The National Living Wage Review (2015-2020)

A report by the Low Pay Commission

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Introduction

1 The announcement of the National Living Wage (NLW) in July 2015 heralded a seismic shift for the minimum wage and the labour market in the UK. For the first time, it introduced a target for the minimum wage: to reach 60 per cent of median hourly earnings (of those aged 25 and above) by 2020. This meant significantly faster increases in hourly pay for the lowest-paid workers and brought many more jobs under the direct influence of the minimum wage. It meant a significant change for businesses in low paying sectors. The introduction of a target also radically altered ways of working for the Low Pay Commission, the social partnership body responsible for making recommendations on minimum wage rates.

2 The NLW hit its target in 2020 and in this report we look at the impacts from its inception up to that point. A key challenge has been that the Covid-19 pandemic began shortly before the 2020 NLW rate came into force in April of that year. The onset of the pandemic and the policy responses to it had a major impact on the economy, the labour market and the evidence base at this time. This means that in some cases we are only able to measure the impacts up to and including 2019 evidence.

3 We begin in Chapter 1 with a brief history of the NLW; this covers the economic and policy context, as well as employer and worker views and expectations at the time the NLW was announced. In Chapter 2 we cover the effects on pay, including spillover effects and how these pay effects vary across the country and for different groups of people. Chapter 3 covers the NLW's effect on weekly pay and household income, an area we haven't considered in detail before. Chapter 4 looks at employment effects, an area we have covered in detail in our annual reports, but also looks at progression in work and job mobility, which are relatively new areas for us. Chapter 5 summarises how employers have responded, given that we haven't found significant employment effects. This chapter includes a more in-depth look at the relationship between the NLW and productivity.

4 We end the report with some reflections on how the NLW has successfully raised pay without strong evidence of damage to employment, and what we might learn for the future.

Executive summary

1 The introduction of the National Living Wage (NLW) in April 2016 was a radical step change in UK labour market policy. It moved from a minimum wage approach focussed on raising pay but minimising job loss to a new, ambitious approach with a target of 60 per cent of median hourly pay by 2020 for those aged 25 and above. In reaching this target, the Government had greater tolerance of job loss and its aim was to *'encourage a model of higher pay and higher productivity'* (BIS, 2015). This also meant a new role for the Low Pay Commission (LPC), one focussed on plotting the path to the target and warning the Government of any impending risks, but ultimately with less flexibility to respond to economic conditions. Above all it meant faster increases in the wage floor; between October 2015 and April 2020 the NLW increased at 6 per cent on average each year, compared with 3.8 per cent each year over the preceding 16.5 years.

2 When the NLW was announced, the prospect of large increases in pay led some employers to say they were extremely worried and describe the NLW as a 'big gamble' (LPC, 2016). Some employers were more positive and thought the post-crisis recovery would mean businesses could afford to meet the expected wage rises. Worker representatives welcomed the announcement, while noting their aspiration to go further – including to the UK Living Wage as developed the Living Wage Foundation. They also argued that there would be losers from in-work benefit changes which were announced at the same time.

3 This report looks at the impact of this first phase of the NLW, from its inception to the point that it hit its target and the onset of the Covid-19 pandemic. While some of the impacts are already known, not least from our annual reports, we look in more detail at some of the broader impacts. These include greater study of geographical impacts, the relationship with household incomes and the impact on different groups of workers. The stated rationale for the NLW was to raise pay and productivity; we look closely at the evidence on the rate's relationship with the latter.

Pay, coverage and spillovers

4 The main impact of the NLW was to raise hourly pay in the lowest-paid jobs. The coverage of the NLW, that is the number of jobs that pay it, increased from just under 1 million to 1.6 million (employees and apprentices not in their first year aged 25 and over) upon introduction, as the wage floor moved up the pay distribution, drawing in many more jobs. This included more jobs held by women and a small shift towards full-time jobs. While coverage also increased at a household level, as more households now held someone with an NLW job, the balance of different household types stayed the same. This increase in coverage all took place in the first year of the NLW, after which the number of people paid the rate remained flat, despite the rate continuing to increase faster than average pay.

5 At a time when the rest of the economy was going through what the Bank of England had described as a 'lost decade' for pay as real wages were squeezed, the NLW delivered real and relative (to other workers) increases. The NLW rose by 26 per cent between April 2015 and April 2019, more

than twice the increase in median hourly pay for eligible workers (12 per cent) and much faster than CPI inflation (around 8 per cent). This reduced inequality in the bottom half of the hourly pay distribution and within and between each nation and region in the UK. The NLW also appears to have narrowed the ethnicity pay gap and the gender pay gap.

6 These pay effects spilled up the wage distribution as firms tried to maintain pay differentials for supervisory roles and more experienced workers or simply wanted to pay above the NLW. This meant that in addition to the 1.6 million workers (7 per cent of jobs) paid the NLW in 2019, we estimate that up to a further 6.7 million jobs (28 per cent of jobs) were paid more than they otherwise would have been.

7 The NLW also benefitted many workers aged below 25. Many employers chose to pay the NLW rate to all their staff. Where this wasn't the case, the higher rate for those aged 25 and over made those below this age relatively less costly to hire. This 'shelter' meant the youth rates of the minimum wage could rise faster than they otherwise would have done.

Household incomes

8 While hourly rates of pay are important to workers, what matters for living standards is workers' total weekly or monthly pay. This is determined by both the hourly rate and how many hours are worked. When we track individual NLW workers over time we can see that, on average, their hourly pay increases translated directly into weekly pay increases, suggesting the average NLW worker did not lose hours of work due to the higher NLW.

9 However, other policies limited the impact of these pay increases on household incomes overall. When the NLW was announced, worker representatives welcomed the change but noted that other announcements at the same time, around cuts to in-work benefits, would leave some workers no better or even worse off. While households with at least one NLW worker saw their household earnings increase by more than other households (31 per cent, compared with 20 per cent, between 2015/16 and 2019/20), this was offset by losses of in-work benefits such as tax credits or Universal Credit. This was due both to their tapering as incomes rose and a freeze in benefit levels. So, despite significantly greater earnings increases, the total incomes of NLW worker households increased only at a similar rate to other households.

Employment, hours and progression

10 Our research has not found conclusive evidence of a negative impact on employment or hours. We have found a mix of both positive and negative effects on employment, but the effects are small and only affect certain groups of workers at certain times. Employment rates also grew faster for the groups of workers most reliant on low-paying jobs, benefitting from the jobs-rich growth the UK experienced in the last decade. The evidence we have collected suggests that the first phase of the NLW did not affect aggregate employment, or if it did the effects were very small.

11 In his review of the international evidence, Professor Arin Dube found likewise, noting a '*very muted*' effect from minimum wages on employment. His review also reiterated a key justification for minimum wages in the first place: monopsony, where employers have greater wage-setting power than they would in a competitive market. He notes '*some increases in the minimum wage may have little*

negative effect on employment in a monopsonistic labour market' (Dube, 2019), which may explain the absence of an employment effect.

12 It is possible that while the NLW does not result in job loss, it may result in lower job growth among affected firms. Employer stakeholders told us at the outset and throughout that reducing recruitment would be preferable to making redundancies. A study we commissioned on this found that lower-paying firms saw lower job growth than in similar but higher-paying firms. We also observed a shift in employment from low-paying occupations and industries to other parts of the economy. This reallocation in employment could be caused by the NLW.

13 The cost of maintaining pay differentials (the pay difference between NLW workers and other jobs requiring more skill or responsibility) was a major concern for employers, who worried that falling differentials could reduce incentives to progress. We have found some evidence that the introduction of the NLW reduced differentials within low-paying industries. In some cases, employers told us they had reduced headcount at higher levels, rather than among NLW workers, which also reduced progression opportunities. But our analysis suggests that progression opportunities did not change much over the NLW period. Between 40 and 50 per cent of workers left NLW jobs for higher-paying roles each year (in some cases with the same employer), but mostly to only slightly better-paying jobs. However, there has been a decline in the share of NLW workers moving to another employer each year. This is positive for employers – staff turnover is lower than it otherwise would be – but it may affect lower-paid workers' careers in the long-term.

Employer responses

14 The absence of employment effects is likely a consequence of employers adjusting to the rising NLW in other ways. At the time of the announcement, employers told us they intended to respond to the increased costs in a similar way to previous NMW increases. This meant absorbing the cost and accepting lower profits, raising productivity in some way, increasing prices, changing the overall pay and reward package (for example, reducing breaks, overtime, staff discounts etc) and reducing headcount (via reduced hiring, rather than redundancies).

15 These predictions largely turned out to be correct, but with some important differences. Simply absorbing the costs and accepting lower profits was the main employer response to the first phase of the NLW. After this, price increases were a common response. Research we commissioned found that a 10 per cent increase in the minimum wage could increase prices of certain goods and services by up to 1.1 per cent. Because this only affects a small subset of items and regions, the NLW had a negligible impact on overall measures of inflation.

16 Despite being a key aim of the policy, productivity improvements were harder to realise than many expected. We find that industries and areas with a higher share of minimum wage workers did not experience faster productivity growth, relative to other industries and areas, after the NLW was introduced. This suggests that the NLW did not improve productivity. Chartered Institute of Personnel and Development (CIPD) surveys found just 30 per cent of affected firms had planned to improve productivity at the outset of the NLW, and an even smaller share had actually done so subsequently. This was for several reasons. Firstly, in many cases, improving productivity requires costly investment. While larger businesses were more likely to expand investment in response to the NLW, smaller

employers told us they were increasingly likely to cut investment to pay for increases. Even those able to invest viewed it as risky and told us there was no guarantee it would 'pay off'.

17 This difficulty is perhaps why some businesses fell back on 'work intensification' – making staff work harder – to improve productivity. A significant minority of firms opted to give staff more tasks, required more flexibility on hours, tightened restrictions on absenteeism, increased the pace of work or raised performance standards.

18 At the NLW's outset some firms made changes to other aspects of their pay and reward packages. This was controversial at the time and resulted in the then Chancellor publicly criticising these changes as not being *'in the spirit of the law'*, stating these firms should *'abide by their responsibilities*.' In various employer surveys, reductions in perks, overtime and premium rates, breaks and discounts have featured consistently, but only among a minority of affected firms (approximately 10-20 per cent). We have heard of these practices frequently in conversations with employers and workers. However, our analysis of changes to overtime and premiums finds no strong evidence of a substantial change for NLW workers. While some firms undoubtedly made these changes, they may have happened regardless of the NLW. Other changes, such as removing free food, staff discounts or paid breaks, are far more difficult to measure.

Conclusions

19 Overall, our assessment of the first stage of the NLW's journey is positive. It increased hourly and weekly pay for the lowest-paid workers at an ambitious pace, making the UK's minimum wage one of the highest in the world. It did so with minimal effect on employment and hours. And while the impact on household income was far weaker, this was a consequence of other policy decisions and is not an uncommon finding internationally.

20 However, it is important to note that this apparent success was not costless. Many businesses told us they struggled to pay for increases and there may have been other trade-offs for workers. Employer surveys suggested accepting a lower rate of profit was the main response to the NLW; some employers, particularly the smallest, raised concerns about the sustainability of this. Furthermore, smaller firms repeatedly told us that to pay for NLW increases they cut back investment plans, risking future sustainability and growth. The productivity improvements that many believed necessary to cover the costs of the NLW proved elusive.

21 Since 2020, we have had a new target to reach two-thirds of median pay by 2024 and to lower the NLW age threshold to 21 over the same timeframe. To inform this next stage of the NLW, it is useful to consider what factors contributed to the success of its first phase. One such feature is that while the NLW raised costs and was challenging for some businesses, it also had positive effects. Our analysis provides some evidence that NLW workers were less likely to move jobs following its introduction, lowering staff turnover – a key cost for employers.

22 The framework itself may also have contributed to the minimal job loss we observed. The NLW target meant forecasts of earnings became central and it was contingent on the LPC to regularly set out an indicative path for increases. This helped employers plan for the future and decide how to cope with cost increases. Furthermore, the target rate for 2020 fell from the initial rates predicted at the time of the NLW's announcement. In July 2015 the NLW was forecast to be £9.35 by 2020. But shortly after

this, as the ongoing nature of the real wage squeeze became apparent, these ambitious forecasts were adjusted down, with the eventual 2020 rate being £8.72. This difference meant those who planned for the higher rate announced in 2015 would have found the eventual rate easier to deal with.

23 The broader labour market environment was also important. The employment rate reached new heights and even optimistic forecasts of job growth at the time of the NLW announcement were easily surpassed. With the economy creating jobs at a high rate, anyone who did lose their job as a result of the NLW would have had a high chance of finding another.

24 Notwithstanding the huge uncertainty that Covid-19 has created, there are useful lessons from the first phase of the NLW which may inform the second as it moves to two-thirds of earnings by 2024. The first point is that while in-work financial support policies meant that earnings increases did not result in substantial increases in household income, the situation may be different in the future. The 2021 Budget lowered the taper rate (the rate at which Universal Credit payments are reduced when earnings rise) and raised the work allowance (the amount workers can earn before the taper rate takes effect). These changes mean NLW workers will keep more of any future rate increase. This re-emphasises a key aspect of policy for low-paid workers – that minimum wages and in-work financial support are not substitutes for one another, but can be powerful complements.

25 Secondly, the ways in which employers responded to the first phase of the NLW may not be as viable post-Covid. Firms in hard-hit sectors have already taken a hit to their profits, meaning there is less scope to accept further cost increases. Smaller firms are far more indebted than pre-crisis, which may make them less willing to allow their profit margins to erode further. They may be risk averse about hiring and expansion and further reduce their capacity to invest.

26 Thirdly, productivity improvements are not guaranteed by future increases. The relationship between minimum wages and productivity has always been complex, with multiple mechanisms at work. But despite being one of the original aims of the NLW, it has so far been shown that raising the minimum wage does not guarantee productivity improvements; and what increases are found may result from work intensification as opposed to use of technology, improved training or different working strategies.

27 Lastly, we do not know if we will return to the same jobs-rich growth that characterised the mid- to late-2010s. Sectors such as hospitality, which grew continually between 2005 and 2019, providing many jobs with a low barrier to entry, may be permanently affected by the pandemic.

28 These uncertainties further reinforce the need for the remit the LPC currently has, one with ambitious aims for low-paid workers but the flexibility to respond to changing circumstances.

Chapter 1

A history of the National Living Wage

Key points

- The introduction of the NLW was a fundamental change in labour market policy in the UK that entailed much faster increases in minimum wage rates and a change in the Government's risk tolerance for job loss. Its rationale was to help move towards a high wage, high productivity, low tax, low welfare society.
- At the time of the announcement, the UK economy had recovered from the financial crisis. Jobs-rich growth had seen the employment rate reach a 45-year high and it was forecast to continue improving. However, wage growth had undergone a protracted squeeze.
- The NLW target of 60 per cent of median hourly earnings by 2020 meant that forecasts of pay were required to set out the rate for each year up to 2020 ('the path'). The Office for Budget Responsibility's initial forecast of the NLW in 2020 was around £9.35, but its projection was skewed by its optimistic view of future earnings growth which, while in line with other forecasters at the time, did not come to pass.
- Some employer groups were 'very worried'' by the announcement, calling it a 'big gamble.' While others were more positive, all noted the importance of improving productivity in affording the increases and expressed concerns that judgements around the rate were becoming too political.
- Worker representatives welcomed the change but also wanted to go further. Some noted that other announcements at the same time as the NLW, around cuts to in-work benefits, would leave some workers no better – or even worse – off.

1.1 In the closing moments of his July 2015 Budget speech, the then Chancellor, George Osborne, announced a significant change to the minimum wage framework in the UK. He said " *…I am today introducing a new National Living Wage. We've set it to reach £9 an hour by 2020. The new National Living Wage will be compulsory. Working people aged 25 and over will receive it. It will start next April, at the rate of £7.20. The Low Pay Commission will recommend future rises that achieve the Government's objective of reaching 60 per cent of median earnings by 2020.*" (HM Treasury, 2015a)

1.2 The rationale given for this change was that the National Living Wage (NLW) would raise pay and productivity and help lower spending on welfare benefits: *"…we want Britain to move from a low wage, high tax, high welfare economy, to a higher wage, lower tax, lower welfare society…..It can't be right that we go on asking taxpayers to subsidise, through the tax credit system, the businesses who pay the lowest wages. That subsidised low pay contributes to our productivity problem.*" (HM Treasury, 2015a)

1.3 The NLW marked a fundamental break with the previous 15 years of successful minimum wage policy in several ways. Firstly, the NLW had a target tied to average earnings, on the basis that average earnings growth – and therefore the target itself – would ebb and flow with the economic cycle. This meant a very different job for the LPC. Our role was now to '*recommend future rises that achieve the Government's objective of reaching 60 per cent of median earnings by 2020*' (HM Treasury, 2015a). These increases were subject to 'sustained economic growth', which we interpreted as GDP growth of 1 per cent or more per year, as that was the benchmark used in the Charter for Budget Responsibility (HM Treasury, 2015b). This reduced the LPC's flexibility to make recommendations, which had previously been entirely driven by the desire to minimise job loss.

1.4 The NLW signalled an important change in the Government's risk appetite. The Office for Budget Responsibility (OBR) made projections in their July 2015 report that the NLW would increase unemployment by between 20,000 and 110,000, with a central estimate of 60,000 by 2024 (OBR, 2015a). While the OBR described this as 'fractional', particularly against their prediction of one million more jobs for the economy over the same period, it nevertheless represented a greater tolerance for job loss. By contrast, the Government's aim in the previous year's LPC remit had been '*to have NMW rates that help as many low-paid workers as possible, while making sure that we do not damage their employment prospects'*.

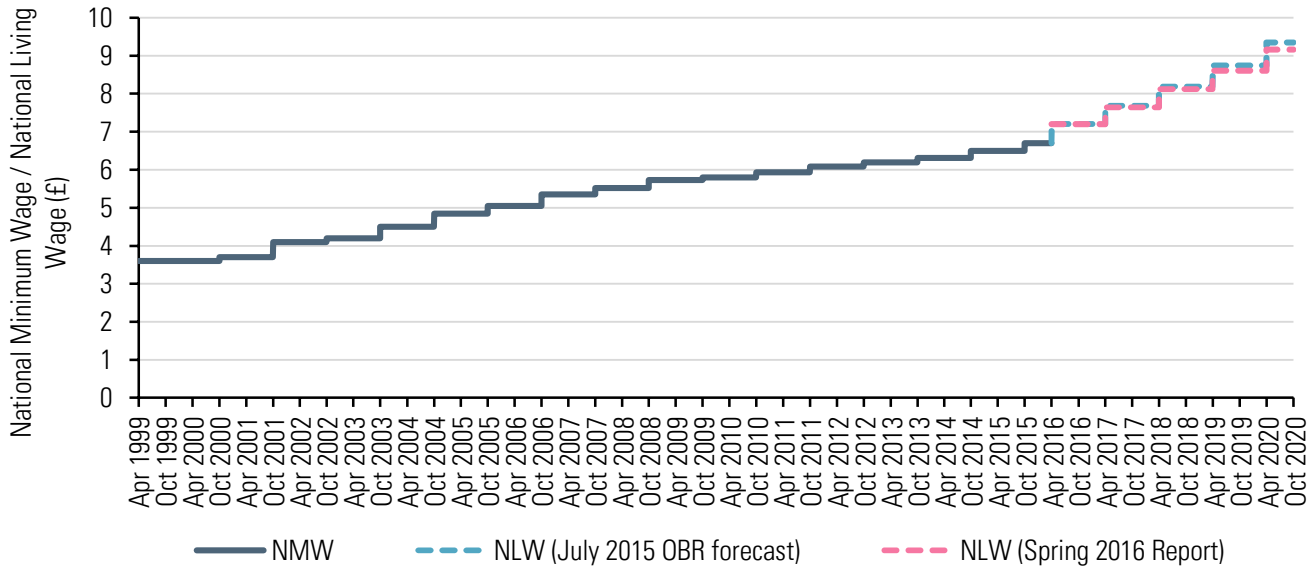
1.5 The NLW also meant a new age threshold – 25 years old. This was the first time the highest or adult rate of the NMW would begin at 25. At its inception in 1999 workers became eligible for the National Minimum Wage (NMW) at 22 years old, although the LPC had recommended this be 21. It continued to recommend this age reduction in each of its subsequent reports until the Government agreed in 2009 with implementation in 2010.

1.6 The NLW's age threshold meant the LPC effectively had two remits: for those aged 25 and over it should chart a course to 60 per cent of median hourly pay, subject to sustained economic growth but with a higher tolerance for job loss. But for those aged under 25, its remit was unchanged: *'help as many low-paid workers as possible without damaging their employment prospects'*. This implied the possibility that the NLW and the rates for workers aged under 25 would diverge. However, it also meant that the NLW would provide 'shelter' for younger workers, as the higher rate for those aged 25 and over makes those below this age relatively less costly to hire. This in turn meant the youth rates of the minimum wage could rise faster than they otherwise would have done.

1.7 There were also two practical changes for the LPC. Firstly, the Government moved the month in which upratings would come into force from October to April. This had implications for our key source of evidence on earnings, the Annual Survey of Hours and Earnings (ASHE) and therefore our understanding of key metrics such as coverage and underpayment, as discussed in later chapters. The second practical change was the new reliance on forecasts of pay, with their inherent uncertainty. The approaches we took to developing suitable forecasts are outlined later in this chapter.

1.8 But, most importantly, the new policy meant the NLW would likely rise much faster than the NMW. The anticipated path at the time of the announcement is shown in Figure 1.1. It had a steeper trajectory for the NLW than had been the case for the NMW, whether we used the OBR forecasts from July 2015 or our own initial projection (LPC, 2016). The first estimate of what the rate would be in 2020 was £9.35.

Figure 1.1: Increases in the NMW and the 2015 forecast increases in the NLW, UK, 1999-2020



Source: LPC Reports 1999-2015 and LPC estimates using forecasts from OBR (2015a) and estimates based on forecasts from OBR (2015b) as published in the LPC Spring 2016 Report.

Stakeholder views

1.9 Faster increases were deemed a greater risk by some employer representatives. The Confederation of British Industry (CBI) was representative of the views of many business responses in arguing that the NLW was '*a seismic shift in the way pay is set in the UK… away from an independent evidence-based approach… towards a politically driven goal'*. It was seen as '*a big gamble'* and firms were '*extremely worried'* (LPC, 2016).

1.10 However, some business representative groups were more positive, including the Institute of Directors (IoD) and the Engineering Employers' Federation (EEF, now known as Make UK). The IoD said that '*past experience tells us that most [employers] absorb the pressures via some combination of passing on small increases in price to consumers, a dip in profits and increases in productivity'* and '*thanks to the strength of the recovery in some quarters, there are now plenty of businesses who can afford, over time, to meet this sort of wage rise*'. However, it also warned that '*in the long run… improving the UK's productivity performance will be essential to making the NLW affordable…Politicians should address the underlying issues holding back pay rises, and must resist the temptation of descending into a wage auction*' (LPC, 2016).

1.11 In recognition of the impact on business the Chancellor also announced some offsetting measures. He noted that the OBR '*estimate that the cost to business will amount to just 1% of corporate profits. To offset that I have cut corporation tax to 18%. To help small firms I will go further now and cut their national insurance contributions. From 2016 our new Employment Allowance, will now be increased by 50% to £3,000. That means a firm will be able to employ 4 people full time on the new National Living Wage and pay no national insurance at all.* '

1.12 The IoD was broadly supportive of the package of NLW changes accompanied by wider savings: *'the Chancellor has offered business a new deal on employment… the IoD and our members accept that deal'.* But the British Chambers of Commerce (BCC) argued that *'the majority of the relief will be felt by large, highly profitable firms that traditionally employ few workers on minimum pay, whereas the majority of the cost increase will be felt by small firms or those in particular sectors that employ primarily low-paid and/or part-time workers'* (LPC, 2016).

1.13 There was an early recognition that the NLW would create greater difficulties for certain sectors – social care was singled out in the LPC's Spring 2016 Report, with warnings from across the sector that the NLW would intensify the already existing funding crisis.

1.14 Worker representatives welcomed the announcement, while noting their aspiration to go further - whether £10 per hour (TUC) or the UK Living Wage as developed the Living Wage Foundation (Unite, Unison). They also argued that there would be losers from tax credit changes which were announced at the same time. The TUC noted that *'many workers will lose a lot more than they will gain'*. The union of Shop Distributive and Allied Workers (Usdaw) likewise told us that 'e*ven with the NLW in place … many minimum wage earners will be worse off*" . Some did not agree with the new age threshold: the TUC said ' *the government has adopted the highest age threshold in the developed world, matched only by Greece. In contrast, France pays the full rate from age 18 onwards'* (LPC, 2016).

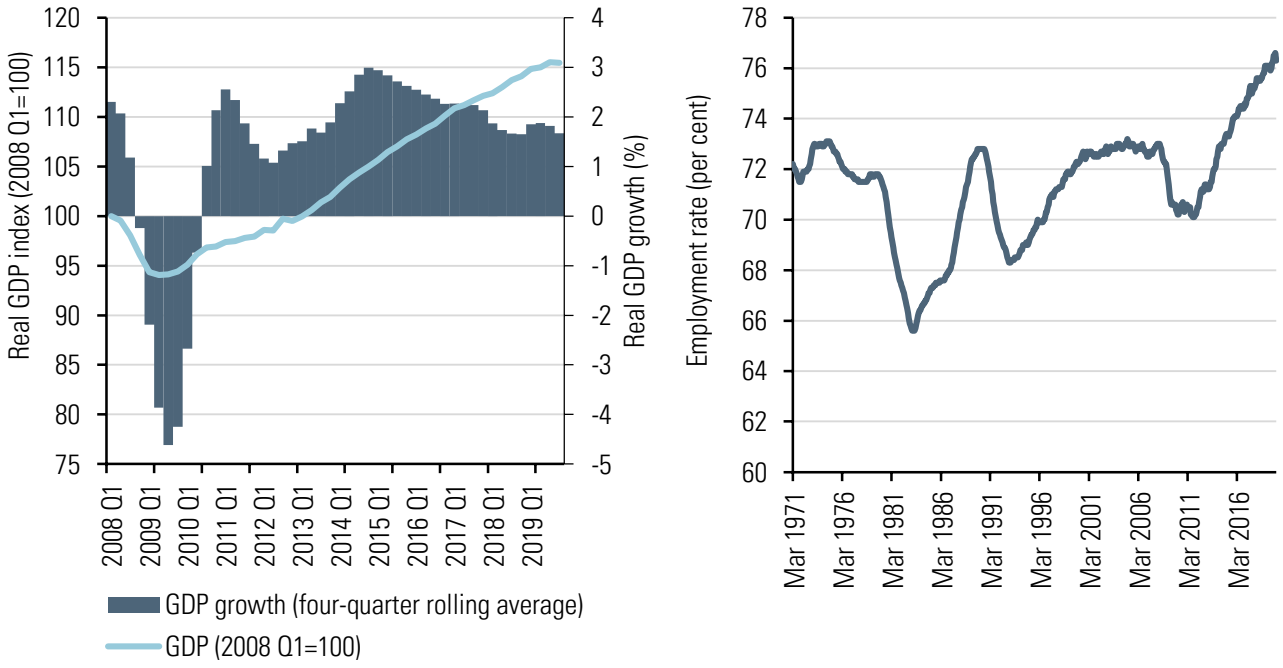
Economic context and forecasts

1.15 The UK economy took over five years to return to its pre-crisis level of real GDP following the financial crisis (Figure 1.2) that began in 2008. But, by the time of the NLW's announcement in July 2015, it was showing signs of reasonably strong growth and GDP was over 6 per cent higher than the pre-financial crisis high.

1.16 The employment rate had returned to its pre-financial crisis high of 73 per cent at the end of 2014 (Figure 1.2) and continued to increase in the first half of 2015 – reaching its highest rate for almost 45 years (when records began in 1971). The picture for wages was very different however, with growth continuing the sluggishness precipitated by the financial crisis. As seen from the change in average weekly earnings (AWE) shown in Figure 1.3, nominal wage growth between 2010 and 2014 hovered around 1-2 per cent, well below the pre-financial crisis norm of 4-5 per cent.

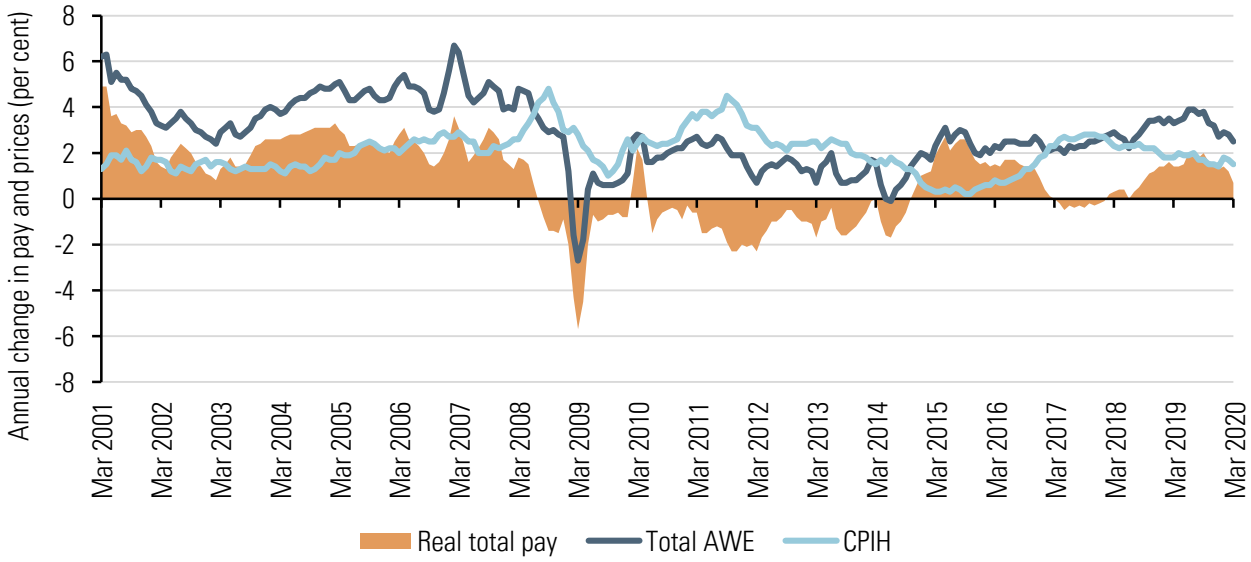
1.17 Inflation, which rose during the financial crisis, grew faster than wages between 2008 and 2015. In the spring of 2015, real total weekly pay (including bonuses) was around 6 per cent lower than it was in March 2008, while regular (excluding bonuses) weekly pay was nearly 3 per cent lower. This lengthy real wage squeeze was historic. A later speech by the then Chief Economist of the Bank of England noted that "*Since as far back as 1870, there have been only two episodes when the real pay of workers has fallen over a ten-year period. The other episodes were associated with seismic shocks in the labour market, often wrenching technological change or sharp cyclical downturns, which raised levels of unemployment and job insecurity. The past decade has bucked that historical trend, with a boom in job creation accompanying weak pay growth"* (Haldane, 2018).

Figure 1.2: Real GDP and real GDP growth (left), employment rates (right), UK, 1971-2020



Source: ONS Gross Domestic Product chained volume measures (ABMI), seasonally adjusted 2008 Q1- 2019 Q4 and 18-64 Employment Rate (LF24), seasonally adjusted, Mar 1971 – Mar 2020.

Figure 1.3: Pay growth, GB, 2001-20



Source: ONS Nominal Total Weekly Pay (KAC3), CPIH (Consumer Price Index with Housing Costs, L55O) and Real Total Weekly Pay (A3WW).

Forecasts and the National Living Wage

1.18 Looking back at forecasts of the time is instructive for two reasons. Firstly, the outlook for the economy gives an indication of how confident the Government was in the economy's ability to cope with this change. Secondly, wage forecasts in particular became an intrinsic part of the NLW framework. The Government had set a target for the NLW of 60 per cent of median hourly wages in 2024. Plotting the path to this target (i.e. setting out indicative rates of the NLW for each year up to 2020) required timely median hourly wage forecasts for those aged 25 and over.

