Does It Pay to Work in the Public Sector?

RICHARD DISNEY and AMANDA GOSLING

Abstract

This paper uses microeconomic data from the British Household Panel and General Household Surveys to describe how the distribution of pay differs between the public and private sectors in 1983 and in the early 1990s. Separate analyses by gender and education group reveal that it is women and those with intermediate-level qualifications who do best in the public sector. The large differences between the shapes of the conditional (that is, holding age and education constant) distributions of wages in the public and private sectors are demonstrated using quantile regressions estimated separately for each education group. The paper also exploits the longitudinal structure of the data used to assess how much of these differences can be explained by the unobserved characteristics of individuals.

JEL classifications: J31, J45.

I. INTRODUCTION

Does it pay to work in the public sector? Unions representing public sector workers do not believe so, arguing that they are worse off in relation to their private sector counterparts and indeed that this relative position has deteriorated over the 1980s and 1990s. This perception has been heightened since 1993. In that year, tough cash limits were imposed on the public sector and pay increases granted by public sector pay review bodies were not fully implemented — a

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policy which has continued since that time and which New Labour shows no
sign of reversing. At the top end of the pay scale, it is argued, increases in the
relative wages of skilled and educated workers in the private sector have not
been reflected in public pay settlements. At the bottom end of the scale, policies
such as contracting-out and the encouragement of competitive tendering are seen
to constitute a general policy of ‘levelling-down’, so reducing lower-paid public
sector workers to the status of their worst-paid private sector counterparts. In
addition to lagging pay, public sector unions are angry at a variety of policy
measures over the last few years that may have affected the distribution of pay
within the public sector and weakened their national bargaining position. These
include explicit links between pay and individual or group performance and
decentralisation of pay-setting.

There is, as always, another side to the story. On average, public sector
workers are still better paid than are private sector workers. In 1994, for
example, male hourly public sector earnings were about 14 per cent higher than
male hourly private sector earnings (source: New Earnings Survey). Public
sector wage rates are more likely to be set by unions, which are also likely to be
able to achieve better working conditions for their members. According to the
1990 Workplace Industrial Relations Survey, 91 per cent of public sector
establishments recognise unions for manual workers; the figure is 98 per cent for
non-manual workers. In the private sector, the respective figures are 44 per cent
and 28 per cent (Disney, Gosling and Machin, 1995, Table 1). Furthermore,
white-collar public sector workers typically have index-linked pensions, and
most public sector workers have more job security, as measured by longer job
tenures, than employees in the private sector. Looking at simple measures of
average pay, therefore, public sector workers in the past have had both better pay
and better conditions than their private sector counterparts.

It is, however, the argument of this paper that looking at levels of and trends
in average wages between the public and private sectors provides a misleading
picture. The question of interest must be what a public sector worker, taken at
random, would lose or gain by obtaining a job in the private sector and how
much this differential has changed over time. At least part of the measured wage
gap between public and private sector workers is likely to be driven by the fact
that workers in the two sectors have very different skills. Moreover, any change
in the composition of the public sector driven by privatisation or contracting-out
will affect relative wages even if the ‘true’ (i.e. holding everything else constant)
mark-up does not change. Pay inequality also differs between the public and
private sectors and this may have changed over time as a result of shifts in policy
or the economic environment. In order to assess the importance of these factors,
it is necessary to look at individual rather than aggregate data.1

1One of the issues that is central to the paper is whether the estimated pay differentials between the two sectors
do in fact correspond to ‘true’ differences in pay, were individuals to be randomly assigned to the two sectors
This paper therefore examines trends in public pay over the last two decades, relative to the private sector, but also looks at how individual groups in the public sector have fared. The answer to the question in the title is: it all depends who you are and what you do. Specifically, the main findings are:

- Although the ratio of average public to average private sector pay is roughly the same at the end of the 1990s as it was at the end of the 1970s, these averages conceal substantial changes in the employment composition of the two sectors. When we control for changes in occupational composition in the private and public sectors, there is a clear secular decline in the public–private pay differential over that period. Nevertheless, controlling for occupation, women in the public sector still enjoy a clear ‘premium’ over the average female private sector wage.

- The same period has seen a rise in pay inequality in both the public and private sectors, but especially in the latter. Examining sub-groups of the public sector therefore shows that the equalising effect of public sector status on pay has been enhanced over the period.

- The General Household Survey for 1983 and the British Household Panel Survey for 1991–95 are utilised to examine the public sector ‘premiums’ or ‘penalties’ at different percentiles of the wage distribution, disaggregated by educational qualification and gender. There is evidence that the public sector reduces pay inequality both between and within educational groups, but this effect is not uniform by qualification and gender. In particular, women with school-leaving qualifications benefit disproportionately in the public sector, but the positions in the public sector of men with degrees and of both men and women without qualifications have worsened considerably, relative to the private sector.

- We examine the interpretation and consequences of these findings. In particular, are other attributes of jobs playing a part in these pay discrepancies? What are the consequences of observed differentials for labour quality? If, for example, the public sector pays higher wages to a particular group relative to wages paid by private sector employers, does the public sector attract better-quality workers, in terms of other attributes such as ability, aptitude and commitment? Do we then observe workers with such characteristics ‘self-selecting’ into the public sector? If not, what are the consequences of discrepancies in pay for public sector productivity and morale?

In the manner described in this paragraph. For this reason, we denote the estimated differentials as ‘penalties’ and ‘premiums’, with the inverted commas signifying that the calculated differentials may only be approximations to these ‘true’ figures.
The advent of the Conservative administration in 1979 was associated with the onset of a period of economic change in the UK, which has continued to the present time. Many of these changes affected the public sector directly and indirectly.

The most obvious change has been the contraction of public sector employment, from 7.45 million people in 1979 to 5.23 million in 1995. This 30 per cent fall saw the share of the public sector in total employment drop from more than a third to less than a quarter. Much of this change arose from the privatisation programme, which saw wholesale transfers of components of the public sector labour force to the private sector, accompanied by widespread job losses and retrenchment. At the same time, policies of contracting-out and compulsory competitive tendering (CCT) have both reduced total employment in the public sector (although the number of workers financed by public expenditure will have fallen by a smaller amount) and forced ‘in-house’ suppliers to compete with private sector competitive firms.

