

UK Wages Over the Past Four Decades - 2014

Coverage: **UK**

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Geographical Area: **Region**

Theme: **Labour Market**

Theme: **Economy**

Key Points

- Employees aged 21 in 1995 earned 40% more after adjusting for inflation by the age of 39 than those aged 21 in 1975 did up to the age of 39
- Average hourly earnings peaked at older ages in 2013 compared to 1975
- The difference between male and female average pay for the under 30s has decreased dramatically since 1975.
- Since 2011 the top 10% of full-time earners have had the largest falls in wages after adjusting for inflation.
- Since 1975 average earnings for full-time employees have more than doubled after accounting for inflation.
- Since the introduction of the National Minimum Wage, wage growth at the bottom of the earnings distribution has been strong for both full and part-time employees.
- Almost a third (32.6%) of those in the top 10% of earners worked in London in 2013 while 12.3% of the bottom 10% of earners worked in the North West
- Hourly wage inequality has fallen across the regions and devolved countries of the UK since 1998

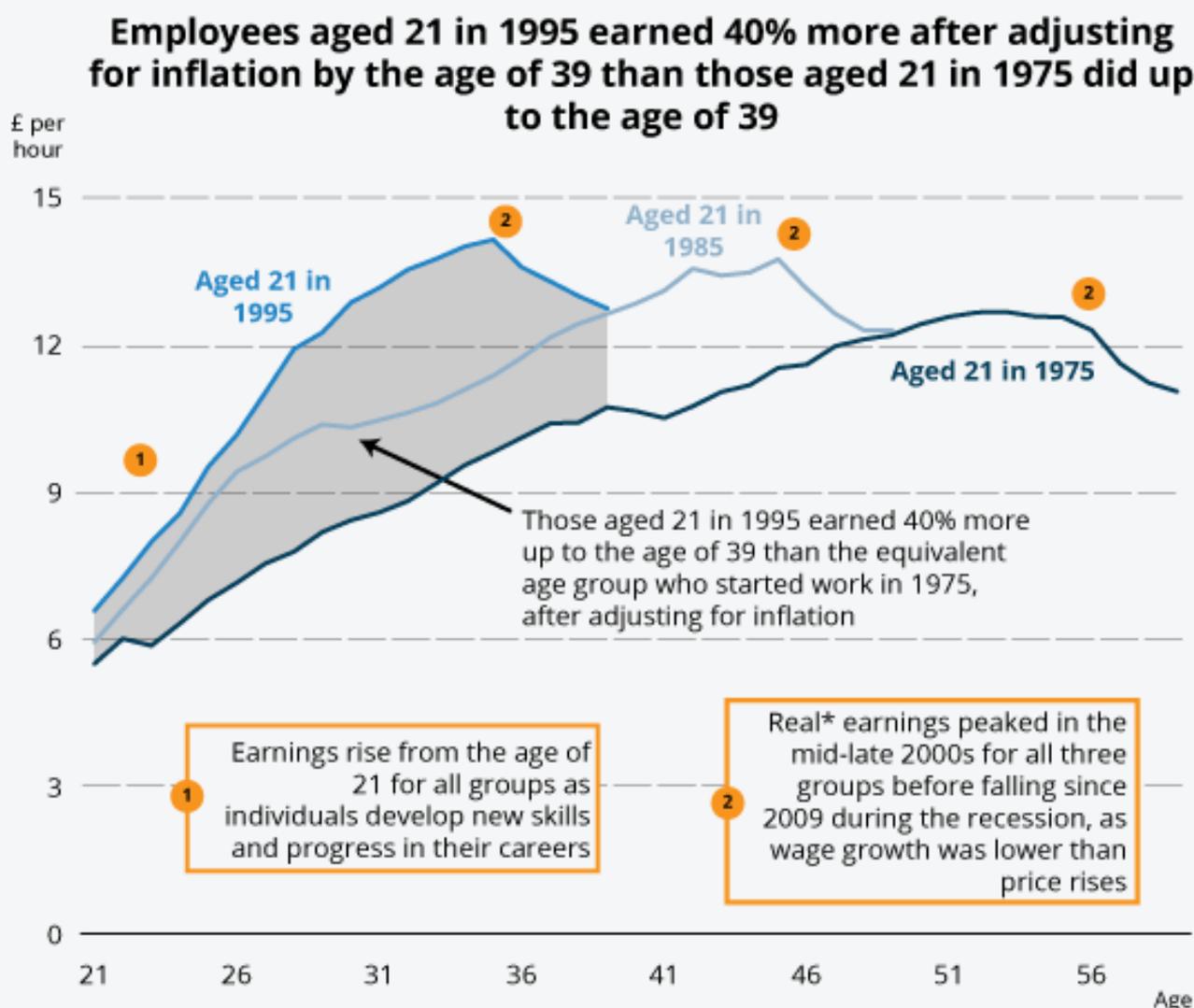
UK Wages Over the Past Four Decades

Employees aged 21 in 1995 earned 40% more after adjusting for inflation by the age of 39 than those aged 21 in 1975 did up to the age of 39

On average, individuals who were 21 in 1975 have fared worse in terms of average pay over their career to 2013 than those who were 21 in 1985 and 1995. Adjusting for inflation to put wages into a 2013 equivalent and comparing the age range 21 to 39 shows that those who started work in 1995 earned 40% more than their counterparts who started work in 1975. A similar comparison of the age range 21 to 49 shows that those who started work in 1985 earned 18% more than their 1975 counterparts.

The difference in earnings between the 1975 and latter cohorts means that those who started work in 1975 had to work between three and four years longer than those who started in 1985 to accumulate the same amount of earnings and between five and six years longer than those who started in 1995.

Figure 1: Median real hourly earnings progression for employee cohorts aged 21 in 1975, 1985 and 1995, 1975-2013, UK



	£ per hour		
	'75 Cohort	'85 Cohort	'95 Cohort
Age 21	£5.49	£5.93	£6.57
2009	£12.54	£13.72	£14.11
2013	£11.03	£12.27	£12.72

	Percentage change over period (percentage change per year)		
	'75 Cohort	'85 Cohort	'95 Cohort
Age 21 - 2013	100% (1.9%)	107% (2.6%)	94% (3.7%)
Age 21 - 2009 1	128% (2.5%)	131% (3.6%)	115% (5.6%)
2009 - 2013 2	-12% (-3.2%)	-11% (-2.7%)	-10% (-2.6%)

*Earnings adjusted to a 2013 equivalent using the Consumer Prices Index measure of inflation

Source: Annual Survey of Hours and Earnings (ASHE) - Office for National Statistics

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Considering 21 year olds, those in 1975 earned on average 94p per hour (£5.49 in 2013 prices), in 1985, 21 year olds earned £2.70 per hour (£5.93 in 2013 prices) and those who started in 1995 earned £4.48 (£6.57 in 2013 prices).