1.19 No major forecasting organisation publishes forecasts for levels of median hourly wages or provides wage forecasts for specific age groups. The OBR is the only major forecasting organisation that produces forecasts of the growth in average hourly earnings[1]. We used these forecasts to produce our first projections of the path that were published in the Spring 2016 Report. But the change to our cycle meant that the only OBR forecasts available when deliberating on our rate recommendations are those from six months previously.

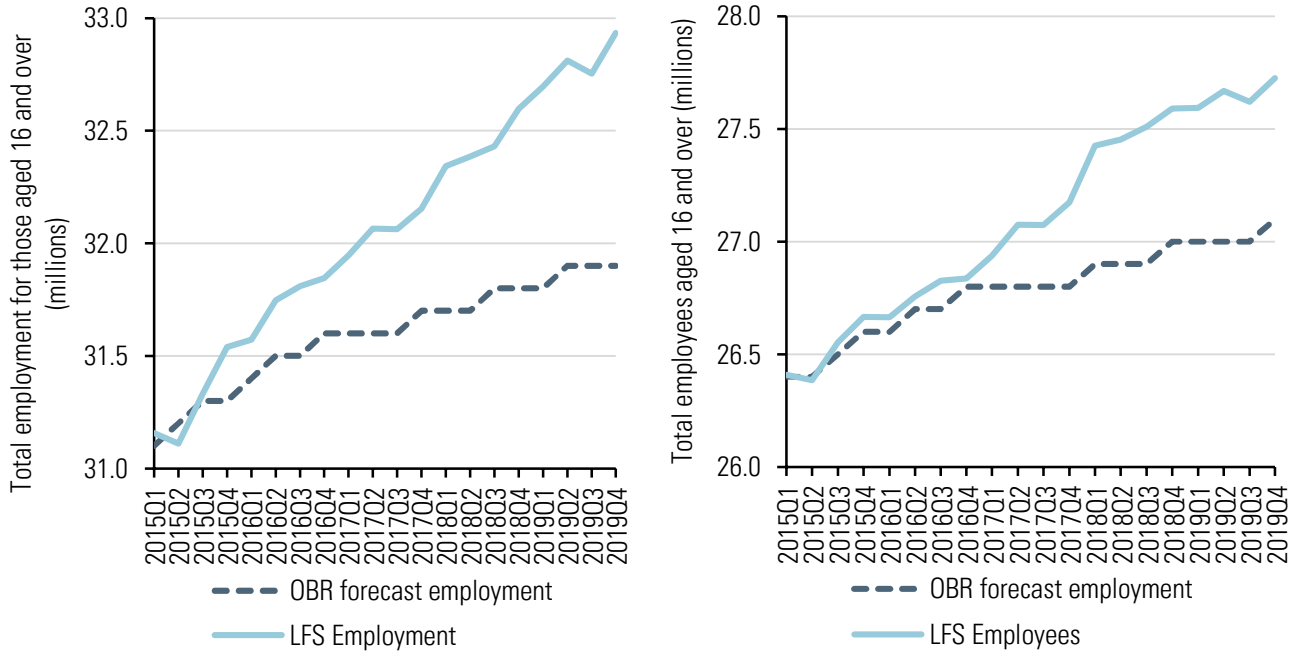
1.20 With no timely access to the hourly wage growth forecasts, we instead used average weekly wage growth forecasts as a proxy. We use the forecast growth rate in average weekly pay to project median hourly pay forward from the latest available data. When the economy is growing, this difference matters less, as weekly and hourly pay growth tend to move together. But during shocks or downturns they move apart as employers tend to adjust hours of work more than hourly rates of pay. There was initially an issue with the forecast period; only the OBR provided wage forecasts out to 2020. In response, HM Treasury added average weekly wage growth forecasts to its quarterly medium-term panel from February 2016. This gave us forecasts from a range of independent forecasters for wage growth covering the next five years (including 2020).

1.21 Using this data, we regularly published estimates of the on-course rates for each year up to 2020. Employers repeatedly told us these updates were useful for planning and negotiating contracts. However, all economic forecasts are fraught with uncertainty.

1.22 At the point that the NLW was introduced, the strong employment performance of the previous few years was expected to continue, with the OBR predicting just under 1 million more people in employment (including over 600,000 more employees) by 2020. However, this forecast was easily surpassed, as the 1 million milestone was reached three years early in 2017.

[1] Its average hourly wage index is produced in Table 1.6 in the Economy Supplementary Tables of its bi-annual Economic and Fiscal Outlooks).

Figure 1.4: Forecast and actual employees and employment growth, UK, 2015-2019



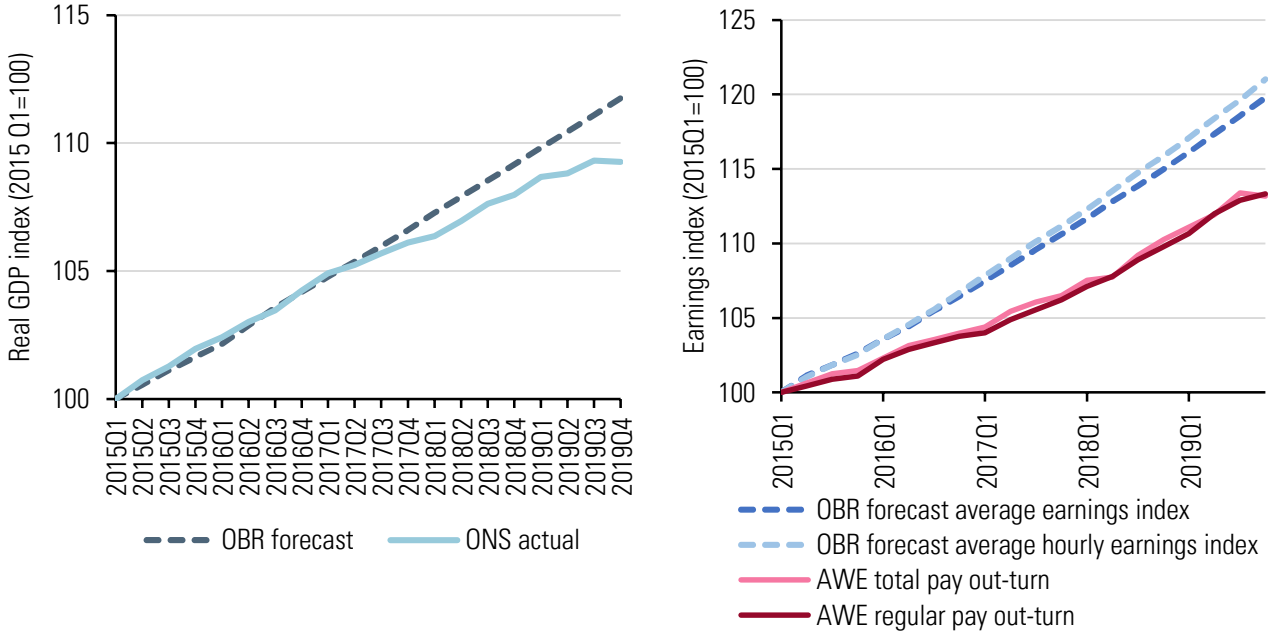
Source: OBR forecast total employment and total employees (OBR, 2015a) and ONS total employment (MGRZ) and total employees (MGRN), 2015 Q1 – 2019 Q4.

1.23 In sharp contrast, GDP and wage growth proved weaker than forecast, wage growth particularly so, as seen in Figure 1.5. The OBR expected GDP to grow at a steady pace from the first quarter of 2015 onwards and to be 11.8 per cent higher in the final quarter of 2019 than in the first quarter of 2015. In fact, GDP was just 9.3 per cent higher in the fourth quarter of 2019. We make comparisons with the end of 2019 rather than 2020 due to the unforeseen onset of the pandemic.

1.24 Average total and hourly earnings were forecast to be 19-21 per cent higher by the end of 2019 than in the first quarter of 2015, but both turned out only around 13.5 per cent higher (on both measures). This had significant implications for the path of the NLW as it progressed towards its target in 2020.

1.25 Driven by the initial optimistic wage forecasts in July 2015, the OBR's first estimate of the NLW in 2020 was around £9.35, as shown in Figure 1.6. But over the following 18 months or so, the forecasts for earnings fell as the outturn came in much lower than expected. For the three years following October 2016 (barring a short period in 2017), the 2020 NLW rate was expected to be around £8.62. Indeed, one of the reasons why the employment effects of the NLW were negligible could be that employers who had initially planned for £9.35 would have found the out-turn rate easier to cope with.

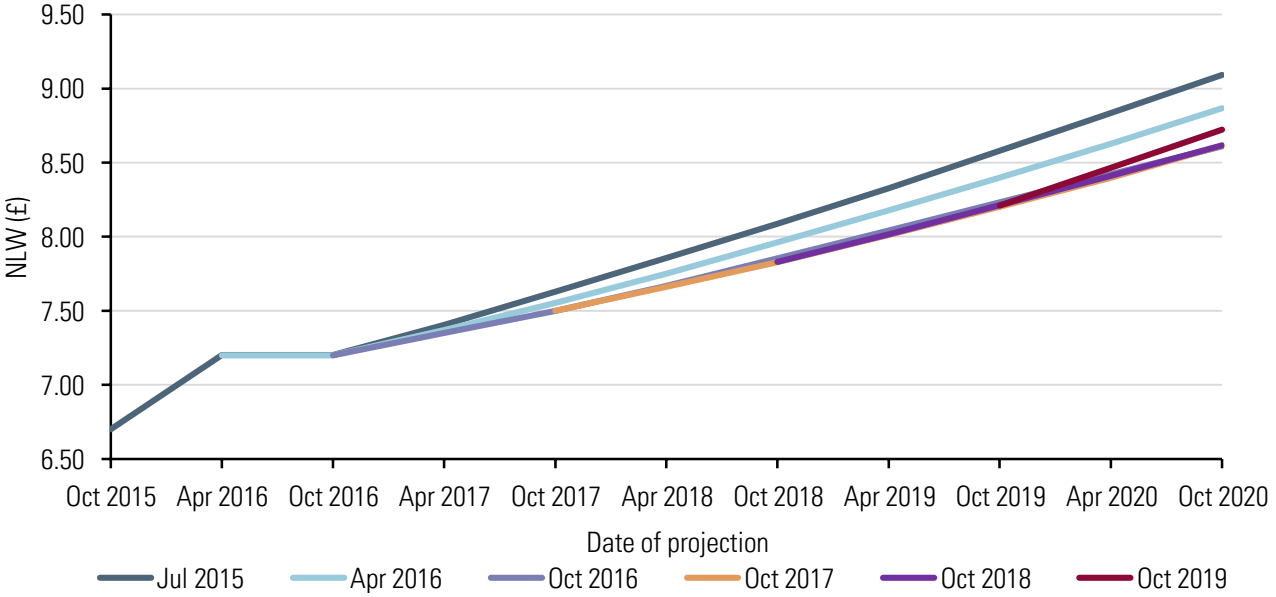
Figure 1.5: Forecast and actual GDP and earnings growth, UK, 2015-19



Source: LPC analysis of OBR (2015a) and ONS GDP (ABMI), whole economy total pay (KAB9) and whole economy regular pay (KAI7), 2015 Q1 – 2019 Q4.

1.26 However, this effect works the other way when the on-course rate – the term for the rate needed to reach the next point on the target path – comes in higher than expected. The actual 2020 rate came in at £8.72, 10 pence higher than what had been thought earlier that year because the earnings outturn was higher than forecast. This meant a 6 per cent increase rather than a 4 per cent increase in the NLW. We heard from employers that this had caught some off guard, particularly as the announcement was delayed until after the General Election in December 2019, though the effects of this are hard to discern as they coincide with the beginning of the pandemic.

Figure 1.6: The projected path of the NLW by date of projection, UK, 2015-20



Source: Low Pay Commission projections based on forecasts from OBR (2015a and 2015b), the Bank of England (2016a, 2017, 2018 and 2019), and HM Treasury (2016a, 2016b, 2017a, 2017b, 2018a, 2018b, 2019a and 2019b); and ONS Average Weekly Earnings total pay (KAB9), 2015-19.

Conclusions

1.27 The NLW was a major intervention in the UK labour market that intended to raise pay, improve productivity and reduce welfare spending. Its announcement came at a time when economic growth had largely recovered from the financial crisis and employment rates had reached record highs and were expected to continue improving. Pay growth had been very sluggish since the financial crisis, which may have been part of the policy rationale.

1.28 While some employers were concerned about the scale and pace of the NLW increases, they expected to respond as they had to similar increases: by absorbing the cost and accept lower profits, trying to raise productivity, increasing prices, changing the overall pay/reward package e.g., reduce breaks, overtime, staff discounts etc and reducing headcount through lower recruitment rather than redundancies. Worker representatives welcomed the NLW but noted their concern about changes to benefit policies announced at the same time. In the rest of this report, we look in detail at what the effects actually were.

Chapter 2

Pay, coverage and spillovers

Key points

- The hourly NLW rate increased roughly twice as fast (26 per cent) as median hourly pay for workers aged over 25 (12 per cent) between 2015 and 2019. This reduced hourly pay inequality overall and within and between each nation and region in the UK.
- The introduction of the NLW meant many more workers were paid at the wage floor. Coverage increased from just below 1 million to 1.6 million workers aged 25 and over. The NLW also meant the minimum wage reached broader categories of workers. Coverage grew faster in the public and voluntary sectors, among older workers and among those in full-time jobs.
- As the number of NLW workers grew, so did the number of households with a minimum wage worker. However, among those with a minimum wage worker, the balance of different household types and tenures has changed little. In around a third of households with an NLW worker, they are the main earner in the household, and this hasn't changed.
- In addition to the 1.6 million jobs directly paid at the NLW rate, spillover effects meant that pay for up to 6.7 million additional jobs rose higher than it would have done. This is because firms sought to maintain pay differentials where they could.
- The evidence suggests that the NLW has reduced ethnicity and gender pay gaps. It has also benefitted workers aged under 25, as many employers chose to pay the NLW to all their workers, while the 'shelter' provided by the NLW meant the youth rates of the NMW could increase faster than they otherwise would have done.
- Some employers have made compensatory changes to their broader reward packages and other conditions of employment, such as paid breaks, subsidised canteens, free meals, staff discounts, etc, but the extent of these changes is hard to measure. When we look at overtime and premium pay using official data, we find little change overall.

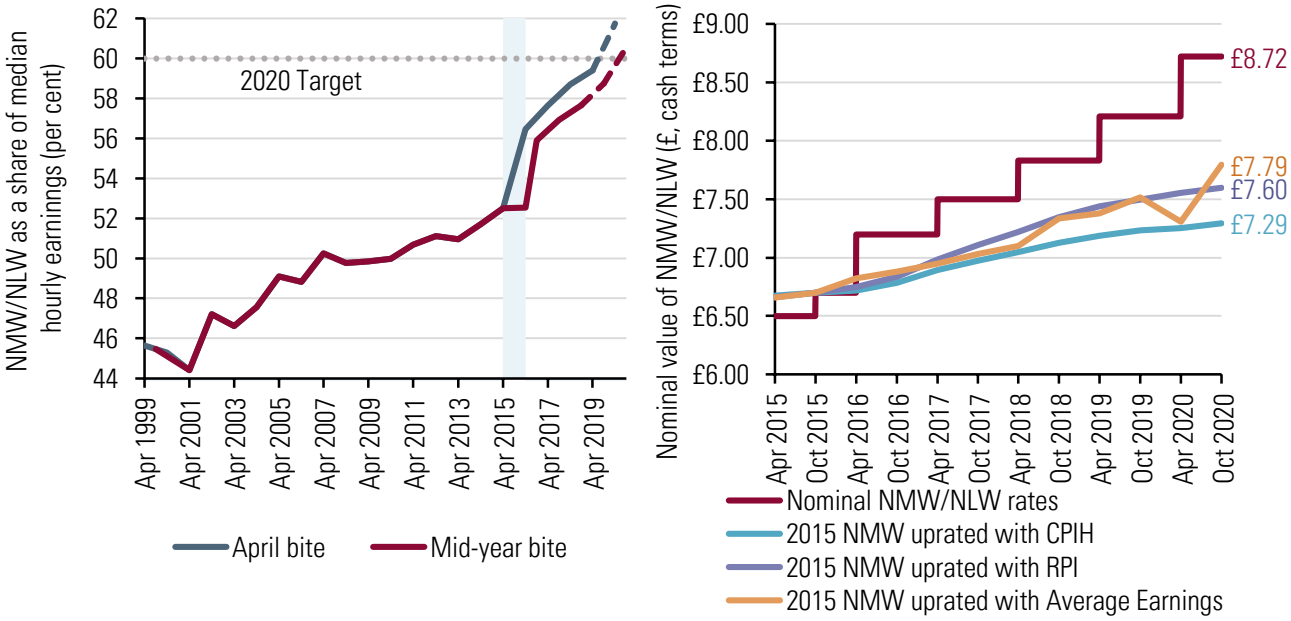
2.1 The announcement of the National Living Wage (NLW) in July 2015 came at a time when pay growth in the rest of the economy was sluggish and had been since the financial crisis. Later in 2016, Mark Carney, then Governor of the Bank of England, said *'real wages are below where they were a decade ago — something that no one alive has experienced before.'* (Bank of England, 2016b). This may have played a part in the NLW's inception; in his speech announcing the NLW, the then Chancellor said, *'Britain deserves a pay rise and Britain is getting a pay rise'.* In this chapter we examine the NLW's impact on pay across the economy and country and for different groups of workers.

Headline National Living Wage impacts

2.2 The NLW rose by 26 per cent between April 2015 and April 2019, more than twice the increase in median hourly earnings for those aged 25 and above (12 per cent). In its first 16 years, the National Minimum Wage (NMW) as a percentage of median hourly earnings, the so-called 'bite', increased by 7 percentage points. The NLW had the same impact over the next five years, with the bite increasing by a further 7.5 percentage points, from 52.5 per cent of the median wage in 2015 towards the 60 per cent target in 2020 (Figure 2.1).

2.3 Growth in the NLW also outstripped inflation. Between April 2015 and April 2020, the NLW grew by 34 per cent, whereas CPIH (a measure of consumer prices) grew by only 9 per cent. The right-hand side of Figure 2.1 compares the actual values of the NLW to what it would have been if it had increased in line with prices or average earnings. It would have been 90p to £1.40 an hour lower.

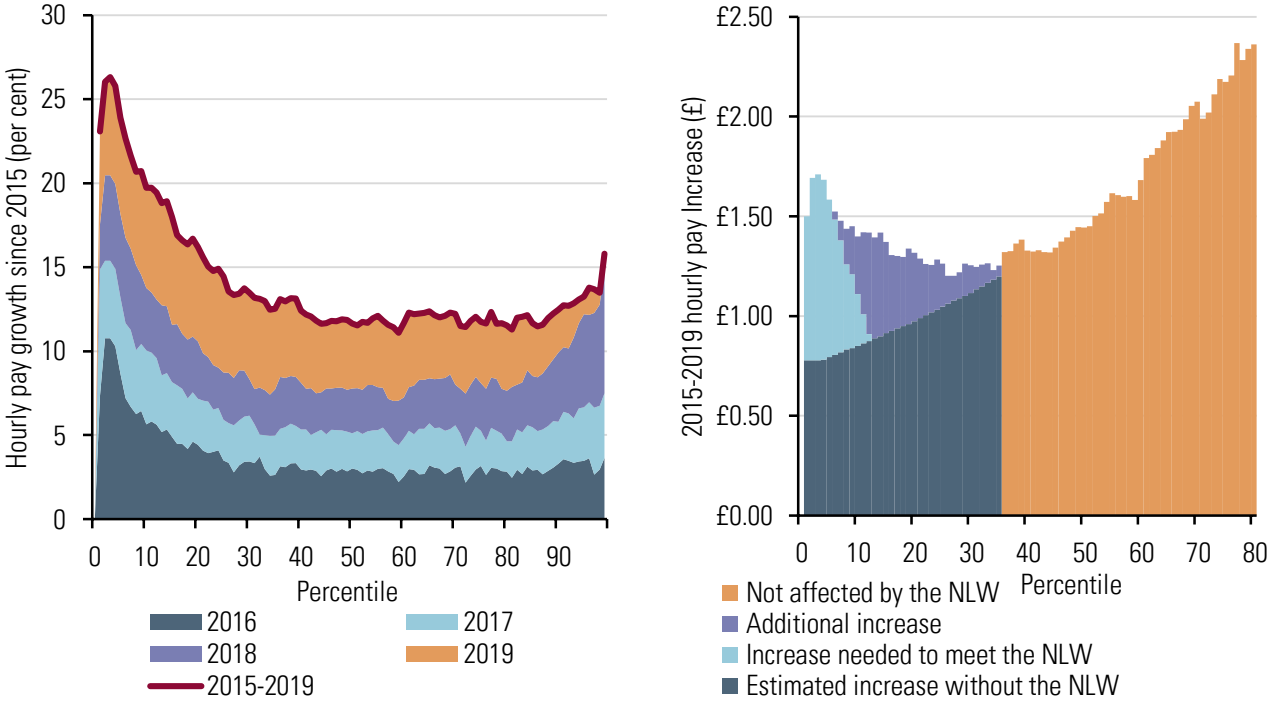
Figure 2.1: NMW/NLW bite and relative to prices and earnings, UK, 1999-2020



Source: LPC analysis using ASHE, workers aged 25 and over excluding first year apprentices, UK, standard weights, 1999-2019. Data for 2020 in LHS chart are based on projections using ASHE 2019 and ONS AWE growth, due to problems with ASHE 2020. LPC analysis using ONS CPI index, ONS RPI Index and ONS average weekly earnings data, 2015-2020.

2.4 Figure 2.2 shows how hourly pay increased at a much faster rate at the bottom of the distribution between 2015 and 2019. Increasing hourly pay at the bottom of the pay distribution relative to the median reduced hourly wage inequality. The 50/10 ratio of pay – a measure of wage inequality for the bottom half of workers – fell by more between 2015 and 2019 than in the whole of the 17-year period from the NMW's inception to the NLW's introduction. This is the first rapid fall in hourly earnings inequality since the 1970s (McKnight and Cooper, 2020).

Figure 2.2: Growth in hourly pay across hourly pay distribution, UK, 2015-2019



Source: LPC analysis using ASHE, UK, 2015-2019, standard weights. Workers aged 25 and over, excludes first year apprentices. Highlighted areas in LHS chart shows annual increase in hourly pay percentile as a per cent of 2015 value for that percentile.

2.5 Figure 2.2 also shows that not only did the NLW lift pay for many minimum wage jobs, it also did so for many more jobs paid just above the minimum wage. Between 2015 and 2019, we estimate that the NLW increased pay for up to 35 per cent of jobs (8.3 million jobs). This includes 7 per cent of payrolled jobs (1.6 million) paid the NLW in 2019 and a further 28 per cent of jobs (6.6 million) for whom pay was higher in 2019 than it would have been if the NLW had not been introduced.

2.6 This 'spillover' effect occurs because employers seek to maintain a pay differential between those on the minimum wage and their managers or team leaders, or those with more skills or experience. Some employers make sure they always pay above the wage floor so they're not regarded as a minimum wage employer, and to avoid inadvertently underpaying. Falling pay differentials between workers within the same firm have implications for progression in the workplace, which we discuss in Chapter 4.

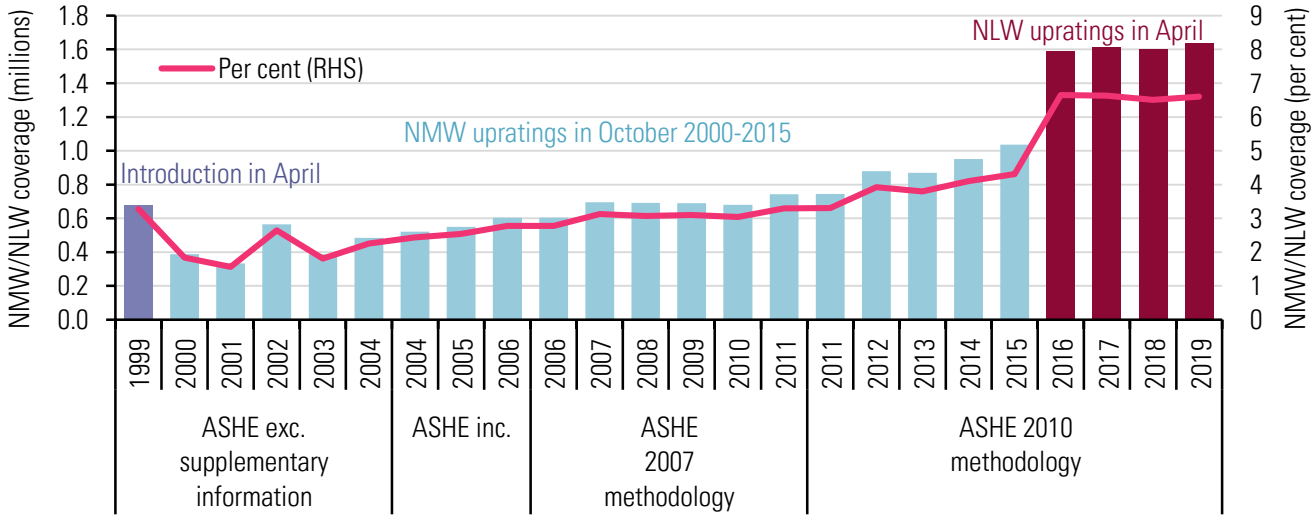
2.7 Our estimates rely on assumptions about how fast pay would have increased if the NLW had not been introduced. Between 2015 and 2019, hourly pay grew at a roughly constant rate for jobs paid in the 36th to 80th percentiles. We assume that if the NMW/NLW had not increased in this period, pay for the bottom 35 percentiles would have grown at a similar rate. The right-hand side of Figure 2.2 breaks down the increase in pay for the bottom 35 percentiles into the estimated increases without the NLW and the increases induced by the NLW (including spillovers). The decision to make the cut-off at the 35th percentile is based on inspection of the left-hand side of Figure 2.2, so may slightly underestimate or overestimate the scope of spillovers.

2.8 Reassuringly, our estimates are similar to previous estimates. Butcher, Dickens, and Manning (2012) estimated that increases in the NMW before 2010 had spillover effects up until the 25th

percentile of workers. Avram and Harkness (2019) estimate that spillover effects of the NLW reached the 30th percentile and Cribb, Giupponi, Joyce, Lindner, Waters, Wernham, and Xiaowei (2021) found statistically significant spillover effects up until the 25th percentile of workers for the changes between 2015 and 2019.

2.9 From 2016 onwards, around 1.6 million individuals, or just under 7 per cent of those aged 25 and over, were paid up to 5 pence above the NLW, which we refer to as 'coverage'. This increase, from just under 1 million in 2015 to 1.6 million in 2016, was the largest rise in the minimum wage's history (Figure 2.3). However, this increase is in part down to changes in the uprating timetable.

Figure 2.3: Coverage of workers aged 25 and over, ASHE, UK, 1999-2019

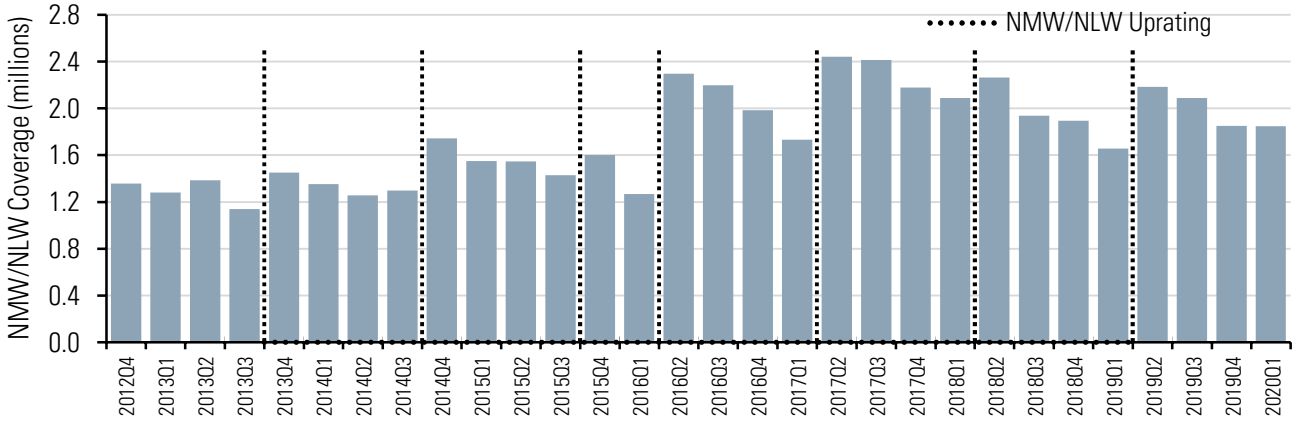


Source: LPC analysis of ASHE, low pay weights, workers aged 25 and over, excludes first year apprentices, UK, 1999-2019.

2.10 When the NLW was introduced, new rates came into force each April rather than each October. Our key data source for measuring pay and the effects of the NMW is the Annual Survey of Hours and Earnings (ASHE), which is conducted each April. The timetable change means we switched from measuring coverage six months after the uprating came in, to doing so at the peak of coverage, almost immediately after the uprating in April. Using the Labour Force Survey (LFS) to measure coverage helps show the impact of this, though it provides less accurate estimates of the actual level of coverage. Unsurprisingly, Figure 2.4 shows that coverage is highest in the quarter immediately after the uprating occurs, and then falls over the year as workers receive increases in pay taking them above the minimum wage and therefore out of coverage.

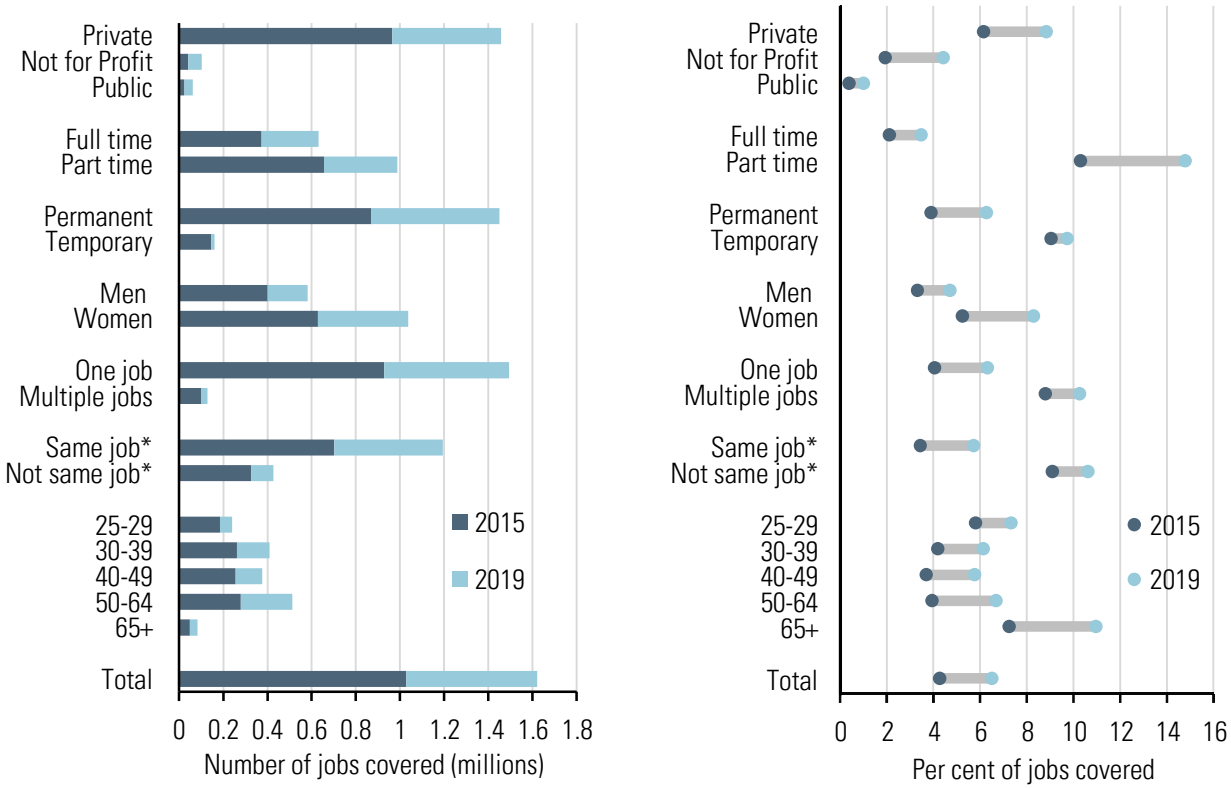
2.11 Nevertheless, our best estimates suggest coverage did increase substantially on introduction of the NLW, and this increase meant the NLW covered a different cohort of workers and jobs. While the vast majority (90 per cent) were in the private sector in 2019, this was lower than in 2015 (94 per cent) as coverage rates increased at a faster rate in the public and voluntary sectors, albeit from low bases. Similarly, the majority of NLW jobs were still part-time: 61 per cent of NLW jobs were part-time in 2019 compared with 27 per cent of all jobs. But coverage increased faster among full-time jobs, which made up 39 per cent of NLW jobs in 2019, up from 36 per cent in 2015. An already predominantly female workforce became even more so (the share of NLW jobs held by women increased from 61 per cent to 64 per cent). There were increases across the age ranges, but particularly for older workers. Finally, there was a rise in salaried workers, i.e. those who are not paid by the hour and are paid monthly. This coincides with an increase in measured underpayment, which we discuss later.

