

## 5. Public sector pensions and pay

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### Summary

- Public spending on public service pensions, having risen dramatically over the last forty years, is set to fall as a share of national income. This is due to reforms already implemented by the last Labour government and the current government that will sharply reduce the generosity of these schemes for many members. Public sector workers will still have much more generous pensions than those typically available to their private sector counterparts.
- The two major structural reforms to public pensions – the move to career average from final salary pensions and the alignment of normal pension ages to the state pension age – are coherent changes, with the latter making sense in the context of increasing longevity at older ages.
- Decisions over the rates of accrual and indexation mean that the latest reforms might not save money in the long term. Lower earners are likely on average to benefit from the reforms, while higher earners will lose somewhat. These distributional consequences enhance rather than diminish the differences between public and private sector labour markets.
- Average hourly wages of public sector workers are 24.3% higher than those in the private sector. Most – but not all – of this difference can be explained by public sector workers typically having greater experience and more education. After taking into account these differences, average hourly wages are estimated to be 8.3% higher in the public sector than in the private sector.
- This estimated public sector pay premium has grown over the period since 2008, largely due to the fall in private sector earnings during the recession. The government’s proposed squeeze on public sector pay, which is to run until 2014–15, will roughly eliminate this unintended increase.
- After taking into account differences in age and education, lower-paid workers have a greater estimated public sector pay premium than higher-paid workers. The government is relatively protecting the lowest-paid in the public sector. Lower earners will also typically gain, and high earners lose, from the public service pension reforms. Both enhance rather than diminish the differences between public and private sector labour markets.
- The estimated public sector pay premium varies remarkably across regions. There is no evidence of a public sector pay premium in the South East of England, while in Wales the estimated premium is 18.0% for men and 18.5% for women. This provides a strong case for having regional variation in the pay awards that are set centrally. But there is also tentative evidence that the premium varies across different occupations within the same region; therefore any regional variation in public sector pay awards would need to be carefully designed.

## 5.1 Introduction

Public sector pensions and public sector pay have both been the subject of much recent discussion. Prior to the general election, both the Conservative Party and the Liberal Democrats called for a review of public sector pensions. After forming the government, they duly set up the Independent Public Service Pensions Commission, which was led by the former Labour Secretary of State for Work and Pensions, Lord Hutton.<sup>1</sup> This made a number of recommendations, most of which the government is now in the process of implementing. Given the large fiscal consolidation that is currently underway, and in particular the planned deep cuts to spending on public services (see Chapter 3), it is also unsurprising that the government is looking to control the size of the public sector pay bill both through reducing the numbers employed in the public sector and through tight control of public sector pay.

A joined-up approach to policymaking requires that the generosity of public service pensions – and the impact of any reforms on different groups – should be considered alongside public sector pay. What matters is the extent to which the overall remuneration package offered by public sector employers is well designed to attract, motivate and retain sufficient numbers of workers of the desired quality in a way that provides good value to the taxpayer. In general, this is likely to mean that public sector workers should have an overall package – in terms of financial and non-financial benefits – that is similar to that available for similar roles in the private sector.

Therefore this chapter considers both public service pensions and public sector pay. It starts in Section 5.2 by looking at the direction of reform of public sector pensions in recent years and the government's latest changes, in particular focusing on their impact on the average generosity (and therefore cost) of these schemes and their implications for different types of public sector workers. Section 5.3 then turns to examine public sector pay, providing a careful comparison with the pay of workers in the private sector. In particular, this section examines whether any differences in pay are long-standing or new, and the extent to which they vary across different types of workers or across regions of the UK. Section 5.4 concludes.

## 5.2 Public sector pensions

This section begins by looking at public spending on public service pensions over time and the impact of reforms already implemented on the projections for future spending. It then goes on to describe the latest set of reforms and the impact that they will have on the pensions that public sector workers accrue.

### Aggregate cost of public sector pensions

One measure of the cost of public service pensions to the taxpayer is the amount spent on providing these pensions.<sup>2</sup> The cost to pay the pensions of former public sector workers

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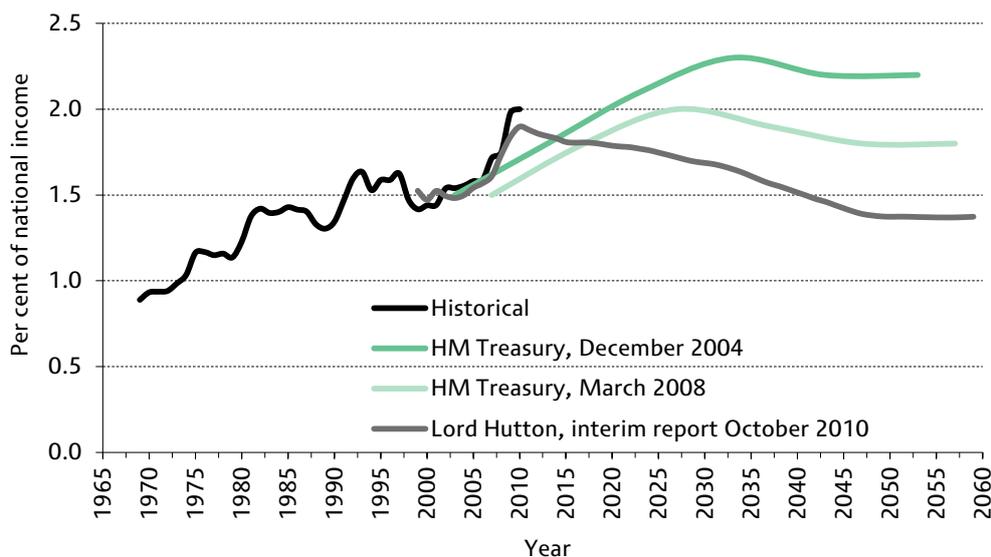
<sup>1</sup> See [http://www.hm-treasury.gov.uk/indreview\\_johnhutton\\_pensions.htm](http://www.hm-treasury.gov.uk/indreview_johnhutton_pensions.htm).

<sup>2</sup> There are a number of other methods for valuing these schemes. See, for example, box 4.B on page 57 of Independent Public Service Pensions Commission, *Independent Public Service Pensions Commission: Interim Report*, October 2010 ([http://www.hm-treasury.gov.uk/d/hutton\\_pensionsinterim\\_071010.pdf](http://www.hm-treasury.gov.uk/d/hutton_pensionsinterim_071010.pdf)).

in 2011–12 is forecast by the Office for Budget Responsibility (OBR) to be £28.2 billion.<sup>3</sup> The black line in Figure 5.1 shows that, over the last forty years, spending on these schemes has increased gradually from just under 1.0% of national income in the late 1960s to 2.0% of national income now. This increase reflects a combination of maturing of the schemes and greater longevity among retirees.

Figure 5.1 also shows three different vintages of forecasts for spending on public service pensions as a share of national income. The first is taken from the Treasury’s long-term public finance report of December 2004 (and is the earliest official forecast for the cost of these schemes that we have been able to find). This forecast implied that the cost of public service pensions to the taxpayer would be running at around 2.3% of national income in the middle of this century, a significant increase on the 1.5% of national income it was running at over the decade or so up to when this forecast was made. The second forecast is taken from the Treasury’s long-term public finance report of March 2008. By this date, the last Labour government had implemented reforms to public service pensions which, in particular, meant that most new entrants to these schemes would only be able to receive a full pension from age 65 rather than age 60. As a result, spending on public service pensions was forecast to peak at 2.0% of national income and then to fall back to 1.8% of national income in the middle of this century.

Figure 5.1. Public service pension spending over time



Source: Historical data on public service pension spending calculated from table 6.1.45 of Office for National Statistics, *Blue Book* (calculated as series QYJT plus NMWK less EWRO). Historical data on GDP from HM Treasury ([http://www.hm-treasury.gov.uk/data\\_gdp\\_fig.htm](http://www.hm-treasury.gov.uk/data_gdp_fig.htm)). Projections taken from: table 5.1 on page 50 of HM Treasury, *Long-Term Public Finance Report: An Analysis of Fiscal Sustainability*, December 2004 ([http://webarchive.nationalarchives.gov.uk/20100407010852/http://www.hm-treasury.gov.uk/prebud\\_pbr04\\_adlongterm.htm](http://webarchive.nationalarchives.gov.uk/20100407010852/http://www.hm-treasury.gov.uk/prebud_pbr04_adlongterm.htm)); table 4.1 on page 36 of HM Treasury, *Long-Term Public Finance Report: An Analysis of Fiscal Sustainability*, March 2008 ([http://webarchive.nationalarchives.gov.uk/20100407010852/http://www.hm-treasury.gov.uk/bud\\_bud08\\_longterm.htm](http://webarchive.nationalarchives.gov.uk/20100407010852/http://www.hm-treasury.gov.uk/bud_bud08_longterm.htm)); and chart 4.B on page 66 of Independent Public Service Pensions Commission, *Independent Public Service Pensions Commission: Interim Report*, October 2010 ([http://www.hm-treasury.gov.uk/d/hutton\\_pensionsinterim\\_071010.pdf](http://www.hm-treasury.gov.uk/d/hutton_pensionsinterim_071010.pdf)).

<sup>3</sup> See table 4.23 on page 149 of Office for Budget Responsibility, *Economic and Fiscal Outlook: November 2011* ([http://cdn.budgetresponsibility.independent.gov.uk/Autumn2011EFO\\_web\\_version138469072346.pdf](http://cdn.budgetresponsibility.independent.gov.uk/Autumn2011EFO_web_version138469072346.pdf)).

The final, and most recent, projection shown in Figure 5.1 is taken from the 2010 interim report of Lord Hutton's Independent Public Service Pensions Commission. By this date, another reform affecting the generosity of these schemes significantly had been implemented. The new government in the June 2010 Budget announced that in payment (and for uprating to retirement for deferred members<sup>4</sup>), these pensions would be indexed in line with a different measure of inflation: with the consumer price index (CPI) rather than the retail price index (RPI). Because the CPI is expected to increase less quickly than the RPI, this reform reduces the generosity of these schemes to their members and therefore the cost to the taxpayer of providing them. This reform has a more immediate impact on costs than the last Labour government's reform since it did not only apply to new entrants: current members will receive lower pensions, with future accrual and pensions paid relating to past service both being made less generous, and deferred members will receive lower pensions in relation to their accrued service.

Lord Hutton has suggested that this forecast might no longer be accurate as a result of the worsening outlook for the UK economy.<sup>5</sup> It is true that national income is now expected to be lower going forwards, thereby increasing projected spending as a share of national income via the reduced denominator. However, it is also the case that projected spending in cash terms (the numerator) is also likely to be reduced as a result of two policies announced by the Chancellor, George Osborne, in his Autumn Statement: first, the additional squeeze on public sector pay in 2013–14 and 2014–15 (since lower pay will automatically lead to lower defined benefit pensions); and second, the additional reduction in the size of the public sector workforce that will likely arise as a result of the additional spending cuts planned for 2015–16 and 2016–17. Given the scale of these two policies, it seems unlikely that future spending on public service pensions as a share of national income would actually now be higher than it was forecast to be prior to the Autumn Statement.

