Policy Exchange

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Further analysis on the public sector pay premium

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Executive Summary

- This note updates and extends our previous analysis of the public sector pay gap using three new quarters of Labour Force Survey data.
- It shows that for the median worker, an hourly pay gap of 8.89% exists when adjusted for age, gender, full time and part time work, region, and qualifications (though not other factors such as pension entitlement, holidays or productivity). For those toward the bottom of the income distribution, this gap rises to 16.34%.
- Perhaps surprisingly, both these figures have risen since the start of the public sector pay freeze in April 2011. For those towards the top of the income distribution, there is a pay penalty of 3.5%, which has increased since the pay freeze.
- These premiums do not include a measure of the much more generous pension arrangements in the public sector or factors such as holidays or productivity. These factors mean that the real premium for total remuneration will be higher.
- This premium exists despite the fact that productivity in the public sector has been falling by 0.3% a year.
- To increase productivity and save jobs in the public sector, while boosting the ability of the private sector to recruit across the country, our recent report *Looking to the Future of Growth*, recommends that the government abolishes national pay bargaining and works with the unions to implement a system of localised pay bargaining.

Introduction

Our previous publication, *Public and private sector terms, conditions and the issue of fairness*, found that a significant pay premium exists in the public sector compared to the private sector.[1] There are debates about how one should analyse differences in pay between sectors.[2] For this reason, our previous report outlined a range of measures of the pay gap. All of these measures, (including one that accounted as far

[1] Holmes & Oakley 'Public and private sector terms, conditions and the issue of fairness'. Policy Exchange, 2011. See
[2] See Damant, A., & Jenkins, J., (2011), 'Estimating differences in public and private sector pay'. ONS

as possible for the innate differences between the composition of the public and private sector workforces), showed a significant pay gap between the public and private sector. This gap had also been growing over the period of the recession.

This note focuses on one measure of the pay gap that accounts for differences in the composition of the two workforces using the Labour Force Survey. Three more quarters of this data have become available since our last report, so this note updates that analysis. It estimates the pay premium at different parts of the income distribution. Annex B outlines how this analysis was conducted.

We also publish details of an FOI response from the Department of Work and Pensions that outlines changes in bonus payments over the last five years. It shows that bonus payments increased by 123% between 2009/10 and 2010/11.

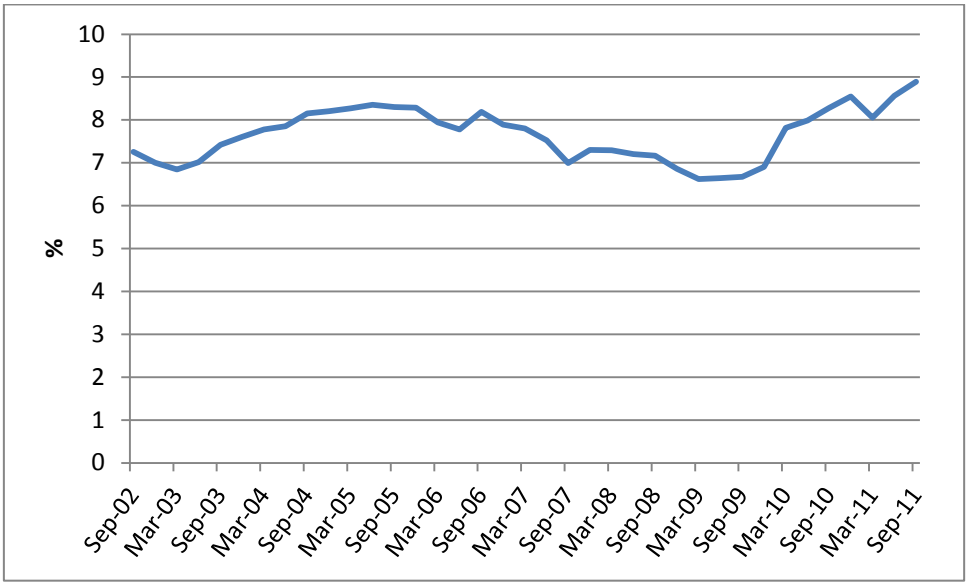
Results

Figure 1 shows the hourly pay premium for public sector workers when measured by hourly wages and after controlling for compositional differences (age, gender, education and region) in the public and private sector workforces. It shows that in between June and September 2011 (the most recently available Labour Force Survey data) the public sector workers enjoyed a premium of 8.89% compared to their equivalents in the private sector.

