

{Section 2}
**The long view: Tracking
the long term drivers of
living standards**

Chapter 4
**The decline of
broad-based wage
growth**

Chapter summary

- Growth in median wages has fallen behind growth in average productivity over time.
- More than half of this divergence is explained by wage inequality; just 12 pence of every £1 of GDP growth now goes to wages for the bottom half of the workforce.
- With top earners capturing an unusually large share of wages, the UK has to grow more than other countries to deliver the same gains for ordinary working people.
- The UK stands out for the large scale and poor quality of low wage work, with one in five workers paid below the Living Wage, hitting part-time workers and women in particular.
- Britain’s underperformance owes much to chronic skills shortages in the bottom half of the workforce, poor management and weak labour market institutions.
- Together these factors add up to an economic model that encourages low-paid business strategies, with a heavy cost to government of as much as £4 billion a year.

This chapter tells the bigger story of changes in the link between growth and wages. This relationship is the key to sustained growth in living standards. It has long been assumed that employees become more productive over time and that their pay rises automatically on the back of this productivity growth. Now, the link from productivity to pay has

weakened for several reasons, fundamentally eroding the benefits of growth for ordinary working people. As we will see, this is a tough trend to reverse, but not one beyond our control. It arises from key characteristics of Britain’s workforce and jobs market, and also from the fact that the UK economic model encourages low-skilled, low-paid business strategies.

4a Productivity and pay in the UK

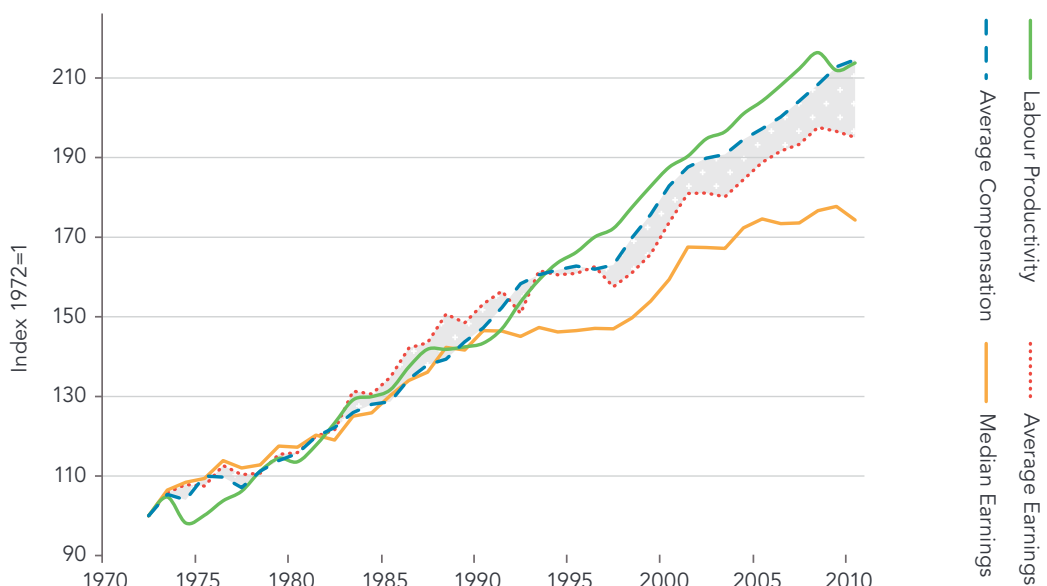
A number of wedges have driven apart productivity and median pay in recent decades^[1]

Research for the Commission by Professor John van Reenen gives new insights into the relationship between productivity and pay. We saw in Figure 2.3 that the gap between median wages and GDP had widened over time. Figure 4.1 confirms that stagnation during the 2003–2008 period is only part of this story. The data it displays also allows us to work through, step by step, the wedges that have driven productivity and pay apart. They help us to better understand one of the key reasons that growth no longer leads automatically to rising living standards.

The gap between productivity and pay reflects a longer-term fall in the “wage share”

The first two wedges between productivity and pay are familiar because they relate to our discussion of the labour share and wage share in Chapter 2. In Figure 4.2, the gap between labour productivity (the top line) and average compensation (the second line) reflects the part of productivity growth that doesn’t feed through to workers – in other words, changes in the share that is retained as profits. We have already seen that labour’s share of national income relative to profits declined in the early 2000s and

Figure 4.2: UK trends in hourly earnings and labour productivity, 1970–2010



Notes: UK data is controlled for the GDP deflator. Includes employees and self-employed. All data is hourly and it controlled for the GDP deflator. Source: Analysis from Pessoa and Van Reenen, Decoupling of Wage Growth and Productivity Growth?; ONS, GHS, LFS and ASHE

[1]As Lawrence Mishel has put it in reference to the US economy: “The conventional notion that increased productivity is the mechanism by which living standards increases are produced must be revised to this: Productivity growth establishes the potential for living standards improvements and economic policy must work to reconnect pay and productivity.” <http://www.epi.org/blog/understanding-wedge-productivity-median-compensation/> [Last accessed 3 October 2012]

that the 2008-09 recession brought the two back into line. Now we see that, before the crisis, changes in the labour share explained one-fifth of the gap that had opened up between productivity and pay since 1972.

Second, the dotted section of the chart shows the gap between average compensation (the second line) and average pay (the third line down). This is made

Wage inequality has been by far the biggest wedge between productivity and median pay

squeezing the amount left over for pay. Now we see that this gap is quite sizeable, opening widest in the late 1990s and early 2000s, and in 2008 accounting for over a quarter (27 per cent) of the gap between productivity and pay.^[2]

The skew of wages away from the bottom half of the wage distribution has had by far the biggest impact

The most striking lesson from this longer-term perspective is the size of the gap between average pay

(the third line) and median pay (the bottom line). Because median pay is the pay of the middle employee while mean pay is total pay divided by the number of employees, the latter is pulled up by rising pay at the top while the former is not. The growing gap between median pay and average pay is therefore explained by rising wage inequality, which has been by far the biggest wedge between productivity and median pay, growing substantially since the mid-1980s as wage growth has become more skewed towards the top. By 2008 it accounted for more than half (53 per cent) of the productivity and pay gap that had opened up since 1972.

The increase in inequality that occurred from the mid-1980s to the mid-1990s has made the UK economy less effective at sharing out the proceeds of growth. The gap between median and average pay widened from 14 per cent in 1975 to 20 per cent in 1985, to 27 per cent in 2010. The high level of inequality means that growth is hitched less tightly to pay in the bottom half of the wage distribution, making it harder to deliver on the basic promise that the earnings of those in ordinary working households should rise over time broadly in line with economic growth.

[2] It is also notable that from 2008 to 2010 it almost doubled in size, as wages proved far more sensitive to the downturn than overall compensation.

4b Inequality across advanced economies

Broad-based wage growth has declined across the OECD

Britain's economy now has to work harder than it used to – and, as we will see, harder than other countries – in order to deliver the same growth in living standards for ordinary working people. Of course strong productivity growth remains vital, but the UK must also do better than we have done recently at sharing the resulting growth broadly.

What lies behind the unusually large increases in wage inequality in the UK? Certainly the UK was not alone: the final quarter of the 20th century was a period of rising inequality across the developed world (Figure 4.3). The average Gini coefficient in the OECD – a measure that ranges from 0 at full equality to 1 when all earnings go to one person – rose from 0.29 in the mid-1980s to 0.316 by the late 2000s, rising in 17 out of 22 OECD countries.^[3]