From the age of 21 average hourly wages tend to rise as individuals get older, in part reflecting them developing new skills, taking on new responsibilities and progressing in their careers. Those who started work in 1975 follow this pattern with earnings having risen by 100% by the time this group reached the age of 59 in 2013, equivalent to an above inflation wage rise of 1.9% per year over their career. Real earnings grew by 107% (2.6% per year) for those who started work in 1985 up to the age of 49 in 2013 while real earnings grew by 94% (3.7% per year) for those who started work in 1995 up to the age of 39 in 2013.

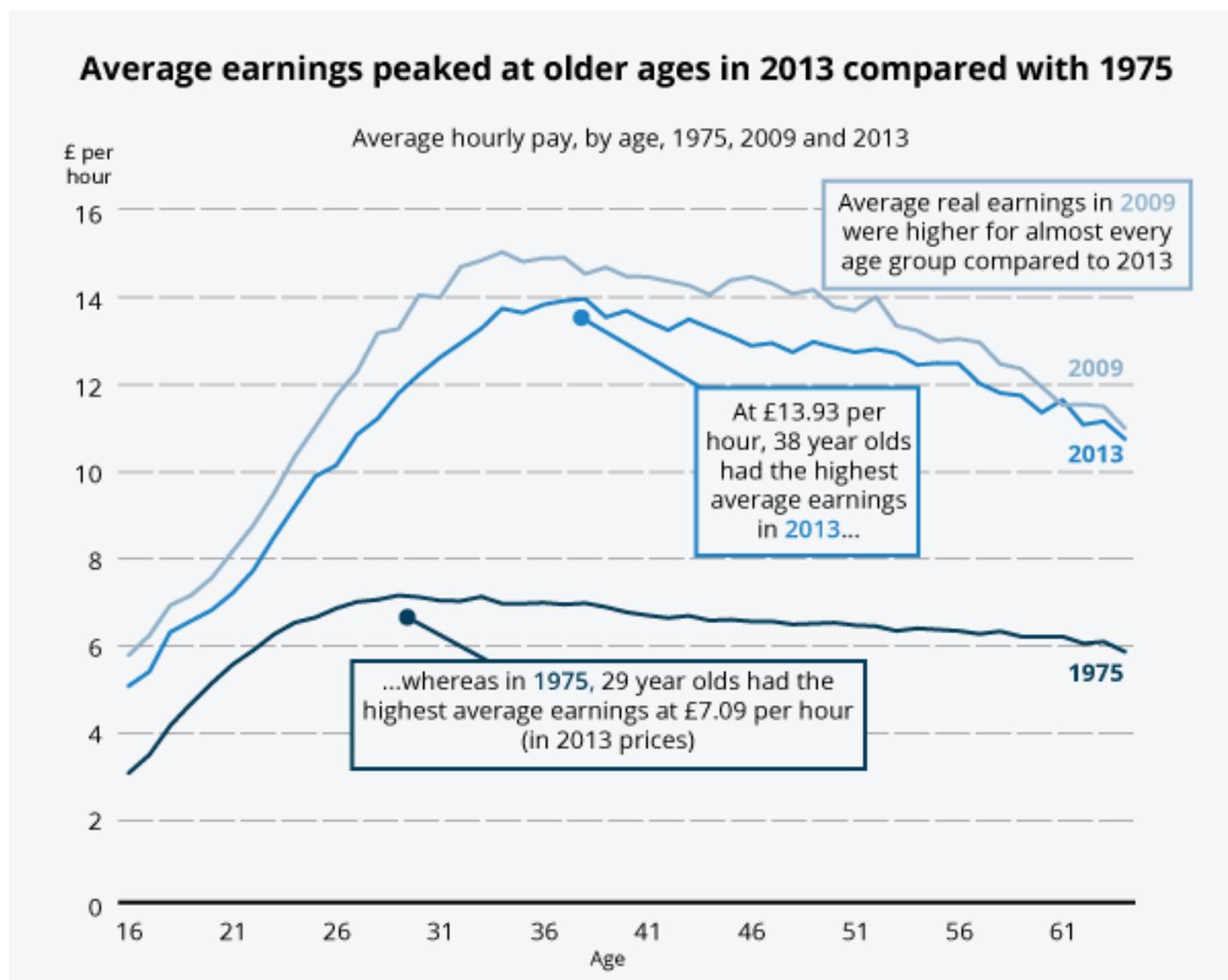
Since 2009 all three groups have seen earnings fall in real terms. Earnings have fallen by 10% (-3.2% per year) for those who started in 1995, by 11% (-2.7% per year) for those who started in 1985 and by 12% (-2.6% per year) for those who started in 1975. Some of the decline for the 1975 cohort may be explained by people in their late fifties beginning to consider retirement, with the highest earners often retiring early. This would bring down average pay before any consideration is taken of the wider economic conditions. There is some evidence of this happening as pay for the 1975 group peaks in 2007, slightly earlier than for the other cohorts.

Average earnings peak at older ages in 2013 compared with 1975

Rather than track a cohort over time it is also possible to look at a snapshot of earnings in any particular year. In 1975 the median wage, the value at which half of employees earned less and half earned more, was £6.17 (in 2013 prices). By 2013 the median had risen to £11.56 per hour, an increase after taking account for inflation of 87%.

Looking at wages in 1975 for those at different ages, the group with the highest average earnings in 2013 were 38 year olds at £13.93 per hour. This peak comes later in the age distribution than it did in 1975 when the age group with the highest average earnings were the 29 year olds who, in 2013 prices, earned £7.09 per hour. Looking across the age range we can see that for all age's employees in 2013 on average earned more than their counterparts within the same age group did in 1975.

Figure 2: Median hourly earnings (excluding overtime), by age, all persons, 1975, 2009 and 2013, UK



Source: Annual Survey of Hours and Earnings (ASHE) - Office for National Statistics

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Earnings after adjusting for price increases have fallen since 2009

Over the 40 year period considered 2009 represents the peak in real earnings before the effects of the economic downturn were felt on wages and inflation. Real earnings were higher for almost every age group in 2009 compared with both 2013 and 1975. The gap between the 2009 and 2013 distributions reaches its widest point for 28 year olds where employees in 2009 earned on average 17.6% more than employees in 2013. There is some variation in how the downturn has affected people of different ages. The earnings of those in their twenties in 2013 were on average 12% lower than the earnings of those in their twenties in 2009, Those in their thirties fared slightly better as their