This represents a 1.89% rise in the premium compared to the same quarter of 2007 and a slight rise since our last publication. Note that these figures use a four-quarter moving average of the raw analysis in order to smooth any potential seasonal effects. The raw figure for June-September 2011 was 10.61%.

This shows, perhaps surprisingly, that the public sector pay premium is not reducing, despite the start of a pay freeze in April 2011.

Figure 1: Median hourly pay gap between public and private sector when controlling for differences in the composition of the workforces



Source: Authors own calculations using Labour Force Survey

This estimate of the pay gap does not include an analysis of the gap that exists in the value of pension provision between the two sectors: perhaps the most significant factor. Adding this to the calculation (not possible with existing data) would significantly increase this remuneration premium for the public sector. Other factors (for instance, more generous holiday allowances and greater use of flexible working) would also be likely to increase this premium if we considered a total 'benefits package' premium.

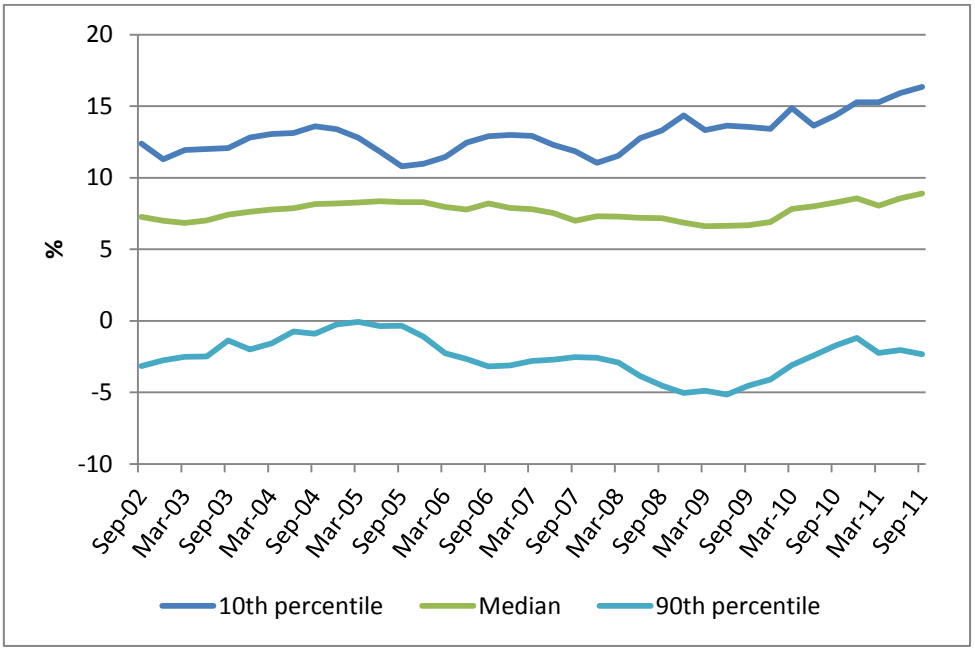
There are also arguments that might suggest the premium should be changed due to other factors. In particular, our analysis assumes equivalence in the weighting of age and qualifications which may not be justified. In many parts of the public sector, pay is linked to tenure rather than performance. Pay spines, automatic promotions, a greater emphasis placed on the value and necessity of formal qualifications, combined with greater job security mean that experience is not a reasonable proxy for productivity in large parts of the public sector. There may be other factors of remuneration relatively more generous in the private sector than public sector (company cars or health insurance for example). However, overall we believe that the estimate we present here is a lower bound on the true public sector remuneration premium: combining the compositionally adjusted pay premium with other factors we are not able to account for would increase it significantly.

