

# Resolution Foundation

## BRIEFING

# Who's been getting a pay rise?

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## Executive Summary

This briefing sheds light on a recent debate – which has been a prominent feature of the public narrative on the labour market – concerning the extent to which employees who remain in their jobs from one year to the next have experienced real pay rises.

In particular, this analysis:

- » Demonstrates that the recent finding of above-inflation *growth in median pay* for *full-time* employees remaining in their jobs – rising to 4.1 per cent in 2014 – holds for *all* employees. However, this has been *widely misinterpreted* as capturing the typical pay rise experience.
- » Highlights more recent research showing that *median pay changes* for full-time employees look very different to this, and describes how these two similar-sounding statistics capture different things.
- » Shows that the majority of employees staying in the same job have in fact experienced real annual pay *cuts* throughout the downturn, with around half continuing to experience falling pay last year. We estimate the typical annual real pay change for *all employees staying in their jobs* to be around 0 per cent for 2014 (that is, half received pay rises above this level and half had a pay change below it).
- » Highlights the wide variation of experiences around the typical pay change – ranging from nominal pay *cuts* greater than 7 per cent for the one-in-ten hardest hit, to nominal pay *rises* greater than 15 per cent for the one-in-ten employees experiencing the largest pay growth.
- » Finds that the incidence of pay rises (that is, the likelihood that someone gets a pay rise or not) varies by group, with particular differences by age, industry, and working hours. For example:
  - » Full-time employees are more likely to get a pay rise than part-time employees.

- » The likelihood of a pay rise declines with age – more than half of those aged under 35 had a pay rise in 2013.
- » Highlights that while the incidence of pay rises across groups of employees is largely consistent over time, there have been some noticeable changes since 2007, including:
  - » A narrowing of the gap between the lowest earners and the rest. Prior to the downturn, the one-in-ten lowest-paid employees were *much more likely* to get a pay rise, but their experience has been very similar to those higher up the wage distribution since 2010.
  - » A reversal of the fortunes of public and private sector employees, with those remaining in jobs in the public sector now much less likely to get a pay rise.

## Section 1

# Introduction

There have been welcome signs in recent months that the UK's six-year wage squeeze is coming to an end, and optimism is building that the recovery in wages will strengthen over the course of this year.<sup>[1]</sup> It's clear that low inflation is playing a key part in this real pay recovery, and so far nominal pay growth has remained very low. In fact, for a large part of 2014, nominal pay dropped below 1 per cent. But as we and others (such as the Bank of England) have shown, that decline owed something to the changing make-up of the workforce. For example, it appears that average pay growth has been held back recently by the emergence of new jobs in lower-paying occupations.<sup>[2]</sup>

This being the case, it is unsurprising that average pay for employees who have stayed in the same job – who account for around four-fifths of the total in any given year<sup>[3]</sup> – has grown more strongly than the headline aggregate for all employees. Recent analysis by the Office for National Statistics (ONS) found that while median pay for *all full-time employees* was broadly flat in nominal terms in the year to April 2014, median earnings for those *full-time employees continuously in the same job*<sup>[4]</sup> grew by 4.1 per cent. Furthermore, while median pay for *all full-time employees* has grown more slowly than inflation in every year since 2009, median pay for *full-time employees continuously in the same job* increased faster than inflation in every year except 2011.<sup>[5]</sup>

The ONS analysis serves as an important reminder of the limitations of a focus on the headline aggregate pay data. However it is wrong to assume – as some have – that it removes all effects relating to changes in the make-up of the workforce.<sup>[6]</sup> Even more misplaced is the interpretation that it tells us whether people who remain in their jobs have been getting pay rises. A range of

[1] For example, in its latest Inflation report the Bank of England simultaneously increased its nominal pay forecast and slashed its inflation forecast for the final quarter of 2015. See: Bank of England, 'Inflation Report: February 2015', February 2015

[2] L Gardiner & M Whittaker, 'Why 2014 hasn't been the year of the pay rise: The impact of the changing make-up of the workforce on wages', Resolution Foundation, November 2014

[3] Office for National Statistics (ONS), 'ASHE analyses giving proportion of employees in continuous employment for at least 12 months' (ad hoc data), November 2014

[4] Employees are identified as in the same job if employers completing the survey in the second year report that they have been in post for a year or more. Employees can move jobs within firms, as well as moving from business to business. Throughout this briefing, analysis of those remaining in the same job is limited to main jobs only, and individuals whose pay is affected by absence or who are not on adult rates are excluded.

[5] ONS, 'Annual Survey of Hours and Earnings, 2014 Provisional Results', November 2014

[6] The focus on those continuously in the same job removes certain 'compositional' effects related to job characteristics, such as industrial or occupational shifts. However, it has certain compositional boosts 'built in'. Namely, the group becomes one year older and more experienced in each year-on-year comparison, and earnings tend to rise with age and experience. Therefore, by definition, it doesn't capture the overall effect of changes to the age structure or job tenure of the workforce. Those continuously employed also tend to have higher qualifications than those who experience spells out of work, and earnings tend to rise faster with age for the more highly educated. This means that a focus on those who remain in the same job does not strip out all compositional factors – both positive and negative – in the way that decomposition modelling does, such as that conducted by the Resolution Foundation and the Bank of England (see: L Gardiner & M Whittaker, 'Why 2014 hasn't been the year of the pay rise: The impact of the changing make-up of the workforce on wages', Resolution Foundation, November 2014; Bank of England, 'Minutes of the Monetary Policy Committee meeting, 3 and 4 September 2014', September 2014). For a fuller explanation of what wage growth for those in continuous employment does and does not tell us, see: J Cribb & R Joyce, 'IFS Green Budget: February 2015 – Earnings since the recession', Institute for Fiscal Studies, January 2015

commentators have used this analysis as evidence for the idea that the typical individual in stable employment (the full-time qualifier usually gets dropped) received a healthy real-terms pay rise both in 2014 and in nearly every year of the downturn.<sup>[7]</sup>

Other analysis provides a better indication of the reality of individual experiences in recent years. A more recent ONS publication shows that a majority of full-time employees (in this case including people who changed jobs) experienced a fall in real earnings in each year between 2010 and 2013, and that around half did in 2014.<sup>[8]</sup> Similar conclusions have been drawn using different data for the period up to 2012-13.<sup>[9]</sup>

In this briefing we reconcile these opposing interpretations and describe how similar-sounding statistics can actually capture very different things (Section 2).

