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WHO FARED BETTER? THE FORTUNES OF PERFORMANCE-PAY AND FIXED-PAY WORKERS THROUGH RECESSION

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Who fared better?

The fortunes of performance-pay and fixed-pay workers through recession

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Abstract

We examine whether those paid for performance fared better in terms of wage growth and job tenure than their fixed pay counterparts through the most recent recession. In theory we might anticipate that, since performance pay workers share the income risks of economic shocks with their employers, their earnings may have declined more than those of fixed pay employees. However, for this very reason, they may experience more stable employment patterns than fixed pay workers whose 'stickier' wages may make them susceptible to job loss. Using data from the Annual Survey of Hours and Earnings 2002-2012, we find changes in bonus payments accounted for 16 per cent of the decline in aggregate wages between 2009 and 2012. Bonus payments fell more precipitately than fixed wages of both performance pay and fixed pay workers. We confirm that performance pay employees were more likely to experience nominal wage cuts than fixed pay employees during the recession. This 'wage gap' was apparent for hourly wages and was not driven by differential hours flexibility. We also find performance pay employees had longer job tenure than fixed pay employees.

Key words: wages, performance pay, bonuses, recession

JEL classification: J31; J33; J63

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1. Introduction

The period since the financial crisis of 2008 has seen very low rates of growth in nominal earnings, and a decline in real earnings on a scale not experienced for many years. At the same time employment levels have held up much better than past experience would have suggested, given the sharp fall in output in 2008/9 and the four years of stagnation which followed. While there have been a number of discussions of these aggregate trends, including some which have sought to map the trajectories for individual workers (e.g. Elsby et al, 2013; Gregg et al., 2014), there has been relatively little in-depth analysis of the role of wage-setting mechanisms in either exposing workers to risk or protecting them from it through this period.[1]

A key feature of many employment contracts in Britain is that a share of the total wage is conditional upon the performance of the worker, or the performance of some broader unit to which they belong, such as a team, a department or even the whole firm. In this paper we examine whether employees in these performance-related pay (PRP) jobs fared differently in terms of wage growth and labour market prospects through the recent recession than their counterparts in fixed-pay jobs. In theory we might anticipate that, since performance pay workers share the income risks of economic shocks with their employers, their earnings may be more flexible than those of fixed pay employees, at least in the depths of recession. However, for this very reason, they may experience more stable employment patterns than fixed pay workers, whose 'stickier' wages may make them susceptible to job loss. This micro behaviour would, at a macro level translate into

[1] The exceptions are perhaps Elsby et al. (2013: 21-22) and Van Wanrooy et al. (2013: 93), both of which briefly consider the role of unions.

bonuses playing the role suggested by Gordon (1982) as a factor facilitating wage flexibility and thus employment stability in the face of macro-economic fluctuations.

The relationship between profit-sharing, employment and wages was studied by Wadhwani and Wall (1990) using company data. Instead we look at data on individual workers and consider a broader definition of performance pay that goes beyond profit sharing. To our knowledge, ours is the first paper to explore the contribution of performance pay to wage flexibility in the recent recession. First we investigate the overall contribution of performance pay to aggregate wage flexibility, before going on to explore how the evolution of wage growth has differed among individuals in performance pay jobs compared with workers in jobs where there is no performance pay component. We also explore differences between workers at different points in the earnings distribution. As well as examining the consequences for wage flexibility we consider the implications for job tenure. Our primary data source is the Annual Survey of Hours and Earnings: it provides very accurate information on earnings and allows us to follow individuals over time and, as discussed in Section Three, this longitudinal component to the survey enables us to move beyond a simple identifier of the *receipt* of performance pay and to arrive at a more comprehensive identification of employees that are working in performance pay *jobs*. Our analysis is conducted for the private sector only, where performance pay is more prevalent.[2]

The paper is organised as follows. Section Two provides a brief overview of the literature and sets out our key hypotheses. Section Three introduces the data. Section Four presents our results, and Section Five concludes.

[2] Using data from the 2011 Workplace Employment Relations Study, Bryson et al. (2014) find the incidence of performance pay is four times higher in the private sector than the public sector (28 per cent of employees compared with 7 per cent).

2. Existing evidence and hypotheses

In the period before the financial crisis nominal average earnings typically grew by around four to five per cent per annum (Levy, 2013: Figure A4). This growth rate briefly fell below zero in early 2009 and, after a short bounce, settled in the region of one to two per cent over the period 2010-2012. Movements in nominal regular pay (excluding bonuses) were less pronounced over this period, but the growth rate similarly fell by at least half, from around four per cent before 2008 to around one to two per cent in the subsequent years. At the level of the individual worker, instances of zero wage growth and wage cuts also became more common, with Gregg et al. (2014) finding that, among employees working for the same employer between 2009 and 2012, around one third received a cut in their nominal hourly base pay in at least one year of the downturn.

In theory, we may expect the wages of performance pay workers to show greater flexibility in a downturn, as employers are perhaps more readily able to adjust labour costs where wages include a performance element. Some past studies provide empirical support for this; Nickell and Quintini (2003), using the New Earnings Survey (NES) for the period 1975-1995, found that workers who received some incentive pay were less likely to experience a freeze in nominal pay, and more likely to experience a nominal pay cut, than fixed pay workers. They therefore suggested that performance pay was a key element in wage flexibility, although they noted that even among workers with no performance pay, a considerable proportion still received pay cuts. In contrast, Smith (2000), using the British Household Panel Survey for the period 1991-1996, reported no difference in the proportion of employees receiving a nominal pay cut between those that

received bonuses and those that did not. For the US, Devereux (2001) showed greater wage cyclicality for workers paid by piece rate or commission compared to salaried or hourly paid workers over the period 1970-1991. Devereux also showed that, among salaried workers, a major source of variation in their total earnings was due to variation in performance pay and overtime, rather than the salary component. He hypothesised that if these forms of performance pay were to become more common, greater wage cyclicality would be observed in the economy at large.

Yet it is not only performance pay workers who have wages that are sensitive to fluctuations in the fortunes of their employer. The literature on rent-sharing indicates that, after controlling for the characteristics of individual employees, the wage that the average employee receives is sensitive to the profitability of the firm in which they are employed (Blanchflower et al., 1996), although the recent work of Bell and Van Reenen (2011) does suggest an important role for performance-related pay in distributing any rents across workers within a given firm.

Wage flexibility is not the only reason why firms might offer bonuses however. To the extent that firms employ people who belong to salary-based pension schemes rather than defined contribution pension schemes, wages paid by means of bonuses have the attraction that they are typically not pensionable. Thus, remuneration by means of bonus may simply be a means of offering increased take-home pay at lower cost to the employer than would a superficially-equivalent base salary. If this were an important aspect of bonuses, they might be little more flexible than base pay. Another reason why firms might pay bonuses is because they think that they should: if both parties to the wage contract regard bonuses as a normal part of remuneration (a key conjecture of

Wadwhani and Wall, 1990), then any tax surcharge or statutory cap on bonuses would be translated one for one into higher basic pay. It remains to be seen how far the EU bonus cap has that effect, but broader research by Green and Heywood (2012) suggests that bonus payments are not divorced from base wages and that there is a degree of substitution between the two.