## The latest reforms

Lord Hutton's final report<sup>6</sup> proposed further reform to public service pensions. In particular he recommended that:

- defined benefit schemes should remain in the public sector, but for future accrual these should be based on a career average rather than a final salary basis;
- with the exception of the uniformed services (police, firefighters and the armed forces), the normal pension age (NPA) – that is, the age at which a full pension can be received – should be aligned with the state pension age (SPA);
- existing public sector workers' accrued rights (but not their future accrual) should be protected from these changes.

There is a logic to these proposals.

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<sup>4</sup> That is, individuals who were previously members of a public service pension but are no longer accruing additional rights – for example, because they no longer work in the public sector but are also not yet drawing their pension.

<sup>5</sup> See Lord Hutton's interview on 'The World This Weekend', BBC Radio 4, 4 December 2011 (reported at <http://www.bbc.co.uk/news/uk-politics-16022001> and <http://www.bbc.co.uk/news/uk-16021345>).

<sup>6</sup> Independent Public Service Pensions Commission, *Independent Public Service Pensions Commission: Final Report*, March 2011 ([http://cdn.hm-treasury.gov.uk/hutton\\_final\\_100311.pdf](http://cdn.hm-treasury.gov.uk/hutton_final_100311.pdf)).

The state is able to offer defined benefit pensions as it is better able to manage, for example, longevity risk than are individuals or the private sector. A career average is arguably a more logical measure of earnings to use than final salary. In final salary schemes, two otherwise-identical employees doing the same job for the same pay will accrue different pension entitlements according to their future pay (so, for example, under a final salary scheme, teachers who go on to be headteachers accrue greater pensions than otherwise-identical teachers who do not go on to become headteachers).

Aligning the NPA to the SPA is a coherent response to the challenge of rising longevity at older ages (although it is less clear why the uniformed services, who are presumably also experiencing rising longevity, are best rewarded with a lower NPA than other public sector workers rather than, say, higher pay or more financial help with relocation and retraining should a career change prior to retirement be appropriate).

Aligning future pension accrual for both existing and new members of these schemes means that otherwise-equivalent individuals doing the same job, on the same pay, will also accrue the same pension entitlements. (At present, those who joined schemes after the implementation of the last Labour government's reforms can be accruing lower pension rights than otherwise-identical individuals doing the same jobs who joined the schemes earlier.)

The government accepted these recommendations, and in negotiations with the public sector unions also proposed that those within 10 years of their current NPA would be protected from any losses from these reforms.<sup>7</sup> Note that this has the potential to create large differences in the value of the remuneration received by otherwise-identical individuals just a few weeks apart in age.

But how generous these schemes will actually be is determined by two crucial parameters: the accrual rate and the uprating factors. The accrual rate determines the proportion of each year's earnings that should be paid out each year as a pension. For example, an accrual rate of  $1/60^{\text{th}}$  means that someone with 40 years of service would receive a pension worth  $40/60^{\text{th}}$  – i.e.  $2/3^{\text{rds}}$  – of their earnings. Lord Hutton made no recommendation on what the level of the accrual rate should be. The uprating factors determine how earnings in each year are indexed to the year in which the pension is first received. Lord Hutton recommended that while an individual was an active member of their scheme, their earnings each year should be uprated in line with growth in average earnings. He did not make a recommendation on how the pension rights of deferred members (i.e. those who have left their scheme but are not yet drawing their pension) should be uprated each year.

As well as affecting the overall generosity of the scheme, the choice of accrual rate and uprating factors also affects the extent to which individuals with different earnings trajectories receive relatively more or less generous pensions. Individuals who experience relatively rapid earnings growth during their lifetimes benefit more from a scheme that puts greater weight on earnings towards the end of their careers and less weight on their earnings in earlier years. The most extreme form of this is a (literal) final salary scheme. Someone who experiences much lower earnings growth is relatively

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<sup>7</sup> See statement by Danny Alexander, Chief Secretary to the Treasury, 2 November 2011 ([http://www.hm-treasury.gov.uk/statement\\_cst\\_021111.htm](http://www.hm-treasury.gov.uk/statement_cst_021111.htm)). For a recent and detailed discussion of the reform process, see D. Thurley, 'Public service pension reform – 2010 onwards', House of Commons Library, Standard Note SN05768, January 2012 (<http://www.parliament.uk/briefing-papers/SN05768.pdf>).

better off in a scheme that puts less weight on their final salary but has a higher annual accrual.

The government has now published its 'Heads of Agreement' on public service pension reform, which has been reached with the Principal Civil Service Pension Scheme, the NHS Pension Scheme, the Teachers' Pension Scheme and the Local Government Pension Scheme (which, in terms of numbers of active members, are the four largest public service pension schemes). The key details released by the government for the first three of these pension schemes are summarised in Table 5.1.

**Table 5.1. Key features of the proposed latest public service pension reforms**

Pension scheme	Principal Civil Service Pension Scheme	NHS Pension Scheme (England and Wales)	Teachers' Pension Scheme (England and Wales)
Gross cost ceiling	22.5%	21.9%	21.7%
Taxpayers' cost ceiling	16.9%	12.1%	12.1%
Employees' cost ceiling	5.6%	9.8%	9.6%
Career average	Yes	Yes	Yes
Normal pension age	SPA	SPA	SPA
Accrual rate	1/44 <sup>th</sup>	1/54 <sup>th</sup>	1/57 <sup>th</sup>
In-service uprating	CPI	CPI + 1.5	CPI + 1.6
Deferred members' uprating	CPI	CPI	CPI

Source: [http://www.hm-treasury.gov.uk/press\\_146\\_11.htm](http://www.hm-treasury.gov.uk/press_146_11.htm).

While these three pension schemes will all operate on a career average basis, the other features of the schemes differ. In particular, the Principal Civil Service Scheme has a relatively more generous accrual rate and a less generous rule for uprating earnings in service (but note, unlike the NHS and the Teachers' Pension Schemes, the civil service already had a career average scheme (NUVOS) that operated with an accrual rate of 2.3% (roughly 1/43<sup>rd</sup>) and price indexation). Compared with the NHS Pension Scheme and the Teachers' Pension Scheme, this will be relatively less generous to those with low pay trajectories and relatively more generous to higher flyers and to those who leave to work for another employer. There are also small differences between the NHS Pension Scheme and the Teachers' Pension Scheme, with the latter having a slightly more generous uprating for benefits in service (CPI plus 1.6 percentage points a year rather than CPI plus 1.5 percentage points) and slightly less generous annual accrual (1/57<sup>th</sup> rather than 1/54<sup>th</sup>). It is unclear whether such small differences between these two schemes is justified on the basis of evidence on the typical career paths of the members of these schemes (or their responsiveness to the incentives implied by these schemes), or whether it would have been better, for simplicity, to have had the same rules for members of both schemes.

The government has decided that deferred members' pension rights should be uprated in line with the CPI. In the NHS Pension Scheme and the Teachers' Pension Scheme, the fact that uprating of pension rights is more generous for active members than for deferred members will provide a significant incentive for public sector workers to remain in the public sector.

The government has also agreed an overall cost ceiling, which sets a limit on the cost of these schemes as a share of earnings, for each of these schemes, along with a division of

how that should be shared between employees and taxpayers. These ceilings are intended to aid negotiations between the Cabinet Office and the relevant public sector unions, as they will allow different scheme options that fall within these ceilings to be considered as potentially viable options to the government. Out of the three schemes in Table 5.1, the ceiling on taxpayer contributions is highest for the Principal Civil Service Pension Scheme and the same for the NHS and the Teachers' Pension Schemes.

## **Public service pension reforms: impact on individuals**

The government has not yet published estimates of the impact of the final reforms either on the estimated cost to the taxpayer or on how benefits are distributed across different types of members. Hopefully, such analysis will follow once the remaining details of how the schemes will operate are finalised. The size of the reduction in generosity – and therefore the cost to the taxpayer – will depend on a number of outcomes.

A crucial variable is the way in which public sector pay grows relative to the CPI. If pay grows relatively more quickly, then the reforms will have saved more money. This is because when public sector pay is growing relatively fast, this will increase the generosity of a final salary scheme relative to a career average scheme where in-service benefits are uprated by the CPI (or by the CPI plus a fixed amount). In a scenario of relatively high public sector pay growth, the government will have saved more from moving away from a final salary scheme. On the other hand, if earnings in the future grow less quickly than expected relative to the CPI, then it would have been relatively cheaper to have maintained final salary schemes.

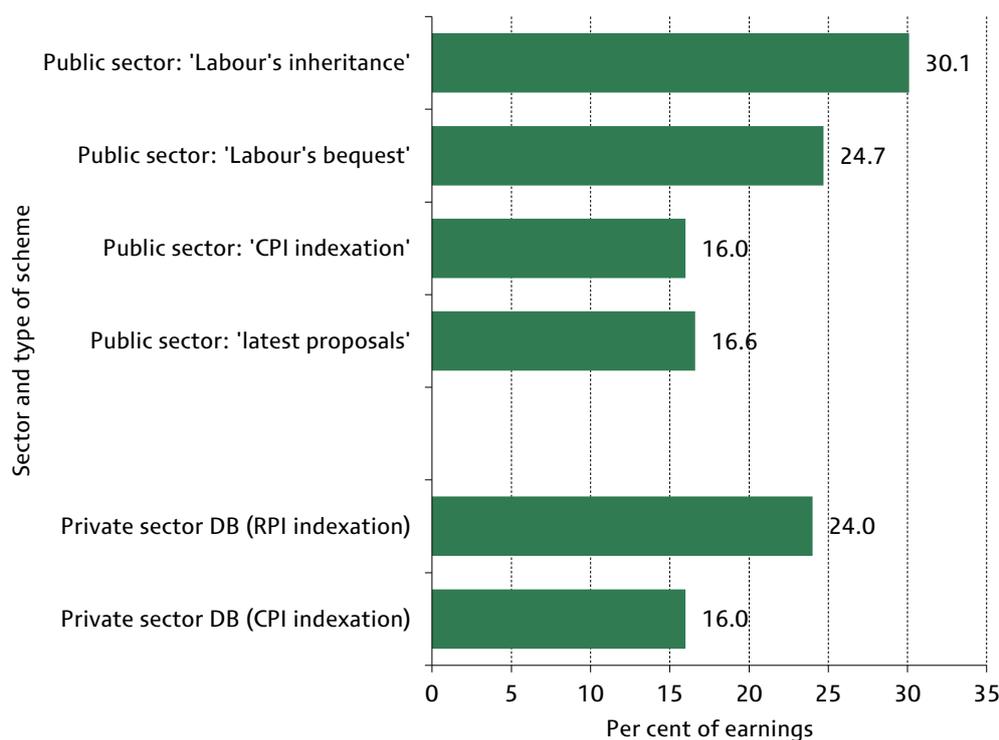
The estimated generosity of some stylised example schemes is shown in Figure 5.2. These take data on public sector workers who are members of public service pension schemes and use information on their age, sex, pension tenures, estimated earnings trajectories (which are modelled allowing for variation by sex, age and years of education), social class, marital status and the age and social class of their partner (where relevant) to compute the one-period pension accrual as a share of current earnings. This is the increase in the present discounted value of pension rights, measured as a share of current earnings, that the individual will receive by working and remaining in the scheme for one more year. The figures shown in Figure 5.2 are the mean of the estimated values of the stylised public service pension scheme for a sample of members of public service schemes. These values include both the individual's own pension and, where relevant, the value of the pension that would be paid to their surviving partner. But they do not include the value of any other aspects of the pension, such as ill-health retirement provisions.