Having established what aggregate statistics do and do not tell us about the extent of pay rises, and determined the overall trend, Section 3 presents new analysis of the incidence of pay rises in recent years. We explore the size of pay rises (and falls), and we examine which groups of employees have been most likely to receive a pay rise. Box 1 describes the data we use and the definitions we adopt for this analysis.

## *i* Box 1: Data and scope for this analysis

Throughout this briefing we use the most reliable source of employee earnings data – the Annual Survey of Hours and Earnings (ASHE) – which is completed by employers, referring to April each year.<sup>[1]</sup> We use this data to explore pay rise trends for all employees – not just those working full time – because we want to understand the incidence and extent of pay rises across the whole employee workforce.

Because we capture both full-time and part-time employees, we focus on changes in hourly pay, although we also highlight how these interact with changing hours to drive variations in weekly pay from year to year.

Although we tend to prefer the RPIJ measure of inflation, throughout this briefing we use CPI to express pay changes

[1] ASHE is collected by ONS. It is based on a 1 per cent sample of employee jobs, meaning that self-employed workers are not captured in this analysis.

in real terms. We do this because this is the measure of inflation the ONS has adopted in its recent analysis of pay trends for the continuously employed. In addition, CPI is the index that our most timely earnings statistics (Average Weekly Earnings) tend to be compared to each month.

Finally, while the number of job-to-job moves and the size of pay changes when people move are important in lifetime earnings progression and influence aggregate pay, in this briefing we focus on pay rises for individuals remaining in the same job. We take this approach because the experience of those who've held onto their jobs over the course of the downturn has been the focus of recent public discourse on pay rises, relating as it does more to firm-level pay settlements behaviour than individual-level decisions.

[7] Both Number 10 (see: Prime Minister's Office, 10 Downing Street, 'Press briefing: morning 19 November 2014', 19 November 2014) and the Secretary of State for Work and Pensions (in oral answers to questions in the House of Commons on 8 December 2014) have asserted that people in work for more than 12 months have received average annual pay rises of around 4 per cent. A picture of healthy real wage growth for the majority is also put forward in: A Heath, 'The truth on pay – far more people are now enjoying real wage rises', The Telegraph, 9 February 2015

[8] I Derrick, C Taylor & P Wales, 'Economic Review, March 2015', ONS, March 2015

[9] As well as covering a different time period and using a different dataset, this analysis differs from the ONS's in that it captured all employees (not just those working full time). See: A McKnight, 'The Coalition's Record on Employment: Policy, Spending and Outcomes 2010-2015', London School of Economics, January 2015

## Section 2

# Have most people been getting a pay rise or not?

We begin this section by describing in more detail the two recent approaches taken to capturing pay trends for those who remain in work. We then describe how these differ and the conclusions that can and cannot be drawn from each.

The two recent approaches taken by the ONS to capturing pay trends for the continuously employed, represented by the two dashed lines in Figure 1, are as follows:

- » As part of the ASHE 2014 results published in November 2014, the ONS assessed the *change in median pay* (in this case *weekly* pay in full-time positions, for *employees who had remained in the same job* over the course of a year).<sup>[10]</sup> This was the analysis that showed above-inflation growth rates for most of the downturn, rising to 4.1 per cent in 2014. In Figure 1 we present this in real rather than nominal terms (4.1 per cent nominal becomes 2.3 per cent real).
- » As part of the March 2015 Economic Review, the ONS assessed the *median change in pay* (this time *hourly* pay in full-time positions, and *including employees who had moved jobs* over the year).<sup>[11]</sup> This is another way of saying the 'typical pay rise' (or fall). This turned positive – just – for the first time in 5 years in 2014.

Part of the difference between these two lines will of course be due to the fact that they cover different pay measures and different groups. Therefore Figure 1 also shows our own versions of the *change in median pay* and *median change in pay* series on an otherwise like-for-like basis, and covering all employees rather than just full-time workers (the solid lines).

It's apparent that our like-for-like versions of the *change in median pay* and *median change in pay* (i.e. typical pay rise / fall) series show similar trends to the ONS series. Therefore, we also forecast what the *median change in pay* for all employees remaining in the same job is likely to have been in 2014, by assuming it mirrors changes in the series published by the ONS.<sup>[12]</sup>

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[10] ONS, 'Annual Survey of Hours and Earnings, 2014 Provisional Results', November 2014

