

**Government evidence to  
the Low Pay Commission  
on the economic effects of  
the National Minimum  
Wage**

JANUARY 2010

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# Executive summary

The Government welcomes this opportunity to present the Low Pay Commission (LPC) with economic evidence on the National Minimum Wage (NMW) in the LPC's thirteenth year of operation. This document forms the second half of the Government's annual submission, covering the economic effects of the NMW. It should be read in conjunction with the previous Government submission on the non-economic evidence.<sup>1</sup>

It is widely agreed that the NMW has been successful since its introduction in 1999 and is now firmly established as a key element of UK labour market policy. The NMW sets a floor for wages in the labour market and the Government closely monitors the evidence of its labour market and wider economy impacts. The main findings of the Government's assessment on the economic evidence are set out below.

## Macroeconomic conditions and outlook

In the period from the introduction of the NMW in 1999 to 2007, the UK labour market performed strongly, with the level of employment increasing by around 2.4 million.

The global financial crisis and subsequent downturn in the wider economy has inevitably impacted on economic activity and employment levels. In the UK, these shocks struck after a prolonged period of strong and stable growth in output and employment, underpinned by low inflation. The combined effect has been to push the UK economy into recession. GDP has now fallen in six successive quarters and over the last two years employment has fallen by over half a million. However, the falls in employment have been smaller than in the 1990s recession. The labour market has reacted flexibly and shown resilience, reflecting the effectiveness of labour market policies.

In addition to the underlying strength of the economy and the labour market, swift action has prevented the outcome of these events from being far worse. A substantial fiscal and monetary stimulus has supported the economy, while targeted short-term assistance has helped business, workers and home owners cope with the recession.

Looking ahead in the near term as the economy recovers, there remains significant uncertainty over the labour market outlook. Although, the latest statistics suggest that employment and unemployment may have stabilised, vacancy levels remain low and unit wage costs have been rising. Private business surveys of employment intentions – such as those produced by Manpower and the British Chambers of Commerce – suggest that employers are likely to remain tentative in the near term and so there is a risk that employment growth may be relatively slow. However, over the medium-term, the 2009 Pre-Budget Report expects economic activity to pick up progressively through 2010 and 2011.

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<sup>1</sup> <http://www.berr.gov.uk/files/file53073.pdf>

## **Evidence on pay**

Average earnings have consistently risen faster than prices since 1999 and the NMW has increased faster than average earnings. In real terms the value of the adult NMW has risen by a third when deflated by consumer prices, and by around a quarter when deflated by retail prices.

Over the last year the adult NMW has increased in nominal terms by around 1.2 per cent. As prices have been falling, this represents a real rise of 2.0 per cent, when deflated by retail prices, but a real fall of 0.3 per cent when deflated by consumer prices.

The NMW as a percentage of the median wage – known as the ‘bite’ – is now around 50.8 per cent, an increase of around five percentage points since 1999. The bite is higher for small firms (59 per cent) and the low-paying sectors (ranging from 64 per cent to 88 per cent). As the NMW has risen, an increasing proportion of the working population are earning wages near the statutory minimum.

## **Impact of the NMW on the labour market**

UK academic research to date has not found evidence that the adult NMW has had a significant adverse effect on employment. There has been a slight decline in the share of UK employment in low-paying sectors since 1999 but there is no evidence that this is the result of the NMW and the trend actually predates its introduction. In addition, there is also no evidence that the NMW has hindered low paying sectors in coping with the economic downturn. Jobs have fallen by less in the low paying sectors than in the economy as a whole.

Although it seems that the labour market may be stabilising, there currently remains a lot of uncertainty. Looking forward, GDP growth is expected to return by the end of the year and to pick up through 2010 and 2011. While employment in the low-paying sectors may have been hit less hard than other sectors by the recession, they have still seen a significant fall in jobs over the last year. What is more, past experience suggests that employment in the low-paying sectors may also benefit less from an economic recovery than other sectors. Given the current uncertainty, and the increasing bite and coverage of the NMW, it is even more important that all the available evidence is considered alongside the wider economic and labour market impacts when setting the National Minimum Wage rates.

## **Developments in the labour market for younger workers**

The labour market has proved challenging for some younger workers, with a longer-term downward trend in the employment rates of 16-17 year olds who are not in full time education. They have also been hit by the economic downturn, with significant declines in the employment rates of 16 to 17 year old and 18 to 21 year olds over the last year. In addition, the labour market prospects of those with no qualifications have also been harder hit than their more qualified counterparts. However, although there is uncertainty around the labour market outlook, when the economy recovers it is likely that all age groups will see improvements.

## Other issues

The Government is committed to moving **21 year olds** onto the adult rate in October 2010. Our initial estimate is that around 46,000 21 year olds stand to benefit from this change.

From 1 October 2009, **tips** can no longer be used to count towards the NMW. This change mainly affects the hospitality and gambling sectors. There will be increased labour costs for some firms but not all firms will be affected. Employers who did not use tips to make up basic NMW pay before 1 October 2009 will be unaffected.

The Government is committed to establishing **apprenticeships** as a key route to building the national skills base, working with employers to help young people and adults get the skills and qualifications valued by employers.

There are important supply and demand side issues that need consideration when setting an apprenticeship minimum wage. In order to encourage supply to apprenticeship schemes, an apprentice minimum wage needs to be set at a level which provides appropriate incentives for individuals to participate in schemes. However, a too high apprentice minimum wage will lead to higher wage costs for employers and this could dissuade employers from providing schemes. Our main concern in the establishment of an apprentice minimum wage is in respect of young people because of their vulnerable labour market position.

# 1. Macroeconomic conditions and outlook

In the period from the introduction of the NMW in 1999 to 2007, the UK labour market has performed strongly, with the level of employment increasing by around 2.4 million.

The global financial crisis and subsequent downturn in the wider economy has inevitably impacted on economic activity and employment levels. In the UK, these shocks struck after a prolonged period of strong and stable growth in output and employment, underpinned by low inflation. The combined effect has been to push the UK economy into recession. GDP has now fallen in six successive quarters and over the last two years employment has fallen by over half a million. However, the falls in employment have been smaller than in the 1990s recession. The labour market has reacted flexibly and shown resilience, reflecting the effectiveness of labour market policies.

In addition to the underlying strength of the economy and the labour market, swift action has prevented the outcome of these events from being far worse. A substantial fiscal and monetary stimulus has supported the economy, while targeted short-term assistance has helped business, workers and home owners cope with the recession.

Looking ahead in the near term as the economy recovers, there remains significant uncertainty over the labour market outlook. Although the latest statistics suggest that employment and unemployment may have stabilised vacancy levels remain low and unit wage costs have been rising. Private business surveys of employment intentions – such as those produced by Manpower and the British Chambers of Commerce – suggest that employers are likely to remain tentative in the near term and so there is a risk that employment growth may be relatively slow. However, over the medium-term, 2009 Pre-Budget Report expects economic activity to pick up progressively through 2010 and 2011.

The Government's latest published assessment of the outlook for the UK economy was made as part of the 2009 Pre-Budget Report.<sup>2</sup>

## **Economic growth**

The world economy has faced exceptional challenges since mid-2007, with the financial crisis of 2008 precipitating a steep and synchronised global downturn. The intensification of financial market stress into the worst global financial crisis for generations delivered a severe blow to an already weakened world economy, as rising commodity prices squeezed household real incomes and company profit margins. These combined factors pushed many advanced economies into recession and led a growing number of

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<sup>2</sup>[http://www.hm-treasury.gov.uk/prebud\\_pbr09\\_index.htm](http://www.hm-treasury.gov.uk/prebud_pbr09_index.htm).

emerging economies to require financial support from the IMF and other sources.

These shocks struck the UK after a prolonged period of strong and stable growth in output and employment, underpinned by low inflation. GDP grew by 2.6 per cent in 2007 and employment reached a record high of more than 29.5 million in early 2008. Reflecting the impact of the major shocks it has faced, the economy slowed progressively as credit conditions tightened. The UK entered recession in the second quarter of 2008, as quarterly GDP fell by 0.1 per cent. This was the first fall in output since 1992, with negative growth across most sectors of the economy. GDP has now fallen in six successive quarters, the longest sequence of negative quarterly growth since quarterly records began in 1955, and by a cumulative 5.8 per cent.

Faced with these exceptional challenges, governments around the world have utilised all available policy levers to support their economies. In the face of a steep and synchronised global downturn, the UK Government has put in place a comprehensive and coherent package of targeted support to continue to help households and businesses through the downturn. These measures, together with the significant monetary stimulus already in place should support a strong and sustainable recovery.

## **Outlook**

The 2009 Pre-Budget Report economic forecast is for GDP to contract by 4.75 per cent over the year in 2009, larger than the 3.5 per cent forecast at Budget 2009. However, given signs of stabilisation in recent economic data, growth is expected to return by the end of the year, in line with the Budget forecast. GDP growth is forecast to pick up through 2010 and 2011, as credit conditions continue to ease and the continuing and lagged effects of the significant monetary policy support and the depreciation of sterling take hold. In line with the Budget 2009 forecast, GDP growth is expected to return by the end of the year, before picking up through 2010 (1 to 1.5 per cent) and 2011 (3.25 to 3.75 per cent).

This recovery will be underpinned by a rebalancing of demand in the UK economy, with increased saving by households, increased investment by companies as they respond to new opportunities, and a rebalancing of domestic and external demand. There is also some indication that advanced economies are beginning to emerge from recession, with Germany, France and Japan all posting positive growth in the second and third quarter of 2009, and with even stronger performance amongst a number of emerging economies. The recovery of world growth will support a rebalancing of growth in the UK.

While some of the more severe downside risks to the economy have been averted, economic forecasts remain subject to exceptional uncertainties across a broad range of factors, in particular: the size and timing of the impact of the financial shock on trend output; the pace and balance of the global recovery; the availability of sufficient credit to support recovery; and the speed and extent of private sector deleveraging.

Reflecting this uncertainty, the UK GDP estimate of a 0.4 per cent contraction in the third quarter contrasted with private sector forecasts of positive growth

in output on the quarter. ONS have subsequently revised the September quarter upwards to a contraction of 0.3 per cent. However, independent forecasters expect a return to growth in 2010. And the GDP forecasts for 2011 (based on a smaller group of forecasters) are all higher in 2011 than in 2010. The average of independent forecasters as compiled by HM Treasury is shown in Table 1.1 and those by Consensus Economics are shown in Chart 1.1.

**Table 1.1: Independent forecasts of UK economic outlook**

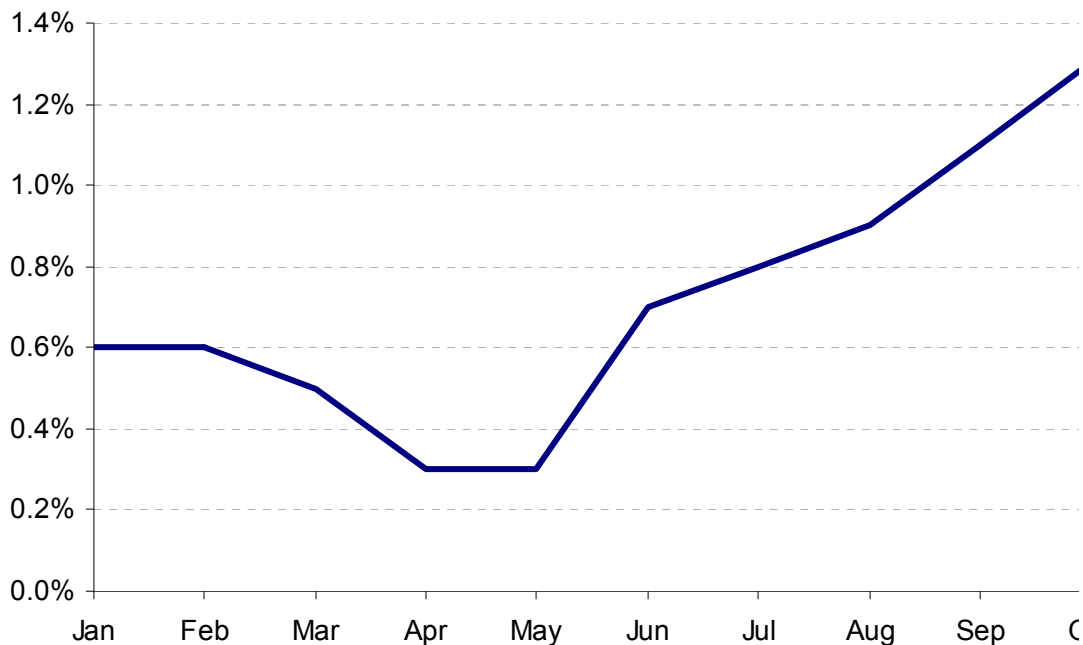
	2007 Actual	2008 Actual	2009 Forecast	2010 Forecast
GDP (%)	2.6	0.6	-4.5	1.3
Consumer spending (%)	2.1	1.0	-3.0	0.2
Claimant unemployment (Q4:million)	0.8	1.2	1.7	1.9
Average earnings (%)	3.8	3.6	1.4	2.3

Source: Office for National Statistics; HMT December 2009 survey of independent forecasters  
GDP, consumer spending and average earnings (including bonuses) are annual average per cent growth; unemployment is claimant count.

While forecasts for 2009 were revised down progressively, Chart 1.1 shows that the average GDP forecast for 2010 has continued to improve over the year.

**Chart 1.1: Consensus forecasts for 2010 GDP growth**

Annual percentage change



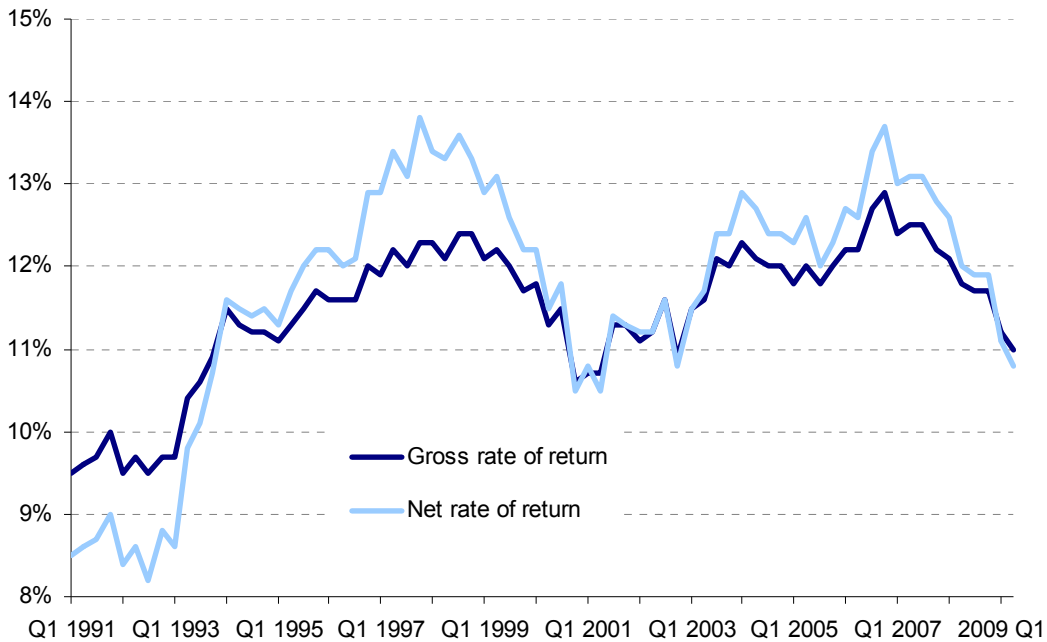
Source: Consensus Economics

## UK company profitability

Before the economic downturn, business had generally enjoyed a long period of increasing profitability, with the exception of a dip caused by the dotcom crash at the start of the century. Profitability began to fall from the latter part of 2007 and continued its downward trend in the first half of 2009 (see Chart 1.2).

**Chart 1.2: UK company profitability\***

Per cent return



Source: Office for National Statistics

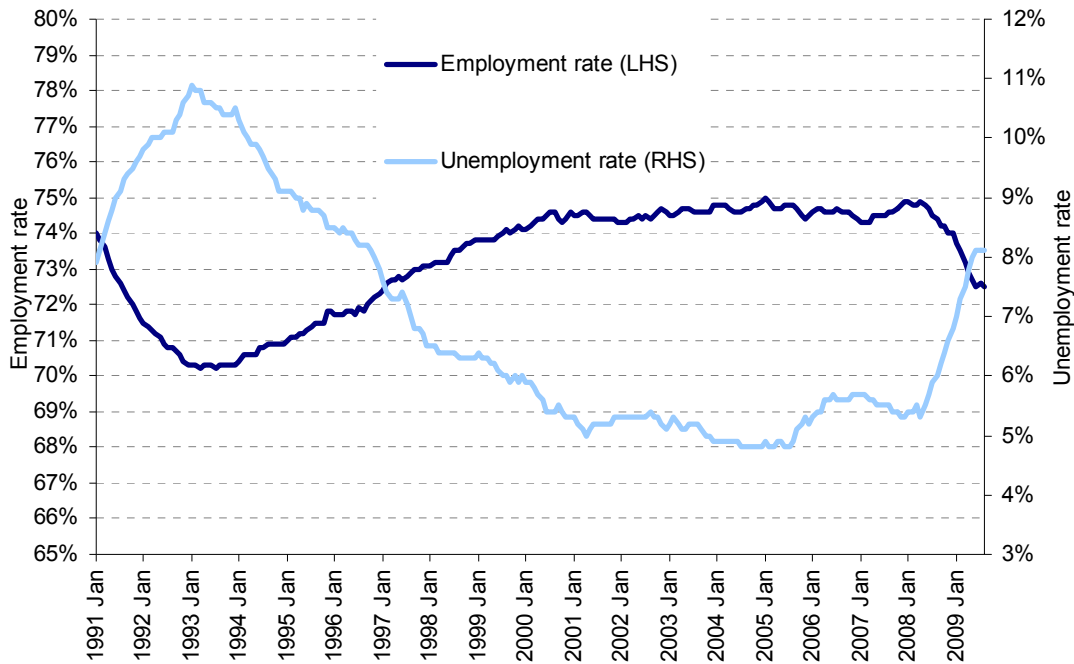
\*UK Private Non-Financial Corporations, excluding Continental Shelf Non-Financial Corporations.

## The labour market

Since the introduction of the NMW in 1999 the UK labour market has fared well, with the level of employment increasing by around 2.4 million in the nine years to the end of 2007. Over the same period the employment rate has touched historic highs and the unemployment rate historic lows.

The labour market has not been immune to the economic downturn. The slowdown in economic growth has caused employment to fall from its peak of 29.56 million in the three months to May 2008 to 28.93 million in September 2009. The employment rate has fallen by more than two percentage points from its peak in early 2008. The unemployment rate was 7.8 per cent in the three months to September 2009, up 2.0 percentage points from a year earlier (see Chart 1.3).