The first row shows the average generosity for public sector workers of a final salary scheme, with an NPA of age 60, that is RPI indexed in payment ('Labour's inheritance'). This is estimated to be worth 30.1% of earnings: i.e. on average, public sector workers in such a scheme see their pension rights increase by an average of 30.1% of their gross earnings in one year. The figure for an equivalent scheme with an NPA of age 65 ('Labour's bequest') is 24.7%. This suggests that the long-run effect of Labour's reform is to reduce the generosity of public service pensions by an average of 5.4% of earnings, or by 18%, of what it would have been without reform.<sup>8</sup> Of course, in the near term, the

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<sup>8</sup> This assumes constant longevity at older ages. One of the reasons that the schemes have become more expensive is that longevity at older ages has increased and hence the value of the pension, measured in this way, will also have increased.

Figure 5.2. Mean one-period pension accrual under different example scheme rules (long-term impact)



Note: For details of the methodology and assumptions, see R. Crawford, C. Emmerson and G. Tetlow, 'Occupational pension value in the public and private sectors', IFS Working Paper 10/03, 2010, (<http://www.ifs.org.uk/publications/4804>) and R. Disney, C. Emmerson and G. Tetlow, 'What is a public sector pension worth?', *Economic Journal*, 119, 517–35, 2009 (<http://www.ifs.org.uk/publications/4666>). Source: Authors' calculations using data from the British Household Panel Survey combined with age–earnings profiles estimated from the Labour Force Survey.

complete protection for current members from this increase in the NPA means that the average reduction in generosity, and therefore the saving to the taxpayer, will be lower.

The third row assumes a pension scheme the same as 'Labour's bequest' but with CPI rather than RPI indexation. This assumes that the CPI runs 1.4 percentage points a year lower than the RPI, as suggested by modelling recently carried out by the Office for Budget Responsibility.<sup>9</sup> This is estimated to represent a substantial reduction in generosity, making such schemes worth, on average, 16.0% of gross earnings. Those with longer life expectancies (women, younger individuals, and those from social class groups with greater average life expectancies) and those married to individuals who are expected to outlive them (and therefore to benefit from a dependant's pension) lose relatively more from this change.

Further to the June 2010 Budget decision to shift from RPI to CPI indexation, the Chancellor announced in the October 2010 Spending Review that the amount members of public service pension schemes contribute would increase by an average of 3% of earnings by 2014–15 (with members of the armed forces exempt from this increase). This does not affect the amount of pension accrued each year (and therefore does not

<sup>9</sup> See R. Miller, 'The long-run difference between RPI and CPI inflation', Office for Budget Responsibility, Working Paper 2, November 2011 (<http://cdn.budgetresponsibility.independent.gov.uk/Working-paper-No2-The-long-run-difference-between-RPI-and-CPI-inflation.pdf>).

affect the estimated values in Figure 5.2), but it does represent a saving for the taxpayer and reduction in take-home pay for those public sector workers who are affected. The increase is being phased in gradually from April 2012 and is projected to save the taxpayer an estimated £1.8 billion annually from 2014–15.

The fourth row of Figure 5.2 takes the scheme rules as set out in the Heads of Agreement for the NHS Pension Scheme: that is, a career average scheme, with an annual accrual of 1/54<sup>th</sup>, in-service indexation of CPI plus 1.5 percentage points and an increased NPA.<sup>10</sup> The calculations suggest that, at least on average, this reform does not significantly change the generosity of these schemes in the long run. This finding is in line with that of recent analysis by John Ralfe.<sup>11</sup>

But this is not to suggest that there is no saving to the taxpayer. Existing members of public service pension schemes prior to Labour's reform could still have an NPA of age 60 – but under the current government's reforms will find that, with the notable exception of those working in the uniformed services, their future pension accrual is based on an NPA that is equal to their SPA (unless they are currently within 10 years of their NPA). This will be less generous for many individuals, and will – at least in the short and medium term (but not the long term) – deliver savings to the taxpayer.

The final two rows of Figure 5.2 show the estimated average generosity of defined benefit pension schemes in the private sector for the minority who are members of such a scheme. For members of private sector defined benefit schemes with RPI uprating of pensions when they are drawn, these are estimated to be worth, on average, 24.0% of earnings. This is comparable to the value of public sector schemes estimated under the 'Labour's bequest' scenario and is more generous than the estimated generosity of the 'CPI indexation' scheme. For those who are a member of a scheme with CPI uprating, this falls to an average of 16.0% of earnings, which is comparable to both the 'CPI indexation' and the 'latest proposals' public sector schemes.

But the key fact is that there are extremely large differences in the coverage of pensions between the public and private sector. In 2010 in the public sector, 79.0% were members of a defined benefit pension, compared with just 11.0% in the private sector. This latter figure is falling over time as private sector defined benefit schemes are typically closed to new entrants and it is increasingly the case that they are being closed to all future accrual – for example, the equivalent figure in 2009 was 12.4%, in 2008 13.6%, and back in 1997 it was at 33.9%.<sup>12</sup>

Overall, the value of a pension will depend on how much is being accrued, rather than on whether the scheme operates on a defined benefit or a defined contribution basis. Defined contribution schemes are more common in the private sector than in the public sector. But once membership of all types of workplace-based schemes is accounted for, there is still a stark difference between the public and the private sector. The vast majority of public sector workers (83.9%) are members of a workplace-provided pension

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<sup>10</sup> The NPA is to be increased to be in line with the SPA. But because the long-run impact of these changes is being modelled here, the NPA is set to be equal to 68.

<sup>11</sup> See R. Peston, 'Civil service pensions "still gold plated"', BBC Blog, January 2012 (<http://www.bbc.co.uk/news/16419885>).

<sup>12</sup> Authors' calculations using table P2 of the *ASHE Pension Tables*, available at <http://www.ons.gov.uk/ons/publications/all-releases.html?definition=tcn%3A77-27932>.

scheme, while only a minority (34.4%) are members of such a scheme in the private sector.<sup>13</sup>

In addition, the defined contribution (DC) schemes offered by the private sector are typically not as generous as the defined benefit (DB) schemes offered by either the public or the private sector. Once these huge differences in pension coverage are accounted for, the average pension accrual, including both DB and DC pensions, across all private sector employees in 2005 was just 7.3% of earnings assuming that those with DB pensions are receiving RPI indexation (and just 4.6% of earnings if private sector DB schemes all receive CPI indexation). Therefore while the estimates suggest that the public service pensions now on offer are, on average, less generous than those available before the recent reforms, they are still much more generous, on average, than those of private sector workers.

As stated above, the shift to career average schemes will benefit those who experience relatively low pay growth during their careers more relative to those who experience rapid pay growth. On average, graduates in the public sector experience higher pay growth over their lifetimes than those with lower levels of education (the same being true, on average, in the private sector too). Table 5.2 splits the average estimated accrual in each of the stylised schemes set out above by level of education. This shows that, as expected, final salary schemes ('Labour's inheritance', 'Labour's bequest' and 'CPI indexation') are found to be more generous, on average, to those with higher levels of education. However the career average scheme modelled here – 'latest proposals' (which follows the broad rules of the new NHS Pension Scheme) – is found to have similar levels of average pension accrual across each education group. While the 'latest proposals' scheme is found to be as generous as the pre-reform 'CPI indexation' scheme on average, it is much more generous for those with low levels of education and less generous to those with high levels of education.

**Table 5.2. Mean one-period pension accrual under different example scheme rules (long-term impact), by education**

	<b>Low education</b>	<b>Mid education</b>	<b>High education</b>	<b>All</b>
'Labour's inheritance'	20.1	30.0	32.4	30.1
'Labour's bequest'	16.4	24.3	26.6	24.7
'CPI indexation'	11.0	15.6	17.1	16.0
'Latest proposals'	17.4	15.3	16.6	16.6

Notes: Education is defined as follows: low for leaving full-time education at compulsory school-leaving age; mid for remaining in education until age 18; and high for continuing in education beyond age 18. Also see Note to Figure 5.2.

Source: As for Figure 5.2.

Finally, all of this analysis has assumed that average earnings in the public and private sectors grow at 2% above the RPI going forwards. This level of growth would be in line with the economy-wide productivity growth that the UK experienced over the whole of the twentieth century. But, as stated above, the relative generosity of these schemes will depend on the level of average earnings growth going forwards, with final salary schemes

<sup>13</sup> See footnote 12.

being relatively more (less) generous than a career average scheme (with annual accrual less related to earnings growth) when real earnings growth is higher (lower). This is demonstrated in Table 5.3, which shows the estimated generosity of these schemes under different scenarios for average earnings growth. The shift from the ‘CPI indexation’ final salary scheme to the ‘latest proposals’ career average earnings scheme is, under the assumption of earnings growth running 2 percentage points above the RPI, associated with a slight rise in the average estimated generosity of the scheme (from 16.0% to 16.6% of earnings). But under the scenario where average earnings were only running 1 percentage point above the RPI, this changes to a larger increase in the estimated average generosity (from 14.1% to 16.5% of earnings).

**Table 5.3. Mean one-period pension accrual under different example scheme rules (long-term impact), by average earnings growth**

	Assumed average earnings growth			
	Lowest: RPI only	Lower: RPI plus 1ppt	Central: RPI plus 2ppt	High: RPI plus 3ppt
‘Labour’s inheritance’	23.9	26.8	30.1	33.7
‘Labour’s bequest’	19.6	21.9	24.7	27.6
‘CPI indexation’	12.5	14.1	16.0	18.0
‘Latest proposals’	16.3	16.5	16.6	16.8

Note: As for Figure 5.2.

Source: As for Figure 5.2.