We have also analysed how the pay premium differs across the income distribution. Figure 2 shows the results of this analysis. As before, the median gap stands at 8.89%. The corresponding figures for those at around the 10th income percentile (i.e. bottom ten per cent of workers) is 16.34% of hourly wages. For those at around the 90th percentile (i.e. the top ten per cent of workers) there is a pay penalty of

around 3.5%.

In financial terms, applying these figures would suggest that a private sector employee working full time on around the minimum wage would be around £2,000 worse off a year compared to a public sector worker with similar characteristics (age, gender, qualifications and region). For those private sector employees working at around the median hourly wage, this would mean being around £1,900 worse off.[3]

Figure 2: Median hourly pay gap between public and private sector when controlling for differences in the composition of the workforces. At the 10th, median and 90th percentile.



Source: Authors own calculations using Labour Force Survey data

Conclusion

The most recently available Labour Force Survey data suggest that a sizeable public sector pay premium exists for all but the very highest paid workers. This is as large as 16.34% at the bottom of the income distribution. For the median worker, the pay premium is 8.89%.

This premium exists even before the substantially more generous public sector pensions arrangements and other factors are added to the analysis.

While the public sector pay freeze came in force in 2011, the data show that this is not yet reducing the premium in pay that exists for public sector workers. We have also found evidence that some departments may still be increasing overall staff pay. In an FOI response from the Department for Work

[3] This is calculated by taking the coefficient at the relevant percentile and applying this at the corresponding hourly pay percentile. We then assume full time hours (40 hours) over a full year.

and Pensions (see Annex A), we learnt that total bonuses paid to staff increased by 123% between 2009/10 and 2010/11 (from £21.81 million to £48.68 million). Per head this amounts to an increase of £227.

This consistent pay premium in the public sector should also be seen in the context of public sector productivity that has been declining at a rate of 0.3% a year.[4]

In our previous reports on public sector pay and conditions and a recent report *Looking to the Future of Growth*,[5] Policy Exchange has argued that more needs to be done to ensure that public sector job losses are kept to a minimum while public spending necessarily falls. We have also argued that to ensure quality of service for the public, productivity in the public sector must begin to rise.

To do this we have urged the government to move to a pay-bill freeze (meaning that departments could balance job losses with pay moderation) and to abolish national pay bargaining. Both of these measures would save public sector jobs and boost productivity in the public sector. They would also make it easier for private companies to compete on a level playing field with the public sector on pay across the country. This would boost the quality of public services, reduce unemployment and help rebalance the economy in areas which have been over dependent on the public sector.

[4] Phelps, M, *'Total Public Service Output and Productivity'*, UK Centre for the Measurement of Government Activity, Office for National Statistics, 2009

[5] Oakley, M., (eds), 'Looking to the future of growth'. Policy Exchange, 2011.

Annex A: FOI response from DWP

I am replying to your e-mail of 23 August 2011 in which you requested information from the Department under the Freedom of Information Act on:

1. *The total expenditure on bonus payments to DWP staff annually over the last five years a) in total b) per head.*
2. *The proportion of total remuneration (pay and bonus) these payments represented annually over the last five years.*
3. *The figures for questions 1) and 2) in relation to a) Non-NDPB DWP staff b) NDPB DWP staff.*

The Department operates two pay-related employee reward schemes. They comprise end of year non-consolidated performance payments and in-year non-consolidated performance awards.

The figures for end of year performance awards include amounts received by members of the Senior Civil Service (SCS). The Department operates an end of year performance award scheme. It is government policy to operate an end of year performance award scheme and therefore similar schemes are run across other government departments.

All DWP employees are eligible to be nominated for an in-year performance award. In-year awards are one-off payable at any time during the performance year, to recognise exceptional achievements and/or contributions to business performance.

In-year performance awards are paid either as retail vouchers between £25 and £50 or cash payments above £50.

1) The total expenditure on bonus payments to DWP staff annually over the last five years a) in total b) per head.