Finally, bonuses may be a part of a structure of *relative* incentives within the firm; to the extent that bonus arrangements allow firms to reward individuals who perform above average and to penalise those who perform below it, they will play much the same role in bad times as in good. If that is the case, once again, the total share of bonuses in the wage bill is unlikely to be very sensitive to overall economic performance.

Given the above, we explore a number of hypotheses relating to wage flexibility of performance pay workers in recession:

Hypothesis 1: changes in bonus payments have made a greater contribution to depressing aggregate wage growth in recession than changes in regular (base) pay

Evidence from the firm-level data available in the Monthly Wages and Salaries Survey shows an increase in the proportion of total pay accounted for by bonuses in the mid-2000s (Forth, Bryson and Stokes, 2014). The share of total pay accounted for by bonuses fell in 2009, before regaining much of its ground in 2010. These estimates suggest that there was a disproportionate fall in bonus pay relative to base pay in recession. We thus expect to find in our ASHE data (which have been the source of most of the existing in-depth analyses of wage growth through recession) that changes in bonus

payments have made a greater contribution to depressing aggregate wage growth than have changes in base pay.

Nevertheless, the contribution of performance pay to changes in aggregate wage growth will depend partly on changes in the proportion of individual workers receiving performance pay, as well as changes in the average value of base wages and bonuses. Using the firm-level data mentioned above, Forth et al (2014) are able to show that changes in the share of wages due to bonuses are almost entirely due to changes that occur within PRP-paying firms, rather than being due to changes in the prevalence of such firms in the economy. But their firm-level data do not provide observations on individual workers.[3] We therefore also disentangle the extent to which aggregate wages were affected by changes in the proportion of workers receiving performance payments versus changes in the size of such payments. Forth et al's analysis lead us to expect that any disproportionate impact of bonus payments on aggregate wage growth will have come primarily from changes in the size of bonus payments, rather than changes in the share of workers in receipt of PRP.

Hypothesis 2: employees in performance pay jobs have experienced greater flexibility in earnings than fixed pay workers through recession

As the discussion above makes clear, performance pay may contribute to aggregate wage flexibility both through changes in its incidence and changes in the size of the payments made to any given worker. In order to get closer to the dynamics of

[3] Analysis of the British Household Panel Survey (Bryan and Bryson, 2014) indicates that the incidence of performance pay remained stable for men over the period from 1998 to 2008, while at the same time falling for women. However, the BHPS does not provide information on the incidence of performance pay since 2008.

wages under different types of payment system, it is helpful to move away from the aggregate picture and to focus on wage changes among employees who remain in the same job from one year to the next. We are then able to focus, as Devereux (2001) and others have done, on the degree of wage flexibility that is apparent under different wage-setting mechanisms in continuing jobs, with our estimates no longer being affected by changes in the overall prevalence of different types of wage setting. For the reasons outlined above we expect that, in a longitudinal setting, workers in PRP jobs will experience greater flexibility in their wages than workers in non-PRP jobs.

Hypothesis 3: the extent to which wage flexibility in performance pay jobs exceeds wage flexibility in fixed-wage jobs will be greater at higher points in the wage distribution

Our third hypothesis focuses on whether experiences of performance pay workers have differed according to their position in the earnings distribution.

For the US, Guvenen et al (2014) show that earnings among the top 1% of earners are more pro-cyclical than for the average. We also know from existing literature that employees at the top end of the earnings distribution are much more likely to be in performance pay jobs and receive a greater proportion of their total pay in the form of bonuses. For the UK, Bell and Van Reenen (2011) find substantial rent-sharing for chief executive officers (CEOs), with smaller effects lower down the corporate hierarchy. Their work suggests that the main mechanism for rent-sharing is through the use of cash bonuses; CEOs receive more of their remuneration as bonuses than do other workers, and base salaries are not very responsive to firm performance. For these reasons, we hypothesise that wages of performance pay workers will show even greater flexibility

than the wages of non-performance pay workers at higher points in the earnings distribution.

Hypothesis 4: performance pay workers were less likely to experience changes in hours worked in recession than non-performance pay workers

Hypothesis 5: employees in performance pay jobs experienced longer job tenure through recession than employees in non-performance pay jobs

Employers may of course take other actions than changes to wage rates in response to recession. Where employers have less flexibility over the wage rate paid to their employees, an alternative action when faced with increasing cost pressures may be to reduce labour costs by reducing the size of the labour force. This may occur through reducing the number of people employed, or through retaining employees but reducing their paid hours. We expect that the greater wage flexibility offered by performance pay contracts will protect employees to some extent from these pressures, meaning that they are less likely than fixed-wage workers to experience job loss or hours reductions.

3. Data and earnings measures

Data:

We analyse data from the Annual Survey of Hours and Earnings (ASHE) (ONS, 2013). ASHE is based on a random sample of 1 per cent of all employees in Britain. Their employers are surveyed each April and asked to provide a wide range of information about the employee's earnings during the preceding year, including the amount of bonus or incentive pay received. The survey also asks about the employee's

earnings and hours during the current pay period (e.g. the week that includes the survey date, for employees paid weekly, or the month including the survey date for those paid monthly).[4] The survey is carried out by the UK's Office for National Statistics (ONS) and is mandatory.

We augment the ASHE data with information from the ONS Business Structure Database (BSD) which is an annual snapshot of all firms in the economy, taken from the UK's official business register (the Inter-Departmental Business Register or IDBR). The BSD provides richer information on the characteristics of the employing unit, including firm age and foreign ownership (ONS, 2014a).

We also bring in firm-level data from the ONS Annual Business Survey (the ABS, formerly the Annual Respondents Database) (ONS, 2012; ONS 2014b). This is an annual census of firms with 250 or more employees, and a sample survey of smaller firms. It collects data on the firm's income and expenditure over the preceding financial year, thereby allowing us to bring into ASHE an indicator of the financial performance of the firm, in those cases where the employee's firm is also surveyed in the ABS.

Measures of earnings:

We focus on the measures of earnings that relate to the preceding year, rather than merely the current pay period, in order not to miss any bonus payments that are not paid in the pay period covered by ASHE's April survey date. Forth et al. (2014) show that bonuses are highly seasonal, with such payments comprising a substantially higher proportion of total wages in the months December to March than in the months April to

[4] Employers are asked first to specify the length of the pay period including the specified survey date, and then to give details of pay received in that period.

November. A focus on the April pay period alone thus risks understating the importance of bonus payments, and is likely to do so differentially across occupations and industries.

All estimates of pay presented in this paper focus on hourly pay based on total gross annual earnings (to be consistent with our annual measure of total incentive pay) and hours worked from the reference period to convert this to an hourly rate.