**Chart 1.3: UK labour market**



Source: Office for National Statistics, Monthly data, Labour Market Statistics. Employment rate is a proportion of working age. Unemployment rate is a proportion of all aged 16 and over.

Recent labour market outturns need to be kept in context. The performance of the UK labour market has actually been relatively robust given the scale of the economic downturn. It has also performed much better than expected by independent forecasters when the 2008 version of this report was prepared. Falls in employment have been relatively modest compared to the 1990s recession, even though the fall in GDP has been much greater this time. Falls in employment and GDP have so far been similar to the 1980s recession but employment continued to fall substantially in the 1980s after output began to recover. However, it should be noted that there remains considerable uncertainty as this recession has not yet ended, the sectoral composition of the UK economy differs across recessions and there are uncertainties as to whether firms will shed labour in the future. For these reasons a certain degree of caution is needed when drawing conclusions about labour market prospects.

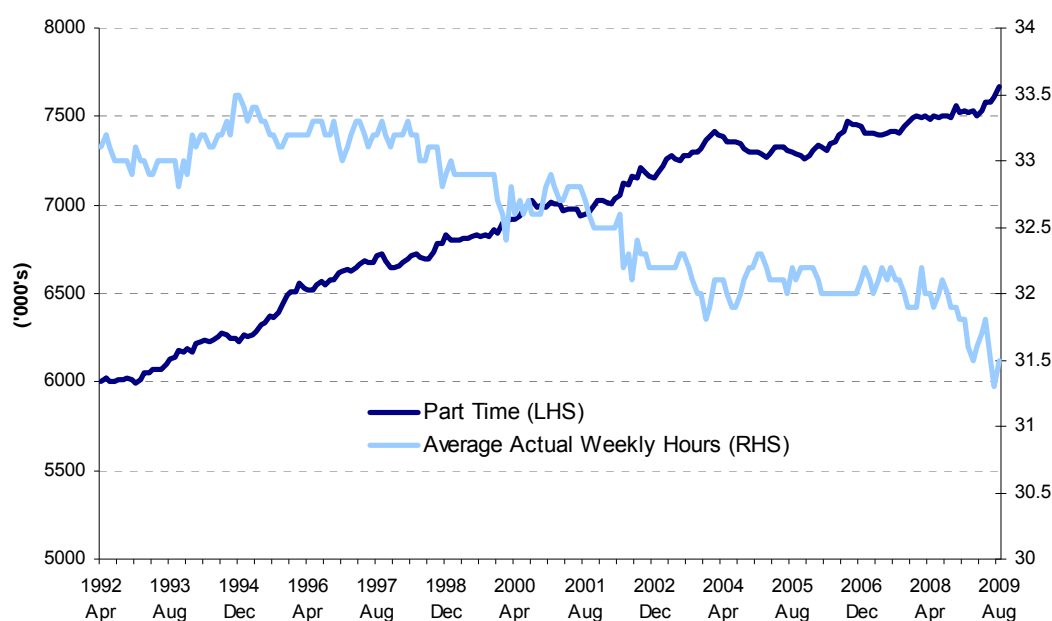
One reason why employment has not fallen as much as output is that the diversity and dynamism of the UK labour market has allowed firms and individuals to adjust to the recession in a number of ways. Whilst there has been some degree of reduction in hours and nominal wage moderation to avoid redundancies, there is some evidence to suggest that the UK's liberal regulatory regime, and factors such as welfare to work policies, have contributed more towards retention of employment. Large claimant count outflows reflect the high levels of dynamism in the UK labour market.

Chart 1.4 highlights that average weekly hours have been falling substantially over the course of the current recession (from 32.2 hours in the first quarter of 2008 to 31.5 hours in the third quarter of 2009). About two-thirds of this fall reflects a decline in average hours for both part-time and full-time workers.

The remaining part appears to be due to changes in the composition of employment as job losses have been disproportionately concentrated amongst full-time workers and the proportion of part-time workers has risen strongly (by 1.1 percentage point to 26.5 per cent). A large chunk of this increase in part-time work reflects those who have taken it as a second choice to a full-time role but in preference to unemployment. This has been reflected in a sharp increase in the number of part-timers who say they would prefer to be working full time. While this 'under-employment' is not ideal, it is preferable to people becoming disengaged with the labour market. These types of flexible strategies may be limiting the extent of redundancies and enabling people to remain in employment.

**Chart 1.4: Part-time working and hours worked**

LHS = Thousands of part-time workers, RHS = Average actual weekly hours worked



Source: Office for National Statistics, Monthly data, Labour Market Statistics

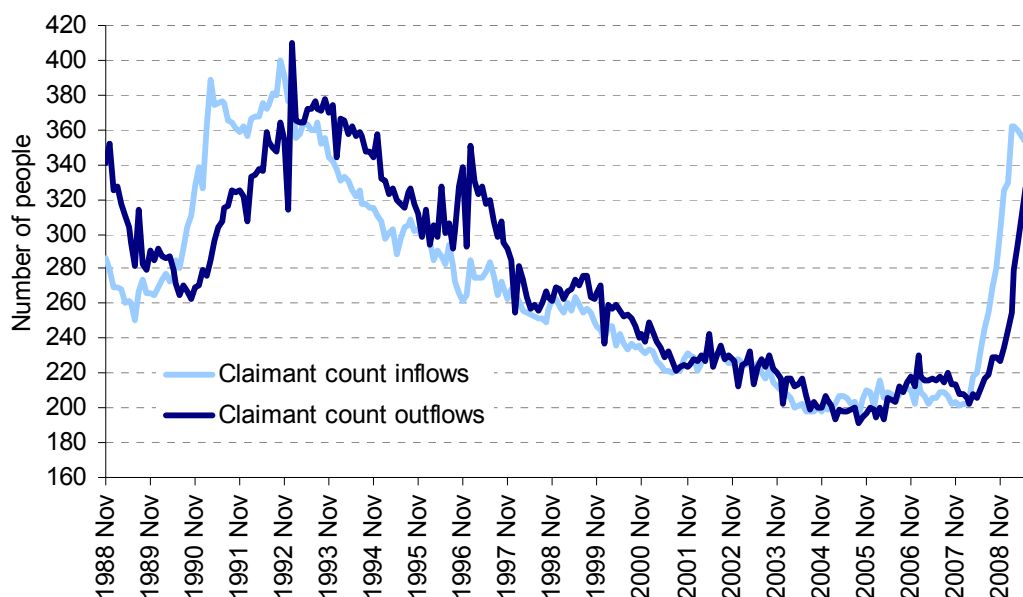
In the context of the sharp falls in employment and rising unemployment seen through the first half of 2009, the third quarter of 2009 looks relatively positive. While unemployment continues to rise, recent increases in both International Labour Organisation (ILO) and claimant unemployment are now significantly smaller than seen earlier in the year (see Chart 1.5). There are also signs from the most recent data on claimant unemployment that claimant count figures are already beginning to stabilise. The claimant count increases have fallen for eight out of the last nine months and the last monthly increase was slightly less than 13,000.

While independent forecasters expect the claimant count to continue to rise in 2010, the increase is expected to be significantly less than in the two previous years (see Table 1.1). The 2009 Pre-Budget Report projects the claimant count to continue to rise, peaking around the middle of 2010. The claimant count is then projected to fall back by the end of 2012.

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**Chart 1.5 Standardised Inflows and outflows of claimant unemployment**

Thousands



Source: Office for National Statistics, Labour Market Statistics, Monthly data

Looking ahead in the near term as the economy recovers, there remains significant risks to the labour market outlook. Although there are signs in the latest statistics that employment and unemployment have stabilised vacancy levels remain low and unit wage costs have been rising. Private business surveys of employment intentions – such as those produced by Manpower and the British Chambers of Commerce – suggest that employers are likely to remain tentative in the near term. Given this uncertainty there remains a risk that employment growth may be slow to pick up in the recovery.

### Average earnings and pay settlements

Average earnings growth remained relatively steady through the first half of 2008, close to the rates recorded in 2007 on most measures (see Table 1.2). However, private sector earnings growth (excluding bonus payments) has eased substantially over the past five quarters and now stands at a record low.

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**Table 1.2 Growth in various wage measures**

Annual per cent change, September quarter

	2007	2008	2009
Average earnings (incl. bonuses) - all sectors	4.2	3.4	1.2
Average earnings (incl. bonuses) - private sector	4.4	3.2	0.8
Average earnings (incl. bonuses) - public sector	3.0	3.9	2.8
Average weekly earnings (experimental)	5.0	3.1	0.4
Average weekly earnings (LFS)			

Sources:

AEI &amp; Average Weekly Earnings (Experimental) – Office for National Statistics, Monthly Wages and Salaries Survey.

(Note: The AWE is an experimental series published on the web one week after the AEI. Both the AEI and AWE use the same data source, the Monthly Wages and Salaries Survey. The AEI is a measure of the growth in average earnings, derived by calculating the growth in the weighted average pay for businesses responding to the survey in successive months (the 'matched' sample). The AWE, on the other hand, is a measure of the level of average earnings, derived by separately weighting the earnings and employment data for the sampled businesses in each month and then calculating the ratio. The growth in AWE can be calculated and compared with the growth in AEI.)

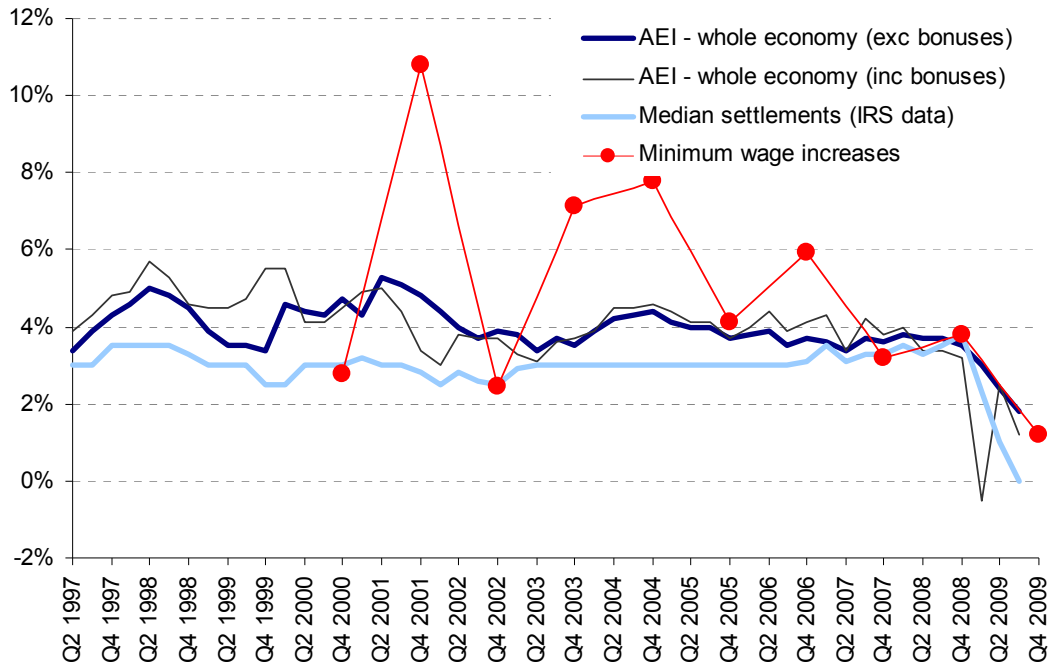
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While initially the greatest fall in earnings growth was through bonuses, as bonuses in the financial sector were scaled back, growth in the whole economy annual average earnings excluding bonuses has also now fallen significantly. This slow down has been driven by a combination of weaker settlements (around one third of total settlements resulted in a pay freezes this year, in contrast to around 2 per cent of zero settlements on average from 1994 to 2008) and negative pay drift (irregular component of pay growth such as overtime and commission related payments). Growth of 1.8 per cent in the three months to September represented the lowest growth on record since the current series began in 1997. The earnings growth excluding bonuses in the private and public sectors was 1.5 and 2.8 per cent respectively.

This relatively low nominal earnings growth may have helped to mitigate employment losses in the economic downturn. However, earnings growth is still higher than the current rate of inflation (as measured by the Consumer Price Index (CPI)). Real wages increased by 3.6 per cent in the year to the third quarter of 2009 (whole economy Average Earnings Index (AEI) including bonuses deflated by the tax and prices index). This follows a period of sluggish real wage growth from the start of 2007 to late 2008 and is well above the average rate of real wage growth (1.8 per cent from 1988 to 2008), although it has declined from the high level seen in the year to the second quarter of 2009 (4.8 per cent). This suggests living standards are still improving for those in work.

Chart 1.6 also plots annual NMW increases; the largest percentage rise in the NMW was in October 2001. The October 2008 increase (3.8 per cent) was similar to average earnings and median pay settlements.

**Chart 1.6: Average annual earnings growth, pay settlements and NMW increases**



Source: Office for National Statistics, Average Earnings Index (excluding bonuses); Median settlement (IRS data)

## 2. Evidence on pay

Average earnings have consistently risen faster than prices since 1999 and the NMW has increased faster than average earnings. In real terms the value of the adult NMW has risen by a third when deflated by consumer prices, and by around a quarter when deflated by retail prices.

Over the last year the adult NMW has increased in nominal terms by around 1.2 per cent. As prices have been falling, this represents a real rise of 2.0 per cent, when deflated by retail prices, but a real fall of 0.3 per cent when deflated by consumer prices.

The NMW as a percentage of the median wage – known as the ‘bite’ - is now around 50.8 per cent, an increase of around five percentage points since 1999. The bite is higher for small firms (59 per cent) and the low-paying sectors (ranging from 64 per cent to 88 per cent). As the NMW has risen, an increasing proportion of the working population are earning wages near the statutory minimum.

### Growth in the NMW

The NMW has increased substantially faster than both average earnings and prices, especially since 2001. Since it was introduced in April 1999 the adult NMW has risen by around 61 per cent. In comparison, the AEI (including bonuses) has risen by only around 47 per cent (see Chart 2.1) between April 1999 and the end of September 2009. The Retail Price Index (RPI) has increased by around 31 per cent, and the CPI rose by around 21 per cent both between April 1999 and October 2009.

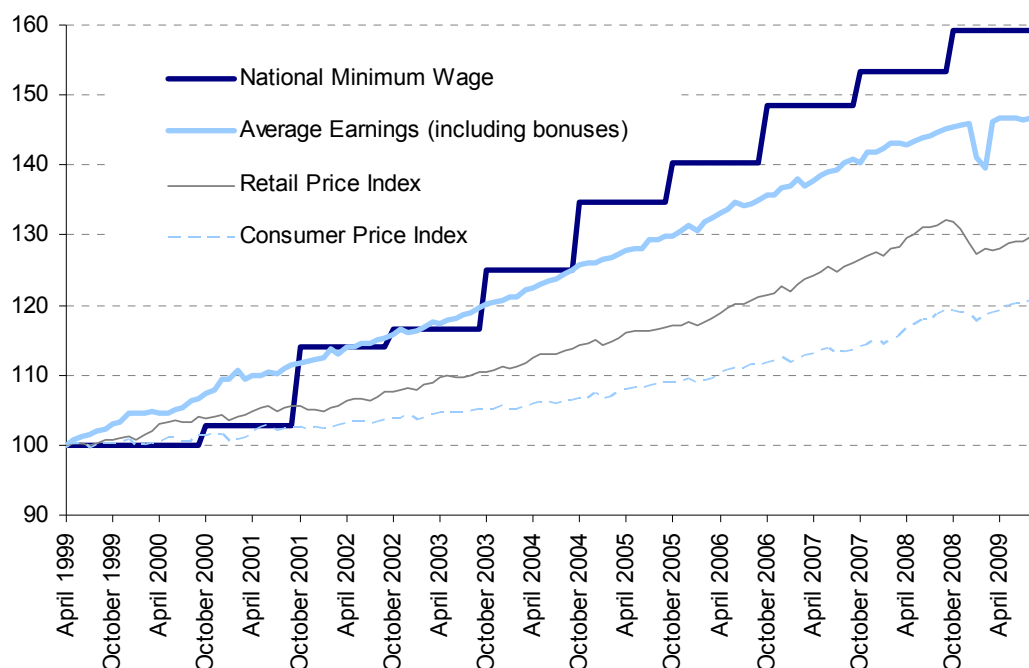
However, the October 2009 NMW rise of 1.2 per cent was in line with the latest annual earnings growth of around 1.4 per cent.<sup>3</sup> Chart 2.1 shows that average earnings (including bonuses) fell sharply at the beginning of 2009 largely due to falls in bonuses in the finance sector.

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<sup>3</sup> This is Average Earnings Index growth, including bonuses – three months to September 2009 compared to the three months to September 2008 (series LNNC).

**Chart 2.1: Adult NMW increases compared to earnings growth and inflation**

Index Rebased to April 1999 = 100

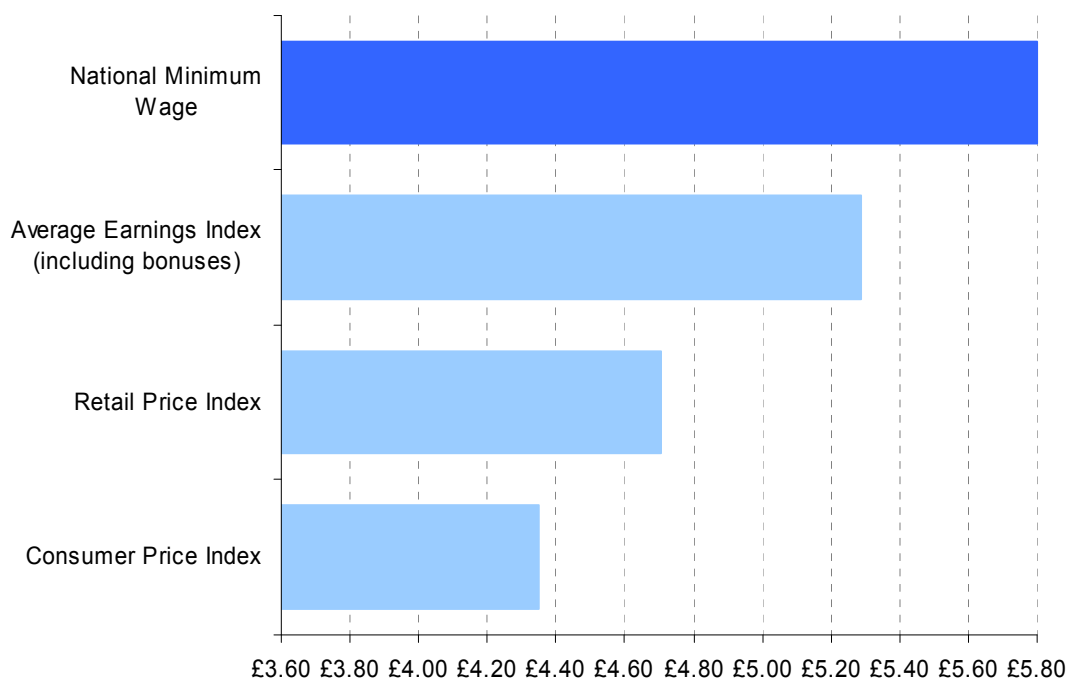


Source: Office for National Statistics; Retail Price Index, Consumer Price Index and Average Earnings Index. Low Pay Commission; National Minimum Wage

Since the introduction of the NMW in April 1999 the adult rate has increased in real terms by 33 per cent, 23 per cent, and 10 per cent when deflated by consumer prices, retail prices and average earnings respectively. Over the last year, the adult NMW has increased in nominal terms by around 1.2 per cent (October 2008 to October 2009). This represents a real rise of 2.0 per cent, when deflated by retail prices, a real fall of -0.3 per cent when deflated by consumer prices (October 2008 to October 2009) and almost no real change (0.1 per cent) when deflated by average earnings (October 2008 to September 2009).

