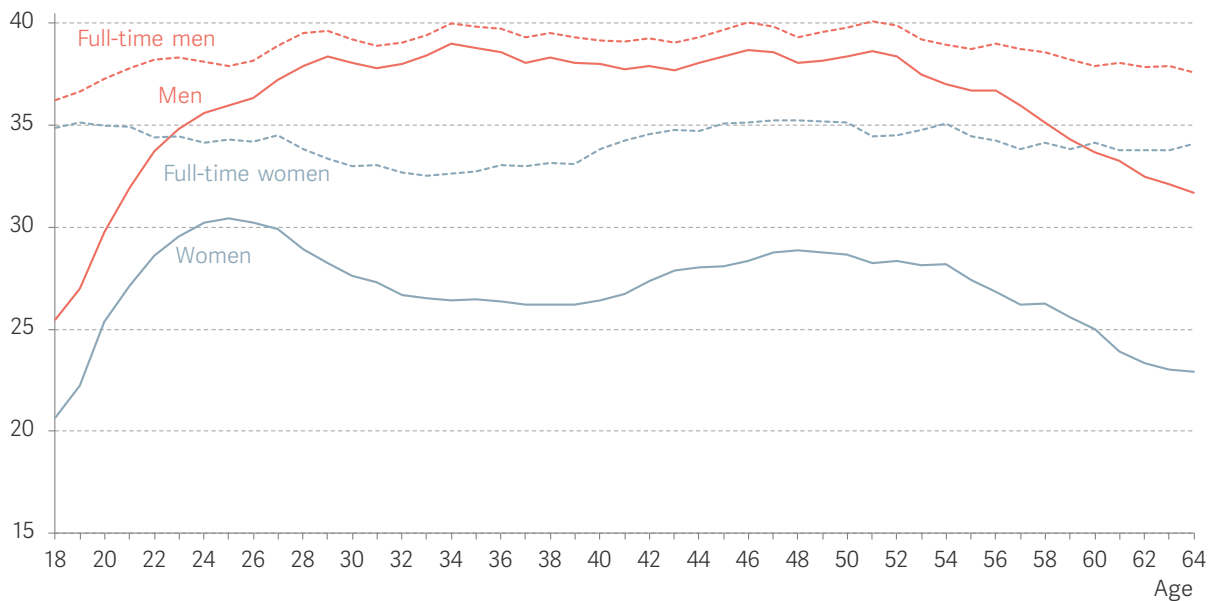
SOURCE: RF analysis of ONS, Labour Force Survey

## Working hours vary by age, most significantly for women with children

We turn next to the age variation in working hours, which Figure 2 suggested was considerable. Figure 3 plots average working hours by age, for working-age men and women. Clearly there is a major difference between men and women in the hours they work, at all ages and even among full-time workers. The pattern of variation over the life course is also different between men and women. Working hours for both sexes rise between the ages of 18 and 24, but diverge thereafter. Men's average hours keep rising until their early 30s, stay at just below 40 hours until the age of 50, and then taper off in the years approaching retirement age. Women's hours, by contrast, are longest in their mid-20s and fall between the ages of 24 and 38, before rising a little up to around age 50 and then tapering off in the same way that men's hours do.

**FIGURE 3: Men's hours have an inverse-U age profile, while women's are highest in their 20s and late 40s**

Average actual weekly working hours, by sex, age and full-time status: UK, 2018



NOTES: Includes all workers including those working no actual hours in reference week. Lines show three-year moving averages. Hours refer to main jobs only, for employed and self-employed workers.

SOURCE: RF analysis of ONS, Labour Force Survey

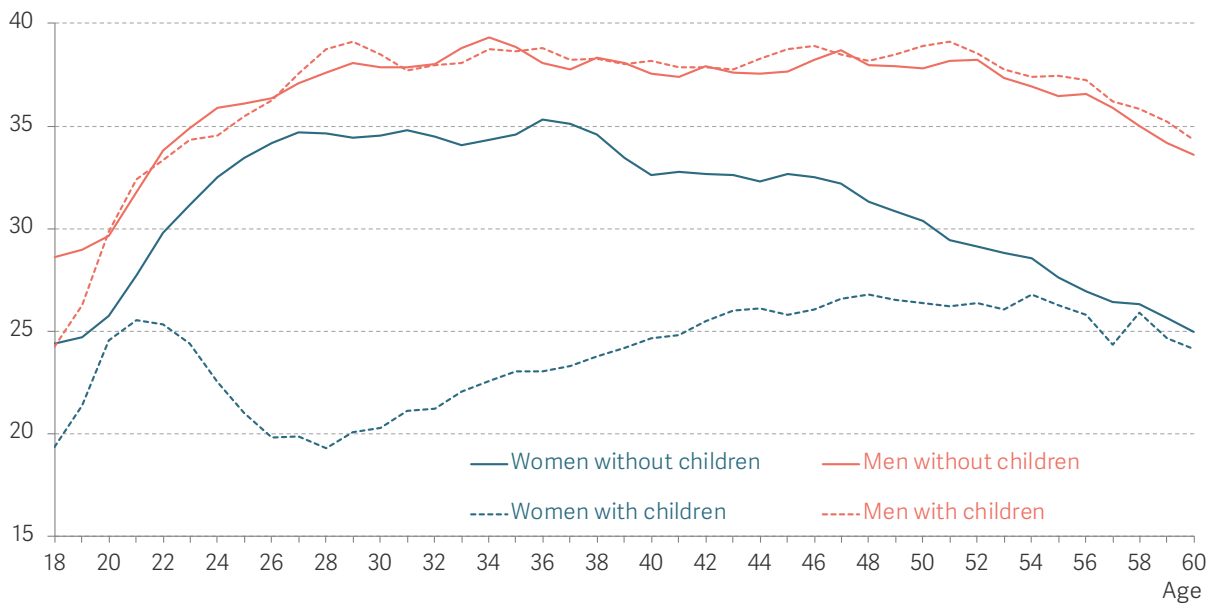
Full-time workers' hours vary less between men and women than do those of the whole workforce. This is because rates of part-time work explain more than half the difference in average hours between men and women. Two-thirds of part-time workers are women, and they are particularly clustered around child-rearing age: of the group of female part-timers, one-fifth are aged 30-39 while half live with children.

Women are more likely to reduce their working hours when faced with caring responsibilities. Figure 4 presents similar statistics to those in Figure 3 but disaggregated by the presence or absence of children under 18 in the household. It shows that men's working hours are largely unaffected by the presence of children. Women living without children have a life course pattern of working hours not too dissimilar from men, although on average they still work around three to five hours fewer per week, and their average hours start getting shorter in their late 30s rather than around the age of 50. The working time of women living with children, however, tends to drop by around five hours between the ages of 21 and 26.<sup>9</sup> At age 28, women with children work on average 15 hours fewer per week than women without children.

<sup>9</sup> Note that strictly this figure could include women living in households with parents and younger siblings, but that would not undermine the significance of the difference between women and men shown in Figure 4.

**FIGURE 4: The presence of children changes women's working hours a lot, but on average has no effect on men's**

Average actual weekly working hours by sex, age and presence of children in household: UK, 2018



NOTES: Includes all workers including those working no actual hours in reference week. Lines show three-year moving averages. Hours refer to main jobs only, for employed and self-employed workers.  
SOURCE: RF analysis of ONS, Labour Force Survey

Both regression analysis, and analysis of longitudinal data that captures people before and after childbirth, confirm the independent and asymmetric impact of children on men's and women's working patterns.<sup>10</sup> These differences will reflect preferences within couples about who provides childcare, societal norms and the fact that lower-paid (more frequently female) parents face stronger incentives to reduce working time in the face of high childcare costs. The different impacts that children have on working hours across the sexes partly explains why there is still a gender gap in hourly pay – since women's working hours are significantly shorter than men's in the years around childbirth, and workers' pay is correlated with their cumulative labour market experience.<sup>11</sup>

A further influence on hours which affects men and women differently is the design of the social security and tax system. Figure 1 showed that there is a cluster of women who work 16 hours per week, the threshold at which (mainly female) single parents become eligible for working tax credit. Benefit taper rates above this threshold create much weaker incentives to work more hours.

<sup>10</sup> This analysis uses a pooled sample from ISE, British Household Panel Survey and Understanding Society. We find that women's weekly hours fall significantly in the year that a child arrives. The fall is smallest (at 6 hours per week) for those who are degree-educated. Women with school-level qualifications reduce their hours by around 10 per week.

<sup>11</sup> M Costa Dias, R Joyce, & F Parodi, *The gender pay gap in the UK: children and experience in work*, Institute for Fiscal Studies, February 2018

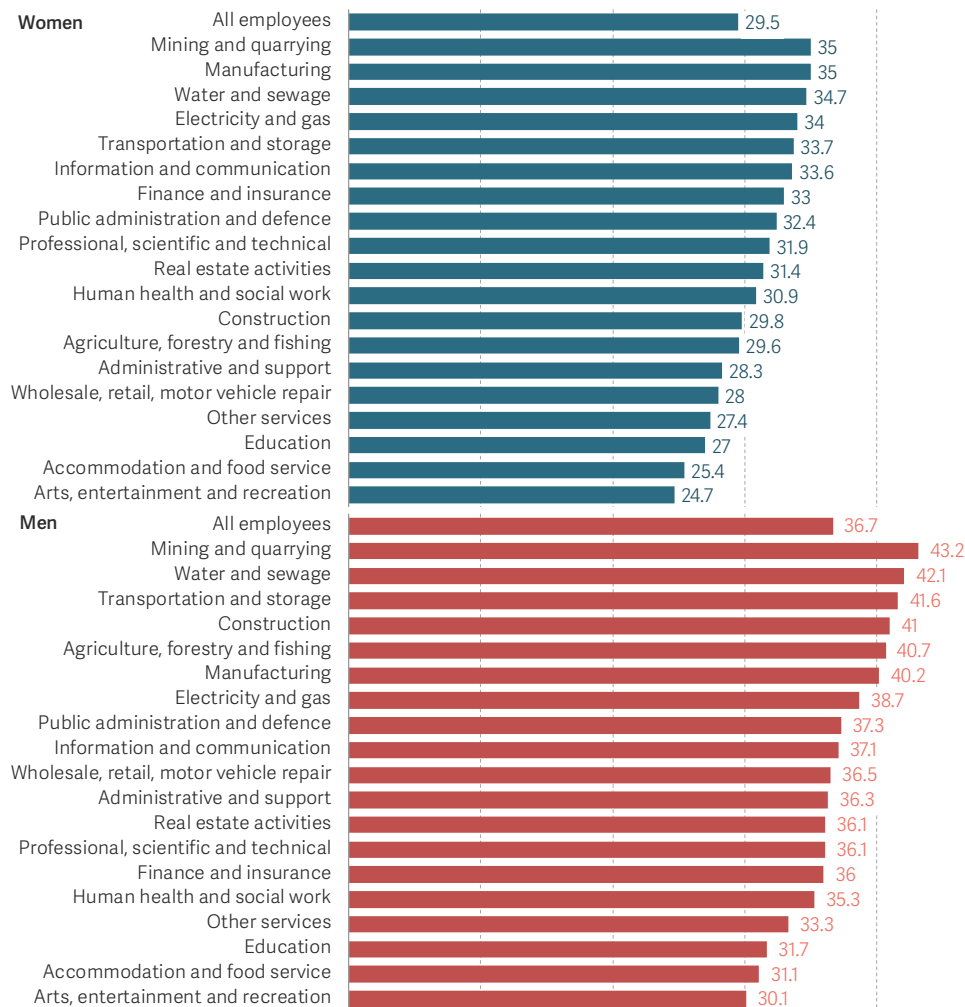
## Hours vary considerably by industry and occupation

Beside workers' individual characteristics, their working hours also vary according to the characteristics of their jobs. These variations are evident when we compare average hours in different industries and occupations, but also in relation to pay levels and the types of contract workers have.

Turning to industry first, Figure 5 shows average working hours among employees in the major sectors of industry in 2018. The shortest average hours for women are worked in the distribution and hotels and restaurants sectors, while for men the shortest hours are in 'other services'. In sectors other than agriculture, forestry and fishing, the difference in average hours between men and women is around nine hours per week.

**FIGURE 5: Hours tend to be longest in mining and manufacturing, and shortest in service sectors**

Average actual weekly working hours of employees by industry sector in main job and sex: UK, April 2019



NOTES: Averages do not include self-employed workers.

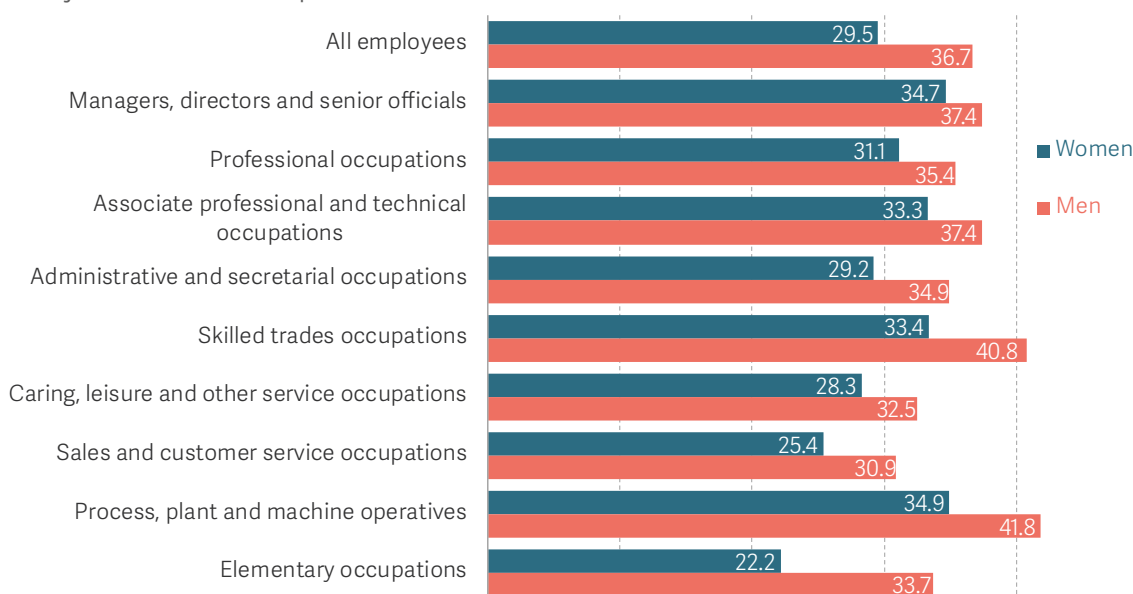
SOURCE: RF analysis of ONS, Annual Survey of Hours and Earnings



Figure 6 divides workers instead by their occupation. It shows the general pattern that the longest hours, nowadays, tend to be worked in managerial, skilled trades and machine occupations, while the shortest are in sales and customer services. The gap between occupations is larger for women (at 12 hours between the longest- and shortest-hour occupations) than it is for men (at 9.5 hours), reflecting the much higher rate of women's part-time work in certain groups of occupations.

**FIGURE 6: Women's working hours vary more by occupation than men's**

Average actual weekly working hours, employees by major occupation group in main job and sex: UK, April 2019



SOURCE: RF analysis of ONS, Annual Survey of Hours and Earnings

Digging beneath these broad categories of occupation shows that the specific occupations with the longest hours are all connected with manufacturing, construction and transport.<sup>12</sup> Large goods vehicle drivers are the major occupation whose employees work the longest hours (an average of 48.0 per week across 214,000 people in 2019), hours that are exceeded only by the comparatively small groups of agricultural machinery drivers and crane drivers.<sup>13</sup> Other major long-hours occupations include welding trades (44.0 hours) and construction supervisors (42.8 hours). Among women only, the picture is a little different since many long-hours occupations are male-dominated. The longest-hours occupations among women include groundskeepers (40.7 hours), vehicle salespersons (40.4 hours) and air traffic controllers (39.9 hours).

Some of the shortest hours are worked in the care and leisure sectors: playworkers average 14.6 hours per week, followed by leisure and theme park attendants (17.6 hours), sports coaches (18.5 hours) and fitness instructors (18.9 hours). The largest short-hours

<sup>12</sup> Specifically, we move from one-digit to four-digit Standard Occupational Classification (SOC 2010) codes.

<sup>13</sup> All figures from: ONS, Annual Survey of Hours and Earnings, [Table 14](#), 2019

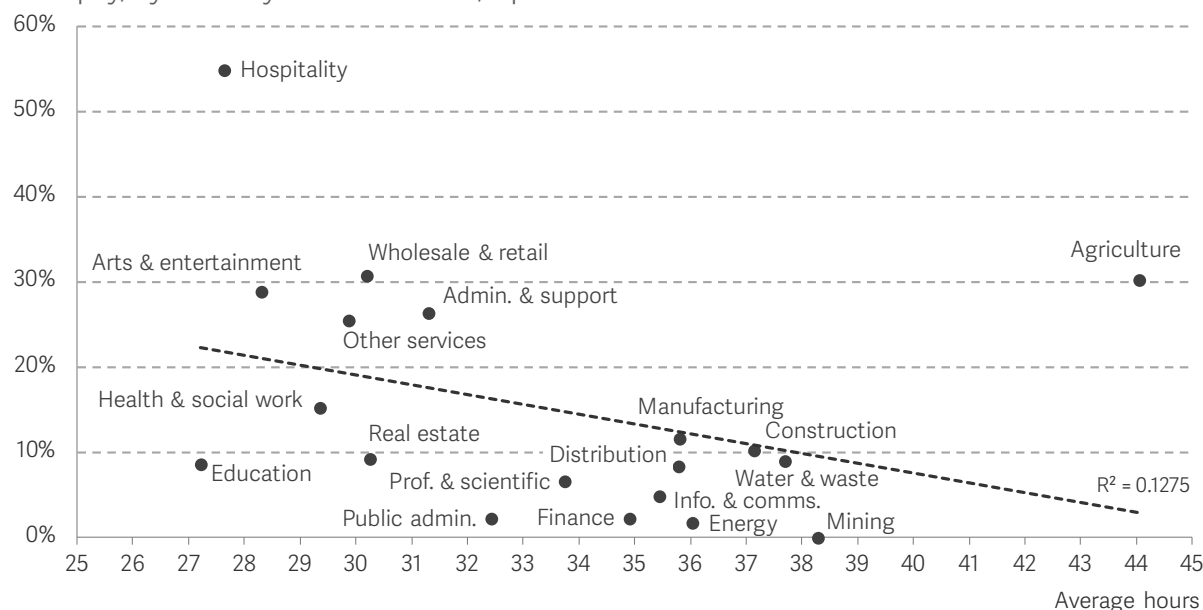
occupations are waiters and waitresses (19.8 hours, average across 208,000 workers) and cleaners (20.8 hours across 582,000 people).