The question about annual incentive pay was first introduced into ASHE in 2002. However in this paper, we focus on the period from 2005 to 2012, as a change to the design and wording of the question in 2005 indicates that the incidence of incentive pay was understated in the period 2002-2004. In each year from 2005-2012, employers were asked, "For the tax year ending 5 April [year],... how much bonus or incentive payments did the employee receive for the current job?". They are instructed to include "profit sharing, productivity performance and other bonus or incentive pay, piecework and commission", and to exclude "basic, overtime and shift premium pay". Our final analysis sample contains a total of 799,942 observations for the period 2005-2012 (see Table 1 for full details).

[TABLE 1 HERE]

Identifying performance-pay jobs:

Our basic measure of earnings focuses on receipt of performance pay. Yet in a given year, some individuals will be working in a job where they are eligible to receive performance pay, but do not receive a performance payment at that time. If we focus on receipt of performance pay alone, we are likely to underestimate the prevalence of

performance pay jobs, particularly during a downturn. To explore wage flexibility among employees in performance pay and non-performance pay jobs, we therefore make use of information in ASHE that allows us to identify job matches over time. We are able to follow employees from one year to the next using the unique person identifier. We then define an employee as remaining in the same job from one year to the next where that employee: (i) works for the same employer (identified using the IDBR enterprise reference number); (ii) has remained in the same job according to the employer's response in the survey; and (iii) has remained within the same four digit occupation (using the Standard Occupational Classification).[5] Following the work of Lemieux et al. (2009) for the US, we then identify performance pay jobs as those in which performance pay has been paid in any of the years in which we observe that job.[6]

Identifying performance pay jobs in this way suffers from the problem that jobs observed near the beginning and end of our time period are less likely to be identified as performance pay jobs, simply because we observe them for fewer years. Following Lemieux's approach, we apply an 'endpoint adjustment', which constructs an adjusted measure of the prevalence of performance pay jobs, through estimating probit models based on the number of times a job match is observed, and using the resulting predicted

[5] One might be concerned about minor variations in the SOC code from year to year caused by respondent or coding errors. However, among employees who remain with the same employer across two years, and for whom the employer states that the employee is working in the same job as last year, the SOC code typically matches at the four-digit level (this applies in 95 per cent of cases). We are therefore confident that our use of a four-digit SOC code does not artificially inflate the number of job matches.

[6] Our definition of a job match differs from that used by Lemieux et al. (2009), in that their job match is effectively an "employer match", i.e. the spell an individual spends with a particular employer. This is likely to cause an upward bias in our estimates of the prevalence of PRP in cases where employees move between PRP and non-PRP jobs during their tenure within a given firm, as may occur if an employee is promoted to a managerial position. Our approach addresses this issue by beginning a new job match if the employer indicates that the employee has transferred to a new job in the organisation, or if the employee moves to a different four-digit occupation.

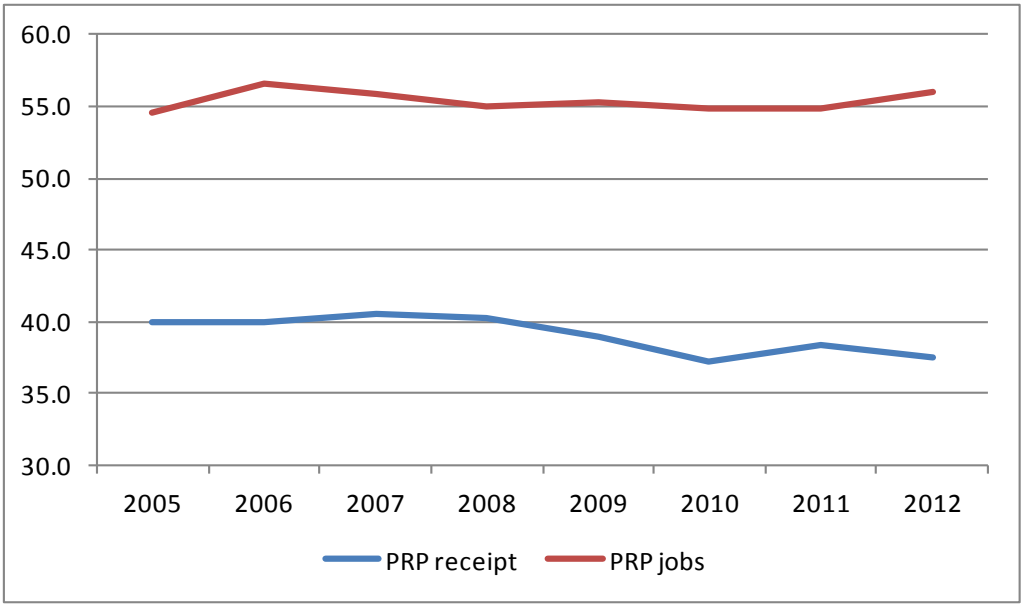
probabilities to construct a weight which then effectively holds the distribution of the number of times a job match is observed to that observed in the middle of our sample.[7]

The resulting estimates of performance pay jobs are presented in Figure 1. On this basis, just over half of jobs in the private sector were performance pay jobs over the period 2005-2012. In contrast, only two-fifths of all private sector jobs entailed the receipt of a performance-related payment, indicating that around one quarter of all performance pay jobs paid no bonus in any given year.

Our measure may overestimate the number of performance pay jobs if some jobs are not covered by a performance pay scheme for the whole of their duration (i.e. if the employer introduces or withdraws a performance pay scheme part-way through the period for which the job is observed). The series in Figure 1 is then perhaps best considered to show the upper bound of the prevalence of performance pay jobs. Nevertheless, despite any concern over the precise levels, it is noticeable from Figure 1 that, whilst receipt dipped in the period 2008-2010, the prevalence of performance pay jobs remained broadly stable.

[7] Our endpoint adjustment has been calculated on the basis of data for the period 2002 to 2012, so our midpoint here is 2007.

Figure 1: PRP receipt and PRP jobs, 2005-2012, private sector



Source: ASHE.

4. Results

Hypothesis 1: changes in bonus payments have made a greater contribution to depressing aggregate wage growth in recession than changes in regular (base) pay

We begin by exploring the contribution of performance payments to aggregate wage flexibility. To do so, we decompose aggregate wage growth into the part which is due to changes in the proportion of workers receiving any performance pay, and that which is due to changes in the components of wages - that is, changes in base and bonus pay. Note that, at this point, our focus is on aggregate wage changes and so we focus solely on the receipt of performance pay, rather than our broader measure of performance pay jobs. The broad trajectory of receipt was presented in Figure 1, which showed that the percentage of employees receiving any bonus or incentive pay stood at approximately

40 per cent between 2005 and 2008, but fell through 2009 and 2010, to around 38 per cent in 2010. There was a small increase in 2011, before it dipped again in 2012.