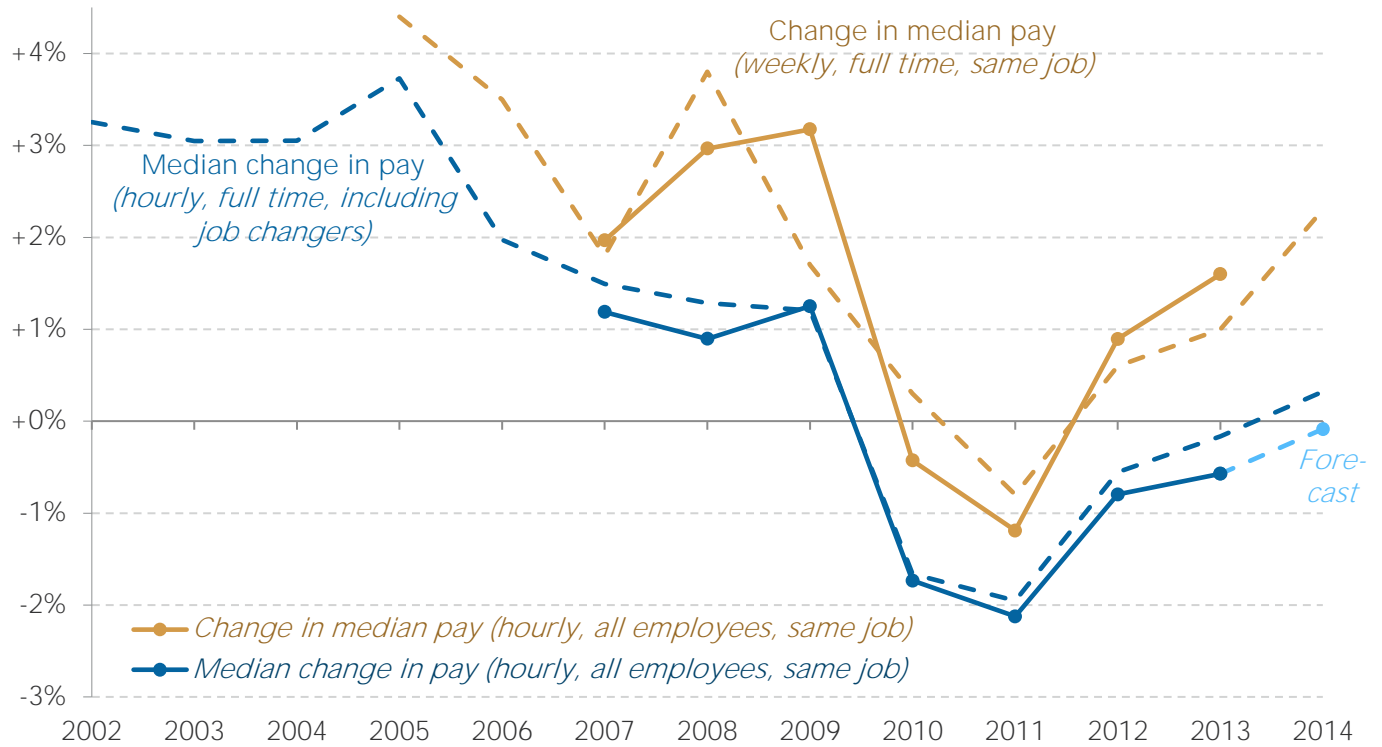
[11] I Derrick, C Taylor & P Wales, 'Economic Review, March 2015', ONS, March 2015

[12] Alternative data (Labour Force Survey 5-quarter longitudinal datasets, ONS) shows very similar trends in *median annual changes in pay* in comparison to our series, and gives a similar result to our forecast for the latter part of 2013.



Figure 1:  
**Pay trends for the continuously employed**

Real-terms annual trends in pay for the continuously employed (CPI-adjusted)



**Notes:** Figures refer to April of each year. Unlike the ONS, we do not currently have access to data for April 2014, therefore we forecast the median change in pay (hourly, for all employees remaining in the same job) by assuming it follows the same path as the published ONS series (which shows the median change in pay in full-time positions, including people who changed jobs). If anything, we judge that this is likely to overestimate the growth in the median change in pay for all employees in the same job, as full-time workers and job changers have been more likely to see their pay increase in recent years (see the following section of this briefing note for more information on the different pay rise experiences of full-time and part-time employees). The series based on published ONS data (the dashed lines) are adjusted for inflation by subtracting the rate of CPI inflation from nominal annual changes, following the approach taken by the ONS in the Economic Review. The series we have produced ourselves (the solid lines) are derived by adjusting individual pay records using the CPI inflation index before calculating summary statistics. In the series we have produced, individuals whose pay is affected by absence or who are not on adult rates are excluded, and analysis is restricted to main jobs, in keeping with the ONS's methodology. When analysing the median change in pay, we produce summary statistics using the population weights from the second year, as longitudinal weights are not available for the ASHE survey at present.

**Source:** Resolution Foundation analysis of Annual Survey of Hours and Earnings, ONS; ONS, 'Annual Survey of Hours and Earnings, 2014 Provisional Results', November 2014; I Derrick, C Taylor & P Wales, 'Economic Review, March 2015', ONS, March 2015

Having discounted differences relating to the measure of earnings used or the population covered, there remains a consistent gap between the *change in median pay* and the *median change in pay* for those continuously employed, with the *change in median* higher in each year. Why is this?

### Change in median pay compared to median change in pay – what's the difference?

The year-on-year *change in median pay* for people who remain in work might sound like it tells us about the typical experience of individuals. It removes inflow and outflow effects and therefore isolates a group that remains the same over time. And by using the median it compares the 'typical' person in the group in one year to the 'typical' person in the next year, making it much less sensitive to extreme changes than if mean averages were used.

It is therefore an easy trap to fall into to think that the *change in median pay* represents the typical pay change for individuals in the group, i.e. the value at which half had a pay change that was higher, and half had a lower pay change. But it doesn't. This can only be derived by looking at the *median change in pay*.<sup>[13]</sup>

Indeed, when focusing on those who remain in work, it's entirely possible for the *change in median pay* to be **consistently and significantly higher** than the *median change in pay* (i.e. the 'typical pay rise'). This would be the case if:

1. **A minority of people receive large pay rises**, while the majority experience little or no change in pay.

And:

2. These pay rises are either **relatively evenly spread across the pay distribution**, or are **more common, or larger, for lower-paid workers**.

The stylised example in Box 2 demonstrates how this combination of patterns can produce a higher *change in median pay* than the *median change in pay* for a continuous group of workers.

### *i* Box 2: A stylised example of the difference between change in median pay and median change in pay for a continuous group of workers

Imagine a small labour market in which 25 workers remain in their jobs over the course of a year. Initially, hourly pay is evenly distributed between £8 and £10.40, in 10p intervals. So the lowest-paid person in year 1 earned £8, the second-lowest-paid £8.10, the third-lowest-paid £8.20, and so on. Median pay in year 1 is £9.20 – the wage of the 13th person in the pay distribution.

Over the year one-fifth of these workers receive a pay rise of 5 per cent, while the remaining four-fifths receive no pay rise at all. In addition, these pay rises are evenly spread across the pay distribution – the 1st, 6th, 11th, 16th and 21st workers (ranked by initial wage) get one. The median

pay is now £9.30 (because these differential pay rises have propelled some workers up the distribution, so the 'middle' person is different to the previous year). This produces a change in median pay of 1.1 per cent – the percentage increase from £9.20 to £9.30. Yet the median change in pay is 0 per cent (because four-fifths of workers experience no change in pay).

If the pay rises experienced by lower-paid workers are larger, for example, if the 1st and 6th workers get a 12 per cent pay rise instead of a 5 per cent pay rise, the median rises to £9.40 in year 2, and the change in median pay is 2.2 per cent.