Although pay in the public sector has not been explicitly determined in the 1980s and early 1990s by ‘incomes policies’ and periods of wage restraint, public pay has been settled according to various forms of public sector pay management involving cash limits combined, not always consistently, with the reports of pay review bodies. Some groups, such as firefighters and the police, have done reasonably well from the pay review system and other special arrangements. In general, however, the combination of the pay review system with cash limits since the early 1990s has avoided the ‘catch-up’ pay awards such as those awarded by the Clegg Inquiry at the end of the 1970s. If anything, cash limits have been enforced more tightly since the advent of the Labour government in 1997.

Finally, as mentioned earlier, trade unions still maintain almost complete coverage of the public sector work-force, in contrast to their free-fall decline in the private sector. Nevertheless, union bargaining power has been considerably weakened since their heyday of the mid-1970s by falls in membership, the destruction of some key sectors such as the coal-mining industry, and increased emphasis on decentralised bargaining and the construction of autonomous agencies in most branches of government.

Thus the nature of the public sector work-force has changed, as has the environment in which it works. These changes are likely to have affected different groups disproportionately; for example, CCT is likely to have affected relatively unskilled workers who may have found any ‘premium’ from working in the public sector eroded by competitive pressures. In contrast, other groups,

\[2\text{For more evidence on trends in pay over time for particular groups covered by pay reviews, see Trinder (1994) and Elliott and Duffus (1996).}\]
such as civil servants, may be relatively immune from these pressures. It should be remembered, too, that the private sector has seen major changes over the period, such as growing pay inequality, attrition of older men from the labour force, and technical change biased in favour of particular skills and sectors such as information technology use and development and personal services.

How have public sector workers fared in practice against this background of economic and social change? Figure 1 plots the ‘raw’ difference between average wages in the public and private sectors for men and women between 1979 and 1994, from the annual published New Earnings Survey data. There is a positive gap between wages in the public and private sectors throughout the period — of around 20 per cent for women and 12 per cent for men. Note that we do not control for other determinants of pay in this graph, thereby ignoring the possibilities that workers in the public sector may have different qualifications and work in different types of occupations from workers in the private sector. Both these omissions are rectified shortly.

Two other features of Figure 1 are of interest. First, there is no evidence of trends in the ‘premiums’ for either men or women over this period. Second, there is clear evidence that the public sector ‘premium’ is counter-cyclical: when the economy is moving towards its peak, as in the mid-1980s and the mid-1990s, the ‘premium’ is stationary or falling; when the economy is moving into recession, as in the early 1980s and late 1980s, the ‘premium’ rises sharply.

**FIGURE 1**

*Public Sector Wage ‘Premiums’, by Gender*

Source: New Earnings Surveys.
This counter-cyclicality is largely driven by macroeconomic shocks to the private sector, which thereby tends to exhibit greater temporal volatility in employment and wage movements. Movements in the political business cycle and in public budgetary constraints may also induce fluctuations in the level of public pay, but these fluctuations, too, are likely to be pro-cyclical. For example, governments may prefer to hold general elections in upturns in the economic cycle, and to be relatively generous to public sector workers prior to elections, leaving the bill to be paid later. Similarly, public budgetary constraints are likely to be more relaxed in economic upturns if the notional public sector borrowing requirement (PSBR) is taken as a measure of the need for tight fiscal policy. Thus levels of pay are likely to be pro-cyclical in both the private and public sectors, but the greater pro-cyclicality of the former generates the observed counter-cyclical public sector ‘premium’.

As observed previously, these ‘premiums’ do not control for the different characteristics or skills of public sector workers, nor for the different sorts of jobs that they do. These are important omissions. Certain occupations, such as teaching and nursing, are predominantly public sector. Others, such as sales and machine operatives, are largely private sector. The occupational mix of the two sectors has changed over the 1980s and 1990s. For example, many low-paid occupations, such as refuse collection and ancillary services in hospitals, have been privatised or subject to CCT; some of these workers are no longer in the public sector. At the other end of the pay spectrum, there is increased emphasis on private-sector-style management and business practices in the public sector, and on recruitment into central and local government, and its agencies, of more-qualified manpower. We examine later how workers with the same qualifications fare in the public and private sectors. For the moment, we adjust measured pay for these changes in occupational composition.

To do this, the original New Earnings Survey data tapes were utilised, and cross-section ordinary least squares (OLS) regressions were run for each year from 1979 to 1994. These regressed individual pay on a public sector binary (dummy) variable and a set of (three-digit) occupational dummy variables. By this means, an average public sector ‘premium’ or ‘penalty’ for each year is obtained, abstracting from all variations in pay attributable to occupational ‘affiliation’, and these are shown in Figure 2.3

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3Write the equation to be estimated as

$$\ln w_i = \alpha + \beta D_t + \delta O_t + \epsilon_i$$

where \(\ln w_i\) is the logarithm of the wage of individual \(i\) at time \(t\), \(D_t\) is a dummy indicating public sector status, \(O\) is a vector of occupational dummies with (possibly) time-varying returns \(\delta\), \(\alpha\) is a set of year-specific constant terms, and \(\epsilon_i\) is the error term. Note that, in this specification, \(\beta\) is the predicted average ‘premium’ at time \(t\), that the occupation-specific components of pay are time-varying but do not vary across individuals at a point in time, and that individual-specific variations in the public sector pay ‘premium’ or
FIGURE 2
Public Sector Wage ‘Premiums’ and ‘Penalties’, Controlling for Occupation

The difference between Figures 1 and 2 is dramatic. Although there is still evidence of counter-cyclicality in pay (though it is not perhaps as transparent as before, especially for women), there is clear evidence of a downward trend in the public sector ‘premiums’ for men and women over the period. For both men and women, the ‘premium’ falls by about 8 percentage points from a somewhat lower base than in Figure 1. Indeed, there is no clear evidence of a ‘premium’ for men between 1990 and 1994, other than in 1993. This provides compelling evidence that the position of public sector workers has worsened, on average, over the period.4

III. EDUCATION AND THE DISTRIBUTION OF WAGES IN THE PUBLIC AND PRIVATE SECTORS

This section utilises the 1983 General Household Survey (GHS) and the 1991–95 pooled British Household Panel Survey (BHPS) to look at the pay gap between the public and private sectors and to see how it changes after

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[4] Elliott and Duffus (1996) identify non-manual occupational sub-groups in the New Earnings Survey and suggest that this occupation-corrected decline has been occurring since as long ago as 1970. Poterba and Rueben (1994) do not find that correction for occupational composition affects the trend in US public–private sector differentials, although the level is thereby reduced.
conditioning on education and age. These datasets are closely comparable in both sampling frame and definitions of the pertinent variables; however, only weekly earnings are available in the GHS, and the 1983 GHS is the only year of that survey that contains data on trade union membership.5

