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Is the Public Sector Pay Advantage Explained by Differences in Work Quality?

David Blackaby, Alan Felstead, Melanie Jones, Gerry Makepeace, Philip Murphy, and Victoria Wass

8.1. INTRODUCTION

This chapter addresses the common perception that work in the public sector confers a 'double premium' of better quality work and better pay (Bellante and Long, 1981), leading to feelings of 'sector envy' (Dolton and Makepeace, 2011). In the past, these feelings have been exacerbated by evidence which claimed to show that, in some cases, the pay of public sector workers is 35 per cent higher than those working in the private sector. Furthermore, it has also been claimed that equalizing the pay and pensions of the public sector with the private sector would reduce public expenditure (Holmes and Oakley, 2011, 2012). Although the evidence has been hotly disputed, it has been used to promote the case for local 'market-facing' pay deals in the public sector (Damant and Jenkins, 2011; Incomes Data Services, 2011).

   In addition to being wasteful of public expenditure, it has also been argued that higher average levels of pay in the public sector have a number of other damaging consequences. These include making it difficult for private sector business to compete with higher pay levels offered in the public sector; sustaining variations in pay unrelated to public sector service quality; and reducing the number of jobs that the public sector can support with any given level of expenditure (Lambert, 2010). These claims are also widely contested (Algan et al., 2002; Faggio and Overman, 2012).

   Yet, to ensure that public sector pay is fair the government seeks independent advice from seven Pay Review Bodies (PRBs). They are tasked to review pay levels and recommend annual pay rises given to public sector workers such as teachers, doctors, nurses, police officers, and senior civil servants. The

first PRB was set up in 1971 and the latest in 2014 (Home Office, 2013).
Together their remit covers 2.25 million workers, which accounts for 40 per
cent of the 6.3 million strong public sector workforce, and their decisions
have an impact on a pay bill of £93 billion. Each PRB is given an annual
remit which varies according to a number of factors. These include the state
of public finances and hence the affordability of any recommendations;
recruitment and retention issues; and varying the size of the pay award by
grade or pay level in order to favour the low paid (see NHS Pay Review Body,
2014, appendix A).

However, while pay and other features of work such as final salary
pension schemes—which have been phased out more slowly in the public
sector—have attracted much attention, little is known about the comparative
non-pecuniary advantages and disadvantages of working in the public as
opposed to the private sector. The notion of the public sector as a 'good
employer' suggests that one would expect to see a public sector advantage
here as well as in relation to pay. This chapter tests this notion by examining
inter-sector differences in the intrinsic quality of work which are evident in
data collected by surveys carried out in 1997, 2001, 2006, and 2012 as part of
the Skills and Employment Survey (SES) series (see Technical Appendix). It
also examines how the sector gaps have changed over time. The chapter then
goes on to explore what effect the inter-sector differences identified have on
the public sector wage premium.

The chapter proceeds as follows. Section 8.2 outlines the theory of com-
pensating wage differentials as a framework within which to understand
inter-sector wage differences. Section 8.3 examines the possible sources of
the public sector pay premium as well as the limited evidential basis that
public sector jobs are better in other ways too. Section 8.4 outlines our
twofold analytical approach and the evidence base on which the chapter
draws. Section 8.5 outlines the bivariate findings on intrinsic features of work
which are rarely collected by official datasets—such as the Labour Force
Survey (LFS) and the Annual Survey of Hours and Earnings (ASHE)—on
which most of the public–private sector pay gap literature is based.
Section 8.6 presents the results of a series of regressions which explore the
extent to which the public sector pay premium can be explained in terms of
the theory of compensating wage differentials. By carrying out separate
analyses by gender and at different points in the pay distribution we identify
for whom and at what pay levels there is evidence of a public sector wage
premium after accounting for differences in intrinsic work quality.
Section 8.7 ends the chapter with a summary and an outline of the implica-
tions for policy-makers who have used the raw pay gap data to justify
political interventions into pay-setting arrangements and for labour market
analysts who monitor movements in pay differentials.

8.2. COMPENSATING WAGE DIFFERENTIALS

The theory of compensating wage differentials was conceived by Adam Smith nearly 250 years ago. Simply stated, it argues that jobs which are more costly to undertake, more disagreeable, involve more effort, or require more training will command a higher wage because 'the whole of the advantages and disadvantages of the different employments of labour and stock must, in the same neighbourhood, be either perfectly equal or continually tending toward equality' (Smith, 1976, 111). This is expressed in equation (1), where undesirable non-pay benefits of working in sector 1 such as high work intensity and low levels of autonomy are compensated by higher pay than in sector 2 where non-pay benefits are more desirable, and vice versa. In other words, if one job has *ceteris paribus* a better (traditionally unobservable) attribute such as greater autonomy or less stress, then the wages for that job will be lower in order to compensate for the better non-pecuniary benefits. Workers move between jobs until net advantages are eliminated. In this model, wage rates embody a set of implicit prices for different job characteristics. Any resulting pay differences simply reflect differences in non-monetary characteristics of jobs, thereby equalizing 'net advantages'.

Pay in sector 1	=	Pay in sector 2	(1)
+ net value of non-monetary benefits of work in sector 1		+ net value of non-monetary benefits of work in sector 2	

Duncan and Holmlund (1983, 366) note that there are few propositions in labour economics with greater intuitive appeal than compensating wage differentials. However, empirical results are mixed so that, while there is 'some clear support for the theory', there are also 'an uncomfortable number of exceptions' (Brown, 1980, 118, quoted in Duncan and Holmlund, 1983, 367). Econometric difficulties turn on the inability to adequately control for all relevant worker and job characteristics in typical cross-sectional datasets and notably the non-monetary aspects of work, as contained in the Skills and Employment Surveys (SES).