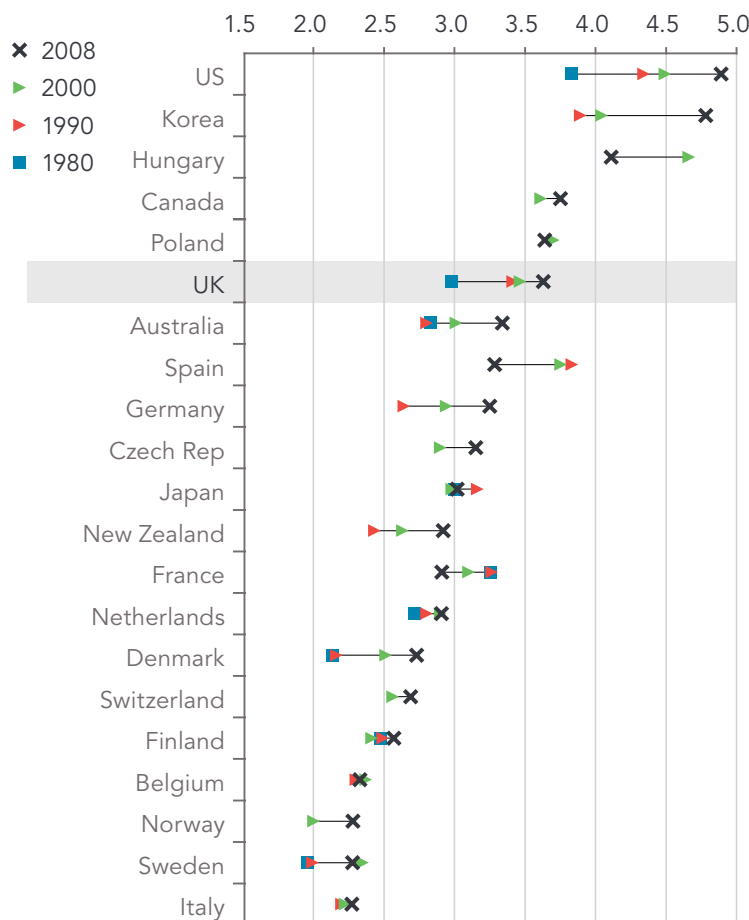
Wage inequality rose far faster and much earlier in some countries than in others but by now no country seems immune. Indeed, some of the largest increases in recent years have taken place in countries with historically very broad-based earnings growth, most notably Sweden and Denmark.

Some common factors underpin this widespread rise in wage inequality

It is also important to note that the rise in inequality changed shape over time. In the earlier period, inequality took the form of a fanning out of earnings across the whole of the distribution. Later, particularly in the UK but also on average across OECD economies, inequality stopped rising within the bottom half of the distribution but continued to rise in the top half. A general fanning out became a detachment of the top – and in particular the top 1 per cent or 0.1 per cent – from the rest, as the bottom half of the workforce (and low and middle income households) were left behind. This stark and widespread growth in wage inequality has led to a sophisticated academic and policy literature. It points to several global trends that have skewed wage growth towards the top across the developed world:^[4]

- *New technologies have raised demand for higher skilled workers relative to workers with low or intermediate skills. This has increased pay gaps between different jobs and changed the type of jobs that are created. Lately, it has pushed advanced economies to create both more highly paid and more poorly paid jobs. Meanwhile, middle-skilled jobs, dominated by low to middle income households, have declined as a share of overall employment (see In depth 4.1).*
- *There has been an erosion of regulations and institutions that used to buttress the negotiating power of workers in the bottom half of the wage distribution, most centrally the declining coverage of collective union agreements. This has tilted the balance of power towards employers and has done so particularly in service sectors where union membership is lowest. These sectors now make up a large and growing share of employment, particularly in low to middle income households.*
- *The globalisation of trade has had a more complex effect. While upsides from increased financial openness have created more good jobs, for example through inward investment, these have been balanced by downsides, such as increased pressure on low-skilled (and increasingly middle-skilled) labour costs from emerging markets.*
- *There has been a widespread reduction in high marginal income tax rates. These have not just increased income inequality (by cutting tax bills for the highly paid) but have also boosted wage inequality by incentivising high earners to work longer hours. This is important because rising earnings inequality has been driven in large part by a*

Figure 4.3: International growth in wage inequality by decade, OECD; ratio between the top and bottom 10 per cent of the full-time weekly earnings distribution*



Notes: Wage dispersion: D9/D1 ratios of full-time earnings: the ratio of the wages of the 10 per cent best-paid workers to those of the 10 per cent least-paid workers. *Earnings data annual in some cases. Source: OECD earnings database

[3] OECD, *Divided we Stand*, p. 22. The Gini coefficient is calculated by plotting a cumulative contribution curve for earnings or income across a given population (this line is known as the Lorenz curve). Plotted in the same way, a straight line at 45 degrees would represent total equality (in which every additional person adds the same amount to total earnings or income). The Gini coefficient is the area between the Lorenz curve and the line of total equality divided by total area under the line of equality.
 [4] See OECD, (2011), *Divided We Stand: Why inequality keeps rising*, Organisation for Economic Co-operation and Development, Paris, p. 112, for a detailed analysis of these different drivers. See also Atkinson, A. B., (2008), *The Changing Distribution of Earnings in OECD Countries*, Oxford University Press, New York.
 [5] OECD, *Divided we Stand*, p. 178.

growing divide between long hours, well-paid jobs at the top and badly-paid, part-time jobs at the bottom.^[5]

All in all, these trends suggest a labour market in which workers in the middle, and not just at the bottom,

are increasingly vulnerable. The key question for our purposes is whether these trends have been ameliorated or magnified by the UK domestic policy and social environment.

In depth 4.1: Has the UK labour market really polarised?

A key concern among labour market economists is the shape of jobs growth over time. Are modern economies creating good jobs or bad jobs and what does this mean for the distribution of pay? Until the 1990s economists broadly agreed that the march of technological progress would simply create ever better jobs. New inventions would lead to lower skilled roles gradually being automated while new, higher skilled roles were created in their place.

This theory – a kind of race between skills and technology – rested on the view that technical change is “skill-biased”.^[6] Then, in the 1990s and 2000s, it turned out that patterns of job creation in the UK (and in most other developed economies) were proving more complex. Technology has certainly proven skill-biased in some ways, with millions of jobs created at the top in knowledge sectors like finance and consultancy. But employment has also grown at the bottom in low-paid sectors like retail and social care. Meanwhile, mid-level jobs in administration and skilled manufacturing have been in decline. Figure 4.4 shows the change in the proportion of UK employment in each job quality decile between 1979 and 2008.

This has led to a theory of labour market polarisation and the modern “hourglass labour market”, fat at the top and bottom and squeezed in the middle.^[7] The key realisation that lies behind this way of thinking is that new technologies are not skill-biased but ‘task biased’: they don’t replace the lowest paid or the lowest skilled but workers carrying out routine tasks that can be automated.^[8]

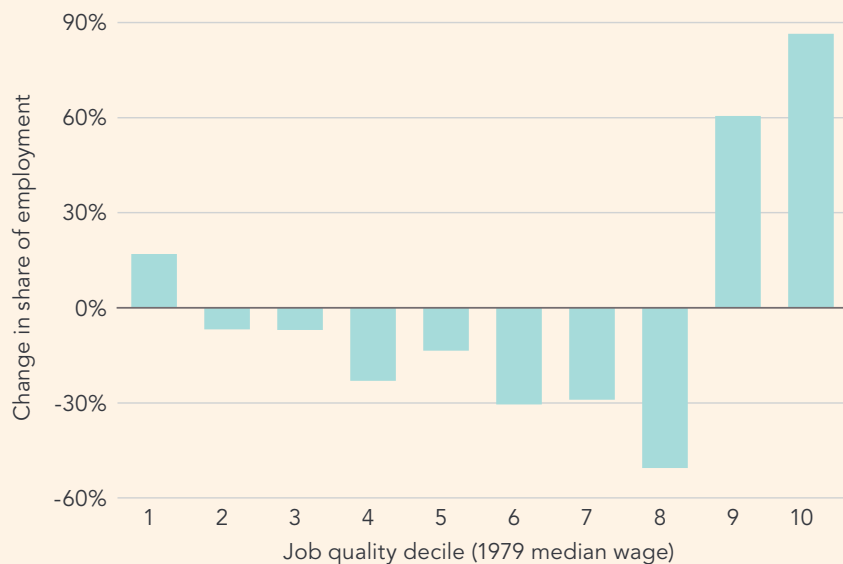
These are very different things, first because there are lots of low-paid people doing non-routine tasks like providing care for the elderly, and second because there are lots of fairly well-paid tasks – like cashing cheques – that are automatable when technology is sufficiently advanced.

The result is that, rather than facing a future of ever better, higher skilled jobs, the UK now faces a future of fewer jobs in the middle and more at the bottom and top. Research for the Commission confirms these findings but adds an important nuance: growth in some top jobs can be explained by job title inflation.^[10] For example, although the UK now has more retail managers, the proportion of these managers earning less than £400 a week is up from 37 to 58 per cent since 2000.

Some good jobs – particularly in knowledge sectors – still pay well. But other roles that sound like good jobs don’t pay as well as they used to (in relative terms).

What does this all mean for policy? The biggest implications are for skills. If new technologies create ever better jobs, then all government needs to do is deliver an ever more skilled workforce. But if good jobs don’t come naturally there may be a bigger role for government in encouraging their creation. It also becomes more important for people in the declining middle to be able to break into growing roles at the top. Meanwhile, new skills might not be enough for those in low-paid jobs. Public authorities may need to work more actively, or encourage work from others, to make bad jobs better, creating new career ladders or raising pressure on employers to invest in training and pay more when they can afford it.