The first row of Table 1 shows that weekly earnings in the public sector are about 12 per cent higher than weekly earnings in the private sector and that this has not changed between 1983 and the 1990s. The next rows look separately at men and women, akin to Figure 1. In line with the results from the New Earnings Survey discussed in the previous section, the estimated wage gap is much larger for women than it is for men. The gap for men falls slightly over the 1980s, while that for women rises by 4 percentage points. However, a different story emerges after controlling for the different skills (measured by age and qualifications) of the public sector. Not only are the measured gaps much lower but the change over the 1980s is different. Rather than experiencing no change in relative wages (as suggested by the first row), male public sector workers have

TABLE 1
Difference in Weekly Earnings between Public and Private Sector Workers

<table>
<thead>
<tr>
<th>Condition</th>
<th>1983 (GHS)</th>
<th>1990s (pooled BHPSs)</th>
<th>Change, 1983–1990s (percentage points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unconditional</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>effects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>12%</td>
<td>12%</td>
<td>0</td>
</tr>
<tr>
<td>Men</td>
<td>9%</td>
<td>8%</td>
<td>–1</td>
</tr>
<tr>
<td>Women</td>
<td>23%</td>
<td>27%</td>
<td>4</td>
</tr>
<tr>
<td>Conditional on</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>age and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>qualifications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>5%</td>
<td>1%</td>
<td>–4</td>
</tr>
<tr>
<td>Women</td>
<td>11%</td>
<td>14%</td>
<td>3</td>
</tr>
</tbody>
</table>

Notes: Conditional estimates were obtained as the coefficient $\beta$ in the following regression, estimated by OLS for each gender on the BHPS and the GHS separately:

$$\ln w_{it} = \alpha_i + \beta D_{it} + \gamma_1 \text{age}_{it} + \gamma_2 \text{age}_{it}^2 + \delta Q_{it1} + \delta Q_{it2} + \delta Q_{it3} + \varepsilon_{it}$$

where $\ln w_{it}$ is the logarithm of the weekly earnings of individual $i$ at time $t$, $D_{it}$ is a dummy variable equal to 1 if the person works in the public sector, $Q_{it1}$ to $Q_{it3}$ are dummy variables for highest qualification ($Q_{it1} =$ degree, $Q_{it2} =$ A levels, $Q_{it3} =$ O levels, the base category is nothing), $\alpha$ is a set of year-specific constant terms, $\varepsilon_{it}$ is an error term and the remaining terms are a quadratic in age.

Hourly earnings would be a better measure of pay than weekly earnings. For an examination of public sector effects on hourly pay rates using the BHPS, see Disney, Goodman, Gosling and Trinder (1998).
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Table 2 looks at the level and change in inequality of wages in the public and private sectors. Average pay has, of course, risen over time; what is more interesting is that pay inequality has increased, especially in the private sector. The measure of inequality used is the 90:10 percentile ratio of weekly earnings (that is, the ratio of the wage of an individual at the 90th percentile to the wage of an individual at the 10th percentile). The first three rows of Table 2 show not only that wage inequality is higher in the private sector (apart from for women in 1983) but also that it has risen much faster over time in the private sector than in the public sector. The last two rows give the measures of wage inequality controlling for observable dimensions of skill, which can be interpreted as residual inequalities of pay after controlling for the effect of skill differences by regression analysis. The fact that the trend growth in wage inequality appears to be much closer between the public and private sectors in these rows suggests that the skills of public sector workers have become a lot more homogeneous over time. Nevertheless, there is still a disparity in the growth of inequality both between men and women and between the two sectors.

Table 3, which looks directly at changes in the probability of working in the public sector by educational qualification, shows no change in the relative composition of the public sector, then the changes in probabilities should be the same across all education groups. This is clearly not the case. Low-qualified men have experienced a much

<table>
<thead>
<tr>
<th></th>
<th>Public sector</th>
<th></th>
<th>Private sector</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unconditional effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>2.82</td>
<td>2.86</td>
<td>0.04</td>
<td>3.05</td>
</tr>
<tr>
<td>Men</td>
<td>2.53</td>
<td>2.66</td>
<td>0.13</td>
<td>2.63</td>
</tr>
<tr>
<td>Women</td>
<td>2.70</td>
<td>2.81</td>
<td>0.11</td>
<td>2.47</td>
</tr>
<tr>
<td>Conditional on age and qualifications</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>2.23</td>
<td>2.38</td>
<td>0.15</td>
<td>2.44</td>
</tr>
<tr>
<td>Women</td>
<td>2.13</td>
<td>2.38</td>
<td>0.25</td>
<td>2.35</td>
</tr>
</tbody>
</table>

Note: Conditional estimates measured as residuals from the regressions used in Table 1.
faster fall in the probability of working in the public sector than have qualified men. Among women, those with at least one A level or with no formal qualifications have seen the biggest drops.

The absolute growth in inequality, the differential growth rates in inequality across the two sectors and the apparent downward trend in the public sector ‘premium’ when we control for occupation together suggest that the 1980s and early 1990s have had disparate effects on various groups in the public sector. However, these findings are consistent with a number of stories as to what is happening to public sector pay.

- Taken together, the trends in the ‘premium’ and in relative inequality might suggest that individual-specific public sector ‘premiums’ have held up better among lower-paid public sector workers than among higher-paid workers. Higher-paid workers are, on average, more qualified, so this might imply that returns to qualifications have suffered disproportionately in the public sector. This would suggest greater disparity in ‘between-group’ returns in the public sector when groups are defined by qualification level.
- Alternatively, given overall structural change in the labour market towards better-qualified workers and increased competition facing relatively less-skilled public workers via CCT and privatisation of services, ‘between-group’