As an extension to this approach some researchers have advocated modelling the determinants of total reward (e.g. Danzer and Dolton, 2012; Leslie, 2008). This refers to the total present value of a number of items, including pay as well as pensions and other benefits in kind over the life course. While the dataset used here measures whether or not the employer contributes to a pension on behalf of respondents,[1] the level of detail needed to pursue the total

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[1] This shows a marked and, if anything, widening sector difference with those in the public sector more likely to report that their employer contributes to their pension. In 2012, 79.6 per cent of public sector workers reported that employer pension contributions were made on their behalf compared to 45.6 per cent of private sector workers.

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rewards approach is not available—as its advocates acknowledge 'data require-
ments for this research are high' (Danzer and Dolton, 2012, 589). These
include pension membership rules, pension scheme parameters, the value of
employee and employer contributions, and scheme tenure. So, in line with
existing research on public–private sector pay comparison, differences in
pension arrangements are not factored into the analysis which follows.

8.3. EXPLANATIONS FOR SECTOR DIFFERENCES

There are reasons one might expect the non-pay quality of work to be higher
in the public sector. Historically, the public sector has striven to be a 'good
employer'. This notion has roots extending back to the formation of the civil
service in the mid-19th century (Davies, 2012; Horton, 2006; Morgan and
Allington, 2002). The *Royal Commission on the Civil Service*, for example,
stated that while a 'good employer' need not necessarily offer its employees
high rates of pay, it did have to provide job security, joint consultation in the
form of collective bargaining and 'carr[y] out a range of practices that would
today constitute good management, whether they be in the form of joint
consultation along civil service lines, fairness and equal opportunities'
(Priestley, 1955, paragraph 172). This idea was echoed a quarter of a century
later by Beaumont (1981), who attributed superior pay and conditions in the
public sector to the government pursuing model employment practices and
treating employees as stakeholders in the productive process. Almost three
decades later, the Black Review (2008) cited the public sector as a beacon of
good employment practice and looked to it to take forward the agenda of
enhancing health and well-being at work.

However, the evidence of superior working conditions in the public sector
tends to be inferred rather than based on direct evidence. The institutional
environment tends to be better in the public sector with higher union density,
and tighter regulation of employment practices and working conditions (see
Chapter 7 of this book; Bellante and Long, 1981; Jones et al., 2014). The latter
includes the 1997 Single Status Agreement which ensures that all local gov-
ernment staff receive equal pay for work of equal value, changes resulting from
the NHS Agenda for Change 2004 and the additional demands stemming
from the Public Sector Equality Duty which came into force in 2010. Using
employee rights in relation to equality as a marker of superior working
conditions, the public sector is seen to be a clear leader over the private sector.
According to the Workplace Employment Relations Survey 2011, the presence
of an equal opportunities policy was almost universal in the public sector—99
per cent of workplaces had one in 2011—compared to 74 per cent of private
sector workplaces (Bach et al., 2009; van Wanrooy et al., 2013, 116–18). More

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importantly, perhaps, the equality policies in the public sector are more likely to be supported by substantive workplace practices, for example, the monitoring of jobs by gender and ethnicity, flexible working, and practices in relation to requests for disability related adjustments (Hoque and Noon, 2004). Furthermore, it is argued that there is positive interaction between regulation and unionization in the enforcement of individual rights in relation to equality, a factor which has greatest impact in the public sector given its relatively high levels of unionization (Hoque and Bacon, 2014).

There are also reasons why public sector workers are better paid. The employment profiles of each sector are very different (Incomes Data Services, 2011). For example, professionals with specific service roles and high-level qualifications are over-represented in the public sector, especially within healthcare and education. Indeed, much of the pay gap disappears when controls for the qualifications held by employees are included in wage equations. By taking these structural differences into account, Emmerson and Jin (2012) report an overall 8 per cent pay differential, which varies according to the time period chosen, how the model is specified, and where in the earnings distribution the gap is measured. In subsequent studies, Blackaby et al. (2012) and ONS (2012) include further controls, including establishment size, and the pay gap disappears completely for men and shrinks significantly for women. Studies by Disney and Gosling (1998), Blackaby et al. (1999), and Lucifora and Meurs (2006) have also found that the adjusted public–private sector pay premium decreases the further up the wage distribution you move, and that for men this gap becomes negative for high-income earners. The public sector pay premium favours women and the low paid and can therefore be regarded as a force for reducing inequalities in pay. This has sometimes been recognized in the remits given to the PRBs which exempt those towards the bottom of the earnings distribution from stringencies and/or suggest tighter controls on the pay awards for those at the top (e.g. NHS Pay Review Body, 2014, appendix A).

There are grounds, then, for expecting that the intrinsic quality of work is higher in the public sector and most empirical work indicates a public sector pay premium. The coincidence of both better pay and better job quality in the public sector presents a challenge to the compensating wage differential model and therefore an important and interesting subject of study. However, there is little quantitative evidence to substantiate many of the differences in non-monetary benefits of work in each sector. This chapter aims to fill that gap by addressing four aspects of intrinsic job quality. These include inter-sector differences in the skill content of jobs; differences in discretion and autonomy over job tasks; differences in work effort and work intensity; and differences in perceived risk of job loss and anxiety about this and other aspects of work. A distinctive feature of the SES data series is that most of these measures are focused on the job and not the individual. We explore how inter-sector differences have evolved over time (1997–2012) and, in particular, whether

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they have widened or narrowed. These differences in job quality are then included as controls in the compensating wage differentials framework, which allows us to evaluate whether there is a 'double premium' or whether the wage differences can be accounted for by non-pay variations in the quality of work.