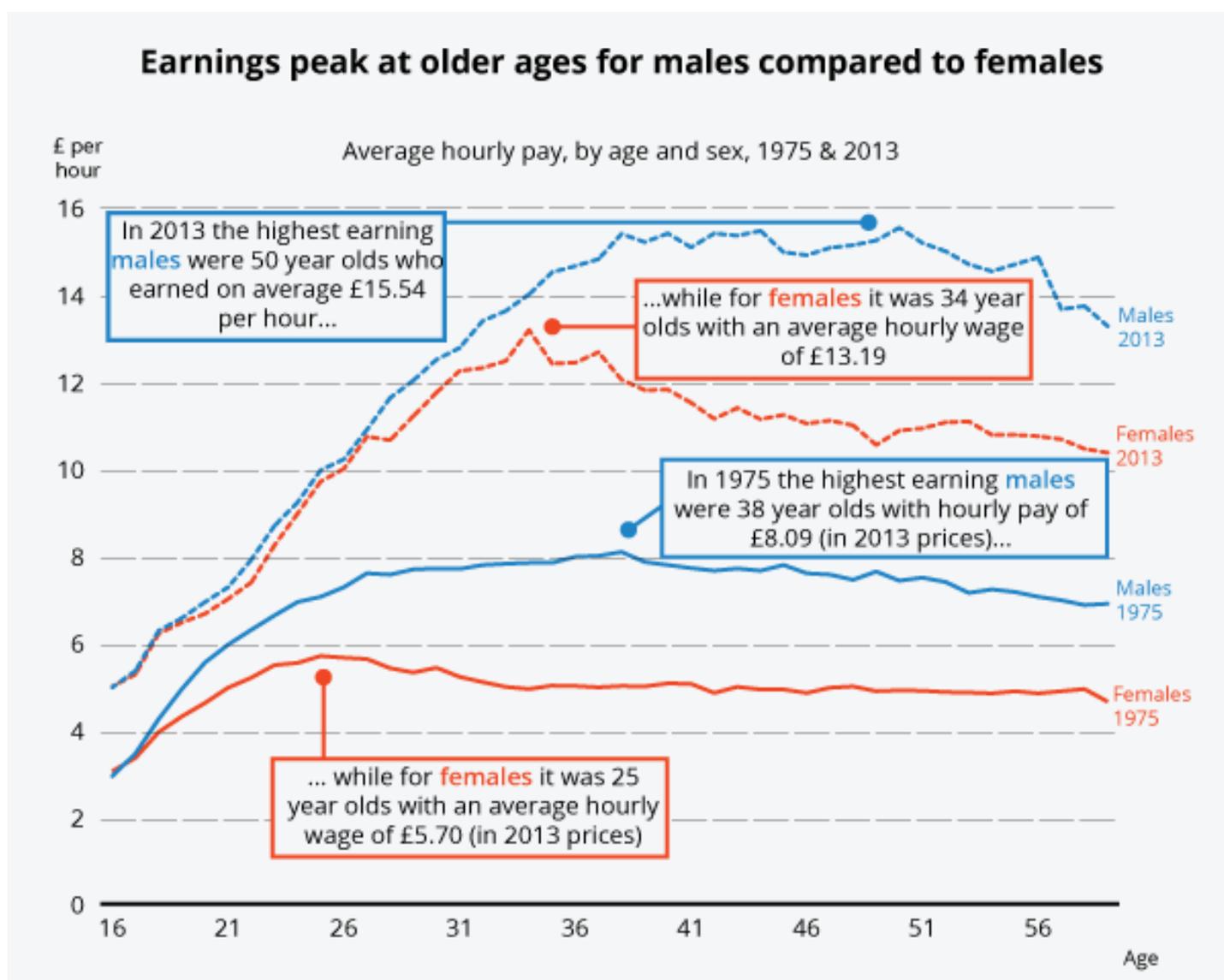
average earnings were 9% lower than the earnings of those in their thirties in 2009, Moving up the age groups the average percentage fall was around 5% for the over-50s.

Earnings peak at older ages for males compared to females

Looking at the average wages of males and females, in 2013, both males and females earned more at each year of age compared with males and females in 1975.

Both years show difference between males and females with average earnings for males increasing further along the age range than for females. In 2013 the highest paid age group among men were 50 year olds who earned on average £15.54 per hour. By contrast the age group with the highest average earnings among females were 34 year olds who earned £13.19 per hour.

Figure 3: Median hourly earnings (excluding overtime) by age, males and females, 1975 and 2013, UK



Source: Annual Survey of Hours and Earnings (ASHE) - Office for National Statistics

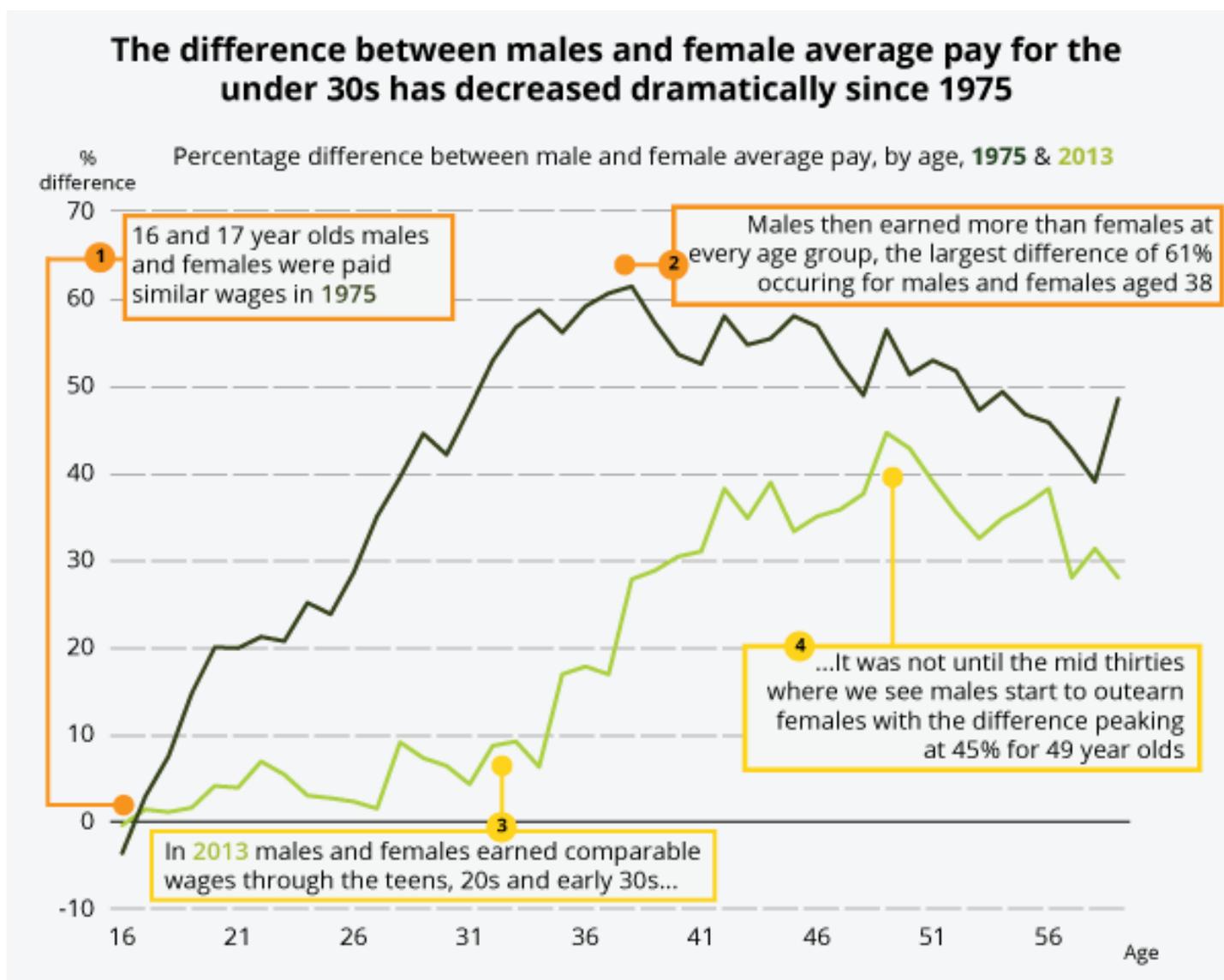
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The difference between male and female average pay for the under 30s has decreased dramatically since 1975