It turns out that these patterns – a positive skew in the *pay rise distribution*, with the chance of getting a pay rise relatively equal across the pay distribution, and the magnitude of pay rises larger for those lower down the *pay distribution* – are consistent features of the UK's labour market for those who remain in their jobs, as the next section of this briefing will demonstrate. None of this is particularly surprising. It's normal for people's pay to change very little in lots of years but to jump up occasionally (for example reflecting progression or if the business has had a particularly good year), driving the skew in the *pay rise distribution*. And it's also unsurprising that on average and at a given point in time, low earners get larger pay rises: a larger proportion of them are at the beginning of their careers when progression is quicker, and their pay is more influenced by changes in minimum and living wages (which have tended to rise more quickly than average pay).

[13] The difference between the *change in median pay* and the *median change in pay* for a continuous group of workers has been previously highlighted in: G Tily, 'Misleading claims of 4% earnings growth', ToUChstone blog, 12 December 2014

Therefore, the fundamental message here is that if anyone uses *changes in median pay* to make a statement about 'typical pay rises', they are going to be wrong – probably significantly so. More specifically, they will consistently make upside mistakes, telling a more positive story than the true picture on typical pay rises shows.

## Typical pay rises over the downturn

The answer to the question posed at the beginning of this section is therefore 'no': the fact that the median pay change in Figure 1 is negative in the years since 2010 demonstrates that the majority of workers have *not* been experiencing real pay increases in each year of the downturn. Our estimate is that around half of all employees remaining in the same job experienced an annual pay rise last year. This is indicated by the fact that we forecast the typical real pay change for all employees to be around 0 per cent for April 2014. Claims of 'typical pay rises well above inflation' in April

last year, because they are based on the growth in median pay, are therefore likely to be a long way wide of the mark.

*If anyone uses changes in median pay to make a statement about 'typical pay rises', they are going to be wrong – probably significantly so. More specifically, they will consistently make upside mistakes, telling a more positive story than the true picture on typical pay rises shows*

Figure 1 also shows that the typical *real* pay change figure has been recovering from its low point in 2011, when it fell to around -2 per cent. Importantly, this recovery is almost entirely driven by falling inflation – the median *nominal* pay change has been very similar (at around 2 per cent) in each year since 2010. The implication is therefore that pay settlements within firms have not changed markedly in recent years.

Even if low inflation continues to drive improvements in the typical *real* pay change, it has a way to go to

return to its pre-downturn level of above 1 per cent. Furthermore, the longer time-series in Figure 1 (for full-time employees only and including job changers) suggests that typical pay rises were falling even before the downturn, reflecting general wage slowdown in the mid-2000s. The 2014 pattern of pay rises is therefore likely to be even further away from what it's possible to achieve.

## Section 3

# How big a pay rise? And for whom?

Having shown that around half of those remaining in their jobs continued to face pay cuts last year, in this section we get beneath the surface of the overall trend. We explore the distribution of pay rises (and falls) around the median, and the incidence of pay rises across groups. In addition, we establish how the distribution and incidence of pay rises have changed over the downturn period.

The latest data we have access to for this analysis refers to April 2013. However, we judge that the 2014 picture – if not the situation today – is likely to be similar to the patterns we discuss. This seems reasonable because (as we will show) differences across groups and across the pay rise distribution have been fairly consistent over time. In addition, as shown in the previous section, the pay rise position identified by the ONS for 2014 only represented a moderate change from the 2013 picture.

### Variation in pay changes

Although the *median change in pay* is a type of average that gets us a lot closer to individual experiences than the *change in median pay* for those continuously employed, it still masks a great diversity of outcomes. Figure 2 shows the distribution of pay rises around the median (i.e. the value in the middle of the pay change distribution) for those remaining in their jobs. To be clear, this figure says nothing about each individual's position in the overall *pay distribution* – rather it shows the *distribution of annual changes in pay*. It shows that nominal annual changes in

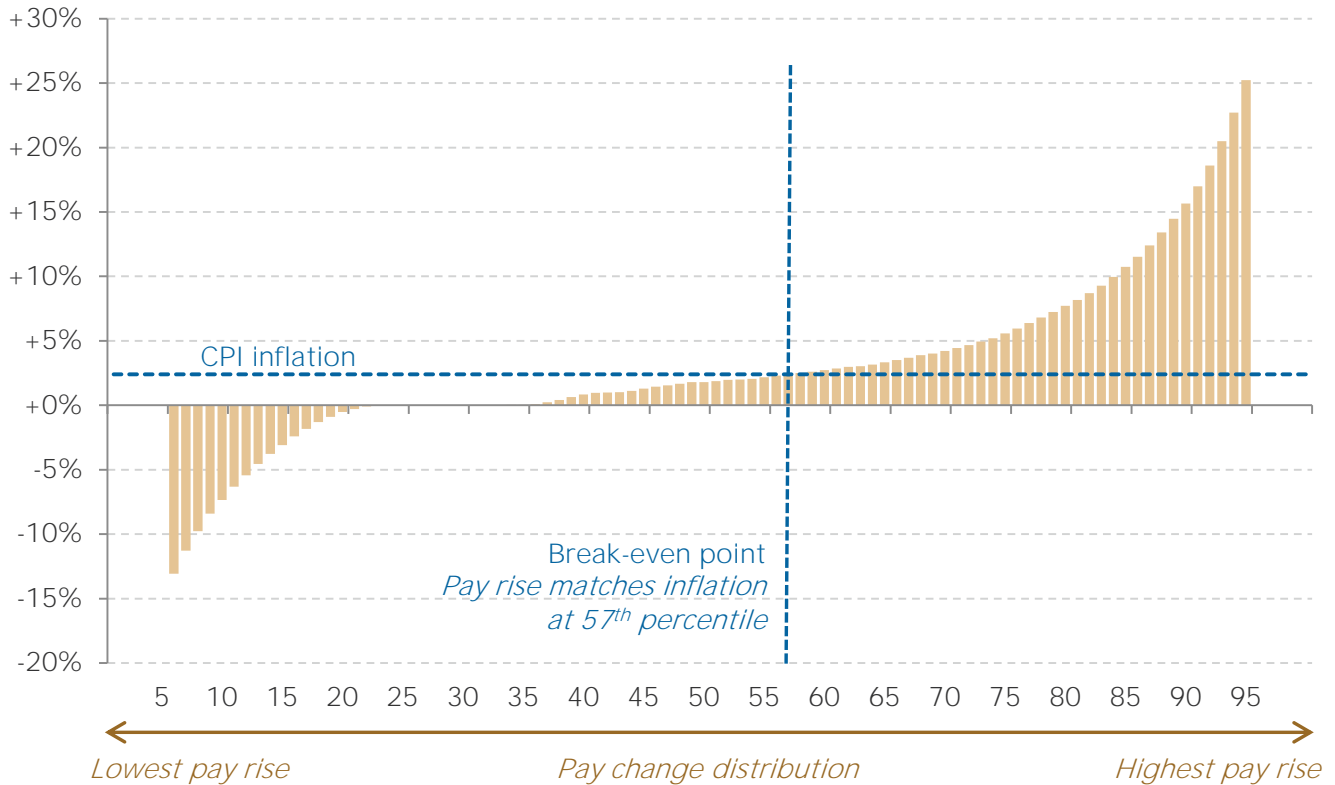
pay were equal to inflation at the 57th percentile of the pay change distribution, meaning that only 44 per cent of this group of employees got a real pay rise over the year to April 2013.