Figure 4.4: Change in proportion of UK employment in each job quality decile, 1979–2008



Notes: Share changes are for the entire period. Job quality is measured via median wage within each occupation in 1979. Source: Mieske, “Low-skill Service Jobs and Technical Change”^[9]

[6] For an account of the 20th century as the “human capital century” see Goldin, C. and Katz, L., (2008), *The Race Between Education and Technology*, Belknap Press. [7] See for example Goos, M. and Manning, A., (2007), “Lousy and Lovely Jobs: The rising polarization of work in Britain”, *Review of Economics and Statistics*, 89 (1), pp. 118–133; Autor, D. et al., (2003), “The Skill Content of Recent Technological Change: An empirical exploration”, *Quarterly Journal of Economics*, 118 (4), pp. 1279–1333; Sissons, P., (2011), “The Hourglass and the Escalator”, Work Foundation, London. [8] For a more recent account of “task biased technical change” see Acemoglu, D. and Autor, D., (2010), “Skills, Tasks and Technologies: Implications for employment and earnings”, NBER Working Paper No. 16082, National Bureau of Economic Research. [9] Mieske, K., (2009), “Low-skill Service Jobs and Technical Change”, unpublished MSc dissertation, University College London. [10] Holmes, C. and Mayhew, K., (2011), *The Changing Shape of the UK Job Market and its Implications for the Bottom Half of Earners*, Resolution Foundation, London.

4c How the UK stands out – the high level of low pay

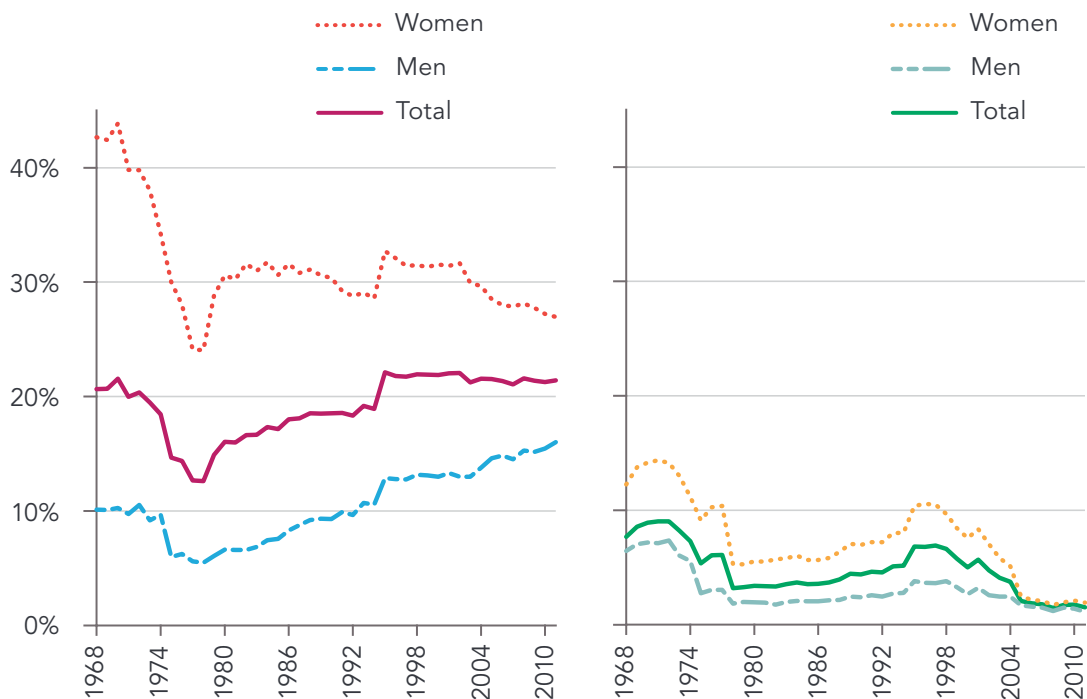
Low pay is key to understanding how the UK fits into broader labour market trends. The UK stands out not only for having had faster growth in inequality than most other countries, but also for the nature and quality of its low wage work. More than one in five UK employees earns less than two-thirds of median hourly pay, compared to fewer than one in 10 (8 per cent) in Denmark. The UK has the second highest level of low pay among advanced economies, behind the US.^[11]

Figure 4.5 puts the overall incidence of low wage work in the UK into historical perspective, showing the proportion of UK employees paid below two-thirds and below one-half of median pay between 1968 and 2010. It shows that the incidence of low wage work declined rapidly in the early 1970s, with women making particularly rapid progress.^[13] Then low pay grew steadily until the mid-1990s, rising more contin-

uously for men, from just above 5 per cent in 1978 to 16 per cent in 2011.^[14] Figure 4.5 also highlights the near abolition of pay below 50 per cent of median pay from 1997, as employers adapted to the forthcoming introduction of the National Minimum Wage in 1999.

The scale of low pay in the UK cannot be separated from the growth of work in service sectors. In the past 20 years low-paid personal service roles have expanded across the world's advanced economies, driven mainly by higher consumption but also by social and demographic shifts.^[15] The populations of ageing societies require more care while the rise of households in which all adults work has meant that some tasks formerly carried out in the home, from childcare to cooking, are now paid for (badly) in the market.^[16] These sectors, delivering hands-on services from retail to health to hotels and restaurants, now dominate the UK's large low wage labour market (Figure 4.6).

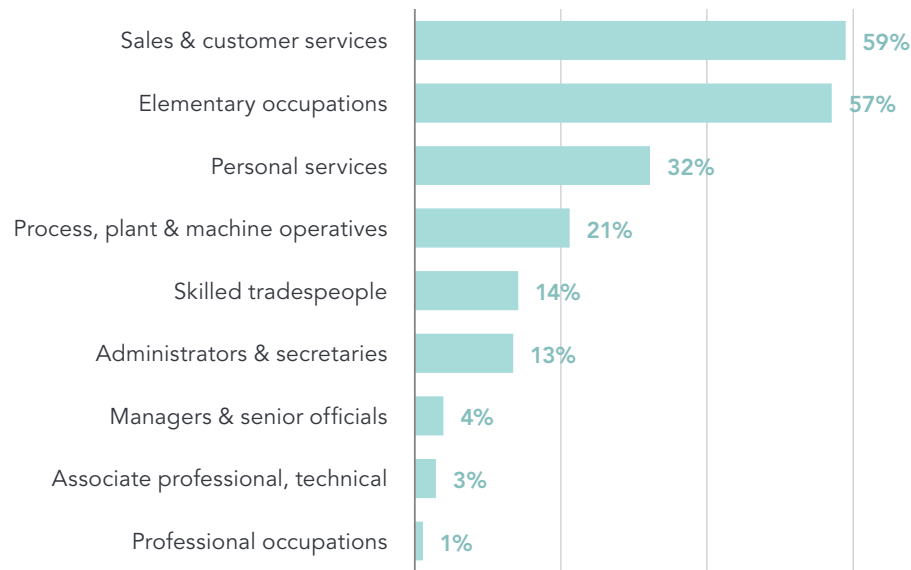
Figure 4.5: Percentage paid below two-thirds (left) and half (right) median pay, UK, 1968–2010



Notes: Hourly pay for all employees (including full- and part-time). Figures are drawn from three separate data sources. Where these sources overlap, differences exist in the proportions of employees reported to be below the various low pay thresholds. Figures before 1997 have been adjusted to account for the magnitude of difference recorded in these overlapping periods, in order to create a consistent time series. The original, unadjusted, data is presented in Pennycook and Whittaker, (2012) "Low Pay Britain 2012".^[12] Sources: Resolution Foundation analysis of DWP, FES (1968–1981); ONS, New Earnings Survey Panel Data (1975–2010); and ONS, ASHE (1997–2011)