Figure 4: Percentage difference between male and female earnings by age, 1975 and 2013, UK



Source: Annual Survey of Hours and Earnings (ASHE) - Office for National Statistics

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In 1975 16-18 year old males and females were paid similar wages however moving past the age of 18 men earned more at every age group. The highest percentage difference was for 38 year olds where men earned on average 61% more than women. In 2013 the picture was very different as the difference between male and female pay stayed relatively close to zero up to around the age of 30. The difference then rises up to peak of 45% between males and females aged 49.

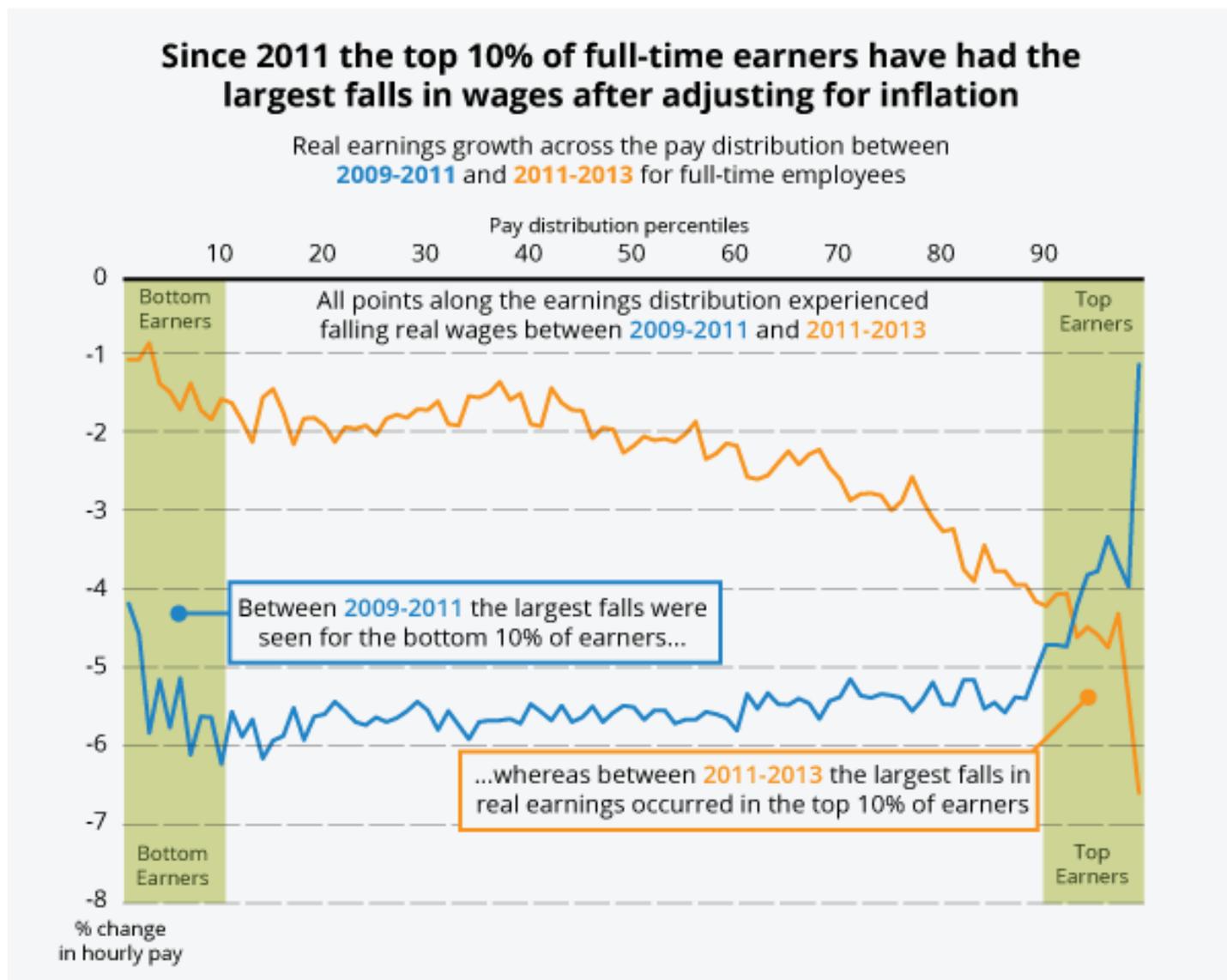
Between 1975 and 2013 there were a number of changes in employment legislation and in the wider economy. For instance the rise of the service sector, a sector in which women are more likely to work, has increased the employment rate among women whereas the decline in the manufacturing and mining sectors has had the opposite effect on men. This taken alongside legislative changes, such as the Sex Discrimination Act 1975, may offer an explanation as to why the difference between average male and female pay has fallen between 1975 and 2013.

An explanation as to why the improvement has only been seen for the youngest age groups, up to the early thirties, is that there may also have been a cohort effect for women. Over time changes to the economy and to legislation have fed through to new entrants to the labour market more than existing members of the labour market. If this is the case we would expect to see differences in gender pay decrease at older ages as time progresses.

It should also be noted that these percentage differences do not take account for the different types of employment undertaken by males and females with women far more likely to work part time, particularly if they leave the labour market to start a family and then return looking for more flexible employment. Furthermore while the gender balance is relatively even for high and low skilled jobs men are more likely to work in skilled trade jobs whereas women are more likely to work in administrative and caring occupations which are typically not as well paid as skilled trade occupations. These differences in employment characteristics help to explain why average pay can differ between men and women.

Since 2011 the top 10% of full-time earners have had the largest falls in wages after adjusting for inflation

Figure 5: Real hourly earnings growth (excluding overtime) for full-time employees, 2009-2011 and 2011-2013, percentiles, UK



Source: Annual Survey of Hours and Earnings (ASHE) - Office for National Statistics

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Focusing now on just full-time employees, between 2009 and 2013 real earnings have fallen across the distribution of earnings which looks at wages from the lowest earners to the highest earners. On average, a full-time worker saw wages 7.5% lower in 2013 compared with 2009.

There are two distinct periods, firstly the period between 2009 and 2011 where earnings between the middle 80% of earners fell by between 5 and 6 %. The wages of bottom 2% of earners fell by slightly less, between 4 and 5 %, possibly due to some protection given by rises in the national minimum wage. Top earners in this period also saw falling real earnings however not by as much as the rest of the distribution with falls in the region of between 1 and 5 %.