Figure 2.4: Coverage of workers aged 25 and over, LFS, UK, 2012 Q4-2020 Q1



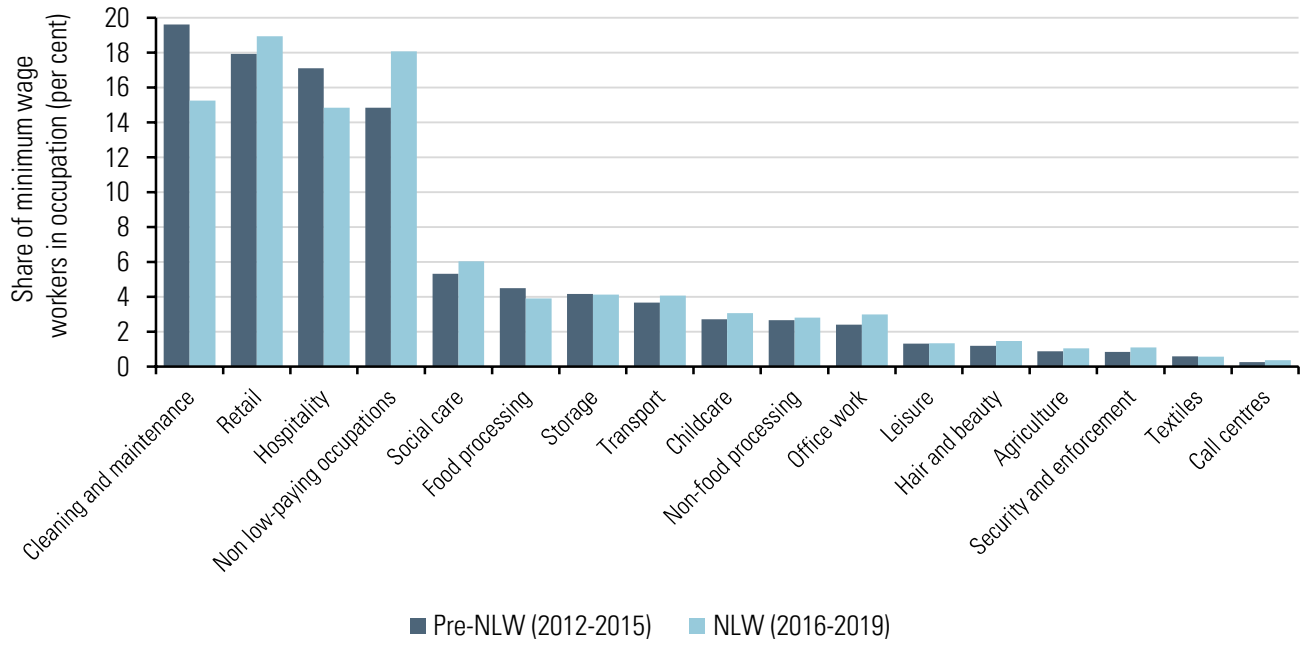
Source: LPC analysis of LFS, income weights, using imputed pay, UK, 2012 Q4-2020 Q1.

Figure 2.5: Coverage of the NMW/NLW by worker and job characteristics, workers aged 25 and over, UK, 2015-2019



Source: LPC analysis of ASHE, low pay weights, workers aged 25 and over, excludes first year apprentices, UK, 2015-2019.
Note: Same job refers to workers with matched record of being in same job in previous year. Not same job is all other workers.

Figure 2.6: Share of all minimum wage workers aged 25+, by low-paying occupations, UK, 2012-2019



Source: LPC analysis of ASHE, using SOC2010, low pay weights, payrolled workers aged 25 and over, excludes first year apprentices, UK, 2012-2019.

2.12 The NLW has also changed how minimum wage workers are distributed between occupations. Between 2012 and 2015, 55 per cent of minimum wage jobs for those aged 25 and over were in cleaning and maintenance, retail, or hospitality (the three biggest low-paying occupations.) While minimum wage workers are still concentrated in these occupations, they now make up only 49 per cent of coverage.

2.13 Low-coverage occupations have seen the fastest increases in coverage since the NLW was introduced (Table 2.1). For instance, on average between 2012 and 2015, 6,000 nursing auxiliaries and assistants were minimum wage workers, only 1.6 per cent of all payrolled workers in that occupation. By 2016-2019, this had quadrupled to 24,000 workers, 6.1 per cent of all payrolled workers in the occupation. There has also been fast growth in coverage in some retail occupations and other occupations that tend to be in government-funded sectors, such as teaching assistants and care workers. Pay settlements in these occupations have not kept pace with NLW increases.

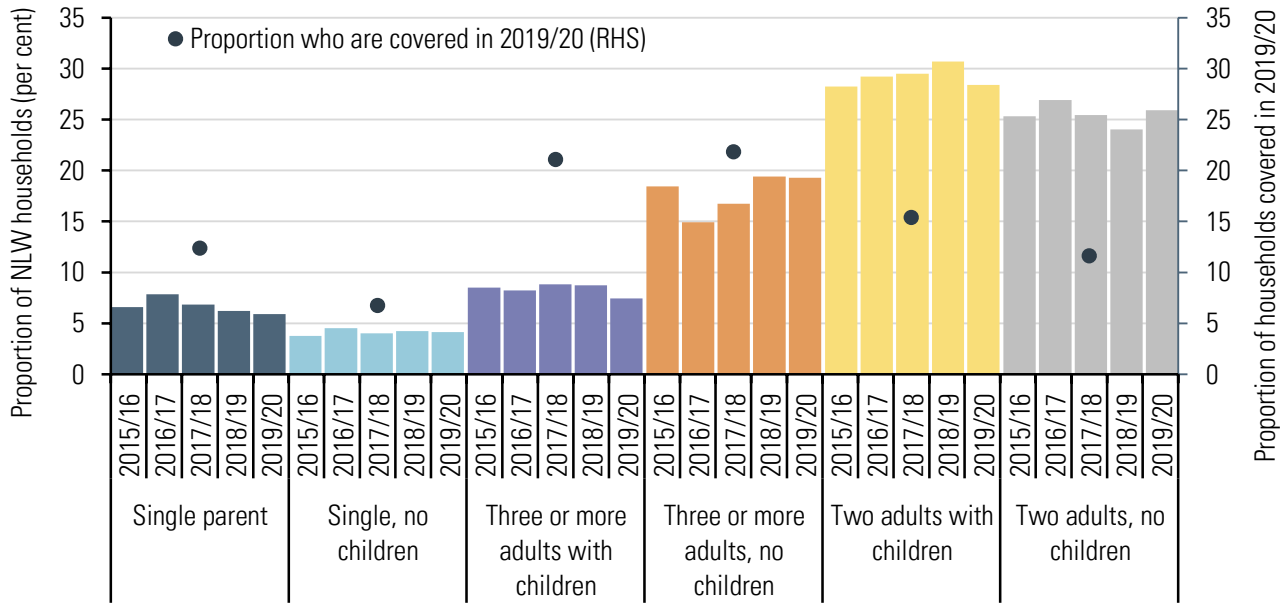
Table 2.1: Occupations with largest increase in share of NMW/NLW workers, UK, 2012-2019

Occupation (SOC 2010 4 digit)	Low paying occupation?	Average number of NMW workers (2012-2015)	Average number of NLW workers (2016-2019)	Increase in NMW/ NLW workers	Coverage rate (2012-2015)	Coverage rate (2016-2019)	Share of all NMW workers (2012-2015)	Share of all NLW workers (2016-2019)	Change in share of all NMW/ NLW workers
		thousands		per cent	per cent		per cent		
Nursing auxiliaries and assistants	No	6	24	304	1.6	6.1	0.6	1.5	0.8
Other admin occupations n.e.c.	No	24	54	124	3.0	6.0	2.6	3.4	0.8
Receptionists	Yes	11	30	182	4.9	12.6	1.2	1.9	0.7
Customer service occupations n.e.c.	Yes	10	29	181	3.5	8.8	1.1	1.8	0.7
Care workers and home carers	Yes	47	92	95	7.4	14.4	5.1	5.7	0.7
Nursery nurses and assistants	Yes	13	30	134	9.9	19.7	1.4	1.9	0.5
Retail cashiers and check-out operators	Yes	3	13	306	2.8	11.6	0.4	0.8	0.5
Teaching assistants	No	4	13	255	1.1	3.8	0.4	0.8	0.4
Chefs	Yes	17	36	110	10.8	16.8	1.9	2.3	0.4
Van drivers	Yes	29	54	85	10.4	17.5	3.2	3.4	0.2

Source: LPC analysis of ASHE, using SOC2010, low pay weights, UK, 2012-2019. Payrolled workers aged over 25, excludes first year apprentices.
Note: n.e.c. = not elsewhere classified.

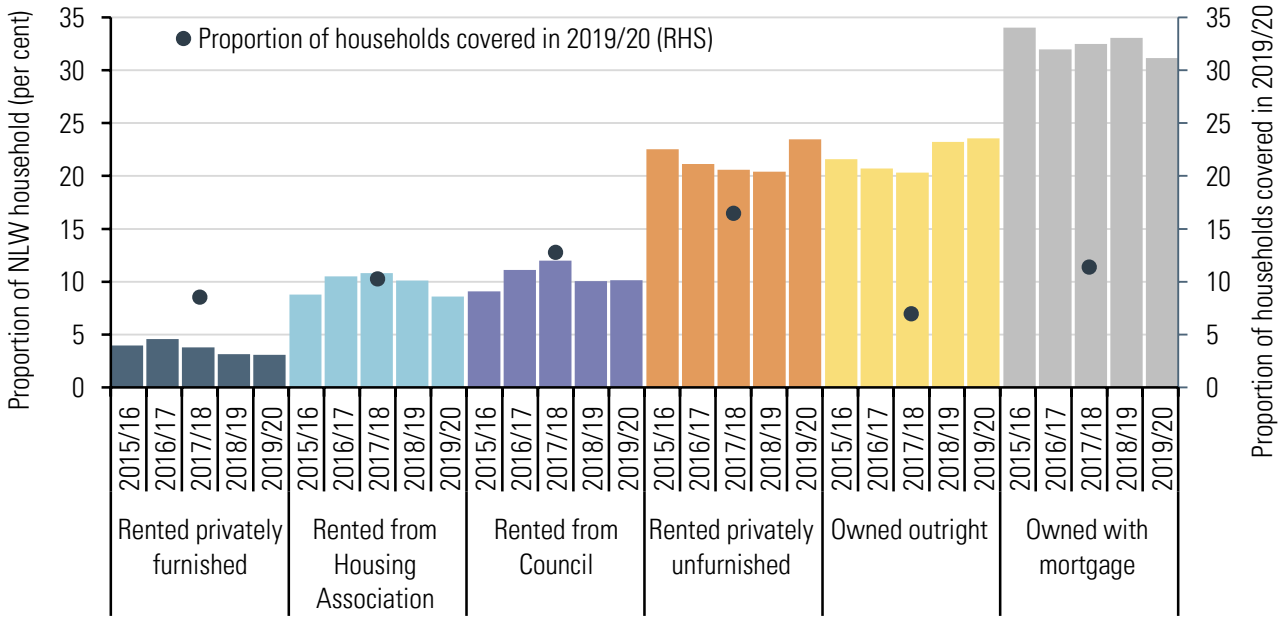
2.14 As coverage increased at an individual level, so it did at a household level, drawing in households who had not been directly affected by the minimum wage before. However, the balance of different household types remained fairly similar over the period (Figure 2.7). Likewise, the pattern of coverage across different tenure types remained broadly stable between 2015/16 and 2019/20. (Figure 2.8). Across all households with an NLW worker, around 55 per cent are owner-occupiers, a quarter are private renters and a fifth are social renters. Households which rent from a housing association or council have lower coverage rates than private renters because these households are less likely to have anyone in work at all. NLW workers in owner-occupied households are mainly partners and children of higher-paid main earners. This challenges the view that the NLW is a tool which targets poorer households; many of the households with at least one worker paid at the rate are able to afford to own their home.

Figure 2.7: Coverage at a household level by composition of household, UK, 2015/16-2019/20



Source: LPC analysis of Family Resources Survey, standard weights, UK, 2015/16 - 2019/20.

Figure 2.8: Coverage at a household level by housing tenure type, UK, 2015/16-2019/20

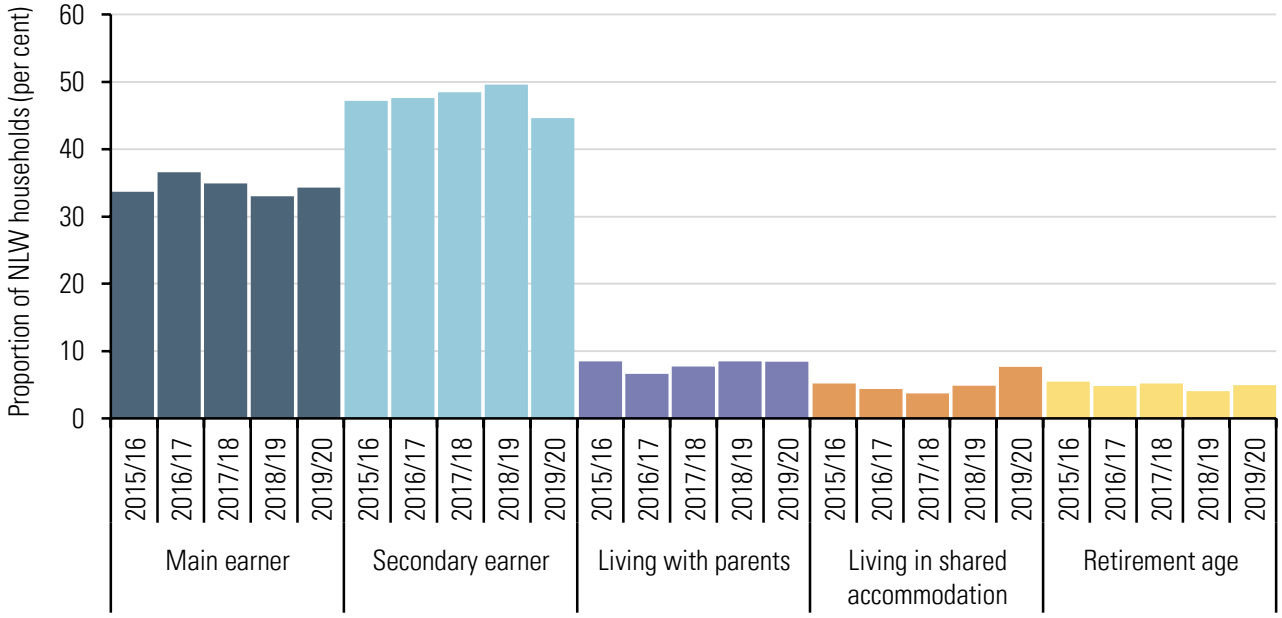


Source: LPC analysis of Family Resources Survey, standard weights, UK, 2015/16 - 2019/20.

2.15 Most minimum wage workers are not the main earners in their household, and this has not changed since the introduction of the NLW. Figure 2.9 shows that minimum wage workers have consistently been the main earners in around 35 per cent of households with at least one low-paid worker. But they are more likely to be secondary earners, earning less than other workers in the household. There is also a significant minority of NLW workers who either live with their parents or live

in shared accommodation with other individuals or families. A small number of NLW workers are of retirement age and may have chosen to continue working for a variety of reasons.

Figure 2.9: Coverage at a household level by the role of the NLW worker in the household, UK, 2015/16-2019/20



Source: LPC analysis of Family Resources Survey, standard weights, UK, 2015/16 - 2019/20.

Geographic impacts

2.16 Minimum wage workers continued to make up a greater share of workers who work in rural and coastal areas. Coverage increased from 4.6 per cent in 2015 to 7.5 per cent in 2019 in local authorities predominantly made up of villages or small towns. Coverage only increased from 3.7 per cent to 5.3 per cent in local authorities within cities.[2]

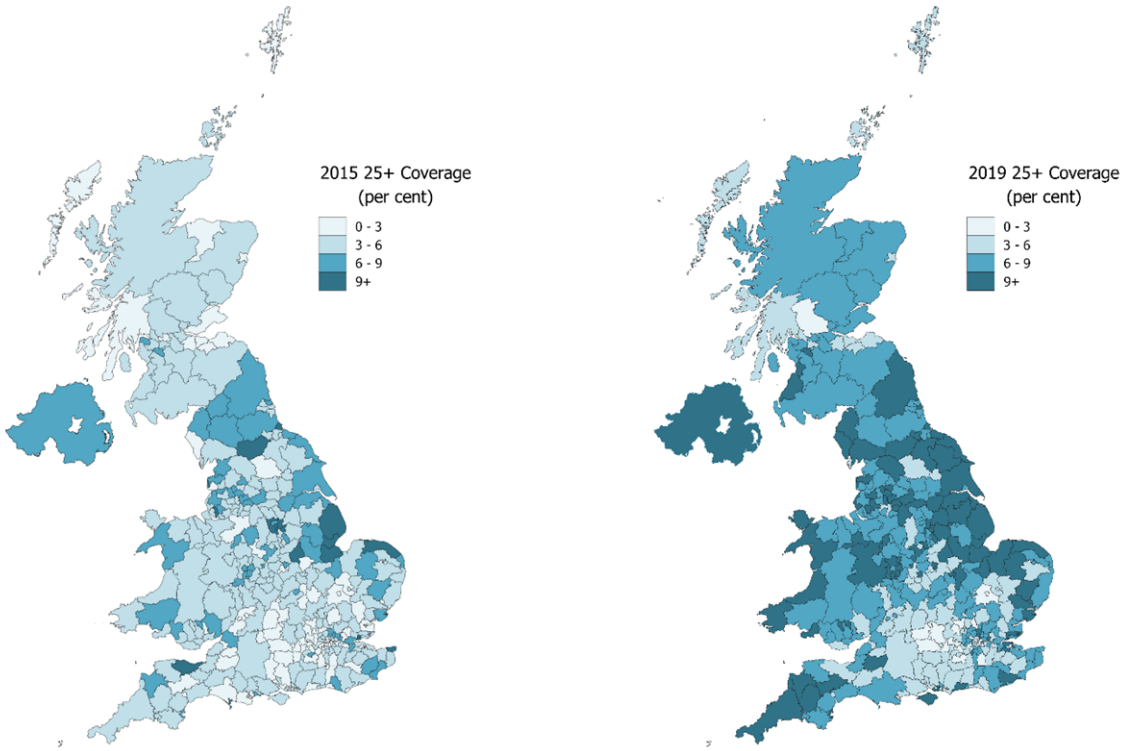
2.17 The introduction of the NLW has meant that minimum wage workers are spread more evenly across the country. While in absolute terms coverage has grown more in high coverage areas, low coverage areas have seen higher percentage increases in coverage. This is shown in Table 2.2. The coverage rate increased by 73 per cent (1.4 percentage points) in the quintile of local authorities with the lowest coverage. The coverage rate increased by only 58 per cent (3.9 percentage points) in the quintile of local authorities with the highest coverage. This means that coverage is now slightly more evenly spread across the country.

2.18 We can use the Gini coefficient (a measure of inequality) to summarise how minimum wage workers have become more evenly spread across the country. We apply the Gini coefficient to coverage rates by workplace local authorities. A Gini coefficient of 1 would mean that all minimum wage workers

[2] LPC analysis of ASHE using House of Commons City Town Classification at local authority level. We group authorities based on the city/town/village classification that is most common in that area. Does not include Northern Ireland.

worked in one local authority, while a Gini coefficient of 0 would mean that the coverage rate was the same in every local authority. Using this measure, we can see coverage has become more evenly spread; the Gini coefficient fell from 0.26 in 2015 to 0.23 in 2019. Planned future increases to the NLW are likely to continue to spread coverage more evenly across the country.

Figure 2.10: Coverage for workers aged 25 and over by local authority, UK, 2015 and 2019



Source: LPC analysis of ASHE, low pay weights, UK, 2015 and 2019, workplace based local authorities, workers aged 25 and over, excludes first year apprentices.

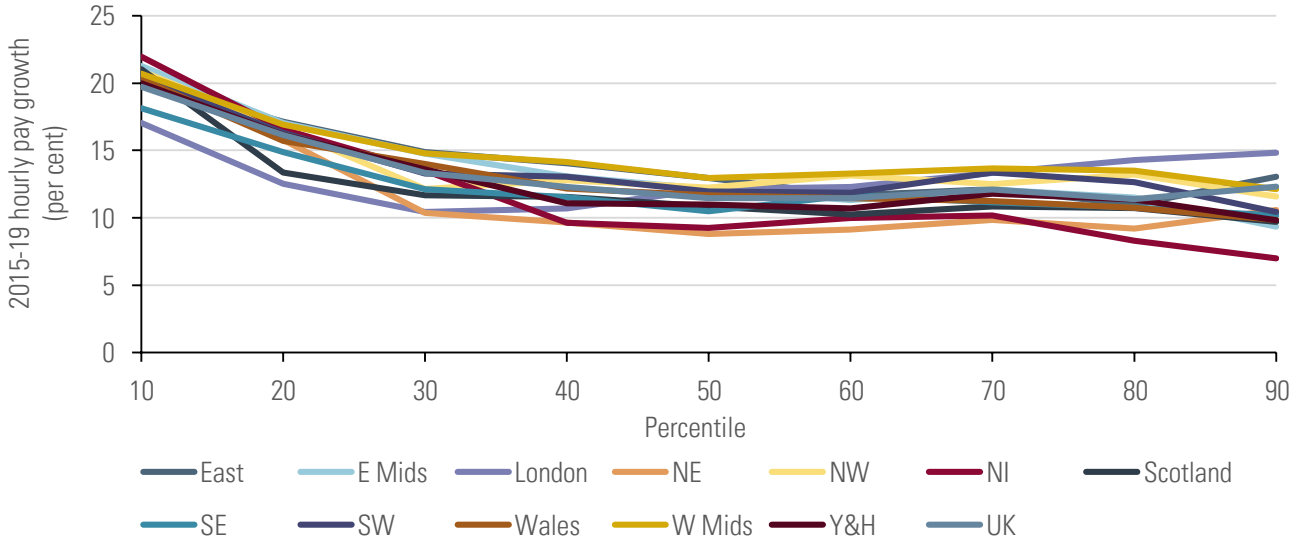
2.19 The introduction of the NLW also led to reduced hourly pay inequality between and within regions. Figure 2.11 shows hourly pay growth between 2015 and 2019 across the pay distribution deciles for each region and nation in the UK. We can see that across the whole of the UK pay growth was highest at the 10th percentile, driven by increases to the NLW. These increases ranged from 17 per cent (London) to 22.5 per cent (Northern Ireland). Whilst growth was lower at the 20th percentile, for most regions it was still higher than further up the distribution, indicating spillover effects as those paid slightly above the NLW received higher than the average growth in pay. NLW increases meant growth in absolute terms was also higher at the 10th percentile compared to most other workers in the bottom half of the pay distribution.

Table 2.2: Coverage of workers aged 25 and over, by local authority coverage rate quintile, GB, 2012-2019

Local authority coverage rate quintile (1 lowest)	Coverage Rate (2012-2015)	Coverage Rate (2016-2019)	Percentage increase in coverage rate	Percentage of all covered workers (2012-2015)	Percentage of all covered workers (2016-2019)	Percentage of all payrolled jobs (2012-2015)	Percentage of all payrolled jobs (2016-2019)
1	1.9	3.3	73	12.6	14.0	26.3	27.8
2	3.2	5.6	74	18.3	17.6	22.4	20.3
3	4.1	7.0	71	18.9	21.8	18.0	20.1
4	5.2	8.5	64	23.4	24.3	17.9	18.6
5	6.9	10.8	58	26.8	22.3	15.4	13.3

Source: LPC analysis of ASHE, low pay weights, GB, 2012-2019, payrolled workers aged over 25. Excludes first year apprentices. Excludes Northern Ireland due to lack of local authority level data. Quintiles are calculated based on relevant period, so comparison between periods includes effect of local authorities moving between different quintiles.

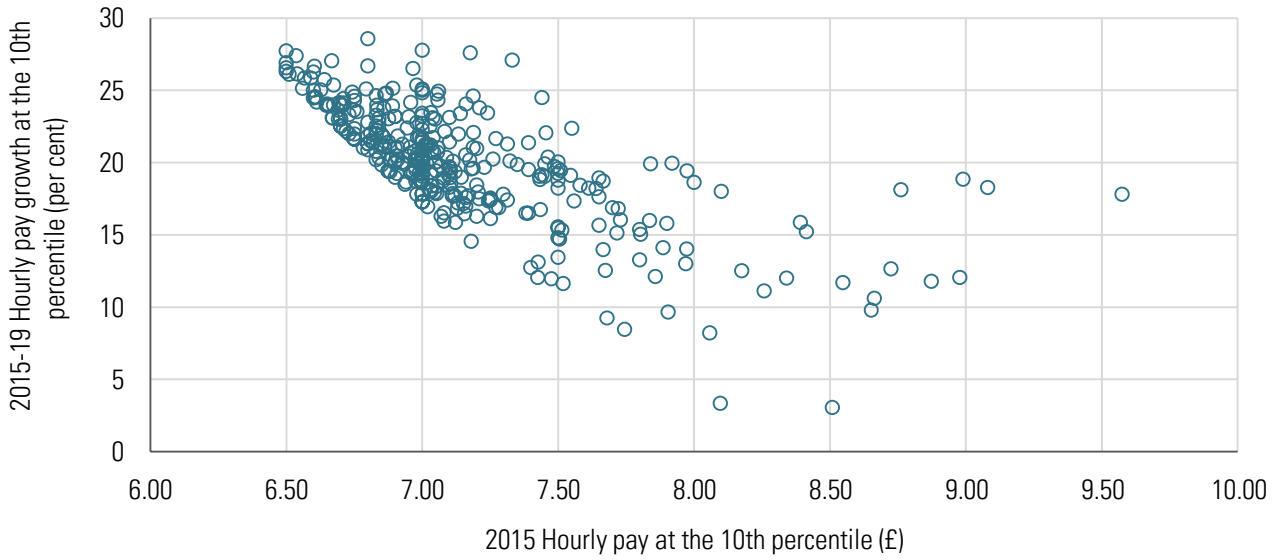
Figure 2.11: Percentage growth in hourly pay for workers aged 25 and over, by region, UK, 2015-2019



Source: LPC analysis of ASHE, standard weights, workers aged 25 and over, excludes first year apprentices, UK, 2015-2019.

2.20 Figure 2.12 shows the percentage growth at the 10th percentile relative to the level of hourly pay at the 10th percentile in 2015 by local authority. It shows that even though the range of hourly pay in 2015 at the 10th percentile was fairly narrow (£6.50-£8.00 for most authorities), those with the lowest levels of pay in 2015 saw the highest pay growth across the period as hourly pay rates towards the bottom of the pay distribution were pushed up by an increasing NLW. Pay growth appears to have generally been higher in coastal areas than large cities, indicating that these parts of the country had lower levels of pay prior to the introduction of the NLW.

Figure 2.12: Growth in hourly pay at the 10th percentile for workers aged 25 and over, by local authority, UK, 2015-2019



Source: LPC analysis of ASHE, standard weights, workers aged 25 and over, excludes first year apprentices, UK, 2015-2019, based on workplace local authority.

2.21 The finding that the NLW has helped to reduce regional earnings inequality across the UK is supported by research evidence. Avram and Harkness (2019) investigated the impact of the NLW on the wage distribution using ASHE and the variation in the minimum wage coverage rate across travel to work areas (TTWAs). They found that hourly wage and earnings growth was stronger at the bottom of pay distribution within TTWAs since the introduction of the NLW. Growth in hourly and weekly pay at the bottom of the local pay distribution was strongest in areas with a higher share of minimum wage workers (at the 5th and 10th percentiles).

2.22 Dickens and Lind (2018) assessed the impact of the NLW on a range of labour market outcomes using geographic variation in wages (again using TTWAs). They found strong wage effects at the bottom of the pay distribution (within TTWAs) following the introduction of the NLW and the 2017 uprating, with significant spillover effects and no significant effects on employment.

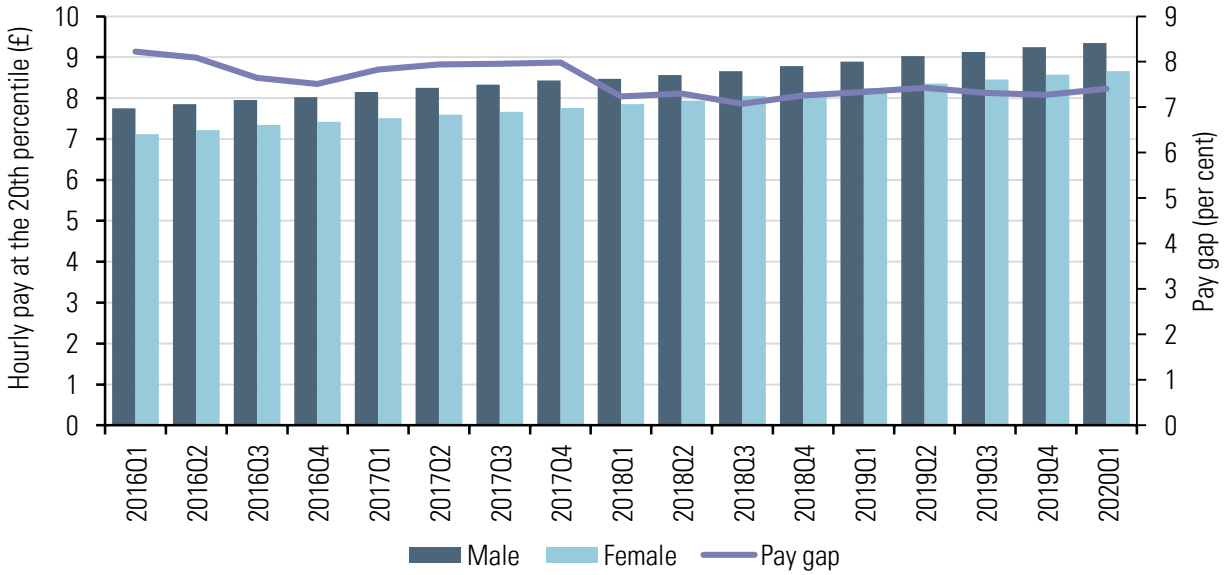
2.23 The introduction of the NLW clearly increased hourly pay for the lowest-paid workers. And it has done so across the country, with areas in receipt of the lowest levels of pay seeing the highest growth. It has therefore played an important role in reducing regional earnings inequality.