Another way of looking at NMW growth is to compare the actual NMW with what it would have been if it grew in line with average earnings or prices. The adult NMW was increased to £5.80 in October 2009. If the initial rate of £3.60 had instead been indexed to average earnings, the October 2009 rate would have been £5.29. If it had been indexed to the RPI it would have been £4.71 and if indexed to the CPI it would have been £4.35 (see Chart 2.2). However, reflecting a cautious approach, the NMW was initially set at a relatively low level and therefore increases above inflation and average earnings may have been expected in its early years.

**Chart 2.2: Adult NMW indexed to earnings growth and inflation\***



Source: BIS estimates; Office for National Statistics \*AEI Index as at end of September 2009, RPI and CPI Index as at end of October 2009. Adult NMW rate as at October 2009.

### **The bite of the NMW**

The NMW as a proportion of median earnings is often termed the 'bite' and is a measure of how high up the earnings distribution the NMW cuts in. Usually median earnings are the preferred measure of average earnings, as this is less sensitive to changes among very high earners. Since its introduction the bite of the adult NMW has increased from 45.6 per cent of the median wage to 50.8 per cent in April 2009 (see Chart 2.3).

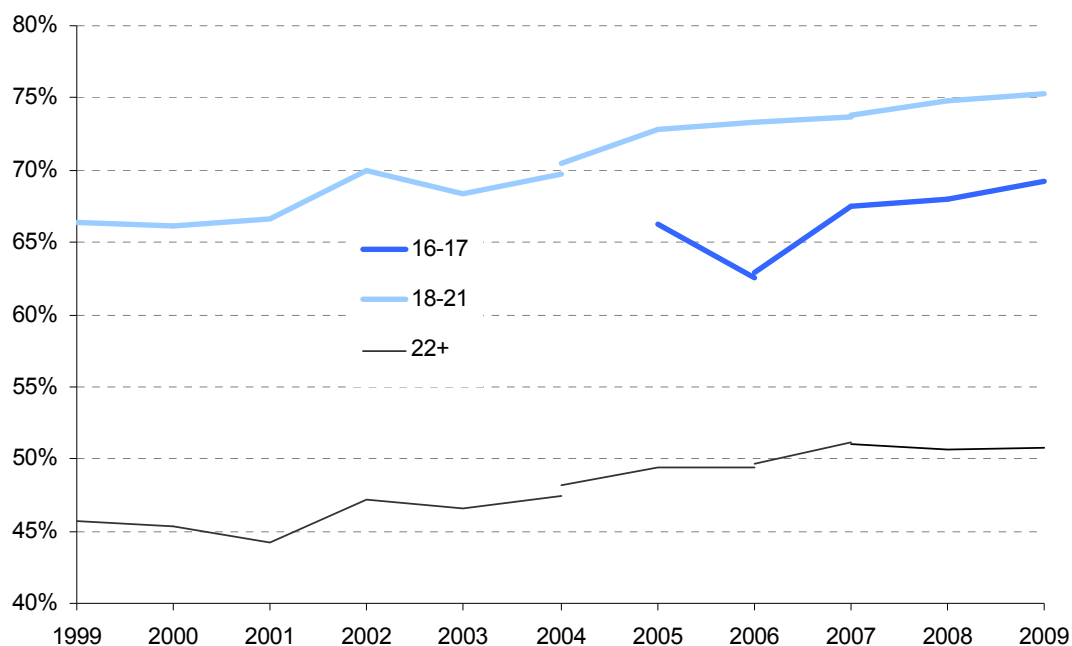
Therefore, the bite has increased by around 5 percentage points since the NMW was introduced in 1999. However, it remained broadly stable between April 2008 and 2009, as the October 2008 NMW increase (3.8 per cent) was broadly in line with average earnings growth in 2008. This bite estimate does not include the October 2009 uprating in the NMW, as we do not yet have median earnings data for this period. However, as the October 2009 NMW increase (1.2 per cent) is actually a bit weaker than average earnings growth in 2009, the bite is likely to continue to be broadly stable between 2008 and 2009.

However, the rate for 18-21 year olds has continued to increase, exceeding 75 per cent of the median in 2009. There was a big jump in the 16-17 year old bite due to the uprating to £3.30 in October 2006. Their bite increased from 63 per cent in spring 2006 to around 68 per cent in spring 2007 and 2008. It has increased again in 2009 to over 69 per cent, reflecting the increase in their rate from £3.40 to £3.53 over this period.

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**Chart 2.3: The bite of the NMW**

Minimum wage as a per cent of median earnings



Source: Office for National Statistics, Annual Survey of Hours and Earnings

1999-2004 ASHE data - excluding supplementary information

2004-2006 ASHE data - old methodology

2006-2009 ASHE data - new methodology

See Annex E for further information on the changes to ASHE data.

**The NMW and low paid sectors**

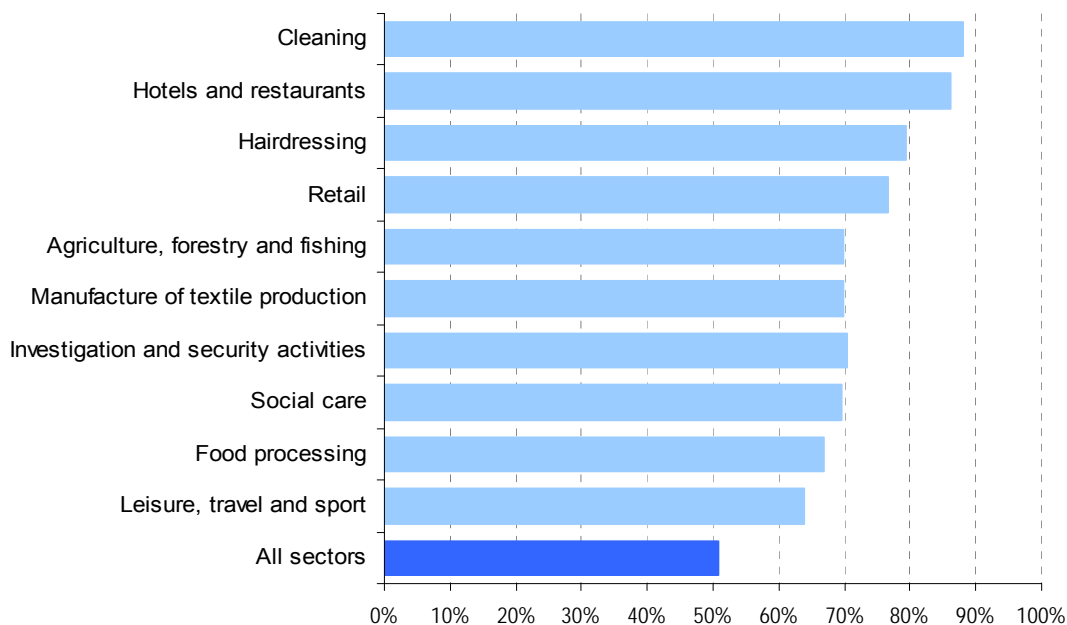
The NMW is more likely to impact on employment in those sectors that are more reliant on low-wage workers. The LPC defines a number of sectors as being 'low-paid', which employ large numbers of people earning near the NMW.<sup>4</sup> The adult bite is much higher in these sectors, with an unweighted average bite of around 74 per cent. The bite ranges from 64 per cent of the median in leisure, travel and sport to 88 per cent in cleaning (see Chart 2.4). In addition, some of the largest low-paid sectors such as retail trade and hotels and restaurants, have some of the biggest bites at 77 per cent and 86 per cent respectively.

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<sup>4</sup> Defined as hotels and restaurants; cleaning; hairdressing; retail; agriculture, forestry and fishing; investigation and security activities; manufacture of textile products; food processing; social care; leisure; and travel and sport.

### Chart 2.4: The bite of the NMW in low-paid sectors

Adult minimum wage as per cent of median wage, 2009



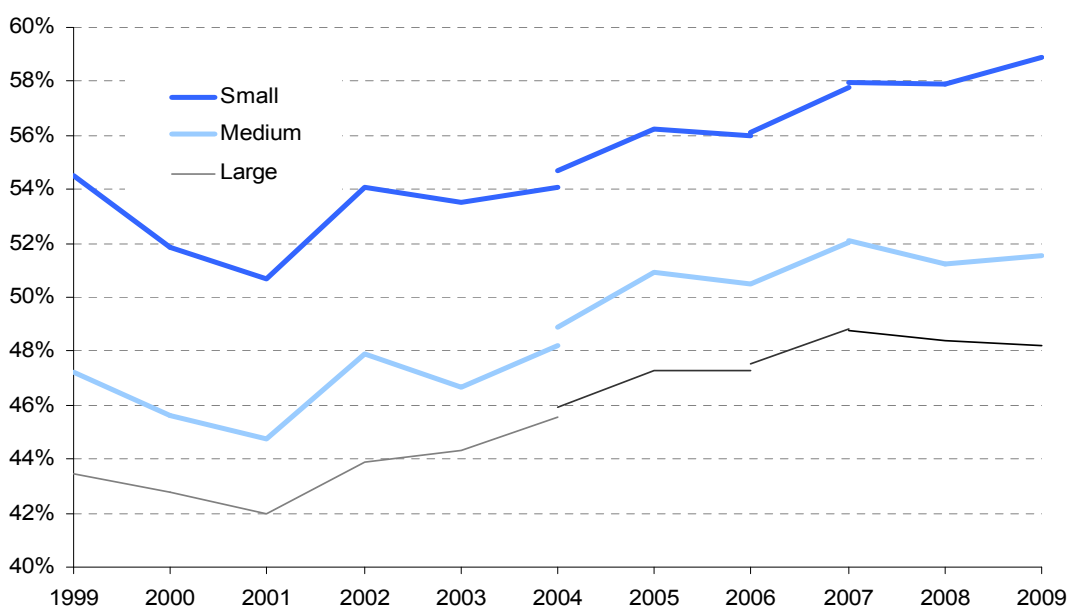
Source: Office for National Statistics, Annual Survey of Hours and Earnings  
Those aged 22+.

### The bite for small firms

Chart 2.5 highlights that the NMW as a per cent of the median wage tends to be higher for smaller firms than for medium and larger firms.

### Chart 2.5: The bite of the NMW by organisation size\*

Adult minimum wage as per cent of median wage



Source: Office for National Statistics, Annual Survey of Hours and Earnings  
1999-2004 ASHE data - excluding supplementary information

2004-2006 ASHE - old methodology  
 2006-2009 ASHE - new methodology  
 \*Small organisations are defined as 1 to 49 employees, medium as 50-249 employees and large is 250 + employees.  
 See Annex E for further information on the changes to ASHE data.  
 Those aged 22+.

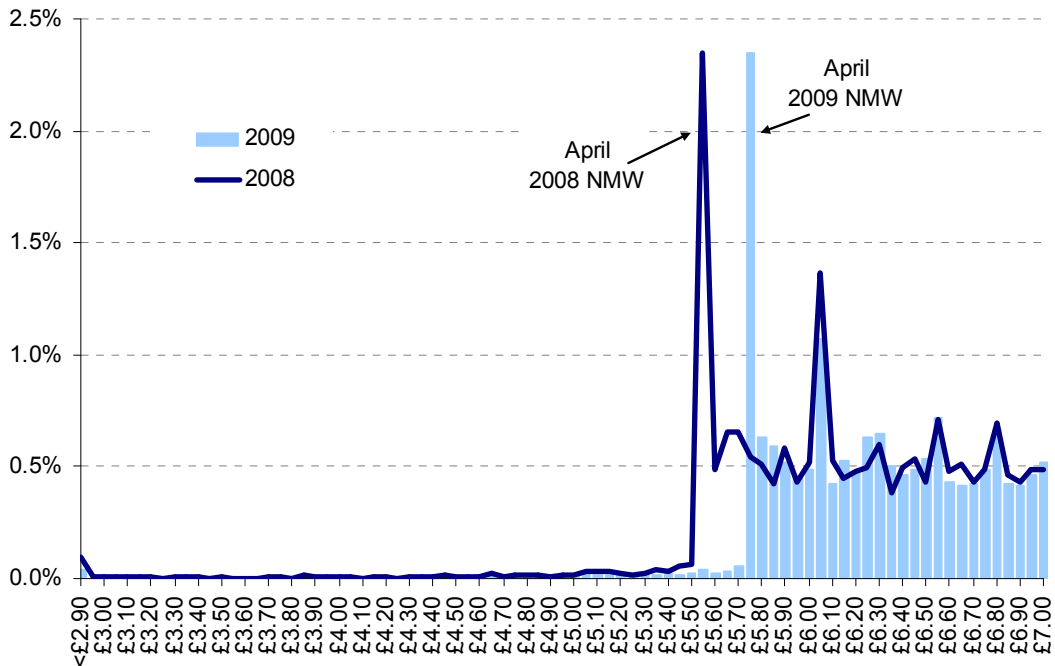
The bite for smaller firms was around 59 per cent in 2009, compared to around 52 per cent for medium-sized firms and 48 per cent for larger firms. This highlights that the NMW is having a greater impact on the costs and profitability of smaller firms.

### Proportion of employees earning the NMW

Chart 2.6 shows the proportion of adult jobs at different points across the hourly pay scale in 2008 and 2009. It highlights a jump in the distribution of adult hourly pay at the point where the NMW cuts in. In particular, the uprating of the adult rate from £5.52 to £5.73 in October 2008 resulted in this spike moving from the old rate to the new higher rate between April 2008 and 2009.

**Chart 2.6: Adult low-pay distribution, April 2009**

Per cent of adult jobs (22 years or older)



Source: Office for National Statistics, Annual Survey of Hours and Earnings

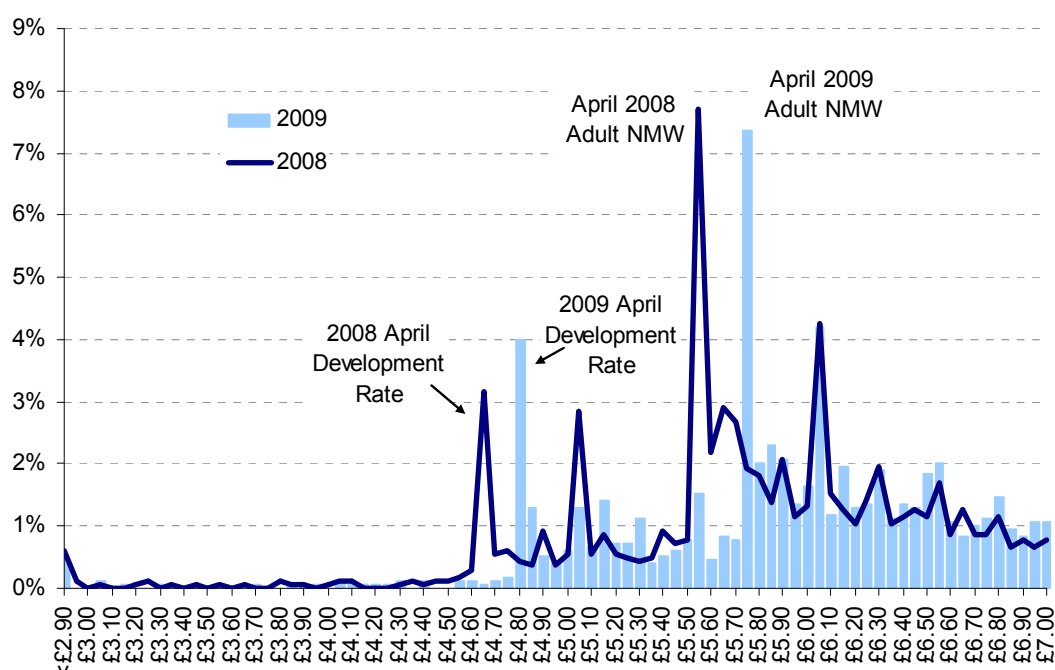
The proportion of jobs paying the NMW remained unchanged between 2008 and 2009. The number of jobs earning the NMW was around 2.4 per cent in 2008 and 2.3 per cent in 2009. The proportion of jobs affected by the NMW stayed broadly constant across the two years, as the NMW grew broadly in line with average earnings.

A similar effect can be seen for the Development Rate, paid to 18–21 year olds. Chart 2.7 shows a spike in the distribution of hourly pay around the Development Rate of £4.77 which prevailed in April 2009.

There has been a rise in the number of employees who earn the Development NMW (from 3.2 per cent in 2008 to 4.0 per cent in 2009). Chart 2.7 also shows a significant proportion of 18-21 year olds who were being paid at the adult NMW rate in 2009 (7.4 per cent in 2009 compared to 7.7 per cent in 2008). In total, almost 79.1 per cent of employee jobs for those aged 18-21 were paid at or above the adult NMW in 2009.

**Chart 2.7: 18-21 year old low-pay distribution, April 2009**

Per cent of 18-21 year old jobs



Source: Office for National Statistics, Annual Survey of Hours and Earnings

### The numbers of jobs paying less than NMW rates

It is of critical importance to the Government that everyone entitled to the NMW actually receives their entitlement. The Government has introduced new penalties for all employers who underpay the NMW and a fairer system of paying arrears under the Employment Act 2008. These new measures came into force on the 6 April 2009.

However, there are some workers who are paid below NMW rates for reasons other than non-compliance. There are a number of circumstances where the NMW does not apply and so individuals may legitimately earn less than the appropriate NMW rate for their age. For example, employees may not be receiving the NMW in cash terms because employers can legitimately reduce rates to take into account the cost of accommodation provided, for which

there is a standard level of deduction. Individuals may also be on Government training programmes or apprenticeships, where they are exempt from the NMW if they are in the first year of their apprenticeship.

According to the latest Office for National Statistics (ONS) estimates of low pay based on data from the new Annual Survey of Hours and Earnings (ASHE) in spring 2009, there were 242,000 jobs held by people aged 16 or over paying less than the appropriate NMW rate. This is equivalent to 0.9 per cent of all UK jobs. This comprised of 14,000 jobs held by 16-17 year olds, 44,000 jobs held by 18-21 year olds and 184,000 jobs held by those 22 and older.