Then looking at the period between 2011 and 2013, top earners saw the largest fall in real earnings. Up to the 60th percentile earnings generally fell by 1-2%; however beyond the 60th percentile earnings fell by 2-4%. Earnings in the top 10% fell by at least 4% with real earnings for the top 1% falling by 6.6%.

Since 1975 average earnings for full-time employees have more than doubled after accounting for inflation

Figure 6: Real hourly earnings growth (excluding overtime) for full-time and part-time employees, 1975-2013, percentiles, UK



Source: Annual Survey of Hours and Earnings (ASHE) - Office for National Statistics

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Between 1975 and 2013, at the median, real hourly pay for full-time employees more than doubled (grew by 101%). Comparing growth rates across the pay distribution, the bottom 1% of earners in 2013 had wages that were 143% higher than the bottom 1% of earners in 1975, after adjusting for inflation. The highest rate of growth was for the top 1% of earners where real wages grew by 189%, almost twice the rate seen for the average full-time employee.

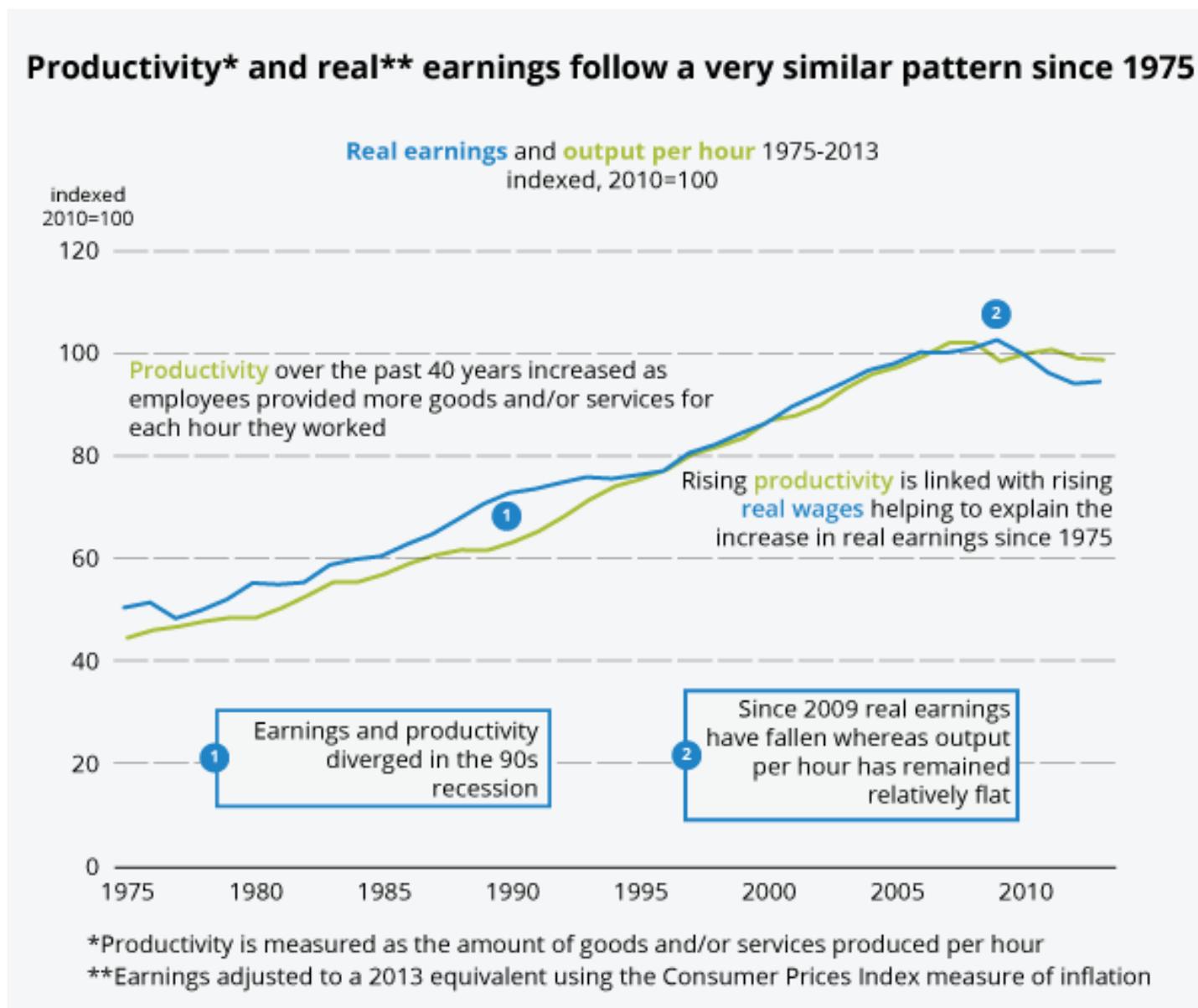
Looking at part time employees there was a similar growth pattern with high growth at the bottom of the distribution, 115% for the bottom 1% of earners, slightly lower growth at the median (87%) and the highest growth at the top of the earnings distribution, in this case for the 95th percentile where earnings grew by 228%, shifting from £8.07 per hour in 1975 (2013 prices) to £26.45 per hour in 2013.

One explanation for this strong growth at the top of the pay distribution for part-time workers is the rise of flexible working arrangements which may have allowed some of the higher paid occupations in 2013 to be performed on a part-time basis where this wouldn't have been possible in 1975.

While growth in hourly pay for part-time employees was stronger than that of full-time employees at some points across the distribution it should be noted that the level of earnings received by full-time employees was higher than the level received by part-time employees in both 2013 and 1975.

So after accounting for price rises wages have grown by 101% for full-time employees since 1975. However another thing that has happened over the past 40 years is that the UK workforce has been improving its productivity. This means that those in work have been producing more goods or providing increasing services for each hour worked, helped by technological advances and improved skills. Comparing output (the goods produced or services provided) per hour to real wage growth shows both measures have moved closely in line with each other, growing from 1975 up to 2008/2009 before falling during the recession. The only point at which we see a divergence between the two series is during the 90's recession.