To examine the components of aggregate wage change, we split our sample into two periods, with the first period (2005-2009) broadly corresponding to a time of aggregate wage growth and the second period (2009-2012) broadly corresponding to a period of aggregate wage decline (effectively the periods prior to and following recession). Average hourly wages for all employees in 2005, 2009 and 2012 are presented in the left hand panel of Table 2, along with average hourly bonus pay for employees receiving performance pay, and average hourly base pay among employees both receiving and not receiving performance pay. For any given year, our data refer to earnings based on the 12 months ending in the April of that year. Our data for 2009, for example, refer to earnings in the year ending April 2009 and therefore capture the onset of recession in June 2008. Over the period 2005-2009, average real wages in our sample rose by four per cent, while in the period 2009-2012, average real wages declined by 10 per cent.

[TABLE 2 HERE]

In the period 2005-2009, total wages of performance pay workers grew proportionately faster than those of non-performance pay workers (5.3 per cent compared with 3.4 per cent), but in the period 2009-2012, they fell more slowly (declining by 8.7 per cent compared with 10.2 per cent). However this represented the accumulated effect of differential movements in bonus and base wages. Among workers receiving

performance pay, bonuses rose proportionately more in the period 2005-2009 and fell proportionately more in the period 2009-2012 than did the fixed components of pay. Bonuses also grew faster and fell more rapidly than the fixed wages of non-performance pay workers in the first and second periods respectively, but in the second period the fixed wages of performance pay workers fell by less than those of non-performance pay workers, thus serving to dampen some of the effect of falling bonuses on the total pay of employees receiving PRP.

PRP receipt was also falling over the two periods (see Figure 1 and the final row of Table 2). Decomposing changes in aggregate wages to ascertain the relative contributions of changes in the different components of wages and changes in the proportion of workers receiving any performance pay, we find that in the period 2005-2009, changes in bonuses paid to performance pay workers accounted for 0.6 percentage points of the four per cent increase in aggregate wages. Increases in base pay of performance pay workers accounted for two percentage points of the increase in aggregate wages, while changes in fixed pay of non-performance pay workers accounted for 1.7 percentage points. In contrast, in the period 2009-2012, over half of the decline in real wages comes from changes in base pay for non-performance pay employees. Changes in bonus pay and base pay for performance pay employees also contribute to the decline, but even among this group, the change in base pay has made a greater contribution than the change in bonuses. In both periods, changes in the share of performance pay workers have made little contribution to change in aggregate wages, not unsurprisingly as the change in this share is relatively small.

Changes in base pay therefore made a greater contribution to the decline in average wages than did changes in bonuses. But Table 2 shows that this is primarily because they account for the larger share of total wages in any given year. When we examine changes in each individual component of the wage bill, we find (as noted earlier) that bonuses rose proportionately more in the period 2005-2009 and fell proportionately more in the period 2009-2012 than the fixed components of pay. We can therefore conclude that there has been greater flexibility from bonuses than from base pay, even though changes in base wages were more important in aggregate.

Hypothesis 2: employees in performance pay jobs have experienced greater flexibility in earnings than fixed pay workers through recession

The preceding analysis has shown the contribution of performance pay to aggregate wage flexibility. However, the estimates of wage growth presented above incorporate not only the effects of wage changes among individuals who remain in the same job, but also changes that arise from people changing jobs (where the new wage and wage-setting mechanism may differ from those in their previous job), as well as differences between the wages of people moving in and out of employment.

In order to examine more closely the dynamics of wages under different types of payment system, we move away from the aggregate picture and focus on wage changes among employees who remain in the same job from one year to the next. We are then able to focus on the degree of wage flexibility that is apparent under different wage-setting mechanisms in continuing jobs, with the expectation that, in a longitudinal setting,

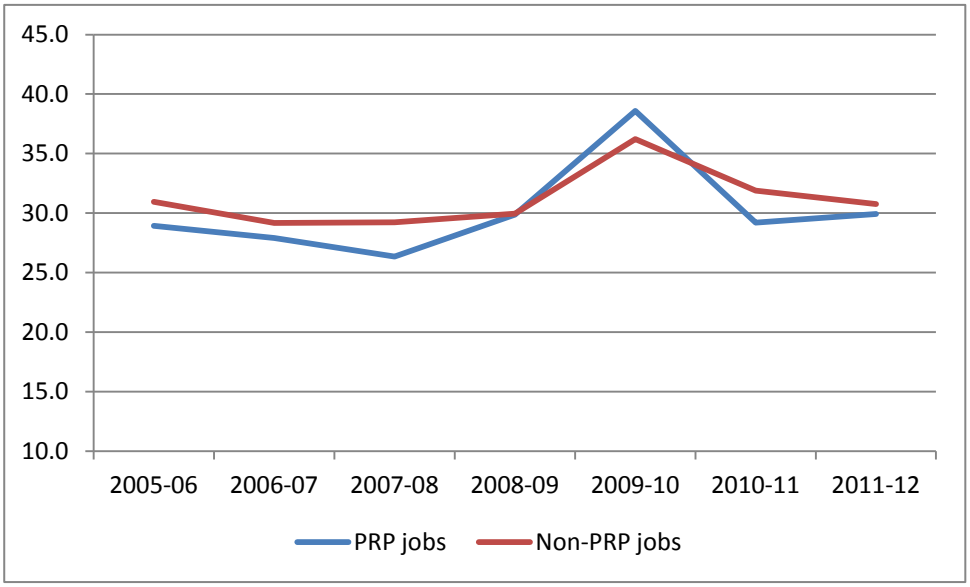
workers in PRP jobs will experience greater flexibiilty in their wages than workers in non-PRP jobs.

On average, in our sample, around 60% of employees in a given year are observed in the same job in the following year. Within this sample we necessarily move away from our simple measure of PRP receipt to our broader measure (outlined in Section 3) of whether the job held by the employee is a PRP job.

Figure 3 shows the percentage of employees experiencing a cut in their nominal pay, separately for employees in performance pay and non-performance pay jobs.[8] We define an employee as having received a nominal pay cut where they experienced a fall of more than one per cent in their nominal wage. Even prior to recession, a substantial proportion of employees – around 30 per cent in any given year - received a cut in their nominal pay, but this figure rose to over 35 per cent in 2009-2010 following the onset of the recession. In most years, pay cuts were actually more common among non-performance pay employees than those in performance pay jobs, but the exception is 2009-10, when this pattern was clearly reversed. This was the result of a particularly sharp rise in the percentage of performance pay jobs that delivered nominal pay cuts, from 26 per cent in 2007-8 to 38 per cent in 2009-10.

[8] Note that the sample changes from year to year.

Figure 3: Employees receiving a cut in total nominal pay



Source: ASHE.