Table 2.1 provides more details of the proportion of jobs paid at hourly wage rates less than the prevailing NMW rate. It should be noted that these estimates are approximate, and subject to revision.

Between 1998 and 2009, the number of jobs held by part-time workers earning below the NMW rate fell from 14.1 per cent of part-time jobs to 1.5 per cent. This compares with a decline in the number of jobs held by full-time workers earning below the NMW rates from 2.4 per cent in 1998 to 0.7 per cent in 2009.

**Table 2.1. Proportion of UK jobs paid below minimum wage**

	1998*	1999	2001	2003**	2005	2007	2009
All	5.6	2.1	1	1			
All (18+)					1.2	1.1	0.9
All (16+) <sup>***</sup>					4	4	4.1
All 16-17	7.2	2.4	2.1	2.3	3	2.6	2.6
All 18-21	5.4	2.1	0.9	0.9	1	1	0.8
All 22+	2.9	1.4	0.7	0.7	1	0.9	0.8
All men	8.4	2.8	1.4	1.4	1.4	1.4	1.1
All women	1.8	0.8	0.3	0.4	0.9	0.7	0.7
Men	14.4	7	4.4	3.5	2.2	2.1	1.4
part-time							
Women	3.6	1.1	-	0.5	0.9	0.8	0.7
full-time	14.1	4.9	2.5	2.4	2.1	2.1	1.6
part-time							
All full-time	2.4	0.9	0.3	0.4	0.9	0.8	0.7
All part-time	14.1	5.3	2.8	2.6	2.1	2.1	1.5

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

- Sample size too small for reliable estimate

\* Figures for 1998, before the NMW was introduced, are for jobs paid less than £3.00 p/h (aged 18-21) or £3.60 p/h (aged 22 and over).

\*\* Estimates for 1998-2003 are based on a central estimate of the LFS and ASHE.

\*\*\* Before 2005 the estimates are for employees aged 18 and over, from 2005 the estimates are for those aged 16 and over.

Number of jobs paid at less than £3.00 per hour (aged 18-21) or £3.60 per hour (aged 22 and over) for 1998 to 2000.

Number of jobs paid at less than £3.20 per hour (aged 18-21) or £3.70 per hour (aged 22 and over) for 2001.

Number of jobs paid at less than £3.60 per hour (aged 18-21) or £4.20 per hour (aged 22 and over) for 2003.

Number of jobs paid at less than £3.00 per hour (aged 16-17) or £4.10 per hour (aged 18-21) or £4.85 per hour (aged 22 and over) for 2005.

Number of jobs paid at less than £3.30 per hour (aged 16-17) or £4.45 per hour (aged 18-21) or £5.35 per hour (aged 22 and over) for 2007.

Number of jobs paid at less than £3.53 per hour (aged 16-17) or £4.77 per hour (aged 18-21) or £5.73 per hour (aged 22 and over) for 2009.

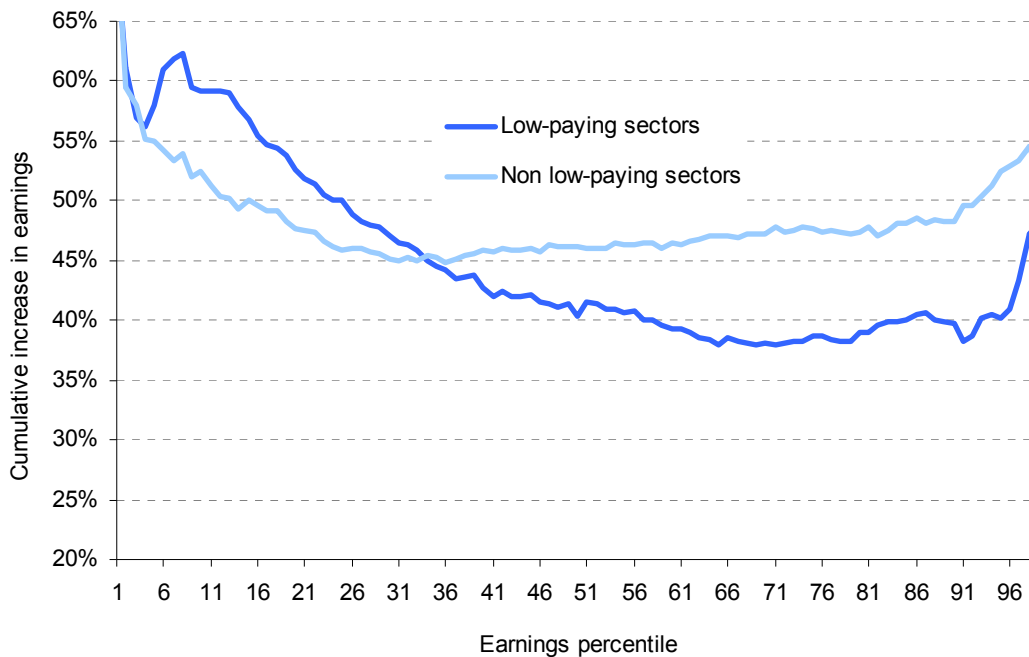
## Compression of the earnings distribution

As the NMW increases relative to median earnings, there is an increase in both the proportion of employees earning the NMW and those earning relatively close to it.

In addition, the introduction and uprating of the NMW has not just benefited the bottom few per cent of employees. There has been an 'upward ripple' effect, with NMW increases influencing pay scales above the NMW. Chart 2.8 shows the increase in hourly pay across the earnings distribution, from the lowest to highest income earners, between 1999 and 2009 for both the low-paying and non low-paying sectors. It highlights that employees at the lower end of the pay scale have received larger percentage increases in their pay than those at the middle or top end over this period. This is particularly true for employees working in the low-paying sectors. This trend appears to be continuing. In the most recent 2009 ASHE data, the earnings growth for full-time employees of the bottom decile increased by 4.4 per cent compared with a growth of 3.1 per cent for the top decile between 2008 and 2009.

**Chart 2.8: Cumulative increase in earnings by percentile, 1999-2009**

Per cent increase



Source: Office for National Statistics, Annual Survey of Hours and Earnings

1999 - ASHE data - excluding supplementary information

2009 - ASHE data - new methodology

See Annex E for further information on the changes to ASHE data.

## Incentives to progress

Incentives to improve one's earnings are, in part, driven by the scope for pay progression in the labour market and how higher gross pay translates into higher take-home pay through the tax and benefit system. Marginal deduction rates (MDRs) are one measure of the extent of the poverty trap, which occurs when those in work have limited incentives to increase their earnings.

Overall, the numbers on MDRs above 70 per cent have more than halved since 1997, to 305,000. The increased numbers facing MDRs of between 60 and 70 per cent reflects the introduction and increased generosity of tax credits since 1999, which has extended financial support to many more families, including, for the first time, those without children.

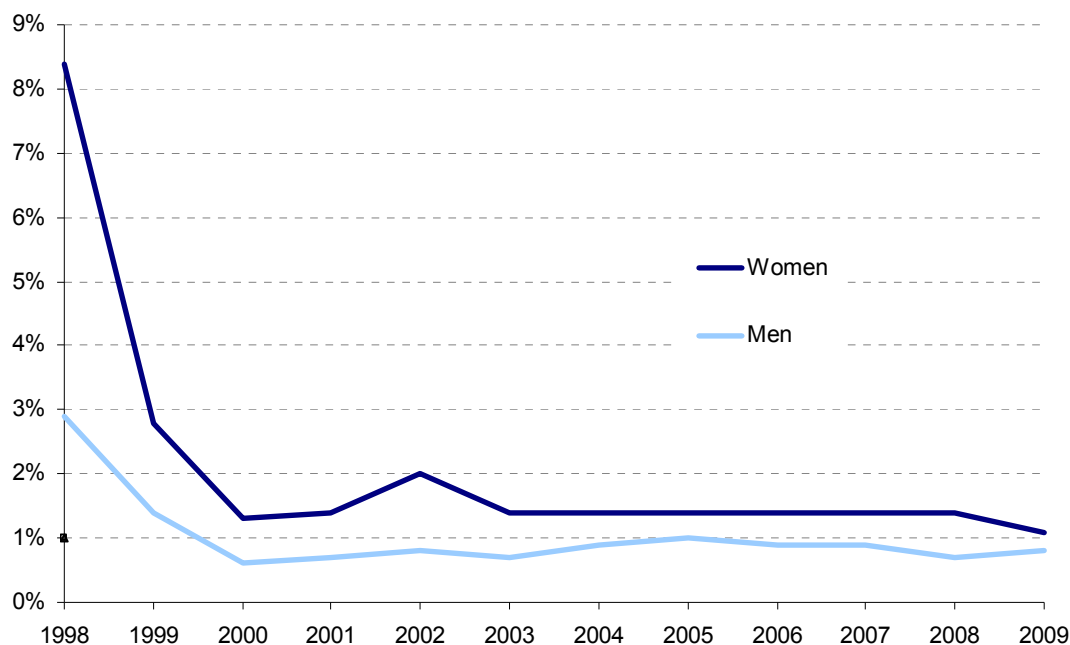
## Gender wage gap

While not the underlying purpose for the introduction of the NMW, it has helped reduce gender inequality as more females than males have been lifted up to a higher wage rate. Chart 2.9 shows that the number of jobs held by women paid less than the NMW fell from 8.4 per cent (940,000 women) in 1998 to 1.1 per cent in 2009 (139,000 women), while the number of men fell from 2.9 per cent (340,000 men) in 1998 to 0.8 per cent in 2009 (103,000 men).

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**Chart 2.9: Female and male jobs earnings less than the NMW**

Per cent of total jobs



Source: Estimates for 1998 to 2003 are based upon the central estimate of the LFS and ASHE. 2004+ based on ASHE. Not seasonally adjusted.

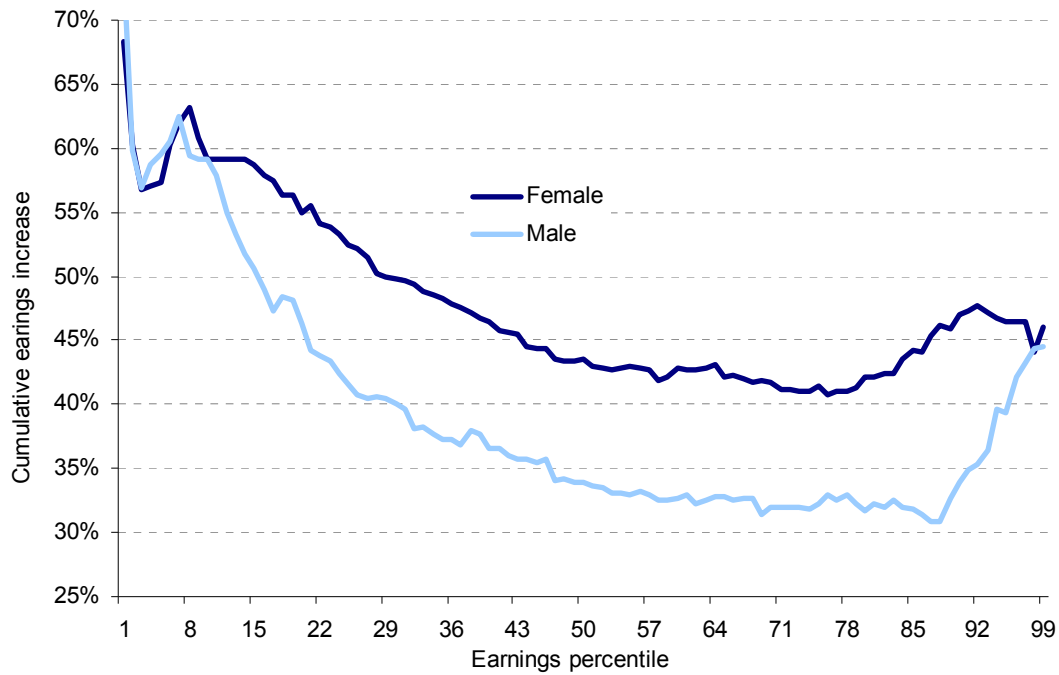
1998-2004 data covers those earnings less than the 18-21 year old rate and the adult rate. 2005 onwards also includes those earnings less than the 16-17 year old rate.

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Chart 2.10 highlights that female earnings have also grown faster than male earnings in the low-pay sectors at almost all parts of the wage distribution since the introduction of the NMW in 1999. The exception is the 6<sup>th</sup> to 11<sup>th</sup> percentile of the distribution, where the gender wage gap continues to widen.

**Chart 2.10: Cumulative increase in earnings by percentile for low paying sectors, 1999-2009**

Per cent increase



Source: Office for National Statistics, Annual Survey of Hours and Earnings  
 1999 - ASHE data - excluding supplementary information  
 2008 and 2009 - ASHE data - new methodology  
 See Annex E for further information on the changes to ASHE data.

# 3. Impact on the labour market

**UK academic research to date has not found evidence that the adult NMW has had a significant adverse effect on employment. There has been a slight decline in the share of UK employment in low-paying sectors since 1999 but there is no evidence that this is the result of the NMW and the trend actually predates its introduction. In addition, there is also no evidence that the NMW has hindered low paying sectors in coping with the economic downturn. Jobs have fallen by less in the low paying sectors than in the economy as a whole.**

**Although it seems that the labour market may be stabilising, there currently remains a lot of uncertainty. Looking forward, GDP growth is expected to return by the end of the year and to pick up through 2010 and 2011. While employment in the low-paying sectors may have been hit less hard than other sectors by the recession, they have still seen a significant fall in jobs over the last year. What is more, past experience suggests that employment in the low-paying sectors may also benefit less from an economic recovery than other sectors. Given the current uncertainty, and the increasing bite and coverage of the NMW, it is even more important that all the available evidence is considered alongside the wider economic and labour market impacts when setting the National Minimum Wage rates.**

A simple perfectly competitive model of the labour market would suggest that the introduction of a minimum wage above the market-clearing wage will lead to the supply of workers outstripping demand, resulting in a fall in employment and a rise in 'involuntary unemployment'. However, if the labour market is not highly competitive or there are labour market frictions, there may be opportunities for firms to limit their employment to restrain wages below the market-clearing wage. In these circumstances a minimum wage will not necessarily lead to increased unemployment, and might even increase employment.

Empirical evidence from the UK has not found significant evidence that the adult NMW has reduced employment. However, most of the evidence focuses on a period in which there was a growing labour market and there is little evidence, both in the UK and internationally, of the relative impact of minimum wages in an economic downturn.

Therefore, this chapter reviews the most recent data on employment using ONS employee jobs and ASHE data for any emerging employment trends in the low paid sectors. This includes analysis up to the second quarter of 2009 and so reflects at least some of the impact of the economic recession on the labour market. However, this is only a preliminary analysis which does not control for other factors that may be impacting on employment in the low pay

sectors. It should also be read in the context of the continued uncertainty around the prospects for the macroeconomy and labour market (see chapter one).

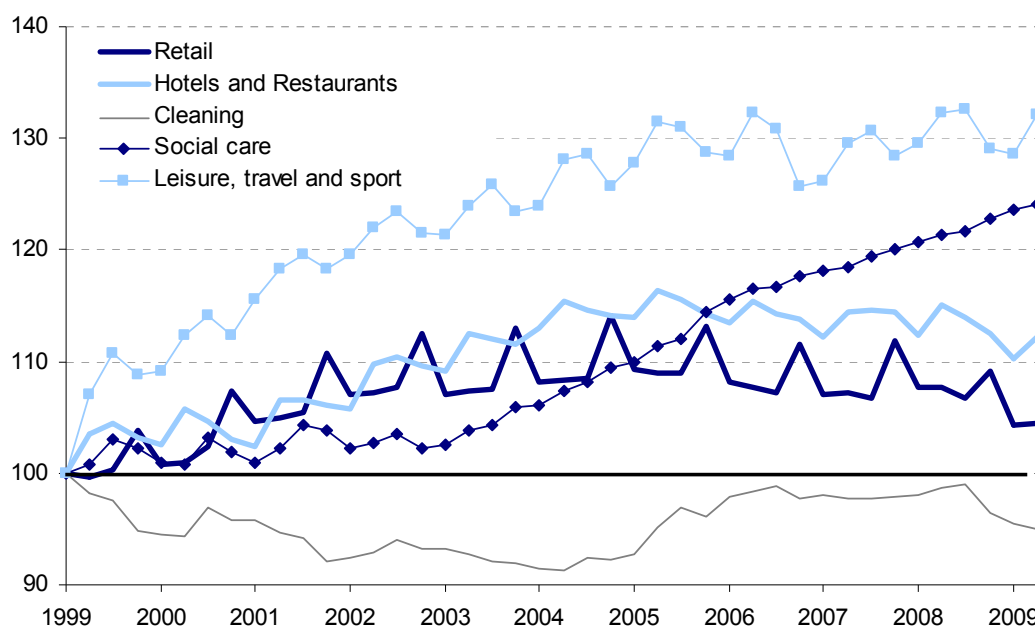
### Employment in low-paying sectors

Total employment in the low-paying sectors has been increasing since the introduction of the NMW in 1999. The number of jobs in the low-paying sectors has increased by 454,000 (5.8 per cent), compared to an overall jobs increase of 1.48 million (6.1 per cent) in the ten years to the second quarter of 2009. The largest job increases have been in social care (up 234,000) and in hotels and restaurants (up 189,000). These two sectors have supplanted the retail sector as the largest job creator in the low pay sectors over the last year, as employment in the retail sector has been relatively hard hit by the economic downturn. However, it has still seen increases in jobs of 138,000 or 4.5 per cent since March 1999 and remains the largest employer amongst the low-paying sectors.

Retail, hotels and restaurants and social care have dominated the increases in absolute jobs in the low-paying sectors as they are the biggest sectors. However, it is the smaller sectors, such as security (up 38.6 per cent) and leisure, travel and sport (up 32.2 per cent) that have enjoyed the highest percentage growth, as shown in Chart 3.1.