What do these differences between industries and occupations tell us about the experience of being a worker in Britain today? Principally, they show that there is still wide variation between different types of job in the time that they demand of their employees. To the extent that these differences give workers the ability to choose a job in a sector or occupation which offers the hours that they desire, then this is welcome. But at times it may be detrimental to living standards, since workers may be restricted by their skills or location to jobs offering hours that they do not want.

Across both industry sectors and occupations, there is a correlation between working hours and the probability of workers being in low (hourly) pay. As Figure 7 shows, sectors with low average hours – such as hospitality and retail – also tend to have high proportions of workers in low (hourly) pay.

FIGURE 7: **Working hours are shorter in low-paid sectors of industry**

Average working hours and proportion of employees below two-thirds median hourly pay, by industry sub-sector: UK, April 2018



SOURCE: RF analysis of ONS, Annual Survey of Hours and Earnings

## The longest hours are worked by the highest-paid people

We have noted that sections of the labour market where low hourly pay is more common tend also to have lower average hours. This correlation is in fact a more general one. In today's labour market, unlike the situation that prevailed for most of the last two

centuries, the longest hours tend to be worked by the workers with the highest hourly pay.<sup>14</sup>

In the late nineteenth century, it was the lowest-paid workers who worked the most. Writing at the century's end, the economist and sociologist Thorstein Veblen argued that the distinguishing feature of the dominant social class of his day was 'abstention from productive work'.<sup>15</sup> The affluent lifestyles of the 'leisure class' were funded by incomes from property and investments, so people in the highest-income households measured their social prestige by how little paid work they could get away with. Today, though, the conspicuous enjoyment of leisure no longer confers the same social status that it did over a century ago. Several analysts have argued that it is now the performance of larger amounts of work, not leisure, that brings social status.<sup>16</sup> According to the sociologist Daniel Bell's prescient account from the 1970s, this change has come about because most capital inputs into the production process have become less scarce relative to human capital, driving up the rewards from 'knowledge-intensive' jobs where the scarcest human capital is deployed. If the performance of paid work is today a signifier of social status, then we would expect people with higher pay and education levels to work longer hours than the rest.

We should also expect the distribution of pay to impact on the incentives for high-paid people to work longer hours. All other things equal, if workers' hourly pay becomes more dispersed, then the marginal income gains from working an extra hour become larger, at least at the top end. As such, with hourly pay inequality in the UK having risen fairly consistently until the last 10-20 years, higher-paid people have had stronger incentives to work longer hours than their peers.<sup>17</sup> We return to this question of incentives in Section 4.

Looking at the distribution of working hours by pay level, it is indeed the case that the longest hours are worked by the people paid the highest hourly wage. Figure 8 plots the hours worked by men and women at every percentile in the hourly pay distribution, and shows that in general, higher hourly pay (towards the right-hand side of the chart) is associated with working longer hours, and the variation in hours across the pay distribution is larger among women than men.

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<sup>14</sup> For international comparisons of how the relationship between hourly pay and weekly hours has switched from negative to positive in many industrialised countries, see: M Huberman & C Minns, 'The times they are not changin': days and hours of work in Old and New Worlds, 1870-2000', *Explorations in Economics History*, 44, July 2007; for the US case see: M Aguiar & E Hurst, 'Measuring trends in leisure: The allocation of time over five decades', *Quarterly Journal of Economics*, 122(3), August 2007

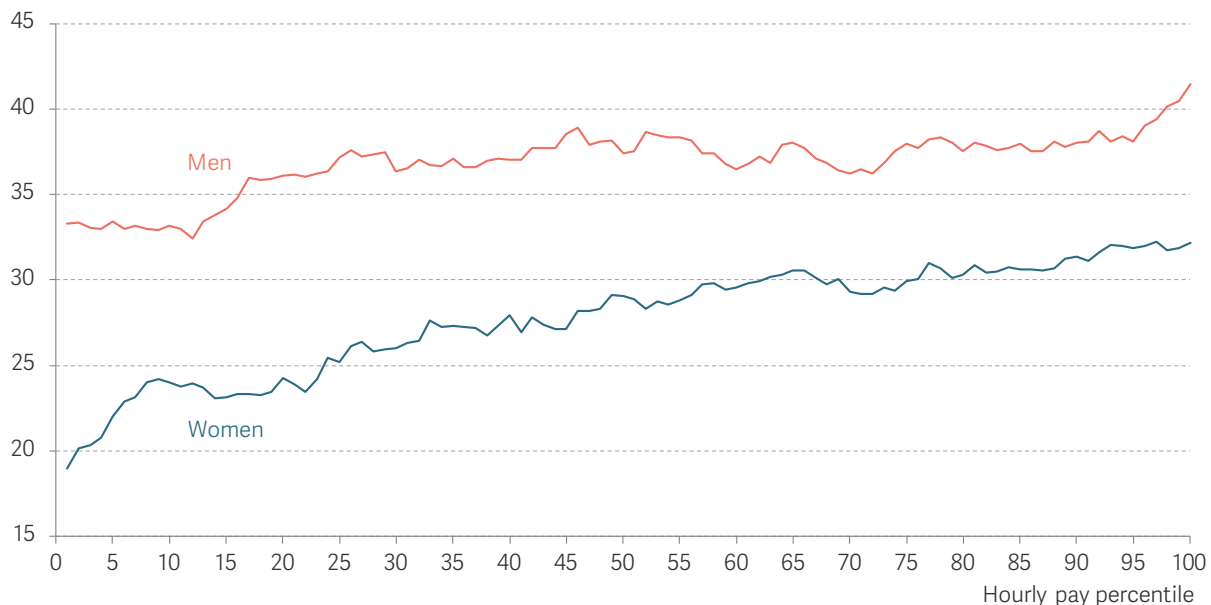
<sup>15</sup> T Veblen, *The Theory of the Leisure Class: An economic study of institutions*. New York, Macmillan, 1899

<sup>16</sup> For an early version of this thesis see: D Bell, *The coming of post-industrial society: A venture in social forecasting*, London, Heinemann, 1974. More recently, see: J Gershuny, *Changing times: Work and leisure in postindustrial society*, Oxford, Oxford University Press, 2000; D Markovits, *The Meritocracy Trap*, London, Allen Lane, 2019

<sup>17</sup> Hourly employee pay inequality rose on all measures until the early 2000s; since then it has remained broadly flat. The ONS Annual Survey of Hours and Earnings, which provides the highest-quality data on employee earnings, has the Gini coefficient on hourly pay inequality falling since then, and that on weekly and annual pay staying flat. On other measures of inequality the story is only slightly different: for example, the p90:p50 ratio continued rising until the late 2000s.

**FIGURE 8: The longest hours are worked by the highest hourly-paid employees**

Average actual weekly working hours among employees, by hourly pay percentile and sex, 18-64 year olds: UK, 2018



NOTES: Percentiles are calculated separately in the men's and women's hourly pay distributions.  
SOURCE: RF analysis of ONS, Labour Force Survey

Figure 8 also shows that the relationship between pay and hours is not a uniform one across the pay distribution. At all levels of pay, men work longer hours than women, though the gap in hours is larger among the lower-paid. For the middle four-fifths of the pay distribution, women's paid work hours vary more according to pay than men's do, illustrating a more general finding in labour economics that women have a greater elasticity of hours with respect to wages than men do. In the bottom tenth of the pay distribution, men's hours do not vary much, and are lower than for all higher-paid men, while women's hours fall sharply as pay gets lower. By contrast, in the top twentieth of the pay distribution, men's hours rise sharply as pay rises, while women's hours do not change.

This gives us some evidence that the people with the highest human capital may indeed nowadays be working the longest hours. This situation doesn't necessarily arise because high-paid people want to work longer than others: it may be that their employers value high hours due to higher staff overheads, or that they just demand longer hours while the employers of lower-paid people do not demand so many hours.

Inequality in working hours with respect to pay matters. If higher-paid people work longer hours, then differences in hours worked will push inequality of labour income upwards, given that for many workers their labour income is the product of hourly pay and hours worked. As Daniele Checchi and co-authors have found, inequality of hours is an important contributor to labour income inequality in the UK, and while hours used to

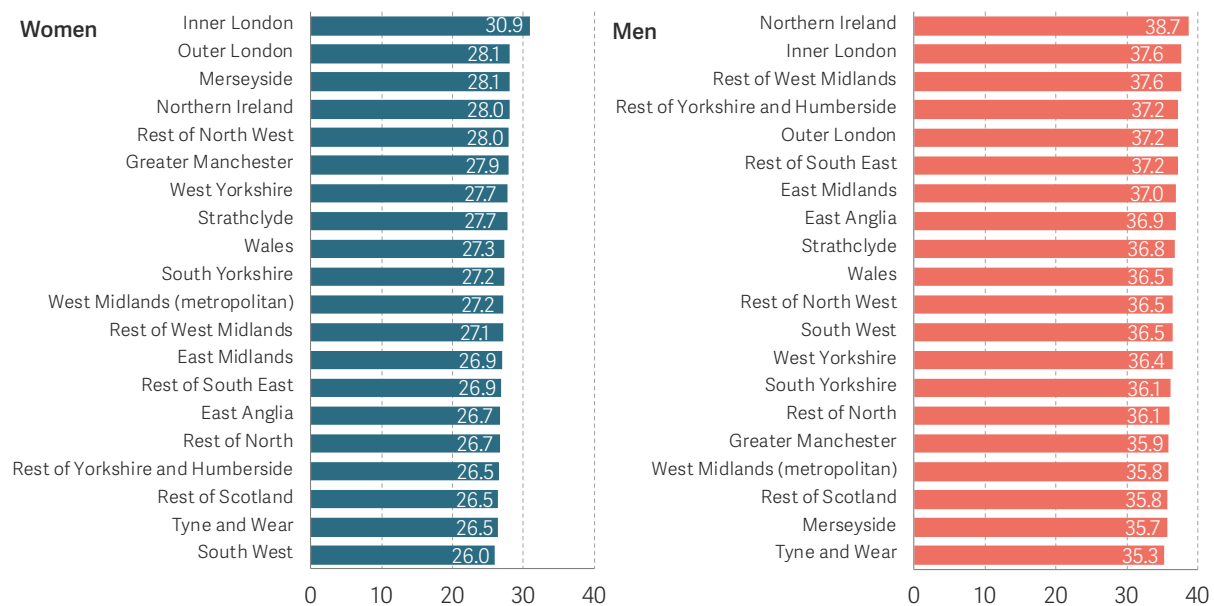
exert an inequality-reducing effect (since lower-paid people worked longer hours), today inequality in working hours drives up inequality in labour income.<sup>18</sup>

## Londoners work some of the longest hours in the UK

Average working hours vary by geography as well as by industry sector and occupation. Figure 9 shows the extent of this variation, and tells us that in 2018 the average working woman living in Inner London spent almost five hours longer in work than her counterpart in the South West. Men's hours are less dispersed by sub-region than women's are, although the average male worker in Northern Ireland still works over three hours per week longer than their counterpart in Tyne and Wear – an amount equivalent to around four weeks' extra work per year.

**FIGURE 9: London and Northern Ireland have some of the longest working hours**

Average actual weekly working hours by sub-region and sex: UK, 2018



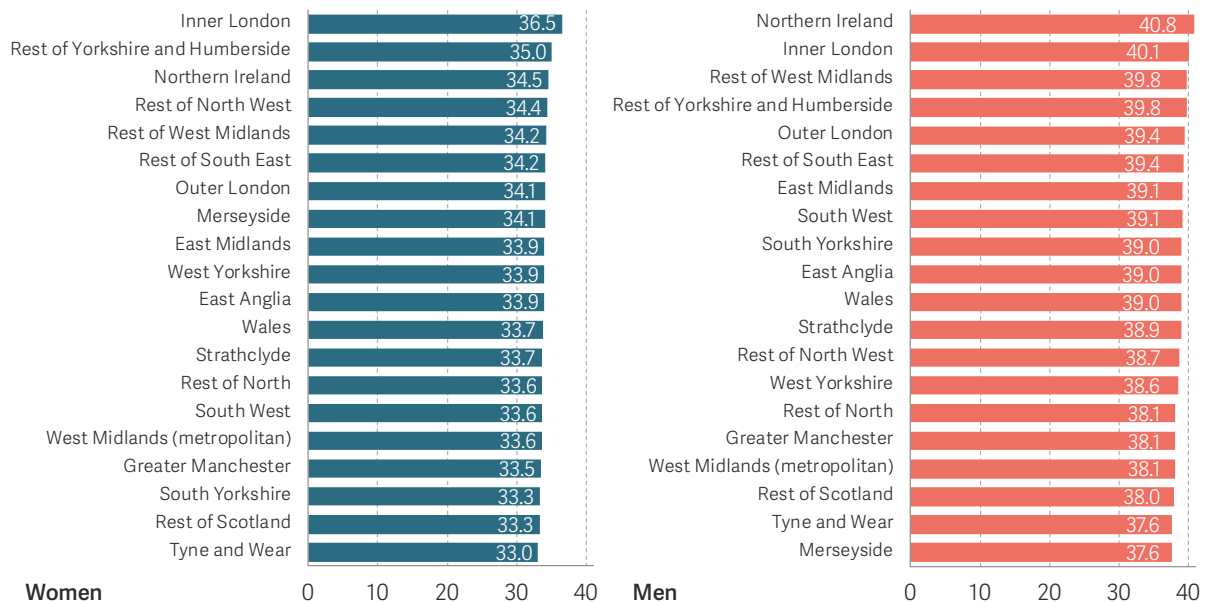
SOURCE: RF analysis of ONS, Labour Force Survey

Rates of part-time work explain some of the geographical variation in working hours. To exclude this factor from our analysis, Figure 10 presents average working hours only among the group of workers who classify themselves as full-time. As expected, this pushes the average level of working hours higher, and much more so for women since a greater proportion of them work part-time.

<sup>18</sup> D Checchi, C García Peñalosa & L Vivian, 'Decomposing Earnings Inequality: The Role of Working Hours', IZA Journal of European Labour Studies, 2016; see also more recent working paper by the same authors [here](#)

**FIGURE 10: London and Northern Ireland remain near the top when regions are ranked by full-time hours**

Average actual weekly working hours among full-time workers by region and sex: UK, 2018



SOURCE: RF analysis of ONS, Labour Force Survey

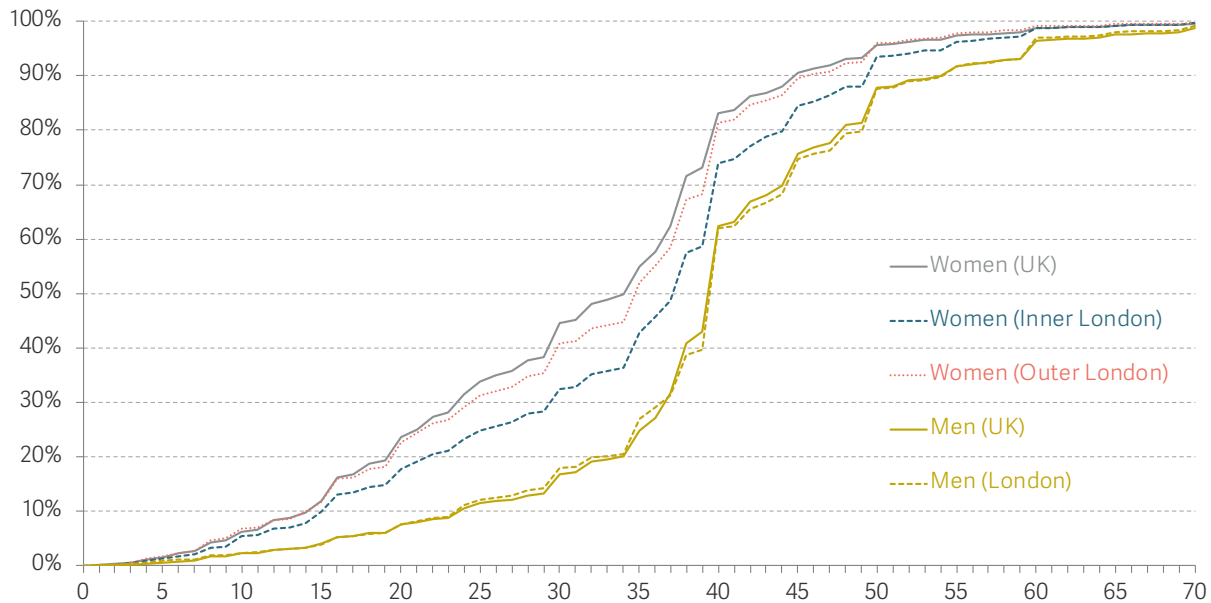
London is striking in having some of the longest working hours of any region, both among women and men. What is different about the distribution of women's hours in Inner London compared to the rest of the country?

Figure 11 shows the cumulative distribution of working hours, and tells us that Inner London is different because women there are much less likely to work part-time than in the rest of the country. Men's hours in London do not differ very much from the UK average, though they are slightly more likely to do short hours and slightly more likely to work over 40 hours per week.



FIGURE 11: **Women in Inner London are much less likely to work part-time than the UK average**

Proportion of female and male workers working up to a given number of actual hours:  
UK and inner/outer London, 2018



SOURCE: RF analysis of ONS, Labour Force Survey

To more precisely determine why London's working hours are longer, Figure 12 shows the results of a Oaxaca-Blinder decomposition comparing the characteristics of workers in London with those in the rest of the UK.<sup>19</sup> This statistical procedure allows us to separate out the effect, on average working hours in the capital, of the composition of Greater London's workforce from that of hours worked within particular groups. It aims to explain why in 2018 Londoners worked an average of one-and-three-quarter hours longer than people in the rest of the UK.