<table>
<thead>
<tr>
<th></th>
<th>GHS (1)</th>
<th>Pooled BHPSs (2)</th>
<th>(2)–(1) (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>0.35</td>
<td>0.22</td>
<td>–0.38</td>
</tr>
<tr>
<td>With a degree</td>
<td>0.49</td>
<td>0.34</td>
<td>–0.30</td>
</tr>
<tr>
<td>With at least one A level</td>
<td>0.39</td>
<td>0.25</td>
<td>–0.37</td>
</tr>
<tr>
<td>With at least one O level</td>
<td>0.35</td>
<td>0.19</td>
<td>–0.46</td>
</tr>
<tr>
<td>With no formal qualifications</td>
<td>0.32</td>
<td>0.15</td>
<td>–0.54</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>0.38</td>
<td>0.34</td>
<td>–0.10</td>
</tr>
<tr>
<td>With a degree</td>
<td>0.63</td>
<td>0.55</td>
<td>–0.13</td>
</tr>
<tr>
<td>With at least one A level</td>
<td>0.71</td>
<td>0.43</td>
<td>–0.39</td>
</tr>
<tr>
<td>With at least one O level</td>
<td>0.35</td>
<td>0.30</td>
<td>–0.13</td>
</tr>
<tr>
<td>With no formal qualifications</td>
<td>0.28</td>
<td>0.18</td>
<td>–0.35</td>
</tr>
</tbody>
</table>
returns may be relatively invariant. What is then being observed is a (relative) compression of ‘within-group’ ‘premiums’ in the public sector: that is, for given educational qualifications, the relative faster growth of inequality in the private sector has enhanced the equalising effect of working in the public sector.

These possibilities can be examined by separating the sample into groups by highest educational qualification obtained by the individual and using the technique of quantile regression. Whereas ordinary least squares (OLS) predicts the average (mean) wage of an individual with a given set of characteristics, this technique predicts quantiles of the distribution of wages for individuals with a given set of characteristics. For example, 10 per cent of people with the same characteristics will be predicted to have a wage below the estimated 0.1th quantile (or the 10th percentile). Estimating quantiles of the distribution of wages will be more informative than estimating with OLS if the return to or the

FIGURE 3
Public Sector Wage ‘Premiums’ and ‘Penalties’,
by Highest Educational Qualification


6For a similar technique applied to the US, see Poterba and Rueben (1994).
distribution of unobserved determinants of wages differs across given sets of characteristics at various points of the wage distribution. Thus if public sector workers with degrees are more equal in terms of ability and ‘drive’ than their private sector counterparts, or if private sector workplaces are more likely to pay a ‘premium’ for these attributes, then there will be a difference between the estimated effects of the public sector at, say, the 50th and 90th percentiles.

The impact of looking at the effect of public sector status across groups differentiated by qualifications attained is apparent from Figure 3, which uses standard OLS regression techniques. For men, the ‘between-group’ reduction in inequality is evident in the higher returns to lower levels of qualifications in 1983 and in the negative return to graduates in the 1990s. For women, the absence of a ‘premium’ for graduates is apparent in both periods, although women with intermediate qualifications tend to fare the best in both periods.

Figure 4 provides quantile regressions, aggregated over all educational qualifications. The compression of pay in the public sector is illustrated by the higher ‘premiums’ at the lower end of the earnings distribution and by the higher ‘premiums’ for women relative to men. It is also noticeable that the variation in ‘premiums’ across the percentiles has increased over time, as has thereby the

FIGURE 4
Public Sector Wage ‘Premiums’ and ‘Penalties’ across the Pay Distribution

Sources: GHS (1983) and pooled BHPSs (1991–95).
relative pay compression effect of the public sector, and that the ‘premiums’ have also declined over time for men, confirming the earlier results.7

Figures 5 and 6 combine the results by qualification and percentile to look at the impact of public sector status on pay within and between educational groups. Both figures again use data on weekly earnings from the GHS for 1983 and the BHPS for the period 1991–95, the latter utilised as a pooled dataset. The regressions are by each gender and educational qualification, covariates are a quadratic in age and, for the BHPS regressions, year dummies.8 Shaded bars are statistically significant ‘premiums’ or ‘penalties’. Unshaded bars indicate that the estimated coefficients on public sector status are statistically insignificant (at the 5 per cent level).

The four panels of Figure 5 provide the information for men. In the top left-hand panel, the impact of public sector status on the wages of men with degrees across the income distribution is illustrated across the two time-separated datasets. Both for 1983 and for the averaged period 1991–95, working in the public sector clearly reduces pay inequality among graduates relative to the private sector. In 1983, graduates at the 10th percentile working in the public sector obtained a 25 per cent ‘premium’ over their private sector counterparts. The ‘premium’ falls and becomes negative (albeit insignificant) as one moves up the income distribution in 1983. The same inequality-reducing effect is evident for graduates in the public sector from 1991 to 1995, but the whole distribution of ‘premiums’ has shifted downwards; indeed, at the 25th percentile and above, graduates in the public sector obtain significant ‘penalties’ by not working in the private sector.

Thus, among male graduates, the stories implicit in Figure 2 and Tables 1 and 2 are confirmed: the (relative) inequality-reducing effect of the public sector has been enhanced over time, but the ‘premium’ has eroded over time and indeed become a ‘penalty’ for the majority of male graduates. Because graduates are among the highest-paid public sector workers on average, and because the highest-paid graduates in the public sector have fared disproportionately badly, the public sector has reduced pay inequality both between and within groups demarcated by qualification.

This pattern is not repeated amongst all qualification groups. In the next panel of Figure 5, men who left school with A levels are highlighted. Here, the

7By way of comparison, Dustmann and van Soest (1997) also find a discrepancy in the wage differentials for men and women in the public sector in Germany, the former obtaining a ‘penalty’ and the latter a ‘premium’. Wage ‘penalties’ are lowest for men with the least education, and ‘premiums’ are highest for women with the highest educational attainment. Poterba and Rieben (1994) also find differences by level of educational attainment.
8The estimated equation utilised here is

$$\ln w^p_i = \alpha^p + \beta D_p + \gamma^p age_e + \gamma^p ag^2 e + \epsilon^p$$

where the $p$ superscript to the earnings term denotes that the object is to estimate percentile $p$ of the earnings distribution conditioned on the independent variables.
equalising effect of the public sector relative to the private sector is again apparent, with a negative gradient of ‘premiums’ and ‘penalties’ as we move up the income distribution. However, in 1983, these pay differences are only statistically significant from zero at the 10th and 90th percentiles. In 1991–95, in contrast, for those with A levels, significant positive ‘premiums’ were received by all those at or below the median of the earnings distribution. These data do not therefore replicate the erosion of the male ‘premium’ seen in Figure 2.

FIGURE 5
Quantile Regression Estimates of Public Sector Wage ‘Premiums’ and ‘Penalties’, by Highest Educational Qualification: Men

* means that the test of parameter equality of the public sector wage effect across percentiles is rejected at the 5 per cent level or below.