Impacts on groups of workers

2.24 We are also interested in how different groups of workers have been affected by the rising NLW. We know that certain groups are more likely to be paid the minimum wage, including younger workers, female workers, ethnic minority workers, and those who were born outside the UK. We also know that the NLW has helped to increase the hourly earnings of low-paid workers. So, a key question is, have these groups of workers who are more likely to be paid the NLW benefited more from increases in the rate?

2.25 Figure 2.13 shows hourly pay at the second decile for women and men workers over the lifetime of the NLW, alongside the corresponding gender pay gap. The second decile refers here to pay for the woman who is paid more than 20 per cent of women and the man who is paid more than 20 per cent of men. We look at the 20th percentile as this is the point in the distribution where we are likely to see differential impacts of the NLW. Male workers tend to have higher hourly pay than female workers, but the gap has been falling marginally: from 8 per cent in the first quarter of 2016 to 7 per cent in the first quarter of 2020. Women are more likely to be paid the NLW, so the strong increases in the NLW and the accompanying spillover effects have increased pay at the 20th percentile more for women than men.

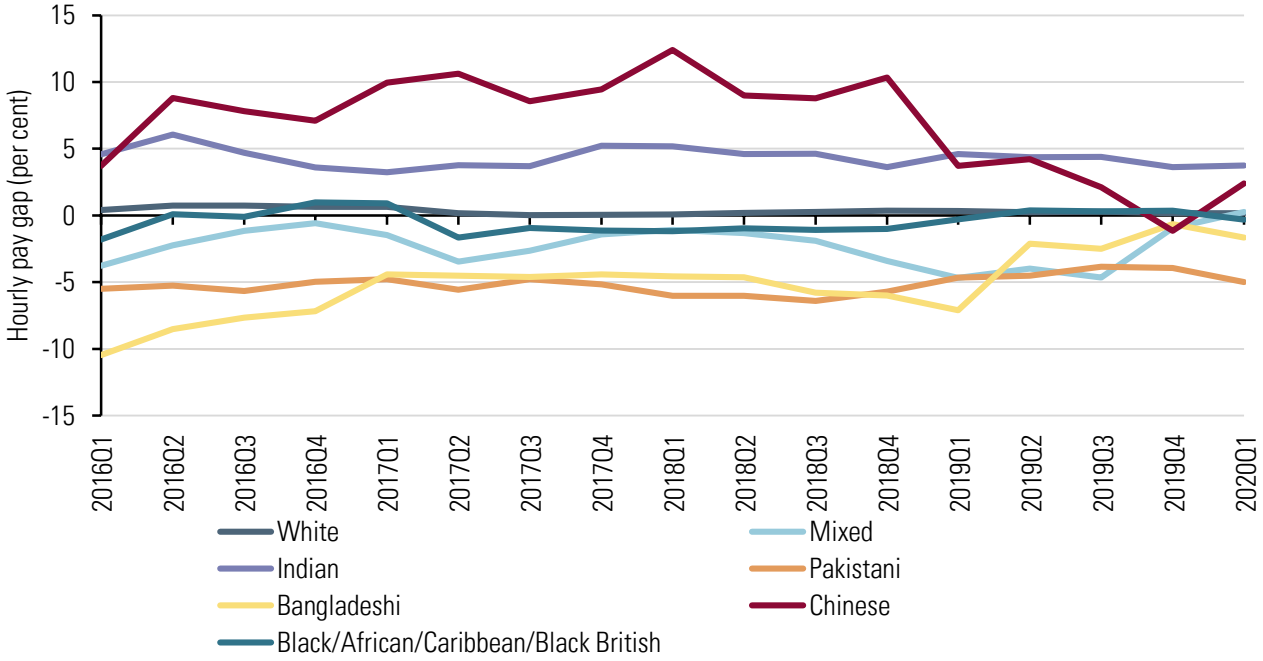
Figure 2.13: Hourly gender pay gap at the 20th percentile, UK, 2016 Q1 – 2020 Q1



Source: LPC estimates using LFS, income weights, imputed hourly pay, quarterly data, not seasonally adjusted, four quarter rolling average, UK, 2015 Q2 – 2020 Q1.

2.26 Similarly, Figure 2.14 shows the difference between hourly pay at the 20th percentile for workers of each ethnicity compared to hourly pay at the 20th percentile for all workers. Workers of Indian or Chinese ethnicity are likely to have higher hourly pay, while workers of Bangladeshi and Pakistani ethnicity tend to have the lowest hourly pay. There are tentative signs that the pay gap between these groups has been narrowing: in the first quarter of 2020, the range of hourly pay at the 20th percentile by ethnicity was 8.7 per cent, compared with 15.1 per cent in the first quarter of 2016. However, while the gap is closing for some groups (e.g. workers from a Bangladeshi background) it is not for others (e.g. workers from a Pakistani background.)

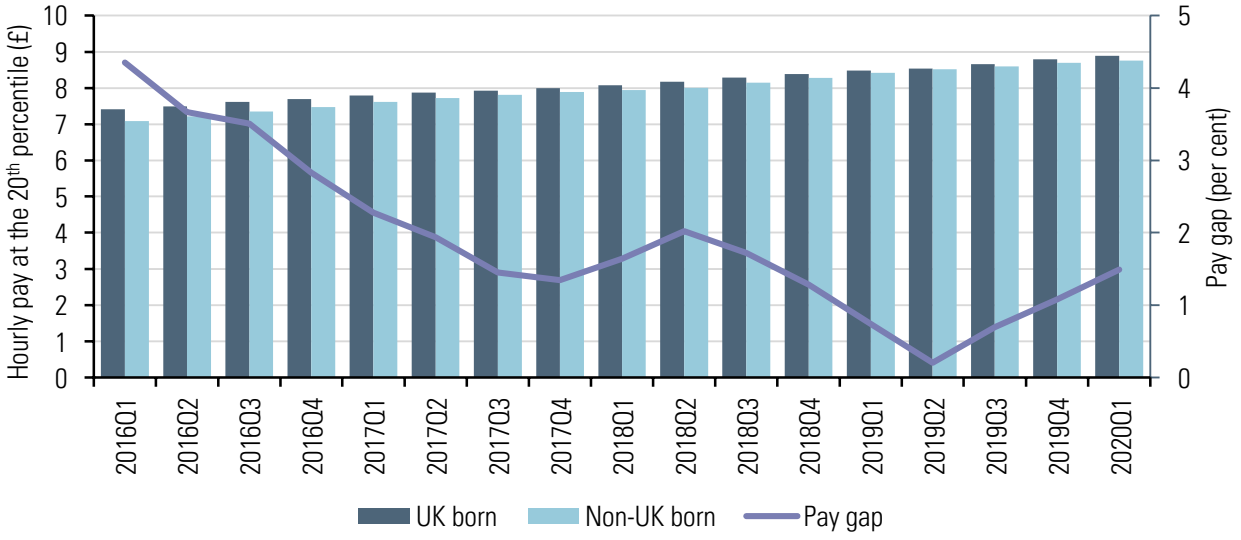
Figure 2.14: Hourly pay gap at the 20th percentile from all workers by ethnicity, UK, 2016 Q1 – 2020 Q1



Source: estimates using LFS, income weights, imputed hourly pay, quarterly data, not seasonally adjusted, four quarter rolling average, UK, 2015 Q2 – 2020 Q1.

2.27 Figure 2.15 shows the hourly pay gap at the 20th percentile for workers who are born in the UK compared with workers born outside of the UK. UK-born workers tend to have higher hourly pay, but the gap has been closing substantially, from 4.4 per cent in the first quarter of 2016 to 1.5 per cent in the first quarter of 2020. Non-UK-born workers, who are more likely to be paid the NLW, have seen greater hourly pay growth over the period.

Figure 2.15: Hourly pay and the pay gap at the 20th percentile by country of birth, UK, 2016 Q1 – 2020 Q1



Source: estimates using LFS, income weights, imputed hourly pay, quarterly data, not seasonally adjusted, four quarter rolling average, UK, 2015 Q2 – 2020 Q1.

2.28 While this descriptive analysis does not in itself prove that the NLW is leading to stronger pay growth for certain groups, such a conclusion is backed up by research evidence. In 2020, the Bank of England investigated gender and ethnicity pay gaps in the UK using the LFS (Amadxarif, Angeli, Haldane, and Zemaityte, 2020). They found clear evidence of reduced gender and ethnicity pay gaps over the 25 years to 2019: the mean gaps have decreased by around half for female workers, and a little less than that for ethnic minority workers. Gaps have also reduced at the lower end of the pay distributions. They concluded that the introduction of minimum wage legislation appears to have contributed significantly to a shrinking of the gender pay gap among lower wage workers. Clark and Nolan (2021) used the LFS to look at the changing distribution of the male ethnicity pay gap in Britain. They found that the introduction and uprating of the NLW has contributed to improvements at the lower end of the pay distribution.

Impacts on younger workers

2.29 The NLW's introduction changed the age threshold for eligibility for the top minimum wage rate from 21 to 25 years old. This simultaneously created a new 'youth rate' for 21-24 year olds, who had previously received the adult rate of the NMW. While the remit for the NLW up until 2020 was to reach 60 per cent of median earnings, with some tolerance for job loss, the remit for the NMW (covering younger workers) continued be to set pay as high as possible without damaging job prospects. As a result, two groups of workers who had previously been eligible for the same wage floor started to be treated differently.

2.30 The new distinction between these workers could have led to two main effects. Firstly, it could have increased the risk of labour substitution between older and younger workers as the gap between the rates widened (increasing employment of younger workers). Secondly, it could have led to spillover effects from the higher rate to younger workers (increasing their pay).

2.31 We have limited evidence of labour substitution. Some stakeholders have told us that they have seen cases where an employer has chosen to employ a younger worker to save costs. But surveys of affected employers suggest this action was only taken by a minority. For example, around 5 per cent of employers affected by the NLW in surveys by the Federation of Small Businesses and the Chartered Institute of Personnel and Development (CIPD) said they had recruited more young workers (see Chapter 5 for more details). This may explain why this is not an effect we can clearly see in the data. At a macro level, employment rates continued to climb across all age groups throughout the first phase of the NLW. Aitken, Dolton, and Riley (2018) used the ASHE and the LFS to explore the impact of the NLW on employment retention. The results suggested that there was little differential change in employment retention between 22-23 and 25-26 year olds as a result of the introduction of the higher rate.

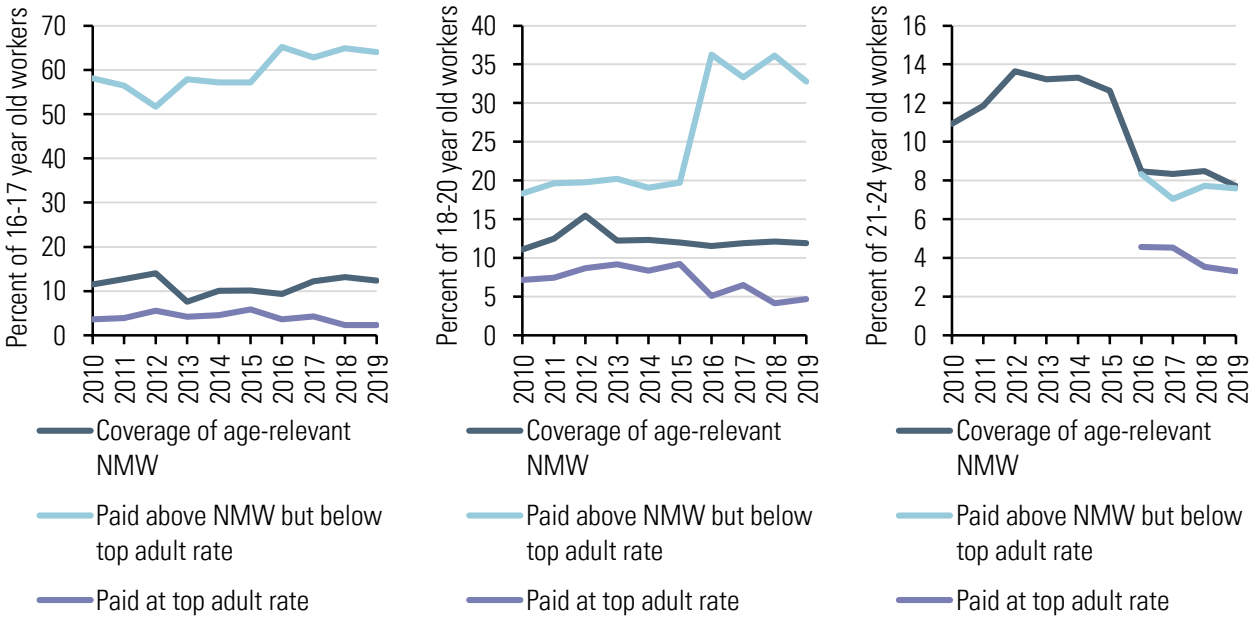
2.32 We have far more evidence, including from stakeholders, that shows the NLW has had a positive impact on younger workers' pay. At the time of our review of the youth rates (LPC, 2019a), social care providers told us that they either did not use the 21-24 Year Old Rate, or used it minimally, finding it difficult to attract staff if they paid below the NLW. Businesses in other low-paying sectors, including retail and hospitality, told us that employers tended to pay the NLW to all staff over the age of 18 for reasons of fairness.

2.33 This evidence is supported by Hudson-Sharp, Manzoni, Rolfe and Runge (2019) who investigated how employers set pay for young people. They found that employers made decisions on pay based on competitors' rates and affordability, rather than a worker's age. Several employers

reported paying the same rate to younger workers because of the perception of fairness, with some reporting that they found it difficult to recruit and retain staff when using the youth rates. Some employers chose to pay the same rate to all ages to avoid the complexity of having multiple rates. Where youth rates were used, employers said that it gave them flexibility to manage wage costs, reflecting productivity differences for younger staff with less experience.

2.34 Figure 2.16Figure 2.16 shows that a significant minority of workers under 25 were paid the NLW after its introduction. Since then, the proportion of workers in this age group paid the age-applicable NMW has fallen, while the proportion paid between this rate and the top adult rate has increased. Although most employers do not choose to pay the NLW to young workers, they have increasingly paid above the wage floor, suggesting that the existence of the NLW has encouraged employers to offer higher rates of pay to these workers.

Figure 2.16: Coverage of NMW and NLW among younger workers, UK, 2010-2019



Source: LPC estimates using ASHE, low pay weights, UK, 2010-2019, excludes first year apprentices.
Note: Workers paid above NLW are not shown but are included in the denominator.

2.35 Econometric evidence also demonstrates that the introduction of the NLW has helped to improve the pay of younger workers. Aitken, Dolton, and Riley (2018) found that wages increased for both 22-23 and 25-26 year olds at the time of the NLW's introduction, with little differential change in employment retention between the two age groups. Giupponi and Machin (2018) found that, in the care sector, young workers' wages had risen in tandem with the higher adult rate, but with no impact on their employment.

2.36 To inform our review of the NLW, we commissioned the Institute for Fiscal Studies (IFS) to investigate the impacts that the NLW had on wages and employment over the 2016-2019 period (Cribb, Giupponi, Joyce, Lindner, Waters, Wernham, and Xu, 2021). They found that the wages of workers aged under 25 were substantially positively increased by the introduction of the NLW and subsequent uplifts, with no negative employment effects. They estimated that around 250,000 employees aged under 25 saw an increase in wages to above the NLW due to the policy.

2.37 Overall, the evidence suggests that the NLW indirectly increased the pay of younger workers without harming their employment and without large scale labour substitution from older to younger workers. This was a key part of our rationale for recommending the reduction in the age threshold for the NLW to 23 in April 2021, and the further reduction to 21 by 2024. These changes will ensure that many more workers directly benefit from increases to the NLW.

Other aspects of pay and reward

2.38 Shortly before the NLW came into force it became apparent that some employers were adjusting other aspects of their pay and reward packages to compensate for at least some of the greater costs (O'Connor, 2016). This included things like the reduction or removal of pay premiums for weekend or night shifts; moving to flexible or 'banked' hours contracts that remove the need to pay overtime; cutting paid breaks and reducing other perks such as free food. The then Chancellor, George Osborne, responded that these firms were not acting within the spirit of the law and should 'abide by their responsibilities' (Butler, 2016).

2.39 In various surveys of employers, these compensatory responses have featured consistently but only among a minority of affected firms (approx. 10-20 per cent of affected firms). We've frequently heard about changes like this in our conversations with employers and workers. While some firms are undoubtedly making these changes, it is hard to assess the role of the NLW in these and many of them are difficult to measure.

2.40 There are some aspects we can measure: overtime and premium pay. Figure 2.17 shows the share of total pay that is made up of overtime and premiums for a range of different workers over the last few years. The first thing to note is that overtime and premiums have been falling as a share of pay for all workers for some time, a point made recently by the CIPD (CIPD, 2021). But for those directly paid the NMW/NLW the story is different.

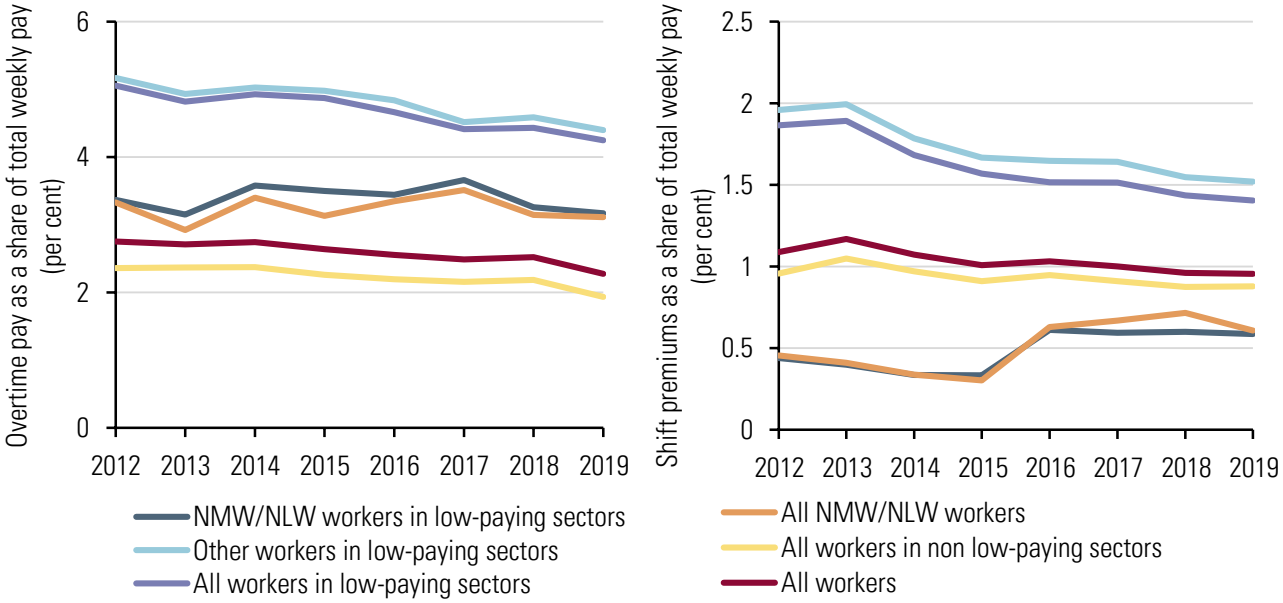
2.41 Overtime payments for NLW workers have changed year-to-year but remained fairly stable at just above 3 per cent of weekly pay between 2015 and 2019. This suggests that firms have not responded to the introduction of the NLW by cutting back on overtime for NLW workers. However, we can see that despite overtime payments holding up for NLW workers it has fallen slightly in the sectors of the economy where NLW jobs are, perhaps affecting those paid just above the NLW. This might explain why we frequently hear of these changes from large national retailers, who all tend to pay above the NLW rates, while seeing little change for NLW workers themselves. Cutting overtime payments for non-NLW workers may be one way that firms reduce overall pay differentials between NLW and non-NLW workers, which we discuss in Chapter 4. Firms may choose to cut back on overtime and shift pay for their non-NLW workers, so they can maintain the pay differentials in basic hourly pay.

2.42 We see a similar picture for shift premiums. Shift premiums have fallen relative to total pay between 2015 and 2019 for UK workers on average, but they have increased slightly for NMW/NLW workers. This could be partly due to changes in the type of workers who carry out minimum wage work, for example an increasing proportion of minimum wage workers work in retail where shift premiums are more common.

2.43 Our analysis of changes to overtime and premiums finds no evidence that the introduction of the NLW has led to employers cutting back on overtime pay and shift premiums for NLW workers, but it

may have caused firms in low-paying sectors to cut back overtime and shift premium payments for other workers.

Figure 2.17: Overtime pay and shift premiums as a percentage of total weekly pay by NMW/NLW worker and low-paid occupations, UK, 2012-2019



Source: LPC analysis of ASHE, UK, 2012-2019 standard weights, payrolled workers aged over 25, excludes first year apprentices.

Conclusions

2.44 The NLW has significantly raised pay levels for low-paid workers. In so doing, it has reduced wage inequality within and between all regions and nations in the UK and contributed to reduced gender and ethnicity pay gaps. Many more workers than those directly paid the NLW rate benefit from this increase. Around 1.6 million workers are paid the NLW, but up to 6.7 million more saw higher pay than they otherwise would have done. In total, the effects of the minimum wage reach up to around 35 per cent of the workforce. In the next chapter we look at what this increase in hourly pay means for weekly pay and household incomes.

Chapter 3

Weekly pay and household incomes

Key points

- As the National Living Wage (NLW) increased hourly pay, weekly pay increased in line with this. NLW workers in 2019 were more likely to work full-time than minimum wage workers aged 25 and over in 2015.
- While hourly pay increases have translated into weekly pay increases, other income sources in the household are also important determinants of household incomes. NLW workers are the main earner in around a third of households (with an NLW worker), therefore the earnings of another higher earning worker significantly determine total household incomes for most NLW workers. Benefit receipt is also a key determinant in low-income households.
- Lower-income households have become more likely to be affected by increases in the NLW as coverage (and the rate) has increased among working households.
- Households with at least one minimum wage worker saw greater increases in earnings than other households (31 per cent, compared with 20 per cent, between 2015/16 and 2019/20), suggesting the NLW helped to reduce earnings inequality between households.
- However, household income overall has grown at a similar rate in households with and without NLW workers and so the impact on income inequality has been more muted. This is partly because some of the earnings gains made by households are offset through benefits and taxation.

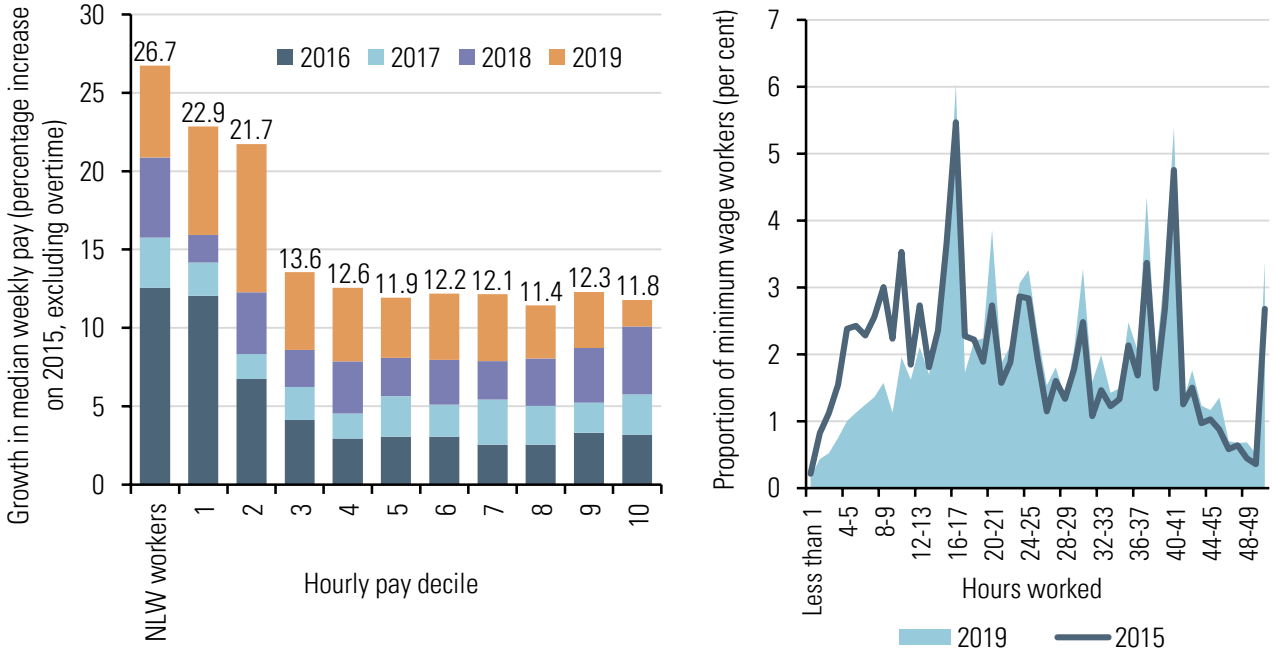
3.1 The National Living Wage (NLW) directly affects the hourly pay of low-paid workers, but while hourly rates of pay are important to workers, what matters for living standards is workers' total weekly or monthly pay. The NLW has pushed up hourly pay across the economy; however, increases in hourly pay don't automatically translate into a higher monthly or weekly pay packet or to overall household income. This is because the number of hours worked is just as important for total earnings. The household may be dependent on multiple sources of income and increases in earnings are reduced by taxation and benefits. In this chapter, we discuss these factors in more detail.

Weekly versus hourly pay

3.2 One of the risks in pushing up hourly pay is that employers reduce weekly hours to restrict the rise in labour costs. As shown in Figure 3.1, over the 2015-2019 period, weekly pay for NLW workers grew at a similar rate (26.7 per cent) to the NLW itself (26 per cent). This suggests that the introduction of the NLW did not reduce hours for minimum wage workers and may even have increased them slightly. The right-hand side of Figure 3.1 reinforces this finding. It shows that minimum wage workers in 2019 worked more hours than minimum wage workers in 2015. Of the 1.6 million workers covered

by the NLW in 2019, 17 per cent worked 14 hours or less. This is far lower than the share (29 per cent) of minimum wage workers who worked 14 hours or less in 2015.

Figure 3.1: Weekly pay growth by hourly pay deciles, and hours worked by covered employees, UK, 2015-2019

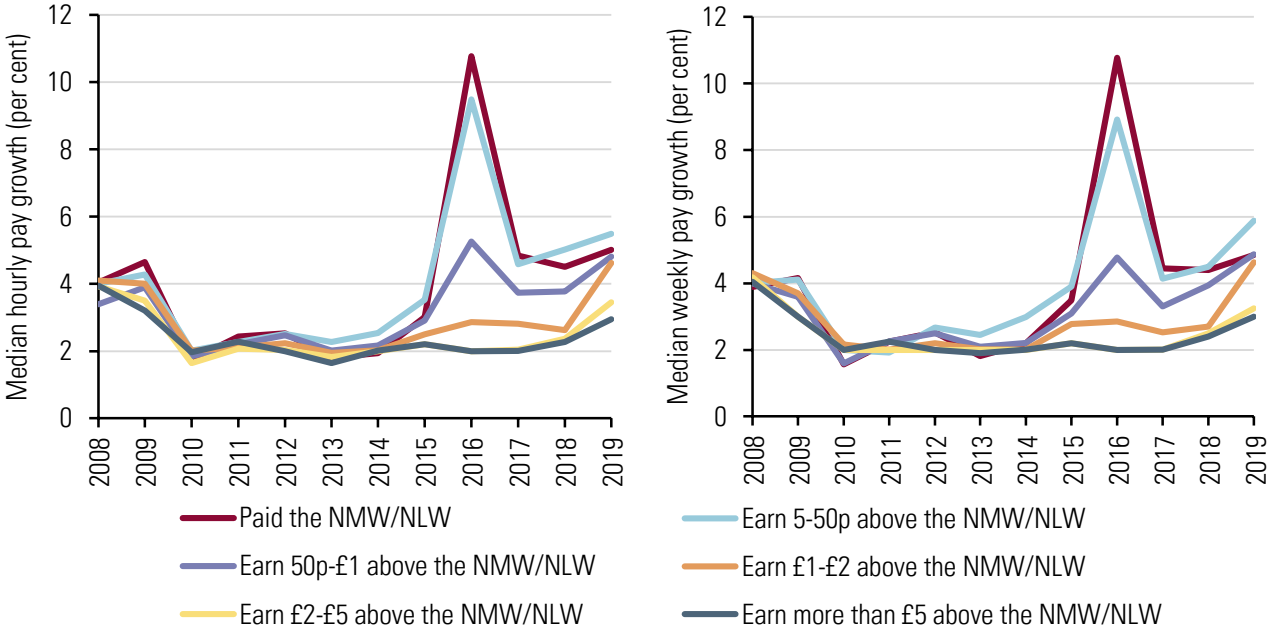


Source: ASHE, standard weights 2015-2019. Workers aged 25 and over, excludes first year apprentices.

3.3 However, changes in the composition of minimum wage workers could also be driving the increase in average hours for minimum wage workers. There were 600,000 more workers covered by the NLW in 2019 than covered by the NMW (aged 25 and over) in 2015. If the new minimum wage workers work more hours on average than the 2015 minimum wage workers, average hours for minimum wage workers would increase. To avoid compositional issues clouding the underlying picture, we can track individual NLW workers over time to see if their NLW increases translate into weekly pay increases. Figure 3.2 compares these two metrics, showing growth in individuals' average hourly weekly wages year to year, across different pay bands above the NLW.

3.4 On both measures, between 2008 and 2015 median pay growth was similar for minimum wage workers and other workers (though there would be variation within these groups). Since 2016, however, median pay growth for the lowest-paid workers increased considerably more quickly than for others. This gap was largest in 2016, when the wage floor increased the most, but was also present in 2017, 2018 and to a lesser extent in 2019. The picture is very similar when looking at weekly pay. This suggests that the average minimum wage worker saw increases in their weekly wages comparable to the increase in their hourly pay following the introduction of the NLW.

Figure 3.2: Median hourly pay growth (LHS) and median weekly pay growth (RHS) for employees aged 25 and over, by wage in previous year, UK, 2008-2019



Source: LPC analysis of linked of two-year linked ASHE datasets, standard weights, 2007-2019. May be subject to attrition bias. Workers aged 25 and over, excludes first year apprentices.

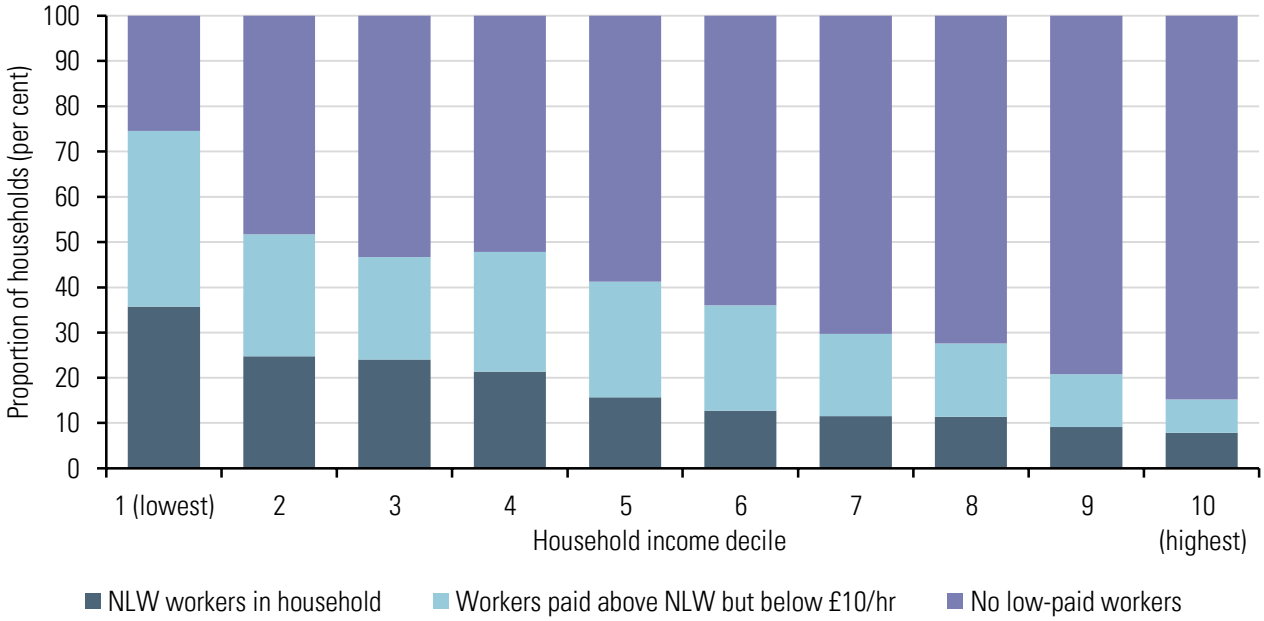
The impact of the National Living Wage on households

3.5 We investigate the impact of the NLW on household incomes in two ways. Firstly, we analyse how incomes have changed for NLW households over time, and then we discuss the results of an Institute for Fiscal Studies (IFS) microsimulation study we commissioned. Our internal analysis reflects the impact of the NLW as well as other policy measures and societal changes on NLW households, whereas the IFS analysis isolates the impact of the NLW on household income. The results from both analyses show a consistent picture.