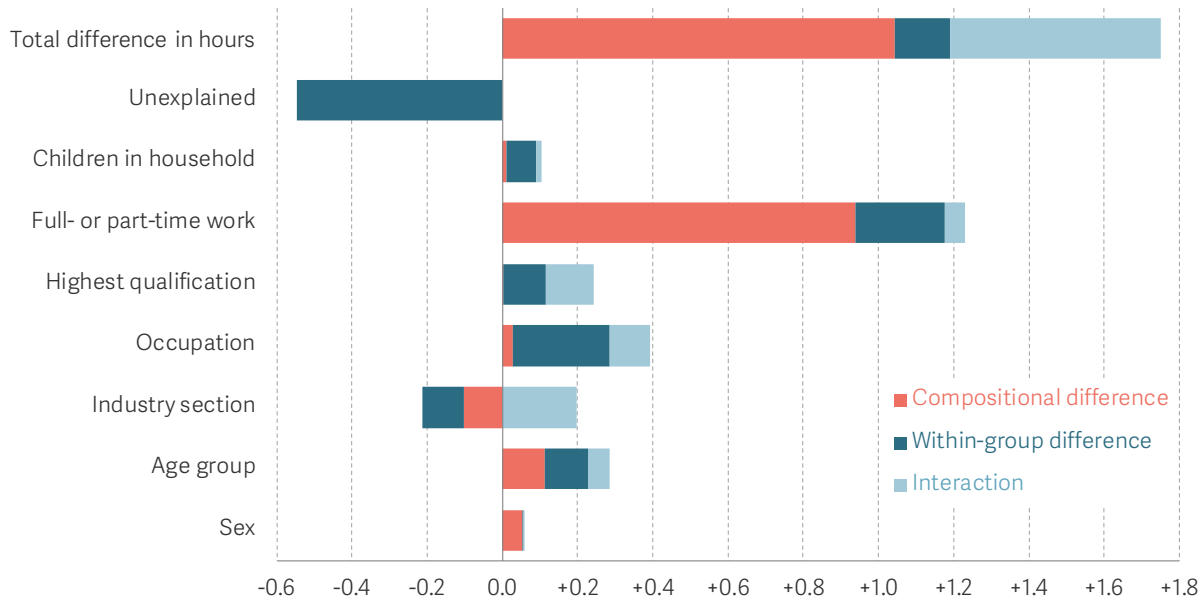
As Figure 12 shows, Londoners work an average of one-and-three-quarter hours longer than workers in the rest of the UK. Just over an hour of the difference can be explained by the composition of London's workforce. Nearly all of this compositional effect is due to Londoners being much less likely to work part-time, while most of the rest is due to London's workforce being younger. Just over half an hour of the difference can be explained by the interaction of compositional and within-group effects: that is, in London some groups are both over-represented and tend to work longer hours than people with that characteristic elsewhere. In London the most important of these interactions are that financial sector workers and higher-educated workers are more prevalent than elsewhere *and* in London those workers work longer hours.<sup>20</sup>

<sup>19</sup> This analysis includes controls for sex, age group, industry section, occupation (two-digit SOC), highest qualification level, full-time or part-time work and the presence of children aged 18 or younger in the household.

<sup>20</sup> Higher-educated workers are defined here as those whose highest qualification is at NQF level 4 or above.

**FIGURE 12: The difference in hours between London and the rest of the UK is mainly explained by low rates of part-time work**

Oaxaca-Blinder decomposition of difference in average working hours between Greater London and rest of UK: 2018



NOTES: Analysis uses methodology in B Jann, 'The Blinder-Oaxaca decomposition for linear regression models', The Stata Journal, 8 (4), May 2008.

SOURCE: RF analysis of ONS, Labour Force Survey

Differences within particular characteristic groups explain relatively little of the variation in hours between London and the rest of the UK. This latter result is because the upward impact of longer hours being worked in London (by certain occupations, by full-time workers and by prime-age workers) is mostly offset by workers in specific industries in London (retail, transport and communications, public administration, education and health and social work) working shorter hours than the norm.

## UK workers' hours are below the European average

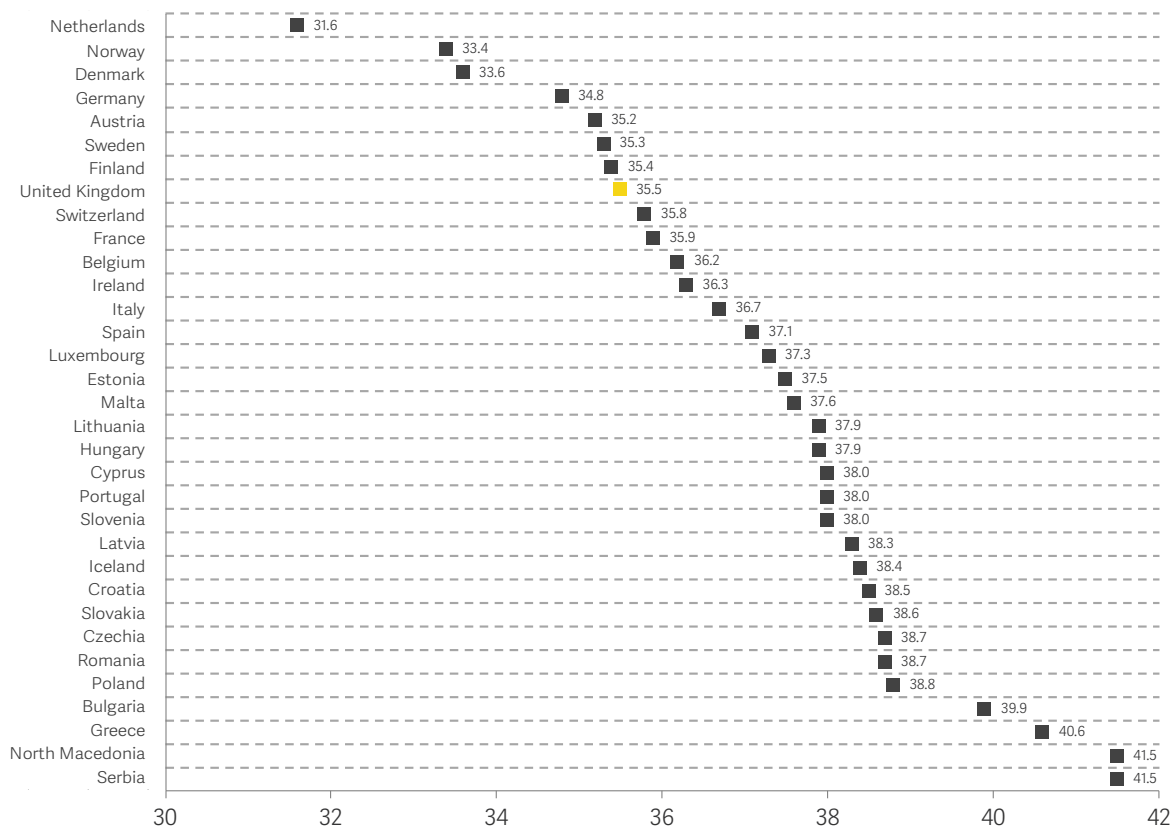
It is often said that Britons work some of the longest hours in Europe.<sup>21</sup> If we rank countries in Europe by their average *full-time* weekly working hours, then the UK sits above average and just above a cluster of countries in southern and eastern European countries. But once we look across the entire workforce, taking into account the UK's high rate of part-time employment, then average UK hours end up lower than the European average, as Figure 13 shows.

<sup>21</sup> TUC, 'British workers putting in longest hours in the EU, TUC analysis finds', TUC press release, April 2019

The explanations for the differences in working hours between countries are complex, and beyond the scope of this paper. One key explanation is the difference between regimes for setting working hours, where the UK is an outlier in Europe, as set out in Box 2. We can however note one trend that links with the analysis in this chapter of how working hours today vary by individual labour income. A similar – though inverse – relationship exists at the international level. Countries with higher per-capita income tend to work shorter hours, other things equal.<sup>22</sup>

**FIGURE 13: The UK works shorter average hours than the majority of European countries**

Average actual weekly hours worked: 2018



SOURCE: Eurostat

<sup>22</sup> A Bick, N Fuchs-Schündeln & D Lagakos, 'How do hours worked vary with income? Cross-country evidence and implications', American Economic Review, 108(1), January 2018

## BOX 2: Institutional regimes for setting working time

Although individual preferences are the underlying drivers of change in working hours, trade union activity has enabled some of the biggest changes in working schedules. Compared to trade union activity, government legislation has tended to play a relatively small part in the evolution of working hours in the UK over the past 150 years. This is because the country is an outlier in Europe in that legislation plays very little binding role in setting workers' hours.

In the past quarter of a century, there have however been a few exceptions to this rule. In the late 1990s the UK government strengthened several aspects of individual employment rights. The National Minimum Wage was introduced in 1999. The year before, in 1998, employees became entitled to statutory paid leave. Initially set at 20 days per year, this allowance has since been raised to 28, though because employers can count bank holidays and public holidays (usually 8 per year) within this total, it effectively stands at 20.<sup>23</sup>

The number of workers working long hours has fallen over the two decades since the UK government introduced Working Time Regulations in 1998, in

order to comply with the guidelines set out in the European Working Time Directive that the maximum working week should be 48 hours. ONS data for all employees shows that the proportion working over 45 hours per week has fallen from its recent-times peak of 24 per cent (in the winter of 1996-97) to 17 per cent of the workforce today.<sup>24</sup> The government's own evaluation of the 1998 regulations found that they may, at least in part, have helped reduce the incidence of long-hours working after 1998, though their principal impact appears to have been through more people being employed on shorter-hours contracts as opposed to an absolute reduction in the number of people working long hours.<sup>25</sup>

The UK's system for setting working hours is an outlier in Europe, given that very few people in any sector have their hours determined by legislation or collective bargaining. Countries can take four basic approaches to determining working hours, whose impacts may be measured by the degree of control that they allow employers and workers to exercise over their working time:

<sup>23</sup> This holiday allowance applies to all workers, including those on zero-hours contracts, those with irregular hours and agency workers, though part-time workers will be entitled to a pro-rata shorter number of days.

<sup>24</sup> ONS, Labour Force Survey

<sup>25</sup> Department for Business, Innovation and Skills, [The Impact of the Working Time Regulations on the UK labour market: a review of evidence](#), December 2014

1. Pure mandated. Most workers have their hours determined by legislation, for example labour law that applies to all employment contracts. substantial roles in determining working hours for most people. Hours tend to be determined by employers when they issue contracts.<sup>26</sup>
2. Adjusted mandated. Most workers' hours are regulated by legislation, but collective bargaining plays a role in adjusting them. The UK is the only country in Europe which mainly uses a unilateral regime to set working hours, with individual employment contracts more important than either collective bargaining or legislation. In every state in the EU27 statutory legislation plays some role in setting working time, unlike in the UK, and in most of Western Europe it is either sectoral- or firm-level collective bargaining that plays the most important role, as Table 1 shows.
3. Negotiated. Collective bargaining determines most workers' hours, usually at a sectoral level but with individual firm-level negotiations sometimes making adjustments.
4. Unilateral. Neither collective bargaining nor legislation play

**TABLE 1: The UK is an outlier in Europe in the way that working hours are decided**

Institutions that determine working hours under different regimes: EU, 2016

Regime	Institutions				Countries
	Statutory legislation	Sectoral bargaining	Company-level bargaining	Individual contracts	
Pure mandated	Most important				Bulgaria, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovenia
Adjusted mandated	Most important	Some role	Some role		Croatia, France, Greece, Portugal, Slovakia
	Most important		Some role	Some role	Czechia, Ireland, Malta
Negotiated	Some role	Most important	Some role		Austria, Belgium, Cyprus, Denmark, Finland, Germany, Italy, Norway, Spain, Sweden
	Some role	Most important	Some role	Some role	Netherlands
	Some role	Most important	Most important	Some role	Luxembourg
Unilateral		Some role	Some role	Most important	United Kingdom

SOURCE: J Cabrita, S Boehmer & C Galli da Bino, Working time developments in the 21<sup>st</sup> century: Work duration and its regulation in the EU, European Foundation for the Improvement of Living and Working Conditions, March 2016

<sup>26</sup> This typology draws on: J Cabrita, S Boehmer & C Galli da Bino, [Working time developments in the 21<sup>st</sup> century: Work duration and its regulation in the EU](#), European Foundation for the Improvement of Living and Working Conditions, March 2016. It draws from those proposed in: P Berg, G Bosch & J Charest, 'Working-time configurations: a framework for analysing diversity across countries', *Industrial and Labour Relations Review*, 67(3), July 2014; D McCann, 'Regulating working time needs and preferences', in J Messenger (ed.), *Working time and workers' preferences in industrialised countries: Finding the balance*, Routledge, 2004

The UK does have very limited statutory limits on working hours via the 48-hour rule derived from the European Working Time Directive, but most workers work shorter hours than this, and many who exceed the limit will have waived their right to its protection.

In previous decades, working hours in the UK used to be determined more extensively by collective bargaining agreements. The shift towards a largely unilateral bargaining regime has taken place alongside an overall decline in trade union membership and collective bargaining coverage.<sup>27</sup>

## When people work: the five-day norm is still strong, though a few people work every day of the week

So far we have looked at people's total hours worked per week. But for individuals' living standards it also matters when in the day these hours take place, and indeed when in the week, year and lifetime. An 8-hour shift starting at 9pm has a different impact on someone's life from one starting at 9am.

### When in the day

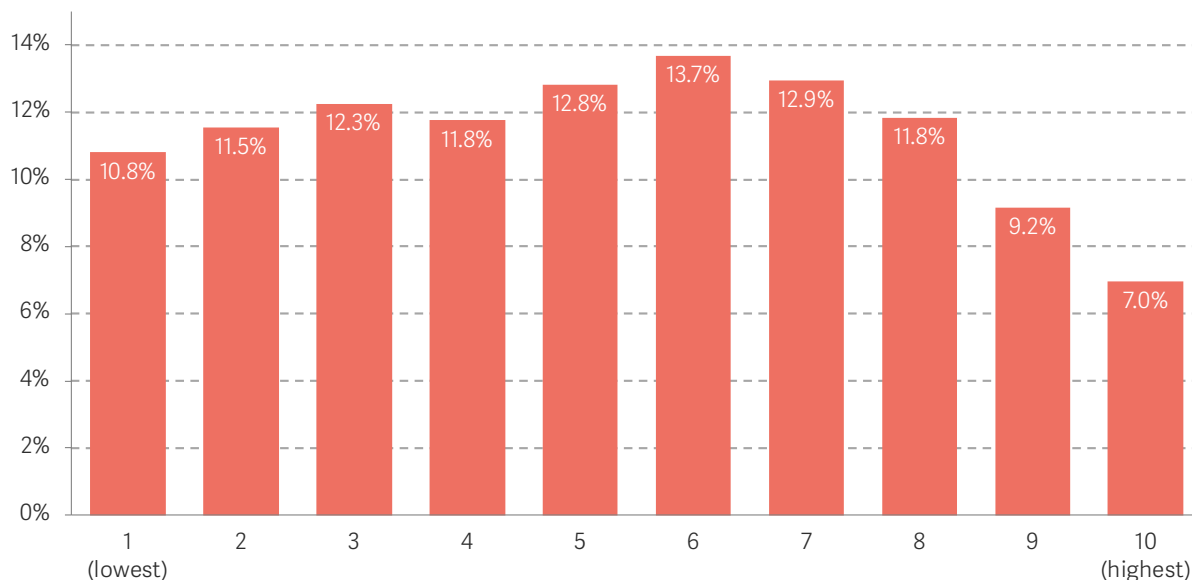
The majority of workers carry out their paid work during the daytime. In spring 2019, 11.6 per cent of workers – 3.8 million people – had night shifts as part of their usual working pattern, a proportion of the workforce that has remained remarkably constant over the past fifteen years. Night shifts are more prevalent among men, 13.8 per cent of whom work at night from time to time, compared to 9.3 per cent of women. The incidence of night work is not significantly different between employees and the self-employed. People who sometimes work at night are most clustered in the upper-middle of the hourly pay distribution, as Figure 14 shows, although this clustering has become less acute over time.

<sup>27</sup> For details of the evolution of UK collective bargaining, see: P Marginson, K Sisson & J Arrowsmith, 'Between Decentralization and Europeanization: Sectoral Bargaining in Four Countries and Two Sectors', *European Journal of Industrial Relations*, 9(2), 2003



**FIGURE 14: Night work is most prevalent in the upper middle of the hourly pay distribution**

Proportion of employees doing night shifts as part of usual schedule, by hourly pay decile: UK, 2018



SOURCE: RF analysis of ONS, Labour Force Survey

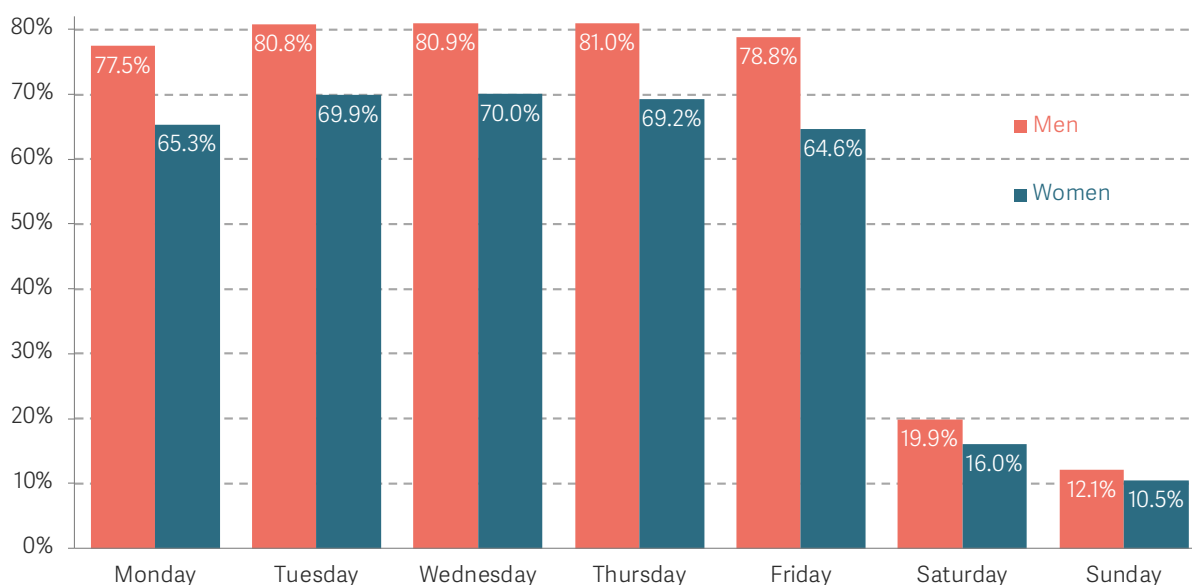
## When in the week

The typical worker, as might be expected, works on five days of the week. The longstanding five-day norm is followed by two-thirds of men and half of women. In this case we define 'working' on a day as doing any amount of paid work within that 24-hour period.

The five-day week is also predominantly worked from Monday to Friday, as Figure 15 shows. On any given weekday, a greater proportion of male workers are likely to be in work – unsurprising given that their average total weekly hours are higher. Weekend working is also more prevalent among men than women, with one-fifth of male workers working on a typical Saturday compared to just over one-in-six female workers. On Sundays the proportion of people working is even smaller, at one-in-eight male workers and just over one-tenth of female workers. Interestingly, Mondays and Fridays are the weekdays that are worked by the lowest proportion of workers.

FIGURE 15: The overwhelming majority of work happens between Monday and Friday

Proportion of workers working on each day of the week, by sex: UK, 2018



SOURCE: RF analysis of ONS, Labour Force Survey

Despite night shifts being more prevalent in the upper middle of the pay distribution, weekend working does not skew towards higher-paid workers. On an average Saturday, a worker in the bottom fifth of the hourly pay distribution is almost six times more likely to be in paid work than someone in the top fifth of the distribution. This pattern does not vary much between men and women.