## Public service pensions: conclusions

The expected future cost to the taxpayer of public service pensions has been substantially reduced by the reform implemented by the last Labour government and the shift from RPI to CPI indexation implemented by the current government. These reforms will significantly reduce the generosity of these pensions for many public sector workers.

The latest set of reforms will improve the structure of public service pensions. The choice of parameters means that, over the longer term, the latest reforms will not further reduce the generosity – or the costs – of public service pensions (although people whose NPA will rise from 60, because they joined their scheme before Labour’s last reforms came into force, to be aligned with the SPA will, on average, lose from the reform). While the NPA has been increased, other parameters have been made more generous in a way that, on average, fully compensates for this increase in pension age. Within this, we expect there to be a substantial group of lower-paid public sector workers for whom the new schemes will be even more generous than those they are replacing.

Public sector workers will continue to accrue pensions that are dramatically more generous than those accrued, on average, by private sector employees, few of whom have access to a defined benefit pension. Those in the private sector least likely to have access to good employer provision are those on relatively low pay. Yet this is the group in the public sector for whom the reformed schemes are likely to be more generous than the final salary schemes they are replacing.

The Chief Secretary to the Treasury, Danny Alexander, has stated that one of the government’s objectives is ‘to put in place schemes that can be sustained for decades to

come'.<sup>14</sup> But similar claims were made by the then Trade and Industry Secretary, Alan Johnson, when implementing the last reforms,<sup>15</sup> so it remains to be seen whether we really have reached the end of the line on public service pension reform.

## 5.3 Public sector pay

This section begins by looking at recent trends in both public sector employment and public sector pay. It continues by comparing levels of pay between the public and private sector and considering the extent to which the difference between the two can be explained by individual characteristics. It then goes on to examine the extent to which this difference varies across the regions of the UK.

### Recent trends in employment and pay

In recent years, the public sector and the private sector have seen quite different trends in both employment and pay. As Figure 5.3 illustrates, employment grew rapidly in the private sector until early 2008, fell significantly during the recession (by about 1 million from peak to trough) and started to recover in early 2010. In contrast, employment in the public sector was relatively flat between 2005 and 2009, with a slight decline for a couple of years before the start of the recession and a slight increase during the recession (at least in part due to the last government's decision to hire additional staff temporarily to work in Jobcentre Plus). Public sector employment peaked in December 2009 and then started to fall. Going forward, public sector employment is predicted by OBR to fall by 710,000 between the start of 2011 and the start of 2017, which is about 12% of the public sector workforce. This will roughly bring the size of public sector back to its level at the start of the 13-year Labour period. It is also worth noting that 12% is just the average; some parts of the public sector will face even deeper cuts.

Until March 2011, the fall in public sector employment was more than compensated for by employment growth in the private sector, so that total employment rose. It looks unlikely that this will be the case going forward. The most recent data (June 2011) point to a fall in public sector employment greater than the growth in the private sector. The OBR forecasts total employment to be broadly flat between 2011 and 2013 and only start to grow from 2014 onwards.<sup>16</sup>

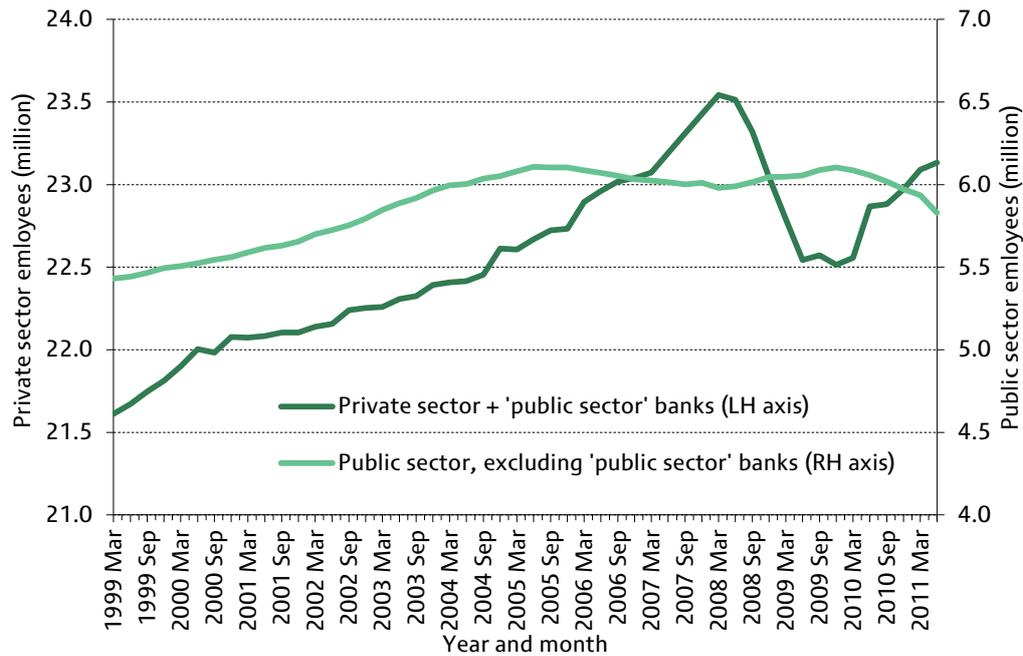
In terms of pay growth, the recession also had a stronger and more immediate impact on the private sector than on the public sector. In the couple of years leading to the recession (2006 and 2007), average weekly earnings were typically growing at just above 3% per year in the public sector, considerably slower than the just above 5% growth experienced in the private sector (see Figure 5.4). During the recession, however, average pay growth slowed down to near zero in the private sector, while public sector pay continued to grow at the pre-recession rate. The big drop in private sector pay growth (to -7.7%) in

<sup>14</sup> See statement by Danny Alexander, Chief Secretary to the Treasury, 2 November 2011 ([http://www.hm-treasury.gov.uk/statement\\_cst\\_021111.htm](http://www.hm-treasury.gov.uk/statement_cst_021111.htm)).

<sup>15</sup> George Jones cites an interview given by Mr Johnson to the BBC Radio 4 'Today Programme': 'Asked it [sic] if he could give an absolute "guarantee" that the agreement would not be re-written, he replied: "Yes, I can". "It is a deal we reached with the unions. Every deal I have ever reached in my life, both as a trade unionist and as a politician, I honour," Mr Johnson said.' ('Turner dangles generous pension, but only if you work until 69', *Daily Telegraph*, 30 November 2005, <http://www.telegraph.co.uk/news/uknews/1504344/Turner-dangles-generous-pension-but-only-if-you-work-until-69.html>).

<sup>16</sup> OBR's November 2011 employment forecasts from table 3.6 of <http://budgetresponsibility.independent.gov.uk/pubs/Autumn-2011-EFO-Charts-Tables129467.xls>.

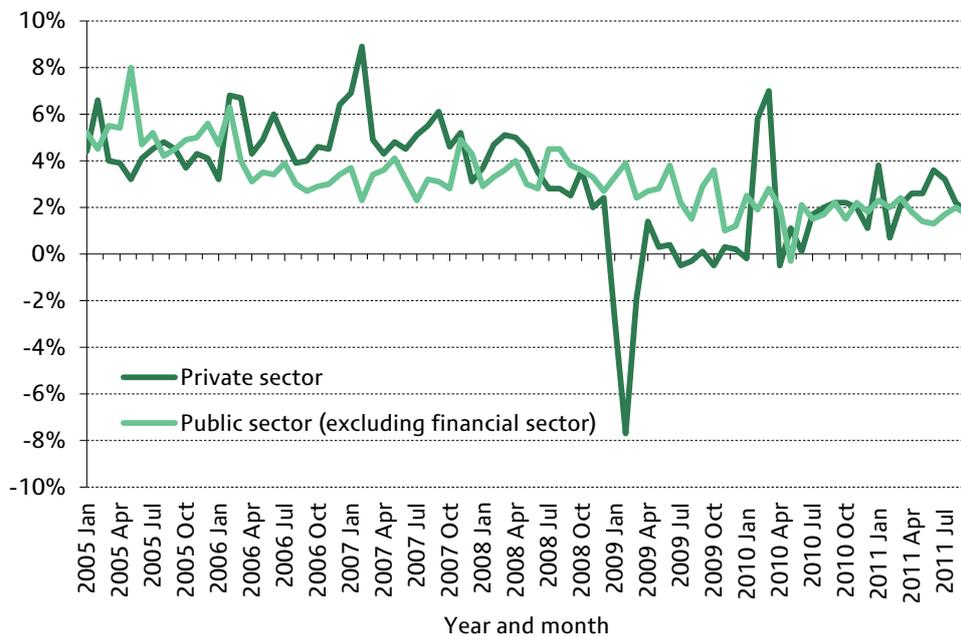
Figure 5.3. Employment by public and private sector, over time



Notes: For comparability over time, publicly-owned financial corporations (RBS and Lloyds Banking Group) are excluded in the public sector series and included in the private sector series. Both series are seasonally adjusted.

Source: Office for National Statistics (tables 2 and 4 at <http://www.ons.gov.uk/ons/rel/lms/labour-market-statistics/november-2011/index-of-data-tables.html#tab-Employment-tables>)

Figure 5.4. Growth in public and private sector pay



Notes: Average weekly earnings not seasonally adjusted and including bonuses (series KA5G for the public sector and KA5E for the private sector). The public sector series excludes publicly-controlled financial corporations.

Source: Office for National Statistics (table 2 at <http://www.ons.gov.uk/ons/rel/lms/labour-market-statistics/november-2011/index-of-data-tables.html#tab-Earnings-tables>).

February 2009 was largely driven by a fall in bonuses relative to 2008, which was particularly notable in the financial sector.<sup>17</sup> As bonuses recovered partially in the following year, there was a positive spike of earnings growth in February 2010. Since early 2010, public sector pay growth has slowed down to about 2% per year, similar to the growth rate in private sector pay. Cumulatively, average pay in public sector has grown more than the private sector by 3.9 percentage points between financial years 2007–08 and 2010–11.

The government is currently implementing a two-year freeze on pay awards, covering 2011–12 and 2012–13. This excludes low-paid workers (those earning less than £21,000 a year at full-time equivalent), who have been guaranteed a pay rise of £250 per year in the two years (i.e. an increase of at least 1.2% per year). This exemption covers 1.7 million, or 28% of all public sector workers. Because of the exemption of low-paid workers, and because of changes in the composition of the workforce (for example, existing employees moving up the pay scale), the average public sector pay is still growing despite the pay freeze. The latest OBR forecasts suggest that it will grow in nominal terms by 2% in 2011–12 and 0.8% in 2012–13.