**Chart 3.1: Jobs in major low-paying sectors since 1999**

Index Rebased to 1999 Q1 = 100

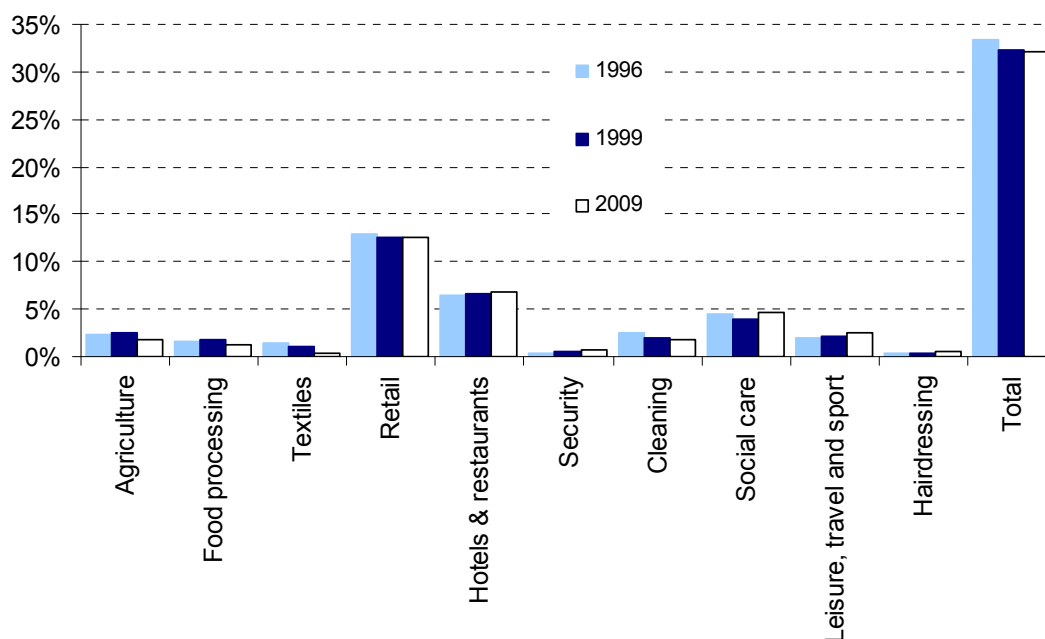


Source: Office for National Statistics, Employee jobs

Employment in the low-paying sectors has tended to grow at about the same pace as other sectors between 1999 and 2009. As a consequence, the share of the low-paying sectors in total employment has only fallen slightly by about 0.2 percentage points between June 1999 and 2009 (see Chart 3.2).

### Chart 3.2: Low pay sectors share in total employment

Per cent of total employment, March quarter



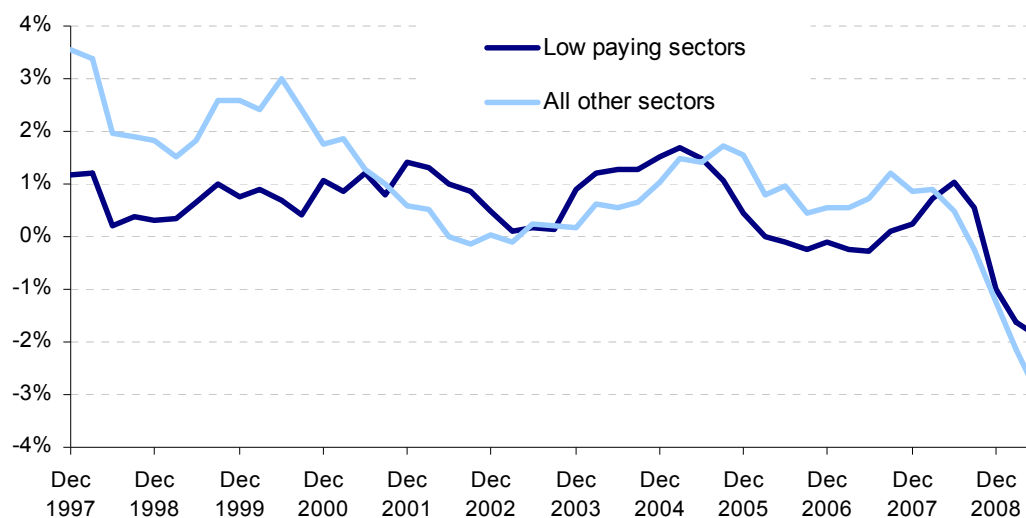
Source: Office for National Statistics, Employee jobs

However, although the share has dropped slightly, employment continues to grow and research suggests that the NMW has not had a significant impact on employment. Instead the change in employment composition across sectors is likely to reflect the longer-term trends of skill-biased technological change and the movement of the UK up the value chain to more knowledge intensive industries. This is reflected in the pattern of employment growth across the low-paying sectors, with declines in employment in tradable sectors, such as textiles and food processing, pulling down average job growth across the low-paying sectors.

In addition, when the NMW began to rise more rapidly in 2001 to 2005 (with an average annual growth of 7 per cent), job growth in the low-paying sectors tended to at least match the annual growth rate in the rest of the economy (see Chart 3.3). While the employment boom seems to have tailed off earlier for the low-paying sectors, jobs in these sectors have been more resilient to the economic downturn. Jobs in low pay sectors fell by 1.9 per cent in the year to June 2009, compared to a fall of 2.7 per cent for the economy as a whole. As a consequence, the employment share of low paying sectors has increased slightly over the last year.

**Chart 3.3: Annual jobs growth**

Annual per cent change



Source: Office for National Statistics, Employee jobs

The recent pattern in job growth across sectors suggests that job growth may be less cyclical in the low-paying sector – perhaps enjoying less growth in the boom years but less prone to job losses in economic downturns. Employment in the low paying sectors has also held its ground or fallen by less than other sectors in previous recessions:

- In the early 1980's recession employment in the low-paying sectors fell at roughly the same rate as elsewhere and as a result the employment share remained virtually unchanged.
- In the early 1990's recession job losses in the low-paying sectors were less than elsewhere and so the employment share rose.

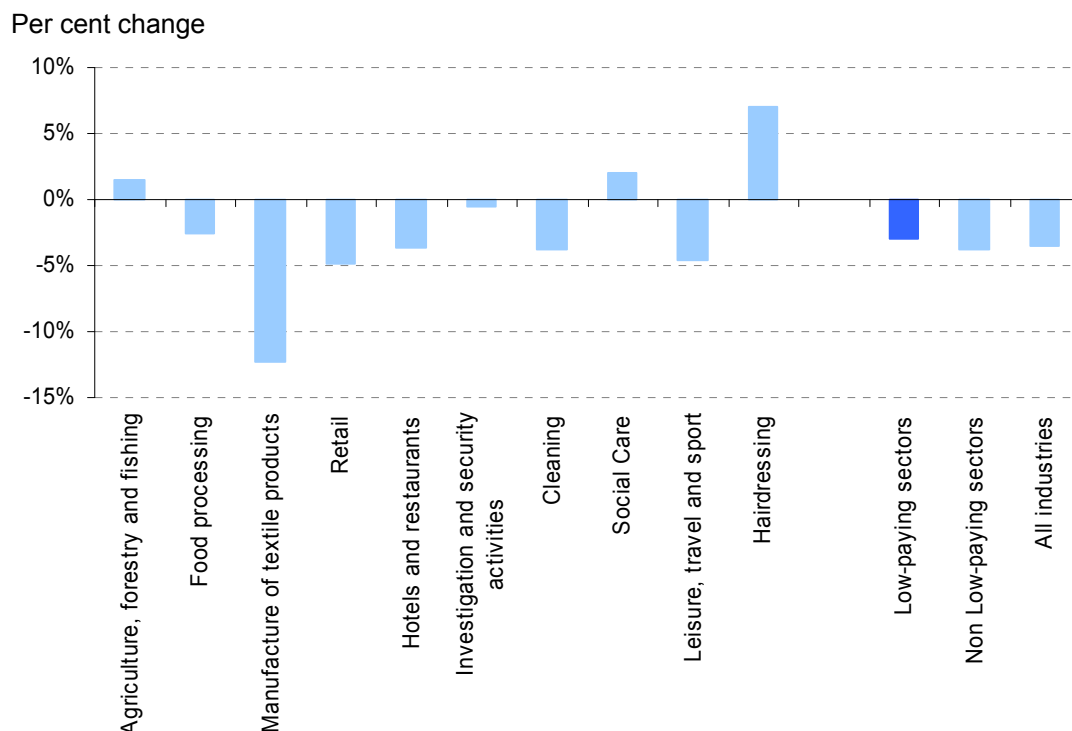
Therefore, cyclical factors may play an important role in explaining recent differences in employment growth between low paying and other sectors, as well as the longer-term trends mentioned above.

Employers may alter hours rather than levels of employment in response to minimum wages. This is particularly likely for low-paying sectors as they have low fixed costs per worker, little on-the-job training, high labour turnover, limits to the substitution of capital for labour and a high incidence of part-time work. Empirical studies have found some impact of minimum wages on hours for example Stewart and Swaffield (2006)<sup>5</sup> (see Annex C).

Over 2008-2009 total hours worked in the low-paying sectors fell by around 3.0 per cent, less than the 3.7 per cent fall in the non low-paying sectors (see Chart 3.4). The variation across the low-paid sectors has been significant. However, it is not possible to disentangle the impact of the NMW from the UK being exposed to lower-cost international competition and other factors.

<sup>5</sup> Stewart M and Swaffield (2006) The other margin: Do minimum wages cause working hours adjustment for low-wage workers? Unpublished paper. University of Warwick.

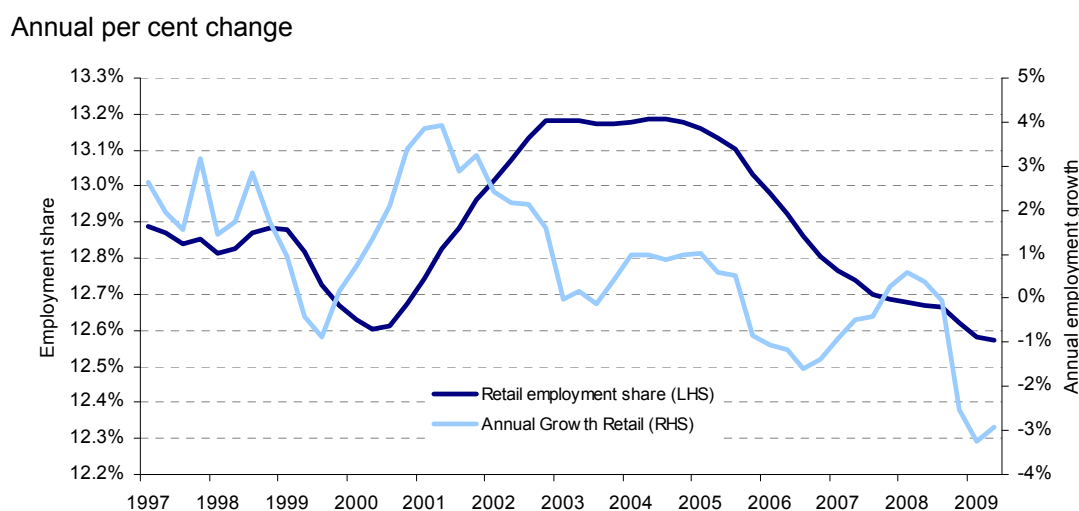
**Chart 3.4: Changes in hours worked for low pay sectors, 2008-2009**



Source: Office for National Statistics, Annual Survey of Hours and Earnings  
 1999 - ASHE data - excluding supplementary information  
 2009 - ASHE data - new methodology  
 See Annex E for further information on the changes to ASHE data.

**Changes in employment across the low-paying sectors**

**Chart 3.5: Annual jobs growth and share in retailing**



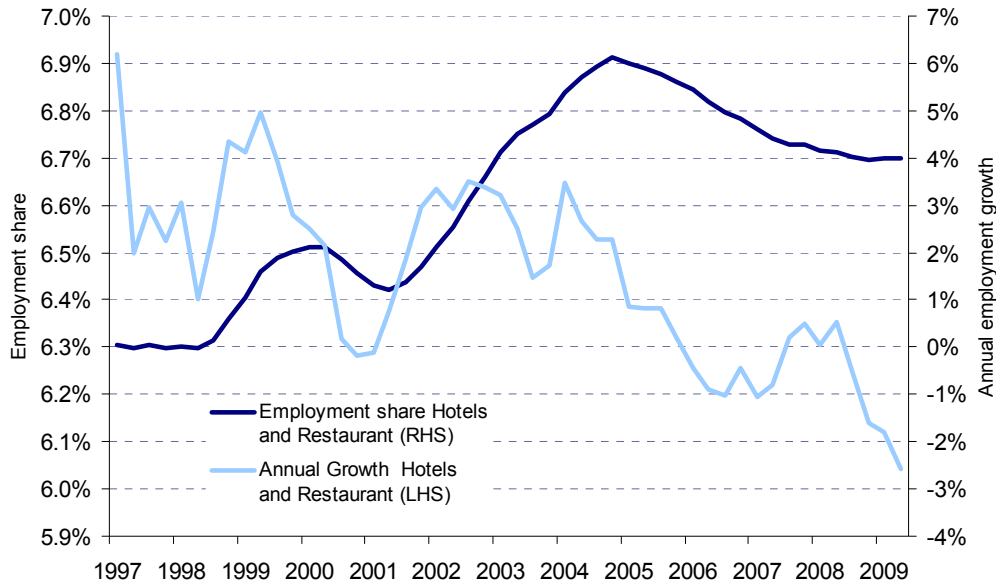
Source: Office for National Statistics, Employee jobs

The retail sector has suffered slightly bigger percentage falls in jobs than the economy as a whole (see Chart 3.5), while the hotels and restaurants sector has seen a slightly smaller fall in jobs than the national average (see Chart 3.6). In the year to June 2009, jobs in the hotel and restaurant sector

decreased by 46,000 (2.6 per cent), which compares to a fall of 98,000 (3.0 per cent) in retail sector jobs and a fall of 2.7 per cent for the whole economy. Growth in retail jobs has tended to be slower than average for a number of years and has been reflected in retail's falling employment share as shown in Chart 3.5.

**Chart 3.6: Annual jobs growth and share in hotels and restaurants**

Annual percentage change



Source: Office for National Statistics, Employee jobs

Analysis of the relative performance of other sectors within the low paying sector also suggests that the economic downturn may have reinforced longer-term changes in employment composition. For example, social care - the third largest low paying sector - has had strong positive annual employee job growth since 1999. Even in the midst of the economic recession, jobs have increased by 25,000 or 2.1 per cent in the year to June 2009. As a consequence of such performance, the employment share of social care has increased from 4 per cent in 1999 to 4.7 per cent in 2009. In contrast, textile jobs have been relatively hard hit by the recession, falling by 9 per cent in the year to June 2009 and continuing its longer-term trend of a falling employment share.

# 4. Younger workers and marginal groups

**The labour market has proved challenging for some younger workers, with a longer-term downward trend in the employment rates of 16-17 year olds who are not in full time education. They have also been hit by the economic downturn, with significant declines in the employment rates of 16 to 17 year old and 18 to 21 year olds over the last year. In addition, the labour market prospects of those with no qualifications have also been harder hit than their more qualified counterparts. However, although there is uncertainty around the labour market outlook, when the economy recovers it is likely that all age groups will see improvements.**

This section includes a separate analysis of younger workers, as well as marginal groups. The focus on younger workers is warranted as evidence suggests that the labour market outcomes of younger workers are more at risk from the uprating of the NMW. As younger workers are typically paid less than older workers, the bite of the NMW is significantly higher for younger age groups than for adults. In addition, the NMW can potentially change the balance of incentives between education and employment. Therefore, it is important to monitor the labour market outcomes of this group closely to strike the right balance between protecting young workers while not jeopardizing their employment and education prospects.

## **16-17 year olds**

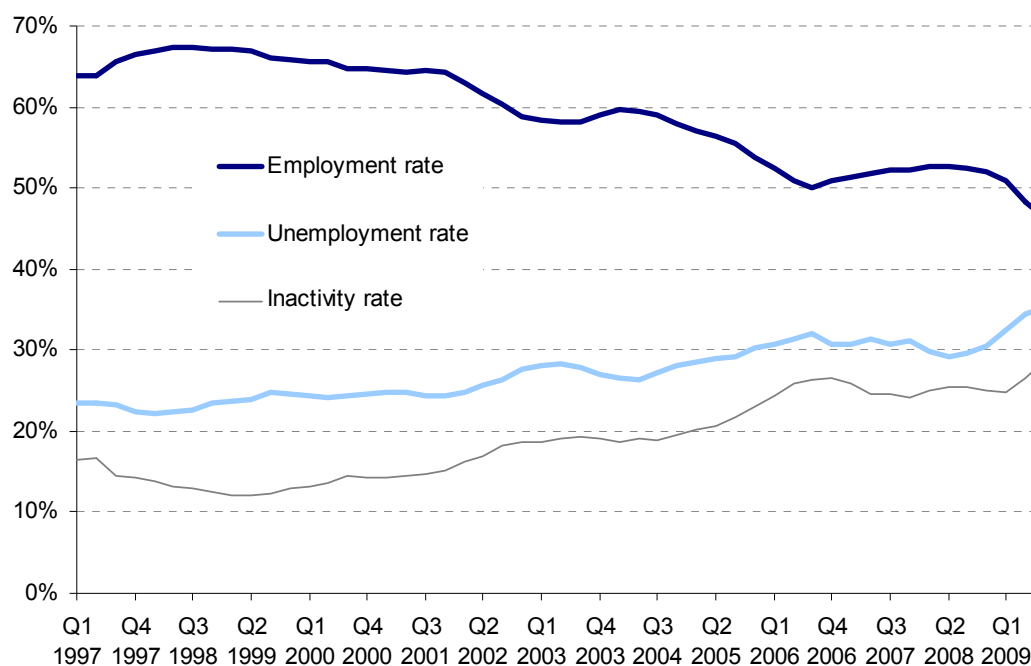
The minimum wage rate for 16-17 year olds was introduced in October 2004. It was initially set at the rate of £3.00 and was increased to £3.30 from October 2006, then £3.40 from October 2007, £3.53 from October 2008 and £3.57 in October 2009.

Chart 4.1 indicates that the employment rate of 16 and 17 year olds, excluding full-time students, was declining until late 2006, when the trend started to improve slightly. It continued to improve into the first half of 2008, but has deteriorated since then as the impact of the economic downturn on the labour market has intensified.

The relationship between the employment of 16-17 year olds and the NMW is not simple. The longer-term deterioration in labour market outcomes for 16-17 year olds has taken place over a period when the employment rates of most disadvantaged groups have risen faster than the overall working age employment rate. In addition, the deterioration largely pre-dated the introduction of the NMW and since its introduction there has been some improvement. However, there is some international evidence that minimum wages can impact on the employment prospects of younger workers.

### Chart 4.1: Employment, unemployment and inactivity rates of 16-17 year olds, excluding full-time students and graduates

Per cent of age group, four quarter moving average



Source: Office for National Statistics, Labour Force Survey. 4-quarter averages  
Not seasonally adjusted.  
See Annex E for further information.