*Although the median change in pay is a type of average that gets us a lot closer to individual experiences than the change in median pay for those continuously employed, it still masks a great diversity of outcomes*

Moving away from the centre, Figure 2 shows that almost a quarter of those remaining in their jobs received a *nominal* pay cut in 2013, and more than 10 per cent experienced no change in nominal hourly pay. At the top end of the pay change distribution the increases were large – with one-in-ten employees remaining in post receiving a nominal hourly pay rise greater than 15 per cent.

Figure 2:  
**This distribution of pay rises, April 2013**

Annual change in hourly pay for those continuously employed in the same job



**Notes:** See Figure 1. The 5 per cent largest and 5 per cent smallest pay changes are excluded from this figure because they may capture some measurement error, and their size obscures the patterns seen across the majority of the distribution.

**Source:** Resolution Foundation analysis of Annual Survey of Hours and Earnings, ONS

Comparison with previous years demonstrates that the shape of the *nominal* pay change distribution shown in Figure 2, and in particular its skew, remains fairly consistent over time. In particular, it has hardly changed at all since 2010. As highlighted in the previous section, this is in accordance with the fact that while the typical *real* pay changes have improved since 2010 due to falling inflation, typical nominal changes have been flat.

The main changes to the shape of the nominal pay change distribution *since 2007* have been a slight reduction in the size of nominal pay increases (with a sharp drop between 2009 and 2010), and a greater likelihood of a nominal pay freeze. A longer-term perspective offered by the ONS (for full-time employees only and including job changers) shows that substantial pay increases were becoming less common even in the pre-downturn years, with the recession seemingly sharpening this longer-term trend.<sup>[14]</sup>

In contrast, the perhaps-surprising pattern of nominal pay cuts shown in Figure 2 – corroborated by the ONS analysis mentioned above and other analyses<sup>[15]</sup> – has been quite consistent over time. We judge that this may reflect a range of factors *as well as* direct cuts, including: the volatility of commission and incentive pay; staff moving back to their original roles (and pay) following a

[14] I Derrick, C Taylor & P Wales, 'Economic Review, March 2015', ONS, March 2015

[15] R Blundell, C Crawford & W Jin, 'What can wages and employment tell us about the UK's productivity puzzle?', Institute for Fiscal Studies, January 2014

period of temporary promotion (wrongly being recorded as still in the same job by their employer); and some measurement error.

Recall from the previous section that the consistent pattern that we have found – with a majority experiencing low or no pay increases while a minority experience quite large ones – is one of the reasons why the *change in median pay* for those remaining in work is consistently higher than the *median pay change*.

In terms of variation in pay changes, a final point to note is that the distribution of *weekly* pay changes is a similar shape to the *hourly* pay change distribution in Figure 2; however, both pay rises and pay falls are more extreme. This reflects the combined impact of changes in the number of hours worked for those remaining in their jobs, as well as changing pay rates. While hourly pay is the best measure of pay rises, weekly pay is a more relevant metric from a living standards perspective. The implication here is therefore that the impact of hourly pay changes on living standards can be amplified (but also likely moderated) by changing working hours for those remaining in jobs.

## The incidence of pay rises

While it is clear that there is wide variation in pay changes overall, some groups of employees tend towards one or other end of the pay change distribution. We demonstrate this in Figure 3, which shows the likelihood of experiencing a real pay rise over the year to April 2013 for different groups.

### Sex

A number of things stand out from Figure 3. First, there are some characteristics against which the likelihood of a pay rise does not vary that much. Sex did not seem to be a determining factor in 2013, and a longer-term look shows that the chance of experiencing an annual pay rise has been relatively equal for men and women in each year since 2007.<sup>[16]</sup>

### Region

The part of the country where the employee is based also mattered little in terms of the likelihood of a pay rise in 2013, although Londoners were marginally more likely to get one. Again, this pattern has remained the same over the downturn, and other research exploring the size of pay rises over a longer period confirms that employees in London experience consistently slightly higher-than-average annual pay growth.<sup>[17]</sup>

### Wage distribution

The position of employees in the initial wage distribution also did not seem to be a determining factor in the likelihood of a pay rise in 2013, although the top 10 per cent highest paid were marginally the least likely to get one. This is somewhat different to the pre-downturn picture, when employees in the bottom decile were *much* more likely to receive a pay rise than those elsewhere in the distribution, as Figure 4 shows. This stark change in performance at the bottom relative to the pre-crisis norm is likely to reflect real-terms decreases in the value of the National Minimum Wage in recent years. Signals that the minimum wage will regain some of its lost ground