The government has decided to follow the pay freeze with another two years of pay restraint: growth in pay awards will average 1% for each of 2013–14 and 2014–15 with no exemptions currently announced. The government has not specified which (if any) groups of public sector workers will get more than a 1% pay rise and which will get less, so it is unclear how the distribution of public sector pay will change. It is possible that there will be political pressure to continue to be relatively generous to lower-paid public sector workers. Taking into account the pay restraint, the OBR expects the average public sector pay growth to be slower than the private sector growth by 1.2 percentage points in 2013–14 and 2.2 percentage points in 2014–15. As a result, the average public–private pay gap is forecast to fall by 4.4 percentage points between 2010–11 and 2014–15. This will bring the average public–private pay differential almost back to its level in 2007–08.

## How do public and private sector pay levels compare?

It has previously been noted that there is an estimated pay premium for public sector workers compared with private sector workers.<sup>18</sup> The average level of hourly pay is considerably higher in the public sector than in the private sector (£15.04 versus £11.69 for women, and £18.19 versus £15.51 for men).<sup>19</sup> However, these raw differences mask a number of factors as they do not compare like with like.<sup>20</sup> Public sector employees tend to be older (and therefore, on average, have greater experience) and have higher qualifications than private sector workers. So we would expect average pay to be higher

<sup>17</sup> While earnings including bonuses fell by 7.7% in February 2009 compared with February 2008 in the private sector, earnings excluding bonuses grew by 2.4%. Within the private sector, earnings including bonuses fell by more than 20% in finance and business services and by about 7% in services during the period.

<sup>18</sup> See, for example, A. Bozio and R. Disney, 'Public sector pay and pensions', in M. Brewer, C. Emmerson and H. Miller (eds), *The IFS Green Budget: February 2011* (<http://www.ifs.org.uk/budgets/gb2011/11chap7.pdf>).

<sup>19</sup> Based on table 13.5a of ASHE 2011 (<http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcn%3A77-235202>). Pay differences can also be measured from the Labour Force Survey (LFS). The LFS figures (weighted) from the first quarter of 2011 are £19.75 versus £14.77 for men and £13.54 versus £11.65 for women. The ASHE figures should be more reliable because the earnings data are taken directly from HMRC's PAYE system, whereas the LFS wage information is self-reported. In addition, sector is reported by the employer in ASHE, but by the employee in the LFS, with the former likely to be more accurate.

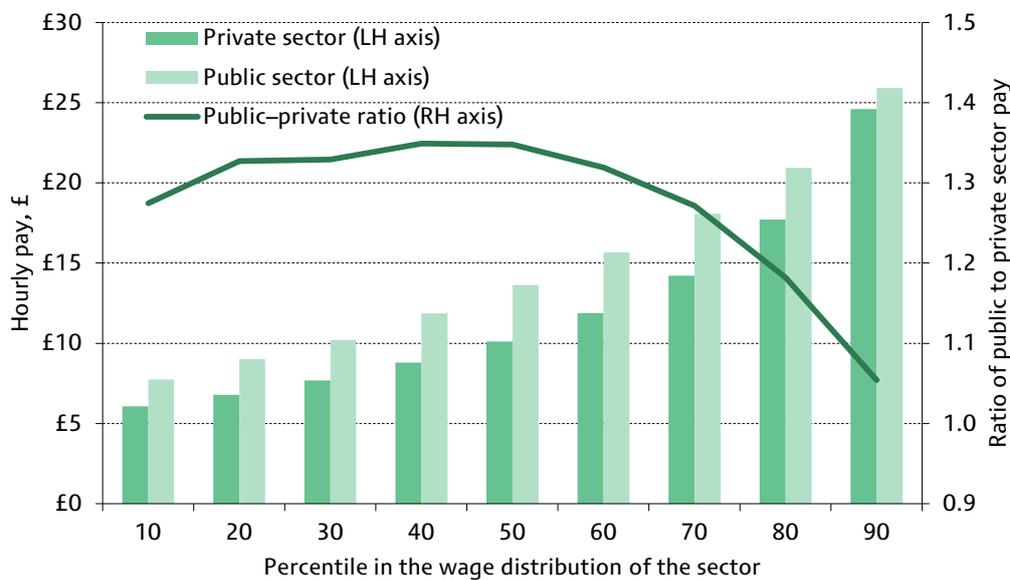
<sup>20</sup> The importance of comparing like with like is discussed in 'Public and private sector earnings: fact and fiction', *IDS Pay Report*, June 2010 (<http://www.incomesdata.co.uk/areas-of-expertise/pay-reward/private-public-sector-earnings.pdf>).

in the public sector even if there were no real public or private sector premium for any given individual.

In what follows, we use regression techniques to account for the differences in observed characteristics between public and private sector workers so as to uncover an estimate of the public sector premium. We also examine whether the estimated pay premium varies across the distribution of pay and whether it varies across regions of the UK.

First, let us look at the raw data. Figure 5.5 shows the recent distribution of gross hourly earnings by sector. At each percentile, public sector pay is higher than that in the private sector. The ratio of public to private sector pay is fairly similar across the lower and middle part of the distribution, but lower at the 80<sup>th</sup> and 90<sup>th</sup> percentile. In other words, the wage distribution is more compressed (with a thinner upper tail) in the public sector (though even at the 90<sup>th</sup> percentile, public sector pay is higher than private sector pay).

Figure 5.5. Distribution of hourly earnings, by sector



Source: Table 13.5a of Annual Survey of Hours and Earnings (ASHE) 2011 (<http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcn%3A77-235202>).

Table 5.4 examines the average public–private pay gap and the extent to which it can be explained by observed differences between workers. The first row shows the raw difference between average public and private sector pay, for men, women and all. On average, female public sector workers were paid 27.5% more per hour than female private sector workers in 2009–11, while the average raw differential was 20.2% for men. Once we control for years of education, the estimated public–private differential falls to 8.9% for men and 15.5% for women. This differential is further reduced to 5.5% for men and 11.3% for women when we also control for age, region and qualifications achieved.<sup>21</sup> The overall average public sector premium is estimated to be 8.3%; this is the average public–private pay differential unexplained by education, region, age or qualifications. Our overall estimate is similar (statistically and economically) to those

<sup>21</sup> We also examined whether the female premium was explained by a difference in the hourly wage premiums for full- and part-time workers, but we found no evidence that this was the case.

produced by the ONS (7.8% as of April 2010) and Policy Exchange (8.8% as of December 2010).<sup>22</sup>

**Table 5.4. Estimated average public–private hourly wage differentials (2009Q2–2011Q1)**

	Male	Female	All
Raw differential	+20.2*** (1.1)	+27.5*** (0.9)	+24.3*** (0.7)
Controlling for education	+8.9*** (1.0)	+15.5*** (0.9)	+12.2*** (0.7)
Controlling for education, age and qualifications and region	+5.5*** (1.0)	+11.3*** (0.8)	+8.3*** (0.6)

Notes: The wage differentials controlling for various factors are estimated by ordinary least squares (OLS). Each number is the coefficient estimate from regressing log hourly wage on a dummy for public sector and controls as indicated in the left-hand column. Regressions for the last column also include a sex dummy. The numbers in the first row are different from the raw mean differences because of the log and because the data are weighted. The second row additionally controls for the age an individual left full-time education. The third row additionally adds two dummies for highest qualification an individual has obtained (degree or other higher education qualifications and NVQ Level 2 or 3 such as A levels, with the omitted group being NVQ Level 1 or below or no qualifications at all), age, age squared, dummies for the 12 regions in the UK, and interactions between age and age squared with age left full-time education. Hourly wages are computed using actual hours reported by survey respondents. Robust standard errors are reported in parentheses. \*, \*\* and \*\*\* indicate statistical significance at the 10%, 5% and 1% levels respectively.

Source: Authors' calculations using weighted data from the Labour Force Survey, 2009Q2 to 2011Q1.

It is possible that public sector workers are on average more attractive employees than private sector workers in some other unobserved way (for example, how much effort they put in per hour of work), which would justify their pay premium. Alternatively, there could be other differences affecting the relative attractiveness between working in the two sectors. As we cannot observe those differences in the data, we cannot account for them. But if such differences are thought to be constant over time, then it is informative to see whether the estimated premium we now observe is a new phenomenon or whether it has been running at the current level for a considerable time (which might be considered more consistent with the idea that the estimated premium is justified by an unobserved difference between public and private sector employees).

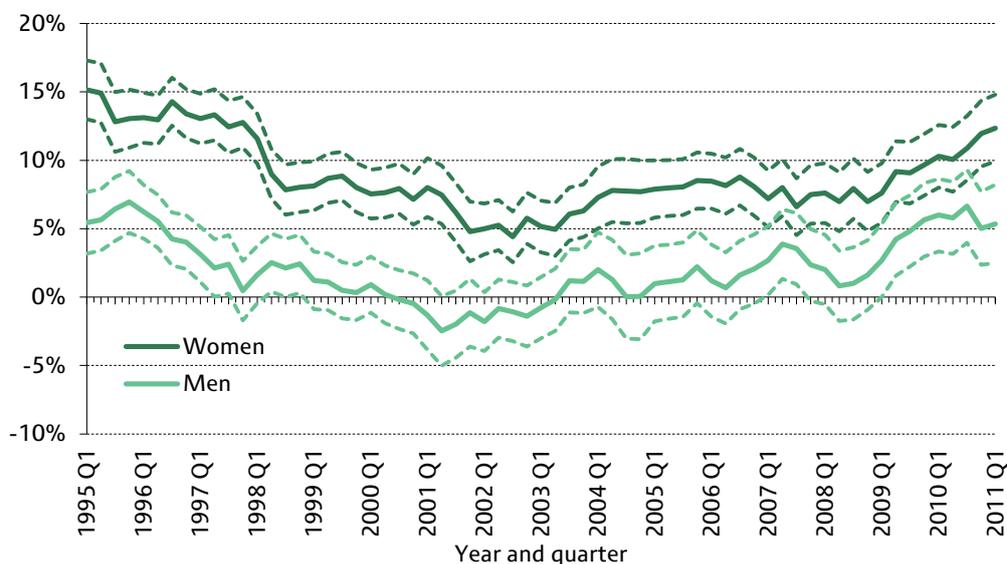
Figure 5.6 shows the estimated public–private hourly pay differentials (after controlling for individual characteristics) for men and women separately since 1995. The estimated public sector premium has always been higher for women than for men. In the 10 years leading to the start of the recession in 2008, there was no significant public sector pay premium for men and indeed a private sector premium in 2001–02. Since 2008, a public sector premium for men started to emerge and was at almost 5% by the start of 2011.<sup>23</sup>

<sup>22</sup> The ONS report is mainly based on ASHE and is conditional on age, occupation and region, and adjusted for qualifications using LFS. See Office for National Statistics, *Estimating Differences in Public and Private Sector Pay* (<http://www.ons.gov.uk/ons/rel/lmac/public-and-private-sector-earnings/2011/estimating-differences-in-public-and-private-sector-pay.pdf>). The Policy Exchange report discusses a range of public sector premium measures. The one most comparable to our measure also uses LFS and takes account of differences in the composition of workforces in the public and private sectors. See E. Holmes and M. Oakley, *Public and Private Sector Terms, Conditions and the Issue of Fairness*, Policy Exchange Research Note, May 2011 ([http://www.policyexchange.org.uk/images/publications/pdfs/Public\\_and\\_private\\_sector\\_terms\\_conditions\\_and\\_the\\_issue\\_of\\_fairness\\_-\\_May\\_11.pdf](http://www.policyexchange.org.uk/images/publications/pdfs/Public_and_private_sector_terms_conditions_and_the_issue_of_fairness_-_May_11.pdf)).