To clarify whether the pattern seen in Figure 3 might be a feature of the wage-setting mechanism or an incidental product of other observable employee or job characteristics, we ran linear estimations of the probability that an employee received a nominal pay cut in which we controlled for a range of employee, job and employer characteristics. The results are presented in Table 3, which also lists the full set of controls. The models show that, after adding a standard set of controls, the likelihood of experiencing a cut in nominal total pay was no different between performance pay and non-performance pay jobs in the years leading up to the recession. But the likelihood was around one percentage point higher in performance pay jobs than in fixed pay jobs in 2008-9 and around 4 percentage points higher in 2009-10 (see second panel of Table 3).

[TABLE 3 HERE]

A similar pattern is apparent if we explore growth in log real hourly wages. The first and second panels of Table 4 report equivalent models to those shown in Table 3, but here for the growth in log real hourly wages (defined as the difference in log real total hourly wages between year t and year t+1). Here the coefficient on the performance pay job dummy is either zero or positive from 2005-6 to 2008-9, but then we see slower real wage growth (or effectively, faster real wage decline) for performance pay employees compared with non-performance pay employees between 2009 and 2010. This accords with the pattern of nominal wage cuts, although here in the case of total hourly wages, this pattern is reversed in the following year.

[TABLE 4 HERE]

The greater prevalence of nominal pay cuts and slower real wage growth among performance pay workers at the onset of recession suggests that their wages were more flexible than those of non-performance pay workers in the face of the downturn. However, in this analysis we are tracking wage changes by reference to changes in macroeconomic conditions, as proxied by annual time periods. In practice, there is a great deal of heterogeneity across firms within a given year, with some performing better than average, and others worse.

For the subset of employees for whom we have information on the performance of the firms in which they work, we can explore the role of firm performance in more detail. To do so we match in information on gross value added from the ABS (and the ARD in years prior to 2008), using this to construct a measure of quasi-rents calculated as gross

value added per employee, minus the average industry wage.[9] This follows the approach taken by Bell and Van Reenen (2011), who were in turn inspired by Card et al.'s (2011) study of rent-sharing in Italy. Our preferred specification controls for contemporaneous growth in firm performance (measured as log growth in our quasi-rent measure, deflated using the GDP deflator), as well as growth in the two prior years, and also controls for the level of firm performance in the base year. Our intention is to control for the possibility that the disadvantage experienced by workers in performance pay jobs in 2009-10 may simply reflect a greater prevalence of such jobs in firms that suffered most in recession, rather than being a function of the wage-setting mechanism *per se*.

We are able to construct our measure of quasi-rents (including lags) for between 30 and 40 per cent of our original sample (varying by year). Repeating the regressions of nominal wage cuts and real wage growth for this subset of employees, but without adding any controls for firm performance, we find there is still a greater likelihood of nominal wage cuts in performance pay jobs in 2009-10 in this sample (third panel of Table 3) and still a lower rate of growth in real hourly wages (third panel of Table 4). Once we include our controls for firm performance, the coefficients are largely unchanged (fourth panels of Tables 3 and 4). Thus workers in performance pay jobs fared worse in terms of wage growth between 2009 and 2010 when compared with non-performance pay workers, even after controlling for variations in the performance of their firms. This result is robust to various different specifications of firm performance. It provides further evidence that those employers who made a share of their employees' total wages conditional on output or effort were able to use this flexibility to exert greater downward pressure on wage costs when macroeconomic conditions changed for the worse.

[9] Average industry wages are constructed at the 2 digit industry level.

The analysis thus far has focused on total earnings. Our expectation has been that the greater flexibility seen in real wages of performance pay workers, compared to non-performance pay workers, has been exerted through changes in the bonus element of pay. We would therefore expect that if we focus on changes in base pay, that we would not see the same pattern. Table 5 presents results from equivalent regressions of the growth in log real hourly base pay. In fact, we see that performance pay workers were also more likely to have experienced slower growth in real base pay between 2009 and 2010. Hence greater flexibility has not been exerted through bonuses alone. Indeed the coefficient is of a similar size to that seen in Table 4, suggesting that bonuses and base pay in performance pay jobs were restrained to a similar extent.

This result might suggest the presence of unobserved heterogeneity between performance and non-performance pay workers. The fact that those in performance pay jobs were more flexible on base pay than their fixed pay counterparts could reflect unobserved heterogeneity with respect to job characteristics. To test for this we replaced our single-digit occupational classification with more a detailed occupational classification at the three-digit level; however the results were essentially unchanged. Alternatively, the finding could reflect unobserved differences between performance pay and fixed pay employees. To examine this possibility we introduced worker fixed effects in a pooled years regression. (It is not possible to add worker fixed-effects to the models for individual years as each worker contributes only one observation to each model). This generated a small (but non-significant) negative coefficient on our performance pay job dummy which became a small (but non-significant) positive coefficient after the inclusion of worker fixed effects. This is suggestive of a degree of negative selection into

performance pay jobs, and points to the possibility that the greater downward wage pressure experienced by workers in performance pay jobs at the onset of recession may actually have come about because they had lower bargaining power than equivalent workers in non performance pay jobs, rather than because of any greater potential for wage flexibility that arose from the wage setting mechanism that applied in these jobs.

[TABLE 5 HERE]

Hypothesis 3: the extent to which wage flexibility in performance pay jobs exceeds wage flexibility in fixed-wage jobs will be greater at higher points in the wage distribution

Table 6 reports results from separate regressions of log real wage growth for each quintile of the earnings distribution, after dividing workers into quintiles through reference to their base pay at the start of the year. Here we see that in the top two quintiles, log real wage growth was actually higher for performance pay workers than non-performance pay workers in all years of our analysis period. It is only in the bottom quintile that we see lower growth in real total wages in PRP jobs compared to non-PRP jobs in recession years. The findings are similar when controlling for firm performance (Table 7).

[TABLE 6 & TABLE 7 HERE]

What happens to base pay by quintile? In aggregate we saw slightly lower growth in base pay for PRP workers in 2009/10 compared to non-PRP workers. Again it is performance pay workers in the bottom quintile of the earnings distribution who see lower growth in base wages than non-performance pay workers in recession (2009-10, as well as 2011-12 in this sample), while in the top quintile, the pattern is reversed (Table 8).

[TABLE 8 HERE]

We had hypothesised that the separate regressions by earnings quintile might provide further evidence that greater wage flexibility occurred through the wage-setting mechanism of performance pay. Instead we find evidence consistent with differential selection into performance pay jobs across the wage distribution. This may be indicative of differences in the relative bargaining power of PRP and non-PRP workers at different points in the earnings distribution, with PRP jobs at the top of the earnings distribution going to those with the highest bargaining power, who are then able to extract a disproportionate share of any available rents, and PRP jobs at the bottom of the earnings distribution going to those with the lowest bargaining power, who are then very limited in their ability to resist employer demands for wage restraint.