Note: Shaded bars denote that estimates are significantly different from zero at the 5 per cent level.
Sources: GHS (1983) and pooled BHPSs (1991–95).
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The reverse is observed in the next panel, however, which comprises men who left school with O levels. Here, there is no systematic evidence of an equalising effect of public sector status on pay within this group. In 1983, for example, between the 10th and 75th percentiles, there is little difference in the ‘premium’ obtained by working in the public sector; however, by 1991–95, it is clearly workers just below and around the median who fare the best. On the other hand, in so far as workers with O levels have lower average wages than those with degrees or A levels, there is an equalising effect between groups attached to public sector status. However, the average level of the ‘premium’ for this group has declined between 1983 and 1991–95, especially at the lower percentiles.

Comparison of the two top education categories for men with the O level group suggests that the public sector has a between-group equalising effect. Examination of the two top educational categories suggests a within-group equalising effect. For men with degrees or O levels, there is a clear erosion of the public sector ‘premium’ over time. However, as the last panel of Figure 5 suggests, those leaving school with no qualifications offer yet another permutation which is, in many ways, the most interesting illustration of the impact of policies towards the public sector in the 1980s and 1990s.

In 1983, most men working in the public sector with no qualifications earned a small but significant ‘premium’ over their counterparts in the private sector, although there was no clear equalising effect across the distribution of public sector pay for unqualified workers. By 1991–95, the ‘premium’ for unqualified workers had disappeared and public sector pay was not significantly different from pay in the private sector for this group, although there is some evidence of a within-group equalising effect of public sector status. It is tempting, and not unreasonable, to believe that this elimination of the public sector ‘premium’ arose from the policies of CCT and contracting-out pursued enthusiastically by successive administrations over the last two decades. This provides some evidence of ‘levelling-down’ between groups to the private sector level of pay, although the poorest of the unqualified men have fared slightly less badly than those with no qualifications who had initially been paid relatively more.

Figure 6 illustrates the results for women, and again we observe a heterogeneous experience across qualifications and the income distribution. Focusing first on women with degrees (the top left-hand panel), there is evidence of a negative gradient in both years in ‘premiums’ and ‘penalties’ across the income percentiles, as with men. However, unlike for men, there is no clear downward shift in the return to female graduates between 1983 and the early 1990s. Indeed, all the ‘premiums’ in 1983 were insignificant. In 1991–95, it is apparent that female graduates do significantly better than their private sector counterparts at the lower end of the distribution and significantly worse at the top end. The within-group equalising effect of public sector status is very clear in the later period for this group.
FIGURE 6
Quantile Regression Estimates of Public Sector Wage ‘Premiums’ and ‘Penalties’,
by Highest Educational Qualification: Women

* means that the test of parameter equality of the public sector wage effect across percentiles is rejected at the 5 per cent level or below.

Note: Shaded bars denote that estimates are significantly different from zero at the 5 per cent level.
Sources: GHS (1983) and pooled BHPSs (1991–95).

The next panel examines women with A levels. There is clear evidence of within-group equalisation of pay within the public sector but, again, little evidence of an erosion of the average public sector ‘premium’ over time. Taking, say, a woman with A levels at the median, the ‘premium’ has risen from 14 per cent in 1983 to about 20 per cent in 1991–95. This group will include some, such as nurses, who have fared relatively well in pay reviews, but it is nevertheless interesting that more-qualified women in the public sector appear to have
maintained or enhanced their relative pay over the period 1983–95. As we shall see, a different pattern emerges at the lower end of qualifications.

The next panel of Figure 6 looks at women with O levels. Here, the evidence of a within-group equalising effect on public sector status is much less apparent and there is also again evidence of an improvement in the position of the public sector over time: by 1991–95, the public sector ‘premiums’ were positive and significant at all the percentiles of the distribution for which estimates were made.

The last panel offers the biggest contrast with what has gone before. Among women with no qualifications, in 1983, there was evidence of a significant public sector ‘premium’ at the 25th and higher percentiles, and some tentative evidence of greater within-group inequality relative to the private sector because the only group not to obtain a significant ‘premium’ were those around the 10th percentile. This positive ‘premium’ has largely disappeared by 1991–95, with only the 10th and the 75th percentiles benefiting from public sector status. This therefore reinforces the result for unqualified men — namely, that unqualified workers have been big losers relative to the private sector from trends in public sector pay determination in the late 1980s and early 1990s. Again, competitive tendering and contracting-out of basic services seem likely to have played a major role in this.

IV. HOW DO WE INTERPRET PUBLIC SECTOR PAY ‘PREMIUMS’ AND ‘PENALTIES’?

So far, the paper has used a standard procedure — the estimation of wage equations — coupled with less standard procedures, such as the use of quantile regression, to examine wage differences between the public and private sectors. Clear evidence of public sector pay ‘premiums’ and ‘penalties’ has emerged, varying across time, by gender and educational qualification, and across the earnings distribution. But are these differences in pay between the public and private sectors ‘true’ premiums and penalties, or are there other factors at work? And if they are ‘true’ differences, what are the consequences for the quality of provision of public services?

To reiterate an earlier point, we seek to estimate conditional premiums’ and ‘penalties’ that are a consistent prediction of what a worker of given characteristics taken at random would gain (or lose) from moving from the private to the public sector. However, there are various alternative interpretations of the results described so far in this paper. In this section, we provide a list of these possible interpretations with brief comments on each one. In the next section, we focus in greater detail on the possibility that unobserved individual attributes are the key reason for observing these ‘premiums’ and ‘penalties’.

9That is, controlling for the characteristics included in the regression equations.
The differences may reflect unobserved individual characteristics in aptitude for training, quality of educational qualifications (for example, a First Class rather than a Pass degree), ability, preferences for different types of jobs and so on. This means that differences in predicted wages are simply picking up differences in unobserved individual attributes. It could also be the case that such unobserved skills are more evenly spread within the public sector.

Comment
If individuals are free to move between the public and private sectors, it seems very plausible that at least part of the difference in the wage distributions arises from differences in unobserved labour quality. We have shown that the estimated wage gains and losses, controlling for observed measures of skill (educational qualifications and age), are very different from the raw measures; it is likely therefore that other unmeasured skills will have similar effects. In the next section, we exploit the longitudinal structure of the BHPS to look at the relative changes in wages of people who move into and out of the public sector which could control for such a possibility. We argue, however, that this will only control for individual-specific differences if job moves across sectors are random, which seems unlikely.