<sup>23</sup> The Policy Exchange report also highlights a rapid increase in the public sector pay premium in 2009 and 2010. One concern with the use of LFS data over time might be the possible inclusion of parts of the financial sector in the public sector after the financial crisis. The proportion of public sector workers reporting that they worked in banking and finance increased from 2.8% in 2008Q2 to 3.5% in 2009Q2, but their average pay was only £1 an hour higher than the mean public sector pay.

This increase was unintended, resulting from the effects of the recession on private sector pay (shown in Figure 5.4), rather than a deliberate policy to attract, motivate and retain workers in the public sector with higher relative pay. The premium for women has increased by an amount similar to that for men since 2008.

Figure 5.6. Estimated average public–private wage differentials over time



Notes: As for the last row in Table 5.4. The dashed lines represent 95% confidence intervals. Each data point is based on a four-quarter LFS sample, ending in the labelled quarter.

Source: Authors' calculations using weighted data from the Labour Force Survey.

Table 5.5. Implications of the pay squeeze for public–private pay differentials

	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
<i>OBR assumptions</i>						
Total employment (million) <sup>a</sup>	29.2	29.1	29.3	29.5	29.8	30.0
GG employment (million) <sup>b</sup>	5.5	5.4	5.3	5.1	4.9	4.8
GG employment (share)	18.6%	18.6%	18.1%	17.4%	16.5%	15.8%
<i>Average growth in:</i>						
Earnings <sup>c</sup>	1.6%	2.2%	3.6%	4.4%	4.5%	4.5%
Public sector pay <sup>b</sup>	2.0%	0.8%	2.6%	2.6%	3.1%	3.1%
Private sector pay <sup>d</sup>	1.4%	2.5%	3.8%	4.8%	4.8%	4.8%
<i>Change in public sector pay differential<sup>e</sup> (cumulative ppts)</i>	+0.5ppts	-1.1ppts	-2.3ppts	-4.4ppts	-6.1ppts	-7.8ppts

<sup>a</sup> Weighted average of OBR's employment forecasts from table 3.6 of

<http://budgetresponsibility.independent.gov.uk/pubs/Autumn-2011-EFO-Charts-Tables129467.xls>.

<sup>b</sup> GG = general government. GG employment growth is calculated from total public sector pay bill and pay bill per head. Public sector pay bill per head is directly from table 2.20 of OBR's fiscal supplementary tables published with *Economic and Fiscal Outlook*, November 2011, available at

<http://budgetresponsibility.independent.gov.uk/economic-and-fiscal-outlook-november-2011/>. Our calculations assume that public sector pay growth is the same as the OBR's forecast for GG pay growth.

<sup>c</sup> Source: Chart C3.31 of <http://budgetresponsibility.independent.gov.uk/pubs/Autumn-2011-EFO-Charts-Tables129467.xls>.

<sup>d</sup> We calculate this line from the three lines above assuming that the share of general government in the UK workforce will follow OBR employment assumptions.

<sup>e</sup> Estimated from average growth in public sector pay less average growth in private sector pay.

In the coming years, as the public sector implements the announced pay freeze and constraint, and if private sector pay growth recovers, the public sector premium is likely to disappear gradually for men. As shown in Table 5.5, the OBR's forecasts for public and private sector pay, taking into account the planned public sector pay squeeze, imply that the public–private pay differential will fall by 4.4 percentage points between 2010–11 and 2014–15, and by a total of 6.1 percentage points by 2015–16. On our estimates, this means that (assuming the public–private pay premium falls by an equal amount for both men and women) the average public sector premium for men is likely to return to its pre-crisis level by 2014–15, which was close to zero. The female premium is also likely to fall back to its pre-crisis level. Of course, such conjectures depend heavily on the OBR's assumptions and forecasts of future earnings growth. But, with this caveat in mind, given that the recent increase of the pay premium was unintended, its disappearance should not cause much concern.

So far, we have examined the average (mean) wage differential conditional on observed individual characteristics. We now compare the wage distribution in the public sector with that in the private sector, again conditional on observed individual characteristics.<sup>24</sup> The technique we use will predict percentiles<sup>25</sup> of the wage distribution for individuals with a given set of observed characteristics. This allows us to explore whether the estimated average public sector premium described in Table 5.4 is constant across the wage distribution or whether, for example, it is higher for those on lower levels of pay than for those on higher levels of pay (again after taking into account observed characteristics).

The results of this exercise are shown in Figure 5.7. Towards the lower end of the distribution, the public sector premium is estimated to be as high as 16%. This means that, given an individual's observed characteristics, at the 10<sup>th</sup> percentile of the wage distribution, public sector workers are paid 16% more than their private sector counterparts. The estimated premium falls gradually along the conditional distribution and is negative (but not statistically different from zero) among men at the 80<sup>th</sup> and 90<sup>th</sup> percentiles of the distribution.

Further analysis<sup>26</sup> suggests that the slope of the estimated premium along the distribution has changed little over time. For both sexes, the premium since 1995 has been higher in the lower part of the conditional distribution than in the middle, and higher in the middle than in the upper part, and there is no obvious widening or narrowing trend of the premium across the distribution in the past 10 years, for either men or women.

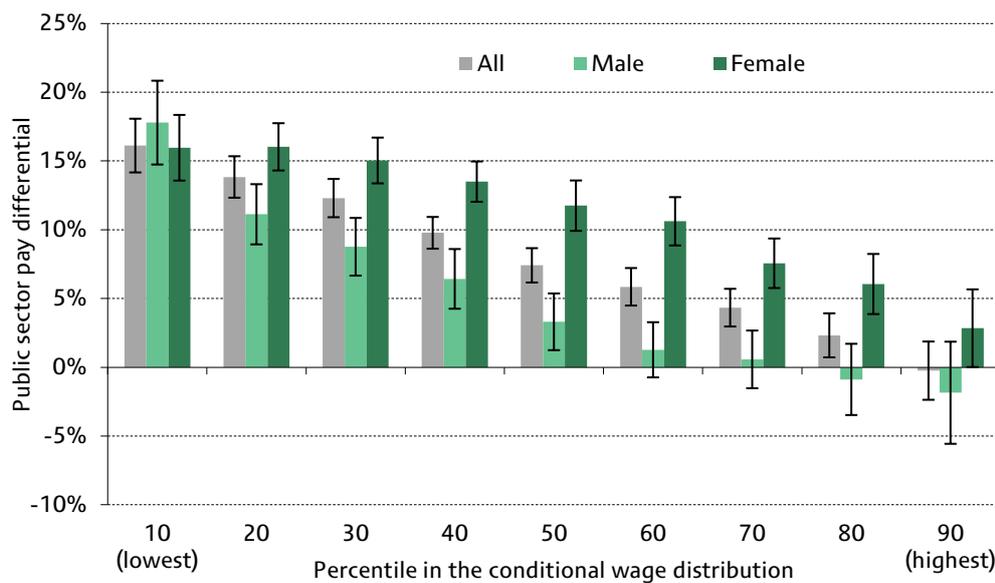
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<sup>24</sup> Using the same characteristics as in Table 5.4. The method we use is quantile regression. The same technique has been used to examine the distribution of the public sector pay premium in the UK by Disney and Gosling (1998), in Great Britain, France and Italy by Lucifora and Meurs (2004), and by other authors for other countries. R. Disney and A. Gosling, 'Does it pay to work in the public sector?', *Fiscal Studies*, 19, 347–74, 1998; C. Lucifora and M. Meurs, 'The public sector pay gap in France, Great Britain and Italy', IZA Discussion Paper 1041, 2004 (<http://www.econstor.eu/bitstream/10419/20276/1/dp1041.pdf>). See also, for example: R. Mueller, 'Public–private sector wage differentials in Canada: evidence from quantile regressions', *Economics Letters*, 60, 229–35, 1998; B. Melly, 'Public–private sector wage differentials in Germany: evidence from quantile regression', *Empirical Economics*, 30, 505–20, 2005; K. Leping, 'Public–private sector wage differential in Estonia: evidence from quantile regression', 2005, (<http://infutik.mtk.ut.ee/www/kodu/RePEc/mtk/febpdf/febawb39.pdf>); and A. Hyder and B. Reilly, 'The public sector pay gap in Pakistan: a quantile regression analysis', PRUS Working Paper 33, 2005 (<http://www.sussex.ac.uk/Units/PRU/wps/wp33.pdf>).

<sup>25</sup> The  $x^{\text{th}}$  percentile of a wage distribution is the wage level that is higher than  $x\%$  of the population and lower than  $(100-x)\%$  of the population.

<sup>26</sup> Available from the authors on request.

Figure 5.7. Estimated public–private wage differential by percentile in the wage distribution (2009Q2–2011Q1)



Notes: As for the last row in Table 5.4. Results are from a quantile regression. The estimates control for education, age, region and qualifications. The bar height at the  $x^{\text{th}}$  percentile represents the gap between the  $x^{\text{th}}$  percentile of the public sector conditional wage distribution and that of the private sector. The black bars show the 95% confidence intervals.

Source: Authors' calculations using weighted data from the Labour Force Survey, 2009Q2 to 2011Q1.

Overall, the falling slope of the estimated premium along the conditional distribution points to two (non-exclusive) possibilities. It could be that the wage distribution may be more compressed in the public sector as a result of unions, collective bargaining or the government being more concerned about pay inequality than private sector employers are. Alternatively, the public sector may need to pay more at the bottom, and is able to pay less at the top, for the unobserved quality that it wants.

It is hard to interpret this evidence in a way that would support the government's recent policy of providing some protection for lower-paid workers while squeezing more those on average and higher earnings. That is particularly true in the context of pension reforms, which look rather generous to the lower-paid group.