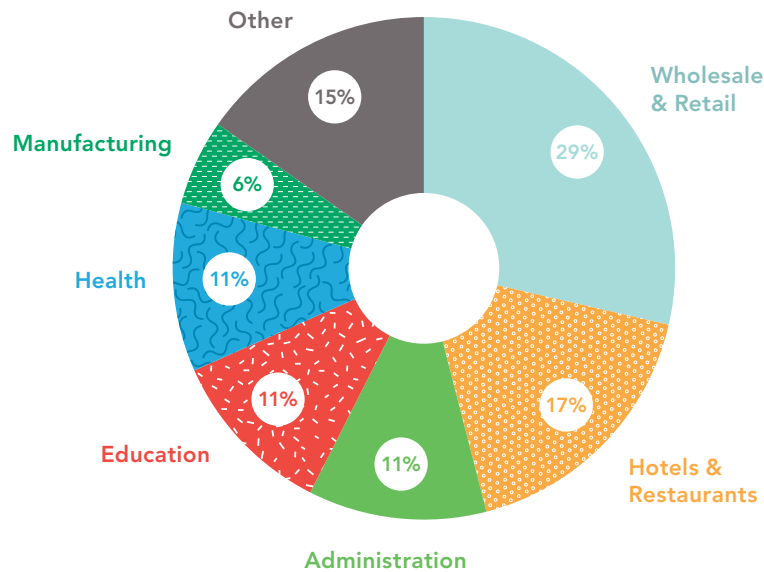
[11] Gautié, J. and Schmitt, J. (eds), (2009), *Low Wage Work in the Wealthy World*, Russell Sage. [12] Pennycook, M. and Whittaker, M., (2012) *Low Pay Britain 2012*, Resolution Foundation, London. [13] It is hard to determine precise causes for the precipitous fall in low pay among women in the 1970s but the impact of the Equal Pay Act of 1970 and the incomes policies of the 1974–1977 government, which had a positive effect on the earnings of the lowest paid (then, as now, predominantly women), are likely explanations. [14] The brief period of sharp growth in 1994 and 1995 is likely to be the result of the abolishment of the remaining wages councils in the Trade Union Reform and Employment Rights Act of 1993. [15] See the series of working papers from the DEMPATEM research project (2001–2004), Schettkatt, R. and Salverda, W. (2004), *Demand Patterns and Employment Growth, Consumption and Services in France, Germany, the Netherlands, Spain, the United Kingdom and the United States*, Amsterdam Institute for Advanced Labour Studies, Amsterdam, <http://bit.ly/UrFUZM> (accessed 1 October 2012). [16] *Ibid.*, p. 75

Figure 4.6(i): Low pay by sector in the UK: percentage of people paid below the Living Wage by occupation, 2011



Notes: Data covers all employees on adult rates of pay who have not had their pay affected by absence in the time covered. Industry categories correspond with SIC 2007 and occupation categories correspond with SOC 2000. Figures for 2011 are based on Living Wage rates of £8.30 in London and £7.20 in the rest of the country. Source: Resolution Foundation analysis of ONS, ASHE. See Pennycook and Whittaker, *Low Pay Britain 2012*

Figure 4.6(ii): Low pay by sector in the UK: percentage of people paid below the Living Wage by and sector, 2011



Notes: Data covers all employees on adult rates of pay who have not had their pay affected by absence in the time covered. Industry categories correspond with SIC 2007 and occupation categories correspond with SOC 2000. Figures for 2011 are based on Living Wage rates of £8.30 in London and £7.20 in the rest of the country. Source: Resolution Foundation analysis of ONS, ASHE. See Pennycook and Whittaker, *Low Pay Britain 2012*

The rise of low paid service roles is key to living standards in the bottom half of the UK labour market because although these occupations are generally of poor quality in all countries, they are much more strongly associated with low pay in the UK.^[17] International comparisons show

that jobs in these sectors in the UK are designed to be lower paid than they are in other countries.^[18] In addition, Britain's personal service employees are paid less than in other countries even for carrying out identical tasks, for example in fast food restaurants with consistent job design.^[19]

[17] See Mayhew, K. and Salverda, W., (2009), "Capitalist Economies and Wage Inequality", *Oxford Review of Economic Policy*, 25 (1), pp. 126–154. [18] For example, shop assistants in Germany are more likely to take responsibility for a section of the store through a combination of buying, layout and customer assistance, while in the UK these functions are more often broken down into specialised tasks, with checkout assistants performing a narrow function and being poorly paid as a result. [19] For the most detailed sectoral and international analysis of low wage work see the multi-volume Russell Sage Foundation series, *Low Wage Work in the Wealthy World* (2006). [20] Manning, A. and Petrongolo, B., (2004), "The Part-time Pay Penalty", London School of Economics and Centre for Economic Performance. See also Mayhew and Salverda, "Capitalist Economies and Wage Inequality", p. 133.

In part for this reason, the pay penalty for part-time work – which is dominated by these sectors – is far higher in the UK than in most other advanced economies.^[20] One other costly implication of these sectoral patterns is that the risk of low pay among women is higher in the UK than in any advanced economy aside from Germany, a fact that has become all the more important as women have come to make up a larger share of overall employment.^[21]

When jobs in these personal service sectors expand, the UK struggles more than other countries to provide people with decent, fulfilling work

Increasingly these non-traded portions of the labour market have become a barometer for the effect that a country's institutions have on job quality and pay. While pay has converged between traded goods sectors in advanced economies, the character of non-traded service roles varies substantially. These occupations, in sectors from social care to retail, are already dominated by households on low to middle incomes and are growing – extremely fast in the case of social care. As we will see in Chapter 7, by far the largest employment growth sector for this group in the next decade is set to be health and social care. When

jobs in these personal service sectors expand, the UK struggles more than other countries to achieve broad-based growth and to provide the majority of people with decent, fulfilling work.

The high cost of low pay

The scale of low wage work in the UK links directly to a model in which the state plays a big role in supporting living standards. Low pay results in substantial direct costs for government through in-work cash transfers and lost tax revenues. Estimating the scale of these costs is difficult. The best modelling to date focuses only on the direct, mechanical benefits and costs of raising the minimum wage to the Living Wage in 2010, (the least hourly pay that is needed to provide a minimum acceptable standard of living).^[22] Under this scenario government revenues would increase by between £6.8 and £7.3 billion as a result of reduced benefit and tax credit spending and increased income tax and National Insurance receipts. Some of these savings would be cancelled out by increased spending on public sector wages of between £3.2 and £3.4 billion. This leaves an overall gain in the region of £3.4 to £4.1 billion, though these costs depend heavily on the assumptions made and are likely to be at the upper end of the range.^[23]

[22] Institute for Fiscal Studies, (2010), *Untitled analysis into the fiscal costs of the living wage*, IFS, London. The Living Wage in 2011 is £8.30 in London and £7.20 across the UK. This analysis is based on the earlier 2010 values of the Living Wage at £7.85 and £7.60 respectively. This work will soon be complemented by new figures calculated in a joint project between the Institute for Public Policy Research and the Resolution Foundation. [23] This figure should be taken with significant caveats since it relates to the static impact of a nationally mandated Living Wage on tax and benefit receipts and so does not take into account lost tax revenues that would flow from likely impacts on employment. It is also not a comprehensive figure and does not include, for example, lost revenues from corporation tax as a result of reduced company profits. See IFS analysis, available on request (accessed 24 August 2012). [21] In the 14 countries for which we have data. See Mayhew and Salverda, "Capitalist Economies and Wage Inequality", p. 134.

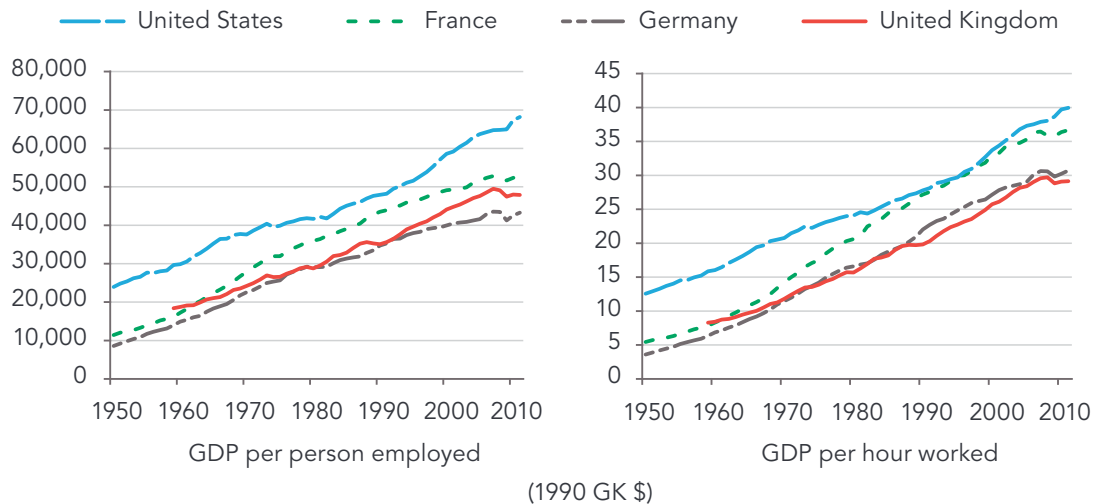
4d Understanding the UK's performance

Aggregate productivity cannot explain these characteristics of the UK jobs market