The results might be biased as a result of other omitted explanatory variables: that is, there might be other characteristics of workplaces that ‘explain’ pay which, were they to be introduced into the estimated equations, would eliminate the ‘premiums’ or ‘penalties’. An example is trade union status.

Comment
As suggested in Section I, trade union status is highly correlated with public sector affiliation. Adding a binary (dummy) variable for union status in a regression equation covering all workers is likely simply to generate a problem of collinearity. A procedure suggested, and implemented in OLS regressions of BHPS data on hourly earnings, by Disney, Goodman, Gosling and Trinder (1998) is to compare the pay of public sector workers with unionised private sector workers. Any ‘penalty’ or ‘premium’ found for working in the public sector is then conditioned on union status. The results of the exercise show that a significant ‘premium’ remains for female workers in most parts of the public sector but is eliminated for male workers (as is confirmed in Figure 2 above). An interesting finding is that unionism raises the wages of unqualified workers by a greater amount in the private sector than in the public sector, other things being equal. However, the fact that, especially for men, much of the ‘mark-up’ is explained by union status does
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not imply that there is no public sector wage effect for men. If workers in the public sector, for some intrinsic reason, are more likely to be unionised, then this merely shows the route by which public sector status affects wages.

Other possible candidate variables are training, region, and occupation. Inclusion of regional dummies does not eliminate the public sector pay effects. The role of occupational affiliation has been considered in the time-series analysis underpinning Figure 2. Training variables may be endogenous to sectoral affiliation, and this issue is considered more fully below.

- There may be ‘compensating differentials’: that is, individuals in the public sector might have other non-monetary attributes that offset pay differences between the public and private sectors. These may include working conditions and fringe benefits.

Comment

Since individuals self-select into jobs according to a variety of personal and job characteristics, this issue is hard to pin down. There is some evidence of ‘compensating differentials’ in pay in the UK but little evidence that the characteristics of jobs that require ‘compensation’, such as adverse working conditions, are disproportionately present in the public sector. Furthermore, disparate measures of job satisfaction (which may, in any event, relate to pay) provide little support for pay disparities across the two sectors. Among fringe benefits, the main pecuniary value is attached to occupational pensions, which are disproportionately attached to public sector jobs, especially among white-collar employees. The fact that there remains a public sector ‘premium’, especially among women, and that the main ‘losers’ in the public sector in the last decade have been among the least-qualified workers, who are least likely to be covered by occupational pension schemes, militates against this general explanation.

- Some of the differences in within-group inequality between the public and the private sectors could arise simply because public sector workers are less vulnerable to shocks to wages, rather than there being any difference in the distribution of and the returns to unobserved skill.

\[10\] For a more comprehensive attempt to achieve these kinds of decompositions, see Blackaby, Murphy and O’Leary (1997).
Comment

As is shown in the next section, shocks to wages are certainly smaller in magnitude in the public sector, but this by no means explains away all of the public sector effect on the distribution of wages.

- The consequences of risk-aversion among workers is another possible interpretation of the results so far. If shocks to wages or employment are greater in one sector than the other, then individuals in the sector prone to greater shocks would wish to obtain higher wages.

Comment

This argument, which is analogous to the ‘compensating differentials’ argument, is unlikely to operate here. As argued previously, shocks to the private sector are likely to be greater in magnitude and frequency than shocks to the public sector, but notwithstanding this fact, public sector workers are more likely to obtain ‘premiums’ than ‘penalties’. However, the disproportionate incidence of shocks may be an explanation of second-order importance for unqualified workers who have seen their public sector pay ‘premium’ eliminated over a period in which unskilled workers in the private sector may have faced greater volatility of employment prospects due to technical change, the growth of small businesses and so on. If, however, more risk-averse workers select themselves into the public sector, greater volatility in one sector may have no clear implication for a sectoral ‘premium’.

This section has examined alternative hypotheses concerning the nature of the public sector ‘premiums’ and ‘penalties’ estimated in previous sections. Three of the alternative ‘explanations’ for the differentials considered — omitted variables, compensating differentials and attitudes to risk — suggest that the estimated effects of public sector status may be biased, but not away from zero. They do not suggest the ‘premiums’ and ‘penalties’ are overstated; indeed, rather the reverse. However, we now exploit the panel structure of the BHPS to try to control for unobserved individual effects, which are the most plausible alternative candidate for explaining the ‘premiums’ and ‘penalties’.

V. COMPARING INDIVIDUAL WAGES OVER TIME

This section assesses whether it is possible to exploit the panel nature of the BHPS data to control for individual-specific differences as discussed previously. Such models, commonly called ‘fixed effects’ models, treat unobserved determinants of wages as being constant for each individual over time. The
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effect of explanatory variables on, in this case, wage determination is then obtained by exploiting their time-series variation within an individual’s history. A set of individual-specific constant terms (fixed effects) are added to the regression to control for the unobserved components of wage determination which may be correlated with public sector status.

Table 4 contains a number of OLS specifications that attempt to measure the impact of public sector status on the average wages of groups differentiated by qualifications and gender. Column 1 contains simple OLS regression estimates pooled over the whole BHPS sample with our standard covariates and year dummies. These equations, of course, obtain similar results to those obtained earlier: significant positive public sector ‘premiums’ with the exception of men with degrees (where the relationship with public sector status is negative and significant) and unqualified men (where the coefficient is insignificant). The results repeat the findings of the quantile regressions that it is those with school-leaving qualifications who fare best in the public sector. The average ‘premium’ for women, at 19 per cent, is far higher than that for men (4 per cent).