8.4. EMPIRICAL APPROACH

The chapter is based on data collected in surveys of the working adult population carried out in 1997, 2001, 2006, and 2012.[2] We follow as far as possible the Office for National Statistics' (ONS) definition of the public sector as comprising organizations which are wholly or mainly owned and controlled by the government. Private sector firms, on the other hand, are organizations which are mainly owned by private persons or shareholders who exercise control over how these businesses are run. The ONS then goes on to list the evidence on which this decision can be based. However, individuals are often not in possession of such detailed information. Self-reporting by respondents of sector is therefore subject to some error. In the surveys reported here—as in many others—respondents are asked: 'Is your organization a private sector organization such as a company, or a public sector body such as local or national government, schools, or the health service, or a non-profit organization such as a charity?' Respondents are grouped into three categories according to the responses given.[3] The official definition of the public–private sector divide puts non-profit organizations into the private sector (Matthews, 2010) and we follow this practice. The empirical work is based on a total pooled sample of 15,896 employees of whom 30.8 per cent work in the public sector.[4]

   The empirical analysis is carried out in two ways. First, we examine inter-sector differences in the non-monetary characteristics of work and assess if workers in the public sector are privileged or disadvantaged in these terms. We focus on four features of work which provide a potential source of a compensating wage differential: job skills; discretion and autonomy; work intensity; and insecurity and anxiety at work. These measures are focused on the job and not the individual so, for example, job skills cover what qualifications, skills, training, and learning are required to do the job. Some aspects are desirable,

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[2] A consistent public sector identifier is available from 1997 onwards.

[3] While the 1986 and 1992 surveys collected self-reported sector data, they did not provide respondents with a three-option response or give examples of the type of organization. For this reason, the 1986 and 1992 public–private sector variable is not consistent with later years. In other publications such adjustments were not made (e.g. Felstead et al., 2013c; Gallie et al., 2013).

[4] For each of the data points the comparative LFS estimates for public sector employment are two percentage points lower than SES estimates.

some less so. Autonomy and discretion at work, for example, are often regarded as desirable features of work and are thought to be key characteristics of professional roles, especially those involving the delivery of public services. Similarly, protection from job insecurity (referred to by Adam Smith as the constancy of employment) is a non-pecuniary and intangible benefit which might give rise to a compensating wage differential. Work intensity, on the other hand, is commonly regarded as less desirable and may therefore be compensated for in higher wages, other things being equal. We examine these four features of work by reporting a set of simple summary statistics which highlight significant inter-sector differences and how these differences in work quality have changed between 1997 and 2012.

Our analysis goes on to explore the public–private sector pay gap in the context of a series of compensating wage models. These produce increasingly like-for-like comparisons, so that the inter-sector wage differential is progressively measured net of all measured differences in characteristics and requirements both at the level of the individual, the employment context, and the job. The analysis presented in this chapter provides a much stronger test of the contention that public sector workers are overpaid than a comparison based on unadjusted averages which fails to take into account the differences outlined earlier. Furthermore, the data series allows us to take into account a much more extensive range of characteristics and requirements than is typical. Datasets traditionally used to measure pay gaps (such as LFS and ASHE) collect data on individual characteristics and gather rather less on the nature of the job itself. While the effects of inter-sector differences in workplace characteristics (such as pay-setting, management structure, human relations policies) have been taken into account using the management data collected by the Workplace Employment Relations Survey alongside individual-level employee data (e.g. Chatterji et al., 2011), we have a richer set of data on job quality at our disposal. Returning to equation (1), greater work intensity, for example, is an undesirable feature of work which will manifest itself in higher wages, so inter-sector differences in work intensity will be 'compensated' for by an inter-sector wage differential. Therefore, by introducing a set of controls associated with the non-monetary characteristics of work, we may uncover sector-related 'compensating differentials' not captured in previous analyses.

The SES series contains pay data along with data on a range of intrinsic features of work. Based on the pay data alone, there is a *prima facia* case for the public sector pay premium as reported in Table 8.1. Here, we compare the raw percentage pay differential estimated from our data series with estimates from ASHE and LFS. While there is variation between the figures generated from different surveys, which is expected given differences in the sample, measurement of earnings, and classification of sector, the raw gap is in the order of 10–15 per cent and there is consistent evidence that the gap is much

Table 8.1. Public–Private Sector Percentage Pay Gaps, Gross Hourly Pay, 1997–2012

	1997			2001			2006			2012		
	SES	ASHE	LFS	SES	ASHE	LFS	SES	ASHE	LFS	SES	ASHE	LFS
All	14.4	8.1	15.7	10.7	3.3	8.4	11.7	9.5	10.4	12.9	15.7	10.0
Men	12.1	8.1	13.5	11.4	4.0	8.7	8.0	11.7	10.2	13.9	18.3	8.5
Women	33.8	25.6	31.6	24.1	19.3	20.3	26.8	23.6	22.3	19.5	28.7	22.2

Notes: the above figures are a percentage differential which is calculated as (public sector average wage – private sector average wage) / (private sector average wage)*100. SES estimates are trimmed (1 per cent top and bottom) throughout.

greater for women. This suggests that the pay data at our disposal are comparable to data collected by much larger sample surveys.