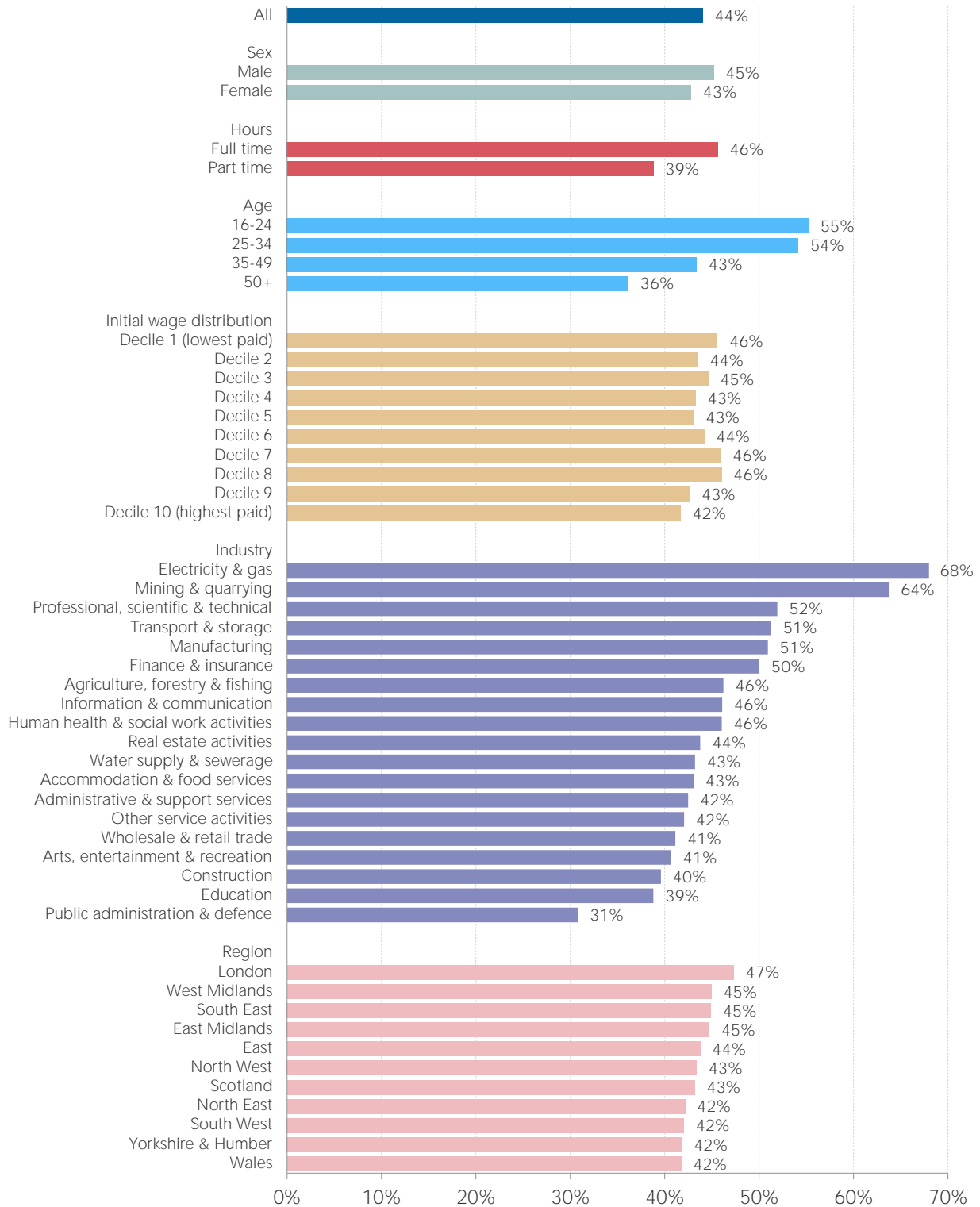
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[16] However, it is worth noting that the overall aggregate measure of median pay has tended to fall less for women than for men over the downturn, leading to a narrowing of the gender pay gap (although a sizeable gap remains).

[17] This pattern of slightly higher individual wage growth in London remains after controlling for other characteristics. See: M Percival, 'Making growth work for everyone' (presentation), Confederation of British Industry (CBI), December 2014

Figure 3:  
**The incidence of pay rises across different groups, April 2013**

*Proportion of those continuously employed in the same job experiencing annual real growth in pay (hourly pay, CPI-adjusted)*



Notes: See Figure 1.

Source: Resolution Foundation analysis of Annual Survey of Hours and Earnings, ONS

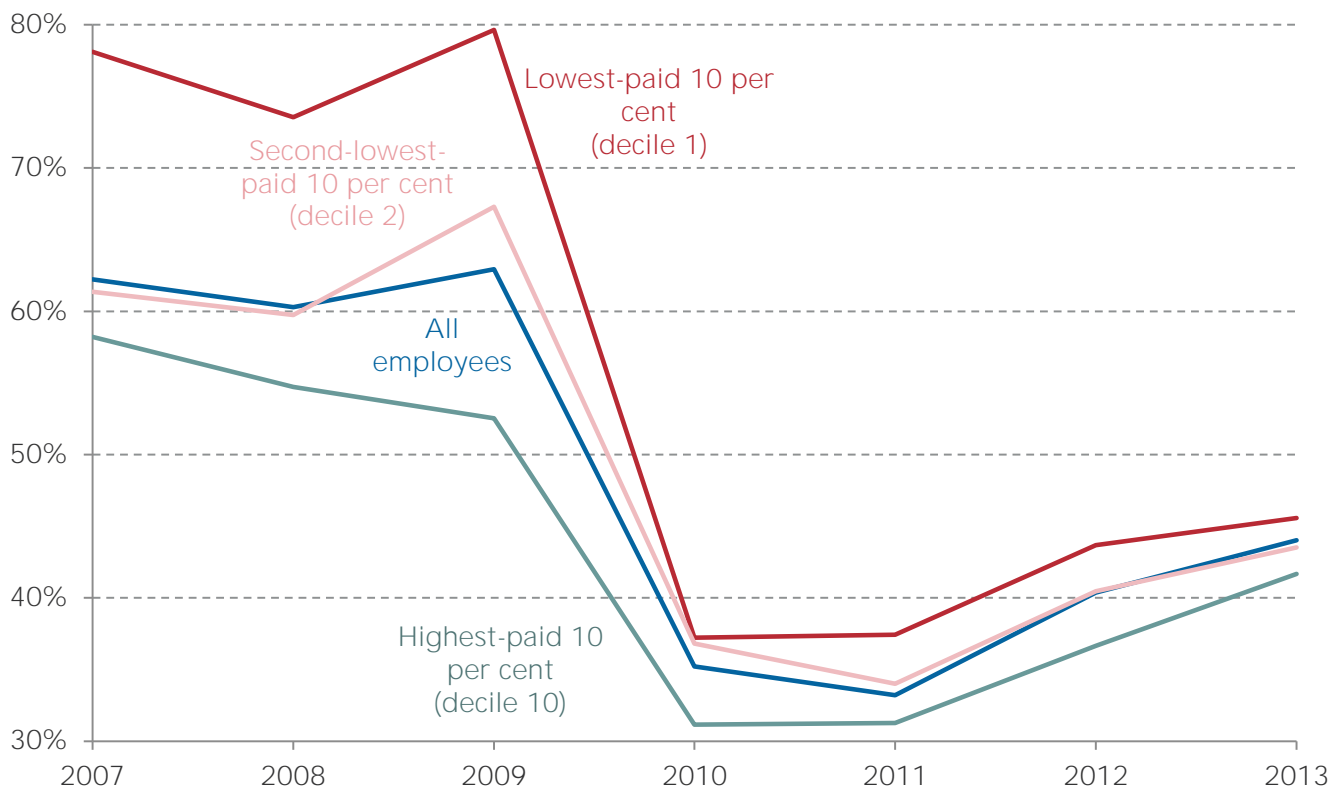
in coming years<sup>[18]</sup> mean we can expect a return to the pre-recession pattern of a greater likelihood of pay rises for the lowest paid.