Hypothesis 4: performance pay workers were less likely to experience changes in hours worked in recession than non-performance pay workers

Our analysis now moves on to look at changes in hours. Our hypothesis was that performance pay workers may be less likely to experience reductions in the number of

paid hours, because of the apparent flexibility present in their wage. Or conversely, that where employers have less flexibility over the wage rate paid to their employees (as ought to be the case in fixed wage jobs), an alternative action on the part of the employer, when faced with increasing cost pressures may be to reduce the number of hours for which the employee has to be paid.

To investigate changes in paid hours, we look at the percentage change in hours from one year to the next for employees who remained in the same job. We find that, in aggregate, the hours of performance pay workers rose more (or fell less) than did the hours of workers in fixed wage jobs at the onset of recession in 2009-10 (see the top panel of Table 9). But again, when exploring differences by quintile, more variation is apparent, with the differential being concentrated among those employees in the bottom quintile of the earnings distribution (see bottom panel of Table 8). This was the quintile where PRP workers experienced the greater disadvantage in respect of hourly earnings; it may therefore indicate an attempt by PRP workers to recoup some of their lost income by working more overtime.

[TABLE 9 HERE]

Hypothesis 5: employees in performance pay jobs experienced longer job tenure through recession than employees in non-performance pay jobs

Turning then to look at job tenure, our original hypothesis was that fixed wage workers may be more likely to be subject to job termination than PRP workers. Where employers are able to adjust labour costs more readily by adjusting bonus payments, it

may be that employees in performance pay jobs are more likely to hold on to their jobs when firms hit hard times. To explore this issue we apply survival analysis to explore job tenure among performance pay and non-performance pay workers.

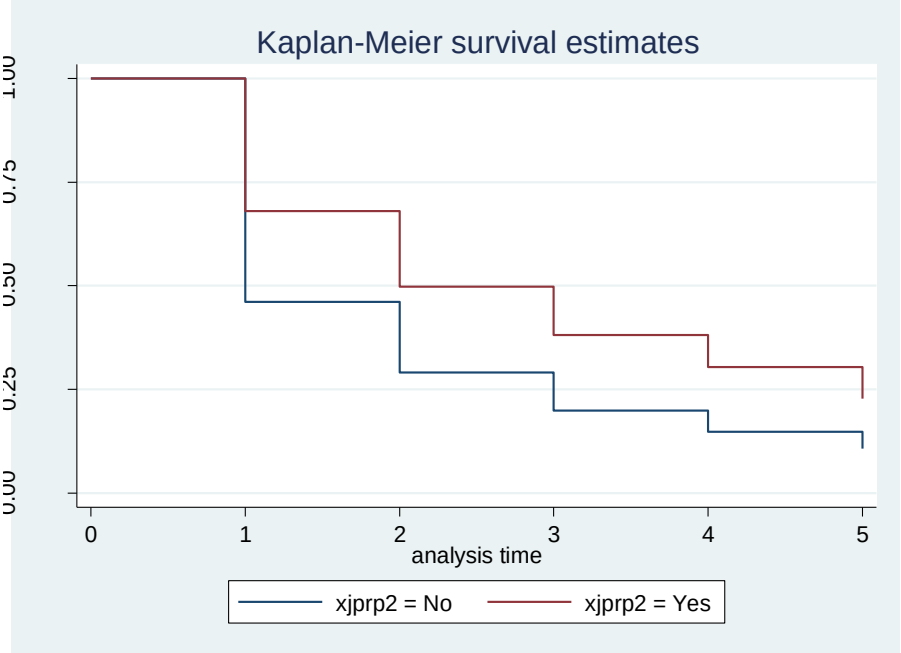
We begin the analysis in 2007, the year prior to recession. We follow individuals from 2007 until their job match comes to an end. This may come about because the employee moves to another job, which may itself be the choice of either the employer or the employee (we are unable to tell which). It may also come about because the employee leaves employment entirely, or their employer may simply have not responded to the survey in that year. We are unable to tell with any certainty which of these scenarios applies.[10]

Figure 4 presents Kaplan-Meier survival plots for the time until the job match comes to an end, split according to whether the individual is employed in a performance pay job or not. After one year (i.e. in 2008), around 30 per cent of those in performance pay jobs in 2007 were no longer in the same job, while for non-performance pay jobs, this proportion stood at around half. On average, performance pay jobs lasted longer over this period. There is a greater hazard of job exit for those in non-performance pay jobs.

Continuing the theme of differences between low and high earners, Figure 5 extends this to consider differences between those earning above and below the median (for ease of presentation in the chart, we use the median here rather than earnings quintiles). Those most at hazard of job loss are those in non-performance pay jobs earning below the median.

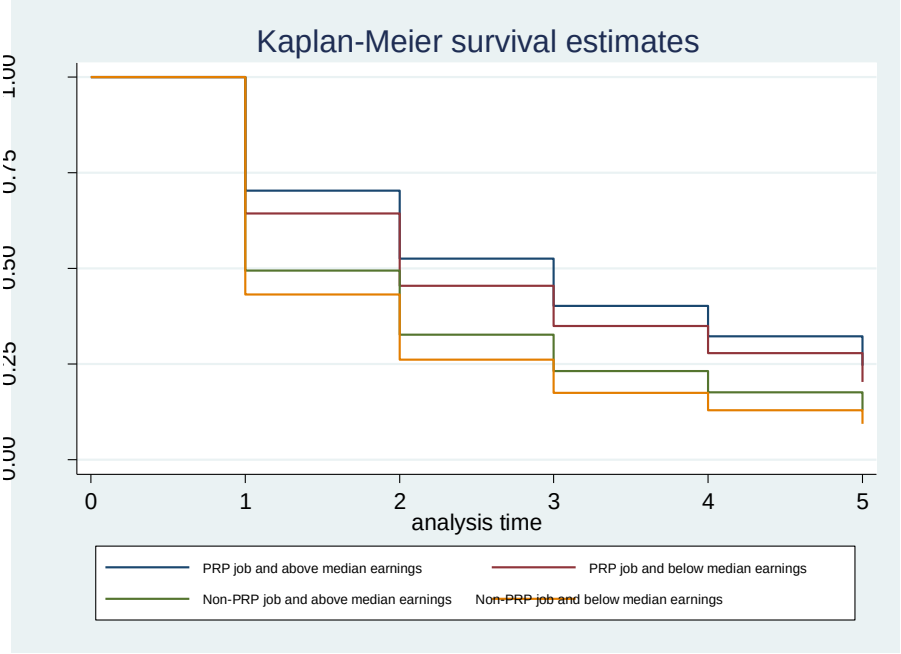
[10] Our choice of 2007 as the starting year is then also helpful because the sample size for ASHE was cut in this year; if we had chosen an earlier year as our starting point we would inadvertently have lost some individuals from the sample at the point when this reduction was made.

Figure 4: Survival plots for job exit



Source: ASHE

Figure 5: Survival plots for job exit, by earnings



Source: ASHE

The top panel of Table 10 then reports results from Cox proportional hazard regressions, after controlling for differences in worker and job characteristics. Performance pay workers were less likely to end their job match; their hazard rate was 30% lower than for equivalent workers in non-PRP jobs. This finding applied in all quintiles of the earnings distribution and was also robust to controlling for differences in firm performance (see bottom panel of Table 10).