## Control over working hours

If a worker has control over their working hours, the amount and scheduling of those hours may be a little less important in determining their wellbeing. A lack of control over working time is a key reason why zero-hours contracts, as well as other types of irregular working arrangement like agency work and (bogus) self-employment, have attracted widespread concerns in recent years that go beyond the sheer rise in these types of employment.<sup>28</sup> Zero-hours contracts cause workers problems not only because they will sometimes not be offered sufficient hours of work to earn an adequate pay cheque, but also because they cannot anticipate in advance *when* their hours will be insufficient.

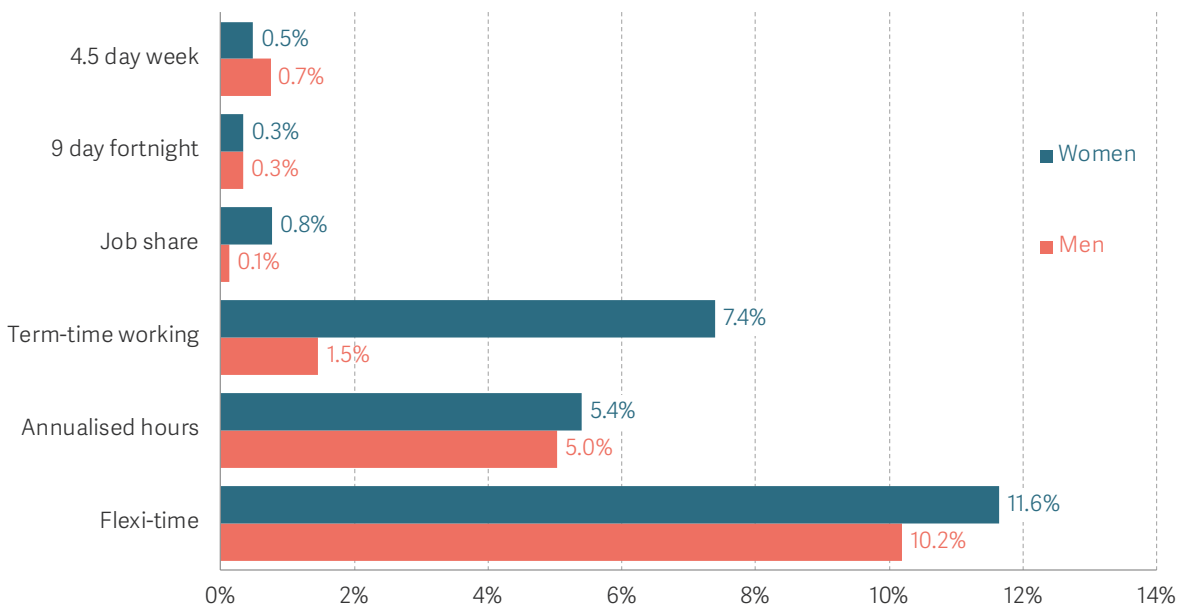
Flexible work arrangements are a means by which workers can shift their working patterns away from the five-day per week norm. We know that women are less likely to work on five days in the week, and Figure 16 shows that in 2018 most types of flexible

<sup>28</sup> See discussion and Figure 1 in: D Tomlinson, [More than we bargain for: Learning from new debates on how institutions can improve worker pay and security in Anglo-Saxon economies](#), Resolution Foundation, November 2019

work arrangement were more widespread among women than men. The largest proportionate difference is in the use of job shares, which are eight times more prevalent among women than men. Also striking is the discrepancy in term-time working, which is followed by 1 in 14 women but only by one man in every 69 – though its prevalence among women is down by 0.8 percentage points since 2008.

FIGURE 16: **Women are much more likely to have flexible work arrangements**

Proportion of workers with different types of flexible work arrangement, by sex: UK, 2018



SOURCE: RF analysis of ONS, Labour Force Survey

Having explored the variety of working habits today, we now turn to how we got here. The next section will consider what drove the long-run fall in working hours before 2009, before we look at the changes in the last decade that have halted this trend.

## Section 3

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### Drivers of the long-run fall in working hours

Over the past 150 years, average working hours have fallen fairly consistently. The only periods when they did not decline were during economic crises and major wars. This section outlines the reasons for this long-run fall. It focuses on the period 1979-2009, since which average hours have not been falling.

Around half of the fall in working hours between 1979 and 2009 is explained by changes in the composition of the workforce, with more women working and more workers going part-time. The other half is accounted for by changes in the average hours worked within particular groups in the labour market, driven by rising prosperity and enabled by institutions like trades unions and (to a lesser extent) legislation. These changes took place principally among young people and those with lower levels of formal qualifications. Among higher-educated, prime-age full-time workers, the shape of a typical working week has changed relatively little.

The fundamental determinants of changes in working hours are productivity, pay and workers' preferences. Workers tend to desire shorter working hours when their living standards rise – independently of how easy these changes are to achieve – because of rising employment income inequality and the general increase in the costs of many key goods and services such as child care.

### Over the long run, working hours have tended to fall, though this trend has stalled in the past decade

Over the past 150 years, average employee working hours have tended to fall.<sup>29</sup> This is a process that has occurred in all industrialised countries, although at different rates.<sup>30</sup> As

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<sup>29</sup> This section looks mainly at actual hours, but these tend to change in a similar way to usual hours. Note that institutional changes have more influence on usual than actual hours – so to some extent actual hours more strongly reflect individual preferences. The relationship between usual and actual hours is partly determined by employers, who may respond to reductions in usual hours by demanding more overtime or employing more people, for example.

<sup>30</sup> For an international comparative view, see: M Huberman & C Minns, 'The times they are not changin': days and hours of work in Old and New Worlds, 1870-2000', *Explorations in Economics History*, 44, July 2007

Figure 17 shows, the weekly hours of an average worker in 2006 were around half of those worked by their counterpart in the mid-19<sup>th</sup> century.

**FIGURE 17: Average working hours have been in steady decline for the last 150 years**



NOTES: Series moves from usual to actual working hours in 1924

SOURCE: Bank of England calculations in A Millennium of Macroeconomic Data for the UK, using British Labour Statistics Historical Abstract 1886-1968, RCO Matthews, CH Feinstein and J Odling-Smee, British Economic Growth 1856-1973 (1982), various Department of Employment Gazettes for pre-1971; ONS, Labour Force Survey for post-1971 period.

There is a range of ways in which a worker's hours may be changed, even while they stay in the same job role. Sometimes, collective bargaining agreements impose specific reductions on working hours, for example in 2018 the Communication Workers Union and Royal Mail agreed to reduce workers' hours from 39 to 35 over several years.<sup>31</sup> At other times, firms or workers may choose shorter weekly hours, or opt for flexible or part-time work schedules which lead to average hours going down, though individual-level bargaining over hours is comparatively rare. Other changes also impact on working hours, such as increases in the time spent not working due to holidays, sick leave and strikes, and shifts in the composition of the workforce, principally the rise of part-time work and the increasing entry of women into the formal paid workforce.

Other, deeper forces act on working hours. When considering these, we distinguish between the underlying incentives that shape workers' preferences for the hours they would like, and the institutional changes that actually enable workers to alter their hours:

- Pay, productivity and preferences are the fundamental determinants of changes in

<sup>31</sup> See: 'Joint Statement by Communications Workers Union and Royal Mail Group on Shorter Working Week', No. 553/18, September 2018

working hours. With rising living standards (enabled largely by higher productivity), workers may choose to trade some of their additional pay for more leisure, a choice which is enabled by the right institutions. Although rising pay is usually necessary for workers to reduce their hours, it does not necessarily lead to shorter hours. People may choose more leisure when they earn more (the 'income effect'), or they may be tempted to work longer hours due to the higher rewards on offer, what economists call the 'substitution effect'.

- Institutions like trades unions and the legislature enable changes in individual workers' hours (or prevent them). Over the past 150 years the regulation of hours has gradually shifted outwards in its scope, from 8-hour day campaigns in the 19<sup>th</sup> and early 20<sup>th</sup> century, to the working week (the adoption of the two-day weekend norm) and then the working year (increases in annual holiday entitlements in the later-20<sup>th</sup> century).<sup>32</sup>

At different moments in history some of these categories have become temporarily more important, though it has always been difficult for workers' preferences for greater leisure to be realised in the absence of legislation or collective bargaining. For example, the single largest reduction in average working hours took place in 1919 not through legislation, but rather through widespread collective bargaining agreements across industry that represented the culmination of years of trade union campaigning (together with the newly-formed International Labour Organisation's call for an 8-hour day and 48-hour week). Similar reductions in hours took place across industrialised countries in 1919, though Britain was unusual in that government played 'no direct role' except in the industries it had taken into its control during the First World War.<sup>33</sup>

Over the second half of the 20<sup>th</sup> century, changes in the typical full-time working week took place more slowly than in its first half. The more important changes affecting hours were due to specific collective bargaining decisions and legislation to increase holiday entitlements, as well as the rise in the proportions of women and part-time workers in the labour force. Holiday entitlements increased most quickly during the 1960s, with 97 per cent of workers covered by bargaining agreements at the start of the decade having 2 weeks' holiday or less per year, compared to a majority having at least three weeks' holiday by the decade's end.<sup>34</sup> Holidays stopped getting longer in the mid-1970s, changing relatively little until the introduction of new statutory leave regulations in 1998.

Before the First World War, essentially no workers worked part-time. Part-time work only

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<sup>32</sup> D Anxo, J-Y Boulin & C Fagan, 'Decent working time in a life-course perspective', chapter 4 in J-Y Boulin, M Lallement, J C Messenger & F Michon (eds.), *Decent Working Time: New trends, new issues*, International Labour Office, Geneva, 2006

<sup>33</sup> P Scott & A Spadavecchia, 'Did the 48-hour week damage Britain's industrial competitiveness?', *Economic History Review*, 64(3), April 2011

<sup>34</sup> *Employment Gazette*, quoted in M Rubin, *Economic Effects of Shorter Working Hours*, PhD Thesis, London School of Economics, 1995

grew very slowly over the following three decades, exceeding 1 in 20 workers for the first time in 1953 and then tripling as a share of the workforce over the next 20 years.<sup>35</sup>

Overall, the big-picture trend was that average working hours continued to get shorter all the way to 2009, as Figure 17 shows. But in the last ten years, the long-run trend of falling hours has come to a halt. In 2014, for the first time since the middle of the Second World War, average working hours were higher than they were a decade before.<sup>36</sup> This is an unusual occurrence: the only previous prolonged periods of rising working hours occurred in the recession periods of the late 1880s and the mid-1930s. Section 4 addresses the reasons for this change of trend, while this section explains why average hours were falling in the decades before 2009.<sup>37</sup>

## Before 2009 working hours fell in all demographic groups, but there was strong variation by age group, qualification level and ethnicity

We know from the headline trend shown in Figure 17. that average hours across all workers were falling consistently for many decades before 2009. To analyse the currents that underlie this trend, however, we are restricted to a more recent time period that begins in the 1970s, since suitably granular data was not collected before then. In this section we therefore focus mainly on changes in working hours over the 30-year period from 1979 to 2009.

To orientate our analysis, Figure 18 shows that hours fell in every demographic group over the 30 years to 2009. Some key trends were:

- Full-time hours fell by much less than the overall average;
- Men's hours fell by almost 5 hours per week, compared to 1.4 per week for women;
- Young people's working hours fell more than others, by more than 8 hours per week for 18-24-year-olds, while 35-54-year-olds experienced the smallest drops;
- The hours of people with lower levels of education fell by more than those with degrees;
- Hours fell by about the same amount among people classifying themselves as part-time workers as those describing themselves as full-time – but part-time men's hours fell much more than part-time women's;
- Self-employed workers' hours fell very considerably, by 16 hours per week; and

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<sup>35</sup> See Appendix D in: R C O Matthews, C H Feinstein & J Odling-Smee, *British Economic Growth 1856-1973*, Oxford Scholarship Online, 1982

<sup>36</sup> The last time this happened was in 1942, so 2014 was the first time in 72 years that average hours were higher than 10 years earlier.

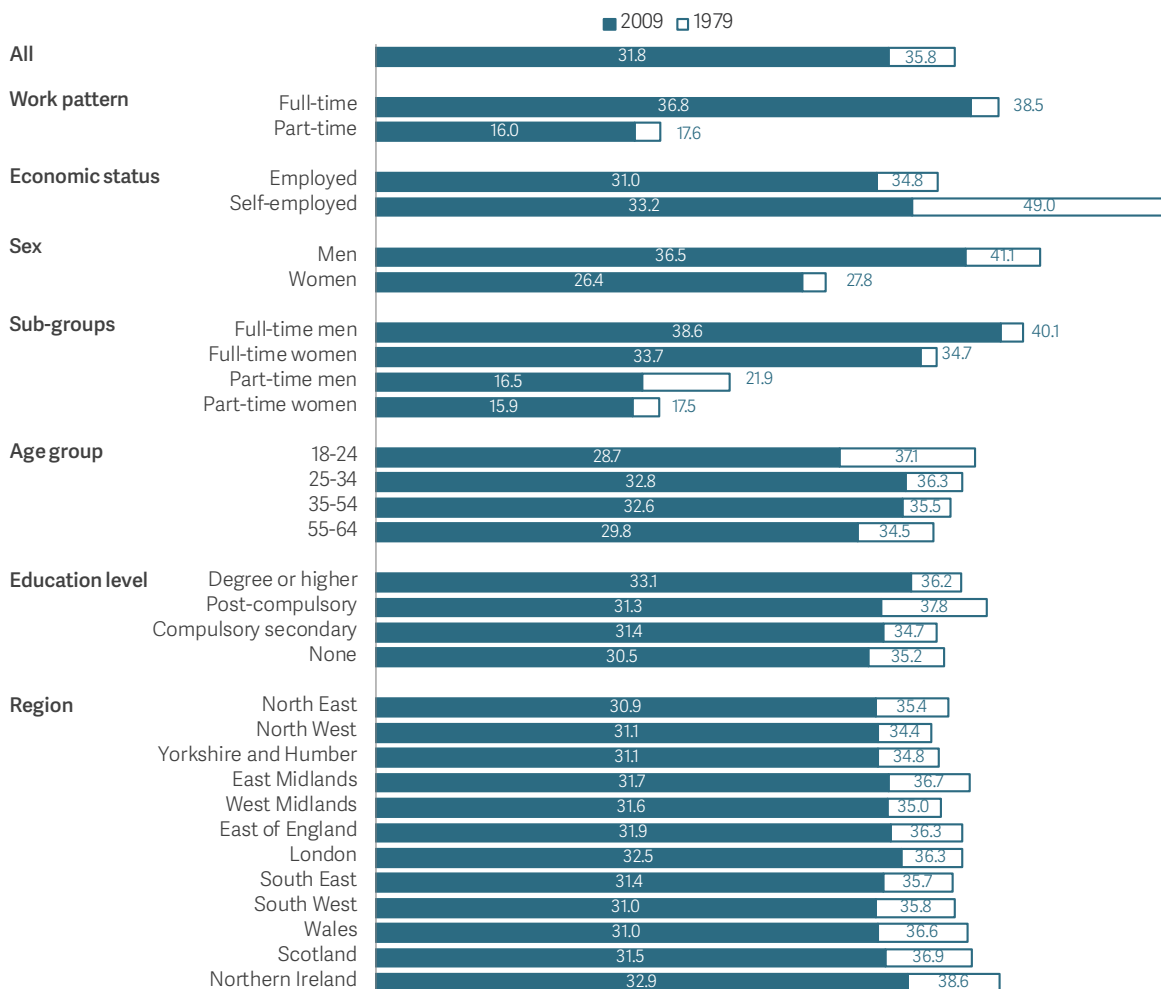
<sup>37</sup> We treat 2009 as the turning-point since this is the calendar year in which average hours reached their all-time low. In some definitions, the stalling in working hours began before this low-point.

- The geography of working hours changed somewhat over the three decades before 2009, although Northern Ireland had the longest average hours overall in both years, despite experiencing a fall of 5 hours per week.

These changes are part of a longer-running historical process, summarised by the International Labour Organisation as one in which 'the historical trends towards a progressive standardisation of working time have given way to a *diversification*, *decentralisation* and *individualisation* of working hours'.<sup>38</sup>

FIGURE 18: **Working hours shrank among all sub-groups of the workforce in the decades before 2009**

Average hours for different groups of workers aged 18-64: UK, 1979 and 2009



SOURCE: RF analysis of ONS, Labour Force Survey

<sup>38</sup> D Anxo et al., 'Introduction: Working time in industrialised countries', in J Messenger (ed.), Working time and workers' preferences in industrialised countries: Finding the balance, Routledge, 2004



## The fundamental drivers of the fall in hours were pay and productivity, but not tax

Workers decide on the hours they would ideally like to work with reference to several factors in their household, including income, care responsibilities and the work patterns of partners. A standard economic analysis relates change in average working hours across all workers to trends in productivity and wages. Rising individual pay leads to rising disposable income, and over the long term the income effect (workers' wish to work less due to higher incomes) slightly outweighs the substitution effect from higher pay (where a worker would increase their hours to take advantage of rising hourly pay).<sup>39</sup>

Both average pay and workers' hourly productivity were rising consistently in the decades before 2009. Take productivity first. Productivity trends lie beneath changes in workers' pay, since pay can only increase (all else equal) if productivity rises or if firms reduce their profits. As Figure 19 shows, average productivity growth remained above 2 per cent per year for almost all of the period between the Second World War and the 2007-08 financial crisis, reaching a peak of over 7 per cent annual growth in 1971. For as long as productivity growth remained elevated, it was possible for workers' pay to increase and therefore for working hours to fall while still allowing real incomes to rise.