Figure 7: Output per hour and real median hourly earnings, 1975-2013, UK, indexed 2010=100



Source: Annual Survey of Hours and Earnings (ASHE) - Office for National Statistics

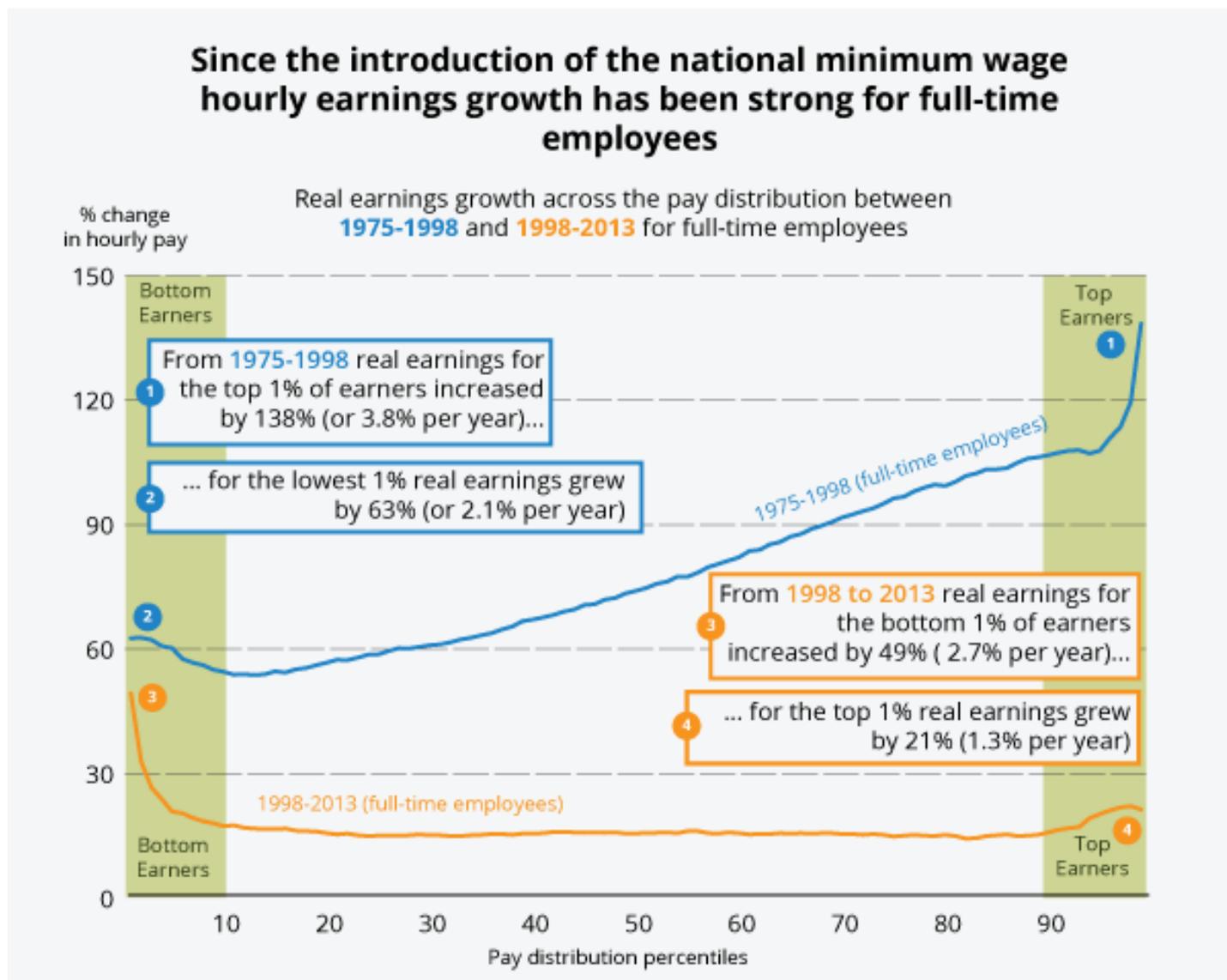
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Since the introduction of the National Minimum Wage, wage growth at the bottom of the earnings distribution has been strong for both full and part-time employees.

Figure 8: Real hourly earnings growth (excluding overtime) for full-time employees, 1975-1998 and 1998-2013, percentiles, UK



Source: Annual Survey of Hours and Earnings (ASHE) - Office for National Statistics

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The impact of the minimum wage can be seen if we look at earnings growth across the distribution before and after the National Minimum Wage Act of 1998.

Prior to the introduction of the minimum wage, between 1975 and 1998, earnings growth for the bottom 1% of full-time earners was 63%. Moving up the distribution towards the higher earners, growth at the median was 74% and the top 1% of earners experienced growth of 138%. This meant that earnings growth over the period at the top of the earnings distribution was twice as strong as it was at the bottom.

Since the introduction of the minimum wage in 1998, up to 2013 growth across the distribution looked very different. Real earnings growth for the bottom 1% of full-time employees was 49%. This was the highest rate of growth seen across the whole distribution as growth for the middle 80% of the distribution remained around 15%.

Figure 9: Real hourly earnings growth (excluding overtime) for full-time and part-time employees, 1998-2013, percentiles, UK



Source: Annual Survey of Hours and Earnings (ASHE) - Office for National Statistics

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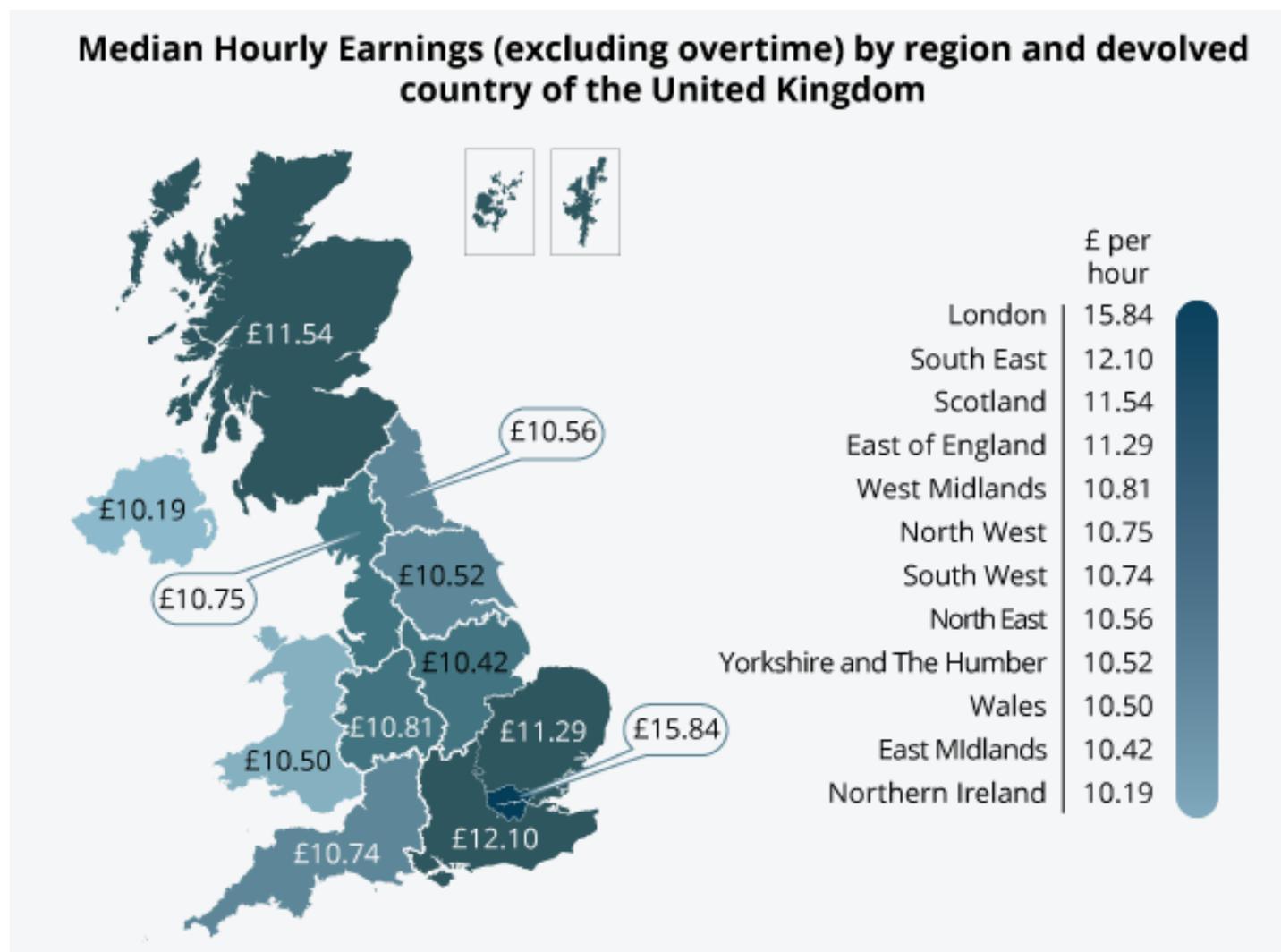
The impact of the minimum wage also differed between full and part-time employment as earnings grew by 92% for the lowest 1% of part-time earners compared with growth of 49% for full-time employees. This may be due to the higher prevalence of jobs paid at the national minimum wage among part-time employees compared with full-time employees with the Low Pay Commission