8.5. SECTOR DIFFERENCES IN THE NON-PAY QUALITY OF WORK

8.5.1. Skill Requirements

The skill requirements of jobs are captured by three broad indicators: qualifications required on entry to the job, prior training for that type of work, and initial post-entry learning while on the job. The first draws data from a survey question which asks respondents 'if they were applying today, what qualifications, if any, would someone need to get the type of job you now have?' We rank the qualifications given and put them into five categories. These range from degree or equivalent to those who said that no qualifications would be needed. Each level is given a score, with '4' at the top and '0' at the bottom. The derived qualification index is the average of these scores. We subtract the private sector score from the public sector score in order to highlight sector differences. We also examine: (a) whether the public–private sector gaps are significant at each data point; and (b) if these gaps have changed significantly over time in order to assess to what extent sector differences have contributed to the evolution of non-pay inequalities at work. This analytical approach is applied throughout this section.

The results show that jobs in the public sector demand higher skills than the private sector as measured by the level of qualifications required on entry. For example, degree-level jobs rose by ten percentage points in both the public and private sectors—rising from 25.2 per cent in 1997 to 35.5 per cent in 2012 in the public sector and from 12.1 per cent in 1997 to 22.7 per cent in 2012 in the private sector (percentages not shown in Table 8.2). The gap in the required

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Table 8.2. Public–Private Sector Gaps in the Non-Pay Quality of Work, 1997–2012

Dimensions of the quality of work (1)	1997 Public–private sector gap (2)	2001 Public–private sector gap (3)	2006 Public–private sector gap (4)	2012 Public–private sector gap (5)	2012 Interaction coefficient (6)
A. Skill requirements (scale differences)					
Required qualifications	0.667***	0.615***	0.774***	0.702***	0.035
Training time	0.758***	1.108***	1.256***	1.086***	0.328
Learning time	0.370***	0.374***	0.468***	0.605***	0.235*
Literacy	0.470***	0.434***	0.480***	0.456***	−0.014
Numeracy	−0.290***	−0.289***	−0.184***	−0.183***	0.107
Physical skills	−0.328***	−0.117***	−0.177***	−0.134**	0.194**
Influence skills	0.357***	0.308***	0.331***	0.329***	−0.028
Planning skills	0.291***	0.236***	0.244***	0.253***	−0.038
Client communication skills	0.011	−0.083**	−0.096***	−0.177***	−0.188***
Problem-solving skills	0.061	−0.018	0.040	−0.037	−0.098
Checking skills	−0.043	−0.056*	0.030	na	0.073
Emotional skills	na	na	0.362***	0.398***	0.036
Aesthetic skills	na	na	0.226***	0.245***	0.019
Computer-use skills	0.153*	0.158**	0.433***	0.307***	0.153
Sophisticated computer-use skills	0.087	0.098**	0.240***	0.148***	0.060
B. Discretion at work (scale and percentage point item differences)					
Task discretion index	0.069**	0.006	−0.001	0.020	−0.049
Supervision index	−0.017	0.061**	0.127***	0.006	0.023
A great deal of say in decisions which change the way you do your job	na	−4.3***	−8.0***	−7.4***	0.661*
Should you have more say in decisions which affect work?	na	2.3	10.7***	8.9***	1.31**
C. Work intensity (percentage point item differences)					
Strongly agree: 'my job requires that I work very hard'	9.2***	8.6***	12.3***	11.8***	1.09
Strongly agree: puts a lot of effort into job beyond what is required	2.1	2.8	4.0**	5.3**	1.17
D. Perceptions and experiences of insecurity (percentage point item differences)					
A chance of job loss	0.7	−7.2***	−3.7***	3.9*	1.18
Recent work reorganization	na	7.1***	5.7***	10.0***	1.14
In future may have less say in job	na	na	na	11.2***	na
In future may have less ability to use skills	na	na	na	5.2**	na

(*continued*)

Table 8.2 Continued

Dimensions of the quality of work (1)	1997 Public–private sector gap (2)	2001 Public–private sector gap (3)	2006 Public–private sector gap (4)	2012 Public–private sector gap (5)	2012 Interaction coefficient (6)
In future may have pay reduced	na	na	na	10.7***	na
In future may be moved to a less interesting job	na	na	na	5.3**	na

Notes: both the descriptive data (columns 2–5) and regression results (column 6) are weighted. Columns 2–5 report t-tests of the public–private sector from the private sector differences, while column 6 reports the 2012* sector interaction variable (i.e. whether the public–private sector gap in 2012 is significantly larger than the gap in 1997 or the earliest year for which data are available). For linear regressions, the interaction coefficient equates, subject to rounding, to the difference between columns 5 and 2. For logistic regressions (where items are reported using percentages), the interaction coefficient presented in column 6 is the odds ratio. *, **, *** indicate statistical significance at the 10 per cent, 5 per cent, and 1 per cent levels, respectively; 'na' denotes question not available at the survey point.

Source: SES

qualification index has remained more or less unchanged at around 0.7 for most of the period (see Table 8.2, panel A).

The second broad skills indicator, prior training, comes from the question: 'Since completing full-time education, have you ever had, or are you currently undertaking, training for the type of work that you currently do?' If 'yes', 'How long, in total, did (or will) that training last?' Eight responses were possible ranging from no prior training (scoring '0') needed at one end of the spectrum to over two years (scoring '7') at the other. The training time index refers to an average of these scores. This produces evidence to suggest that public sector jobs are associated with longer periods of prior training with a significant sector gap in the index at all dates in the series. In 2012, for example, three out of ten public sector workers (31.0 per cent) spent more than two years training for the job compared to two of ten private sector workers (20.7 per cent). Although the absolute sector gap has widened over time—in 1997 it was 0.758 but, by 2012, it had risen to 1.086—the rise was not large enough to be statistically significant (note the positive, but insignificant, 2012 interaction term in column 6 of Table 8.2).