**FIGURE 19: Hourly labour productivity growth has been in decline since the 1970s**

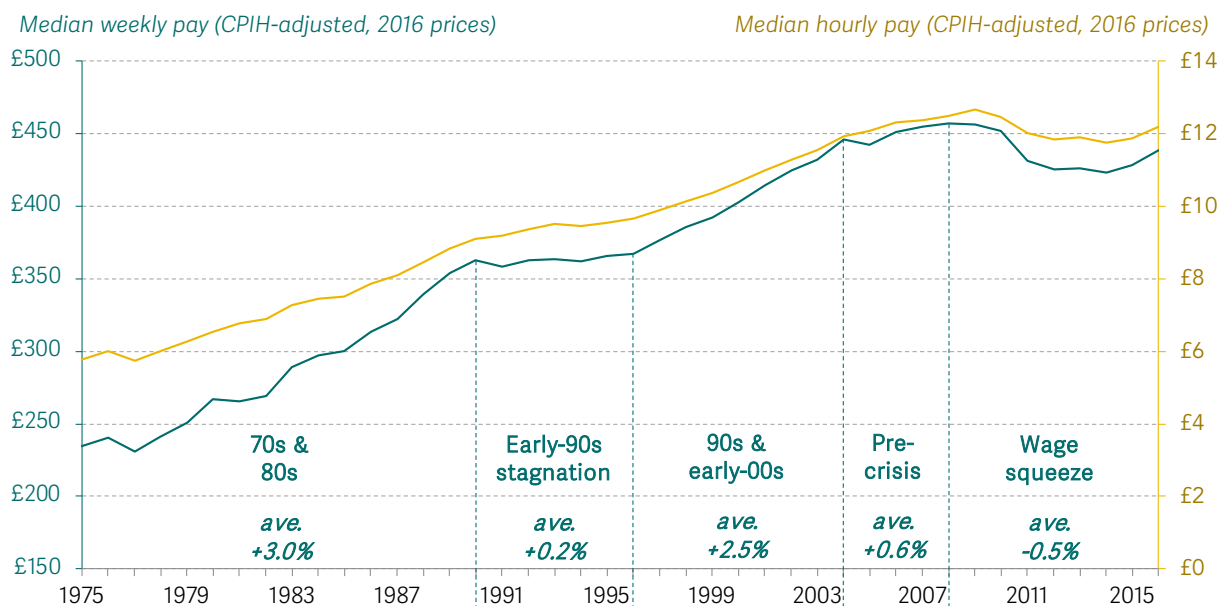


<sup>39</sup> For a recent macroeconomic analysis, see: T Boppart & P Krusell, 'Labor supply in the past, present, and future: a balanced-growth perspective', *Journal of Political Economy*, 128(1), January 2020

Workers' pay was rising fairly consistently from the mid-1970s until 2008, as Figure 20 shows, with the exception of a stagnation in the early 1990s. In a period when real pay is rising, it is likely – though not guaranteed – that workers will on average try to take some of their increased prosperity as more free time. They might not choose free time if they are tempted by the 'substitution effect' to work longer hours, once the potential rewards are greater. It appears, however, that in the three decades before 2009, workers did on average respond to higher hourly pay by choosing shorter working hours where possible.

**FIGURE 20: Typical pay was rising until 2008, after which it entered a long stagnation**

Median weekly and hourly pay per worker: UK



SOURCE: RF analysis of ONS

Changes to tax policy are not a convincing explanation for trends in working hours

Another factor that economists often argue drives shorter working hours is labour tax rates. Raise labour taxes, the argument goes, and workers will shorten their hours since the marginal rewards from an extra hour are diminished. A simple economic model suggests that reductions in marginal income tax rates ought to increase the net income gains that workers experience from working longer hours, and therefore that tax cuts like those in the 1987 budget ought to have prompted a labour supply response whereby people work longer due to the 'substitution effect'.<sup>40</sup>

<sup>40</sup> O Causa, 'The Policy Determinants of Hours Worked Across OECD Countries', OECD Journal: Economic Studies, 2009

The difficulty with this argument is that working hours were falling quite consistently during the later 20<sup>th</sup> century, during a period when marginal tax rates rose and then fell. Hours were falling further back in history, even when tax rates were much lower than today: as Huberman and Minns suggest, 'hours of work began to fall well before the introduction of modern institutions like the welfare state or tax codes'.<sup>41</sup> Other factors are far more important contributors to falls in working hours, such as rising labour power and greater equality.

## Households are where preferences about work are actually formed

The standard economic analysis of how pay relates to working hours has a further deficiency. It underplays the extent to which individual labour supply decisions are strongly dependent not just on individual pay but also on the pay and hours of others in the household.

The dark blue line in Figure 21 shows men's average hours over the period between 1992 and the 2007-08 financial crisis. Looking at this line in isolation, one could conclude that their rising earnings (as shown in Figure 20) were motivating male workers to reduce their hours on average: an 'income effect'.

But the story is not so simple. We also know that over this period more women were entering the labour market, as shown by the light blue line in Figure 21. The red line then shows us that the combined impact of these trends on average *household* hours was neutral: household working hours were broadly flat between 1992 and the mid-2000s. Given that the majority of working-age households contain one male and one female adult, this is perhaps not surprising, if the average male adult was reducing hours and the average female increasing theirs.

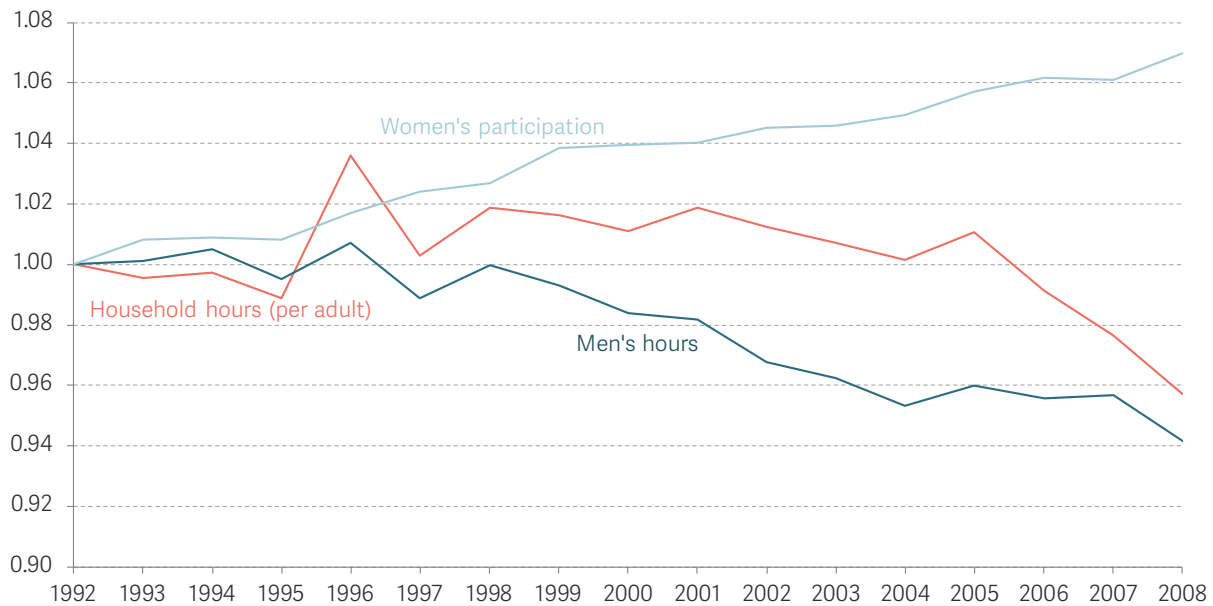
A household-level approach to changes in working hours helps us understand that two forces were acting to reduce average hours worked, both following the increased labour market participation of women. First, the direct impact of more women working is to reduce average hours worked, since they typically work shorter hours than men. Second, higher female participation will also have impacted men's preferences for working hours since their household incomes were also being boosted by the increasing entry of women to the labour market. When a second earner enters the labour market they boost their household's income, and in doing so may prompt the primary earner in the household to reduce their preferred hours. This mechanism could be consistent with the observed trends of falling men's hours and rising women's hours.

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<sup>41</sup> M Huberman & C Minns, 'The times they are not changin': days and hours of work in Old and New Worlds, 1870-2000', *Explorations in Economics History*, 44, July 2007

**FIGURE 21: In recent years, rising women's participation has coincided with falling men's working hours**

Index of average household hours, average men's working hours, and women's participation rate, households with head aged 25-54 (1992=1): UK



NOTES: Average classifies all households by age of primary earner.

SOURCE: RF analysis of ONS, Labour Force Survey

## Changes in the composition of the workforce explain around half of the decline in average hours, and they have altered its character

The importance of these trends in driving the overall reduction in hours can be seen clearly by looking at the changes in the relative size of different groups in the workforce – the number of men, or number of part-time workers for example. They have altered considerably between the 1970s and 2009, with these compositional changes explaining around half of the fall in average working hours between 1979 and 2009. The increase in women's participation and the rising proportion of men working part-time and shorter hours among full-time men stand out.

### 1. More women than ever are in paid work

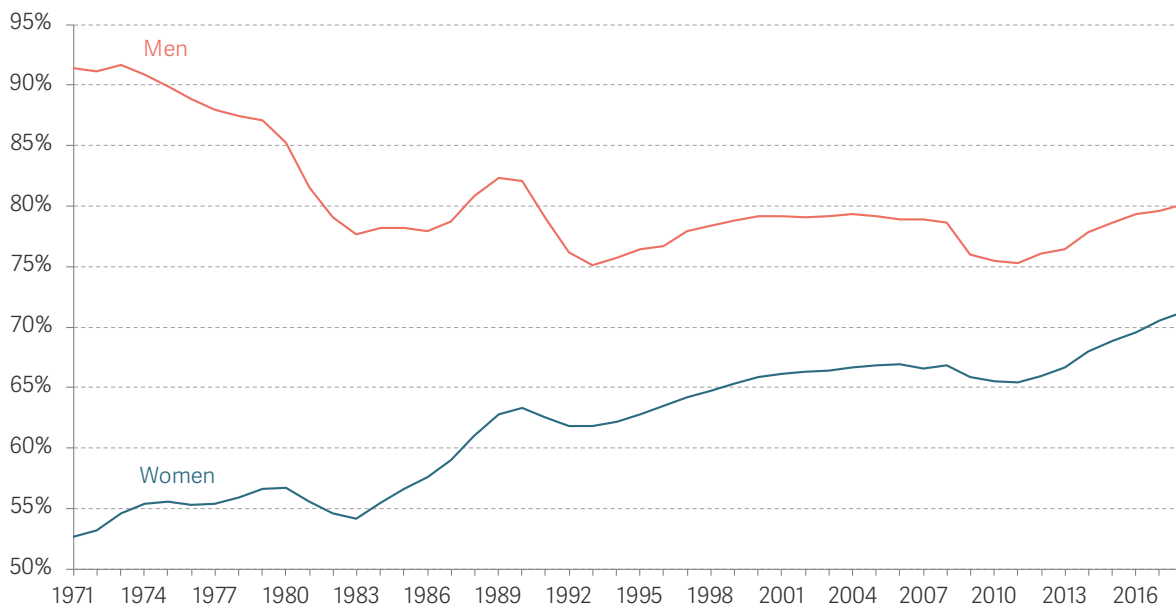
Since prime-age working women (age 25-54) tend to work several hours less per week on average than men of the same age, higher women's participation tends to reduce average working hours, all else equal. Women have always been more likely to work part-time, and even today, despite some equalisation, two-thirds of the people who work less than 35 hours per week are women.

Back in the early 1970s, when the data series shown in Figure 22 begins, around 53 per cent of working-age women (age 16-64) were in employment. Today this figure stands at 72 per cent. Compare that with men in the same age range: in early 1971 their

employment rate stood at 92 per cent, while it has generally fallen over the following decades, although in the past decade it has risen a little to reach 80 per cent today. It is also worth noting that the gap between men's and women's average hours has been gradually shrinking over time: it stood at 13 hours per week in 1979 but had shrunk to 10 hours per week by 2009.

**FIGURE 22: Employment has risen since the financial crisis among men and women, though among men it remains below the pre-1980 norm**

Employment rate by sex, workers aged 16-64: UK



SOURCE: ONS, Labour Market Statistics

Both the causes of rising women's labour force participation, and the consequences for working hours, remain questions of debate. The causes include changes in social norms around gender and work, the falling gender pay gap, and changes in the structure of industry. Four policy-relevant influences that have acted across rich countries are rising women's educational attainment, the growth in the service sector, higher demand for part-time work and improved childcare provision.<sup>42</sup> Recent modelling by economists has highlighted the likely importance of the falling gender pay gap, which has boosted the potential rewards for women from work and so strengthened their relative bargaining power in household-level decisions about who works and how much.<sup>43</sup> Rising divorce rates may also have played a role, giving second earners a stronger incentive to maintain their human capital so that they could be financially independent in the event of divorce.

<sup>42</sup> O Thévenon, *Drivers of female labour force participation in the OECD*, OECD Social, Employment and Migration Working Papers, May 2013

<sup>43</sup> A Theloudis, *Wages and Family Time Allocation*, LISER Working Paper, February 2018; J Knowles, 'Why Are Married Men Working So Much? Home Production, Household Bargaining and Per-Capita Hours', *Review of Economic Studies*, 80(3), 2013

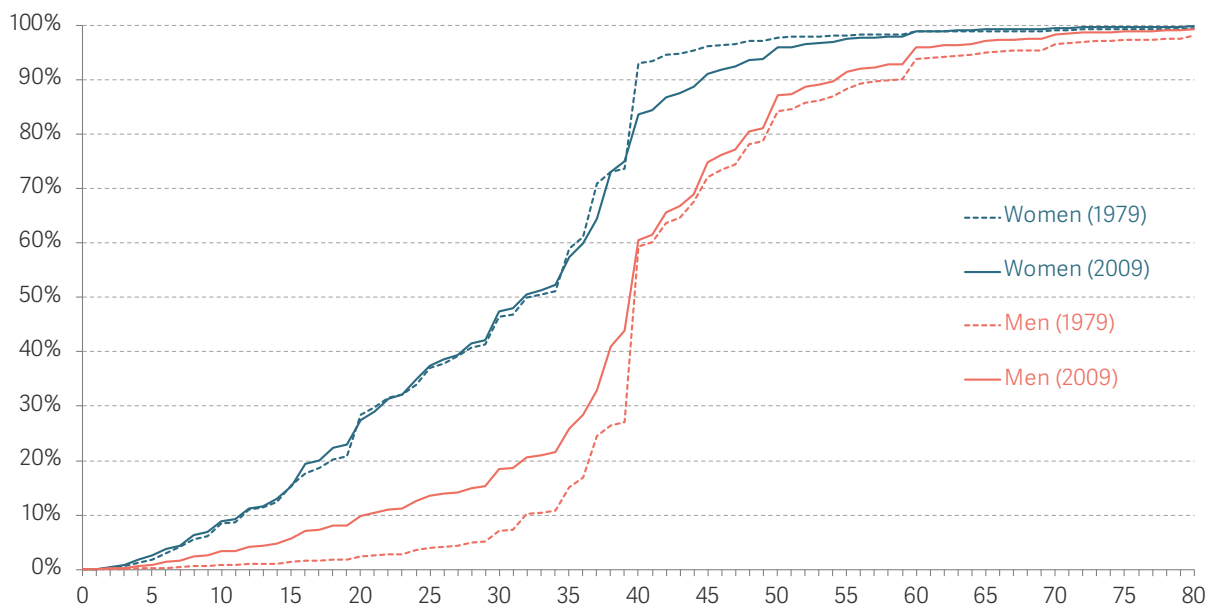
In sum, however, if the proportion of women in the workforce remained at its 1979 level in 2009, then the decline in average hours would have been 18 per cent smaller, in a simple thought experiment holding other things equal.

## 2. Men's hours fell, due to more part-time work and shorter full-time hours

In the early 1950s, only 1 in 20 workers worked part-time. By 1992, when the current high-quality data series on part-time work began to be collected, 22 per cent of workers described themselves as working part-time, a proportion that continued rising until its recent peak of 27 per cent in the summer of 2012. Today the rate stands at 26 per cent. To get an idea of the importance of the rise in part-time work for average working hours we can conduct a simple thought experiment, and simulate how average hours would have evolved if the proportion of part-time workers had stayed at 22 per cent up until 2012. Other things equal, this lack of change would have almost entirely offset the overall fall in average working hours since 1992, pushing the average up by half an hour per week (or four days more per year) compared to what actually occurred. Similarly, if men's average hours had not changed between 1979 and 2009, then the fall in average hours would have been 59 per cent smaller.

**FIGURE 23: Men's rate of part-time work rose substantially between 1979 and 2009**

Proportion of workers working up to a given number of actual hours in main job, by sex: UK, 1979 and 2009



SOURCE: RF analysis of ONS, Labour Force Survey

Rates of part-time work changed much more among men than among women between 1979 and 2009. Figure 23 shows this change in more detail, across the distribution of weekly hours. Although the proportion of women working long hours increased, the general distribution of women's hours did not alter very much. Men's hours, by contrast, changed significantly, with many more men working part-time by 2009. In 1979 only 7 per cent of men worked under 30 hours per week, whereas by 2009 19 per cent of men did.

## On top of compositional changes, average hours fell over time in all sub-groups of the workforce

Although compositional changes have been very important, the fact that average hours fell in every demographic group before 2009 (as shown in Figure 18) suggests that this is not the only story. To check more precisely how much of the fall in this period was compositional, Figure 24 reports the results of a Oaxaca-Blinder decomposition of changes in average working hours between 1979 and 2009. This tells us that about half of the total fall of 3.2 hours per week is explained by falls in working hours within demographic groups, and about half is attributable to changes in the relative size of different parts of the workforce. Interactions between compositional and within-group changes mattered too: mainly the rise in the number of degree-educated workers and the shift of the large Baby Boomer generation into prime working age, two characteristics associated with working longer hours (and the former increasingly so).<sup>44</sup>

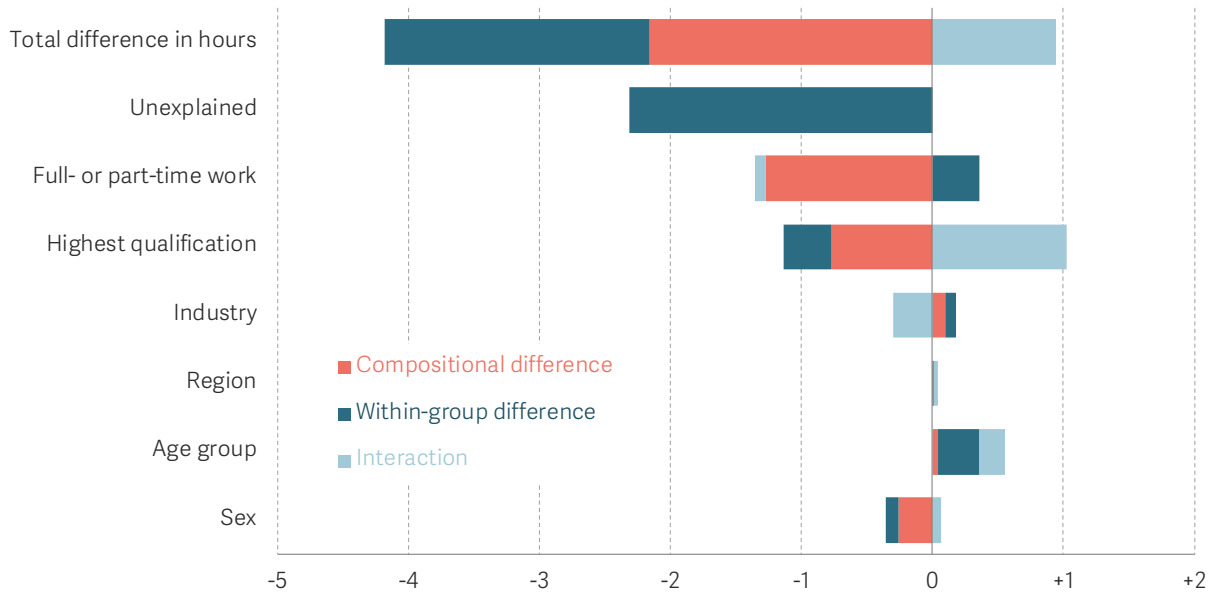
The decomposition in Figure 24 shows us the balance of full-time and part-time workers was the most important compositional change in the workforce, followed by the increase in the proportion of higher-qualified people in the workforce. The impact of this second point is complicated by the interaction over time between qualifications and hours, as will be considered below. The balance between men and women in the workforce also had a modest impact, while the rest of the change over time is accounted for by within-group changes the greater part of which is 'unexplained', i.e. changes that occurred across each of the sub-categories we have identified.