3.6 To understand the impact of these hourly and weekly pay increases on income and living standards, it is important to understand low-paid workers' household make-up. Each household could have multiple earners and multiple sources of income, including from benefits.

3.7 Figure 3.3 shows where NLW workers are in the household income distribution for households with at least one working adult in 2019/20. We use the Family Resources Survey (FRS) over the period from 2015/16 to 2019/20 and identify NLW workers as those who are aged 25 or over and paid up to 5 pence above the NLW. While in 2019/20 the households of NLW workers were skewed towards the lower income deciles, they were spread throughout the whole distribution including the very highest income decile. This is consistent with international evidence showing that minimum wage workers are often located in high income households, and that most low earners are not the primary earners in their households (Matsaganis, Medgyesi, and Karkitsios, 2015; and Redmond, Doorley ,and McGuinness, 2020).

Figure 3.3: Income distribution of working households, grouped by whether the household includes an NLW worker, by income decile, UK, 2019/20



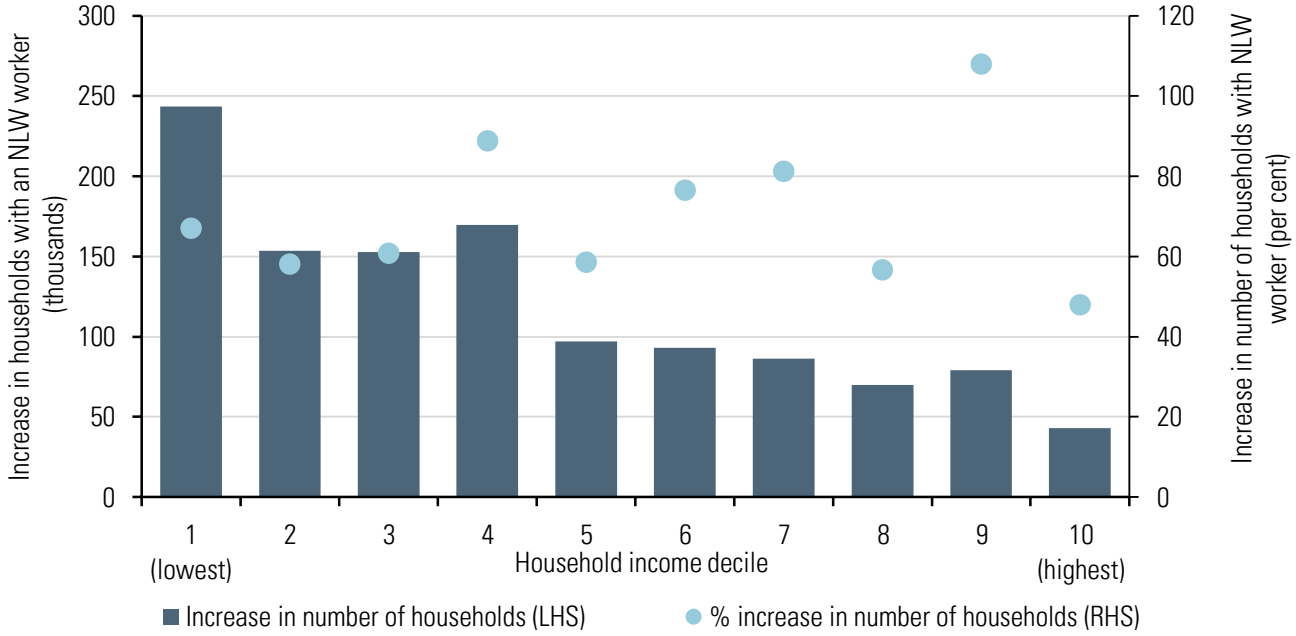
Source: LPC estimates using Family Resources Survey, UK, 2019/20.

3.8 When the NLW was first introduced in 2016, coverage increased and more households had workers who were paid at the wage floor. Figure 3.4 shows the increase in the number of households with a minimum wage worker across the income distribution. Estimates of coverage are higher in the FRS than our main source of data on pay, ASHE, but it is still useful for measuring trends at a household level[3].

3.9 The largest increases were at the lower end of the income distribution for working households. This means that lower-income families became more likely to be affected by increases in the NLW as the rate (and coverage) increased. However, it should be noted that our analysis only covers working households (where at least one adult works). Workless households would tend to have the lowest incomes, and clearly the NLW cannot increase their incomes without someone in that household entering work.

[3] This is because earnings in the Family Resources Survey are reported by households, whereas in ASHE they are reported by employers, based on payslips. Workers often do not remember their exact pay and hours or round them (Fry and Ritchie, 2013; Beisell-Durant and Skinner, 2003). This means overall coverage estimates in the FRS are likely to be overestimates. Individuals are more likely to underestimate their pay (and overestimate their paid hours), leading to lower estimates of hourly pay and higher estimates of coverage. Secondly, the weights are designed for the whole population of households, and the sample may be less representative when we restrict to households with a low-paid worker.

Figure 3.4: Change in number of households with an NLW worker across the working household income distribution, UK, 2015/16-2019/20



Source: LPC estimates using Family Resources Survey, UK, 2019/20.

3.10 As coverage increased at an individual level, it did so at a household level as well. However, the type of households affected by the minimum wage remained broadly similar over the first phase of the NLW. NLW workers were most likely to be in households consisting of two adults with children, followed by two adults with no children (Figure 2.7), and this has been consistent over the lifetime of the NLW.

3.11 Figure 2.9 showed us that only around one in three NLW workers are the main earners in their households. They are more likely to be secondary earners, earning less than other workers in the household. This is important context for understanding the impact on household earnings and incomes, which we turn to next.

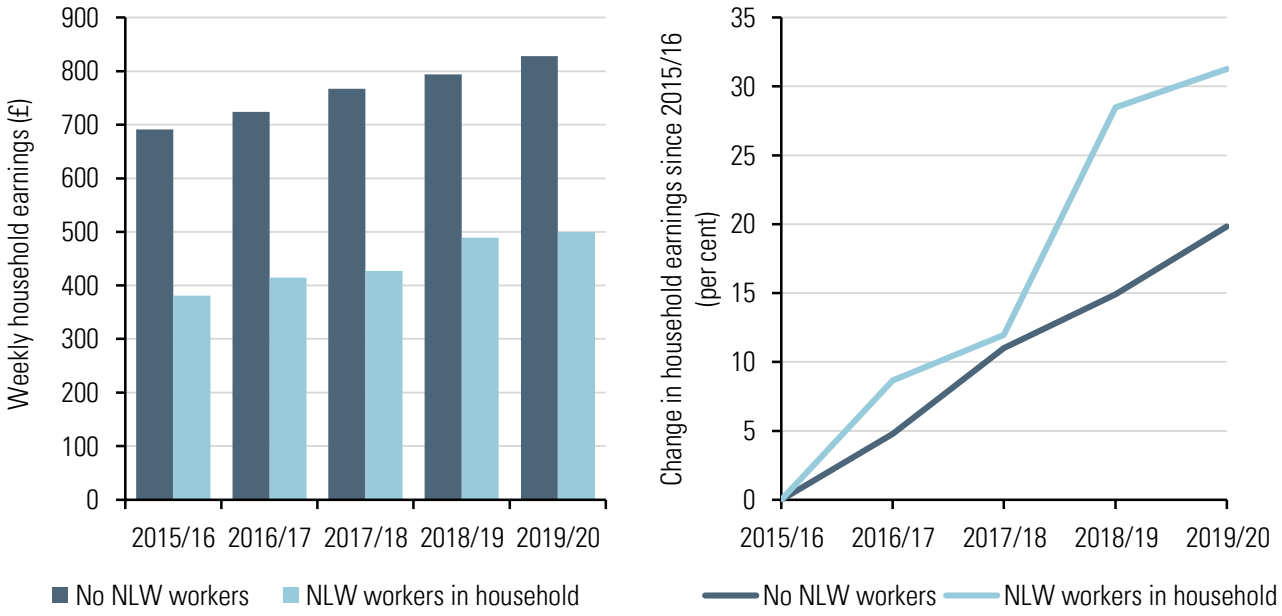
Impact on household earnings

3.12 We have already shown that increases to the NLW largely translated into improvements in individuals' weekly pay. We might therefore expect to see an increase in total earnings for households with NLW workers. Figure 3.5 shows the change in weekly earnings for households with at least one NLW worker compared to households where all workers aged 25 and over are paid above the minimum wage.

3.13 Households with an NLW worker tend to have lower earnings: in 2019/20 the median household in this group had total weekly earnings of £500 compared with £828 for the median household where all workers earn above the NLW. However, the gap has been closing in percentage terms; since the introduction of the NLW, weekly household earnings have grown faster in households that have at least one NLW worker. The median household with an NLW worker in 2019/20 earned 31 per cent more than the equivalent household did in 2015/16. This compares with a 20 per cent increase in earnings in

households where all workers earned above the NLW. In other words, earnings inequality between households with and without a minimum wage worker has fallen since the introduction of the NLW.

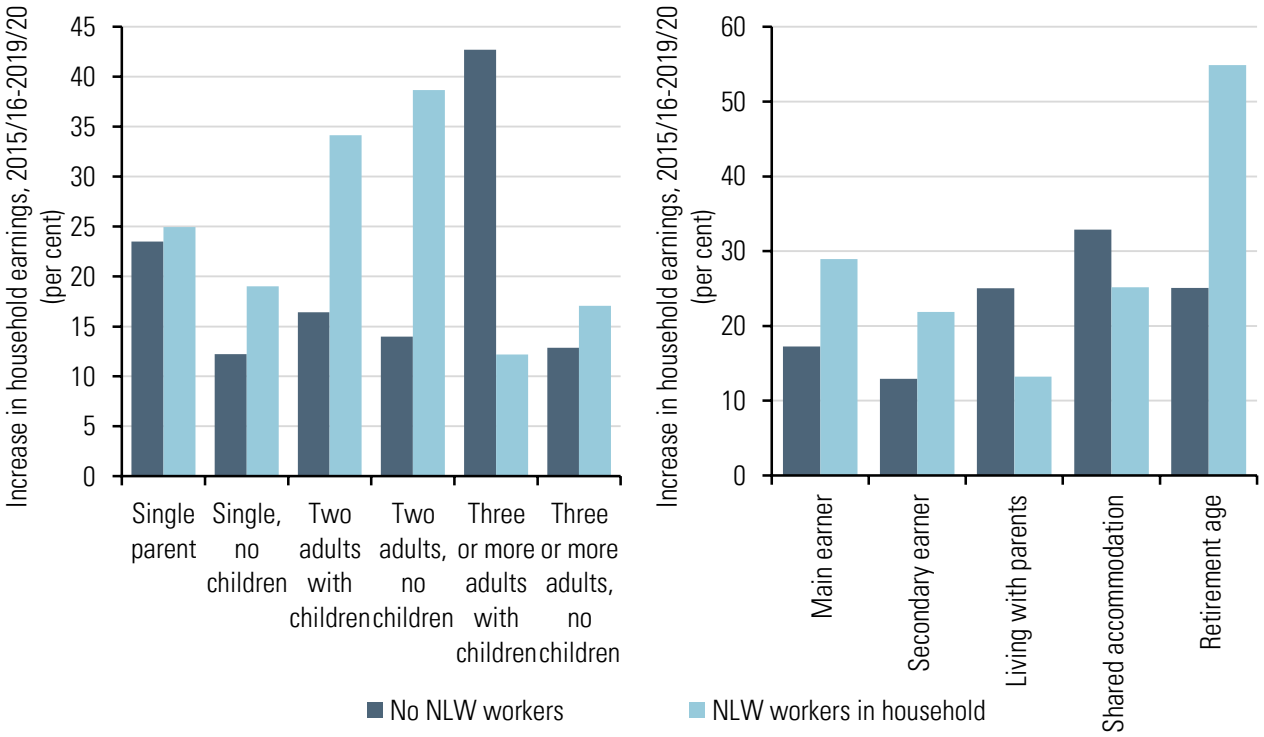
Figure 3.5: Household earnings of the median household with and without an NLW worker, UK, 2015/16-2019/20



Source: LPC estimates using Family Resources Survey, UK, 2015/16-2019/20. The "No NLW workers" group includes all working households which do not include a NLW worker.

3.14 We can also look at the impact of the NLW on earnings by comparing households with a similar composition (the left panel of Figure 3.6). Among single workers, and households with two adults, households with at least one NLW worker experienced stronger earnings growth, with particularly strong earnings growth in households with two adults. We saw in Figure 2.7 that NLW workers were most likely to be in a two-adult household with children; in these households, earnings in 2019/20 were 34 per cent higher than in 2015/16. This is greater than the 26 per cent increase in the NLW over this period. This difference could be explained by hours effects (with NLW workers in 2019/20 working more hours) and household composition effects (with NLW workers in 2019/20 more likely to have a partner in work or working more hours than NLW workers in 2015/16). This could explain why the increases have been more muted in single-person households, who may be more constrained in terms of the number of hours they can work, and who are not affected by the same household composition effects (whereby greater participation – more jobs or hours – increases in earnings among other household members). Compositional effects are likely to be strongest in households with three or more adults, where earnings have grown more strongly in the comparison group. These results could also be affected by data issues relating to hourly pay in the FRS referred to in paragraph 3.8.

Figure 3.6: Changes in household earnings, by household composition (LHS) and by role of earner in household (RHS), UK, 2015/16-2019/20



Source: LPC estimates using Family Resources Survey, UK, 2015/16-2019/20. The "No NLW workers" group includes all working households which do not include a NLW worker. Comparator group includes similar households. "Main earner" comparator group includes all non-NLW working households where the workers in the household are not living with parents, in shared accommodation or retirement age. "Secondary earner" comparator group only includes non-NLW working households where there are at least two earners.

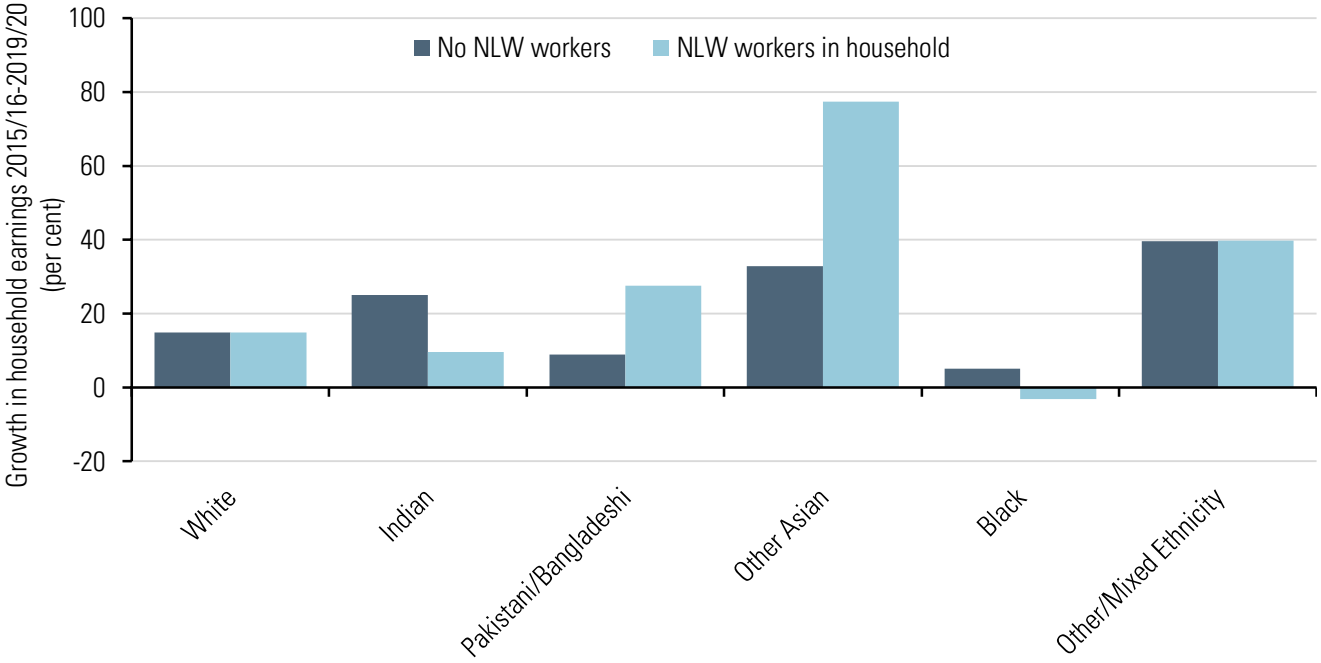
3.15 In a similar way, we can look at how total household earnings changed, comparing households where the worker has a similar role. The right panel of Figure 3.6 shows that earnings grew more strongly in households with an NLW worker, both where they were the main earner and where they had a higher-earning partner. In households where at least one worker was of retirement age, earnings grew particularly strongly, driven by people working at older ages and for longer hours. Earnings grew less strongly in households where the NLW worker lived with their parents or in shared accommodation, which is likely because earnings in these households are much more dependent on the other members of those households.

3.16 Ethnicity is often a factor in pay and living standards, and so we also compare NLW households based on the ethnicity of the person identified as the head of their household (Figure 3.7). Across almost all ethnicities, earnings grew faster for households with at least one NLW worker. For several groups, total household earnings for a household in 2019/20 were more than double what they would have been in 2015/16. This was far in excess of the increase in the NLW over the period and likely to be driven by increased participation and people working more hours.

3.17 It is notable that households with a Black head of household had stagnant earnings, with households in 2019/20 earning no more than a similar household in 2015/16. This is a surprising result, which we currently do not have a clear explanation for. It could partially be due to composition effects. Single parent households or single adult households tend to have lower total incomes. If these types of

households became more common amongst households with a Black head of household between 2015/16 and 2019/20, then it would reduce the average income for all households with a Black head of household. Sample sizes are also small for households with a Black head of household, so part of the explanation could be sampling error.

Figure 3.7: Changes in household earnings for households based on ethnicity of head of household, UK, 2015/16-2019/20



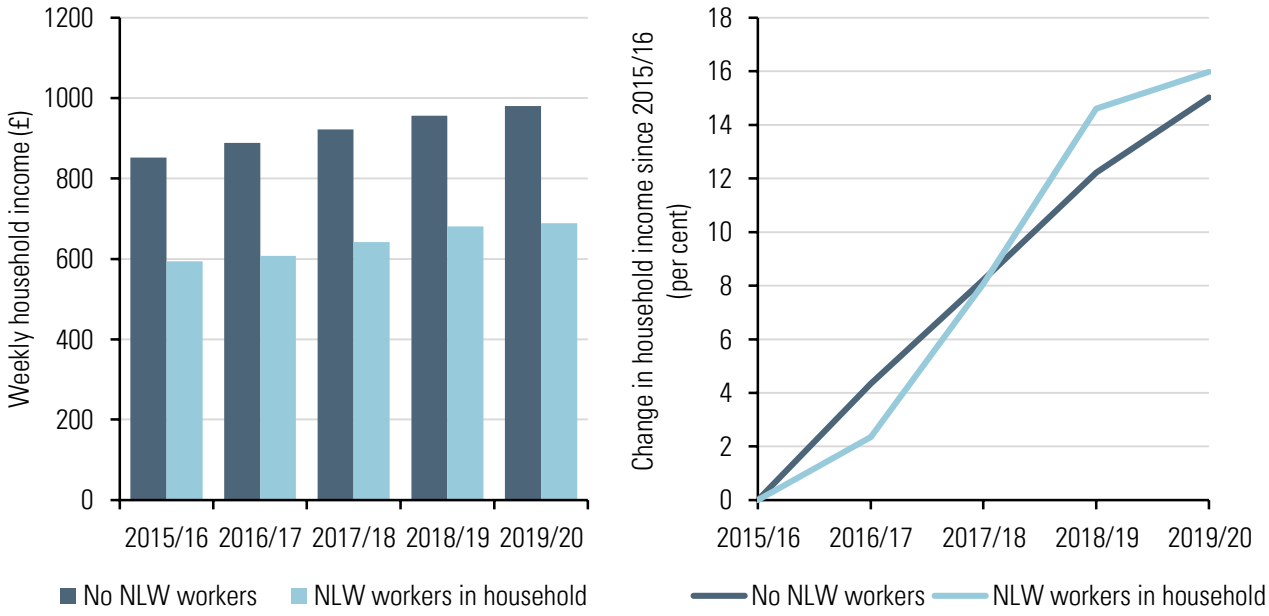
Source: LPC estimates using Family Resources Survey, UK, 2015/16-2019/20. The "No NLW workers" group includes all working households which do not include a NLW worker. Sample sizes are small for NLW households in some ethnic groups, so ethnicity level figures are more uncertain than headline results.

Impact on household income

3.18 While the evidence suggests that the NLW helped to reduce earnings inequality, a different picture emerges when we look at changes in total household income. Total household income includes earnings from employment (including self-employment), benefits, pensions, and any investments. Figure 3.8 shows that households with at least one NLW worker tend to have lower total household income: in 2019/20 the median household in this group had a weekly income of £689 compared to £980 for other households with at least one worker. But, unlike household earnings, the gap between the total household income for these two groups has not been closing. Household income increased at a similar rate in the average household with an NLW worker and the average household where all workers aged 25 and over earn above the minimum wage.

3.19 Comparing NLW households to others with a similar composition (Figure 3.9), we see that among single parents, single workers, and households with two adults, those with an NLW worker saw greater increases in income. But the income effect is weaker than the earnings effect seen in Figure 3.6, with lower overall income growth, and a smaller difference between households with and without an NLW worker. Income growth in households with three or more adults was no stronger in those with an NLW worker, which is likely to be due to the compositional effects mentioned previously.

Figure 3.8: Household income for the median household with and without an NLW worker, UK, 2015/16-2019/20



Source: LPC estimates using Family Resources Survey, UK, 2015/16-2019/20. The "No NLW workers" group includes all working households which do not include an NLW worker.

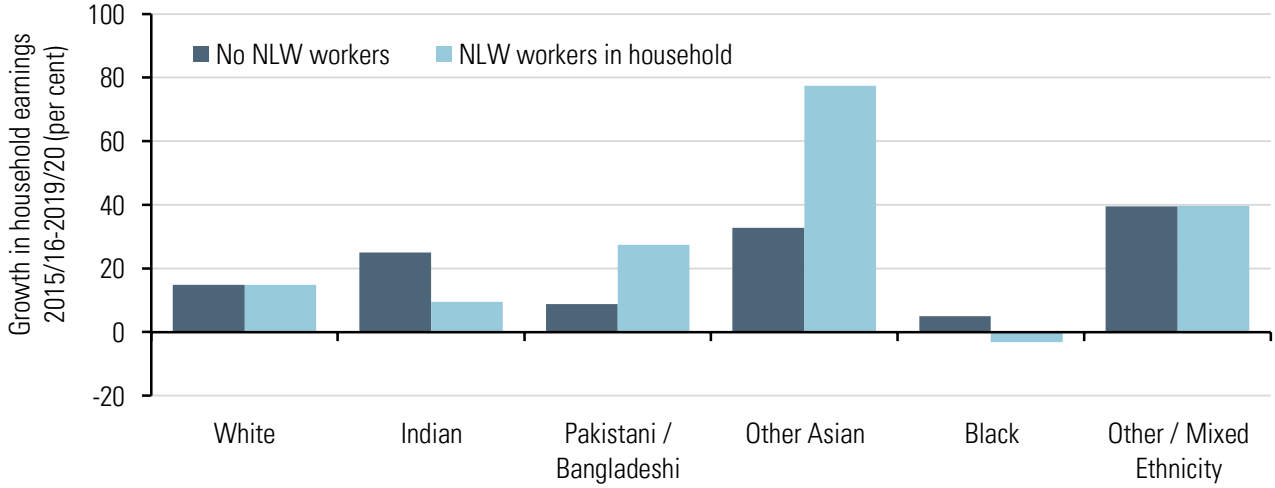
3.20 Similarly, income grew more strongly in households with an NLW worker in cases where the minimum wage worker is the main earner, has a higher-earning partner, or lives with their parents or in shared accommodation. The only exception is for retirement age workers, whose incomes are likely to be affected more by pensions. Comparing to Figure 3.6, we see that these income effects are smaller than the earnings effects, with lower growth in incomes than in earnings, and smaller differences between households with and without NLW workers.

3.21 Figure 3.10**Error! Reference source not found.** again compares households by the ethnicity of the person they have identified as the head of the household. There are differences between these groups, with those with an "Other Asian" head of household seeing substantial increases in their income which are likely to be driven by compositional effects, while those with a Black head of household have seen no improvements in their incomes. For most groups, household incomes increased marginally faster in households with an NLW worker, but this is a smaller effect than for earnings. Where the head of household is White, there is no difference between the income growth in households with and without an NLW worker.

Figure 3.9: Changes in household income, by household composition (LHS) and by role of earner in household (RHS), UK, 2015/16-2019/20

Source: LPC estimates using Family Resources Survey, UK, 2015/16-2019/20. The "No NLW workers" group includes all working households which do not include a NLW worker. Comparator group includes similar households. "Main earner" comparator group includes all non-NLW working households where the workers in the household are not living with parents, in shared accommodation or retirement age. "Secondary earner" comparator group only includes non-NLW working households with at least two earners.

Figure 3.10: Changes in household income by ethnicity of head of household, UK, 2015/16-2019/20



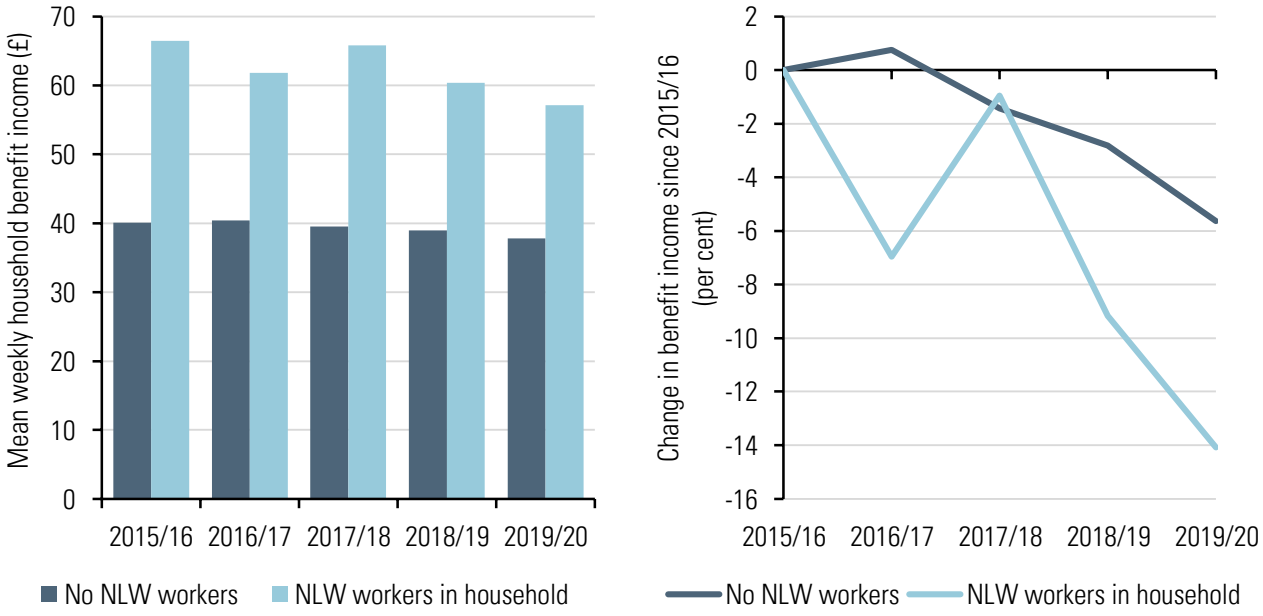
Source: LPC estimates using Family Resources Survey, UK, 2015/16-2019/20. The "No NLW workers" group includes all working households which do not include a NLW worker.

3.22 Overall, we see that while households with an NLW worker experienced growth in their incomes, this effect was weaker than for earnings. One reason for this is that a household can have several sources of income. Figure 3.11 shows how the mean income from benefits changed for households with and without minimum wage workers over the lifetime of the NLW. Income from

benefits tends to be higher in households that have at least one NLW worker, but this income fell faster over the period. A household with at least one NLW worker in 2019/20 had a benefit income that was on average 14 per cent lower than an equivalent household in 2015/16, compared with a fall of 5.6 per cent in other working households.

3.23 The fall in benefit income is due to the combined effects of policy changes, such as the migration from legacy benefits to Universal Credit (UC) and the benefit cap, as well as the design of UC and other related benefits, which are withdrawn as earnings increase. Although increases in the NLW helped to reduce earnings inequality between households, the impact on income inequality was to some extent limited by benefit policy.

Figure 3.11: Benefit income for households with and without an NLW worker, UK, 2015/16-2019/20



Source: LPC analysis Family Resources Survey, UK, 2015/16-2019/20. The "No NLW workers" group includes all working households which do not include a NLW worker.
Note: Data on NLW workers in household is volatile due to small sample sizes. This may explain the sharp rise and fall in benefit income for NLW workers.

3.24 To build on our understanding of the impact of the NLW on household incomes, we commissioned the IFS to conduct an evaluation of the first phase of the NLW from 2015/16 to 2019/20 (Cribb, Giupponi, Joyce, Lindner, Waters, Wernham, and Xiaowei, 2021). While our analysis measures what happened to the household incomes of NLW workers over that period (including all compositional effects as hours changed and other workers had variations in earnings), the IFS research estimates the specific impact of the NLW by modelling the increases in the rate for a fixed cohort of households. Using the FRS, it identified households prior to the introduction of the NLW, and simulated how their net income would change based on the increases in the NLW using its microsimulation model, TAXBEN. The model was adjusted to account for the wage spillover effects of the NLW on higher-earning workers and to account for employment losses.

3.25 Consistent with our analysis, the IFS found that the impact of the NLW on incomes is weakened by the reduction in benefits, leading to small income effects. Looking at all households containing a 25-

64 year old, including workless households, the IFS estimated that each NLW increase raised net household incomes across the whole population by 0.13 per cent, after a third of the increase in pre-tax earnings was clawed back through reduced benefits and higher taxes. This is a modest effect, partly because most households do not contain an NLW worker. For households with a minimum wage worker, each NLW increase leads to an average increase in net weekly income of just under 1 per cent. For households in the second and third income deciles, who are most likely to be subject to the UC taper, almost half of their increases in earnings are clawed back through taxation and benefit withdrawal.

3.26 International evidence also finds that minimum wages have a limited impact on overall household incomes. This includes a recent evaluation of the Irish minimum wage (Redmond, Doorley and, McGuinness, 2020) which found that the minimum wage has had a strong impact on the household wage distribution, but a limited impact on the household income distribution.