## Regional analysis

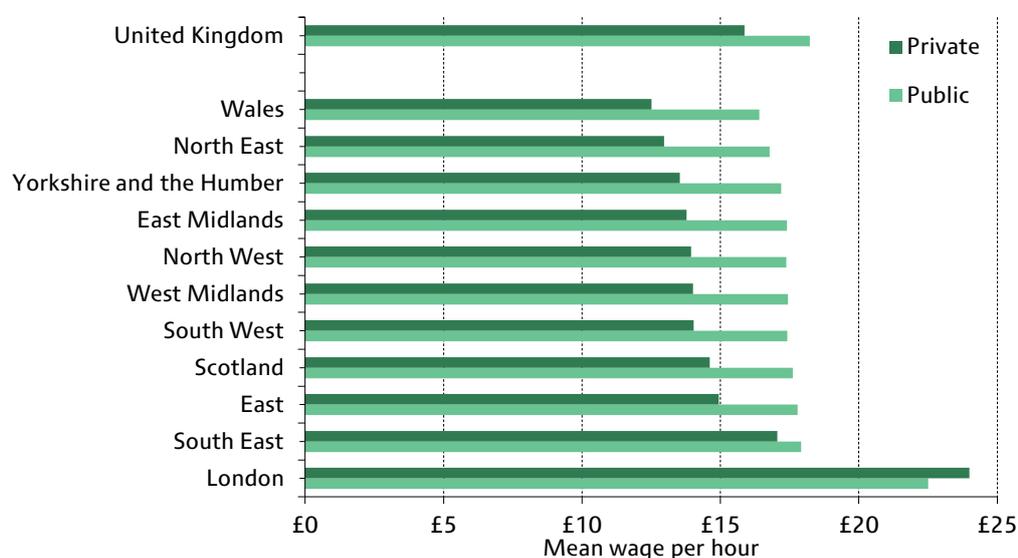
In the Autumn Statement, the Chancellor asked four Pay Review Bodies to consider making pay more responsive to local labour markets. Currently, around 2 million public sector workers' pay is set centrally based on the recommendations of the six independent Pay Review Bodies (PRBs).<sup>27</sup> Two of the six (covering doctors and dentists, and the armed forces) are exempted from considering regional pay. For workers covered by the remaining four PRBs, basic pay awards currently do not vary by region; but teachers and NHS staff in London and the fringe zones already get extra allowances/payments. Further, the prison service already has Locality Pay, which extends far beyond London.

<sup>27</sup> Six Pay Review Bodies cover workers in the NHS (other than GPs), doctors and dentists, schoolteachers, the armed forces, prison officers and some senior salaried staff. They make recommendations on pay scale rates to the government every year, based on their independent research and evidence from the relevant government departments as well as representative organisations and members within their remit groups. See Office of Manpower Economics for details (<http://www.ome.uk.com/>).

Thus, the announcement in the Autumn Statement will only affect, at most, a fraction of public sector workers.<sup>28</sup> In his letters to four Pay Review Bodies (covering the NHS, teachers, prison officers and certain senior staff in the public sector), the Chancellor argues that substantial variation in public–private pay differentials across regions may harm the private sector businesses which have to compete with higher wages.<sup>29</sup> He also argues that the variation in relative pay may lead to unequal quality of services across regions, and a smaller number of jobs than is potentially affordable for any given level of expenditure. Such concerns are not without evidence. For example, in London and the surrounding regions with relatively high private sector pay levels, the vacancy rates in the NHS remain well above those in other parts of the UK.<sup>30</sup> This suggests that relatively low levels of public–private pay differentials may be causing difficulties for recruiting and retaining public sector workers, which would be expected to affect the quality of public services.

This section uses recent data to assess regional variation in the public–private pay differential. Figure 5.8 compares average hourly wages among full-time male workers by sector, in each region. The darker bars illustrate the variation of private sector wages across regions, showing especially high wages in London. Excluding London, there is less regional variation in public sector wages (shown as the lighter bars) than in the private sector. As a result, in London, average hourly wages for full-time men working in the public sector are 6% lower than those of men working in the private sector. In contrast, in the North East and in Wales, they are 30% higher in the public sector than in the private sector.

Figure 5.8. Average hourly wages among men working full-time, by region



Note: Regions ranked by the percentage difference in mean public and private sector hourly wages.

Source: Table 25.5a of the 2011 ASHE (<http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-235202>).

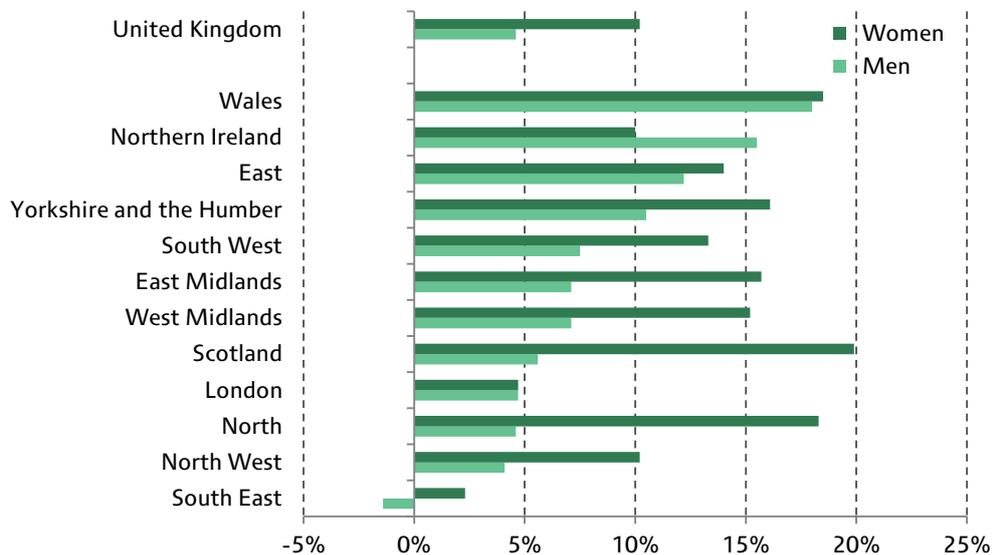
<sup>28</sup> There are around 1.7 million staff covered by the NHS and the teachers' PRBs.

<sup>29</sup> Letters from the Chancellor to the Pay Review Bodies can be found at <http://www.ome.uk.com/Article/Detail.aspx?ArticleUid=dfd0267d-9c7d-421b-80ba-71db9232f4b9>.

<sup>30</sup> A comparison of vacancy rates by region is presented in A. Bozio and R. Disney, 'Public sector pay and pensions', in M. Brewer, C. Emmerson and H. Miller (eds), *The IFS Green Budget: February 2011* (<http://www.ifs.org.uk/budgets/gb2011/11chap7.pdf>). The original data can be found at the NHS Information Centre: <http://www.ic.nhs.uk/statistics-and-data-collections/workforce/nhs-and-gp-vacancies>.

Figure 5.9 shows the estimated public sector premium by region, after controlling for age, education and qualifications, for men and women separately. There is clearly significant variation in the estimated pay premium across regions, and the regional patterns are different for men and women. Men working in the South East have a negative public sector pay premium. In London, the North and the North West, the estimated male premiums are all smaller than 5% and not statistically different from zero.<sup>31</sup> Wales has the highest male public sector premium, of 18%, followed by Northern Ireland with an estimated premium of 15%. For women, the pay premium is estimated to be less than 5% and not statistically different from zero in London, the South East and Northern Ireland. The regions with the highest female public sector premiums are, in descending order, Scotland, Wales, the North, Yorkshire and the Humber, the East Midlands and the West Midlands. For both sexes, the public sector premium is very high in Wales, but small and not significant in London and the South East. In most other regions, the estimated premium varies considerably by sex.

Figure 5.9. Estimated average public sector hourly pay premium by region



Notes and sources: As for Table 5.4. Regions ranked according to the estimated differential for men. Estimated differentials control for education, age and qualifications. Underlying data, and standard errors, can be found in the annex to this chapter.

The above results confirm that there is indeed substantial variation in the public sector premium across regions. Assuming no significant regional variation in the desired quality of public sector workers in a way that is not reflected in their age, years of education or qualifications achieved, the analysis implies that there will be efficiency gains if public sector pay is more closely aligned with the local labour market. (Again we explored whether the variation in the estimated premium was a new phenomenon and found that it was not.<sup>32</sup>)

There is also evidence that the regional variation in public-private pay differentials depends on the occupation. Figure 5.10 shows how wages in selected public sector occupations compare with the average male wage in the UK, or in each of the regions; the

<sup>31</sup> Standard errors and significance levels of all the estimates are reported in the annex to this chapter.

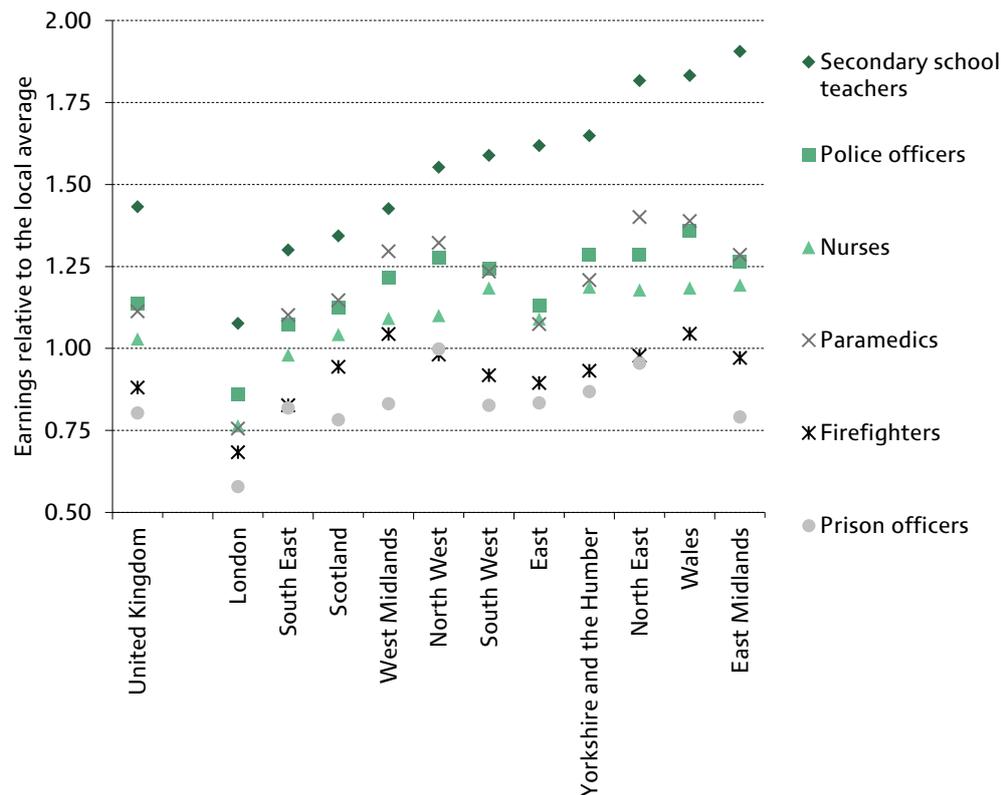
<sup>32</sup> Results available on request.

equivalent data for women are presented in Figure 5.11. As shown in Figure 5.10, full-time male secondary school teachers earn 1.4 times what the average full-time male in the UK earns; male police officers, paramedics and nurses earn slightly more than the average, and firemen and prison officers less than the average. This is not surprising given that, on average, school teachers have more education than the average worker and more than these other groups.