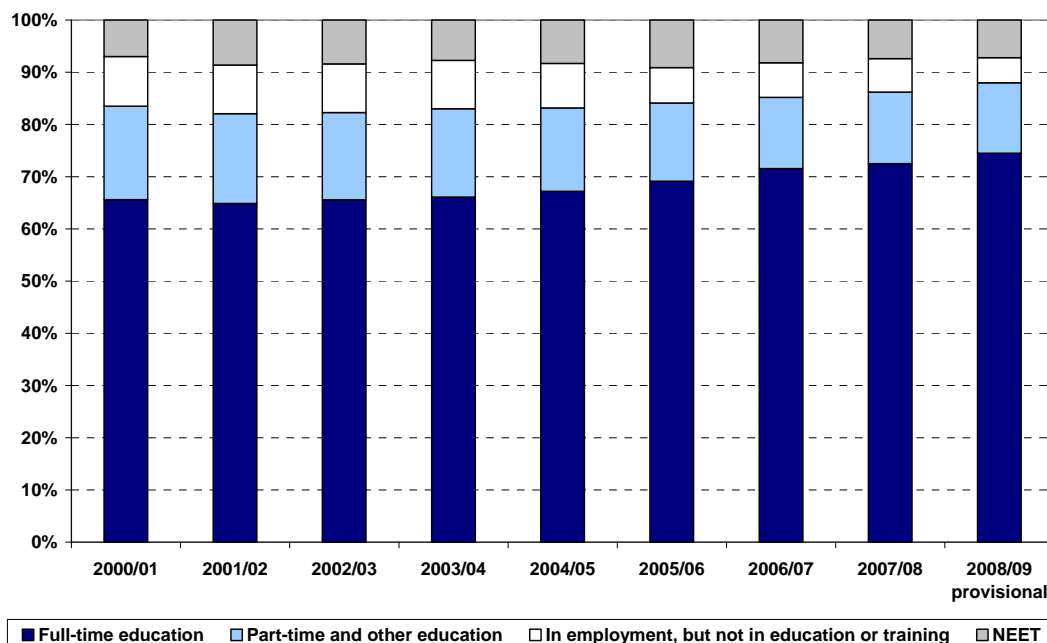
Chart 4.2 highlights that the proportion of all 16-17 year olds that are not in employment, education or training (the NEETs) has stayed broadly constant over the last year. This is because more young people are opting to continue their education. While this is a long-term trend, part of the recent increase is likely to reflect the tighter labour market. For those who wish to enter the labour market, employment is harder to come by.

The recession has also hit the employment rate of 16-17 year olds hard, with their employment rate, excluding students, falling by around six percentage points over the last year. This decline is slightly less than that faced by the 18 to 21 year olds (see below) but it has been significantly higher than for those on the adult NMW. The unemployment rate of this age group has increased even more over the year, increasing by almost eight percentage points.

On a more positive note, it is encouraging that workless 16-17 year olds appear to be continuing to seek employment over the last year, with the fall in the employment rate reflected in increases in unemployment rather than inactivity (see Chart 4.1).

**Chart 4.2: Participation in education and training of young people aged 16-17**

Per cent of age group



Source: Department for Children, Families and Schools

### 18-21 year olds

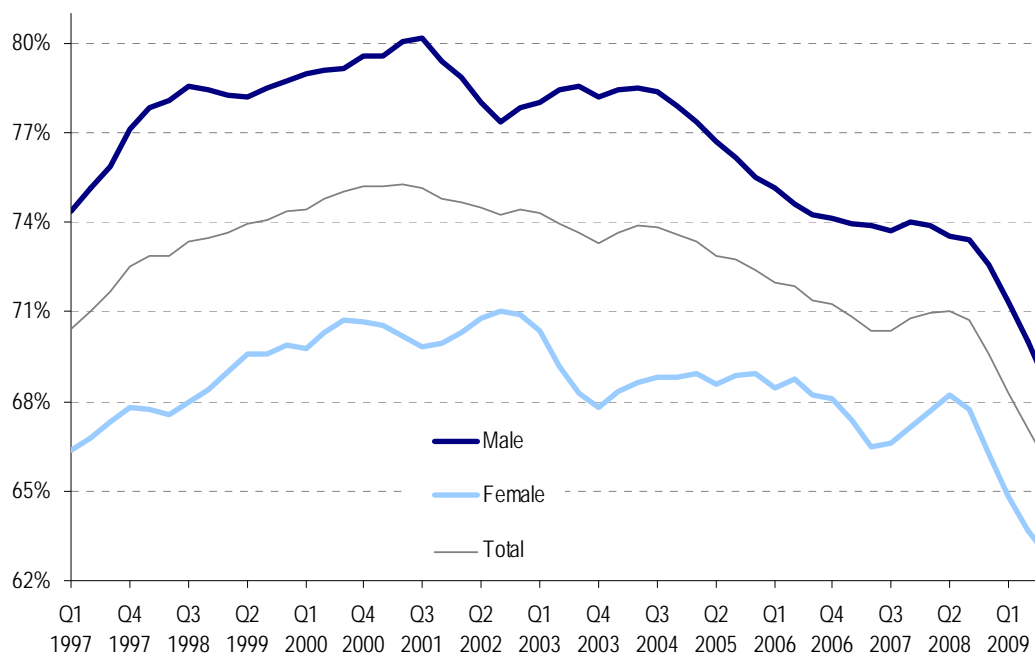
The NMW rate for 18-21 year olds was introduced in October 1999, at the same time as the adult rate. It was initially set at the rate of £3.00 and was gradually increased to £4.83 in October 2009.

The employment rate amongst 18 to 21 year olds, excluding full-time students and graduates, has been gradually declining over much of this century.<sup>6</sup> The employment rate has also been knocked by the economic downturn and has seen the largest decline over the last year compared to the other NMW age bands, falling around six percentage points since the first quarter of 2008 (see Chart 4.3). An improvement in the female employment rate in early 2007 has also been cut short by the economic downturn. The unemployment rate has shown a similar, inverted, pattern (see Chart 4.4).

<sup>6</sup> As well as full-time students, we have excluded graduates (using LFS definitions) from the analysis as education and training are likely to lead to enhanced career prospects and higher future earnings for these individuals.

**Chart 4.3: Employment rate of 18-21 year olds excluding full-time students and graduates up to Q3 2009**

Per cent of age group, four quarter moving average



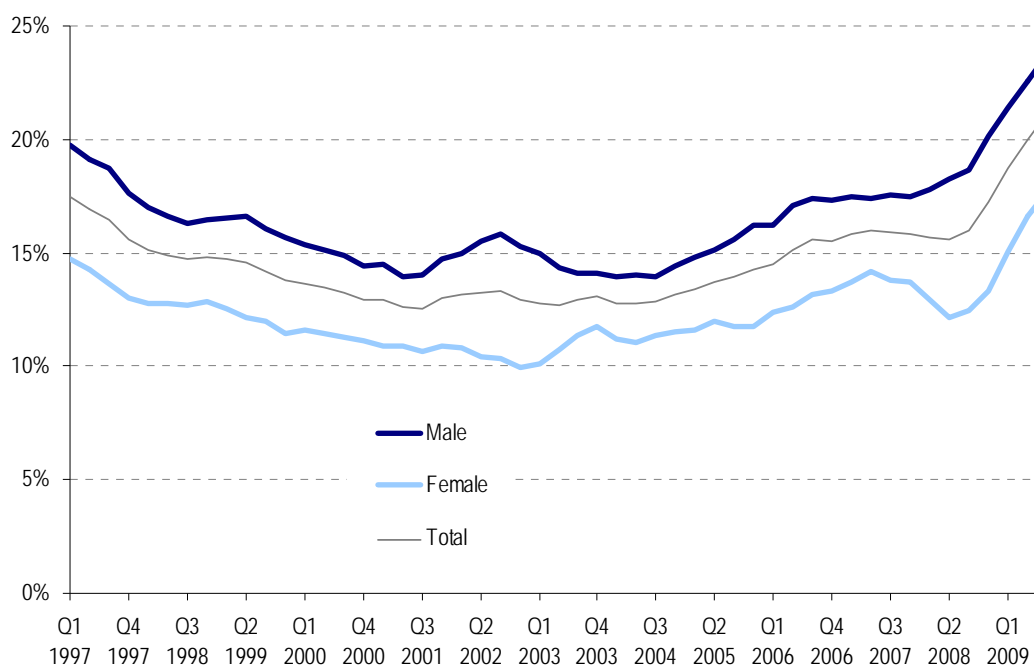
Source: Office for National Statistics, Labour Force Survey. 4-quarter averages

Not seasonally adjusted.

See Annex E for further information.

### Chart 4.4: Unemployment rate of 18-21 year olds excluding full-time students and graduates up to Q3 2009

Per cent of age group, four quarter moving average



Source: Office for National Statistics, Labour Force Survey. 4-quarter averages

Not seasonally adjusted.

See Annex E for further information.

### 21 year olds

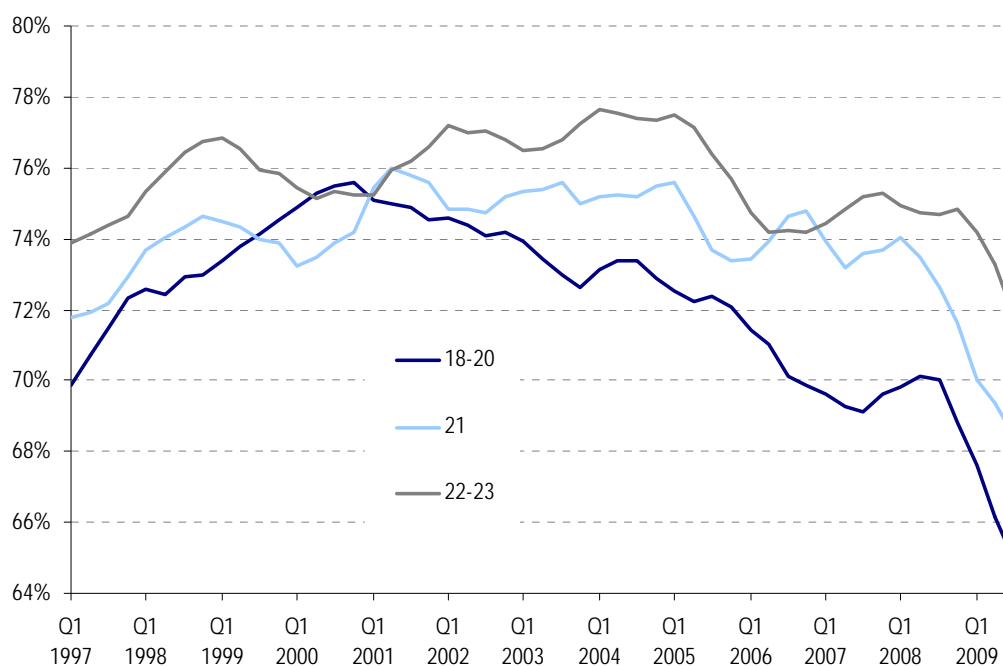
The Government has announced that 21 year olds will be moved to the adult NMW from 1 October 2010. When that decision was made, in early 2008, the labour market performance of 21 year olds had begun (from mid-2006) to more closely resemble that of the 22-23 year olds.

Since then, 21 year olds have suffered a larger fall in their employment rate than their older counterparts over the current recession. As a consequence, the trend in their employment rates has again begun to look more in line with the 18-20 year olds (see Chart 4.5). However, the labour market performance is likely to improve somewhat before the end of 2010.

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### Chart 4.5: Employment rate by age group excluding full-time students and graduates up to Q3 2009

Per cent of age group, four quarter moving average



Source: Office for National Statistics, Labour Force Survey. 4-quarter averages

Not seasonally adjusted.

See Annex E for further information.

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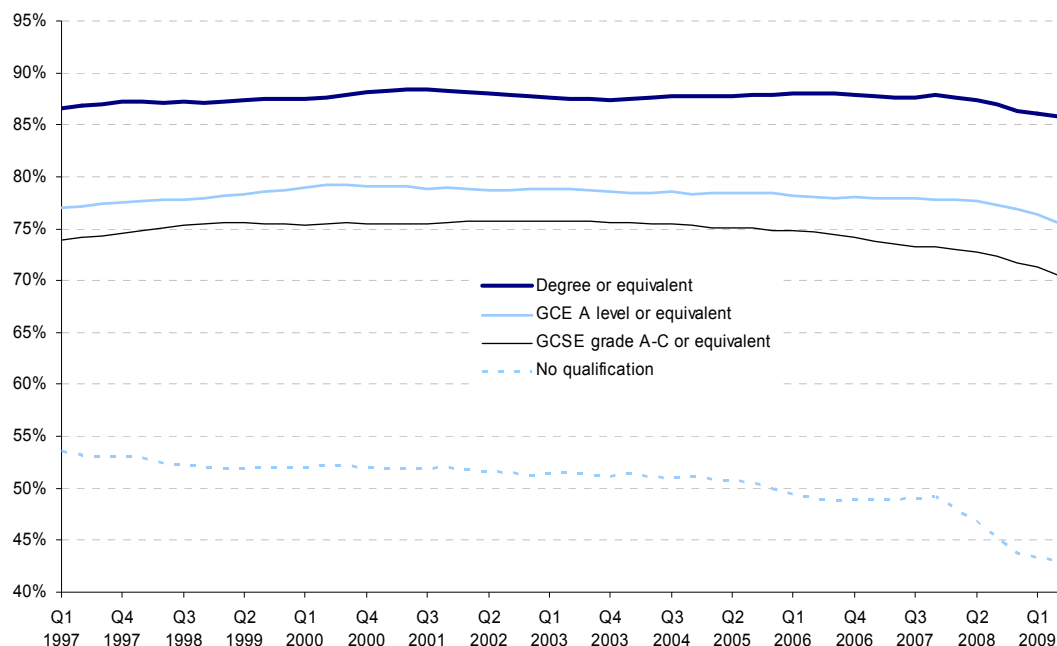
### Employment of low-skilled

Another group who are likely to be affected by the NMW are the low-skilled given that they are most likely to be beneficiaries of the minimum wage. This section explores their labour market outcomes.

Chart 4.6 highlights the large and growing gap between the employment outcomes of unqualified and qualified workers. Unqualified workers have experienced a relative deterioration in employment rates from around 54 per cent in 1997 to around 43 per cent in 2009. This is slightly less than half the employment rate of those with a degree or equivalent. Unqualified workers have also been disproportionately hit by the economic downturn. Their employment rate has fallen by almost four percentage points over the last year. This fall is almost double that of those with GCSEs and more than double of those with a degree or equivalent.

## Chart 4.6: Highest qualification held

Per cent of working age population, four quarter moving average



Source: Office for National Statistics, Labour Force Survey.  
Not seasonally adjusted.

## Minority employment groups

This section reports on the recent labour market performance of other vulnerable groups who may be affected by the NMW.

Since the introduction of the NMW, 0.2 million more people of working age who are Disability Discrimination Act (DDA) disabled<sup>7</sup> and have a work-limiting disability<sup>8</sup> entered employment (change in employment levels since 1999 Q1 to 2009 Q2). The employment rate for this group has increased by 3.0 percentage points from 30.0 per cent in 1999 Q1 to 33.0 per cent in 2009 Q2. The unemployment rate has increased by 0.8 percentage points from 13.6 per cent to 14.4 per cent over the same period. Inactivity rates have fallen by 3.8 percentage points from 65.3 per cent in 1999 Q1 to 61.5 per cent in 2009 Q2.

Between 2001 Q1 and 2009 Q2 over 1 million more people of working age from ethnic minorities have entered employment. The employment rate of minority groups has increased by 3.3 percentage points over the same period, from 56.7 per cent to 59.0 per cent. The unemployment rate has increased by 1.1 percentage points from 12.0 per cent to 13.1 per cent again over the same period. Inactivity rates have fallen by 3.5 percentage points from 35.6 per cent in 2001 Q1 to 32.1 per cent in 2009 Q2.

<sup>7</sup> The Disability Discrimination Act defines a person as DDA disabled as someone who has a physical or mental impairment that has a substantial and long-term adverse effect on his or her ability to carry out normal day-to-day activities.

<sup>8</sup> Change in employment levels since 1999 Q1 to 2009 Q2.

Since the introduction of the NMW, employment for both males and females has increased by around 1.3 million. The working age employment rate for men decreased by 2.6 percentage points from 78.6 per cent in 1999 Q1 to 76.0 per cent in 2009 Q2. The working age employment rate for women increased by 0.3 percentage points from 68.7 per cent to 69.0 per cent over the same period. The working age unemployment rate for men rose from 6.9 per cent in 1999 Q1 to 8.9 per cent in 2009 Q2, for women the unemployment rate rose from 5.5 per cent to 6.9 per cent over the same period. The working age economic inactivity rate for men increased by 1.0 percentage points from 15.5 per cent in 1999 Q1 to 16.5 per cent in 2009 Q2. For women the economic inactivity rate fell from 27.3 per cent to 25.9 per cent over the same period.

# 5. Other issues

The Government is committed to moving 21 year olds onto the adult rate in October 2010. Our initial estimate is that around 46,000 21 year olds stand to benefit from this change.

From 1 October 2009, tips can no longer be used to count towards the NMW. This change mainly affects the hospitality and gambling sectors. There will be increased labour costs for some firms but not all firms will be affected. Employers who did not use tips to make up basic NMW pay before 1 October 2009 will be unaffected.

The Government is committed to establishing apprenticeships as a key route to building the national skills base, working with employers to help young people and adults get the skills and qualifications valued by employers.

There are important supply and demand side issues that need consideration when setting an apprenticeship minimum wage. In order to encourage supply to apprenticeship schemes, an apprentice minimum wage needs to be set at a level which provides appropriate incentives for individuals to participate in schemes. However, a too high apprentice minimum wage will lead to higher wage costs for employers and this could dissuade employers from providing schemes. Our main concern in the establishment of an apprentice minimum wage is in respect of young people because of their vulnerable labour market position.

## **Moving 21 year olds onto the adult rate**

Government is committed to moving 21 year olds onto the adult rate in October 2010. Our initial estimate based on April 2009 ASHE data is that around 46,000 21 year olds stand to benefit from moving 21 year olds onto the adult rate. This represents around 9 per cent of 21 year olds in employment. Of the 21 year olds who stand to benefit around 40 per cent would be male and around 60 per cent would be female.

We base our estimates of the number of 21 year olds that stand to benefit from a move to the adult NMW on October 2009 rates deflated back to April 2009, using average earnings growth data and independent forecasts. For simplicity we assume the adult rate in October 2010 is £5.80.

We estimate a cost increase of around £33 million in labour costs (which includes increase in the wage bill and non-wage labour costs). For ease of calculation this figure assumes that both the adult and development rates remain unchanged from October 2009 and that 21 year olds move onto the adult rate.

Of the 46,000 21 year olds who stand to benefit, on average their wages are expected to increase by £0.47 per hour or £651 per annum.

## Tips and the NMW

As noted in the Government's non-economic evidence, this year's NMW Regulations provided that service charges, tips, gratuities and cover charges paid to a worker through an employer's payroll do not count towards the NMW. This change, which came into force on 1<sup>st</sup> October 2009, brings the treatment of tips distributed through the payroll into line with the treatment of tips paid in cash directly to the worker by a customer, which do not count towards payment of the NMW.

The final impact assessment estimates that, based on ASHE data, around 60,500 workers are potentially affected by the change in the Regulations. Sectors that are likely to have been affected include hotels and restaurants, taxi operations, gambling and betting activities and hairdressing and other beauty treatments. Workers benefit through increases in take home pay (estimated to be £73 million) and there is a transfer to the Exchequer through increased workers' and employers' National Insurance contributions (estimated to be £19.5 million). Table 5.1 below, taken from the final impact assessment, summarises the costs and benefits<sup>9</sup>.