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<sup>44</sup> It is a similar story when this analysis is repeated for the period 1994-2009, which allows us to split the workforce into a large number of specific sub-groups.

**FIGURE 24: Compositional change explains about half of the decline in average hours from 1979 to 2009**

Oaxaca-Blinder decomposition of change in average working hours, employed workers aged 18-60: UK, 1979-2009



SOURCE: RF analysis of ONS, Labour Force Survey

Among smaller sub-groups in the population, some of the largest falls in working hours after 1979 occurred among young people, and among people with lower levels of qualifications. For both men and women it was 18-24 year olds who saw the largest falls in their working hours between 1979 and 2009, and among men lower levels of qualifications were associated with larger falls in working hours.

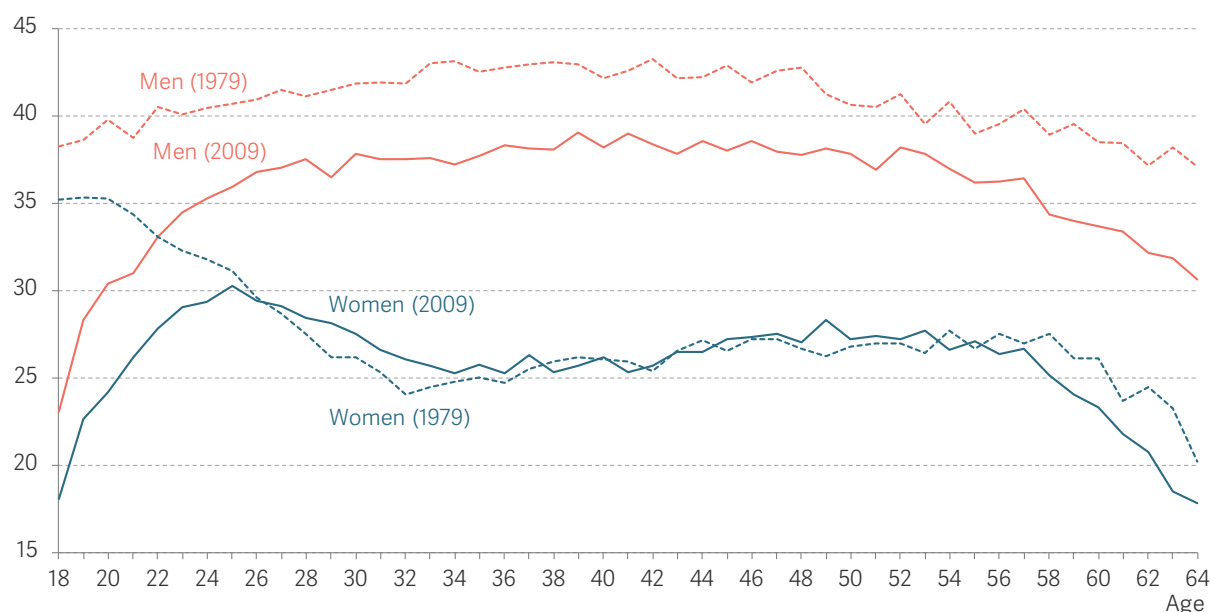
### Hours fell across all age groups

Figure 25 compares the age profile of working hours for men and women in 1979 and 2009. It shows that hours have fallen more among men than among women at all ages over 20, and that the inverse U-shaped age profile of men's hours has become more marked over time due to the reduction in young people's working time. Among women, the changes were very large among the youngest workers, but for women aged over 22 the age profile of working hours has not changed substantially.



**FIGURE 25: Across the age distribution, men's hours fell much more than women's in the three decades before 2009**

Average actual weekly working hours of 18-64 year olds, by sex and age: UK 1979 and 2009



SOURCE: RF analysis of ONS, Labour Force Survey

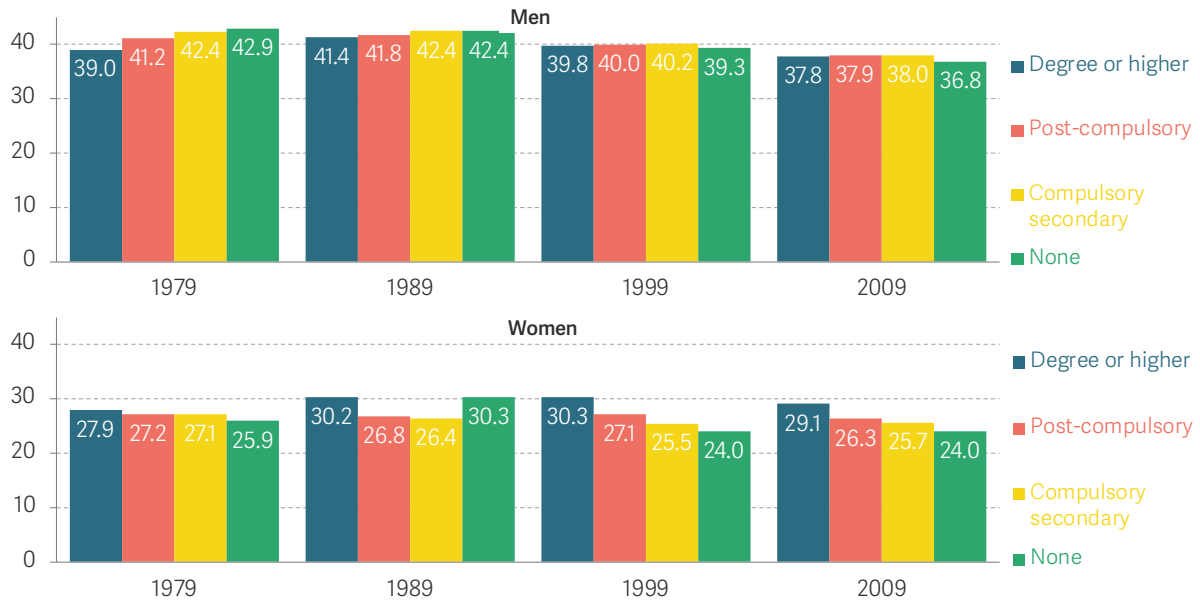
## The profile of working hours by education level changed substantially

Turning to changes by qualification level, we will restrict ourselves to prime-age workers only, to abstract away from the big changes in hours that occurred among the youngest and oldest members of the workforce. The lower men's level of education, the larger the falls in their working hours from 1979 to 2009. Figure 26 tells us that while in 1979 the longest hours were worked by the prime-age men (age 25-54) with the lowest level of education, by 2009 their counterparts did shorter hours than other groups, with the overall difference in hours by qualification no longer a substantial one. Whereas it was traditionally the lower-skilled, lower-paid part of the male workforce that worked the longest hours, this is no longer the case. We shall see in the next section that pay, not qualifications, is today the stronger predictor of working hours among men.

By contrast, women with the highest levels of education also worked the longest hours in 1979, and between 1979 and 2009 the gap between them and less-educated women widened. In fact, by 2009 the hours worked by the highest-educated women were longer than in 1979, while those worked by the lowest-educated women had shortened.

**FIGURE 26: In recent decades the distribution of hours by education has reversed among men, and widened among women**

Average actual weekly working hours of 25-54 year olds, by education level and sex: UK, selected years



SOURCE: RF analysis of ONS, Labour Force Survey

Having considered the reasons for the long-run fall in average hours, we turn now to the reasons why they have stalled over the past ten years.

## Section 4

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### Why working hours are no longer getting shorter

Average working hours stopped falling in 2009, for the first time in seven decades. 2014 was the first year since the middle of the Second World War in which average working hours were higher than a decade before. This was partly the culmination of a trend that began in 1970, whereby the rate of decline in average hours was slowing down year-on-year. But 2009 also marked a turning point: living standards entered a 'lost decade' of stagnation whose impact fed through to working time.

This section explains how the upturn in average working hours that took place between 2009 and 2014 affected a wide swathe of the workforce, although it hit young and low-paid workers the hardest. In contrast with the long-run decline before 2009, which derived in equal part from compositional and workforce-wide changes, almost all of the rise can be explained by particular groups of workers working longer hours, with very little of it due to changes in the relative size of sub-groups within the workforce. This is true despite the continuation of long-term trends that usually push down on average hours, like rising women's participation and more part-time work. A household perspective is once more important in explaining change in hours: women living with partners increased their hours the most of any group by relationship status (by 1.2 per week). Single women and men in couples increased their work by less than half an hour per week.

The post-crisis stalling in average hours is attributable above all to the squeeze on living standards, which gave many workers an incentive to demand longer working hours. For the low-paid, especially younger workers, the crisis experience was more likely to have included real pay stagnation and involuntary shifts to part-time work. For the higher-paid, other forces were in play, such as growing returns to moving up the pay distribution (in occupations where career progression is a realistic possibility).

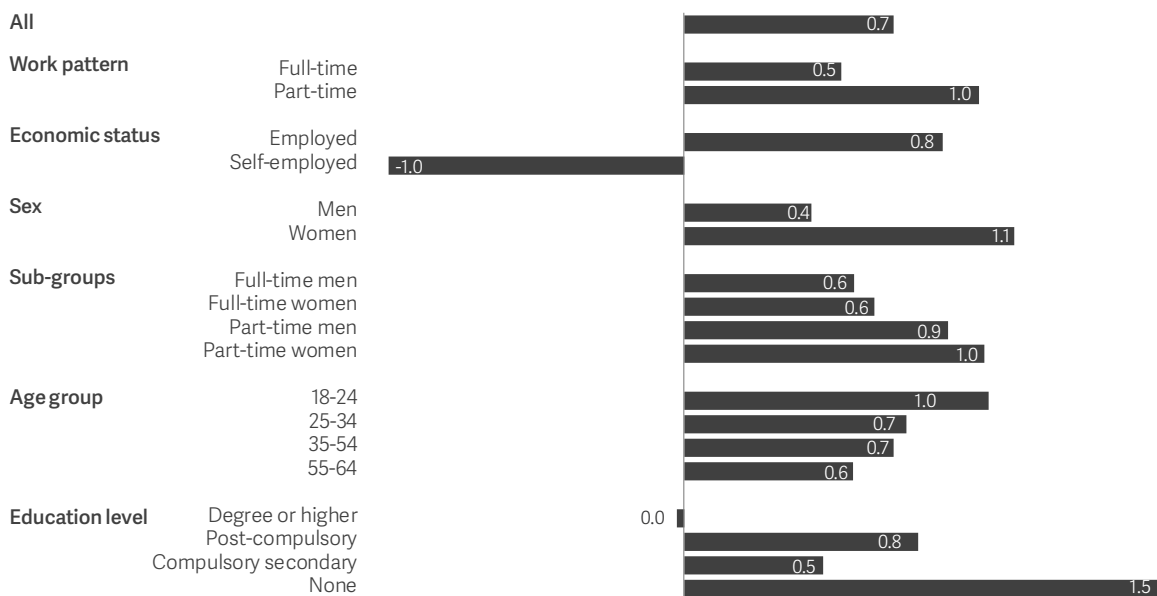
## The recent stalling of working hours is due to many groups in the workforce working longer

Between the 1850s and the 2000s, the hours British people spent in paid work were on a long, steady arc of decline. A full-time worker in the mid-19<sup>th</sup> century toiled on average for more than 60 hours per week, while on the eve of the financial crisis their successor's week was down to just over 37 hours.

But over the past decade, the decline in working hours has halted. If the trend of falling hours observed between the late 1970s and the mid-2000s had continued, we'd be working on average almost one hour less per week than we do today. That's a lot of foregone leisure: Britons seem to have missed out on more than a week and a half of extra time off per year.

**FIGURE 27: Almost all sub-groups of the workforce saw their hours rise after 2009**

Changes in average hours for different groups of workers aged 18-64: UK, 2009 to 2018-19



SOURCE: RF analysis of ONS, Labour Force Survey

In early 2019, the average worker was working 40 minutes longer per week than their counterpart a decade earlier, a total of 36 hours extra per year. Figure 27 shows that this change was broad-based, with most major demographic groups increasing their weekly working hours, although the impact of the financial crisis on labour supply was different for different sub-groups.<sup>45</sup> Some of the largest increases in working hours occurred

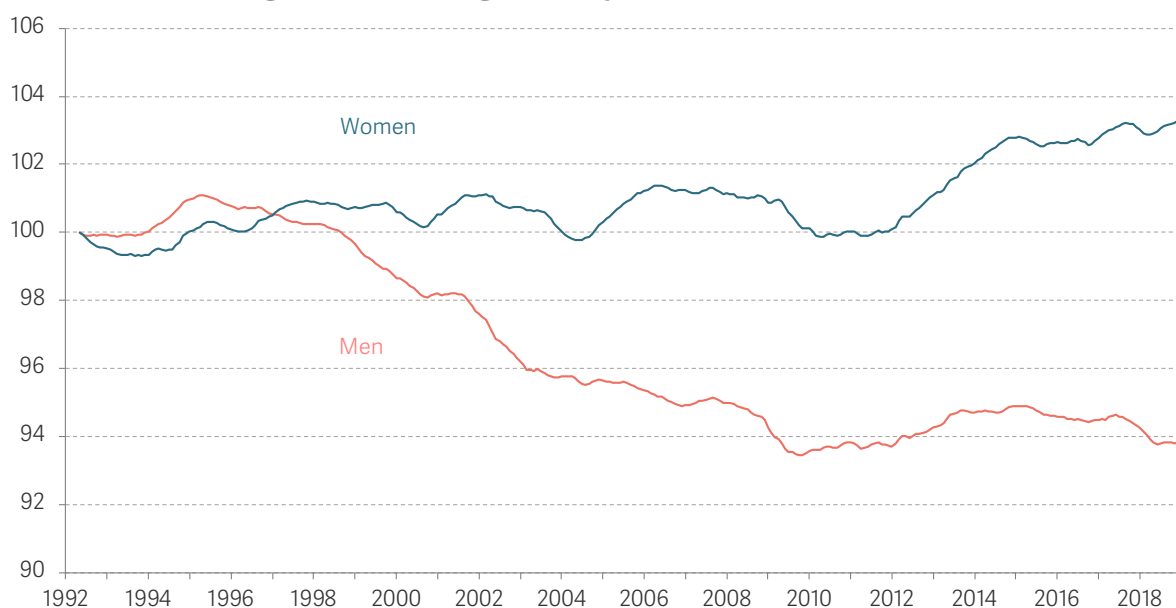
<sup>45</sup> T Bell & L Gardiner, *Feel poor, work more: Explaining the UK's record employment*, Resolution Foundation, November 2019

among younger workers and those with lower levels of education: the same groups that saw the largest falls in their hours in the three decades before 2009. Men's average hours rose most among the youngest and oldest age groups, while among women the increase in hours was large among 18-24s and around half an hour per week for other ages. Self-employed workers were the only group to experience a big fall in their average hours.<sup>46</sup>

Men's and women's working hours have evolved very differently both before and after the financial crisis, as Figure 28 shows. Between 1992 and 2010, women's hours were essentially flat, while men's hours declined by 6 per cent (or more than two and a half hours per week). Over the past decade men's hours have stayed put, while women's have risen considerably. The average woman in spring 2019 worked one hour per week longer than her counterpart 10 years earlier, a large proportional increase in working time.

**FIGURE 28: Since 2009, women's hours have risen while men's hours have stalled**

Index of average actual working hours, by sex (1992 Q2=100): UK



NOTES: Lines show four-quarter moving averages  
SOURCE: ONS, Labour Force Survey

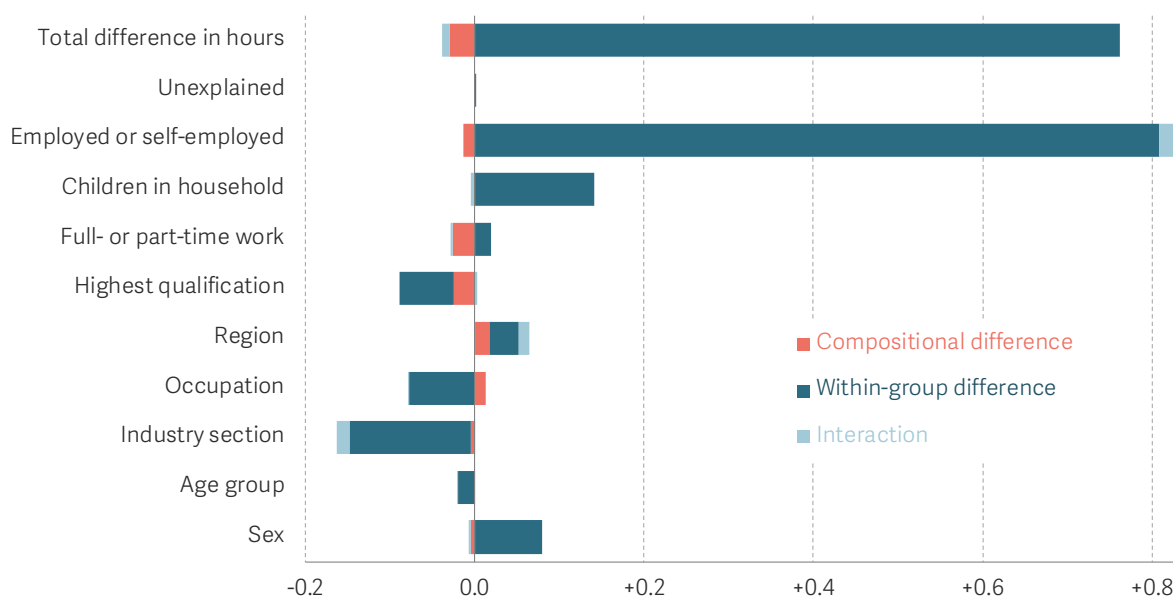
A household perspective is once again important, since couples make decisions about working hours that take into account others in their household. This can be demonstrated by the fact that between 2009 and 2019, the hours of single people and those living with partners evolved very differently. Women living with partners increased their hours the most (by 1.2 per week), followed by single men. Single women and men in couples increased their work by less than half an hour per week.

<sup>46</sup> Though note that self-employment also became a lot more common over this period, changing the composition of this group.

Given that the stalling in average hours has been broad-based, with a similar trend change occurring in 2009 among many demographic groups, it seems unlikely that much of it can be explained by changes in the composition of the workforce. To test this further, Figure 29 presents a more formal decomposition of the change in average hours into that which took place *within* particular demographic groups and that which took place due to shifts of workers *between* particular groups. It shows that almost all of the rise in working hours in the immediate post-crisis period can be explained by workforce-wide changes within many sub-groups, while changes to the workforce's demographic composition had a broadly neutral impact on average hours.