What is it about the UK social and policy environment that explains why wage growth is skewed toward the top and low pay is pervasive? One issue may be overall levels of labour productivity. Certainly the UK has a persistent productivity gap with our main compet-

itors^[24] (Figure 4.7). But although this gap remains sizeable, it has not widened noticeably in recent years. Indeed, UK productivity outperformed many of our competitors in the pre-crisis period, on the back of solid and broad-based improvements across a range of industries.^[25]

Figure 4.7: GDP per person employed and per hour employed, 1990 US\$ PPP, 1950–2010



Notes: Figures for Germany are not comparable over the full period owing to reunification. Units displayed are adjusted for PPP and displayed as 1990 Geary-Khamis dollars, a method of comparing purchasing power across countries. Source: EU KLEMS

While scoring well on some drivers of productivity, like fundamental research, the UK is poor at others, such as exploiting new ideas commercially.^[26] Business R&D has fallen from 1.6 per cent of GDP to 1.2 per cent since the mid-1980s while staying steady or rising in other countries.^[27] ICT intensity has surged in advanced economies but after rising

strongly in the 1990s it has plateaued in the UK. Finally, because of the varied quality of middle management, the UK wastes some of the productivity-enhancing potential of new technologies, many of which are only realised when employers make complementary investments, for example in skills or workplace reorganisation.^[28]

[24] This gap looks somewhat better when measured by GDP per capita. For a summary of trends in the productivity gap and their explanations see Griffith, R., (2007), "Technology, Productivity and Public Policy", *Fiscal Studies*, 28 (3), pp. 273–291. [25] Corry, D., Valero, A. and Van Reenen, J., (2011), *UK Economic Performance Since 1997: Growth, Productivity and Jobs*, Centre for Economic Performance Special Paper, London School of Economics and Political Science. [26] The UK ranks second only to the US in its academic citations and has a relatively high output of PhDs. See Griffith, "Technology, Productivity and Public Policy". [27] In the US business R&D fluctuates between 2.0 per cent and 1.8 per cent of GDP and in France it has risen from below 1.2 per cent to 1.4 per cent. OECD stat from Griffith, R., "Technology, Productivity and Public Policy". [28] Bloom, N. and Van Reenen, J., (2010), "Why Do Management Practices Differ across Firms and Countries?", *Journal of Economic Perspectives*, 24 (1), pp. 203–224.

4e The weakness of the bottom half

Some of the factors that undermine UK productivity are particularly problematic for the bottom half of the workforce. For example, as ICT intensity has grown, the UK's long tail of poor managers (Figure 4.8) has become more costly as poorly performing companies have wasted the potential of these new technologies.^[29] As a result, the variation in productivity between UK firms has increased.^[30] Because part of this variation in productivity feeds through into wages, this has been a factor in the growing dispersion of wages in the UK labour market – in this case skewing wages towards employees in high performing firms.^[31] Closing the productivity gap between firms would help to boost wages in the bottom half.

The role of unemployment and employment

However, other factors affecting the distribution of wage growth have been more important than the productivity gap. One of the most important of these is the link between unemployment and real wages. Evidence shows that high unemployment constrains wage growth while a tight jobs market tends to produce higher wage growth.^[33] This is partly because unemployment reduces workers' power to negotiate pay rises. It is also because people are more likely to hold onto an existing job when competition for new jobs is strong. Because job switching is the main way people boost their pay in good times, when people

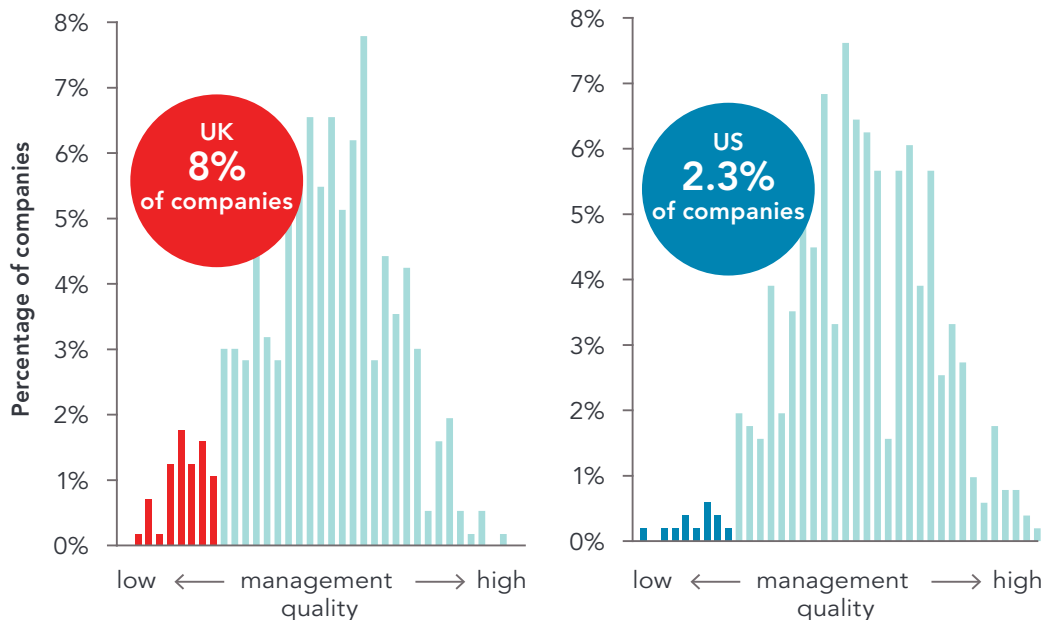
stay put this has a dampening effect on pay.^[34]

Yet as we have already seen, in the years from 2003 to 2008 weak wage growth coincided with the tightest labour market since the 1970s and stable economic growth. Similarly, one of the great puzzles of the 2008-09 and 2012 recessions has been the surprisingly strong performance of employment alongside particularly stark declines in wages. Both periods have given us reason to believe that the relationship between unemployment and real wages might have changed.

New research for the Commission by Professors Steve Machin and Paul Gregg suggests that this is the case.^[35] In the period from 2003 to 2010 real wages became more sensitive to unemployment. The effect of this change is significant. Under the relationship between wages and unemployment that occurred from 2003 to 2010, an increase in unemployment from 4.6 per cent to 8.3 per cent (the increase that occurred between 2005 and late 2011) was associated with a reduction in median earnings of £2,100 a year.^[36] In the earlier period, the same magnitude of growth in unemployment would have reduced median earnings by only £1,300 (in 2011 prices). This increased sensitivity of wages to unemployment therefore equates to around an extra £800 a year wage loss at the median.^[37]

This is an important development, and even more so for lower earners because the drag of unemployment on wage growth in the bottom half of the wage distribution is particularly strong. Wages are between 3 per

Figure 4.8: Distribution of firm-level management scores, UK (left) and US (right), 2010



Source: Firm-level management scores from the World Management Survey^[32]

[29] Faggio, G., Reenen, J. and Salvanes, K. G., (2007), *The Evolution of Inequality in Productivity and Wages: Panel data evidence*, CEP Discussion Paper No. 821, Centre for Economic Performance, London School of Economics and Political Science. [30] Ibid [31] For a discussion of the size of rents in employment relationships see Manning, A., (2010), *Imperfect Competition in the Labour Market*, CEP Discussion Paper No. 981, Centre for Economic Performance, London School of Economic and Political Science. [32] See Bloom, N., Genakos, C., Sadun, R. and van Reenen, J., (2012), "Management Practices Across Firms and Countries", *Academy of Management Perspectives*, 26 (1), pp. 12–33, for methodological details. [33] For the classic and more recent literature on the real wage-unemployment relationship see: Phillips, A., (1958), "The Relation Between Unemployment and the Rate of Change of Money Wages in the United Kingdom, 1861–1957", *Economica*, 25, pp. 283–299; Layard, R., Nickell, S. and Jackman, R., (1991), *Unemployment*, Oxford University Press, Oxford; Gali, J., (2011), "The Return of the Wage Phillips Curve", *Journal of the European Economic Association*, 9, pp. 436–61; Blanchflower, D. and Oswald, A., (1994), *The Wage Curve*, MIT Press; Blanchflower, D. and Oswald, A., (1995), "An Introduction to the Wage Curve", *Journal of Economic Perspectives*, 9, pp. 153–167. [34] Daly M., (2012), *Dissecting Aggregate Real Wage Fluctuations: Individual wage growth and the composition effect*, Working Paper Series, Federal Reserve Bank of San Francisco, www.frbsf.org/publications/economics/papers/2011/wp11-23bk.pdf. [35] Gregg and Machin, *What a Drag*. [36] Annual earnings of a full-time employee at median hourly pay. [37] More straightforwardly, a hypothetical doubling of unemployment would reduce median earnings by £1,600 a year in the earlier period and by £2,600 a year in the later one; the increased sensitivity would produce an additional annual loss of £1,000.

cent and 5 per cent more sensitive to unemployment for modestly paid workers (between the 20th to 50th percentiles) than for workers on higher pay.^[38] These trends could change quickly in a turbulent economy but if the impact of unemployment on real wages has indeed strengthened, this would have a number of implications.