[TABLE 10 HERE]

6. Conclusions

There is a long-standing macro-economic literature that points to the potential employment benefits of pay flexibility induced by pay for performance (Weitzman, 1984). Although the notion has been challenged due to potential unintended consequences of sharing profits with workers (Gordon, 1982), the basic micro-economic intuition is that, if performance pay workers share the income risks of economic shocks with their employers, their earnings will be more sensitive to firm performance than their fixed pay counterparts, helping employers to manage labour costs which, in turn, may result in longer job tenure and lower hiring wages. Performance pay employees may experience more stable employment patterns than fixed pay workers whose 'stickier' wages may make them susceptible to job loss. Ours is the first paper to exploit the exogenous shock to firm performance in the Great Recession to test these propositions for

Britain. We do so with micro-data from the Annual Survey of Hours and Earnings 2002-2012.

First we consider aggregate wage growth in the period since the recession to establish what role performance pay played in the unprecedented decline in real wages. We find changes in bonus payments accounted for a relatively small part (16 per cent) of the decline in aggregate wages between 2009 and 2012: the remainder is accounted for by adjustments to base pay among those on performance pay and those in fixed wage jobs. Even so, bonus payments fell more precipitately than fixed wages of both performance pay and fixed pay workers. We also confirm that performance pay employees were more likely to experience nominal wage cuts than fixed pay employees during the recession. This 'wage gap' was apparent for hourly wages and was not driven by differential hours flexibility. These findings suggest performance pay does indeed offer employers a degree of flexibility which would be unavailable to them if employees only received pay linked to time worked.

For employees who remained in the same job from one year to the next, performance pay workers experienced a slightly greater fall in real wages than non-performance pay workers. This finding remained even controlling for variation in firm performance. However, this fall in earnings was not purely a result of declines in the performance element of pay – it was also apparent in base pay. We speculate that this may reflect differences in bargaining power among workers.

Employees' experiences differed substantially depending on their position in the earnings distribution – wages of high earning performance pay workers continued to grow faster than those of non-performance pay workers. It was only among employees in

the bottom quintile where earnings growth was significantly lower among performance pay workers. These workers experienced cuts in real hourly base pay in 2009-10 and seem to have responded with an increase in hours worked - perhaps to make up for their income loss. Again, this may be linked to the differential bargaining power of workers in different parts of the earnings distribution: it may be that workers paid for performance towards the bottom of the earnings distribution are least able to resist downward wage pressures during recession. It is conceivable that positive worker selection into performance pay jobs, as proposed by Lazear (1986), for example, operates higher up the earnings distribution, but that those entering performance pay jobs at the lower end of the earnings distribution are those workers with lower potential earnings who have limited outside options. This would accord with Green and Heywood's (2012) finding that workers at the lower end of the earnings distribution sacrifice a substantial part of their fixed wage when in receipt of bonuses, whereas the degree of substitution is virtually zero among high earners.

Finally we find performance pay employees had longer job tenure than fixed pay employees during and after the recession, indicating that performance pay workers were prepared to sacrifice some wage growth for job stability. On its own that suggests that performance-related pay is no longer, as Wadhwani and Wall (1990) suggested, much ado about nothing. However, unlike the findings in relation to wage growth, performance pay jobs were more likely to last than non-performance pay jobs among workers across the whole earnings distribution, suggesting mechanisms other than a direct link between earnings restraint and job stability might be at play.

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Table 1: Analysis sample

	Observations		People		Firms		Job matches	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Full dataset 2002-12:	1,829,087	100.0	334,163	100.0	153,678	100.0	.	.
Job match identifiable:	1,743,246	95.3	326,660	97.8	146,468	95.3%	709,977	100.0
Private sector only:	1,109,134	60.6	250,056	74.8	127,230	82.8	488,803	68.8
Private sector, 2005-12 only:	**799,942**	**43.7**	**219,538**	**65.7**	**103,482**	**67.3**	**378,567**	**53.3**

Source: ASHE.
Excludes small number of individuals with multiple jobs in any given year, and job matches which switch between the public and private sectors over time. Public admin and defence, private households and extra-territorial organisations are excluded.

Table 2: Contributions to aggregate wage growth, 2005-2012

				% change		Decomposition (ppts)		Decomposition (%)	
	2005	2009	2012	2005-2009	2009-2012	2005-2009	2009-2012	2005-2009	2009-2012
Mean wage: all employees	£15.77	£16.40	£14.76	4.0%	-10.0%				
For employees receiving performance pay:									
Bonus	£3.23	£3.48	£2.84	7.6%	-18.5%	0.6 ppts	-1.5 ppts	15.5%	15.5%
Base pay	£16.47	£17.26	£16.11	4.8%	-6.7%	2.0 ppts	-2.8 ppts	50.2%	27.9%
Total	£19.70	£20.74	£18.94	5.3%	-8.7%	-	-	-	-
For employees not receiving performance pay:									
Base pay	£13.12	£13.57	£12.19	3.4%	-10.2%	1.7 ppts	-5.1% ppts	42.4%	51.1%
Share of employees in receipt of a performance payment	0.40	0.39	0.38	-1.8%	-3.4%	-0.3 ppts	-0.6 ppts	-7.4%	5.9%
TOTAL						+4.0 ppts	-10.0 ppts	100%	100%

Source: ASHE

Table 3: Any cut in nominal total pay, for employees in same job

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Full sample:							
PRP job (without controls)	-0.020***	-0.012**	-0.029***	-0.001	0.024***	-0.027***	-0.008*
	[-4.76]	[-2.83]	[-6.39]	[-0.17]	[5.62]	[-6.81]	[-2.20]
N	*54165*	*48827*	*48063*	*49836*	*60210*	*61504*	*61332*
adj. R-sq	*0.000*	*0.000*	*0.001*	*0.000*	*0.001*	*0.001*	*0.000*
Full sample:							
PRP job (with standard controls)	0.000	0.009	-0.005	0.012*	0.037***	-0.005	0.005
	[-0.01]	[1.83]	[-1.11]	[2.43]	[8.19]	[-1.28]	[1.13]
N	*54165*	*48827*	*48063*	*49836*	*60210*	*61504*	*61332*
adj. R-sq	*0.026*	*0.030*	*0.028*	*0.024*	*0.029*	*0.025*	*0.023*
Sub-sample with data on firm performance:							
PRP job (without controls)	0.001	-0.003	-0.016	0.016	0.048***	-0.022***	0.014*
	[0.07]	[-0.34]	[-1.76]	[1.74]	[6.61]	[-3.40]	[2.20]
N	*16275*	*15402*	*14991*	*16320*	*24716*	*27205*	*26096*
adj. R-sq	*0.034*	*0.024*	*0.034*	*0.035*	*0.029*	*0.029*	*0.029*
Sub-sample with data on firm performance: PRP job (with standard controls, plus firm performance)	0.002	-0.005	-0.016	0.012	0.047***	-0.021**	0.014*
	[0.26]	[-0.50]	[-1.68]	[1.33]	[6.35]	[-3.19]	[2.20]
N	*16275*	*15402*	*14991*	*16320*	*24716*	*27205*	*26096*
adj. R-sq	*0.035*	*0.025*	*0.035*	*0.036*	*0.030*	*0.030*	*0.031*