Financial Year	Total Paid (end of year)	Per Head	Total Paid (In Year Cash)	Per Head	Total Paid (In Year Vouchers)	Per Head
2006/07	£40.68m	£350	N/A	N/A	N/A	N/A
2007/08	£36.61m	£327	£2.70m	£240	£1.44m	N/A
2008/09	£23.32m	£216	£3.04m	£208	£1.64m	N/A
2009/10	£21.81m	£199	£3.05m	£170	£2.24m	N/A
2010/11	£48.68m	£428	£2.41m	£154	£2.28m	N/A

Note: End of year performance awards paid in one financial year are based on performance in the previous performance year e.g. payments made in 2010/11 relate to performance in the 12 month period to March 2010.

Figures for retail vouchers are available from 2007 when they were introduced to the Department. Figures for cash payments are not available prior to 2007/08.

The amount paid in vouchers is the net value paid to DWP staff. All voucher awards must be for between £25 and £50. It is not possible to identify the number of recipients of voucher awards, only the number of awards issued, therefore it is not possible to provide a 'per head' figure. A small number of individuals may have received more than one cash or voucher payment during the year.

The increase in the total end of year payments paid between years 2009/10 and 2010/11 is not due to an increase of the funding for non-consolidated pay. The public sector pay freeze which came into effect in 2010 restricted non-consolidated payments to Performance Awards.

2) The proportion of total remuneration (pay and bonus) these payments represented annually over the last five years.

Year	Proportion of pay bill – End of Year Awards	Proportion of pay bill – In Year Cash Awards	Proportion of pay bill – In Year Voucher Awards
2006/07	1.39%	N/A	N/A
2007/08	1.41%	0.10%	0.05%
2008/09	0.93%	0.12%	0.07%
2009/10	0.78%	0.11%	0.08%
2010/11	1.87%	0.09%	0.09%

Percentage of pay bill figure is calculated using the annualised pay bill figure for the relevant financial year.

The in-year award information is only available from 2007.

3) The figures for questions 1) and 2) in relation to staff employed in the DWP NDPBs:

Financial Year	Total Paid	Per Head	Proportion of Paybill
2006/07	£2.88m	£2,288	0.98%
2007/08	£3.67m	£2,436	1.22%
2008/09	£2.86m	£1,633	0.78%
2009/10	£6.43m	£425	1.32%
2010/11	£7.32m	£569	1.76%

The Arms Length Bodies included in the above table are Child Maintenance & Enforcement Commission, Remploy, Health & Safety Executive, The Pensions Ombudsman, The Pensions Advisory Service, The Pensions Regulator, The Pension Protection Fund, National Employment Savings Trust Corporation and Independent Living Funds.

The first full year where bonuses were paid in CMEC is 2009/10. The large numbers of staff in CMEC, compared with all the other NDPBs who have much smaller, higher paid workforces, and the smaller size of bonuses paid in CMEC brings down the average payment.

The increase in the total end of year payments paid between years 2009/10 and 2010/11 is not due to an

increase of the funding for non-consolidated pay. The public sector pay freeze which came into effect in 2010 restricted non-consolidated payments to Performance Awards. In addition a number of payments for 2010/11 have not yet been paid.

Annex B: Analysis of public sector pay using the Labour Force Survey

The analysis uses a technique called quantile regression to estimate the public sector pay gap at various points of the income distribution. An example of the use of quantile regression can be found here: http://www.savbb.sk/~grendar/pdf/Koenker_QR_JEP.pdf

We used the Labour Force Survey from the July-September 2002 quarter to the July-September 2011 quarter.

The results control for the following variables, with log-hourly wages as the independent variable.

- Gender
- Age & Age squared
- Region (12 across the UK)
- Qualification

Results for July-September quarter can be found below. Other results are freely available on request.

Note that the results presented above differ from these raw estimates as they are based on a four-quarter moving average of the raw results in order to smooth and seasonal effects that might be present.