Although higher paid workers would be likely to experience modest real wage growth in the recovery, there may be no significant real growth for low and middle earners until unemployment falls significantly, probably below the levels recorded from 1999 to 2007 (between 4 per cent and 6 per cent). One might also expect any economic recovery to boost jobs in the first instance, rather than wages. Over the medium term, policymakers may also have more leeway to keep interest rates lower than in the past at similar levels of unemployment without fear of an inflationary wage-price spiral.

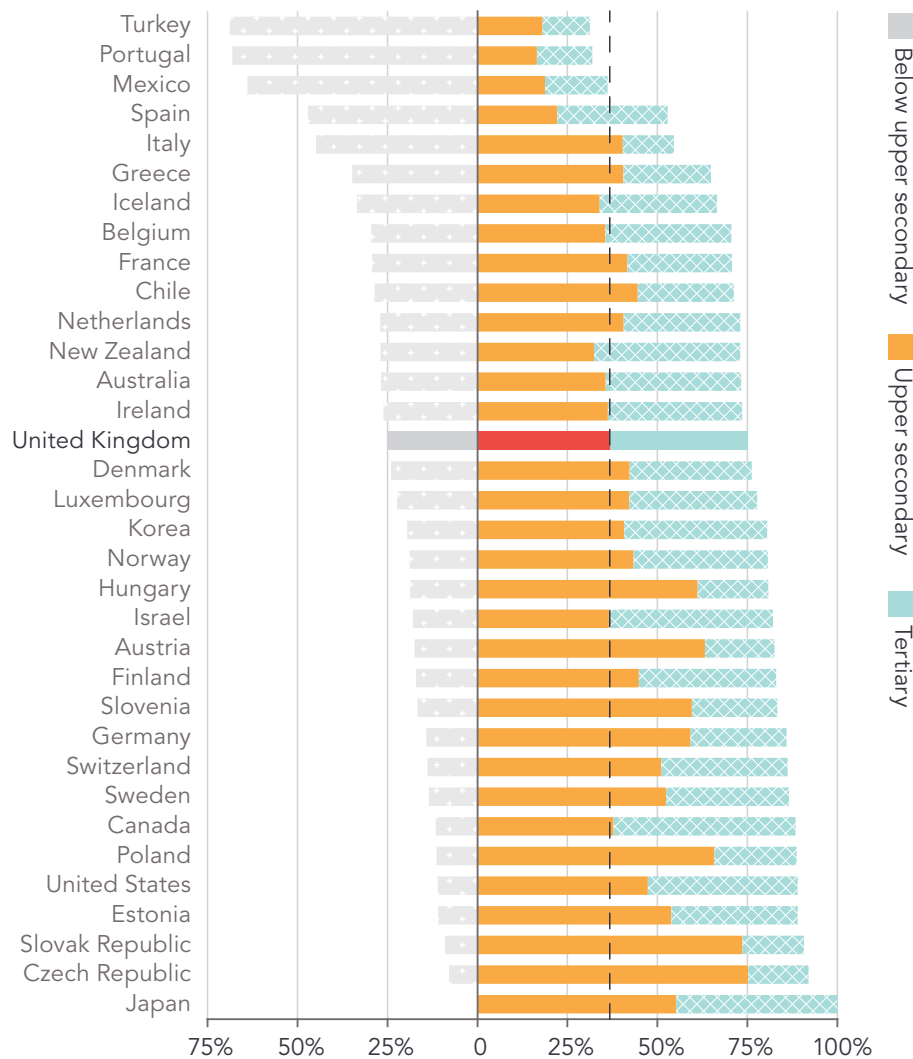
The role of skills

What of other factors more directly linked to workers' productivity? Reducing unemployment is a key part

of a strategy to boost pay, particularly low pay, but the distribution of skills across the UK workforce also stands out. Our relatively good overall performance on average skills hides unusual levels of variation. At the top, UK universities are world class, but performance lags badly in the bottom half of the workforce in a number of ways. This inhibits wages in the bottom half in a number of ways.

The UK has an unusually large proportion of unskilled people and far fewer people qualified to intermediate level than our main European competitors. As Figure 4.9 shows, the UK also suffers from a relatively low proportion of the adult workforce having upper secondary education. The UK ranks 15th on the proportion of the workforce with below upper secondary education, 7th on the proportion with tertiary education and 24th on the proportion with upper secondary education. These figures are likely to overstate the UK's comparative performance at intermediate level since the UK classifies A-C grades at GCSE as the completion of upper secondary education, a practice that has been criticised for inflating UK performance.^[39]

Figure 4.9: Highest level of education among adult population, several countries, 2010

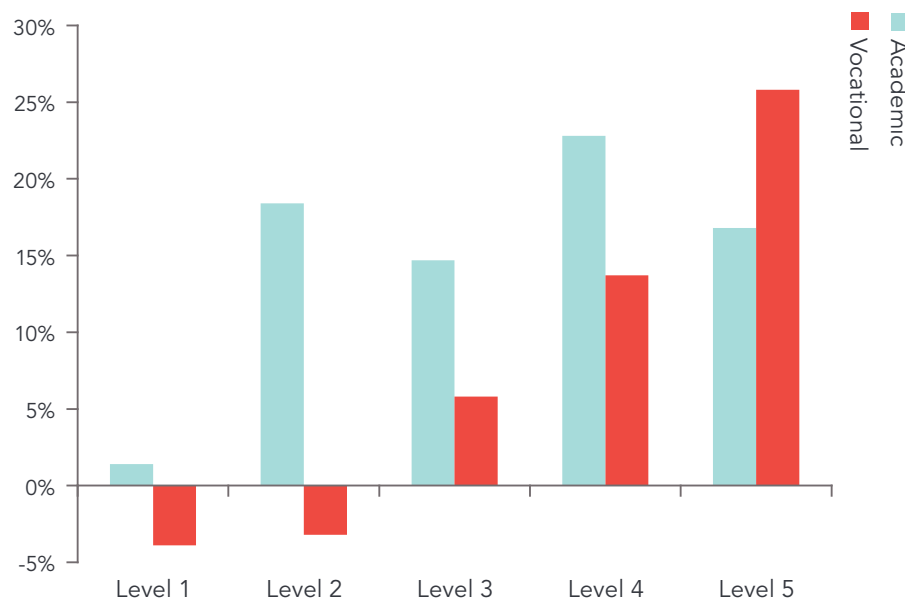


Notes: 25–64 year olds. Some data relates to different years where later data is not available. Sources: OECD, (2012), Education at a Glance. For detail source data see Annex 3, www.oecd.org/edu/eag2012.

[38] Gregg and Machin, *What a Drag*. [39] See Schneider, S., (2011), "The International Standard Classification of Education 2011 and its Application in Cross-national Surveys", University of Oxford, p. 20.

The UK also falls behind other countries in terms of the quality of intermediate skills. The UK is unusually in lacking a reliable, mass-scale, standardised system of intermediate skills that consistently delivers high wage returns. Wage returns to intermediate level, and particularly vocational qualifications, are relatively low and highly variable (Figure 4.10). This hinders people who do not go to university.