Column 2 removes all the time-series variation in the data by treating each sampled individual as a separate group, averaging the values across the five annual observations for each individual, and then regressing the grouped average on the identically grouped covariates and time dummies (to capture the fact that not all individuals are observed in every period). These equations therefore examine the component of the differences in predicted wages that is solely attributable to differences in average characteristics across individuals. It is apparent that the coefficients are very close to those obtained by the pooled regression: individual differences are a major component of the predicted association between public sector status and wages. This model is only meaningful if there is no correlation between public sector status and the

\[ \ln w_i = f_i + \alpha_i + \beta (D_i - \bar{D}_i) + \bar{\beta} \bar{D}_i + \gamma (X_i - \bar{X}_i) + \bar{\gamma} \bar{X}_i + \epsilon_i \]

where \( f_i \) are the individual fixed effects, possibly correlated with public sector status, the dummy for which is \( D_i \) here, \( X \) is a vector of other explanatory variables and a bar refers to an individual’s mean over time. This essentially breaks down differences in wages across individuals and over time into an individual-specific average component (\( \bar{D}_i \), \( \bar{X}_i \) and \( f_i \)) and a component driven by changes in individual wages over time. The model assumes that the \( \beta \)s and the \( \gamma \)s are the same for all individuals and do not change over time.

\[ \ln \bar{w}_i = \alpha_i + \bar{\beta} \bar{D}_i + \bar{\gamma} \bar{X}_i + \epsilon_i \]

where \( \alpha_i \) is the mean of the constant terms of the equation in footnote 11 across the years that the individual is in the sample and \( \bar{D}_i \) takes values at 0.2 intervals between 0 and 1 depending on the time spent in the public sector. The fixed effects — the \( f_i \)s in footnote 11 — are assumed in this case to be zero or uncorrelated with the individual group means of the explanatory variables.
unobserved determinants of wages; it is presented here solely for comparison with the within-group model described next.

In contrast, column 3 removes all the cross-sectional variation (the individual differences) by focusing on the time-series variation, relative to the grouped means, of the variables. By netting out the ‘individual effects’, the equation examines the component of the differences in predicted wages that is attributable to variations from the grouped mean over time in the explanatory variables of

<table>
<thead>
<tr>
<th>TABLE 4</th>
<th>Pay ‘Premiums’ and ‘Penalties’ across and within Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All differences</td>
</tr>
<tr>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td><strong>Men</strong></td>
<td></td>
</tr>
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<td>All education groups</td>
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</tr>
<tr>
<td>No formal qualifications</td>
<td>0.006</td>
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<tr>
<td>O level or below</td>
<td>0.032</td>
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<tr>
<td>At least one A level</td>
<td>0.091</td>
</tr>
<tr>
<td>Degree level or above</td>
<td>0.023</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td></td>
</tr>
<tr>
<td>All education groups</td>
<td>0.191</td>
</tr>
<tr>
<td>No formal qualifications</td>
<td>0.137</td>
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<tr>
<td>O level or below</td>
<td>0.022</td>
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<tr>
<td>At least one A level</td>
<td>0.212</td>
</tr>
<tr>
<td>Degree level or above</td>
<td>0.066</td>
</tr>
</tbody>
</table>

Note: Standard errors are given in italics.
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interest, including public sector status. So, for example, if an individual spent two years of the five in the public sector, the grouped mean is 0.4 and, in column 3, the variable will take the value +0.6 in two years and –0.4 in three years. We are therefore interested in whether these positive and negative values are associated with changes in individual wages from the grouped means of each individual, other things being equal.

It is noticeable that these coefficients are rather different from those obtained in the previous columns, especially for men. For example, the only significant positive ‘premium’ for men is for graduates: taken at face value, the coefficient suggests that graduates who move to the public sector obtain a 13 per cent wage gain on average. For women, all the coefficients are positive and significant, suggesting that transitions into the public sector are associated with significant average wage gains for each qualification group. However, the average wage gain for women, of just under 14 per cent, is somewhat lower than the 19–22 per cent obtained from the models that do not control for individual-specific differences. In principle, therefore, this last model suggests that individual fixed effects are important and casts some potential doubt on the ‘premiums’ and ‘penalties’ calculated by the more conventional approaches.

The wage gains or losses associated with sectoral changes are not immune from problems of interpretation, however. They will only identify the public sector wage ‘premium’ or ‘penalty’ if:

(a) moves between sectors are unrelated to other changes affecting wages;
(b) the public sector effect does not change over time or differ between those who move out of and those who move into the public sector;
(c) the unobserved component of individual wages does not change over time;
(d) enough time periods are observed so that individual-specific shocks to wages will average out.

Individuals move jobs either because they believe that the wage gains to moving exceed those obtained from staying within the same job, or because there are differential non-monetary attractions to different jobs (perhaps their preferences or their household characteristics have changed), or some combination of both. Thus wage gains on moving cannot be given the interpretation of a random change of sector.

One variant of this counter-argument is to suggest that individuals differ in their aptitudes for different jobs. Individuals self-select into the occupations, including public sector status, where their aptitudes are best suited. While such a model does not predict a given public sector ‘premium’ or ‘penalty’ per se, it suggests that predicted wages for individuals that ignore this self-selection are likely to be biased estimates. What is then required is an equation to explain the

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13This model naturally follows from the model in footnote 8.
14See Topel (1986).
decisions to join a particular occupation, or the public sector, in addition to the model of wage determination. But such a joint model is not easily estimated. It should be noted that a model with wage gains attached to job moves is not surprising — this is why many people move jobs. However, it is somewhat more difficult to explain why, in column 3 of Table 4 for men and women, moving to the public sector is associated with net wage gains. A corollary of our interpretation of the coefficients in the within-group estimates of the effect of public sector status is that movement to the private sector is associated with wage losses. Why should this be the case? One can think of several possible explanations, all of which suggest that there are ‘spurious’ correlations between public sector status changes and wage changes:

- If individuals acquire better job-specific skills in the public sector than in the private sector, then movement out of the public sector will induce a fall in (relative) wages. This does not, however, mean that there is a public sector wage ‘premium’ as such; it should be thought of as an argument concerning differential returns to tenure.
- Any relationship between sectoral status and wages will be partially hidden by any misclassification in public sector status. Looking at deviations of observations from their means over time will exacerbate such errors. If these misclassifications are random, then this will tend to bias the estimated ‘within-individual’ effect towards zero. Disney and Gosling (1998), using changes in the public sector proportion in each occupation as an instrument for changes in public sector status, show that such misclassification errors are important.
- When public sector workplaces are in the process of moving towards a more competitive structure or ‘downsizing’ in some other form, those workers who quit or are made redundant will not normally be a random sample of the work-force as a whole. As there has been a secular decline in the size of the public sector work-force, selective retention of the better-quality workers by public sector managers might have led to a rise in average productivity and thus in the observed wage effects associated with sectoral transitions.
- If individual moves between sectors are associated with relative shocks to technology affecting the relative wages of individuals of different skills,

15Identifying restrictions are not always obvious. For example, Dustmann and van Soest (1998) use parent’s occupation as an instrument in order to explain occupational choice between the public and private sectors using West German data. But parental decisions may also correlate with unobserved factors (such as ability) that affect an individual’s wages. The authors also survey a number of other studies that attempt to model the choice between public and private sectors and show that identifying restrictions are ad hoc and often quite contradictory across different studies. A further complication is that both employers and employees may use selection procedures when both the level and inequality of pay differ between the two sectors: see Lemieux (1998).