Simultaneous quantile regression				Number of observations	10483
				0.1 Pseudo R2 =	0.1453
				0.25 Pseudo R2 =	0.2073
				0.5 Pseudo R2 =	0.2577
				0.75 Pseudo R2 =	0.2644
				0.9 Pseudo R2 =	0.2513

	Bootstrap					
lnhourpay	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
q10						

public	0.177	0.015	11.750	0.000	0.148	0.207
ftpt	0.208	0.013	15.590	0.000	0.182	0.234
age	0.053	0.004	13.270	0.000	0.045	0.061
age_2	-0.001	0.000	-11.350	0.000	-0.001	0.000
male	0.111	0.014	8.000	0.000	0.084	0.138
med_ed	-0.219	0.020	-10.800	0.000	-0.259	-0.179
low_ed	-0.345	0.025	-13.570	0.000	-0.395	-0.295
no_ed	-0.421	0.032	-13.210	0.000	-0.483	-0.358
gor_1	-0.062	0.042	-1.480	0.139	-0.145	0.020
gor_2	-0.115	0.032	-3.580	0.000	-0.177	-0.052
gor_3	-0.101	0.040	-2.500	0.012	-0.180	-0.022
gor_4	-0.117	0.037	-3.150	0.002	-0.190	-0.044
gor_5	-0.095	0.037	-2.580	0.010	-0.167	-0.023
gor_6	-0.043	0.031	-1.380	0.167	-0.104	0.018
gor_8	-0.045	0.032	-1.400	0.161	-0.107	0.018
gor_9	-0.109	0.036	-3.040	0.002	-0.180	-0.039
gor_10	-0.122	0.038	-3.210	0.001	-0.197	-0.048
gor_11	-0.051	0.030	-1.690	0.091	-0.111	0.008
gor_12	-0.098	0.037	-2.650	0.008	-0.171	-0.026
_cons	0.728	0.071	10.200	0.000	0.588	0.869
q25						
public	0.144	0.012	12.100	0.000	0.120	0.167
ftpt	0.205	0.013	15.980	0.000	0.180	0.231
age	0.060	0.003	23.130	0.000	0.055	0.065
age_2	-0.001	0.000	-19.350	0.000	-0.001	-0.001
male	0.129	0.013	9.700	0.000	0.103	0.155
med_ed	-0.345	0.018	-19.320	0.000	-0.380	-0.310
low_ed	-0.520	0.019	-26.790	0.000	-0.558	-0.482

no_ed	-0.606	0.023	-26.640	0.000	-0.650	-0.561
gor_1	-0.154	0.024	-6.300	0.000	-0.202	-0.106
gor_2	-0.167	0.024	-6.950	0.000	-0.215	-0.120
gor_3	-0.151	0.031	-4.910	0.000	-0.211	-0.091
gor_4	-0.154	0.031	-5.020	0.000	-0.214	-0.094
gor_5	-0.141	0.023	-6.080	0.000	-0.186	-0.096
gor_6	-0.087	0.026	-3.380	0.001	-0.137	-0.037
gor_8	-0.081	0.022	-3.720	0.000	-0.124	-0.038
gor_9	-0.147	0.026	-5.650	0.000	-0.197	-0.096
gor_10	-0.151	0.036	-4.180	0.000	-0.222	-0.080
gor_11	-0.144	0.028	-5.070	0.000	-0.199	-0.088
gor_12	-0.146	0.032	-4.520	0.000	-0.209	-0.083
_cons	0.988	0.054	18.460	0.000	0.883	1.093
q50						
public	0.106	0.010	10.330	0.000	0.086	0.126
ftpt	0.199	0.014	14.440	0.000	0.172	0.226
age	0.069	0.003	23.080	0.000	0.063	0.074
age_2	-0.001	0.000	-18.170	0.000	-0.001	-0.001
male	0.159	0.012	13.310	0.000	0.136	0.183
med_ed	-0.391	0.013	-29.400	0.000	-0.417	-0.365
low_ed	-0.630	0.013	-47.000	0.000	-0.657	-0.604
no_ed	-0.712	0.018	-40.540	0.000	-0.746	-0.678
gor_1	-0.197	0.024	-8.270	0.000	-0.244	-0.150
gor_2	-0.203	0.022	-9.100	0.000	-0.246	-0.159
gor_3	-0.202	0.029	-7.030	0.000	-0.259	-0.146
gor_4	-0.179	0.026	-6.930	0.000	-0.229	-0.128
gor_5	-0.190	0.024	-7.910	0.000	-0.237	-0.143
gor_6	-0.121	0.027	-4.570	0.000	-0.173	-0.069