Figure 4.10: Rates of return to different qualifications by level and type, UK, 2000-04



Notes: For full definition of rates of return see a study on rates of return to investment in, Institute for Employment Studies, (2005), “Level 3 and Higher Qualifications”. For a fuller discussion of the importance of skills to low to middle income households see Vignoles, *Upskilling the Middle*.^[40]

These skills problems have become more important over time

The UK’s failure to provide marketable skills to many workers in the bottom half of the wage distribution is longstanding and well understood. But to see the impact it is having on living standards we also need to understand how the UK labour market is changing. In the past 20 years, there has been strong growth in jobs at the top and bottom of the labour market in advanced economies like Britain, as discussed earlier (see In depth 4.1).^[41] The decline in mid-level jobs has been sharpest in sectors that have had the greatest rise in ICT intensity, suggesting that technology has played a big role as it has become possible to automate tasks like administration.^[42]

Globalisation has amplified these trends, with trade becoming possible in new areas like back office tasks, putting new competitive pressure on workers in the middle. Even within the UK, these dynamics play out, as company structures split horizontally to take advantage of the fact that more tasks can now be carried out at a distance, boosting efficiency but squeezing the wages of outsourced workers in more narrowly defined roles.

These changes interact with the skills profile of the UK workforce in two important ways:

- When the bulk of good jobs being created are in

highly skilled, hi-tech sectors at the top, it becomes more important that intermediate skills can give people access to these top jobs. This is precisely the area in which the UK’s intermediate skills system has historically fallen short.

- When low-skilled service roles expand, it becomes more important to do whatever can be done to improve productivity in these roles. Skills are not the only way to do this; indeed, in uncompetitive low wage labour markets they may not even be the main way. But making bad jobs better partly requires qualifications that raise productivity, particularly in low-paid service sector roles. Basic transferable skills like literacy and numeracy are key to this.

Perhaps most challengingly, there is also reason to believe that skills supply and demand interact; that is, a workforce’s skills have an effect on the kinds of jobs an economy creates.^[43] The likely scale of this impact should not be overstated. So far, no advanced economy – including countries like Germany with intermediate skills systems that are far more successful than the UK’s – has avoided entirely the decline of middle-paying roles.^[44] But although changing the kinds of jobs our economy creates is likely to be slow, difficult and unpredictable work (and so not a panacea), theory suggests that the UK weaknesses on skills may be encouraging the creation of low quality jobs.^[45]

[40] Vignoles, A., (2012), *Upskilling the Middle*, Resolution Foundation, London. [41] Holmes and Mayhew, *The Changing Shape of the UK Job Market and its Implications for the Bottom Half of Earners*, pp. 4–5. [42] Michaels, G., (2010), *The Shrinking Middle: How new technologies are polarising the labour market*, CentrePiece, London School of Economics. [43] The long-run relationship between skills supply and skills demand is extremely difficult to test empirically. Theory suggests that such effects are likely to exist but cannot be definitive on their scale. For a recent update to the literature on skills demand and supply in advanced labour markets see Acemoglu, D. and Autor, D., (2011), “Skills, Tasks and Technologies: Implications for employment and earnings”, in *Handbook of Labor Economics*, Vol.4, pp.1043–1171. [44] Autor, D., (2010) “The Polarization of Job Opportunities in the U.S. Labor Market: Implications for employment and earnings”, Centre for American Progress, Washington DC. [45] For discussion of the way in which national institutions affect economics and political economy based on the “varieties of capitalism” approach, see Hall, P. and Soskice, D., (2001), “Varieties of Capitalism: the Institutional Foundations of Comparative Advantage”, Oxford University Press, Oxford.

The role of labour market institutions

In this context it is important to think about skills in the same breath as wider labour market institutions. We finish this chapter by considering this question briefly. It is particularly pertinent in the UK because the most distinguishing characteristic of the UK

The UK has seen a far deeper fall in collective bargaining coverage than any other OECD country except Australia and New Zealand

labour market in the past 40 years has been the scale of decline in labour market institutions. The coverage of collective bargaining agreements fell from 70 per cent of the UK workforce in

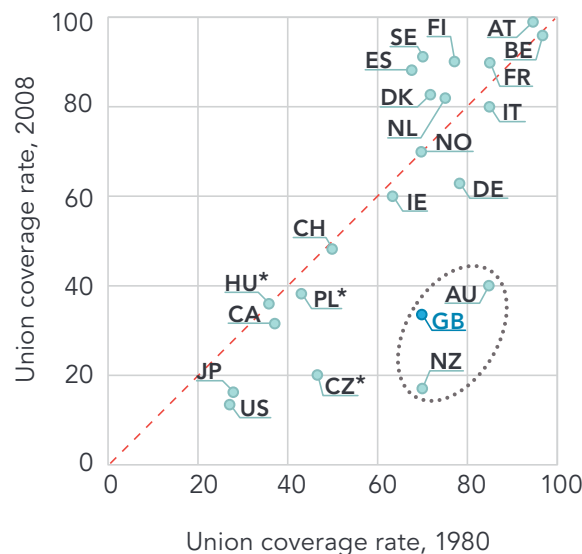
1980 to 34 per cent in 2008, a far deeper fall than in any other OECD country aside from Australia and New Zealand (Figure 4.11). This erosion slowed and even slightly reversed for a time from the late 1990s. [46] The long-term decline in protection for workers in the bottom half of the wage distribution was in part a conscious policy trade-off. In search of the benefits of a flexible labour market, the UK moved to lighter touch relationships between employees and employers. As well as benefits, this choice has costs, for example discouraging employer investment in training that may pay off over the longer term.

Aside from the demise of collective bargaining, the UK has weaker institutions in general. For example, far fewer employers are members of employer associations than in other countries, making them less capable of taking a strategic view on the long-term needs of their sector. [47] This weakness interacts with the UK's underperformance on skills, leaving UK employers peculiarly uninvolved in

planning and designing the training they need, and instead designing jobs for the low skilled workforce they have today, perpetuating underinvestment in training compared with other countries. [48]

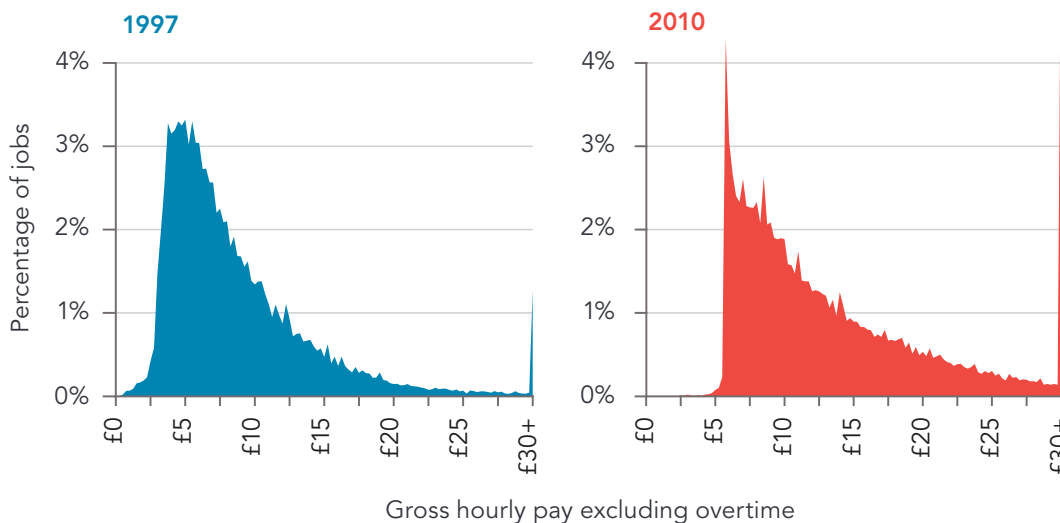
The combined result of these changes is that there is now less support for workers in the bottom half of the wage distribution than in most other developed countries, tilting the balance towards business strategies that are based on low workforce investment and low levels of pay.