**FIGURE 29: Almost none of the rise in hours after 2009 was attributable to changes in the composition of the workforce**

Oaxaca-Blinder decomposition of change in average working hours: UK, 2009-2014



SOURCE: RF analysis of ONS, Labour Force Survey

Even though compositional changes have been less significant in their impact on the average worker's hours, they have nonetheless changed the feel of the workforce as a whole. Section 3 highlighted three key compositional changes that occurred between 1979 and 2009: higher part-time work, higher female participation and net movement of workers between sectors. All three have continued to move in the same direction, despite the combined effects on average hours of the compositional factors modelled in Figure 29 netting out to near zero.

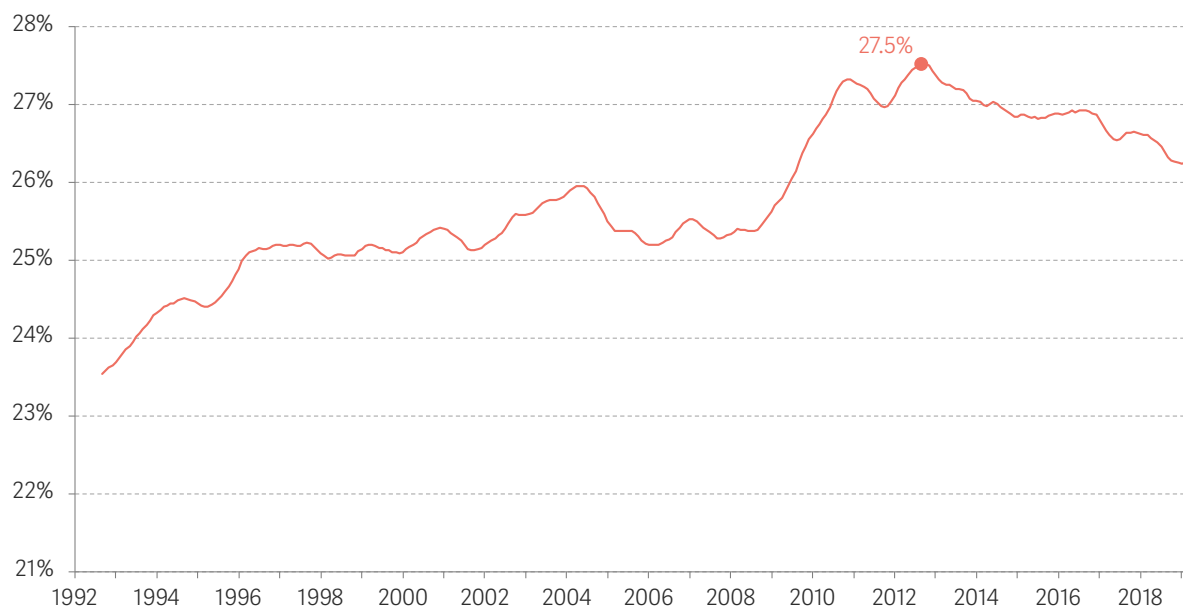
Part-time workers rose sharply as a proportion of the workforce in the immediate post-crisis period, as Figure 30 shows. They reached a high point of 27.5 per cent of the workforce in mid-2012, since which time they have fallen half way back to their pre-crisis

proportion. The negative compositional impact on average hours can be seen in Figure 29.

After 2009, female participation continued its steady upward progress (see Figure 22), exerting gentle downwards pressure on average hours, while sectoral shifts have continued, including the net movement of workers away from long-hours sectors like retail and manufacturing towards services (up 0.9 percentage points as a share of the workforce from 2009 to 2018). A further related change has been in the proportion of couples with children who both work: this did not change at all in the decade before the financial crisis, while it has increased by 7 percentage points over ten years since.<sup>47</sup> When a second partner enters the labour market, having not been working at all, they are likely to be working shorter hours than the average, hence bringing the average down.

**FIGURE 30: Part-time work rose fast after the 2007-08 crisis, and since 2012 has fallen half way back to its previous level**

Proportion of all people in employment working part time: UK



SOURCE: RF analysis of ONS series MGRZ, YCBH

Despite these compositional changes continuing to push down very slightly on average hours, the more significant change in working hours across the labour market was a generalised increase that affected almost all groups of workers.

<sup>47</sup> T Bell & L Gardiner, *Feel poor, work more: Explaining the UK's record employment*, Resolution Foundation, November 2019

## The pay squeeze meant many workers have sought to lengthen their hours over the past decade

Several acute shocks hit the labour market after the 2007-08 financial crisis, with knock-on effects for working hours. Most important among them were the slump in productivity and decline in real wages. Unlike some competing explanations, these factors can explain both the duration of the stalling of working hours and its broad-based impact across the workforce. This section takes each factor in turn.

### Declining productivity

Productivity – the value of output produced per hour worked – is the most fundamental determinant of the growth in pay that makes changes in workers' hours affordable. Productivity growth has been very weak since 2008, making it much more difficult to reduce hours without a fall in living standards. In periods when the economy's output per hour worked is rising, it is possible for workers to 'cash-in' the benefits of that higher output, from time to time, in the form of shorter hours. Between 1979 and 2009 productivity grew at an average annual rate of 2.3 per cent, real wages rose at 2 per cent per year, and average hours fell by 0.3 per cent per year. Contrast that with the post-crisis recovery period 2014-17, when productivity was rising at an average of 0.8 per cent per year. Previous Resolution Foundation research has estimated that average real annual wage growth from 2014-17 would have been 0.6 percentage points higher if productivity had been growing at its pre-crisis rate of change.<sup>48</sup> This may not on its own have been enough to enable working hours to continue to fall, but it would have made it more likely.

Figure 31 shows how productivity has evolved over the past half century, also showing the trends in its two component parts, total output and total hours worked. It shows that total economic output dipped immediately after 2007-08 but recovered its upward path after little more than a year. At the same time however, total working hours turned upwards – reflecting rising average hours and then rising employment from 2012 onwards – meaning that the aggregate measure of output per hour has stayed relatively flat. This underlies the stagnation in pay which means that average earnings still remain just below their pre-financial crisis peak, and hence underlies the lack of appetite across the workforce for any reductions in hours over the past decade.

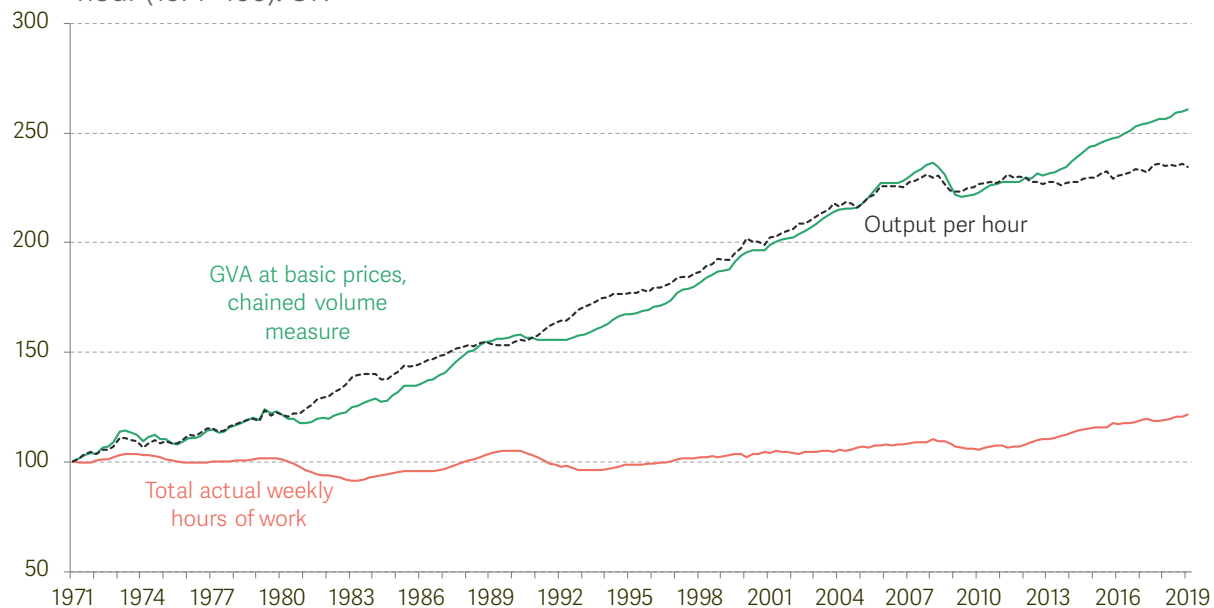
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<sup>48</sup> S Clarke & P Gregg, [Count the pennies: Explaining a decade of lost pay growth](#), Resolution Foundation, October 2018



FIGURE 31: **Productivity has stalled since the 2007-08 financial crisis**

Indices of total output (Gross Value Added), total weekly hours of work, and output per hour (1971=100): UK



SOURCE: RF analysis of ONS series ABMM, YBUS

## Wage squeeze

The UK is now almost 12 years into the longest real wage stagnation in two centuries, in which around 70 per cent of employees have faced a decline in their real wages.<sup>49</sup> When workers' real pay stalls, for many of them the best way to achieve the level of growth they expected is to seek longer working hours (or move into employment): they 'feel poor, work more'.<sup>50</sup> The effect is typically stronger among women, whose average working hours and rate of employment have risen more than men's since 2009, and particularly married women seeking to insure against the risk of their partner's job loss.<sup>51</sup>

The path taken by average wages over the ten years after the 2007-08 financial crisis can be divided into two periods:

- The pay squeeze between 2009 and 2014, during which real wages fell by 6.7 per cent overall, as meagre nominal wage rises were consistently outpaced by inflation.
- The sluggish pay recovery between 2014 and 2017, in which real wages grew at 0.7 per cent per year, on average. In the early 2000s, by contrast, average annual real wage growth was running at 2.2 per cent.<sup>52</sup>

<sup>49</sup> S Clarke & P Gregg, [Count the pennies: Explaining a decade of lost pay growth](#), Resolution Foundation, October 2018

<sup>50</sup> T Bell & L Gardiner, [Feel poor, work more: Explaining the UK's record employment](#), Resolution Foundation, November 2019

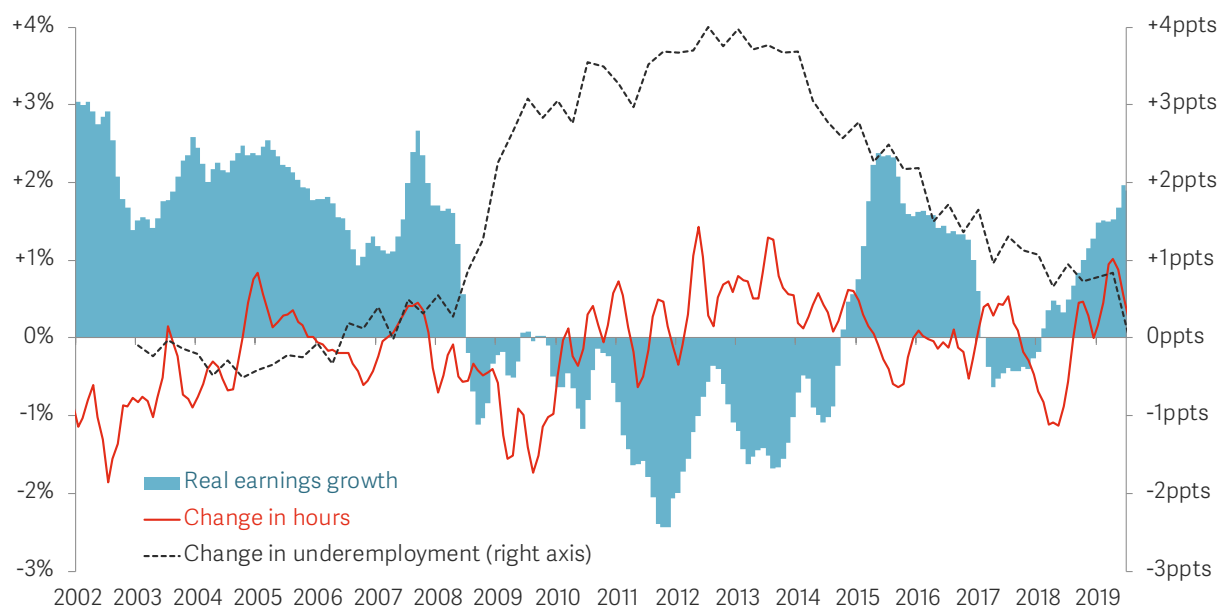
<sup>51</sup> S Lundberg, 'The added worker effect', *Journal of Labor Economics*, 3(1), January 1985; S Albanesi, 'Changing Business Cycles: The Role of Women's Employment', CEPR Discussion Paper 13578, March 2019

<sup>52</sup> S Clarke & P Gregg, [Count the pennies: Explaining a decade of lost pay growth](#), Resolution Foundation, October 2018

Figure 32 shows how the wage squeeze has coincided with the hours stagnation. At the moment that real pay growth (the blue bars) turned negative, in autumn 2008, average hours (the red line) initially went down. This trend reflected companies shifting workers onto shorter hours in order to minimise job losses. This shortening of hours was not however what workers wanted. The dotted purple line shows us that the headline measure of underemployment – the proportion of workers who would like to work longer hours at the prevailing wage – ticked up at exactly the point when the wage squeeze began. This upturn was not just the result of workers losing jobs or losing hours, though both things did occur, but rather shows that wage stagnation very quickly pushed workers into wanting more hours. The implication is that preferences shifted towards longer hours, and although these could not be fulfilled straight away, they remained in place through the 2009-14 period of rising average hours.

**FIGURE 32: Underemployment soared when the pay squeeze began in mid-2008**

Change in mean weekly real earnings, actual weekly working hours and underemployment: UK



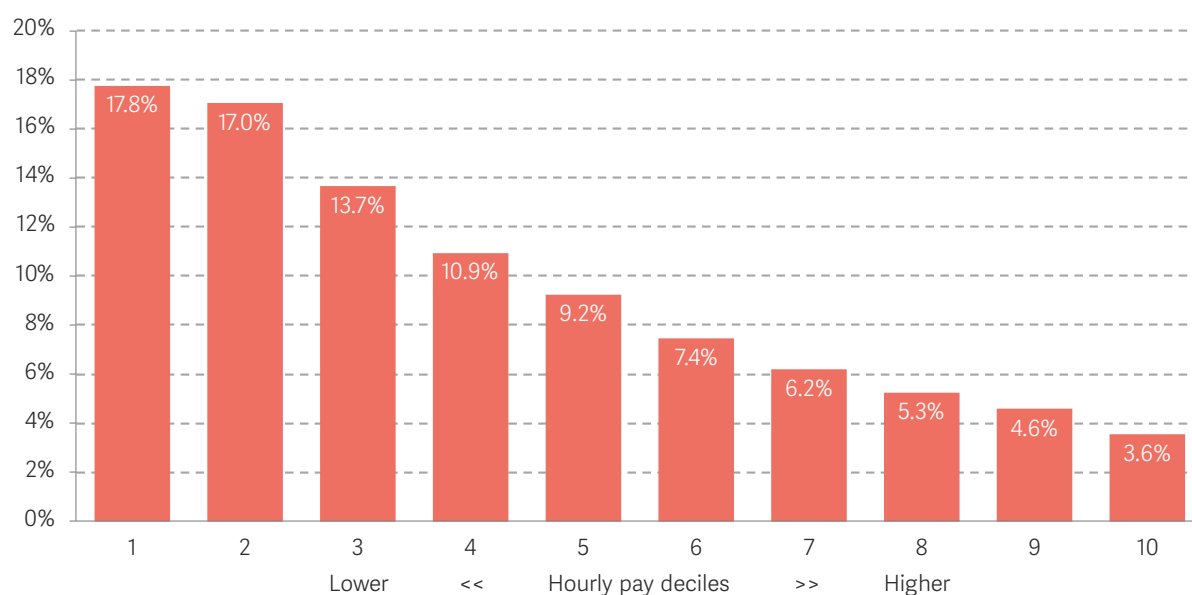
SOURCE: RF analysis of ONS, Labour Market Statistics

Among people paid an annual salary rather than an hourly wage it is at first sight less plausible that a pay squeeze might have induced them to work longer hours, since this does not typically increase a person's salary unless they are separately rewarded for overtime. But other mechanisms might still have induced them to work more. In a recession environment when workers fear for their job security, salaried workers might increase their own hours in a bid to ensure that their individual output rises and hence they safeguard their job relative to colleagues.

The underemployment statistics tell us directly how many workers wanted longer hours during the initial pay squeeze period, while average hours were on an upswing. Figure 33 shows us the average proportion of workers in each pay decile who wanted more hours at their prevailing wage rate, during the period 2009-14. It shows that underemployment was considerably higher among lower-paid workers, as might be expected since their earnings are lower overall, but that underemployment did extend all the way up the pay distribution.

**FIGURE 33: Underemployment is much more prevalent among low-paid employees**

Underemployment rate among employees by hourly pay decile: UK, 2009-14

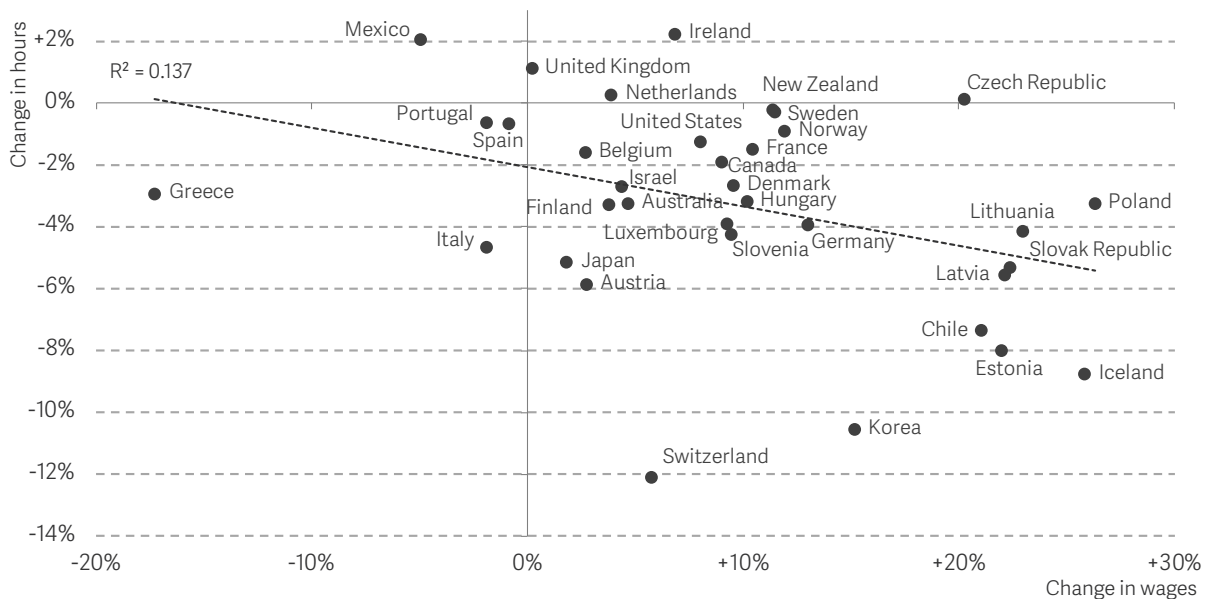


SOURCE: RF analysis of ONS, Labour Force Survey

The international evidence also reveals a link between the severity of pay squeezes and the extent of change in average working hours, in the decade after the financial crisis. Figure 34 shows that the two are correlated across the countries of the OECD: the smaller the growth in real wages over this time period, the smaller the reduction in average working hours. The UK stands out as one of only four countries to experience a rise in hours, while its pay growth was near zero. This international trend supports the UK-specific case that there is a connection between real wage growth and change in working hours.