gor_8	-0.089	0.022	-4.080	0.000	-0.132	-0.046
gor_9	-0.157	0.027	-5.810	0.000	-0.209	-0.104
gor_10	-0.218	0.037	-5.950	0.000	-0.290	-0.146
gor_11	-0.177	0.021	-8.350	0.000	-0.218	-0.135
gor_12	-0.192	0.041	-4.660	0.000	-0.273	-0.112
_cons	1.136	0.053	21.440	0.000	1.032	1.239
q75						
public	0.042	0.017	2.480	0.013	0.009	0.075
ftpt	0.145	0.016	8.800	0.000	0.113	0.177
age	0.075	0.004	20.150	0.000	0.068	0.083
age_2	-0.001	0.000	-16.920	0.000	-0.001	-0.001
male	0.187	0.018	10.180	0.000	0.151	0.223
med_ed	-0.417	0.013	-31.130	0.000	-0.444	-0.391
low_ed	-0.694	0.018	-39.150	0.000	-0.729	-0.659
no_ed	-0.794	0.024	-32.910	0.000	-0.841	-0.746
gor_1	-0.238	0.027	-8.930	0.000	-0.290	-0.186
gor_2	-0.245	0.027	-9.120	0.000	-0.298	-0.193
gor_3	-0.255	0.022	-11.370	0.000	-0.299	-0.211
gor_4	-0.199	0.022	-9.160	0.000	-0.241	-0.156
gor_5	-0.215	0.033	-6.440	0.000	-0.280	-0.149
gor_6	-0.136	0.026	-5.210	0.000	-0.187	-0.085
gor_8	-0.087	0.024	-3.680	0.000	-0.134	-0.041
gor_9	-0.195	0.025	-7.710	0.000	-0.244	-0.145
gor_10	-0.280	0.033	-8.420	0.000	-0.345	-0.215
gor_11	-0.235	0.025	-9.330	0.000	-0.284	-0.186
gor_12	-0.255	0.047	-5.380	0.000	-0.348	-0.162
_cons	1.343	0.072	18.700	0.000	1.202	1.483
q90						

public	-0.014	0.019	-0.720	0.472	-0.051	0.024
ftpt	0.101	0.017	5.930	0.000	0.068	0.135
age	0.087	0.005	17.460	0.000	0.077	0.096
age_2	-0.001	0.000	-14.270	0.000	-0.001	-0.001
male	0.216	0.018	12.250	0.000	0.182	0.251
med_ed	-0.411	0.015	-27.650	0.000	-0.440	-0.381
low_ed	-0.703	0.021	-34.150	0.000	-0.744	-0.663
no_ed	-0.763	0.030	-25.140	0.000	-0.822	-0.703
gor_1	-0.227	0.032	-7.070	0.000	-0.290	-0.164
gor_2	-0.250	0.029	-8.510	0.000	-0.307	-0.192
gor_3	-0.276	0.029	-9.670	0.000	-0.332	-0.220
gor_4	-0.193	0.031	-6.310	0.000	-0.253	-0.133
gor_5	-0.194	0.033	-5.960	0.000	-0.257	-0.130
gor_6	-0.121	0.031	-3.940	0.000	-0.181	-0.061
gor_8	-0.035	0.027	-1.320	0.188	-0.087	0.017
gor_9	-0.179	0.035	-5.140	0.000	-0.247	-0.111
gor_10	-0.312	0.040	-7.840	0.000	-0.390	-0.234
gor_11	-0.276	0.029	-9.390	0.000	-0.333	-0.218
gor_12	-0.237	0.062	-3.850	0.000	-0.358	-0.117
_cons	1.372	0.101	13.570	0.000	1.174	1.570