Figure 4.11: Decline of collective bargaining coverage internationally between 1980 and 2008



Source: OECD

Figure 4.12: Gross hourly pay excluding overtime in the UK before (1997) and after the introduction of the National Minimum Wage (2010)



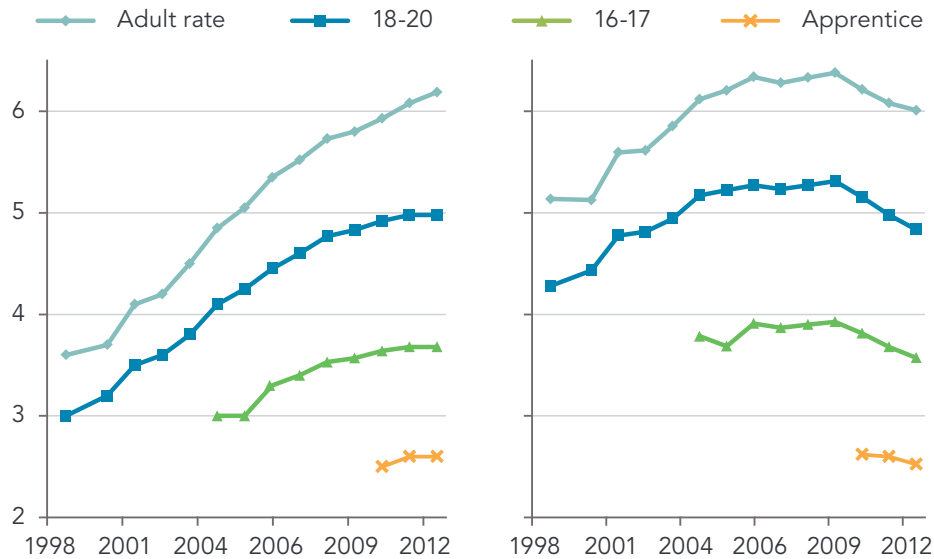
Note: Current prices. Source: Low Pay Commission, ASHE

[46] Blanden, J. and Machin, S. and Van Reenen, J. (2006) "Have Unions Turned the Corner? New evidence on recent trends in union recognition in UK firms", *British Journal of Industrial Relations*, 44 (2), pp. 169–190. [47] Mayhew and Salverda, "Capitalist Economies and Wage Inequality", p. 146. [48] Lanning, T. and Lawton, K., (2012), *No Train, No Gain*, Institute for Public Policy Research, London.

In response to the decline of labour market institutions, as in other advanced economies, the UK has forged a new regulatory framework to affect pay distributions: the National Minimum Wage. At the very bottom of our labour market, the National Minimum Wage protects people effectively. Although the UK has a lot of low-paid workers, countries like Germany without a statutory National Minimum Wage (and the US with a very low federal minimum

wage) have more people on extremely low pay.^[49] Figure 4.12 shows the direct and dramatic impact the National Minimum Wage has had on the UK wage distribution. Although the figures are expressed in current terms and so reflect nominal wage growth over time, the change in the shape of the wage distribution is also clearly visible. There is now a broad academic consensus that this effect has been achieved without causing unemployment.^[50]

Figure 4.13: Minimum wage in the UK, £ per hour, current value (left) and constant prices (right), adjusted for RPI



Source: Resolution Foundation analysis; Low Pay Commission

Yet as Figure 4.12 also indicates, the effects of the National Minimum Wage wage for workers on slightly higher pay have been positive but much more limited. The National Minimum Wage has not moved the entire pay distribution upwards, but has instead compressed the distribution at the bottom. Although some so-called ‘spillover’ effects are found, these have been limited in scale and run at most up to the 20th percentile. The National Minimum Wage has therefore been more a tool for putting a floor under

wages than for lifting wages for all low-paid workers. There is even some evidence that in response to the National Minimum Wage some large retailers have scrapped intermediate tiers of work, leaving a broader, flatter pay structure at the bottom.^[51]

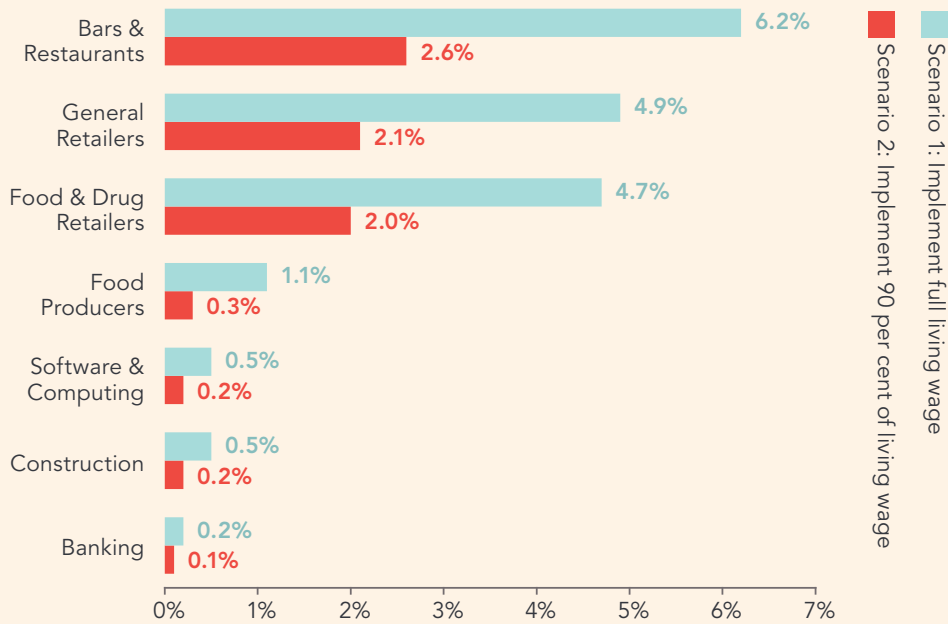
Now, held back – with sensible caution – by the Low Pay Commission’s concern for unemployment effects in vulnerable sectors, the minimum wage has fallen in real terms for the last three years and is now lower than its level in 2004 (Figure 4.13).

[49] The US has a National Minimum Wage but it is far lower than the UK level. [50] For the latest summary of the evidence see Low Pay Commission, (2012), *National Minimum Wage*, LPC Annual Report. [51] Incomes Data Services, (2009), *Monitoring the Impact of the National Minimum Wage: A report for the Low Pay Commission*, Incomes Data Services, London.

In depth 4.2: Can UK employers afford to pay more?

There is evidence that employers in a range of sectors could afford to pay more. Analysis for the Commission has modelled the impact on wage bills across a range of different sectors of paying all employees the Living Wage (Figure 4.14).^[52] The impact in some large, low wage sectors, such as bars, restaurants and retail, is significant (though lower than we anticipated), causing between a 5 per cent and 6 per cent increase in the total wage bill. By contrast, for large companies in sectors such as banking, construction and software/computing – which employ over 1 million low wage workers – paying all workers the Living Wage would mean an increase of less than 0.5 per cent of the total wage bill.^[53] Progress is possible.

Figure 4.14: Average firm-level wage bill increase of implementing Living Wage in the UK, by industrial sector



Notes: Average firm-level wage bill increases were calculated using consolidated financial data for 82 large and medium-sized UK incorporated firms sampled from London Stock Exchange (LSE) listings in seven industrial sub-sectors. Ten firms were sampled from the bars & restaurants sub-sector, 28 from general retailers, seven from food & drug retailers, four from food producers, 13 from software & computing, 15 from construction and three from banking. Source: Resolution Foundation analysis

4f Conclusion

Drawing these threads together, the worry is that the 21st-century jobs market looks a lot like the late 20th century but more so on all of the above fronts. It will be even more high tech, as ICT-intensive sectors continue to grow as a share of employment, making the gap in returns between high level and intermediate skills all the more important. It will be even more competitive in the middle, particularly in those routine jobs that used to provide a good living for those with intermediate skills. It will be characterised by even bigger, employment-intensive, non-traded personal services sectors like social care, with low levels of union membership, roles that are, in the UK, designed to be low paid.

When combined, these factors explain why the UK has settled into an unsatisfactory equilibrium in which the overall distribution of wages is skewed towards the top and a very large number of UK firms operate business models based on low pay and weak investment in skills. Looking forward, a key test will be the UK's ability to equip workers without degrees better so that they can compete in the modern jobs market. This will require widespread

improvements to intermediate skills and more specific support to combat the skills dimension of low wage work.

More ambitiously it will require new and stronger institutions that can fill the gap between the National Minimum Wage and the majority of low-paid workers. Notably, the two other countries that come close to the UK's level of decline in collective bargaining coverage – Australia and New Zealand – have developed institutional responses to do just this. In New Zealand, this has been done through the National Minimum Wage itself, which was raised gradually over 10 years from 48 per cent of the median wage in 1999 to 59 per cent in 2009 (compared with 46 per cent in the UK). Australia, meanwhile, operates a system of sectoral minimum wages backed by “good faith bargaining” obligations.^[54]

The eroding link from productivity to pay – and particularly to pay in the bottom half – helps us to understand one of the key reasons that the link from growth to living standards has weakened. But hourly wages only tell us one half of the story. We turn to the second half next: changes in the distribution of employment.

[52] On the basis of 2011 levels. This would be a very large increase compared with the current National Minimum Wage; 18 per cent in the case of the National Living Wage and 37 per cent in the case of the higher London Living Wage [53] Ibid. [54] These figures are internationally comparable and differ from the more often quoted UK figure of 52 per cent because they include only full-time workers.