Other research has found that as well as (until recently) being more likely to get a pay rise, increases are *larger for low earners*,<sup>[19]</sup> and we might expect increases in the minimum wage to strengthen this in coming years as well.

Again, this pattern – the probability of getting a pay rise being evenly spread across the earnings distribution (or indeed slightly larger towards the bottom) – is consistent with the conditions (described in the previous section) that cause the *change in median pay* to be higher than the *median change in pay*.

Figure 4:  
**The incidence of pay rises at different points in the initial wage distribution**

Proportion of those continuously employed in the same job experiencing annual real growth in pay (hourly pay, CPI-adjusted)



Notes: See Figure 1.

Source: Resolution Foundation analysis of Annual Survey of Hours and Earnings, ONS

[18] For example, the Labour Party has specified a target of £8 for the end of the next parliament, a figure that matches the current HM Treasury forecasts for 2019-20. For further information, including the rate of growth implied by the £8 figure, see: C D'Arcy, 'A £6.70 minimum wage – how ambitious a rise is it?', Resolution Foundation blog, 24 February 2015

[19] CBI, 'Making Britain work for everyone: Facing up to challenges in our labour market', July 2014



## Industry

For the most part there is evident – although not extreme – variation in the likelihood of a pay rise across industries (shown in Figure 3). However, the two ‘most likely’ industries and one ‘least likely’ industry show particularly marked differences. The two industries in which pay rises were most likely – ‘electricity and gas’, and ‘mining and quarrying’ – have been consistently strong performers in recent years. But these are very small parts of the economy – together they account for just 0.6 per cent of UK jobs.<sup>[20]</sup>

Obviously, pay restraint in the public sector would be expected to have had a significant impact on the likelihood of receiving a real-terms pay rise. And this appears to be borne out by the fact that ‘public administration and defence’ was the industry in which employees had by far the lowest chance of a pay rise in 2013. This represents a dramatic turnaround from the pre-downturn position. In 2009 (the first year for which we have data due to changes in industry coding) 70 per cent of those remaining in their jobs in ‘public administration and defence’ had a real pay rise over the year, compared to 62 per cent of all employees. By 2013 this had fallen to 31 per cent (compared to 44 per cent of all employees). The impact of expenditure cuts and wage restraint for public sector employees is also likely reflected in the low chance of a pay rise in the ‘education’ sector in 2013. The changing pay rise position of public sector employees is confirmed by other research, which also shows a relative worsening of employment retention in the public sector over this period.<sup>[21]</sup>

With public sector wage restraint having endured since 2013 and likely to continue, we might expect these trends to hold in coming years. However, against this backdrop it's worth highlighting that just under one-third of employees in ‘public administration and defence’ still experienced a real pay rise in the year to April 2013, as shown in Figure 3. This reminds us of the wide variation in individual pay change experiences around (even the correct) averages.

## Hours

In terms of the hours that employees work, Figure 3 shows that full-time employees were a bit more likely to experience real pay growth in 2013. This difference between full-time and part-time employees has always existed, although it has become somewhat more marked since 2010. This finding serves as a caution to those who have generalised findings relating only to full-time workers to trends across the whole workforce.

## Age

Finally, Figure 3 shows that, as expected, the likelihood of a pay rise declines with age. The higher likelihood of a pay rise when young is unsurprising given that increases in productivity are more marked at the beginning of careers. Indeed, Figure 5 shows that young people have been more likely to experience annual pay growth in each year since 2007, with the gap between young and old having widened slightly over the period.