The third broad skills indicator, initial post-entry learning, is based on the question: 'How long did it take for you after you first started doing this type of job to learn to do it well?' Six responses were possible ranging from 'less than a month' (scoring '1') to 'over two years' (scoring '6'). The learning time index refers to an average of these scores. Again, the public–private sector differences in job skills at each data point are significant with public sector jobs requiring

longer initial post-entry learning. On these three measures, then, public sector jobs are substantially more skilled than those in the private sector, on average. This is true in all four years in the series. Furthermore, the sector gap on this skill measure increases significantly over time (see positive and significant 2012 interaction term in column 6 of Table 8.2).

Respondents to the four surveys were also asked: 'in your job, how important is [a particular job activity]?' Examples of the activities included: 'using a computer'; 'analysing complex problems'; and 'adding, subtracting, multiplying, or dividing numbers'. The 2012 questionnaire covered forty-four activities with previous surveys carrying somewhat fewer. Respondents were asked to pick from a five-point scale which ranged from 'essential' (scoring '4') to 'not at all important' (scoring '0'). Factor analysis produced the ten types of generic skills. To these we add two measures of generic computer use. The first measures the importance of computer use at work. The second asks respondents whether they draw on 'advanced', 'complex', 'moderate', or 'straightforward' computer skills with each level accompanied by concrete examples of such use. From this we derive a computer skills sophistication index. This ranges from no use at all (scoring '0') to 'advanced' use (scoring '4').

Examination of these data reveals that public and private sector jobs are different in terms of the type of skills that are required and, once again, the suggestion is that public sector jobs require higher skills. Public sector jobs require higher skills in terms of literacy, influencing abilities, planning, emotional labour, aesthetic labour, and computer use. However, private sector jobs require significantly more from workers in terms of numeracy skills, physical effort, and client communication (such as selling products and services and advising customers). Out of twelve generic skills, seven were significantly in favour of the public sector in 2012, but only three favoured the private sector. There is no consistent pattern of change over time.

8.5.2. Discretion and Autonomy

The survey series carries a set of questions which address how much personal influence employees report they have over four specific aspects of their jobs: how hard they work; deciding what tasks they are to do; how the tasks are done; and the quality standards to which they work. The response options range from 'a great deal', 'a fair amount' to 'not much' and 'not much at all'. A task discretion index was derived by awarding scores ranging from 3 to 0 for each of these responses.

Despite earlier evidence that jobs in the public sector require higher qualifications on entry, involve lengthier training time, take longer to learn to do well once in post, and (in many respects) entail higher generic skills, discretion

levels differed little between the sectors in 2012. However, in 1997 public sector workers enjoyed significantly higher levels of discretion, but from then onwards discretion levels between the sectors have narrowed significantly and become negligible (see Table 8.2, panel B).

Discretion is related to supervision. Respondents were, therefore, asked: 'How closely are you supervised in your job?' We derive a supervision index from the responses given, ranging from 'not at all closely' (scored as '1') to 'very closely' (scored as '4'). The results using this index mirror the trajectory of change for discretion reported above. Supervision over public sector workers' jobs grew in the 1997–2006 period and discretion fell. However, since then both the supervision and discretion gaps between the sectors have disappeared.

Respondents were also asked: 'Suppose there was going to be some decision made at your place of work that changed the way you do your job. Do you think that you personally would have any say in the decision about the change or not?' Here we report the proportion who said that they would have 'a great deal' of say in the resulting changes. Private sector employees were significantly more likely to report enjoying such a level of job control. This four–eight percentage point advantage was maintained at each of the three data points, with a significant widening of the gap between 2001 and 2012.

Dissatisfaction with such relatively tight—and to some extent tightening—control of the labour process among public sector workers can be seen in the growing desire for more job control relative to their private sector peers. At each of the three data points, around a third of private sector employees reported that they would like to have more say in decisions that affected their work. However, among public sector workers such a desire grew from 40.1 per cent in 2001 to 46.5 per cent eleven years later, with the resulting public–private sector gap growing from 2.3 percentage points to 8.9 points over this period. This represents a significant widening of the public–private sector gap (see Table 8.2, panel B).

Overall, these results suggest that the government's modernization of the public sector agenda—both New Labour and the Conservative/Liberal Democrat Coalition—and the increased emphasis this placed on the marketization of the public sector was having an effect on the quality of work in the public sector. In particular, public sector workers' relative room for autonomy was shrinking and with it resentment levels were rising.

8.5.3. Work Intensity

To capture work intensity overall we use responses given to the question: 'please tell me how much you agree or disagree with the statement: my job requires that I work very hard'. If respondents strongly agreed, we define their

job as involving 'hard work'. Such hard-working jobs are more prevalent in the public sector than in the private sector. For example, in 2012 over half (52.8 per cent) of public sector jobs required employees to work very hard compared to around two fifths (41.0 per cent) of those working in the private sector, with significant gaps reported at each data point. Even so, the magnitude of the gap grew by around three percentage points between 1997–2001 and 2006–2012 (cf. Felstead et al., 2013c). However, this widening gap is not statistically significant (see Table 8.2, panel C).