**Table 5.1. Summary of costs and benefits of amending NMW regulations on the use of tips**

		One off/Ongoing	Affected	£m
Costs	Increase in employers' labour costs	Ongoing	Employers	£92.5
	Increase in administrative costs	One off	Employers	Small
	Implementation costs	One off	Employers	Small
Benefits	Better quality of service	Ongoing	Customers	Small
	Equalisation of NICs treatment across sectors, eligibility for statutory benefits and less administrative burden	Ongoing	Employees	Small
	Increase in pay	Ongoing	Employees	£73.0
	Transfer to the Exchequer	Ongoing	Exchequer	£19.5
Costs	Increase in employers' labour costs	Ongoing	Employers	£92.5

Source: BIS estimates

<sup>9</sup> <http://www.berr.gov.uk/files/file51166.pdf>

## Apprenticeships

The LPC remit for their 2010 annual report includes the consideration of detailed arrangements for an apprentice minimum wage under the NMW framework (as set out in the NMW Act 1998), and to recommend the rate and arrangements that should replace the existing exemptions, together with the timing for its introduction.

The Government has already submitted its non-economic evidence to the LPC in October 2009, including on apprenticeship pay.<sup>10</sup> There are important supply and demand side issues that need consideration. In order to encourage supply to apprenticeship schemes, an apprentice minimum wage needs to be set at a level which provides appropriate incentives for individuals to participate in apprenticeship schemes. However, a too high apprentice minimum wage will lead to higher wage costs for employers and this could dissuade employers from providing schemes. The key conclusions from the non-economic evidence are presented below.

The Government's main concern in the establishment of an apprentice minimum wage is in respect of young people because of their vulnerable and apparently worsening labour market position. Too high a minimum wage could dissuade employers further from offering apprenticeships to this group across all sectors.

We believe strongly that the interests of young people are best served by their participation in education or jobs with training and that barriers to their entry to the labour market must be minimised. Young people are prepared to accept lower pay while they are learning their job and in anticipation of higher future earnings and secure employment.

There is a strong case to pay young people a lower rate while they are training because on average they take longer than adults to complete their training and become fully productive. Indeed, in many respects the comparison for apprenticeship pay for young people is to the education and training market rather than the labour market.

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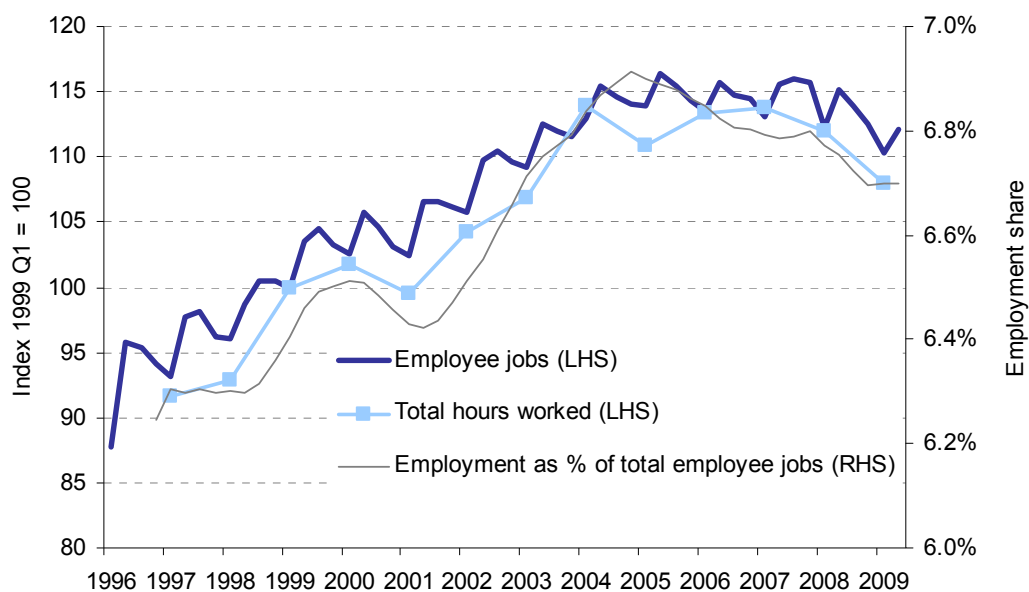
<sup>10</sup> <http://www.berr.gov.uk/files/file53073.pdf>

# Annex A: Employment in low-paying industries

This annex looks at trends in employee jobs in the main low-paying sectors in the UK economy: hotels and restaurants, textile and textile products, security, cleaning, leisure, social care and retail.

**Chart A1. Employee jobs and total hours in hotels and restaurants**

Index and per cent of total



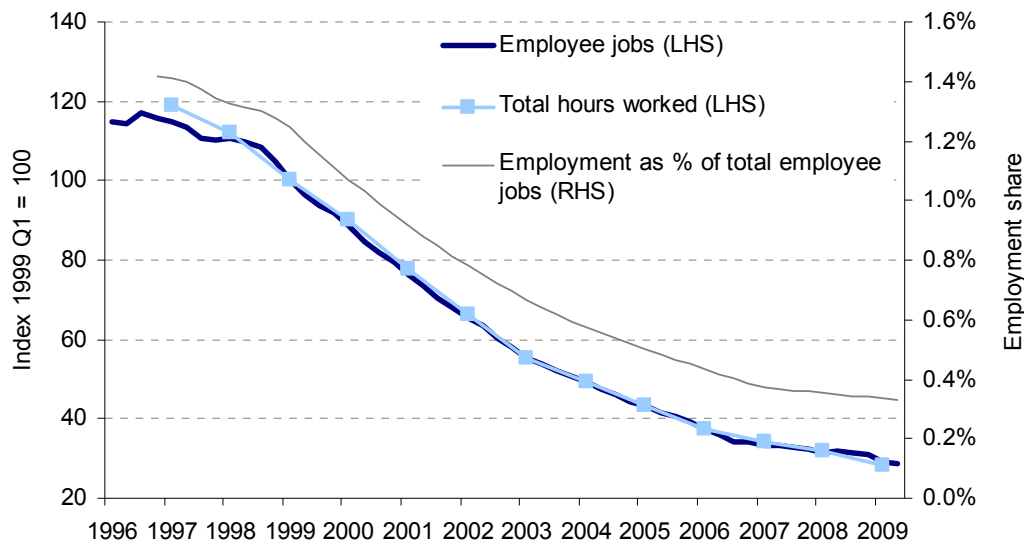
Source: Office for National Statistics, Employee jobs, 4-quarter averages

Not seasonally adjusted.

Total hours worked: employee jobs \* mean weekly total hours from ASHE.

### Chart A2. Employee jobs and total hours in textiles and textile products

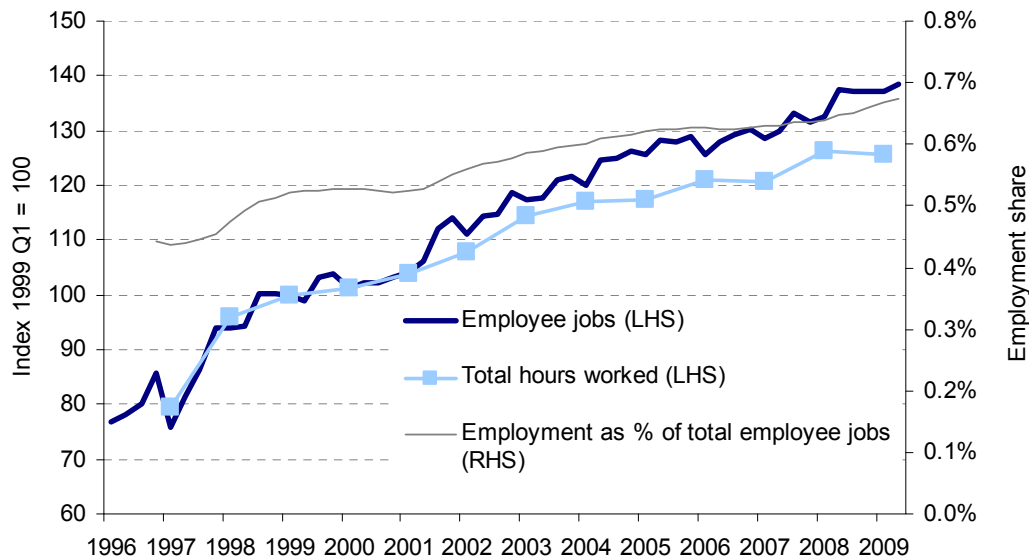
Index and per cent of total



Source: Office for National Statistics, Employee jobs, 4-quarter averages  
 Not seasonally adjusted.  
 Total hours worked: employee jobs \* mean weekly total hours from ASHE.

### Chart A3. Employee jobs in investigation and security activities

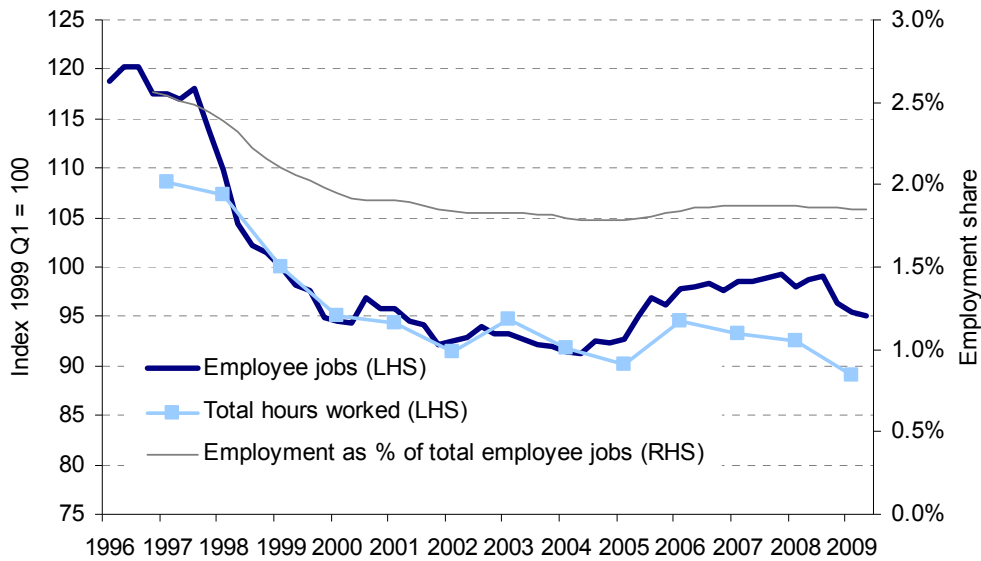
Index and per cent of total



Source: Office for National Statistics, Employee jobs, 4-quarter averages  
 Not seasonally adjusted.  
 Total hours worked: employee jobs \* mean weekly total hours from ASHE.

### Chart A4. Employee jobs and total hours in cleaning

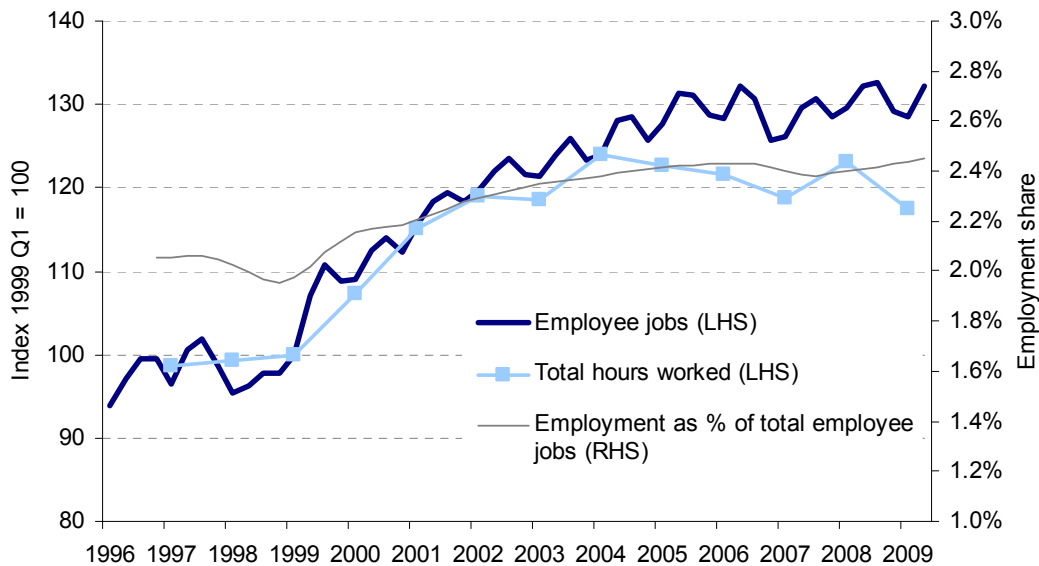
Index and per cent of total



Source: Office for National Statistics, Employee jobs, 4-quarter averages  
 Not seasonally adjusted.  
 Total hours worked: employee jobs \* mean weekly total hours from ASHE.

### Chart A5. Employee jobs and total hours in leisure, travel and sport

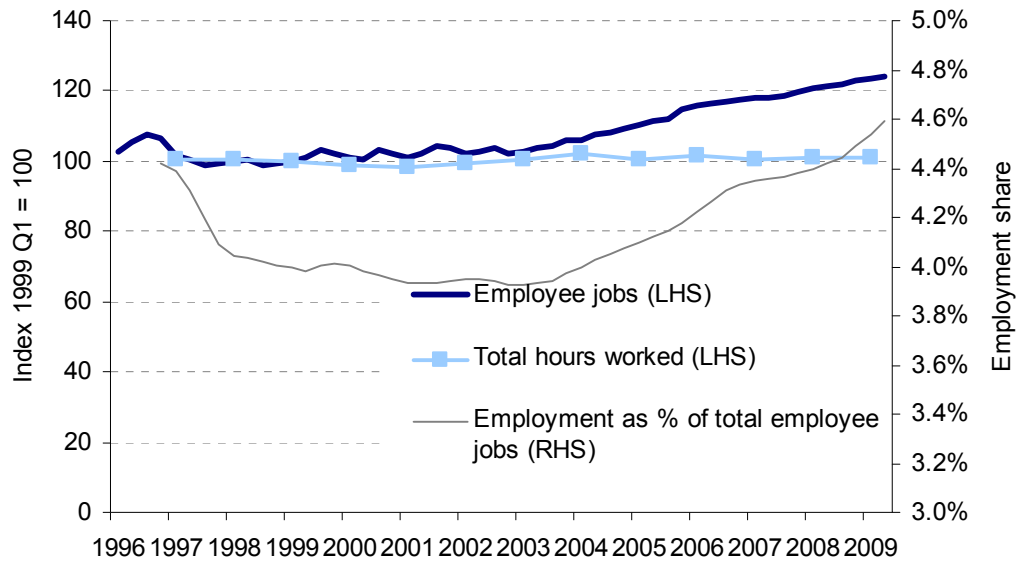
Index and per cent of total



Source: Office for National Statistics, Employee jobs, 4-quarter averages  
 Not seasonally adjusted.  
 Total hours worked: employee jobs \* mean weekly total hours from ASHE.

### Chart A6. Employee jobs and total hours in social care

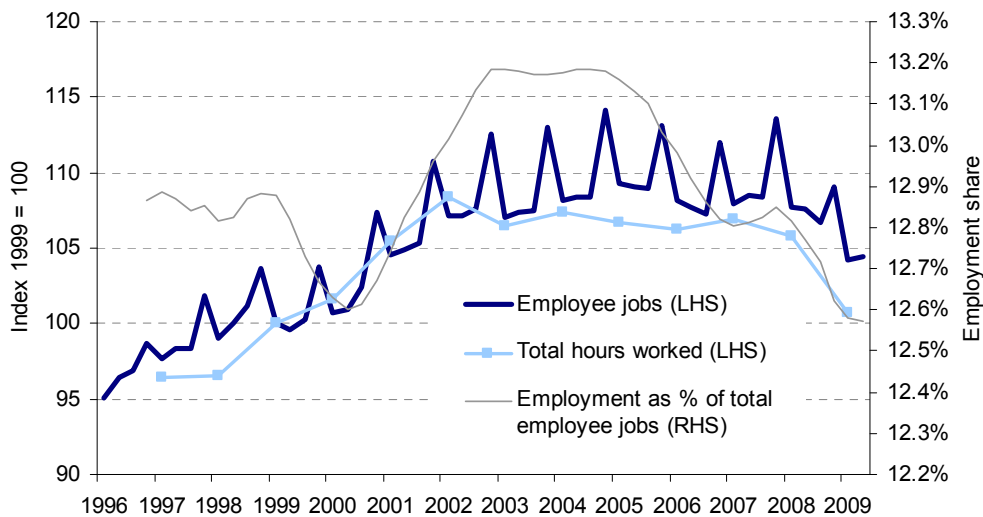
Index and per cent of total



Source: Office for National Statistics, Employee jobs, 4-quarter averages  
 Not seasonally adjusted.  
 Total hours worked: employee jobs \* mean weekly total hours from ASHE.

### Chart A7. Employee jobs and total hours in retail

Index and per cent of total



Source: Office for National Statistics, Employee jobs, 4-quarter averages  
 Not seasonally adjusted.  
 Total hours worked: employee jobs \* mean weekly total hours from ASHE.