estimating that in 2013 60% of jobs paid at the National Minimum Wage were part-time¹. Despite higher growth over the period full-time employees still out-earned their part-time counterparts at all points across the earnings distribution in 2013 which may be a reflection of a lower starting point for part-time employees. For instance for the bottom 1% of earners part-time employees earned £2.56 per hour in 1998 (in 2013 prices) whereas full-time employees earned at £4.15 in 1998 (in 2013 prices).

Regional Comparisons

Average hourly pay in the UK in 2013 was £11.56 and the region with the highest average pay was London where across all employees average hourly pay excluding overtime was £15.84. The lowest hourly earnings were in Northern Ireland at £10.19 per hour.

Figure 10: Average hourly pay (excluding overtime) in the regions and devolved countries of the UK, April 2013



Source: Annual Survey of Hours and Earnings (ASHE) - Office for National Statistics

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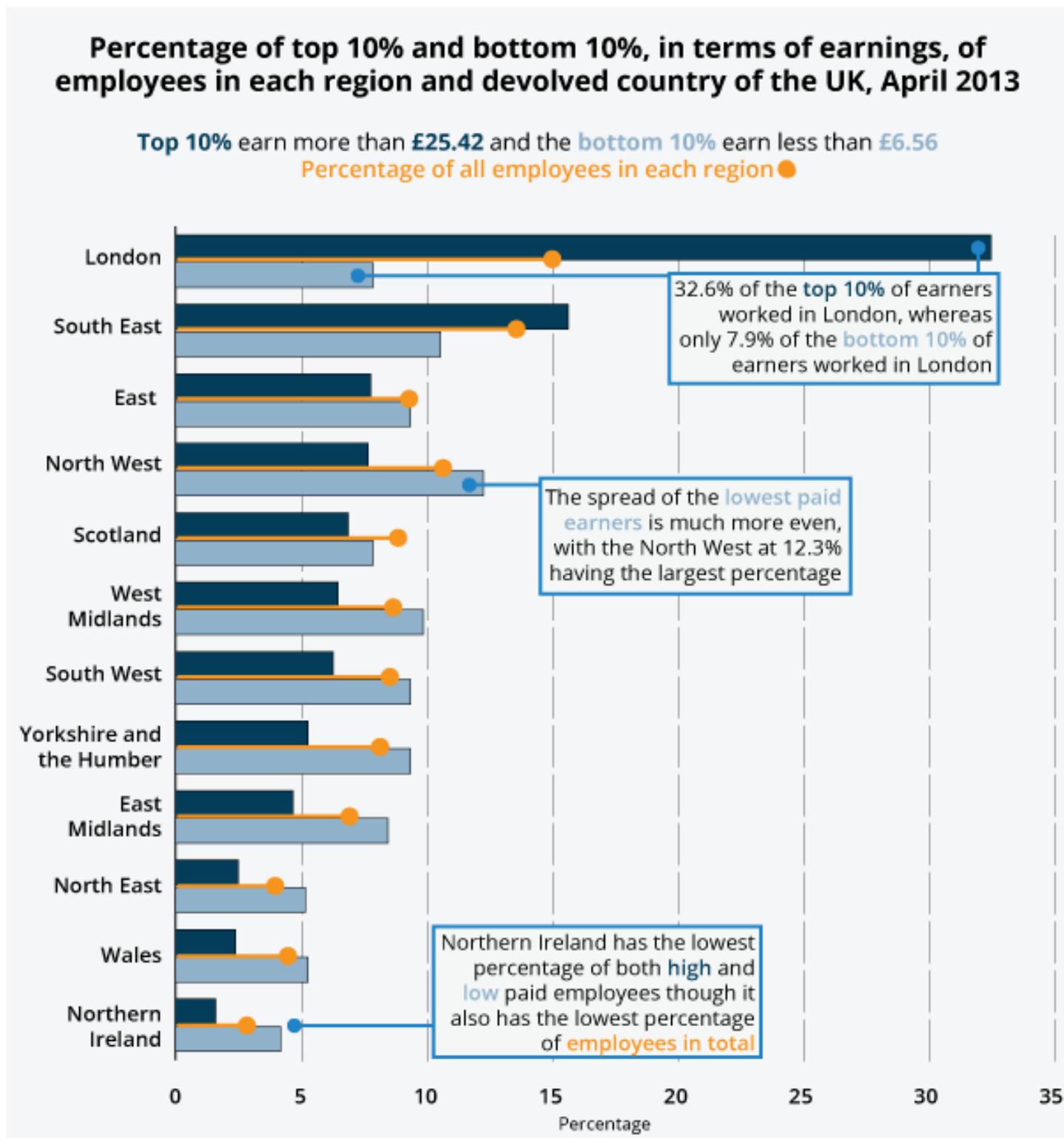
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Each region has very different labour markets made up of different industries and skills which will affect average pay levels. For instance London holds a large number of highly paid jobs, particularly in the finance sector, while other regions have seen declines in sectors such as mining and manufacturing.