FIGURE 34: Over the past decade, countries whose wages increased by more have seen larger falls in hours

Percentage change in real wages and actual working hours, by country: 2008-18



NOTES: Average annual wages are inflation adjusted.  
SOURCE: RF analysis of OECD data

## Higher economic uncertainty also led workers to work longer in practice

Beyond the immediate consequences of the financial crisis for pay packets, its other less tangible impacts have also had an effect on working hours. These can be summarised under the theme of economic uncertainty, since workers became more nervous about job security, while employers lost confidence about future demand. We concentrate here on the impact of workers' economic concerns on their hours: a heightened sense of insecurity meant they stopped taking so much time off.

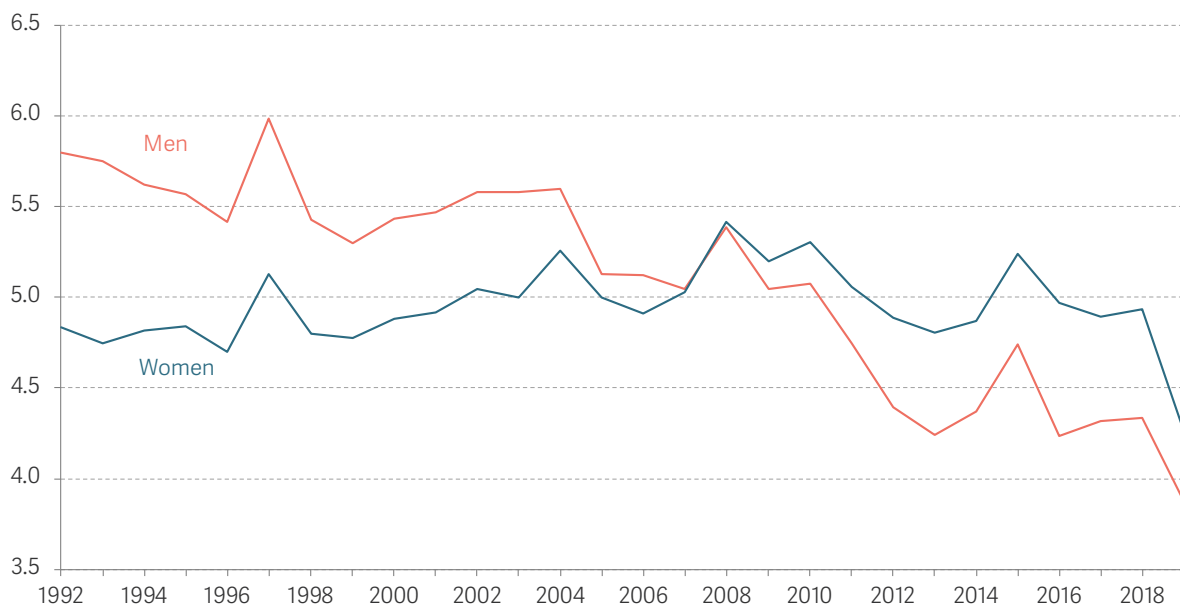
One way to measure workers' nervousness about economic conditions is to look at how often they take time off for holidays, sick leave and parental leave (plus other smaller categories like strike days). This can be expressed as the difference between actual and usual working hours, where the former is the number of hours someone worked in the week before they responded to the Labour Force Survey, and the latter is the number of hours they say they work in a typical week. Usual hours are on average longer than actual hours, and when the gap closes this indicates that workers are taking less time off, perhaps because they fear this will imperil their job.

Figure 35 plots the difference between usual and actual hours over the past 27 years. Between 1992 and the 2007-08 crisis, the gap was gradually falling among men and slowly rising among women. There is a clear turning point in 2008 though, when the

lines for both women and men start to decline. This trend change was noted by former Monetary Policy Committee member Martin Weale in 2016, who suggested it was 'perhaps as concerns about the economic outlook led people to take fewer days of leave than normal', and the gap has further closed since then.<sup>53</sup> The implication is that if workers are taking less time off in holiday and sick leave then their average actual hours will automatically increase, and they may also generally be looking for other ways to work more hours or otherwise signal their value to employers as insurance against the possibility of job loss.

**FIGURE 35: The gap between actual and usual weekly hours has been narrowing since the financial crisis**

Difference between average actual and usual weekly working hours, by sex: UK



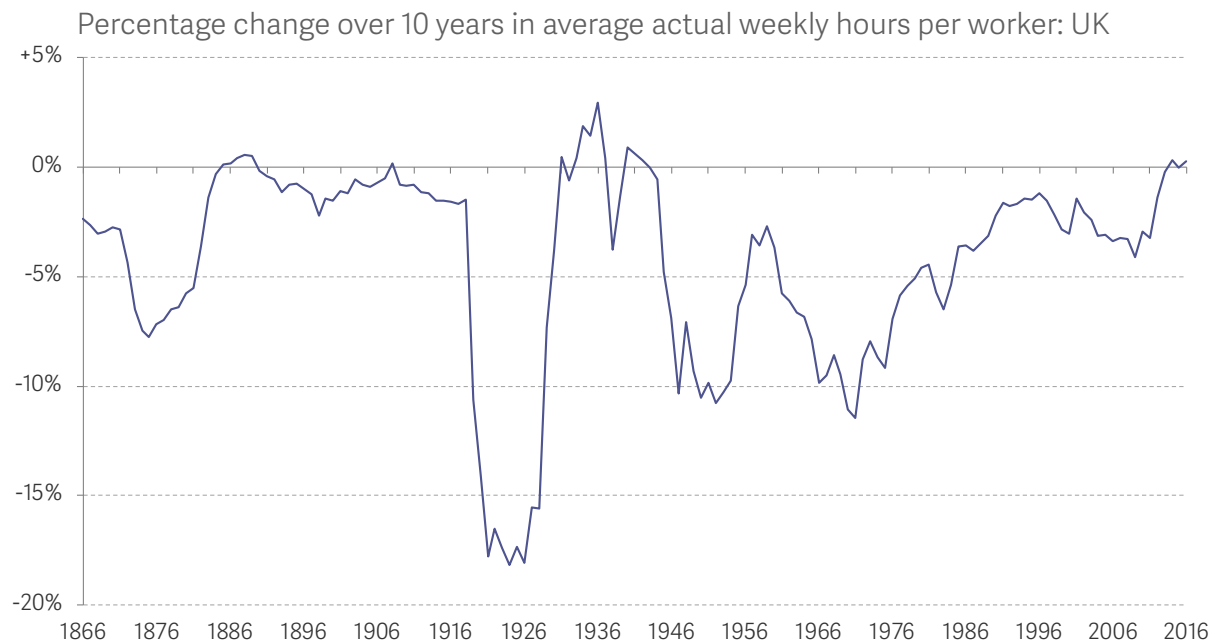
SOURCE: RF analysis of ONS, Labour Force Survey

## The pace of decline in average hours has been slowing since 1970

Although the end of the fall in hours in recent years seems dramatic, how far is it the result of sudden shocks in the labour market rather than longer-running developments? There is a case to be made that the change around 2009 was in fact the culmination of a long-running trend. As Figure 36 shows, the rate at which hours had been falling had in fact generally been slowing down since the 1970s – apart from a slight increase between 1996 and 2006. In this interpretation, part of the stalling in average working hours is not so much the result of a sudden change in the labour market, but rather the outcome of a long, gradual shift.

<sup>53</sup> M Weale, 'What's in a week's work', speech at Gatwick Diamond Business, January 2016

FIGURE 36: The decline in working hours has been slowing since the 1970s



Source: Bank of England calculations in A Millennium of Macroeconomic Data for the UK, using British Labour Statistics Historical Abstract 1886-1968, RCO Matthews, CH Feinstein and J Odling-Smee, British Economic Growth 1856-1973 (1982), various Department of Employment Gazettes for pre-1971; ONS, Labour Force Survey for post-1971 period.

The existence of this trend raises the question of what would have happened to average working hours if the 2007-08 financial crisis had not been followed by such a deep and prolonged wage squeeze. Might working hours have stopped falling even if wages had continued growing?

We cannot answer this counterfactual definitively, but three potential explanations are worth consideration: the slowdown in productivity growth, the changing correlation between hourly pay and weekly hours, and the continued retreat of the trade union movement.

### Productivity

Given the determinative role played by productivity growth in setting the bounds for changes in pay and hence potential reductions in hours, any changes in productivity levels are potential drivers of a slowdown in hours. As Figure 19 showed us, UK productivity growth reached all-time highs of over 4 per cent per year in the post-WWII decades. The onset of economic slowdown in the 1970s brought with it slower productivity growth: an average of 4.2 per cent annual growth in the decade to 1973 was followed by an average of 3.0 per cent the following decade. Productivity growth has gradually slowed since the 1970s, averaging 2.5 per cent during the 1980s, and remaining broadly around this level until its collapse around the time of the 2007-08 financial crisis. In broad terms, at least, this trend in productivity mirrors the turning point in working hours declines shown in Figure 36.

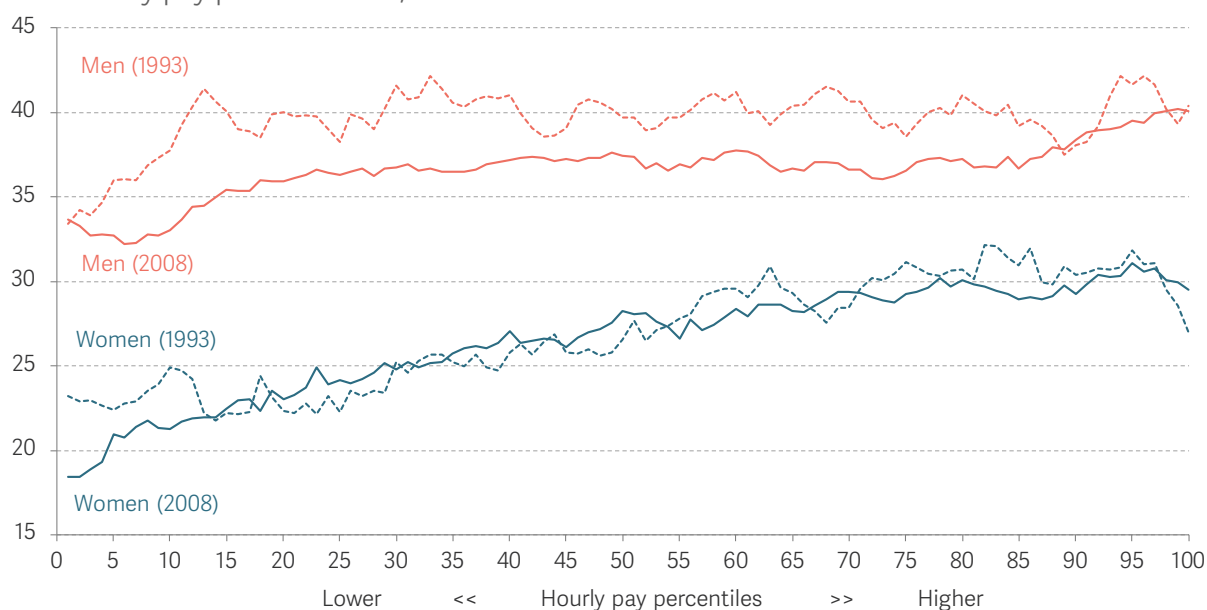
## Labour income inequality

Alongside the rise in average earnings until the onset of the 2007-08 financial crisis, hourly pay inequality has been rising for several decades (at least up to the early 2000s), and hourly pay has become more strongly correlated with workers' hours. It is possible that this rising correlation has played a role in slowing down the pace at which working hours have fallen over the past fifty years, though it cannot explain the stalling of hours in the past decade. The impact of hours inequality on weekly earnings inequality – which depends on inequality of both hours and hourly pay – has often been neglected by economists, who focus mostly on the role played by hourly pay.

Figure 37 shows how the correlation between hourly pay (whose distribution is on the horizontal axis with lower-paid workers on the left) and average weekly hours strengthened over the 15 year period before the financial crisis. Among women, the correlation has always been strong: women who are paid more per hour are much more likely to work longer hours. Yet among men, a large change occurred: in 1993 their hours averaged around 40 per week across the pay distribution, whereas by 2008 they had become more closely correlated with hourly pay. In 1993, men in the second hourly pay decile worked around 40 hours per week on average, the same as men at the top of the pay distribution. By 2008 their average working hours had diverged substantially, with a gap opening up of around four hours per week.

**FIGURE 37: Among male employees, the correlation between working hours and hourly pay has strengthened over the past 25 years**

Average actual weekly working hours among 18-64 year old employees, by sex and hourly pay percentile: UK, 1993 and 2008



SOURCE: RF analysis of ONS, Labour Force Survey

Changes in hourly pay inequality can explain some of the slowing down in reductions in average hours. Rising dispersion in hourly pay tends to exert an upwards push on average hours, since it provides stronger incentives for workers to try to move up the pay distribution. If working longer hours – or at least avoiding working part-time – is a means by which workers believe they can secure pay rises and career advancement, then higher pay inequality ought to lead to longer average hours.<sup>54</sup> Economists have also suggested that workers seek status by emulating the most prestigious jobs, which nowadays tend to be those which demand long hours.<sup>55</sup> Others have proposed that higher within-skill wage inequality gives workers a greater reward from getting better jobs at their skill level, and suggest that longer working hours are a key channel by which better jobs may be secured.<sup>56</sup>

### Collective bargaining coverage

A further underlying driver of the long-run slowdown in the decline in average hours is the strength of the trade union movement, which has been in long-running decline. Back in the mid-1980s, over 60 per cent of workers were covered by collective agreements between employers and trade unions. Today, only 26 per cent of workers are.<sup>57</sup> Union membership has likewise been in long decline: it reached an all-time high of 52.4 per cent in 1979, but by 2017-18 had fallen to 21.4 per cent of those in employment (6.9 million people).<sup>58</sup> Higher union density and coverage levels are not always correlated with shorter average working hours, but evidence from several countries suggests there is usually a link.<sup>59</sup>

More work remains to be done in analysing the reasons why working hours have stalled over the past decade. It is too early to know whether the 2010s were simply a temporary blip in the long-run down-trend in average hours, or something more permanent. But neither of these points should deter policymakers from preparing ways to reduce average working hours when productivity and pay growth are durably restored. The second report in this series turns to this question.

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<sup>54</sup> L Bell & R Freeman, 'The incentive for working hard: explaining hours worked differences in the US and Germany', *Labour Economics*, 8, 2001

<sup>55</sup> S Bowles & Y Park, 'Emulation, Inequality, and Work Hours: Was Thorstein Veblen Right?', *Economic Journal*, 115, November 2005

<sup>56</sup> C Michelacci & J Pijoan-Mas, 'The effects of labor market conditions on working time: the US-EU experience', CEMFI Working Paper 0705, June 2007

<sup>57</sup> OECD, *Employment Outlook 2017*, June 2017

<sup>58</sup> RF calculation using trade union membership statistics from: *Annual Report of the Certification Officer 2018-2018*, 2018; ONS, *Labour Market Statistics*

<sup>59</sup> A Alesina, EL Glaeser & B Sacerdote, *Work and Leisure in the US and Europe: Why So Different?*, NBER Working Paper 11278, April 2005; conversely, some other studies have suggested that higher union density correlates with higher average working hours: S Bowles & Y Park, 'Emulation, Inequality, and Work Hours: Was Thorstein Veblen Right?', *Economic Journal*, 115, November 2005; G Faggio & S Nickell, 'Patterns of work across the OECD', *Economic Journal*, 117, June 2007; O Causa, *Explaining Differences in Hours Worked across OECD countries: an empirical analysis*, OECD Economics Department Working Paper 596, 2009



## Section 5

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### Conclusion

Paid work time remains unequally shared across the UK. Men do much more of it than women – although women do correspondingly more unpaid work – while the longest hours of all are nowadays likely to be worked by high-paid, high-educated Londoners in middle age. The tightness of today's labour market means that it is time for an improvement in job quality, as well as job quantity. Nominal wage growth is back at pre-crisis levels in excess of 4 per cent, while pay rises in the past few years have benefited workers on the wage floor more than others. Raising job quality could include more secure contracts, better on-the-job training, and better routes for job progression. It also means thinking about working hours.

Policymakers can draw several lessons from the present state of working hours, both for understanding the impact of past policy reforms on workers' time use and for considering the ways in which working hours could be altered in future. This report has shown that today's mix of working patterns is more diverse than ever before, and that it results from 150 years of gradual reductions in working hours driven by a combination of rising prosperity, increasing gender equality, trade union activity and government policy. It has also shown the extent to which the long squeeze on living standards that followed the 2007-08 financial crisis has left a lasting impact on the way in which British households spend their time.

To understand the long-run decline in working hours, we need to understand changes both in the composition of the workforce and in the fundamental determinants of workers' desired hours. On the former, the most important developments in recent decades have been the enormous increases in women's participation in paid labour, which has changed the balance of economic power within many households and led to women working longer and men a little less, and in the proportion of the workforce on the latter. Working hours since the financial crisis have stalled, by contrast, not due to changes in the composition of the workforce, but rather because the pay squeeze and living standards stagnation has affected almost everyone. Stalling living standards do not affect households' lives in money terms alone, but also in the way they spend their time.

The debate over the future development of working time is not the focus of this report, and will be discussed in more detail in the second report in this series. But its findings can help us understand the sorts of policies that could be used to help reduce working hours in the future, if that was what workers wanted and could afford. Any future reduction in working time is likely to depend on restoring growth in productivity and pay, and it would also be made easier if trade unions were free to support workers in taking control of their time. It is important for policymakers to prepare carefully, if they are to deliver shorter hours in the future if and when productivity and pay growth improve.

History does show that working hours are constantly changing, and that they are highly likely to keep doing so in future. The direction of their future change is one that will be determined by future trends in pay and productivity growth, and the actions of employers, trade unions and government.

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A decorative image in the bottom left corner showing a close-up of mechanical gears and a metal plate, with a pair of tweezers holding one of the gears.

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