In addition to non-discretionary effort levels respondents were asked about discretionary work effort which they voluntarily give to the organization. Respondents were asked: 'How much effort do you put into your job *beyond* what is required?' A list of options were read out. These were: 'a lot', 'some', 'only a little', or 'none'. We report the percentages saying 'a lot'. The results suggest a similar to pattern to those revealed by the required work effort data; discretionary work effort is higher in the public sector than in the private sector for all of the data points, with statistically significant differences common towards the end of the period. However, the differences between the sectors have not grown significantly.

8.5.4. Insecurity and Anxiety

Given the economic uncertainty and austerity in the public sector which followed the 2008–2009 recession, it is unsurprising that in 2012 respondents in both sectors reported historically high levels of job insecurity—around a quarter thought that they stood a chance of losing their job in the next twelve months (Gallie et al., 2013). However, job insecurity rose more sharply in the public sector, rising significantly by almost twelve percentage points between 2006 and 2012. In contrast, it rose by a more modest (and statistically insignificant, $p > 0.1$) four percentage points in the private sector. This is a reversal of the pattern established in previous years. The gap was against the public sector in 2012 and was around four percentage points ($p < 0.1$). However, a similar sized gap, but in favour of the public sector (and at higher levels of significance, $p < 0.01$), was recorded in 2006. The gap was even more favourable to public sector workers in 2001 when the gap was around seven percentage points. However, there was little sectoral difference in 1997 (see Table 8.2, panel D).

The data also suggest that work reorganization is more prevalent in the public sector than in the private sector. In the former, around two thirds (66.4 per cent) of respondents who were in work with the same employer five, four, and three years ago reported changes to the way work was organized in 2012 compared to approaching three out of five (56.4 per cent) private sector respondents. Furthermore, a greater proportion of public sector respondents

rated these as 'major' rather than 'minor changes'; in both 2012 and 2006 the gap was around six to seven percentage points. This suggests a more turbulent workplace environment for those working the public sector.

Despite their relative protection from unfair treatment (Fevre et al., 2009), public sector employees expressed significantly more anxiety about job downgrading in the future than private sector employees. Over a quarter reported feeling 'very' or 'fairly anxious' about being moved to a less interesting job (26.3 per cent) and/or having less ability to use their skills at work (27.9 per cent). Over a third (38.5 per cent) worried that they might have less say in their job in the future and approaching a half (44.8 per cent) were concerned that their pay might be reduced. In all four areas, anxiety levels in the public sector were significantly higher than in the private sector, but the differences with regard to pay and autonomy were especially marked with gaps in double figures (see Table 8.2, panel D).

8.6. PUBLIC SECTOR PAY GAPS, STRUCTURAL VARIATION, AND NON-PAY QUALITY OF WORK DIFFERENCES

In this section we bring together the job quality indicators discussed above and pay data outlined earlier. In so doing, we examine the impact that job quality has on the public sector pay premium. We begin by measuring the raw hourly pay gap between public and private sector employees over time and then proceed to examine how much of it can be explained by differences in individual characteristics (such as sex, age, and education) and employment characteristics (such as workplace size, occupation, and contractual status). Finally, job quality-related controls are also added (where available consistently between 1997 and 2012). Consider, for example, job skills requirements. If working in the public sector involves using higher level skills, we might expect public sector wages to be higher to reflect the enhanced demands of the job. Inclusion of a job characteristic can either close or extend the pay gap but, if job quality is related to wages and is differentially distributed by sector, inclusion will provide a more precise measure of any pay premium which is specific to the public sector.

Regression analysis provides the standard method for measuring the public sector wage premium while controlling for the effect of individual, employment, and job characteristics. We assume that we have a list of variables (x_k) that affect earnings and capture the effect of sector by including an indicator variable (PUB_{it}) which shows whether or not the individual is employed in the

public sector. We then regress the natural logarithm of earnings on these variables. Thus,

$$\ln E_{it} = \mu_t PUB_{it} + x_{it}\beta_t + \varepsilon_{it} \quad i = 1, .., N_t; t = 1997, .., 2012 \qquad (2)$$

where i indexes the ith individual and t the survey year. E is hourly earnings and $x=\{1, x_2 \ldots, x_K\}$ is $1 \times K$ vector of variables, where the first variable is the constant 1 and the remaining variables measure individual, employment, and job characteristics. $\boldsymbol{\beta}$ is a $1 \times K$ vector of parameters capturing the impact of the corresponding variable on log earnings. ϵ is the random error term which satisfies the standard OLS assumptions.

The estimate of the coefficient of the public sector variable (μ_t) measures the difference in log earnings for two individuals with exactly the same observable characteristics (values for x_k) but where one works in the public sector (so PUB_{it}=1) and the other works in the private sector (PUB_{it}=0). It measures the public sector pay premium, that is, the increase in the log earnings for an employee working in the public sector compared to those of employees in the private sector matched in terms of measured characteristics. In estimating the public sector premium the model assumes that these characteristics have the same influence on earnings across sectors. For example, the returns to education are constrained to be the same in both the public and private sectors.