Almost a third (32.6%) of those in the top 10% of earners worked in London in 2013 while 12.3% of the bottom 10% of earners worked in the North West

Looking at how the top and bottom earners are distributed across regions we can see that almost one third (32.6%) of the top 10% of earners, those who earned above £25.42 per hour, worked in London whereas just 7.9% of the bottom 10% of earners, those who earned less than £6.56 per hour, worked there. For the lowest paid earners the spread was more even. 12.3% of the lowest paid workers worked in the North West, the largest portion of this group in any given region, while the smallest portions of both the top and bottom earners worked in Northern Ireland though this may be a reflection of the smaller overall population size in Northern Ireland

Figure 11: Percentage of the top 10% and bottom 10% of employees in each region and devolved country of the UK, April 2013



Source: Annual Survey of Hours and Earnings (ASHE) - Office for National Statistics

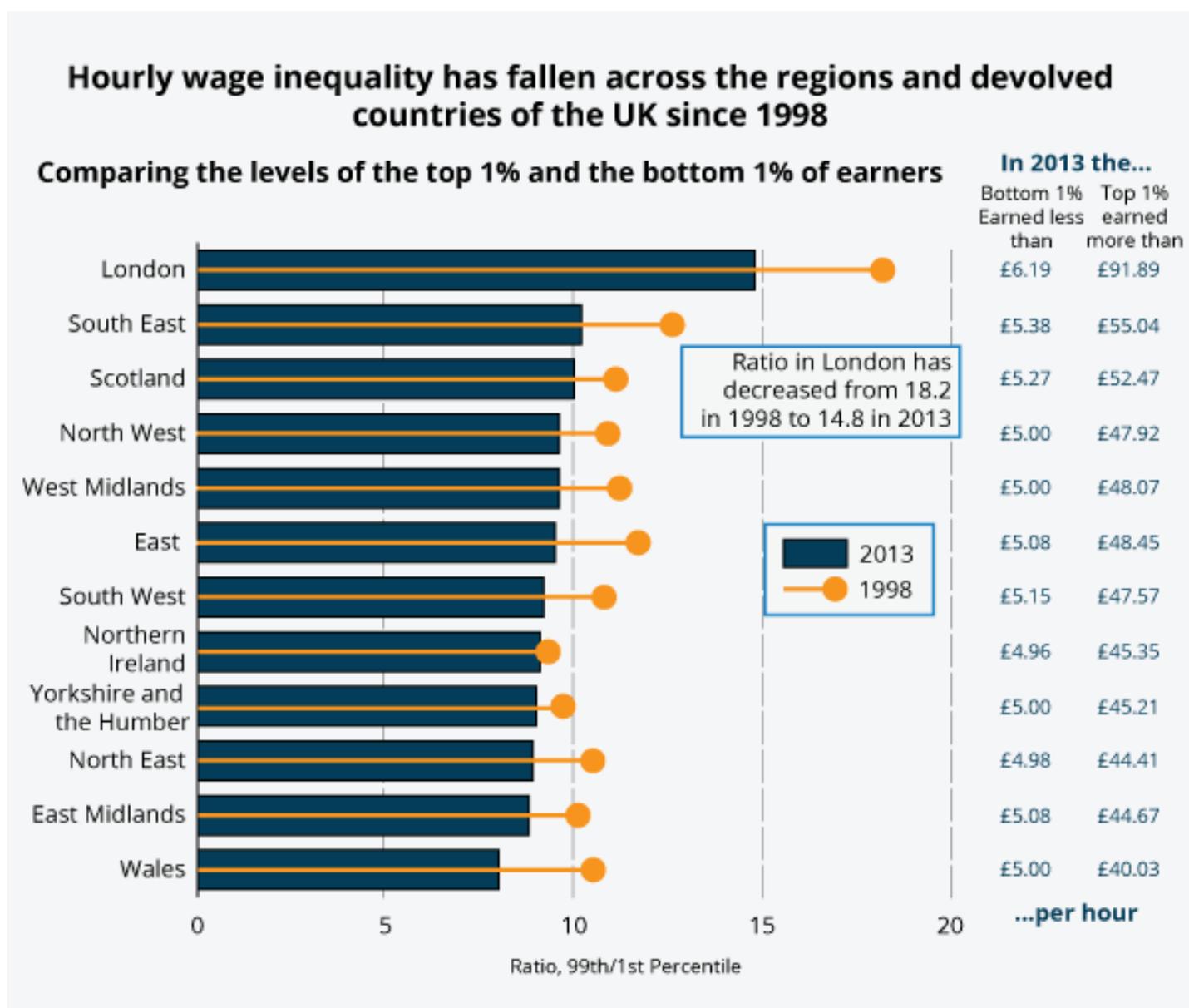
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Hourly wage inequality has fallen across the regions and devolved countries of the UK since 1998

Figure 12: Hourly earnings (excluding overtime), ratio between the 99th and 1st percentiles by region/devolved country of the UK, April 2013 and April 1998



Source: Annual Survey of Hours and Earnings (ASHE) - Office for National Statistics

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Wage inequality across the UK, as measured by the ratio of the top 1% of earners to the bottom 1% of earners has fallen since the introduction of the National Minimum Wage. In 2013 the highest paid employees earned 11 times more than the lowest paid, down from 12.7 times in 1998. Wage inequality has also fallen across all regions of England and the devolved countries of the UK.

In 2013 inequality was highest in London with a ratio of 14.8 and lowest in Wales at 8 times. The lowest level of inequality in Wales is explained by the fact that compared to other parts of the UK it has the lowest wages among their highest earners.

Of the decrease across the different parts of the UK the largest fall occurred in London where the ratio fell from 18.2 to 14.8. The smallest fall was in Northern Ireland where the ratio fell from 9.3 to 9.1. This may in part be explained by Northern Ireland already having the lowest ratio in 1998 giving it less scope for a reduction.

Notes

1. Low Pay Commission (2014), National Minimum Wage Report 2014 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/288847/The_National_Minimum_Wage_LPC_Report_2014.pdf

Background notes

1. The Annual Survey of Hours and Earnings (ASHE) does not cover the self-employed nor does it cover employees not paid during the reference period, which always includes a date in April each year. Earnings estimates relate to employees on adult rates (where known) whose earnings for the survey pay period were not affected by absence.
2. The calculation that the 1975 cohort would have to have worked 5-6 years longer than the 1995 cohort to receive the same level of earnings assumes both cohorts worked 33-hour weeks, 52 weeks per year, for each year that they are compared
3. Cohort Analysis in this report uses the New Earnings Survey (NES)/ASHE Panel dataset 2013 and is unweighted.

For all other sections of the report individual years from the NES/ASHE Panel dataset are used from 1975-1985. From 1986 to 2003 it uses the NES annual datasets, unweighted from 1986 to 1997 and weighted from 1997 to 2003. From 2004 onwards it uses ASHE which replaced NES.

4. ASHE and NES are based on a sample of employee jobs taken from HM Revenue & Customs (HMRC) Pay As You Earn (PAYE) records. Information on earnings and hours is obtained from employers and treated confidentially
5. Gross hourly earnings excluding overtime are used throughout this article.
6. The Consumer Prices Index of inflation is used to calculate real earnings using the annual growth rate between April in each year. The specific Index used can be found [here](#)

7. Details of the policy governing the release of new data are available by visiting www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html or from the Media Relations Office email: media.relations@ons.gsi.gov.uk

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