If the average pay of an occupation relative to the local average is purely determined by the nature of the job and differences in labour quality, then we may expect to see little regional variation in the relative pay. However, as Figure 5.10 and 5.11 show, there is evidence that relative pay in each occupation varies to some extent across regions, even outside London. Further, the evidence suggests that the regional pattern within each public sector occupation is not the same across occupations. For example, the relative pay of male secondary school teachers is highest in the East Midlands, while the relative pay of male police officers is highest in Wales.

Unfortunately, the data that we are able to use to compare differences in pay levels by occupation across regions do not allow us to control for other characteristics, so it could be that differences can be explained by differences in the composition of the workforce. But even to the extent that the differences reflect different 'qualities' of teachers and so

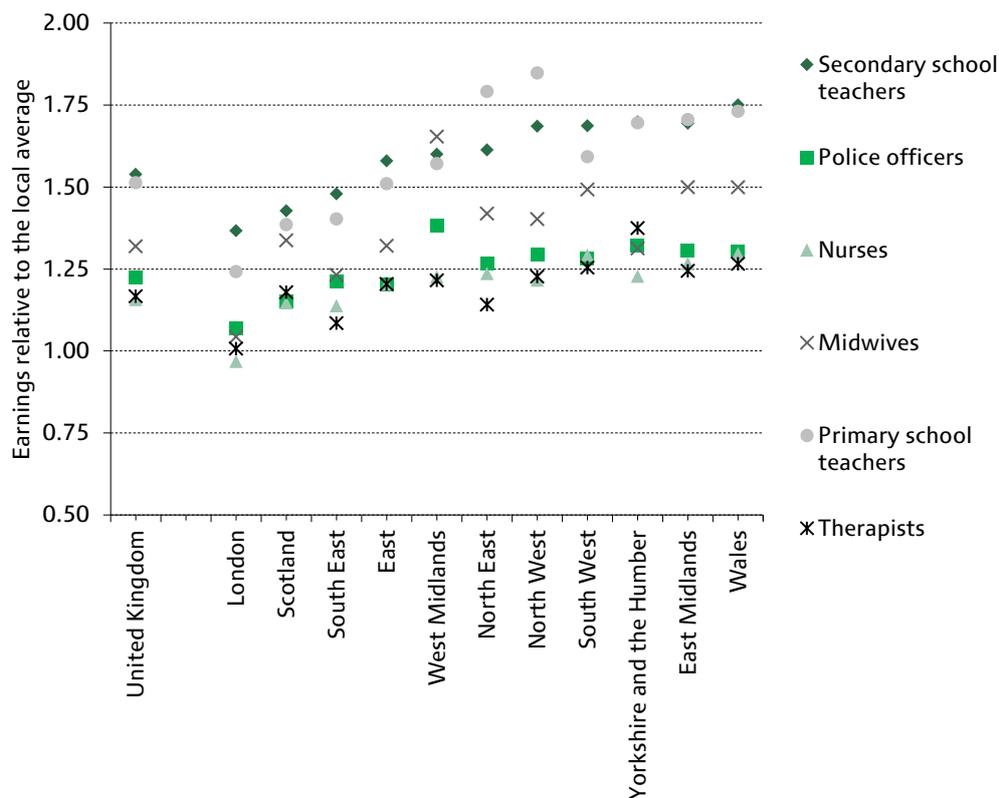
**Figure 5.10. Average hourly earnings of full-time men in selected public sector occupations relative to average male full-time earnings, by region**



Notes: Full-time male workers only. The height of each data point represents the mean wage of each occupation divided by the average male full-time wage in the same region. There are no data for male prison officers in Wales.

Source: Table 15.5a of the 2011 ASHE (<http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcM%3A77-235202>).

Figure 5.11. Average hourly earnings of full-time women in selected public sector occupations relative to average female full-time earnings, by region



Notes: Full-time female workers only. The height of each data point represents the mean wage of each occupation divided by the average female full-time wage in the same region.

Source: As for Figure 5.10.

on in different regions, that does not imply this is an efficient or equitable outcome. There seems little to be said either for a system that rewards similar teachers very differently, relative to the labour market they are working in, in different parts of the country, or for a system that leads to very different qualities of teachers in different parts of the country. At the very least, the findings of this exercise are suggestive that an across-the-board regional pay policy, with all public sector workers in, say, Wales receiving a set amount of pay cut and all public sector workers in the South East getting a set amount of pay rise, would not be appropriate. The Pay Review Bodies that are investigating whether there should be greater local variation in pay should certainly investigate these descriptive findings further.

### Public service pay: conclusions

The analysis in this section has found evidence of a public sector pay premium, after controlling for observed characteristics. This estimated premium has increased during the recent financial crisis as private sector earnings grew less quickly. Our calculations suggest that the government's continued pay squeeze through to 2014–15 would roughly eliminate the unintended increase in the premium in recent years. This estimated public sector premium is, again after taking into account observed characteristics, larger for lower-paid workers than for higher-paid workers and there is no evidence that lower-

paid public sector workers have fared relatively badly in recent years. It is hard to interpret this in a way that would support the government's recent policy of providing some protection for lower-paid workers while squeezing more those on average and higher earnings. Lower earners will also typically gain, and high earners lose, from the public service pension reforms. Both enhance rather than diminish the differences between public and private sector labour markets.

We also find evidence of considerable variation in the estimated public sector pay premium across the regions of the UK. This suggests that, on average, more generous pay awards in, for example, the South East and less generous pay awards in, for example, Wales and Northern Ireland might be appropriate. But our analysis also suggests that the pattern across regions might not be the same for all public sector occupations. So while a shift to centrally-set, but regionally-varied, pay awards might be appropriate, these should be carefully implemented.

## 5.4 Conclusions

The analysis presented in this chapter has shown that reforms implemented by the last Labour government and the current government have significantly reduced, on average, the generosity of public service pensions and therefore their expected cost to the taxpayer in the long term. One key reduction in the cost in the long run comes from the decision, implemented by the last government, to increase the normal pension age for new entrants into most schemes from age 60 to age 65. Another key reduction arises from the current government's decision to switch from RPI to CPI indexation of pension benefits for those receiving pensions and for deferred members of these schemes. Public sector workers who were continuing to enjoy pension accrual based on an NPA of 60 because they joined their scheme prior to the last Labour government's reforms coming into force, and who now see their future accrual based instead on an NPA in line with their SPA, will typically also see the value of their pensions cut significantly. But, despite these cuts, members of public sector pensions will continue to accrue pensions that, on average, are far more generous than those enjoyed by their counterparts in the private sector.

The government's latest reforms to public service pensions will do much to improve the structure of these schemes, in particular by moving to a career average rather than a final salary basis and by aligning the NPA to the SPA. Aligning future pension accrual for both existing and new members of these schemes means that otherwise-equivalent individuals doing the same job, on the same pay, will also accrue the same pension.

On the other hand, the – perhaps surprising – consequence of the long-drawn-out negotiations over reform will be little or no long-term saving to the taxpayer or reduction in generosity, on average, of pensions for public service workers. The increase in pension age has, on average, been fully compensated through changes to indexation and accrual rates. But there will be distributional effects, with lower earners gaining from the changes and high flyers losing out. Since lower earners in the private sector are particularly unlikely to have access to a good-quality employer-sponsored pension, and especially a defined benefit pension, the latest reform will increase the difference between public and private sector labour forces.

The current government is also implementing a squeeze on public sector pay. After taking into account the fact that public sector workers typically have greater experience and

more education than private sector workers, average hourly wages are estimated to be 8.3% higher in the public sector than in the private sector. Moreover, this estimated public sector pay premium has grown over the period since 2008, largely due to the fall in private sector earnings during the recession. The government's proposed squeeze on public sector pay, which is to run until 2014–15, will roughly eliminate this unintended increase.

The estimated public sector premium is, again after taking into account observed characteristics, larger for lower-paid workers than for higher-paid workers and there is no evidence that lower-paid public sector workers have fared relatively badly in recent years. It is hard to interpret this in a way that would support the government's recent policy of providing some protection for lower-paid workers while squeezing more those on average and higher earnings.

Finally, the public sector pay premium varies remarkably across regions. There is no evidence of a public sector pay premium in London or the South East of England, while in Wales the estimated premium is 18.0% for men and 18.5% for women. This provides a strong case for having regional variation in the pay awards that are set centrally. But there is also tentative evidence that the premium varies across different occupations within the same region. For example, while male police officers appear to have the highest relative pay in Wales, for female primary school teachers the North West appears to have the highest relative pay, and for male paramedics the North East appears to be relatively the most generous. Therefore any regional variation in public sector pay awards would need to be carefully designed.

## Annex

Table 5.A1. Raw and estimated average public–private wage differentials, by region

Region	Raw differential		Estimated differential	
	Men	Women	Men	Women
All UK	+20.2*** (1.2)	+27.5*** (0.9)	+4.6 (1.0)	+10.2*** (0.8)
Wales	+34.0*** (5.2)	+39.1*** (3.9)	+18.0*** (4.9)	+18.5*** (3.8)
Northern Ireland	+37.5*** (6.5)	+23.8*** (7.3)	+15.5*** (5.6)	+10.0 (7.2)
East	+25.7*** (4.5)	+32.9*** (4.1)	+12.2*** (4.4)	+14.0*** (3.8)
Yorkshire and the Humber	+29.9*** (3.3)	+34.9*** (2.7)	+10.5*** (3.2)	+16.1*** (2.8)
South West	+22.0*** (3.3)	+27.2*** (2.6)	+7.5** (3.2)	+13.3*** (2.7)
West Midlands	+21.7*** (3.6)	+31.4*** (2.8)	+7.1** (2.9)	+15.2*** (2.8)
East Midlands	+23.2*** (4.0)	+34.7*** (2.8)	+7.1** (3.4)	+15.7*** (2.8)
Scotland	+22.3*** (3.2)	+34.1*** (2.7)	+5.6** (2.8)	+19.9*** (2.6)
London	+13.9*** (3.6)	+19.2*** (3.0)	+4.7 (3.5)	+4.7* (2.8)
North	+20.3*** (4.6)	+36.7*** (3.4)	+4.6 (4.5)	+18.3*** (3.3)
North West	+22.4*** (3.2)	+28.4*** (2.5)	+4.1 (2.8)	+10.2*** (2.5)
South East	+12.2*** (2.5)	+19.6*** (2.0)	-1.4 (2.4)	+2.3 (2.0)

Notes and source: As for Table 5.4.