# Annex B: International comparison of minimum wage rates

**Table B1. Current adult national minimum wage rates 2008**

	In national currency expressed as hourly rate <sup>1</sup>	In UK £, using exchange rates	Real hourly minimum wages <sup>2</sup>	NMW as percentage of median earnings
Australia	AUS \$13.20	£5.42	8.59	52.2
Belgium	€ 8.04	£5.89	8.23	50.6
Canada	Can \$8.32	£3.97	6.43	41.8
France	€ 8.60	£6.45	8.79	62.7
Greece	€ 3.97	£2.76	4.86	53.1
Ireland	€ 8.65	£6.06	7.55	52.8
Japan	¥687	£3.55	5.22	34.6
Netherlands	€ 7.78	£5.86	8.22	42.9
New Zealand	NZ \$11.81	£4.10	6.99	59.1
Portugal	€ 2.46	£1.80	3.31	47.1
Spain	€ 3.46	£2.48	4.07	44.7
United Kingdom	£5.80	£5.80	8.06	46.1
United States	\$6.16	£3.04	5.59	34.1
G7 average <sup>3</sup>		£4.56	6.82	43.9

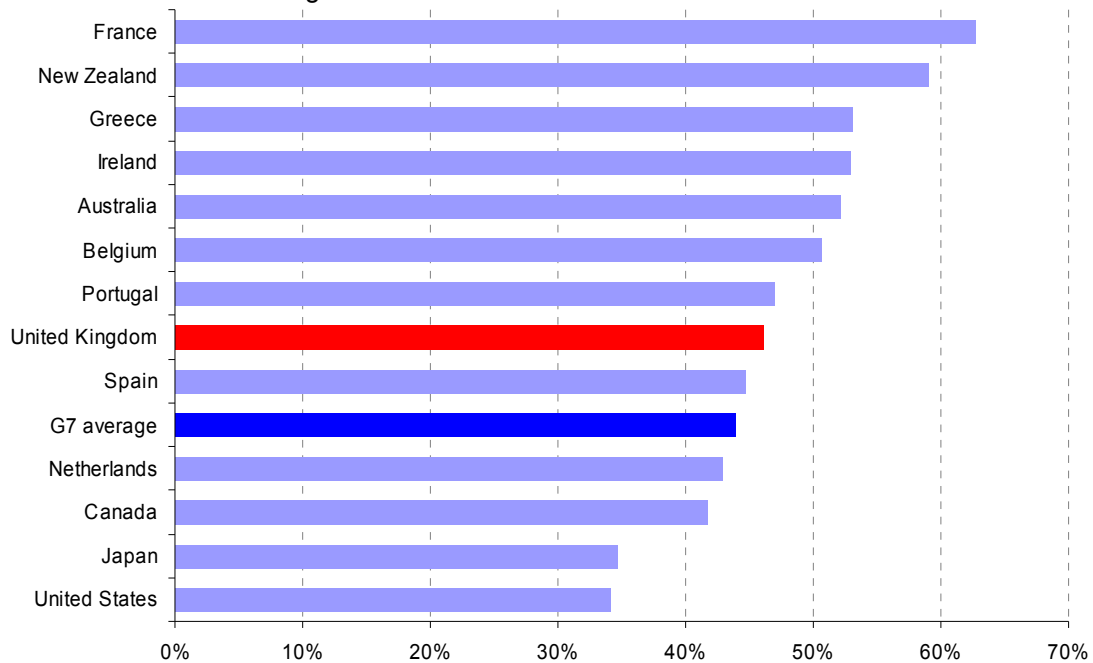
Source: OECD Employment database. Data extracted on 23 October 2009.

1. For countries where the minimum wage is not expressed as an hourly rate, the rate has been converted to an hourly basis assuming a working time of 8 hours per day, 40 hours per week and 173.3 hours per month.

2. US\$ Purchasing Power Parities.

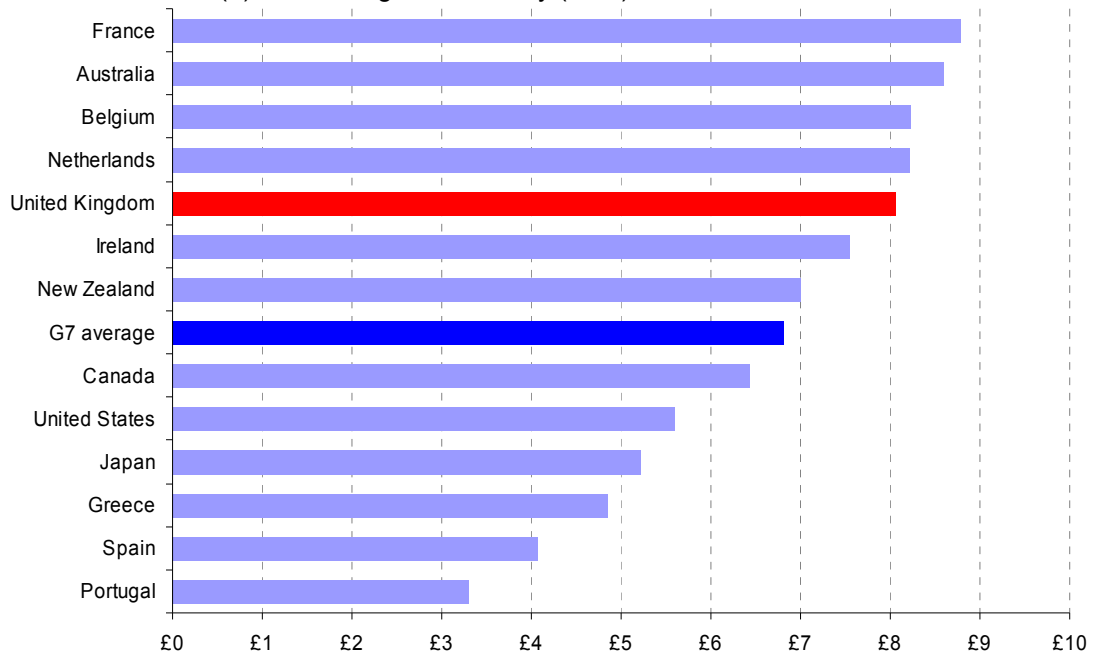
3. Average of G7 countries that have minimum wage rates - excludes Germany and Italy

**Chart B.1: International comparisons of the minimum wage bite**  
Per cent of median earnings



Source: See Table B1

**Chart B.2: International comparisons of the minimum wage**  
NMW in US dollar (£) Purchasing Power Parity (PPP) terms



Source: See Table B1

# Annex C: Review of recent minimum wage research

This short review summarises the recent empirical analysis of the labour market impacts of minimum wages. It focuses on UK research but also highlights some international, particularly US, evidence. For completeness this overview considers the recent literature which has been commissioned by the LPC. The evidence presented so far has been in the context of a growing labour market. There is less evidence, from both the UK and internationally, of the impact of minimum wages in periods of economic downturn.

## Employment effects

There are three broad approaches to analysing the impact of minimum wages on employment using:

- ***Individual-level longitudinal data to estimate the impact on individual employment and hours worked.*** For example, Stewart (2004a and 2004b) compared the employment experience of individual workers affected with those not affected by the minimum wage. He found little evidence that the introduction of the national minimum wage, or the 2000 and 2001 upratings, had an adverse impact on the probability of employment. Dickens and Draca (2005) considered the 2003 uprating, finding insignificant disemployment effects. Similarly, Mulheirn (2008) looked at the 2006 uprating and found no evidence of an adverse employment impact and also found a positive effect on job retention for males from the uprating. Alternatively, Robinson and Wadsworth (2007) investigated the impact of the minimum wage on the incidence of second job holding in Britain. Their results suggest there is little evidence that the extra pay provided by the introduction of the NMW and its subsequent upratings was sufficient to affect the incidence of second job holdings. Jones et al (2006) found that increases in the exit rate from employment, as measured by ASHE, was actually less for the low-paid than the high paid.
- ***Spatial data to explore whether employment declined more in areas with a high proportion of low-wage jobs.*** Stewart (2002) analysed employment changes across 140 areas for the period straddling the introduction of the NMW. Stewart's estimates show no or negative impacts on employment (for example, a 5 per cent rise in the wages for the 5th and 10th percentile was reflected in a 2 per cent reduction in employment), but the latter was not statistically significant. However, Galindo-Rueda and Pereira (2004) did find that the net growth in employment was slightly less in areas with a relatively high proportion of

workers affected by the NMW. While Experian's (2006) study of the relationship between the NMW bite and regional employment found no association for retail, there was a small negative impact on employment in the hospitality sector from the 2003 and 2004 upratings.

- ***Using firm level data to examine whether or not employment fell relatively more in those workplaces with a high proportion of low paid individuals.*** Kersley et al (2004) used the Workplace Employment Relations Survey to find no difference in closure rates between low-paying and other workforces, and low-paying workplaces were less likely to experience a fall in employment of over 25 per cent. Draca et al (2006) also found no correlation between the introduction of the NMW and closures, although they found a fall in profit margins. However, a number of studies of the care home sector have found employment effects. Machin and Wilson (2004) found that those firms affected by the NMW were likely to suffer relative employment falls: for example, a 10 per cent increase in the proportion initially paid below the NMW was associated with 1.3 per cent lower employment growth. There is also evidence of a negative effect on hours.

Overall, while evidence is mixed, there is a lack of strong evidence of negative employment consequences from the introduction and subsequent upratings of the adult National Minimum Wage. However, Neumark and Wascher (2007) argue that the evidence for the UK is not unambiguous. In particular, the existing UK research is limited to estimating short-term effects and there may be longer-term impacts of the minimum wage. In addition, the employment effects of the relatively larger rise in the minimum wage from 2003 to 2006 have not yet been sufficiently studied. Also since the introduction of the NMW the UK has yet to experience an economic downturn. A report by the Income Data Service (2006) studied the UK labour market in the last recession and found that the impacts on low-paying sectors were minimal and that the level of employees in hospitality and retail remained relatively stable over this time period. It should be noted past performance does not necessarily reflect future performance and in previous recessions the UK did not have a NMW.

Indeed there are a much wider range of estimates of the effects of minimum wages on employment in the US. In particular, longer panel studies that incorporate both state and time variation in minimum wages tend to find statistically significant employment effects from minimum wage increases. In contrast, the majority of US studies that found zero or positive effects of the minimum wage on low-skill employment were either short panel data studies or sector-specific case studies (Neumark and Wascher, 2007). One exception to this was a paper by Lutterman (2007) who studied the 1990/91 increase in the federal minimum wage. By estimating the wage corresponding to a constant skill level change over time and using this information to infer each worker's skill from actual wage paid to this individual. Lutterman evidence showed the increase in minimum wage reduced the employment among unskilled workers, however their employment reduction seems largely compensated for by increased employment among the next skill group, which is likely to be a close substitute.

## **Effects on hours worked**

Employers in low-paying sectors may alter hours rather than levels of employment in response to minimum wages.<sup>11</sup> Therefore, it is important to look at the impact on hours worked to understand the impact of the minimum wage on the labour market.

There is some evidence that introduction of the UK National Minimum Wage may have led to a reduction of working hours, particularly over the longer-term. For example, Stewart and Swaffield (2006) found a small but insignificant effect of the minimum wage on hours worked in the UK. However, the lagged effect of the minimum wage on hours is always negative, larger in value and generally statistically significant. The study concludes that the introduction of the minimum wage led to the reduction of one to two hours per week for affected workers. Couch and Wittenburg (2001) found that raising the minimum wage reduced the hours of work of teenagers in the US. As a result, they argue that estimates of the elasticity of teen labour demand with respect to the minimum wage based on employment data consistently understate the effect of minimum wage increases on labour utilisation by 10 per cent to 30 per cent.

## **Effects on wage distribution**

The bottom quarter of the earnings distribution has experienced faster growth than the median since the introduction of the minimum wage, with these increases being greater for those who were lowest paid (Butcher, 2005 and OECD, 2006). This implies an upward 'ripple effect' from the National Minimum Wage within the bottom part of the wage distribution. Lam et al (2006) showed that wages for jobs near the minimum level have moved closely with the minimum wage, maintaining differentials. Other studies have found no strong evidence of ripple effects when the NMW was introduced in 1999 or uprated 2000-02 (Dickens and Manning 2004a, 2004b; Dickens and Draca 2005). However, there is evidence of such effects from the 2003 uprating onwards (Butcher 2005 and Dickens and Manning 2006).

However, as these ripple effects dissipate as they move up the wage distribution, there has also been compression with the average and median wage. Metcalf (2004) found that workers in the bottom decile of pay experienced above average pay rises between 1998 and 2002, with no effects further up the wage distribution. Cameron and Fernandez (2007) find that the difference between the low paid and the average paid (whether mean or median) has been compressed. However, the upper part of the income distribution has been pulling away from the middle at the same time as the lower part has been compressing the middle.

This is an area where further research is needed. Lam et al (2006) suggest that more analysis of small firms is needed, as a number of low-paying sectors are dominated by very small firms, where the impact of small pay changes may be large.

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<sup>11</sup> This is because low-pay sectors have low fixed cost per worker, little on-the-job training, high labour turnover, limits to the substitution of capital for labour and a high incidence of part-time work (OECD 2006).

## **Effects on younger workers**

The academic evidence for the impacts of minimum wages on the young are a little more mixed, with somewhat more evidence for disemployment effects than is the case with adults.

Neathey, Ritchie and Silverman (2005) found little evidence in the retail and hospitality sectors of a link between the minimum wage and decisions to employ young workers of various ages. However, Frayne and Goodman (2005) found that every 1 per cent increase in the 16–17 year old wage resulted in a 3.6 per cent decrease in employment in hours amongst this group, implying that a minimum wage of £3.00 would reduce employment in hours by around 6 per cent.

Several international studies have found evidence that minimum wages can have disemployment effects on the young. Campolieti, Fang and Gunderson (2005) found minimum wage elasticities ranging from  $-0.3$  to  $-0.5$ . Wessels (2005) found significant negative effects on teenager labour force participation for 16-19 year olds in the US.

Dickerson and Jones (2004) found that a minimum wage set between £2.50 and £4.00 will have negligible effects on education participation of 16-17 year olds. However, Rice (2006) finds that the probability of continued participation of young men in full-time education declines significantly as the expected wage increases, although the effects for young women are smaller and not statistically significant. Based on this analysis, Rice (2006) suggests that the impact of 'a cautiously set' minimum wage for 16 and 17 year olds on educational and employment outcomes is likely to be small. A NMW set at a level corresponding to the lowest decile of the observed distribution of actual earnings would reduce the expected participation rate in full-time further education among young males by no more than 1 percentage point. A more generous NMW set at the equivalent of the lower quartile would result in a decline of between 1 and 2.4 percentage points depending on the extent of the spillover effects on the overall distribution of wage offers.

## **Effects on profitability and prices**

The impact of the minimum wage on employment will be muted the greater the extent to which the rise in labour costs is passed on in the form of higher prices or absorbed in a fall in profits.

The impact on overall inflation of the NMW is likely to be small, as the NMW only applies to a relatively small proportion of total jobs. However, there is some evidence of increases in the relative prices of goods and services produced by minimum wage workers. Wadsworth (2007) found prices rose, on average, by an extra 0.8 per cent a year relative to the RPI after the NMW was introduced. Wadsworth (2007) also found that there was considerable variation in the inflation rate movement of individual minimum wage goods, as identified by Wadsworth. Hotels for example experienced a 2 per cent raise above general inflation, while the price of pub drinks followed the general price inflation.

There is also some limited evidence that the initial introduction of the NMW caused a relative fall in profits in the more affected firms. Draca et al. (2006) found that average profit margins fell for those most affected by the National

Minimum Wage by 8 per cent to 11 per cent, compared to the control group of higher-wage firms. Their analysis of a sample of care homes also shows that those that had to raise their wages the most experienced the biggest drop in profits. In a follow-up study, Georgiadis (2006) found a negative association between homes with a larger fraction of affected workers and profitability, but it was not statistically significant. Experian (2006) found that relative gross operating surplus in the retail and hospitality sectors between 1999 and 2004 was lower in regions where the bite of the NMW was strongest but again the association was not statistically significant.

### **Effects on small firms**

The Department of Business, Enterprise and Regulatory Reform previously conducted an annual small business survey between 2004 and 2006, in which they asked 9,000 small and medium enterprises (SMEs) views on a host of issues including obstacles to achieving business success. Around 20 per cent of respondents see regulation as the main barrier to business success; of these respondents only a minority (about 2 per cent) felt that the NMW was the main regulatory barrier. Further, from 2004 – 2006 the number of respondents who felt the NMW was the main barrier of business success has fallen from 3.6 per cent in 2004 to 1.4 per cent in 2006, this is a fall of 2.2 percentage points. Mason et al (2006) uses the biennial membership survey of the Federation of Small Businesses and finds that the NMW has had a limited effect on small business.

# Annex D: Beneficiaries of the 2009 NMW uprating by sex and region

**Table D.1. Number of workers that stand to benefit from the October 2009 National Minimum Wage uprating by age and sex**

	Male	Female	Total
16-17	13	10	24
18-21	65	56	122
22 and over	294	541	834
<b>Total</b>	<b>372</b>	<b>607</b>	<b>980</b>

Source Office for National Statistics, Annual Survey of Hours and Earnings

These data take account average earnings growth between the period April 2009 and September 2009; uprating from £3.53 to £3.57 for 16-17 year olds, £4.77 to £4.83 for 18- 21 year olds and from £5.73 to £5.80 for those 22 and over. ASHE measures number of jobs; therefore beneficiaries calculated assuming workers do not hold more than one job at the NMW. Numbers may not sum to total due to rounding.

Estimates of beneficiaries by country and government office region are also provided (Table D.2).

**Table D.2. Number of workers that stand to benefit from the October 2009 National Minimum Wage uprating by country and government office region**

Country or region	Beneficiaries
Wales	55
Scotland	79
Northern Ireland	42
<b>England</b>	<b>806</b>
North-East	56
North-West and Merseyside	134
Yorkshire & Humberside	97
East Midlands	83
West Midlands	100
Eastern	81
London	80
South East	99
South West	76
<b>United Kingdom</b>	<b>980</b>

Source Office for National Statistics, Annual Survey of Hours and Earnings

These data take account average earnings growth between the period April 2009 and September 2009; uprating from £3.53 to £3.57 for 16-17 year olds, £4.77 to £4.83 for 18- 21 year olds and from £5.73 to £5.80 for those 22 and over. ASHE measures number of jobs; therefore beneficiaries calculated assuming workers do not hold more than one job at the NMW. Numbers may not sum to total due to rounding.

# Annex E: Technical note

## **Annual Survey of Hours and Earnings (ASHE)**

The Annual Survey of Hours and Earnings (ASHE) provides information about the levels, distribution and make-up of earnings and hours paid for employees within industries, occupations and regions.

In this report, estimates for 2004-2009 have been produced using ASHE, which replaced the New Earnings Survey (NES) in 2004. ASHE improves on the NES by extending the coverage of the survey sample and introducing weighting.

From 1997-2003, estimates are based on NES datasets that have been reworked using ASHE methodology. However, these datasets exclude the supplementary ASHE information and as a result there is an inconsistency between estimates in 2003 and 2004.

A further break in the data was also introduced in 2006 when ONS introduced a small number of methodological changes, including changes to the sample design itself as well as the introduction of an automatic occupation coding tool.

To identify these changes, ONS published two estimates for both 2004 and 2006 – one on the new methodology and one based on the previous methodology. Where appropriate these inconsistencies are identified in this report.

### **Changes to weights**

In previous editions of the NMW economic evidence charts and figures stating the bite of the NMW have been calculated using the low-pay weight from the ASHE. This year the analysis has been amended and the bite of the NMW now uses the standard weight of the ASHE, in line with ONS and LPC methodologies. Figures for previous years have all been revised to reflect this change.

### **Labour Force Survey (LFS)**

The Labour Force Survey is a quarterly survey containing the responses of approximately 120,000 individuals surveyed from 52,000 households. The LFS is the best estimate of employment and individual socio-economic characteristics and is widely used across Government and wider labour market analytical work.

### **Changes to unemployment estimates**

In this edition of the NMW economic evidence paper all unemployment estimates now comply with the International Labour Organisation (ILO) definition of unemployment. All unemployment rates are shown as the proportion of economically active individuals which are defined as unemployed by the ILO definition. For more information see [www.ilo.org](http://www.ilo.org).

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