Conclusions

3.27 Overall, the introduction of the NLW has boosted earnings, and helped to reduce earnings inequality, but the impact on incomes has been much more limited.

3.28 To some extent, the weaker impact that the NLW has had on incomes is not surprising. When George Osborne announced the NLW, he stated that the overall purpose of that budget was to move Britain *'from a low-wage, high-tax, high-welfare economy to the higher wage, lower tax, lower welfare country we intend to create'* (HM Treasury, 2015a). The fact that households with NLW workers now have higher earnings and lower benefits income is a product of that policy intention and the package of measures introduced to achieve it. At the time that the NLW was announced, the OBR forecasted that "*household disposable income is expected to be around 1½ per cent lower by the start of 2020 than we forecast in March*". Much of that reduction results from changes to tax and benefits. In analysis by the IFS, (Hood, 2015) showed that although the impact of the July 2015 Budget changes in tax and benefits was to reduce net household income by 1.5 per cent on average, the effects were much greater for the poorest income deciles (around four times as great for those in the bottom three deciles).

3.29 Part of the reason that households have seen their increases in earnings offset by a reduction in benefits is due to the design of the Universal Credit 'taper rate'. For every £1 a UC recipient earns above the work allowance, the amount they receive under Universal Credit is reduced according to the taper rate. At the 2021 Budget, the Chancellor announced that the taper rate would fall from 63 per cent to 55 per cent by December 2021, which will enable households to receive higher benefit payments while they are in work. This means that for each additional £1 of earnings, UC recipients lose 55 pence of benefit payments. The work allowance (the amount you can earn before the government reduces your universal credit payments) also increased from April 2022. These changes are welcome and will ensure that low-income households with at least one worker will be able to keep more of their earnings.

3.30 To conclude, incomes haven't risen as much as earnings, but we shouldn't expect them to, and this is not an argument against raising the NLW. The minimum wage is a specific policy tool which raises the hourly pay of the lowest-paid workers (who are found in households across the income distribution). This is not the same as raising an individual's total weekly, monthly or annual salary and is not the same as raising their total household income. The minimum wage alone is not sufficient to improve the incomes and living standards of the poorest households.

Chapter 4

Employment, hours and progression

Key points

- Externally commissioned research and internal analysis have found either no or limited evidence that the National Living Wage (NLW) reduced aggregate employment. This is consistent with what employers told us; throughout the period, only a small number told us they had made redundancies or reduced hiring because of the NLW.
- Some research suggests the NLW may have reduced employment for women, especially amongst those working part-time. However, the evidence is not yet conclusive and where negative employment effects are found, they have been small and have done little to halt the long-run trend of more women entering work. Overall employment rates continued to grow faster for women than for men after the introduction of the NLW.
- Employment growth slowed in low-paying occupations, industries and firms relative to higher-paying occupations, industries and firms after the NLW was introduced. However, employment rates remained strong for workers more likely to be paid the minimum wage.
- The cost of maintaining pay differentials was a major concern for employers. If they allowed differentials to fall, this could reduce workers' incentives to progress to a higher-level job. We have found some evidence that the introduction of the NLW reduced differentials within low-paying industries. In some cases, employers told us they had reduced headcount at higher levels rather than among NLW workers, which could have reduced progression opportunities.
- We find that progression opportunities did not change much over the NLW period. Between 40 and 50 per cent of workers left NLW jobs for higher-paying roles each year (in some cases with the same employer), but mostly to only slightly higher-paying jobs. However, the NLW does seem to have reduced the share of workers moving to another employer. This is a positive effect for employers – staff turnover is lower than it otherwise would be – but it may affect lower-paid workers' careers in the long-term.

4.1 Minimum wages increase the cost of labour in the lowest-paying jobs in the economy. The intention is to raise pay and tackle exploitation, but the risk is that too high a wage makes labour too expensive, risking jobs and hours. This trade-off has been at the heart of minimum wage rate decision-making in the UK since the Low Pay Commission (LPC) made its first recommendations in 1998. Up until the introduction of the National Living Wage (NLW) in 2016, the LPC's remit from Government had always been some variation of 'raise pay as high as possible without damaging employment'.

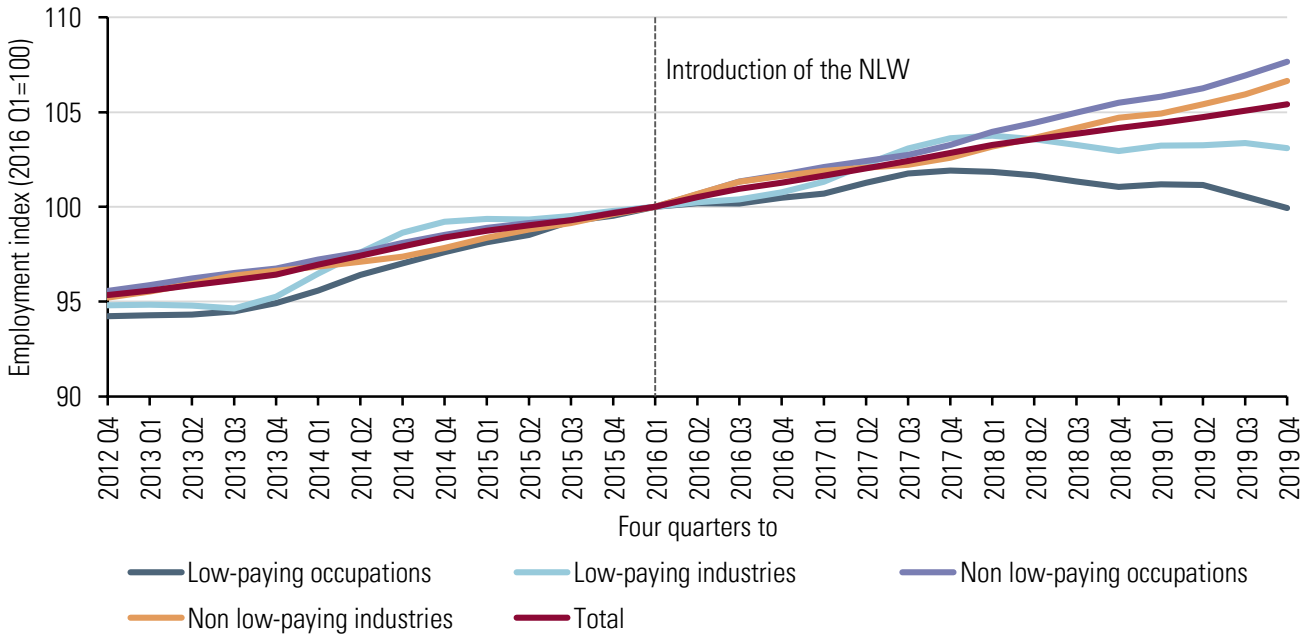
4.2 The NLW ushered in a new approach, one where there was some tolerance for job loss. At the time of the announcement, the Office for Budget Responsibility (OBR) estimated job losses of between 20,000 and 110,000 by 2020 (OBR, 2015a). Against this, the OBR also forecast an additional 1 million

jobs for the UK economy as a whole over the same time frame. At the time of the announcement, stakeholders suggested that while there may be a risk of job loss, firms would seek to make other changes first and these included reduced hiring rather than redundancies. In this chapter we look at what happened to jobs over the first phase of the NLW (up to 2020). The first part of this chapter covers headline descriptive analysis of employment effects, the second covers our econometric evidence and the third looks at rates of progression and job mobility for minimum wage workers.

Descriptive analysis

4.3 Growth in the number of people employed in low-paying occupations[4] was higher than for other occupations in the years leading up to the introduction of the NLW (Figure 4.1). But after it was introduced, growth in these jobs slowed while growth in other occupations strengthened. A similar, although weaker, trend is evident in low-paying industries. Between the first quarter of 2016 and the fourth quarter of 2019, employment fell by 0.2 per cent in low-paying occupations and grew by 7.7 per cent in other occupations. Over the same period employment grew by 3.1 per cent in low-paying industries and 6.7 per cent in other industries.

Figure 4.1: Employment Index (2016 Q1=100) by low-paying occupations and industries, UK, 2012 Q4-2019 Q4



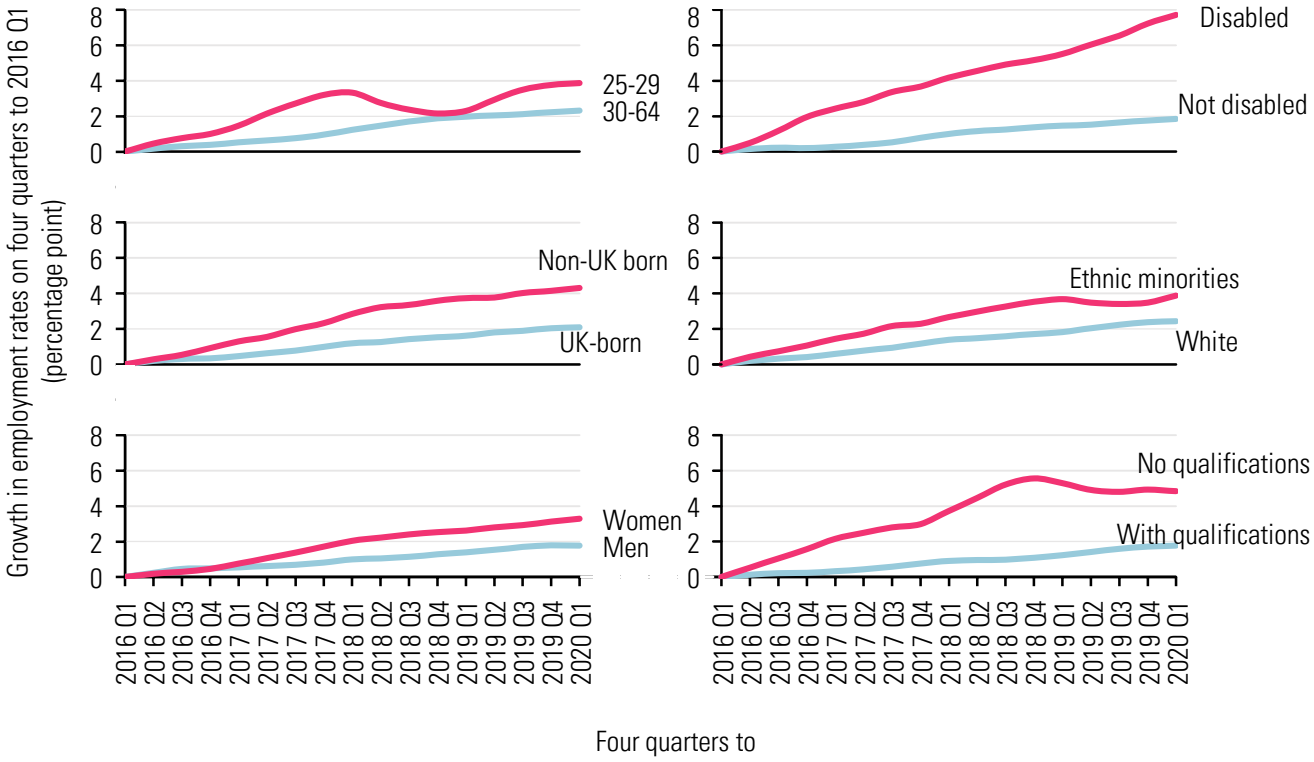
Source: LPC estimates using LFS microdata, workers aged 25-64, population weights, not seasonally adjusted, four quarter rolling average, UK, Q2 2014-Q1 2020.

4.4 The NLW could have been the cause of this fall in employment. Twenty per cent of employees in low-paying occupations were paid the NLW in 2016, whereas only 1 per cent of employees in other occupations were paid the NLW. Alternatively, other factors could be driving these changes. Between

[4] We classify occupations as low-paying based on the share and number of minimum wage workers in the occupation. Further details on how we classify low-paying occupations can be found in Appendix 1.

2016 and 2020, the UK economy was affected by a range of structural changes, including the UK's preparation for exit from the EU, demographic changes and the continued rise of digital platforms such as Amazon and Uber. These could also help explain why employment growth in low-paying occupations and industries has slowed.

Figure 4.2: Growth in employment rates for those aged 25-64, by demographic group, UK, 2015-2020



Source: LPC estimates using LFS microdata, population weights, quarterly, four quarter rolling average, UK, Q2 2015-Q1 2020.
Note: People with disabilities are identified based on the Equality Act definition and figures may vary from previous LPC which used a different definition.

4.5 In contrast, employment rates for those in demographic groups most likely to be affected by the NLW have actually grown faster than for those in other groups. This is shown in Figure 4.2. For example, between 2016 and 2020 the employment rate for 25-29 year olds grew by 4 percentage points, whereas for 30-59 year olds it grew by only 2 percentage points. Other factors could be affecting these trends, for instance the long-run trend of increasing employment rates for women (Roantree and Karthik, 2018). Econometric analysis we discuss later shows a more nuanced picture. Nevertheless, this analysis provides some evidence that the NLW did not reduce employment for the groups of workers most affected.

4.6 One possible explanation for these contrasting findings is that the NLW reallocated jobs away from low-paying occupations and industries rather than reduced aggregate employment. Part of this reallocation could have occurred within firms. In 2019, the British Retail Consortium told us one of the most common responses amongst retail firms to the NLW was restructuring pay. In addition, hoteliers in Scotland said they had introduced more flexible job roles in response to the introduction of the NLW. This restructuring could lead to employees moving from low-paying occupations to other occupations within the industry. It could therefore explain why employment fell in low-paying occupations following

the introduction of the NLW. However, it would not explain the shift away from low-paying industries; if an employee moves roles within the same firm they stay within the same industry.

4.7 Reallocation between firms may play a part. Firms in low-paying industries may have responded to the NLW by reduced hiring, while firms in better-paying industries could afford to expand hiring and take on workers who would otherwise have worked in other industries. Frontier Economics (2020) provided evidence that supports this theory. Reallocation could also help explain our findings in Chapter 2 that minimum wage workers are now more widely distributed across occupations and industries than they were in 2015, although this finding could also be explained without reallocation.

4.8 There is also international evidence of minimum wages causing reallocation across firms. Dustmann, Lindner, Schoenberg, Umkehrer, and vom Berge (2021) found that the introduction of a nationwide minimum wage in Germany made low-wage and low-productivity firms more likely to stop operating. This suggests that as less productive firms shut down, more productive firms took over their market share. Engbom and Moser (2021) found evidence of similar effects in Brazil. Frontier Economics (2020) investigated whether the NLW caused firms more exposed to the NLW to shut down but did not find any evidence of this. This suggests reallocation did not occur in the same way in the UK as it did in Germany.

4.9 Reallocation away from traditionally low-paying industries could also be driven by other long-term structural factors, such as the increased competition between high street retail and online retail. This analysis is not sufficient to conclude the NLW caused reallocation of jobs between and across firms. We plan to explore these issues further and review our definition of low-paying occupations later this year.

Econometric analysis

4.10 Descriptive statistics can only tell us so much about the impact of the NLW. Other approaches, such as econometric analysis, can help us to understand more about causal changes and account for other factors that may affect labour market outcomes.

4.11 Following Professor Arindrajit Dube's recommendations from his review of international evidence (Dube, 2019), we make use of both internal and external econometric analysis. We commission leading independent researchers to carry out major but less frequent evaluations of the evidence, while conducting our own ongoing analysis using established methods. The box below on page 44 below provides an overview of the methods we use and how we quality assure our work, while Appendix 2 presents more detailed findings and methodology for our internal analysis and relevant key pieces of external research.

4.12 Econometric analysis, both internal and external, finds no evidence that the introduction of the NLW had a significant impact on aggregate employment or hours worked over the period 2016 to 2019. The impact of the coronavirus pandemic means that it is difficult to assess employment effects all the way to 2020.

4.13 Some studies looking at employment retention[5] find evidence of one-off effects (both positive and negative) for specific groups in specific years, but these are not consistent across the whole period, or across different studies. The most notable is a small negative effect on employment retention for part-time women workers following the initial introduction of the NLW in 2016. This was noted in two different external studies (Aitken, Dolton, and Riley, 2018); Capuano, Cockett, Gray and Papoutsaki, 2019) and in internal analysis (Lord, 2022), with estimates of the associated reduction in employment retention ranging between 2 and 3 percentage points. However, the effect was not found across the whole period or for other years. The large-scale evaluation that we commissioned from the IFS (Cribb, Giupponi, Joyce, Lindner, Waters, Wernham, and Xu, 2021) also finds some evidence of a negative employment effect for women, although this effect is small (the central estimate suggests a total employment change of less than 0.5 per cent) and is only statistically significant in some specifications of their analysis.

4.14 In commissioned research, McKnight (2022) found that the introduction of the NLW did not lead to negative effects on employment retention for employees with disabilities or for disabled employees reporting at least one functional impairment. She also found no statistically significant negative effects on employment retention for BAME employees overall. However, she did find that the introduction of the NLW appeared to have led to a reduction in employment retention among Indian men.

4.15 One further possibility to consider is that while the overall levels of employment are not affected, it is the security of work which changes. For example, employers could opt for less secure or more flexible forms of work such as temporary contracts, self-employment or zero hours contracts. In our internal econometric analysis (Butcher and Dickens, 2022), we find no evidence of effects on self-employment or use of zero-hours contracts. This contrasts with the findings of Datta, Giupponi, and Machin (2018) who found that the introduction of the NLW did lead to increased use of zero-hours contracts in the social care sector. Employer surveys find that only a very small minority of affected employers (less than 5 per cent) say they've opted for more atypical contracts.

4.16 Finally, changes in the minimum wage are likely to affect labour supply as well as labour demand. Butcher and Dickens (2022) found that the NLW may have boosted participation as inactivity was significantly reduced without a corresponding increase in unemployment.

LPC internal econometric analysis: methods and quality assurance

Since the Dube review, we have expanded our programme of internal analysis. This is led by the Secretariat's analytical team, and we make full use of the expertise of the two academic Low Pay Commissioners and external experts to provide advice and conduct collaborative work.

Our work is peer-reviewed before it is published. Experts are invited to our annual research events to give feedback on the methodology, data sources and interpretation of the findings. We have also established a panel of experts to give challenge and ongoing feedback on our analysis and to judge when the research is of sufficient quality to publish.

[5] Employment retention is where an individual is in employment in the period before an intervention and remains in employment after it, though not necessarily in the same job.

Our internal analysis presented here uses two methodological approaches recommended by Professor Dube: difference-in-difference by pre-intervention wage levels (similar to Aitken, Dolton and Riley (2018)) and using variation in coverage of the NLW across different groups of workers and geographies to compare labour market outcomes for these groups (similar to Manning (2016)).

The first method compares the treated group (workers directly affected by the minimum wage increase) with a control group (workers with similar characteristics but not directly affected by the minimum wage increase) and looks at how outcomes differ for the two groups before and after the introduction of the NLW. Lord (2022) used this approach to compare the labour market outcomes of workers whose pay was less than the forthcoming minimum wage with those whose pay was slightly higher. He used ASHE data to look at individual year effects and the overall effect between 2015 and 2019.

Consistent with the findings of Aitken, Dolton and Riley (2018), he found little evidence of employment effects in general. The one exception was a small negative effect for female employment retention in 2016 only, the year that the NLW was introduced. He found no evidence of effects on hours worked. It should, however, be noted that recent research by Forth, Phan, and Stokes (n.d.) has highlighted potential issues with the weights used to look at employment retention in this study. We will update our analyses when revised weights are available.

The second method uses certain characteristics (such as geography, age and gender) to categorise workers into groups that are more or less affected by the minimum wage and then compares the labour market outcomes of these groups. This is based on the idea that we should expect a greater impact from the NLW in areas and among groups that are more likely to be low paid. In contrast to the research by Lord (2022), this method also enables us to capture all employment change and not just job retention. Butcher and Dickens (2022) use this approach to compare outcomes across segments of the UK labour market. They estimated overall effects for 2015-19 and for individual years and examine a wide range of outcomes, including employment, unemployment, hours of work, self-employment, inactivity, and use of zero-hours contracts.

They found that those segments that were most affected by the minimum wage (those that had higher bite or coverage) experienced faster average wage increases and these increases were higher at lower percentiles of the pay distribution. However, in line with previous findings, they found no evidence of significant negative impacts on employment or hours across the whole period.

Progression, job moves and other employment effects

4.17 Throughout the existence of the NLW, we have heard employer concerns about its impact on differentials – the pay of those immediately above NLW workers in the pay distribution, such as their managers and team leaders. Employers worry that if pay differentials between NLW workers and their superiors close, the incentives for encouraging people into management positions will be reduced – creating skills shortages and a lack of progression opportunities. In 2020, GMB (a trade union) told us that, in the absence of collective bargaining, lower differentials could lead to workers becoming 'stuck' and unable to progress beyond the minimum rates. In a 2020 survey by the Chartered Institute of Payroll Professionals (CIPP), 41 per cent of respondents stated the NLW had affected pay structures.

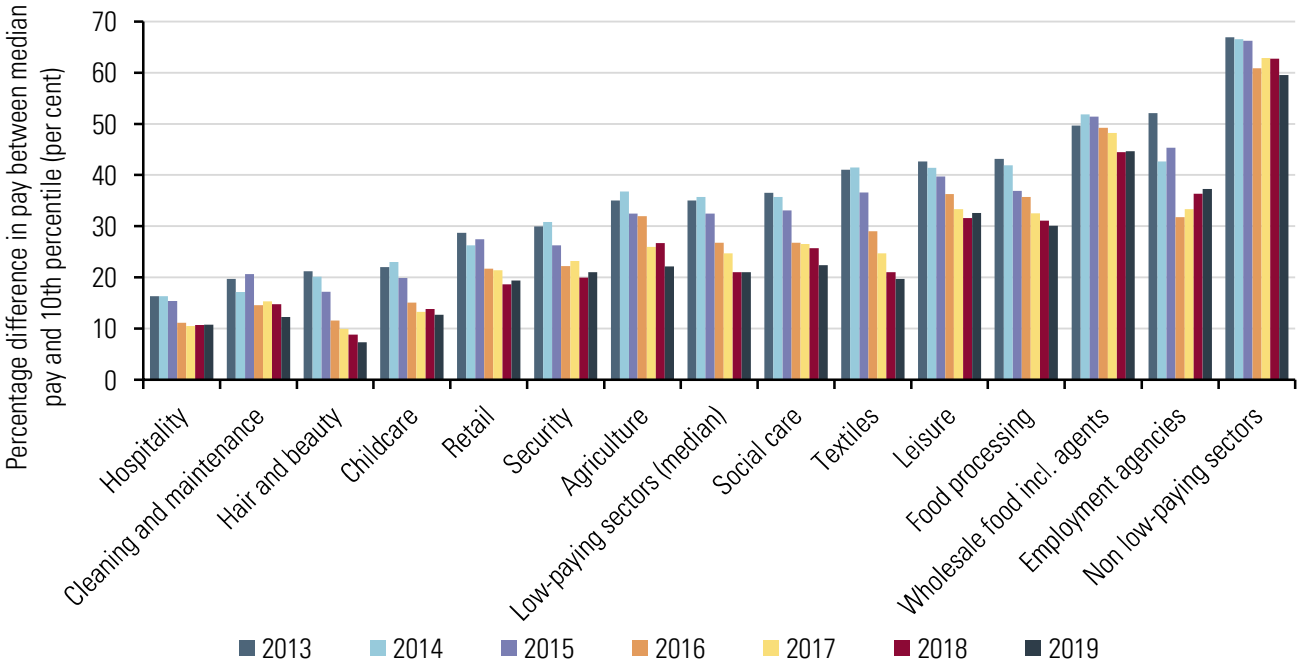
4.18 Our estimates of differentials were stable from 2013 to 2015 in most low-paying sectors but fell following the introduction of the NLW in 2016. The average difference between median pay and the 10th percentile of pay for low-paying sectors in 2015 was 30 per cent, but in 2016 it fell to 27 per cent and then continued to fall to 21 per cent in 2019. This suggests that firms increased pay faster for low-paid

workers (including NLW workers) than better-paid workers in their firm or industry. This squeezing of differentials might be taking place within firms, between them, or both. In any case, our analysis gives further weight to the qualitative evidence we have received from workers and firms.

4.19 This raises the question as to whether smaller differentials reduce the incentive or opportunity for workers to move off the NLW into better-paying employment. Avram and Harkness (2020) found that around half of minimum wage workers move into better-paid employment in any given year, but most of this mobility is short range: around four-fifths of minimum wage workers who find better-paid jobs continue to earn below two-thirds of median earnings. Our internal analysis in Figure 4.4 shows a similar pattern. The slightly lower percentage of workers progressing to better-paid employment in this chart likely reflects differences between data sources.

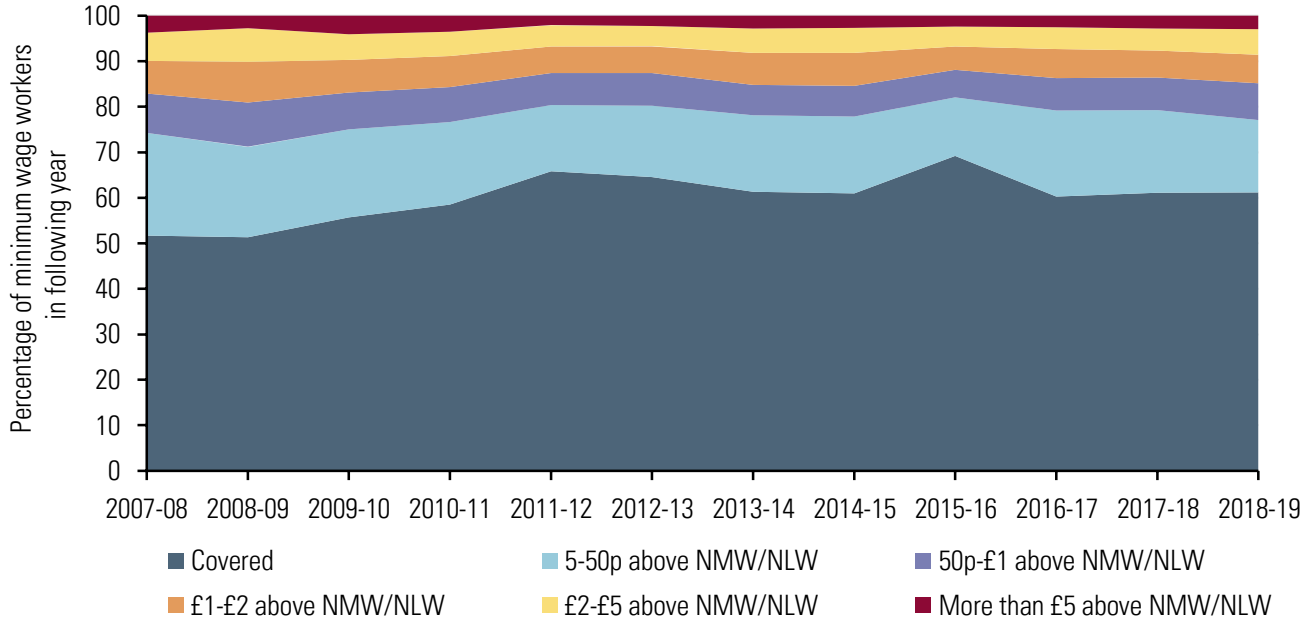
4.20 Avram and Harkness (2020) found that the introduction of the NLW in 2016 temporarily increased the probability that a worker would remain in a minimum wage job. This effect disappears in 2017 and 2018. The researchers concluded that minimum wage workers' progression chances had not been affected by increases in the minimum wage in the long term. Our analysis in Figure 4.4 similarly shows little change.

Figure 4.3: Percentage difference between median and 10th percentile pay, by low paying industry, UK, 2013-2019



Source: LPC analysis of ASHE, standard weights, payrolled workers aged 25 and over, excludes first year apprentices, UK, 2013-2019.
Note: Low-paying sectors and non-low paying sectors aggregate figures are medians of relevant figures for low-paying industries and non low-paying industries respectively.

Figure 4.4: Hourly pay bands for workers who were paid minimum wage in previous year, UK, 2007-2019

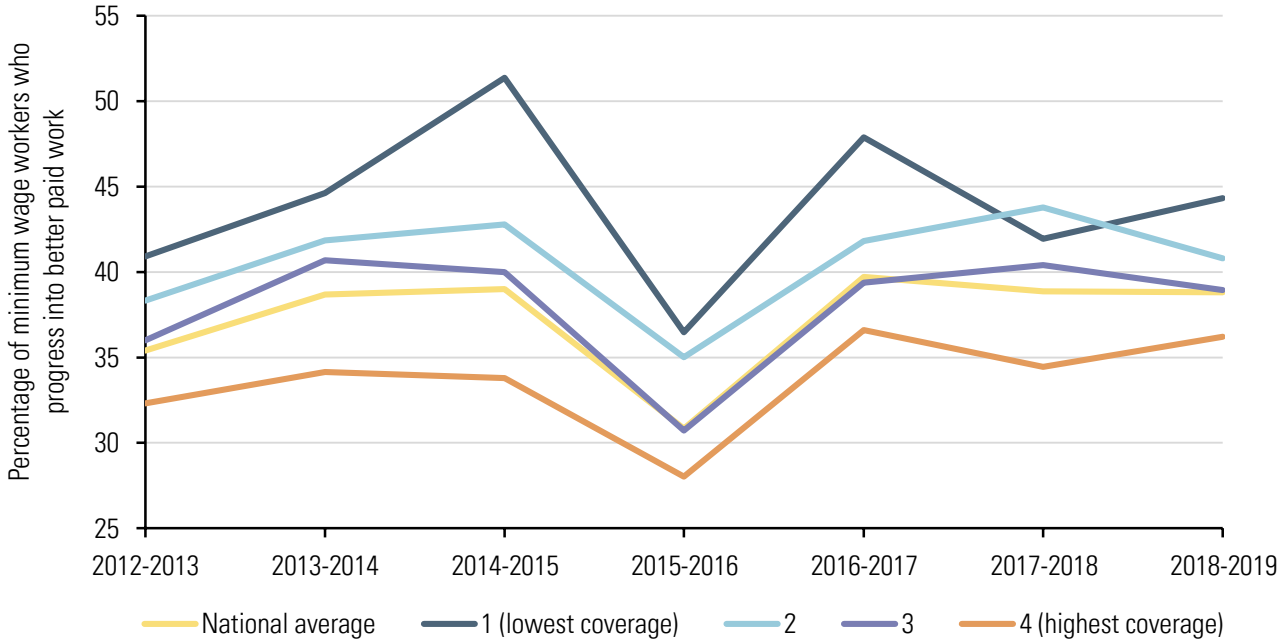


Source: LPC analysis of ASHE, low-pay weights. payrolled workers aged 25 and over, excludes first year apprentices, UK, 2007-2019.
Notes: Only includes workers with two matched consecutive years of employment. May be subject to attrition bias.

4.21 However, opportunities for progression off the minimum wage differ by worker and job characteristics. Avram and Harkness (2020) found that workers with lower levels of qualifications were less likely to progress off the minimum wage. Younger workers were more likely to progress off the minimum wage than older workers. From 2016 to 2019, 47 per cent of NLW workers aged between 25 and 29 who remained in employment progressed in to better-paid work, compared with only 33 per cent of NLW workers aged between 50 and 64.

4.22 Figure 4.5 compares progression probabilities for workers from high minimum wage coverage parts of the country with workers from low coverage areas. On average, workers in low coverage areas (local authority in bottom quartile of coverage) have a 44 per cent chance of progression if they remain in employment, whereas workers in high coverage areas have a 34 per cent chance. The gap remained stable following the introduction of the NLW. The geographic differences in progression are likely explained by worker characteristics (e.g. education) and differences in access to jobs in certain areas. Areas with more minimum wage workers will have fewer non-minimum wage jobs available to move to. Larger towns and cities may also offer workers a wider range of available jobs.