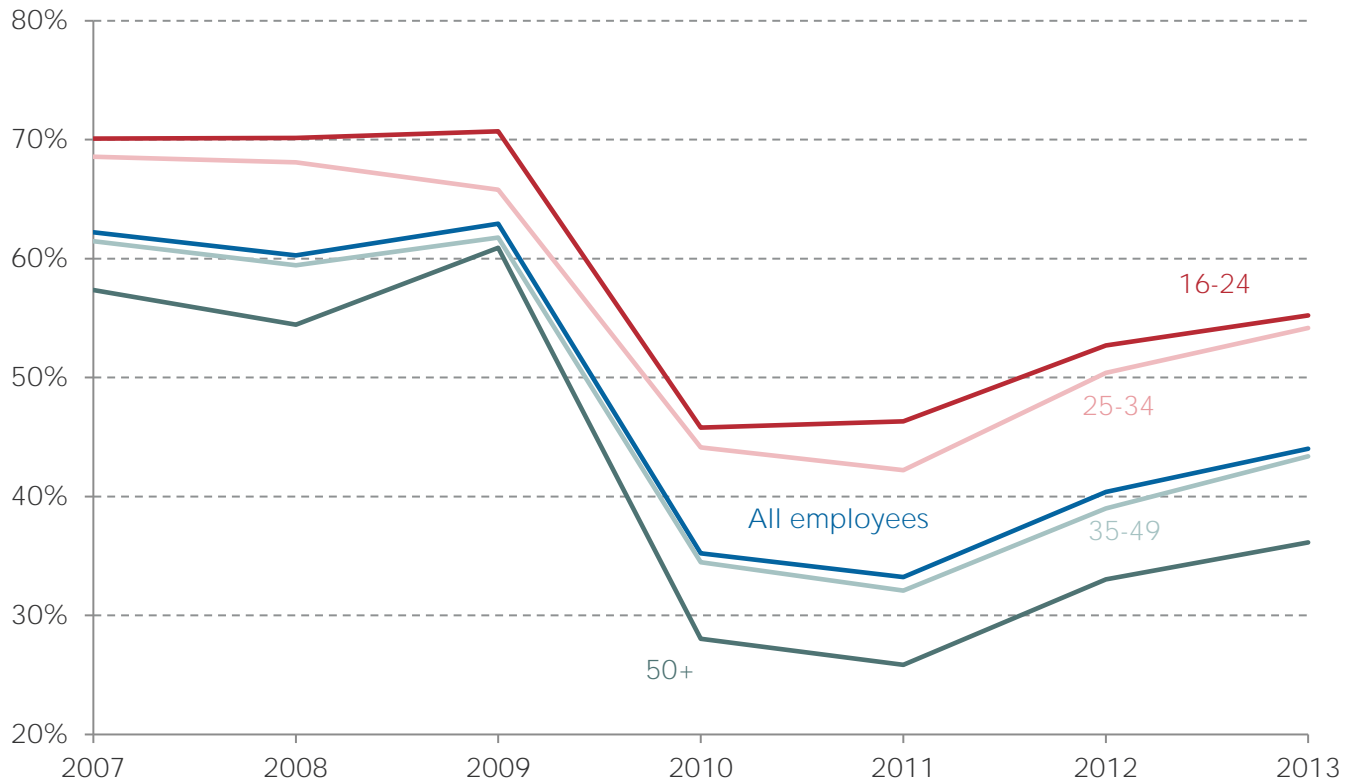
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[20] Workforce Jobs, ONS

[21] A McKnight, ‘Patterns of pay progression and employment retention 1991-2015’, London School of Economics, forthcoming

Figure 5:  
**The incidence of pay rises by age**

Proportion of those continuously employed in the same job experiencing annual real growth in pay (hourly pay, CPI-adjusted)



Notes: See Figure 1.

Source: Resolution Foundation analysis of Annual Survey of Hours and Earnings, ONS

Importantly, we shouldn't interpret the trends in Figure 5 as reflecting young people doing better overall in recent years. We know this isn't the case. The likelihood of a pay rise for young people is still a way off pre-downturn levels. And lower entry wages, reduced working hours, and a higher likelihood of cycling in and out of work have cut pay for young people in ways not seen when looking exclusively at pay rises for those remaining in the same jobs.<sup>[22]</sup> The relatively benign picture on the likelihood of a pay rise when young does not detract from the overall story of the recession as having hit young people particularly hard.

[22] C Belfield et al, 'Living Standards, Poverty and Inequality in the UK: 2014', Institute for Fiscal Studies, July 2014

## Section 4

# Conclusion

In this briefing we have attempted to provide some clarity on the recent debate – which has been a prominent feature of public narrative on the labour market – on the extent to which employees who remain in their jobs from one year to the next have experienced real pay rises. We have described the differences between two similar-sounding statistics – the *change in median pay* and the *median change in pay* for those remaining in their jobs – and clarified that it is only the latter that can be used to measure

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the prevalence of 'pay rises'. On this measure, the typical experience for employees remaining in their jobs has been a real pay *cut* in each year of the downturn, with estimated median real pay growth typically around 0 per cent in 2014.

We are clear that a commonly-heard argument – that the typical person in stable employment has received a healthy real pay rise in nearly every year of the downturn, including an above-inflation nominal increase of 4.1 per cent in 2014 – is wrong. Because this assertion is based on the *change in median pay* it is an incorrect interpretation of the

statistic, and leads to an overestimation of the extent of annual pay rises for those employees who remain in their jobs.

To be clear, we are not arguing that changes at the median are inappropriate statistics in general. Indeed, they are what we and many others normally use to measure developments in the labour market, and they provide a very good summary of trends. However, by necessity they mask variation in individual experiences, and can move differently even to the typical experience within a consistent group of individuals.

Care is therefore required on the part of users of statistics such as these to ensure that findings are not misinterpreted. Equally, there is a continued need for statistical providers to include guidance on what *can and cannot* be interpreted from the data they make available. There is a particular need for such guidance in areas where mistakes can easily be made, as is the case in the distinction between the *change in median pay* and *median change in pay* for a continuous group.

Having cleared up the confusion regarding the extent of pay rises, this briefing explores the size of pay changes for those remaining in their jobs over a year, and their incidence across groups. We find substantial variation around the typical pay rise experience, and according to personal and job characteristics. This rich picture serves as a further reminder that averages, even when described correctly, hide diverse outcomes.

The pay rise position has improved recently and is very likely to have accelerated since April 2014 (when the latest data refers to), helped in part by inflation having fallen further still. In terms of understanding the relationship between national economic growth and individual living standards in coming years, a key indicator will be the duration and magnitude of improvements in real pay rises, and the extent to which these are felt by different groups of employees.

# Resolution Foundation

*Resolution Foundation is an independent research and policy organisation. Our goal is to improve the lives of people with low to middle incomes by delivering change in areas where they are currently disadvantaged. We do this by:*

- » *undertaking research and economic analysis to understand the challenges facing people on a low to middle income;*
- » *developing practical and effective policy proposals; and*
- » *engaging with policy makers and stakeholders to influence decision-making and bring about change.*

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