We run this regression first with just the public sector identifier and, where the data are pooled across time, a control for survey year to capture trends in nominal earnings. The coefficient on public sector reported in Table 8.3, column 1, row 1 measures the resulting raw unadjusted public sector pay gap. We add further sets of control variables in succession beginning with individual characteristics and report the adjusted public sector premia in columns 2–5. The specification reported in column 2 is broadly equivalent in terms of methodology to that of Emmerson and Jin (2012). A set of controls for employment characteristics is included in column 3. The public sector pay premium here is broadly equivalent in terms of methodology to that estimated by Blackaby et al. (2012) and ONS (2012). Job quality variables, including job skill requirements, measures of autonomy and discretion, work intensity, and job security are included as further controls with the public sector premium reported in column 4. The impact of including the job quality variables without personal and employment characteristics is apparent from column 5. Here, the job quality variables in the SES reduce the public sector pay premium as, if not more, effectively than the more traditional personal and employment-related characteristics. Separate regressions are run for each year (rows 2–5) and for men, women, full-time, and part-time employees (rows 6–9) of Table 8.3. Further regressions are run at the five quantile points of the earnings distribution and are reported in rows 10–14.

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Table 8.3. Estimating the Public–Private Sector Pay Gap, 1997–2012

	1	2	3	4	5
	Unadjusted	Adjusted to include personal characteristics	Adjusted to include personal and employment-related characteristics	Adjusted to include personal, employment-related characteristics and job skill requirements, discretion and autonomy, work intensity, and perceived insecurity	Adjusted to include controls for job skill requirements, discretion and autonomy, work intensity, and perceived insecurity only
1 All employees, all years	0.151***	0.074***	0.030***	0.009	−0.006
2 1997	0.160***	0.074***	0.059***	0.031*	0.020
3 2001	0.134***	0.055***	0.014	0.007	−0.007
4 2006	0.150***	0.079***	0.028***	0.004	−0.014
5 2012	0.172***	0.089***	0.034**	0.013	0.002
6 Men all years	0.134***	0.022**	−0.008	−0.007	0.004
7 Women all years	0.250***	0.111***	0.055***	0.022***	0.042***
8 Full-time all years	0.136***	0.047***	0.015*	0.003	−0.010
9 Part-time all years	0.296***	0.169***	0.070***	0.034***	0.072***
10 10th	0.141***	0.129***	0.081***	0.049***	0.064***
11 25th	0.202***	0.120***	0.065***	0.041***	0.036***
12 50th	0.211***	0.094***	0.051***	0.026***	0.001
13 75th	0.169***	0.029***	0.023**	0.004	−0.042**
14 90th	0.036**	−0.014	−0.032***	−0.033***	−0.059***

Notes: data are unweighted. *, **, *** indicate statistical significance at the 10 per cent, 5 per cent, and 1 per cent levels, respectively. Column (1) includes controls for survey year in the models which pool data over time. Personal characteristics in (2) include gender (where appropriate), age band (20–29, 30–39, 40–49, 50–59, 60–65), highest educational attainment (NVQ level), marital status, and region of residence. Employment-related characteristics in (3) include occupation (one-digit SOC), workplace size (<25, 25–99, 100–499, 500+), part-time (as appropriate) and temporary employment. Job skill requirements in (4) include indices measuring required education level, pre-job training time, post-entry learning time and a range of generic skill requirements (literacy, numeracy, physical strength, influence, planning, client communication, problem-solving, computer use, and sophisticated computer use). Controls for autonomy and discretion include the task discretion index and supervision index. Controls for work intensity include two dummy variables indicating that the employee strongly agrees that 'my job requires that I work very hard' and that the respondent puts a lot of effort beyond what is required. The control for perceived insecurity is a dummy variable capturing any positive chance of job loss in the next twelve months.

Source: SES

The coefficients indicate the size of the public sector premium. These log points are multiplied by 100 in what follows with percentage mark-ups in parentheses (where log points and percentages differ). The results presented in Table 8.3 are comparable both across columns and down rows. The raw public sector premium across the four surveys is 15.1 log points (or 16.3 per cent) (see Table 8.3, row 1). Looking across the columns of row 1, factoring in personal characteristics such as gender, age, and educational attainment reduces the gap to 7.4 log points (or 7.7 per cent). When employment-related characteristics are also added, the public sector pay gap shrinks further to 3.0 per cent, although the premium remains statistically significant. Importantly, when measures of intrinsic job quality are taken into account at the aggregate level (columns 4 and 5, rows 1–5) the public–private sector pay gap disappears in all specifications except one where it remains weakly significant ($p<0.1$). However, it remains significant for certain groups of employees which we consider below.

The raw unadjusted gap is greater for women (25.0 log points or 28.4 per cent) than for men (13.4 log points or 14.3 per cent). Furthermore, for women the pay gap shrinks to 2.2 per cent in the full model (column 4), but it remains statistically significant, while for men it disappears completely and is negative, although not significant. In so far as the public sector offers a wage premium this seems to be restricted to women and is consistent with a lower gender wage gap within the public sector (see Jones et al., 2014). The pattern for full-time employees is similar to that of male workers and so the public–private sector pay gap disappears when the quality of work indicators are added to the model (see row 8 of Table 8.3). The unadjusted public sector pay gap for part-time employees, who are predominately female, is far higher at 29.6 log points (or 34.4 per cent) and a premium of 3.4 log points (or 3.5 per cent) remains after accounting for the most comprehensive set of controls (column 4). This is greater than the 2.2 per cent premium for all females.