Figure 4.5: Percentage of NMW/NLW workers who progress into better-paid work, by local authority coverage quartile, UK, 2012-2019

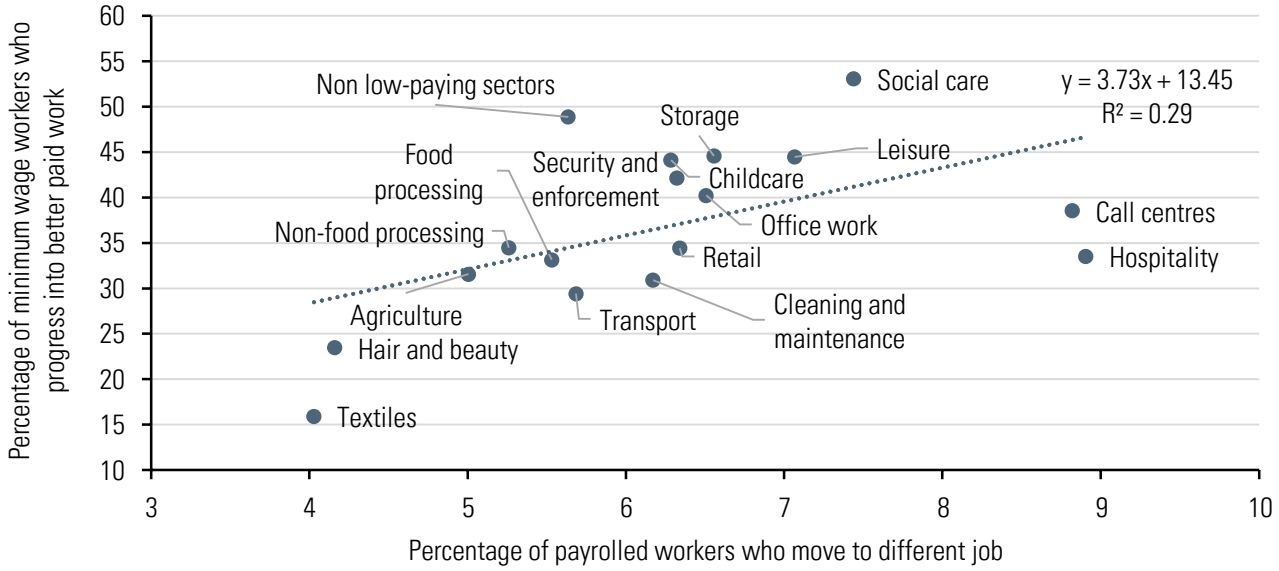


Source: LPC analysis of ASHE, low-pay weights. payrolled workers aged 25 and over, excludes first year apprentices UK, 2012-2019.
Notes: Only includes workers with two matched consecutive years of employment. May be subject to attrition bias.

4.23 Workers in certain occupations have lower chances of progressing off the NLW, as shown in Figure 4.6. Textiles workers are the least likely to progress off the minimum wage, while workers in social care or non-low paying occupations are most likely[6]. Low-paid workers often need to move jobs (and sometimes industries) to progress off the minimum wage. Figure 4.6 shows that the occupations with the highest progression rates also have the highest turnover. **Error! Reference source not found.**While the NLW has not reduced progression opportunities on average, progression opportunities have worsened in some sectors. For instance, between 2011/12 and 2014/15, 49 per cent of call centre workers progressed into higher-paid employment, whereas between 2016/17 and 2018/19 only 41 per cent of call centre workers did.

[6] There are particular difficulties measuring pay and compliance in social care which may affect these figures. We discuss these in paragraph 5.27. High progression in social care may also reflect the potential to move into other better-paying occupations such as health.

Figure 4.6: Percentage of NMW/NLW workers who progress into higher-paid work and percentage of workers who move to a different job, by low-paying occupation, UK, 2015-2019

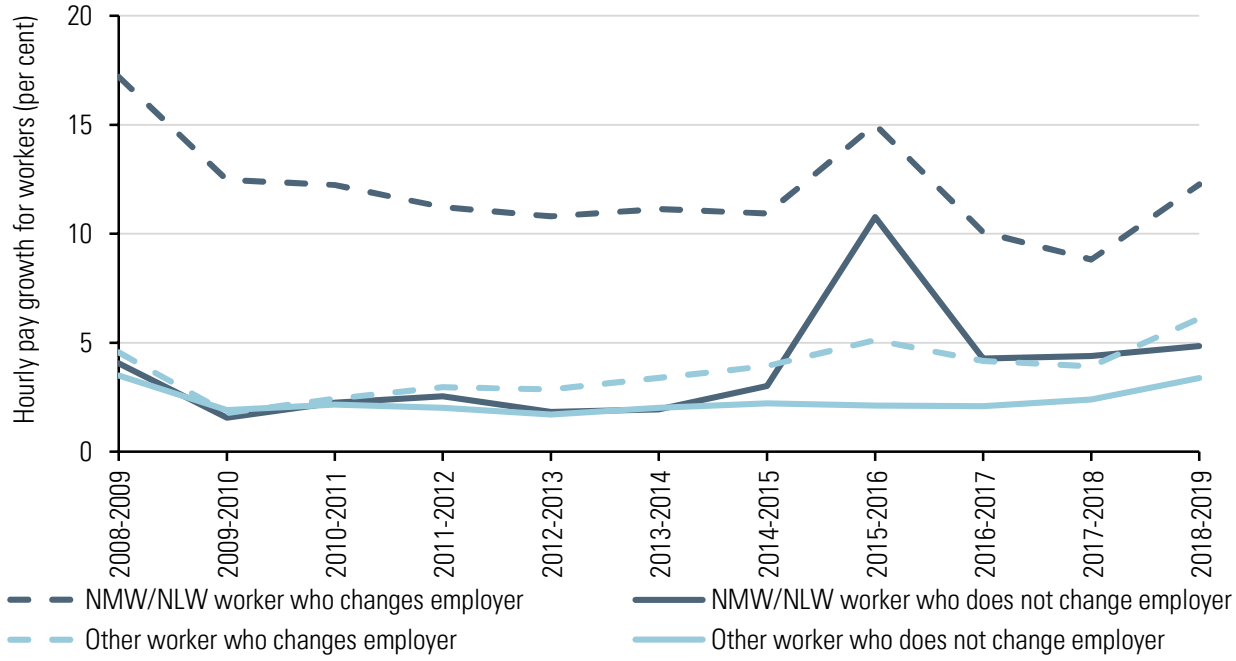


Source: LPC analysis of ASHE, low-pay weights for minimum wage progression (y axis), standard weights for job moves (x axis), UK, 2015-2019.
Note: Only includes payrolled workers aged over 25 with two matched consecutive years of employment, excludes first year apprentices. May be subject to attrition bias.

4.24 Related to pay progression is job mobility, or the rate at which workers move from one employer to another. The average worker who switches employer gets a larger pay rise than the average worker who stays with the same employer. The premium for moving is particularly large for low-paid workers. In 2015, NMW workers who switched employers saw average pay growth of 10.9 per cent, far higher than the 3 per cent received by those who stayed. Part of this premium could be due to other related factors. Younger workers are more likely to move and are also more likely to get high pay rises at the beginning of their career. Figure 4.6 shows occupations with higher turnover in jobs tend to have faster progression. For many workers, the route off the minimum wage is switching jobs rather than getting a pay rise in their current roles.

4.25 However, the introduction of the NLW raised the pay floor for all workers, whether they stayed or moved job. This made moving relatively less attractive for NMW/NLW workers. This was most noticeable in 2016, when minimum wage workers who stayed with their current employer had mean hourly pay growth of 10.8 per cent, only slightly lower than the 15.0 per cent for workers who switched employer (Figure 4.7). There continued to be a premium for moving after 2016, but it was smaller than pre-2015 for minimum wage workers.

Figure 4.7: Mean hourly pay growth by previous year's status and whether worker switches job, UK, 2008-2019



Source: LPC analysis of ASHE, low-pay weights. payrolled workers aged over 25 excluding first year apprentices, UK, 2008-2019.
Note: Only includes workers with two matched consecutive years of employment. May be subject to attrition bias.

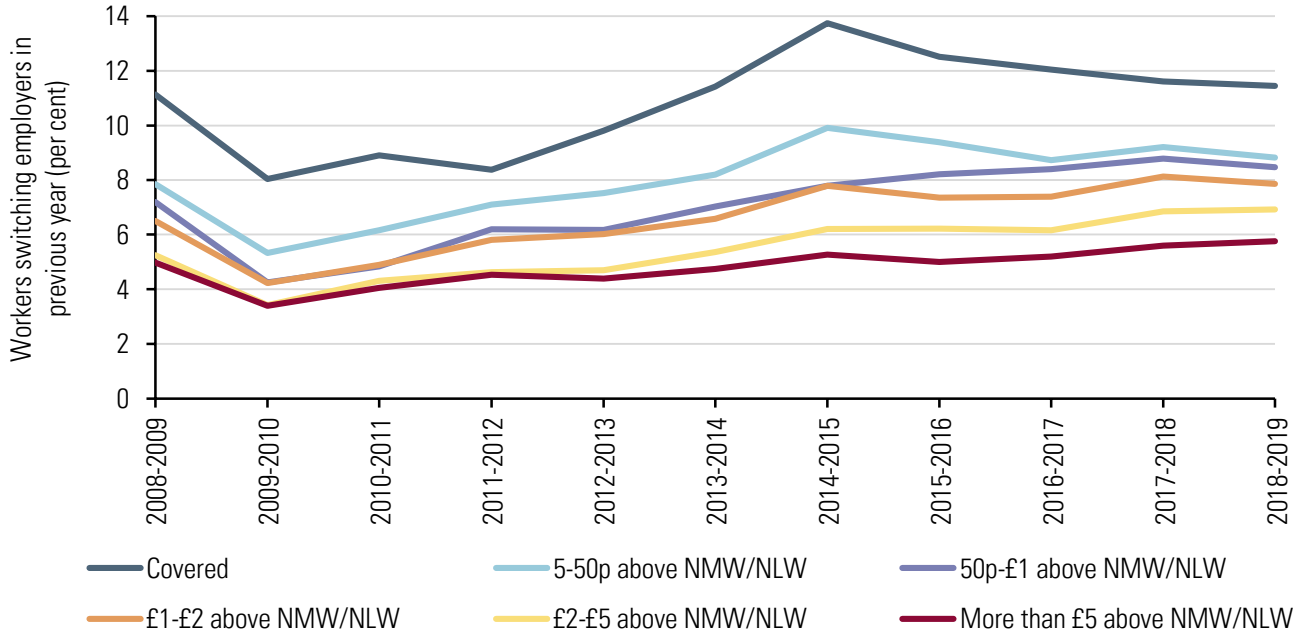
4.26 It remained the case that minimum wage workers were more likely to switch employer than their higher-paid counterparts (Figure 4.8). There are a range of factors at work here. For example, low-paid workers tend to be younger, and younger workers tend to move more as they are at the beginning of their career and finding a job that is the right fit. In addition, low-paying jobs are more likely to be short term or on a temporary basis, necessitating a move to another job.

4.27 The change in the relative gains of moving appears to have affected job-to-job moves for minimum wage workers. Up until the introduction of the NLW, the share of minimum wage workers who switched employer had been rising year-on-year. This mirrored what was happening in the broader economy at that time, where vacancies were rising and job-to-job moves were increasing in tandem. After the NLW was introduced, the share of minimum wage workers moving jobs fell faster than the share of other workers moving. This suggests that the introduction of the NLW may have reduced the incentive for minimum wage workers to move, although we cannot rule out other factors. For example, reduced hiring by low-paying firms would limit opportunities to move (Frontier Economics 2020). Some of these moves will be into new occupations; we know the type of jobs minimum wage workers do has changed since the NLW was introduced.

4.28 Reduced turnover has both positive and negative effects. It may give firms more incentive to invest in training their workers and it reduces the recruitment and training costs associated with staff turnover. However, reduced turnover may also make it more difficult for workers to find a job that matches their skills and preference. This may make it harder for workers to progress into better-paying work in the long term.

4.29 Overall, the evidence suggests that the NLW has not negatively affected the rate at which minimum wage workers progress off the minimum wage into better-paying employment. However, it may have reduced the rate at which they change job, which may matter for their careers in the long term.

Figure 4.8: Percentage of employees switching employers in previous year by wage bands, UK, 2008-2019



Source: LPC analysis of ASHE, low-pay weights. Payrolled workers aged 25 and over excluding first year apprentices, UK, 2008-2019.
Note: Only includes workers with two matched consecutive years of employment. May be subject to attrition bias.

Conclusions

4.30 Overall, the evidence suggests the NLW has not affected aggregate employment, or if it has the effects are very small. We have found a mix of both positive and negative effects on employment, but the latter tend to be small and only affect certain groups of workers at certain times. Employment rates have also grown faster for the groups of workers most reliant on low-paying jobs, benefitting from the job-rich growth the UK has experienced in the last decade.

4.31 Opportunities to progress out of minimum wage jobs do not appear to have been harmed by the NLW. The share of minimum wage workers who move employer does appear to have fallen, however, possibly because the NLW decreased the relative benefit of moving. This is positive for employers as it reduces the training and recruitment costs associated with staff turnover, but it may affect workers' careers in the long term as there remains a wage premium to moving jobs.

Chapter 5

Employer responses

Key points

- When it was introduced, employers expected to manage the rising National Living Wage (NLW) by using a number of strategies. These included increasing prices, absorbing the cost and accepting lower profits, raising productivity, changes to overall pay and reward packages and reducing headcount through lower recruitment rather than redundancies.
- Effects on profits are difficult to measure but evidence shows that some costs were passed on through the prices of certain goods and services, though these effects were too small to affect headline inflation measures.
- Although some employers planned to improve productivity at the outset of the NLW, fewer were subsequently able to achieve this. Our analysis suggests the NLW had little effect on productivity.
- Stakeholder evidence and research shed light on why productivity improvements were so elusive. Some improvements required investment in technology or equipment, but smaller firms told us they cut investment in response to NLW increases. We heard that in some cases the technology failed to deliver the results expected, was inflexible or disliked by customers. In some sectors, particularly agriculture, technology was simply not yet available; in others, such as care or hairdressing, the human element remained indispensable.
- This may explain why some employers opted to intensify work by increasing worker effort. This involved giving staff extra tasks, requiring more flexibility on hours, tightening restrictions on absenteeism, increasing the pace of work or raising performance standards. But there are limits to what work intensification can achieve in terms of productivity.
- Faster increases in the NLW could be expected to increase underpayment. Overall, we do not believe the NLW caused an increase in non-compliance, although changes to the uprating timetable made it more difficult to measure underpayment. Alongside the NLW, there was a large increase in enforcement resources.

5.1 As we saw in Chapter 4, the National Living Wage (NLW) raised hourly pay without strong evidence of damaging jobs. This raises the question of how employers responded and what sort of adaptations were necessary to achieve this.

Expected and actual responses

5.2 Over the NLW period, employer survey data has supported the findings of limited employment impacts. For example, throughout the period to 2020, both the Federation of Small Businesses (FSB) and British Chambers of Commerce (BCC) surveyed their members affected by the NLW on how they were responding. Just 5-6 per cent and 6-8 per cent of affected employers respectively said they had made redundancies as a result. Instead, they adapted in a range of other ways.

5.3 At the outset, employers expected to respond in similar ways to previous National Minimum Wage (NMW) increases. These included simply absorbing the cost and accepting lower profits; raising productivity in some way; increasing prices; changing the overall pay and reward package (for example reducing breaks, overtime, staff discounts); and reducing headcount. On the final point, most employers were of the view that staffing levels would be affected by reduced hiring rather than making redundancies. The previous chapter discusses evidence corroborating this.

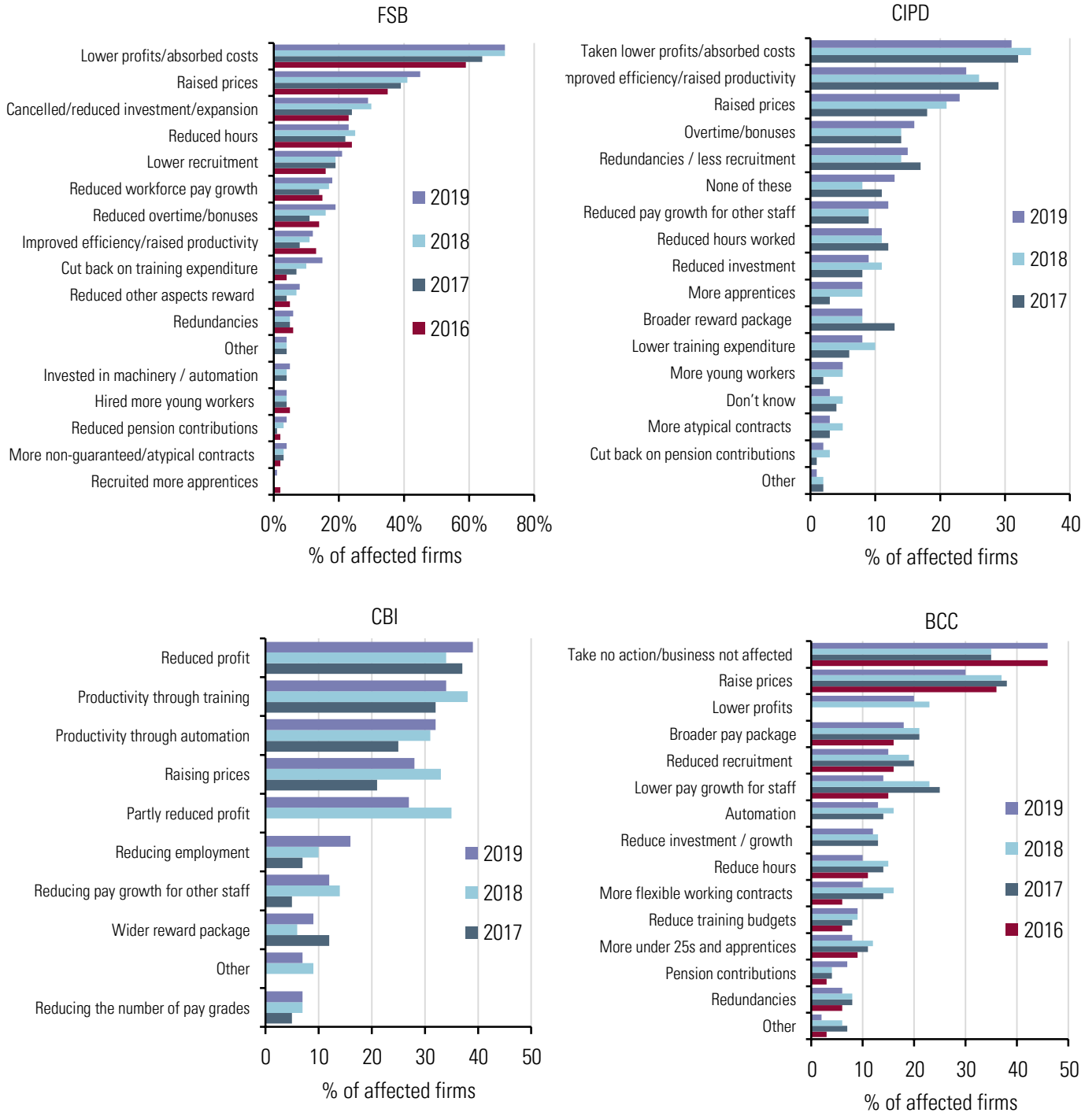
5.4 Broadly, these expectations turned out to be correct. Figure 5.1 shows a summary of how different employers affected by the NLW responded to it, with survey responses from members of the Confederation of British Industry (CBI), FSB, BCC and a survey of employers carried out by the Chartered Institute of Personnel and Development (CIPD). In each survey the option to simply absorb the cost or do nothing was the most common response. After this, larger firms, which tend to be better represented in the CBI and CIPD surveys, were likely to opt for raising productivity through training and/or automation. Price rises tended to come after these options for larger firms but were the second most common response for FSB and BCC members. The key difference for FSB members, who are overwhelmingly small and micro-businesses, is that they were far more likely to cancel or cut back on investment plans following NLW rises, and this became a more common response over the period. By contrast, larger firms were more likely to invest.

Profits

5.5 The most common response from employers was simply to absorb the cost of NLW increases and accept lower profits than would otherwise have been the case, although this varied by employer size. In CBI and CIPD surveys, where larger firms were more represented, around 30-40 per cent of those affected said they were absorbing the cost. However, a far greater share of the FSB membership said their profits had been hit (just under 60 per cent in 2016, rising to 70 per cent in 2019).

5.6 Unfortunately, official statistics on profit levels are not available at a sufficiently granular level to look into this in more detail. Academic research suggests profits are a key channel firms use to absorb minimum wage rises. Research on the introduction of the NMW in 1999 has found that it significantly reduced profits for affected firms (Draca, Machin, and van Reenen, 2011). More recent research has shown that the announcement of the NLW caused stock prices to fall for low-paying firms (Bell and Machin, 2018). Stock prices are, in theory, valued based on future dividend payments, so a fall in stock value indicates that the market expected profits to fall. This academic evidence and the fact that employers reported taking lower profits as their most common response to the rising NLW is consistent with the lack of impact on employment.

Figure 5.1: Stakeholder surveys of employer responses to the NLW



Source: Responses to LPC annual consultations from the Federation of Small Businesses (FSB), the Chartered Institute of Personnel and Development (CIPD), the Confederation of British Industry (CBI), and the British Chambers of Commerce (BCC)

Prices

5.7 Another common response was to pass on costs in the form of price rises. This became more prevalent over the period, particularly for smaller employers. It was the second most common response in the FSB's survey, where the proportion of respondents raising prices rose from 35 to 45 per cent between 2016 and 2019. While the CIPD and CBI surveys found larger employers to be slightly more likely to seek productivity improvements, they also show increasing proportions raising prices.

5.8 Price increases are seen as problematic for many employers, particularly those in highly competitive markets. Employers in sectors predominantly funded by public spending, such as adult social care, have far less power to change prices. In many cases they are involved in contract negotiations with large public sector organisations who have little scope to pay more to cover the costs.

5.9 We commissioned Frontier Economics (2020) to explore the NLW impact on prices. It identified sector and region combinations that were more or less likely to be exposed to increases in the minimum wage and mapped these to monthly consumer price quotes covering 700 items in the region. The research found that exposed firms raised prices more in months when the minimum wage was increased. However, the effect was relatively small compared to the size of the uplift: inflation of exposed items was between 0.1 and 0.6 percentage points higher, with larger effects since the introduction of the NLW in 2016. The 'elasticity' of prices with respect to the minimum wage was between 0.023 and 0.11, meaning that a 10 per cent increase in the minimum wage could increase prices of affected goods and services by up to 1.1 per cent. However, because this only applied to a small subset of items and regions, the minimum wage increases studied had a negligible impact on overall measures of inflation.

Productivity

5.10 As set out in Chapter 1, improving productivity was one of the Government's aims in introducing the NLW, to "*encourage a model of higher pay and higher productivity* " (BEIS, 2015). Upon the announcement of the NLW, many firms told us they planned to become more productive. The Institute of Directors said that '*past experience tells us that most [employers] absorb the pressures via some combination of passing on small increases in price to consumers, a dip in profits and increases in productivity*'. But it also warned that '*in the long run… improving the UK's productivity performance will be essential to making the NLW affordable'* (LPC, 2016). Worker representatives told us that higher pay might encourage improved productivity, reduce absenteeism and boost demand. However, research (CIPD 2019) found that while just 30 per cent of businesses had planned to improve productivity, a smaller number (24 per cent) had actually done so several years later. This section looks at the evidence on whether the NLW contributed to improved productivity, and some of the reasons it may have failed to do so.

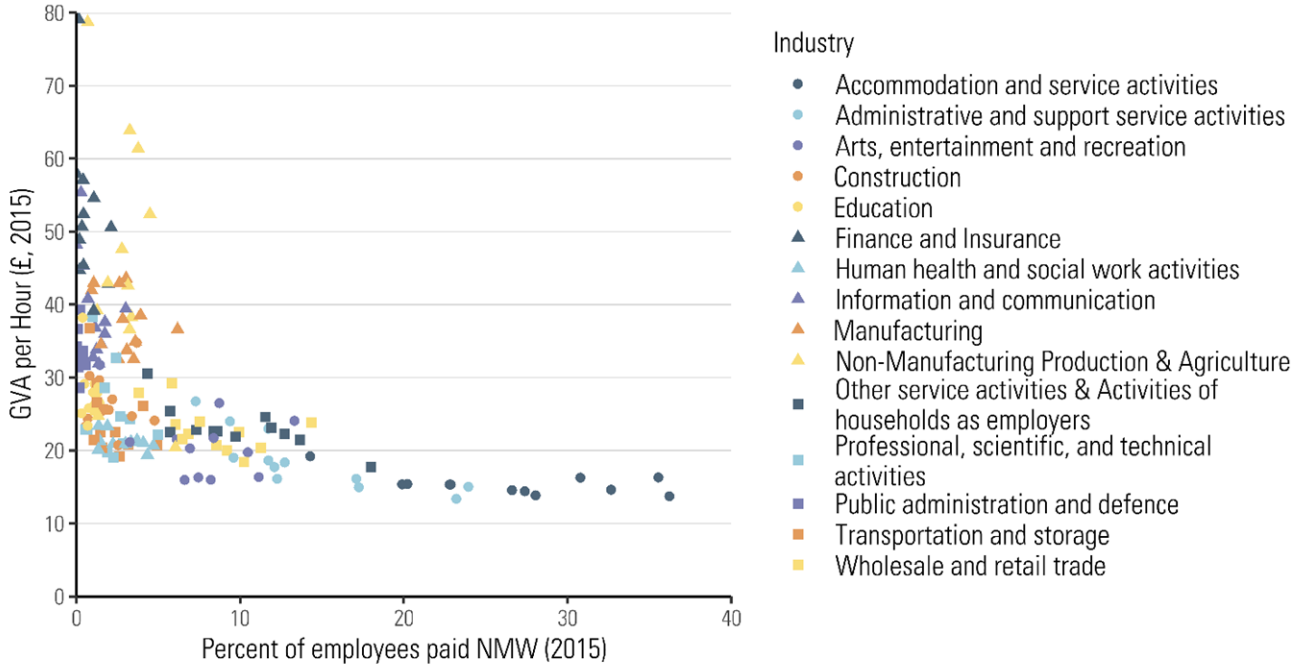
5.11 Research prior to the introduction of the NLW showed some positive, but not always significant, association between productivity and the NMW (Forth and O'Mahoney, 2003; Forth, Rincon-Aznar, and Robinson, 2009; Crawford, Jin, and Simpson, 2013; Galindo-Rueda and Pereira, 2004; Croucher and Rizov, 2011; Riley and Rosazza-Bondibene, 2013; Riley and Rosazza-Bondibene, 2015). In theory, the increase in costs could incentivise a range of different responses. These include adopting more capital-intensive ways of working, undertaking more training, shifting to a more skilled and experienced workforce, adopting tougher recruitment criteria, greater supervision to encourage more effort and outsourcing. Bernini and Riley (2016) looked at each of these mechanisms and confirmed a positive association between productivity and NMW increases but concluded that no single channel could be identified that explained the productivity effect. Instead, any effects were likely to have arisen through a combination of factors within the firm or for different reasons in different firms.

5.12 We have tested the impact of the NLW on productivity by comparing the growth in productivity across 180 different industry-region cells. There is large variation in both Gross Value Added (GVA) per hour, a measure of productivity, and the share of workers paid the minimum wage across these cells. This is shown in Figure 5.2. Productivity is lower in the high coverage industry-region cells. For instance, in 2015, 36 per cent of hospitality workers in Northern Ireland were paid the NMW and on average productivity was only £16 per hour. In contrast, in 2015 a manufacturing worker in the South East of England on average produced £42 of output per hour and only 1 per cent of them were paid the minimum wage. This follows from the relationship between productivity and pay. If workers are more productive, firms can afford to pay them better and so pay tends to be higher for more productive workers.

5.13 We found no evidence that the NLW changed productivity in affected industry-regions. Using a difference-in-difference method, we compared growth in productivity amongst high coverage industry-regions to growth in productivity amongst low coverage industry-regions. Productivity grew at a similar rate for industry-region cells with high or low minimum wage coverage, as shown in Figure 5.3. When doing a similar test on wages, we do find a positive effect (in line with other research discussed in chapter 2). This suggests that the NLW did increase wages but did not increase productivity for the affected industry-regions.

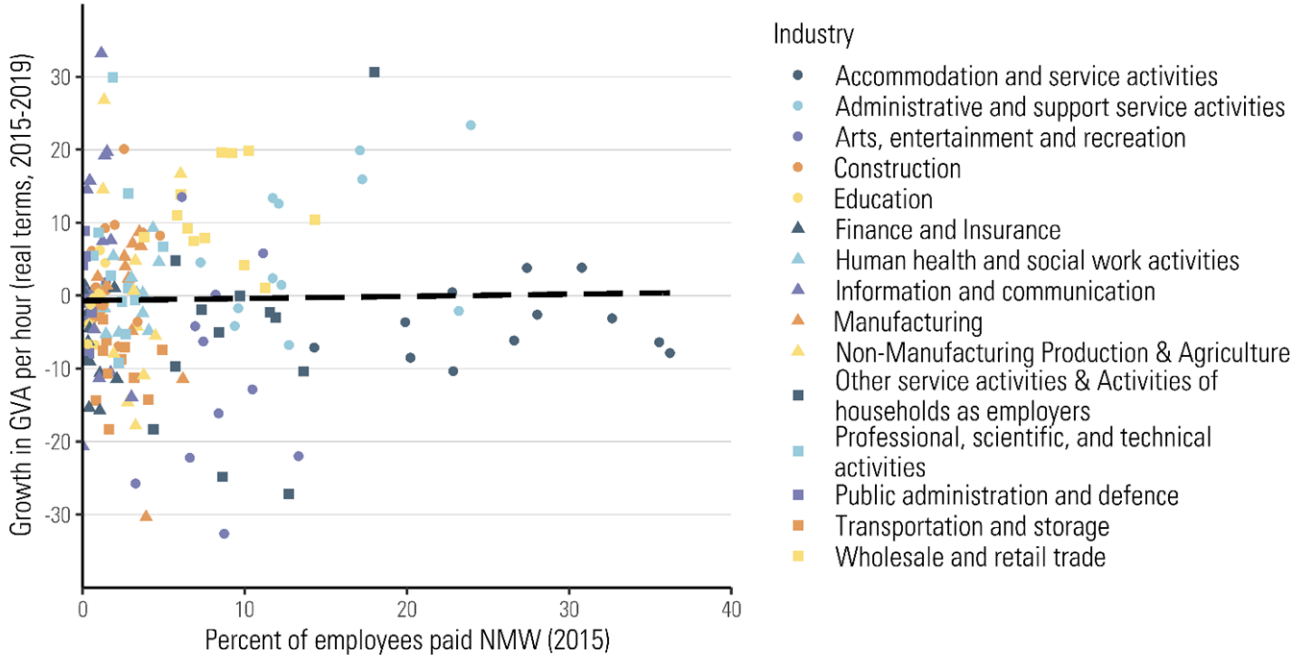
5.14 However, there is a large amount of uncertainty around these findings. Our estimates are based on a relatively small number of observations and the minimum wage affects a minority of workers in any industry-region. This means we cannot rule out either substantive positive or negative productivity effects from the NLW. The range over which we have 95 per cent confidence that the true effect falls within is wide. It ranges from a 1 percentage point increase in coverage in an industry-region decreasing productivity by 0.2 per cent in that industry-region to a 1 percentage point increase in coverage increasing productivity by 0.1 per cent. Nevertheless, our results suggest that the NLW had no substantial effect on productivity. We have published a detailed report based on this research alongside this report (Latimer, 2022).

Figure 5.2: Productivity and NMW coverage, by industry-region, UK, 2015



Source: LPC analysis using ONS productivity by Industry-Region data (at current prices) and ASHE, 2015, UK, low pay weights. Minimum wage coverage only includes workers aged 25 and over, excludes first year apprentices. Excludes real estate activities.

Figure 5.3: Real terms growth in GVA per hour and NMW coverage, by industry-region, UK, 2015-2019



Source: LPC analysis using ONS productivity by Industry-Region data (chained volume measures) and ASHE, low pay weights. Minimum wage coverage only includes workers aged 25 and over, excluding first year apprentices. Excludes real estate activities.