16This should not be interpreted as saying that government training has higher returns than private sector training, since the evidence suggests that the reverse may be true: see Heckman (1998).
differential correlations between sectoral status and wage changes might be observed across the sample.

Some evidence that ‘movers’ are non-random can be gleaned from Table 5, which illustrates the dispersion of wages in the public and private sectors over time, conditioned on gender, age and education. These data show a slight increase in inequality over time but, much more clearly, a disparity in inequality between the private and public sectors, replicating the result in Table 2. If we take out the individual-specific effects, as calculated in Table 4, then we find that the standard deviation of wages of those who worked in the public sector throughout the period is 0.218 whereas it is larger, at 0.256, in the private sector. But the standard deviation of wages of those who move between sectors is 0.275. Thus it is clear that the pattern of wage changes of job movers is very different from that of job ‘stayers’.

In summary, therefore, it is not hard to see why the criteria of identifying the ‘true’ public sector wage effect through individual changes in sector are not satisfied. Nevertheless, the results overall strongly suggest that public sector workers are very different from their private sector counterparts and that the ‘true’ public sector pay effect may differ across different sorts of workers.

**VI. CONCLUSIONS**

What conclusions can be drawn from these findings? Using data from repeated cross-sections of the New Earnings Survey and of the British Household Panel Survey, and one year of the General Household Survey, there is evidence that

<table>
<thead>
<tr>
<th>Year</th>
<th>Public sector</th>
<th>Private sector</th>
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<tbody>
<tr>
<td>1991</td>
<td>0.426</td>
<td>0.494</td>
</tr>
<tr>
<td>1992</td>
<td>0.394</td>
<td>0.495</td>
</tr>
<tr>
<td>1993</td>
<td>0.399</td>
<td>0.520</td>
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<tr>
<td>1994</td>
<td>0.420</td>
<td>0.481</td>
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<tr>
<td>1995</td>
<td>0.431</td>
<td>0.504</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Always in the public sector</th>
<th>Always in the private sector</th>
<th>Moves between sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard deviation</td>
<td>0.218</td>
<td>0.256</td>
<td>0.275</td>
</tr>
<tr>
<td>(24% of sample)</td>
<td>(65% of sample)</td>
<td>(11% of sample)</td>
<td></td>
</tr>
</tbody>
</table>
men and especially women in the public sector have earned a pay ‘premium’ in the past, but that this ‘premium’ has been eroded over time and has now all but disappeared for men. This provides strong prima-facie evidence that the public sector has fared worse than the private sector in the past two decades, albeit from an apparently more privileged starting-point.

A second striking feature of the data is that the pay distribution is more compressed in the public sector and that, although there has been some increase in public sector pay inequality in the past two decades, the more rapid increase in private sector inequality has enhanced the ability of the public sector to compress pay.

The public sector can potentially compress pay in two dimensions: by reducing between-group inequality (when groups are defined by, say, highest educational qualification) and by reducing within-group inequality. Quantile regressions of public sector pay ‘premiums’ and ‘penalties’ throw up some complex effects. Women almost uniformly do better than men in exacting public sector ‘premiums’, which reduces between-group inequality in the labour market in one dimension: gender. Among graduates, the public sector also has both inequality-reducing features: male graduates in the public sector face a pay ‘penalty’ which has been increasing over time, and this adverse effect is felt disproportionately by the highest-paid graduates.

Other groups do not exhibit between- and within-group reductions in inequality in the public sector. The sharpest example is among those with no qualifications, where ‘premiums’ have been almost entirely eroded amongst all but the lowest-paid women. We interpret this as resulting from the policy of compulsory competitive tendering and privatisation that has been followed since the mid-1980s. The main beneficiaries from public sector ‘premiums’ are those with school-leaving qualifications, especially women, but there is evidence of erosion of these ‘premiums’ for men.

Alternative explanations for these measured ‘premiums’ and ‘penalties’ were considered. Most seemed to hold little credibility bar the possibility that these pay differentials constituted differences in labour quality between the two sectors. Indeed, where individuals are free to join either sector, it is hard to envisage any alternative explanation. Suppose, for example, that the different percentiles of the female graduate pay distribution in Figure 6 represented, in ascending order, those with Pass, Third Class, 2.2, 2.1 and First Class degrees. The evidence of pay ‘premiums’ and ‘penalties’ for 1991–95 would suggest that those with Pass and Third Class degrees would join the public sector whereas those with 2.1 and First Class degrees would enter the private sector. The quality of graduates in the public sector would, on average, be lower than that in the private sector. Furthermore, the systematic erosion of returns to male graduates over time exhibited in Figure 5 would suggest that the quality of the graduate intake employed in the public sector would have systematically declined since
the mid-1980s, and that better-qualified graduates would have moved to the private sector as opportunities arose.

Although this is the basic conclusion to be drawn from these findings, this illustration is obviously a simplistic one. Pay inequality and measurable ability (if, indeed, class of degree is a good measure of ability) may not coincide. Individuals may have differing aptitudes for different jobs and may self-select, or be selected, between the two sectors on criteria other than overt qualifications. In these circumstances, measured pay ‘premiums’, in particular, may reflect individual job-specific attributes rather than deviations from a ‘competitive’ job market (i.e. one in which, other things being equal, job-specific ‘premiums’ and ‘penalties’ are zero).

This possibility was examined by exploiting the panel element of the BHPS dataset in order to decompose variation in pay into that attributable to individual-specific characteristics and that attributable to temporal variations in other variables (including public sector status) holding individual-specific effects constant. The results suggested a clear relationship between individual-specific characteristics and the size of the pay ‘premium’ or ‘penalty’. However, there was also evidence of a somewhat different set of ‘premiums’ (by qualification) attached to changes in public sector affiliation, holding individual characteristics constant. Since moving between jobs is voluntary, and is likely to be determined by, in part, the promise of wage gains from moving as opposed to wage gains from tenure in the same job, this observation of asymmetric wage gains from moving in one direction (from private to public sector) is somewhat puzzling. We therefore described a number of factors that might underpin this asymmetry and are exploring further approaches to the problem in Disney and Gosling (1998). The results here do, however, illuminate a complex and interesting pattern of shifts in pay inequality within the public sector, consistent with prior beliefs as to the impact of public sector pay policies and the changing economic environment of the last two decades.

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