When the regressions are run at different points on the earnings distribution using quantile regressions, the public sector premium is found to decrease as earnings increase. So, in the full model (see column 4, Table 8.3), those who work in the public sector and whose hourly pay is in the bottom 10 per cent of the distribution receive 4.9 log points (or 5.0 per cent) more than an otherwise identically placed private worker. Those in the bottom quartile receive 4.1 log points (or 4.2 per cent) more and median earners 2.6 per cent more. However, in the top half of the pay distribution the advantages of working in the public sector disappear and for the top earners they are reversed. Those in the top decile, for example, earn 3.3 log points (or 3.4 per cent) *less* than equivalent counterparts who work in the private sector (see rows 10–14, column 4, Table 8.3). The pattern of advantage/disadvantage found for public sector workers at the bottom and top ends of the earnings distribution reported here is broadly similar to that found elsewhere for the UK, most notably by

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Blackaby et al. (1999 and 2012), Disney and Gosling (1998), and Murphy et al. (2014).

In further specifications estimated separately by gender for each year (results not reported), the unadjusted gap is significant for men throughout the period. The fully adjusted gap is insignificantly different from zero across all years and for part-time or full-time status. In contrast, for females, the unadjusted gap is larger and while the gap tends to narrow as additional controls are included in the model, it remains significant for part-time and full-time workers and is especially pronounced for part timers. Across the distribution, the adjusted differential is insignificantly different from zero for men until the 90th percentile when there is evidence of a public sector pay penalty. While the latter is also evident for women, the public sector premium is most pronounced at the bottom end of the distribution and is significant at points up to and including the median.

8.7. CONCLUSION

It is popularly assumed that public sector workers enjoy better pay and better terms and conditions than their private sector counterparts. Reports of average pay comparisons, for example, frequently generate headlines such as 'You are £86 a week better off if you work in the public sector' (Mail Online, 22 November 2012). Such reports often go on to claim—based on little or no evidence—that public sector workers are advantaged in other ways too, such as working under less pressure, enjoying greater job security, and getting better pensions. The presumption of a 'double premium' has been used to justify public sector pay restraint. This chapter has presented evidence which challenges this notion by first examining sector differences in the qualitative aspects of work and second by showing how differences in these qualitative characteristics can explain the unadjusted public sector pay mark-up on which many of these newspaper headlines are based.

Differences in the quality of work are most pronounced in terms of job skill requirements which are consistently higher in the public sector. For example, public sector jobs are higher skilled in terms of the level of qualification required on entry, the length of prior training for that type of work, and the length of initial post-entry learning needed to get up to speed. However, contrary to the 'double premium' presumption public sector jobs do not offer workers more autonomy. In fact, according to some measures they have far less say at work and the gap between the sectors has been moving against public sector workers. We also find that workers in the public sector work harder and expend more discretionary effort than their private sector counterparts. Furthermore, the growth in perceived levels of job insecurity in the public sector in the period

2001–2012 means job stability is no longer a positive feature of public sector employment, with work reorganization also more prevalent than in the private sector.

Consistent with the earlier literature we find evidence of a raw hourly earnings gap which favours the public sector. This narrows with the inclusion of personal and employment-related characteristics but remains significant (at about 3 per cent). Previous analyses have stopped at this point since data on job quality are not collected in official surveys such as the LFS and ASHE. However, we have taken the analysis a step further by adding in data on features of the intrinsic quality of work which contribute to explaining some of the remaining pay gap. The inclusion of these features reduces the wage premium to insignificantly different from zero overall and reduces the premium for women from 5.7 per cent (i.e. 5.5 log points) to 2.2 per cent. So, in so far as there is a public sector pay premium, it is much smaller than has been suggested and its benefits are confined to women (and may therefore explain the lower gender pay gap in the public sector) and particularly those who are low paid (with positive effects in terms of poverty and equality outcomes).

The policy implications of these findings are twofold. First, Pay Review Bodies which review and recommend the pay of public sector workers need to note how the inclusion of job quality measures almost eliminates the overall pay gap. Their 'market-facing' pay reports have acknowledged how a number of key structural differences between the two sectors may account for a pay gap (e.g. NHS Pay Review Body, 2012, chapter 2). The employment profiles of each sector are very different. For example, professionals with specific service roles and high-level qualifications are over-represented in the public sector, especially within healthcare and education. Indeed, much of the pay gap disappears when these factors are controlled for in wage equations (Emmerson and Jin, 2012; Blackaby et al., 2012). This chapter suggests that using a richer set of variables that control for the quality of work further reduces the pay gap. Far from promoting and sustaining a double premium, the setting of public sector pay appears to have equalized the current reward package between the sectors.

Second, restraining public sector pay can have important implications for recruitment and retention issues in the public sector. Nickell and Quintini (2002), for example, noted that the marked decline in relative public sector pay in the 1980s resulted in a decline in the quality of men entering teaching and public sector general administration in the early 1990s, when measured using ability scores compared to the late 1970s. Clearly, it is important that wage rates in the public sector are high enough to attract and retain individuals with the skills and qualifications to deliver high-quality public services. The long-standing public sector wage penalty observed at the upper tail of the wage distribution (Blackaby et al., 1999 and Murphy et al., 2014) has implications for the delivery

of high-quality public services which are also worth scrutiny by the Pay Review Bodies. Furthermore, the tendency for low-paid women to be treated more favourably in the public sector is likely to be weakened if public sector pay is restrained across the board (Cribb and Sibieta, 2013). This will have consequences for the egalitarian tendencies—sometimes prompted by government—which PRBs have successfully followed for a number of years.

The chapter also has lessons for labour market researchers. Foremost among them is the finding that entering the quality of work indicators alone into our wage equations produces similar results to the full model. This suggests that they are powerful indicators alone and are helpful in providing further explanatory power over and above standard individual and employment-related characteristics. They are therefore indicators worth collecting in order to fully understand pay differentials and the extent to which differences in the quality of work are reflected in the extrinsic rewards employees receive.