5.15 Research (CIPD, 2019) confirmed what we had heard from a range of stakeholders over the course of the NLW – that realising productivity improvements was hugely challenging for a range of reasons. Some improvements required investment in technology or equipment, but smaller firms cut investment in response to NLW increases. In FSB surveys (Figure 5.1), the third most common

response to NLW increases was cutting or cancelling investment, with the proportion doing so rising from 23 to 29 per cent between 2016 and 2019. We heard from those that did invest that the technology did not always deliver the results expected, could be inflexible or was disliked by customers. In some sectors, particularly agriculture, the technology was simply not yet available; in others such as care or hairdressing, the human element was indispensable.

5.16 This may be why some employers opted for work intensification to achieve productivity gains. This essentially involved workers working harder in their current roles. CIPD survey data (LPC, 2019b) showed that some employers affected by the NLW focused on increasing worker effort (23 per cent of private sector firms affected by the NLW and 30 per cent in the public sector). Respondents also reported giving staff extra tasks (25 per cent), requiring more flexibility on hours (23 per cent), tightening restrictions on absenteeism (9 per cent) and increasing the pace of work or raising performance standards (14 per cent). Similarly, a 2018 survey by the Association of Convenience Stores, of almost 4,000 convenience store workers, found that 37 per cent 'expected to be asked to work harder' because of the NLW. The British Retail Consortium described 'staff being asked to take on more responsibility'.

5.17 Work intensification may marginally increase productivity levels but is unlikely to lead to a prolonged upturn in productivity growth. There is a limit to how much harder someone can work. This could help explain why researchers have found evidence that previous increases in the NMW did increase productivity (Riley and Rosazza-Bondibene, 2013 and 2015), but we have found no such evidence following the introduction of the NLW. Many of the gains from work intensification may already have been achieved.

Underpayment

5.18 One consequence of a fast-increasing NLW could be more underpayment; employers unable or unwilling to keep up with the rising rate may be less likely to comply with the rules. In our Spring 2016 Report, we described the NLW as 'in the long-term a potential game-changer' for compliance and enforcement, given projections at the time meant that coverage would increase threefold. The potential problems we identified included the greater complexity arising from introducing a new rate; the adjustment to the timing of upratings catching employers off-guard; and new sectors and employers coming into scope of the rate. Our consultation at the time suggested several low-paying sectors faced particular risks: social care, small retail, small firms, textiles and agriculture.

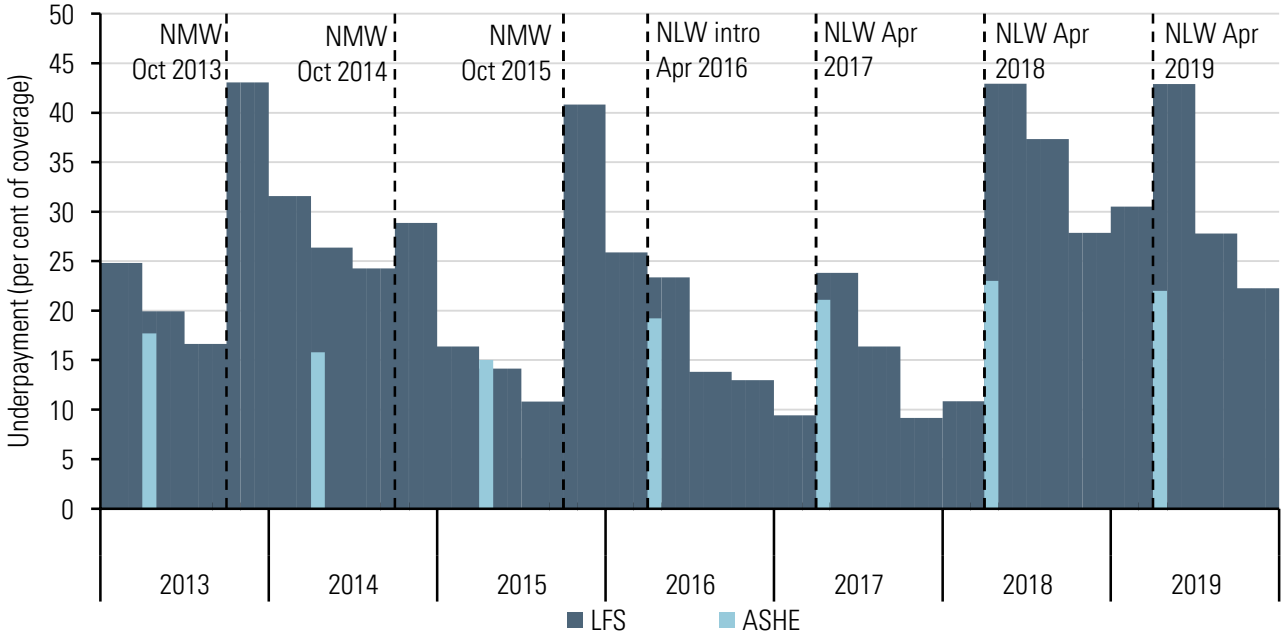
5.19 When the NLW was introduced, the budget for enforcement increased substantially, from £9.2m in 2014/15 to £20m in 2016/17 and eventually to £26.3m in 2019/20. HM Revenue and Customs (HMRC), the tax collecting agency, is the body responsible for enforcement of the minimum wage. It has increased the number of compliance officers from around 180 in 2014/15 to around 450 by 2019/20. The increase in the number of cases which HMRC opened and closed was more modest, but the arrears they recouped grew spectacularly. Between 2009/10 and 2014/15, enforcement officers secured on average just under £4 million of arrears each year. In 2018/19, HMRC recovered £24.4 million of arrears.

5.20 It is easy to measure the rise in enforcement activity but far harder to say whether there was an increase in underpayment. In part, this has to do with the difficulty of measuring underpayment; most of which is likely to remain 'off the books' and outside official data sources. Although we can and do measure underpayment in official datasets, there are obvious problems with both employer and worker surveys in estimating the scale of non-compliance.

5.21 A separate problem stems from the change in the uprating date from October to April which accompanied the NLW. Our main data source, the Annual Survey of Hours and Earnings (ASHE) is conducted in April, just after the uprating, when underpayment is likely to be highest. This means it is not possible using these data to compare measured underpayment before and since the NLW was introduced. The Labour Force Survey (LFS) represents an alternative source, published quarterly, but is based on worker surveys and is less reliable as a measure of the level of underpayment. Nevertheless, as seen in Figure 5.4, LFS data highlights how underpayment jumps each April when the new rate comes in, then falls back through the year. The move to April upratings of the NLW meant that ASHE data henceforth recorded underpayment at its annual peak. Previously it measured underpayment six months after an uprating. Both ASHE and LFS data since 2016 have shown an upwards trend in measured underpayment, albeit a relatively moderate one in ASHE, from 305,000 underpaid workers in 2016 to 345,000 in 2019.

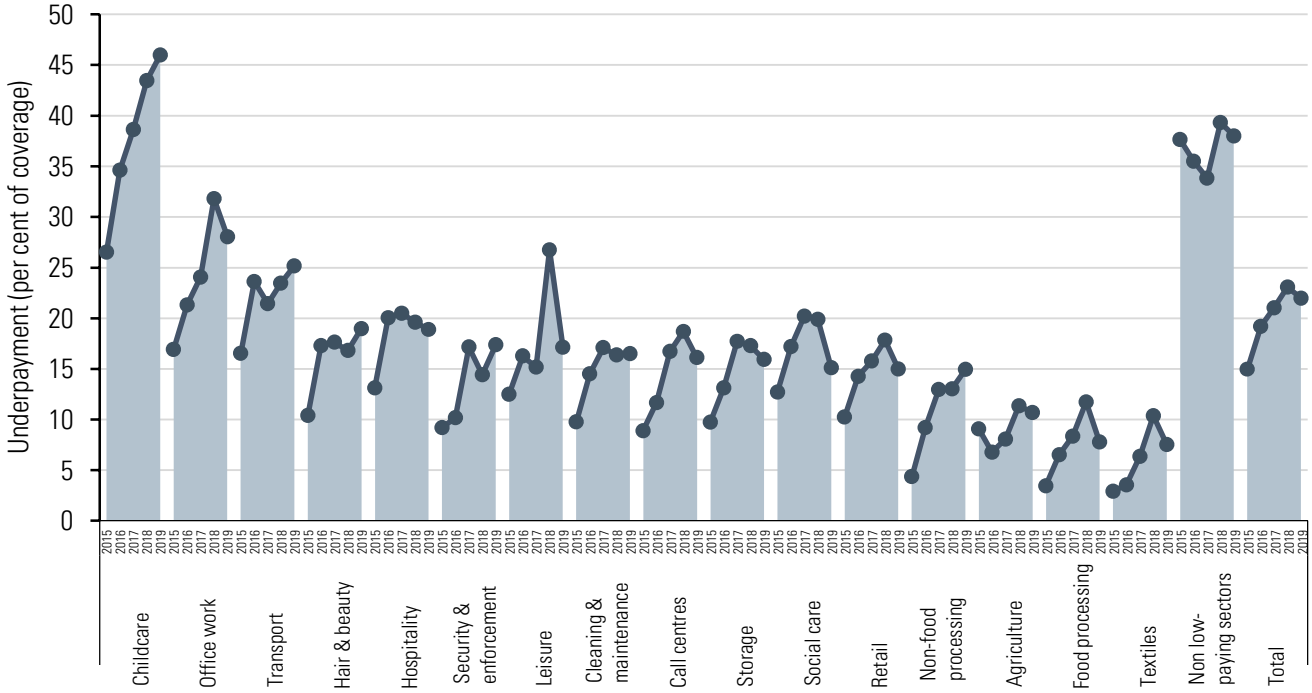
5.22 The characteristics of underpaid workers remained relatively stable over the period. Low-paid workers were more likely to be underpaid if they were female; if they worked in a salaried job rather than one paid hourly; and if they worked full-time rather than part-time. As Figure 5.5 shows, in most occupations, the initial jump in underpayment between 2015 and 2016 then flattened to some extent. The occupations with the highest levels of recorded underpayment remained the same, with only childcare notable for a sharp and sustained increase over the period. In non-low paying occupations, rather than new areas being caught out by the rising rate, measured underpayment actually fell in the years following the introduction of the NLW.

Figure 5.4: ASHE and LFS underpayment as share of coverage, UK, 2013-2019



Source: LPC analysis of LFS using imputation methodology, Q1 2013 – Q4 2019 and using ASHE 2010 methodology, low pay weights, 2013-2019, UK.

Figure 5.5: NMW/NLW underpayment by low-paying occupation for employees 25 and older, UK, 2015-2019



Source: LPC estimates using ASHE 2010 methodology, low pay weights, low pay flag, UK, 2015-2019.

5.23 Since 2017, we have published separate reports looking at compliance and enforcement of the minimum wage. In these, we look at the evidence on the scale of underpayment, assess the policy response to it and make recommendations to Government. Although enforcement has expanded and improved since the NLW was introduced, there remains much to be done to better understand the scale and nature of non-compliance; and to target limited enforcement resources.

Non-compliance in social care

5.24 Underpayment of social care workers was a concern even before the announcement of the NLW. Our 2015 Report noted the pressure on local authority budgets and the compliance risks these created. We noted these were exacerbated by the prevalence of zero-hours contracts in the sector, and by specific, persistent problems around payment for travel time and sleep-in shifts. At the time, stakeholders in the sector predicted the NLW would increase financial pressure and could lead to widespread closures (Plimmer, 2015). In our Spring 2016 Report, we noted stakeholder concerns that the NLW, if not matched by a commensurate increase in local authority fees, would have a negative impact on the sector and its workforce: 'non-compliance is mainly a function of broader funding and commissioning problems'. We urged the Government to maintain social care as a priority sector for enforcement.

5.25 Over the years, we continued to hear the same issues dogging the sector and damaging working conditions, documented in our annual reports throughout the period. Funding remained at an impasse; local authorities' commissioning budgets did not increase to match the rising NLW; the rates they offered to providers were squeezed; workers and unions continued to report unfair and non-compliant working practices as a matter of routine. Research we commissioned in 2018 found that the

quality of care had been affected by funding shortfalls and the cost pressure of the NLW (Datta, Giupponi, and Machin, 2018).

5.26 HMRC, guided by the advice of the Director of Labour Market Enforcement, continued to treat social care as a priority, but the outcomes of its activity were unclear. A targeted Social Care Compliance Scheme in 2018 identified over £6 million in arrears (BEIS, 2022), but unions were disappointed that providers who cooperated with the scheme avoided being publicly named. Problems with measuring, defining and documenting care workers' working hours hung over the sector throughout the period. A series of court cases regarding payment for sleep-in shifts left many workers and employers in doubt about their entitlement to the NLW for hours spent asleep. This was ultimately only resolved by a Supreme Court judgement in February 2021 (Supreme Court Judgement, 2021), which determined that sleep-in shifts did not count as working time for NLW purposes.

5.27 Unions argued that employers' failure to keep adequate records lay at the heart of much underpayment. Since November 2017, HMRC inspectors have the power to take action against employers for record-keeping offences even when these are not combined with another offense. Following LPC recommendations, the Government brought in legislation in 2019 to force employers to record hours of work on payslips, with the goal of enabling workers to understand their pay and identify underpayment. But unions reported that these changes were inadequate in scope and seldom enforced.

5.28 Social care is not the only sector where public funding has failed to keep pace with the rising NLW – this is also the case for childcare and parts of the leisure sector – but it is a particularly acute example. Our reports throughout the period called attention to the consequences of this funding shortfall, and we continue to urge the Government to take responsibility for funding a rising minimum wage in social care and other areas where it is the ultimate source of funds.

Conclusions

5.29 Employers have responded to the NLW in a similar way to previous minimum wage increases. These included absorbing the cost and accepting lower profits, trying to raise productivity, increasing prices, changes to overall pay and reward packages and reducing headcount through lower recruitment rather than redundancies. However, improving productivity has proven more difficult than some employers initially planned. This may explain why some employers have opted to intensify work by increasing worker effort. And, while the NLW increases were large, they do not appear to have increased non-compliance.

Chapter 6

Conclusions and discussion

6.1 Overall, our assessment of the first stage of the National Living Wage's (NLW) journey is positive. It increased hourly and weekly pay for the lowest-paid workers at an ambitious pace, making the UK's minimum wage one of the highest in the world. It did so with minimal effect on employment and hours. And while the impact on household income was far weaker, this was a consequence of other policy decisions and is not an uncommon finding internationally.

6.2 It is useful to reflect on what we can learn from the first phase of the NLW to inform its progression to two-thirds of median earnings by 2024. The first question is why the NLW has not caused job loss. The most obvious explanation is the strength of the UK labour market during the period in question. We have seen the employment rate break record after record since the 2008 financial crisis. At the time the NLW was announced the employment rate had reached a 45-year high and the labour market was forecast to go on creating jobs at an ambitious pace. These forecasts were easily surpassed as the employment rate continued to move from strength to strength. This means that the first phase of the NLW target policy took place during a period particularly conducive to job growth and therefore, if anyone did lose their job, they likely had opportunities elsewhere.

6.3 Another likely factor at work is the NLW policy framework itself, which involved regular published estimates of what the NLW rate would be each year up to 2020. These were subject to the uncertainties inherent in all economic forecasting; nevertheless employers told us they were very useful. Employers had NLW projections on which to plan and therefore make decisions as to what action they would take in response. These projections helped employers decide whether they could afford the uprating or needed to take one or more of the actions discussed in Chapter 5. In particular, employers involved in large or long-term contracts for their services or products could use these path estimates in their negotiations over prices.

6.4 There is also the fact that the initial estimates of the NLW rate in 2020 turned out to be too high, skewed upwards by earnings forecasts that were too optimistic about pay in the UK labour market. This meant that the initial estimates of an NLW in 2020 of £9.35 were far higher than the ultimate rate of £8.72 in 2020. Any employer planning for the higher rate would have found the eventual lower rate easier to deal with.

6.5 Finally, it should be remembered that the absence of an effect on employment is not an unusual finding internationally. In his review of the international evidence, Professor Arin Dube (Dube, 2019) found likewise, noting a "very muted" effect of minimum wages on employment. His review also reiterated a key justification for minimum wages in the first place – monopsony, where employers have greater wage-setting power than they would in a competitive market. He noted 'some increases in the

minimum wage may have little negative effect on employment in a monopsonistic labour market,' which may explain the absence of an employment effect.

6.6 The absence of an employment effect does not imply that adjusting to the NLW has been easy for employers; this apparent success is not costless. Instead of cutting jobs, employers have opted to absorb the cost and accept lower profits, pass on some costs through price increases, make cost savings elsewhere and try to improve productivity through a range of methods. This latter change, though, has been far more challenging than expected.

6.7 A key question for the next phase of the NLW up to 2024 is whether employers are willing and able to continue responding like this. Even before the Covid-19 pandemic, employers were telling us that cuts to profits were not sustainable and that reductions in investment harmed businesses in the long term. Many have taken significant hits to their profits and/or taken on high levels of debt during the pandemic. These changes may make firms more risk-averse and less able to invest in their business.

6.8 Productivity improvements have proven hard to come by, and so are not guaranteed to follow future increases either. The relationship between minimum wages and productivity has always been complex, with multiple mechanisms at work. But despite being one of the original aims of the NLW, it has so far shown that raising the minimum wage does not guarantee productivity improvements; and what increases are found may result from work intensification as opposed to use of technology, improved training or different working strategies.

6.9 We do not know if the post-Covid era will be characterised by the job-rich growth we saw from 2014 onwards, although at the time of writing in spring 2022 the labour market is experiencing record levels of demand and employers are struggling to recruit.

6.10 While the effect on household incomes has been limited so far, a recent policy change will mean that households will benefit more from NLW increases. The 2021 Budget increased the work allowance of Universal Credit, the amount someone can earn before their benefits start to be withdrawn, and reduced the taper rate, the proportion that is taken as earnings increase. This means we can expect household incomes to be more responsive to increases in the NLW than they have been in the past.

6.11 Uncertainties around the post-Covid labour market and the impact of the current rise in living costs further reinforce the need to balance ambitious aims for low-paid workers with the flexibility to respond to changing circumstances.

Appendix 1

Definition of low-paying sectors

A1.1 Throughout this report, we refer to low-paying sectors. We define these as occupations or industries that contain a high number or large proportion of low-paid workers based on the Standard Occupation Classification (SOC) and Standard Industrial Classification (SIC) codes published by ONS. We have two distinct definitions of low-paying sectors, one based on industries and one on occupations. These definitions are used when conducting detailed analysis of low-paying sectors using ASHE or the LFS. Some sectors thought of as low-paying, e.g. retail and hospitality, will tend to include higher-paid roles such as buyers and managers when looked at on an industry basis. On the other hand, there are some low-paying occupations, e.g. cleaning, which are found across different industries.

A1.2 In 2017, we reviewed the low-paying classifications to identify new low-paying sectors arising from the NLW, considering the 2020 NLW target of 60 per cent of median pay for workers aged 25 and over. As a result, we added two new groups to the industry classification: security and wholesale food (including agents), both of which included above average proportions of low-paying workers. Small changes were also made within the cleaning and maintenance and social care groups. We also added two new groups within the occupation classification: security and enforcement and call centres. As with the industry classification we also made several small changes within some of the other occupational groups.

A1.3 Our 2017 Report provides full details on the review including new definitions of each low-paying occupation and industry based on the latest SIC 2007 and SOC 2010 codes (LPC 2017) (LPC 2017). Table A3.1 shows our revised list of low-paying sectors.

A1.4 We will conduct a review of low-paying sectors and industries in 2022, based on SOC 2020 codes and hourly pay in the latest ASHE data.

Table A1.1: Definitions of Low-Paying Industries and Occupations by SIC 2007 and SOC 2010

Low-paying industry/occupation	Current industry definition (SIC 2007)	Old industry definition (SIC 2007)	Current occupation definition (SOC 2010)	Old occupation definition (SOC 2010)
Retail	45, 47, 77.22, 95.2	45, 47, 77.22, 95.2	1254, 5443, 7111,7112,7114, 7115, 7123-7125, 7130, 7219, 925	1254, 5443, 7111,7112,7114, 7115, 7123-7125, 7130, 7219, 925
Hospitality	55, 56	55, 56	5434, 5435, 9272-9274	5434, 5435, 9272-9274
Social care	86.10/2, 87, 88.1, 88.99	86.10/2, 87, 88.1	6145, 6146, 6147	6145, 6147
Employment agencies	78.10/9, 78.2	78.10/9, 78.2	-	-
Cleaning and maintenance	81, 96.01	81.2, 96.01	6231,6232, 6240, 9132, 9231, 9233-9236, 9239	6231,6240, 9132, 9231, 9233-9236, 9239
Leisure, travel and sport	59.14, 92, 93	59.14, 92, 93	3413, 3441, 3443, 6131, 6139, 6211, 6212, 6219, 9275, 9279	3413, 3441, 3443, 6131, 6139, 6211, 6212, 6219, 9275, 9279
Food processing	10	10	5431-5433, 8111, 9134	5431-5433, 8111, 9134
Wholesale food incl. agents	46.1, 46.2, 46.3	-	-	-
Childcare	85.1, 88.91	85.1, 88.91	6121-6123, 9244	6121-6123, 9244
Agriculture	01, 03	01, 03	5112-5114, 5119, 9111, 9119	1213, 5112-5114, 5119, 9111, 9119
Security	80.1	-	7122, 9241, 9242	-
Textiles and clothing	13, 14	13, 14	5411, 5414, 5419, 8113, 8137	5412-5414, 5419, 8113, 8137
Hairdressing	96.02, 96.04	96.02, 96.04	622	622
Office work	-	-	4129, 4133, 4216, 7213, 9219	4129, 4216, 7213, 9219
Non-food processing	-	-	8112, 8115-8116, 8119, 8121, 8125, 8127, 8131, 8134, 8139, 9120, 9139	5211, 5441, 8112, 8114-8116, 8125, 8131, 8134, 8139, 9120, 9139
Storage	-	-	9260	9260
Transport	-	-	5231, 8135, 8212, 8214	5231, 8135, 8212, 8214
Call centres	-	-	7113, 7211	-

Note: '-' denotes not applicable.

Appendix 2

Summary of econometric evidence on employment

Publication title and authors	Methodology	Summary of findings
Impact of the introduction of the National Living Wage on employment, hours and wages **Andrew Aitken, Peter Dolton, and Rebecca Riley** (2018) (National Institute of Economic and Social Research)	This study investigated the impact of the introduction of the NLW in April 2016 and the subsequent uprating in April 2017 on real wages, employment retention and hours worked. Employment retention measures whether an individual in employment in the period before the minimum wage increase remains in employment after it. The researchers adopted a difference-in-difference approach, using data from the Annual Survey of Hours and Earnings (ASHE). They use both a standard, wage-based difference-in-difference approach, comparing a treated group (NLW-affected workers) with a control group (of workers aged 25 and over not directly affected by the NLW), and alternative difference-in-difference approaches, which exploited the fact that workers aged 21-24 were not entitled to the NLW. The analysis was conducted separately for men and women, working part-time and full-time. It also covered low-paying occupations and industries, as well as regions and countries across Great Britain. One potential weakness of this study is the high non-response rate in the ASHE data. In some cases an employee may remain in	The study found no evidence of any significant impact on employment retention or hours, except for women working part-time. For this group, the researchers estimate that employment retention fell by 2.4-2.6 percentage points (depending on specification) following the 2016 introduction of the NLW. This effect was not found for the 2017 uprating. Among part-time women, the effect is clearest for those retail jobs with the lowest wages (prior to introduction of the NLW). The study generally found no evidence of a reduction in hours worked following the introduction of the NLW in 2016 or the 2017 uprating, although there was some evidence of a reduction in weekly hours for full-time women in low-paid retail occupations.

	employment but be measured to have left employment if their employer does not respond to the following year's survey.	
The impact of the minimum wage on employment and hours **Stella Capuano, James Cockett, Helen Gray and Dafni Papoutsaki** (2019) (Institute for Employment Studies)	This research builds on that of Aitken, Dolton and Riley (2018), using a difference-in-difference approach to compare workers based on their wage levels before the introduction of the NLW. Note that, as with other studies using ASHE to measure employment retention, there is a risk of measurement error due to non-response. The treatment group was defined as those workers who were directly affected by the change in the minimum wage as their hourly pay was below the incoming NLW in the period prior to the introduction or uprating, while the comparison group was defined as those whose pay was at, or up to 10 per cent above, the incoming NLW (a group that were closest to those on the minimum wage but not directly affected).	This study found that the initial introduction of the NLW in 2016 reduced employment retention for both male and female part-time employees. The employment retention elasticities from the NLW are estimated at -0.56 for part-time women and -0.72 per cent for part-time men, although the effect for men was sensitive to the estimation approach. The effects were largest for women working part-time in the public sector. The study found little evidence that the 2017 or 2018 upratings affected employment retention for men or women, working full-time or part-time. The only exception to this is a positive employment retention effect for private-sector part-time women in 2018. The study found little evidence of an effect from the NLW on working hours.

The distributional and employment impacts of nationwide minimum wage changes **Jonathan Cribb, Giulia Giupponi, Robert Joyce, Attila Lindner, Tom Waters, Tom Wernham, and Xiaowei Xu** (2021) (Institute for Fiscal Studies, University of Bocconi and University College London)	The researchers study the impact of the NLW on individual labour market outcomes by adapting the bunching approach developed in Harasztosi and Lindner (2019) and Cengiz, Dube, Lindner and Zipperer (2019). They use ASHE and the Annual Population Survey (APS) to estimate the effects of the NLW on the number of jobs within wage bands. To identify these impacts, they exploit differences in wage levels across the UK. They compare employment changes across the wage distribution in low-wage areas to employment changes of similar workers living in high-wage areas, who are less exposed to minimum wage increases. The analysis considers the impacts of the NLW in each year from 2016 - 2019, and across the period as a whole. They estimate effects for the whole population, as well as by gender, working pattern (full-time/part-time) and age.	This study found that the NLW did not lead to statistically significant effects on aggregate employment. They estimated that, on average, NLW increases led to a 0.09 per cent reduction in total employment over the period of the study, but this was not statistically significant (the 95 per cent confidence interval runs from a 0.42 per cent reduction in employment to a 0.24 per cent increase). The study found more evidence of negative effects on employment for women. In their baseline specification, the researchers estimate that female employment in low-wage areas fell by 0.44 per cent more than in high-wage areas. This marginally crosses the threshold for statistical significance at the 5 per cent level. In alternative specifications, the central estimate remains similar but sometimes falls just short of statistical significance at the 5 per cent level. The researchers also looked at different age groups among those aged 25 and over. The estimated employment effects were not statistically significant for any of the age groups considered.
The impact of the National Living Wage on wages, employment, and hours **Anthony Lord (forthcoming, 2022)** (Low Pay Commission)	This research builds on that of Aitken, Dolton and Riley (2018). It follows individuals over time to estimate how the NLW has affected their wage, employment retention and hours. It uses a difference-in-difference approach with a treatment group of workers paid less than the minimum wage at the point of introduction of the NLW and two different control groups of workers paid just over the minimum wage at the time of introduction of the NLW. The first control group is defined as those earning between the incoming NLW and 10% above it and the second control group uses a definition of	This study found a positive effect of the NLW on the wages of the treatment group in all years except 2019. It did not find any effect on employment or on hours worked overall, but did find a 2 percentage point decrease in employment retention for part time women workers in 2016 using the first control group. *Note that Forth, Phan and Stokes (2021) have raised concerns about the suitability of the weights used in this study. They are developing longitudinal weights for ASHE and we intend to revisit this analysis once these are available.*

	individuals paid between 10% and 20% above the incoming minimum wage.	
Impact of the NLW using geographic wage variation Tim Butcher and Richard Dickens (forthcoming, 2022) (Low Pay Commission)	This study used variation in NLW coverage across region-age-gender cells to estimate the impact of the NLW on a range of outcomes, including employment, unemployment, hours of work, self-employment, inactivity and use of zero-hours contracts. Panel regression by segment, exploiting variation in coverage of the NLW. The researchers constructed a panel data set of these 'segments' for each year from 2013 to 2019 using wage data from ASHE and employment outcomes and characteristics from the LFS. They initially segmented the labour market into 20 regions, eight age groups and by gender, which results in 320 separate region/age/gender segments. They then adopted a difference-in-difference estimation approach, using both the bite of the NLW and the coverage rate (the proportion of jobs paid the NLW in an area) in 2015 (the baseline year) as two alternative measures of the impact across the different area, age and gender groups. They estimated effects using standard year-on-year panel regressions and also the total differences between 2015 and 2019.	The study found that those segments that were most affected by the minimum wage (those that had higher bite or coverage) experienced faster average wage increases and these increases were higher at lower per-centiles of the pay distribution. However, in line with previous findings, they found no evidence of significant negative impacts on employment or hours across the whole period. However, they did find that the NLW may have boosted participation as inactivity was significantly reduced without a corresponding increase in unemployment.
The impact of the NMW/NLW on employment retention and wage progression by ethnicity, disability and gender Abigail McKnight (forthcoming, 2022) (Low Pay Commission)	This study uses data from the Annual Population Survey and Understanding Society to explore the employment impacts of the NMW/NLW for different groups of workers based on ethnicity, disability and gender. The author tests whether workers paid the below the incoming NLW became less likely to remain in employment following the introduction of the NLW. She does this using a difference-in-differences specification similar to Aitken, Dolton and Riley. She uses a control group of workers paid up to 10 per cent above the incoming NLW.	The study finds no statistically significant effects on employment retention in aggregate. It also finds no statistically significant effects on employment retention for workers with disabilities, Black workers or workers with a Pakistani/Bangladeshi background. This is despite higher coverage rates in these groups. Indian men are the only subgroup of workers, where the study does find statistically significant (at the 5% level) negative effects on employment retention. This finding is surprising given that Indian men

	The author uses Understanding Society for the employment retention estimates. Understanding Society contains detailed information on ethnicity and disability, so this allows her to test whether employment retention effects differed across groups of workers. She uses imputed pay data to deal with the issues with self-reported pay data (Fry and Ritchie, 2013). However, there is likely still some measurement error in the pay data and with smaller sample sizes for subgroups of workers, this makes it harder to estimate effects precisely.	tend to have above average pay and may require further investigation.

Appendix 3

Abbreviations

Abbreviation	Meaning
ACS	Association of Convenience Stores
APS	Annual Population Survey
ASHE	Annual Survey of Hours and Earnings
AWE	Average Weekly Earnings
BAME	Black, Asian and minority ethnic
BCC	British Chambers of Commerce
BEIS	Department for Business, Energy and Industrial Strategy
BIS	Department for Business, Innovation and Skills
BRC	British Retail Consortium
CBI	Confederation of British Industry
CIPD	Chartered Institute of Personnel and Development
CIPP	Chartered Institute of Payroll Professionals
CPI	Consumer Prices Index
CPIH	Consumer Prices Index with housing costs
EEF	Engineering Employers Federation, now known as Make UK, the manufacturers' organisation
EU	European Union
FRS	Family Resources Survey
FSB	Federation of Small Businesses

GB	Great Britain
GDP	Gross domestic product
GVA	Gross Value Added
HMRC	HM Revenue & Customs
IDR	Incomes Data Research
IES	Institute for Employment Studies
IFS	Institute for Fiscal Studies
IoD	Institute of Directors
LHS	Left hand side
LFS	Labour Force Survey
LPC	Low Pay Commission
NICs	National Insurance Contributions
NIESR	National Institute of Economic and Social Research
NLW	National Living Wage
NMW	National Minimum Wage
OBR	Office for Budget Responsibility
ONS	Office for National Statistics
Q	Quarter
RHS	Right hand side
RPI	Retail Prices Index
SCJ	Supreme Court Judgement
SIC	Standard Industrial Classification
SMEs	Small and Medium-sized Enterprises
SOC	Standard Occupational Classification
TTWA	Travel to work areas

TUC	Trades Union Congress
UC	Universal Credit
UK	United Kingdom
Usdaw	Union of Shop, Distributive and Allied Workers

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