Source: ASHE.
Standard controls: industry (1 digit), occupation (1 digit), gender, age, full-time/part-time status, job tenure, whether permanent/temporary job, whether covered by a collective agreement, region (9 regions), firm size, whether firm foreign-owned, firm age.
t-statistics in parentheses (* p<0.05; ** p<0.01; *** p<0.001)

Table 4: Average annual growth in the log of total real hourly pay, for employees in same job

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Full sample:							
PRP job (without controls)	0.011*	0.002	0.013**	-0.011*	-0.012**	0.013***	-0.014***
	[2.30]	[0.34]	[2.60]	[-2.41]	[-2.97]	[3.44]	[-3.88]
N	*54,165*	*48,827*	*48,063*	*49,836*	*60,210*	*61,504*	*61,332*
adj. R-sq	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*
Full sample:							
PRP job (with standard controls)	0.007	-0.001	0.013*	-0.005	-0.009*	0.009*	-0.003
	[1.44]	[-0.16]	[2.41]	[-1.19]	[-2.47]	[2.31]	[-0.80]
N	*54,165*	*48,827*	*48,063*	*49,836*	*60,210*	*61,504*	*61,332*
adj. R-sq	*0.013*	*0.017*	*0.015*	*0.016*	*0.02*	*0.013*	*0.018*
Sub-sample with data on firm performance:							
PRP job (without controls)	-0.007	0.009	0.012	-0.012	-0.019**	0.006	-0.009
	[-0.70]	[1.01]	[1.06]	[-1.32]	[-3.04]	[1.04]	[-1.60]
N	*16,275*	*15,402*	*14,991*	*16,320*	*24,716*	*27,205*	*26,096*
adj. R-sq	*0.014*	*0.021*	*0.02*	*0.019*	*0.024*	*0.017*	*0.026*
Sub-sample with data on firm performance: PRP job (with standard controls, plus firm performance)	-0.008	0.011	0.012	-0.009	-0.017**	0.006	-0.009
	[-0.71]	[1.21]	[1.06]	[-1.03]	[-2.71]	[0.96]	[-1.64]
N	*16,275*	*15,402*	*14,991*	*16,320*	*24,716*	*27,205*	*26,096*
adj. R-sq	*0.014*	*0.022*	*0.021*	*0.02*	*0.025*	*0.017*	*0.026*

Source: ASHE.
Standard controls: see Table 3.
t-statistics in parentheses (* p<0.05; ** p<0.01; *** p<0.001)

Table 5: Average annual growth in the log of real hourly base pay, for employees in same job

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	Pooled	Pooled with fixed effects
Full sample:									
PRP job (without controls)	0.008	-0.009	0.005	-0.007	-0.015***	0.006	-0.016***	-0.004**	0.016*
	[1.67]	[-1.86]	[1.03]	[-1.46]	[-3.82]	[1.52]	[-4.17]	[-2.78]	[2.51]
N	*54097*	*48781*	*48004*	*49765*	*60131*	*61432*	*61254*	*383464*	*128032*
adj. R-sq	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.002*	
Full sample:									
PRP job (with standard controls)	0.005	-0.007	0.006	-0.004	-0.011**	0.003	-0.006	-0.002	0.008
	[1.00]	[-1.53]	[1.17]	[-0.92]	[-2.98]	[0.66]	[-1.67]	[-1.41]	[1.25]
N	*54097*	*48781*	*48004*	*49765*	*60131*	*61432*	*61254*	*383464*	*128032*
adj. R-sq	*0.011*	*0.015*	*0.012*	*0.013*	*0.018*	*0.013*	*0.016*	*0.014*	
Sub-sample with data on firm performance:									
PRP job (without controls)	-0.005	0.001	0.007	-0.014	-0.022***	-0.002	-0.011	-0.007*	-0.003
	[-0.50]	[0.08]	[0.59]	[-1.54]	[-3.51]	[-0.27]	[-1.93]	[-2.48]	[-0.22]
N	*16262*	*15395*	*14981*	*16307*	*24702*	*27195*	*26083*	*140925*	*48266*
adj. R-sq	*0.012*	*0.019*	*0.018*	*0.014*	*0.023*	*0.016*	*0.026*	*0.015*	
Sub-sample with data on firm performance: PRP job (with standard controls, plus firm performance)	-0.005	0.003	0.007	-0.012	-0.019**	-0.002	-0.012*	-0.006*	-0.004
	[-0.48]	[0.33]	[0.62]	[-1.35]	[-3.06]	[-0.32]	[-2.02]	[-2.35]	[-0.27]
N	*16262*	*15395*	*14981*	*16307*	*24702*	*27195*	*26083*	*140925*	*48266*
adj. R-sq	*0.012*	*0.019*	*0.019*	*0.014*	*0.023*	*0.016*	*0.026*	*0.015*	

Source: ASHE.
Standard Controls: see Table 3.
t-statistics in parentheses (p<0.05; ** p<0.01; *** p<0.001)

Table 6: Average annual growth in log of total real hourly wages, for employees in same job, by earnings quintile (full sample)

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Top quintile	0.084***	0.063***	0.103***	0.076***	0.072***	0.075***	0.091***
	[5.78]	[5.87]	[7.23]	[6.40]	[8.21]	[8.72]	[11.17]
N	11679	11060	10440	10798	12887	13190	13354
adj. R-sq	0.218	0.205	0.252	0.202	0.231	0.256	0.21
2nd quintile	0.030***	0.014	0.033***	0.026***	0.021***	0.024***	0.017***
	[4.69]	[1.86]	[5.26]	[4.08]	[4.20]	[4.89]	[3.44]
N	11816	10642	10619	10853	12917	13215	13268
adj. R-sq	0.112	0.081	0.12	0.118	0.119	0.151	0.12
Middle quintile	0.026***	0.024***	0.038***	0.013*	0.009	0.025***	0.021***
	[3.92]	[3.51]	[5.45]	[2.12]	[1.62]	[4.30]	[4.17]
N	11051	9923	10034	10404	12525	12709	12745
adj. R-sq	0.082	0.068	0.074	0.071	0.078	0.064	0.08
4th quintile	0.014*	0.008	0.015*	0.002	0.003	0.028***	0.007
	[1.97]	[1.13]	[2.11]	[0.28]	[0.51]	[4.52]	[1.39]
N	10758	9563	9461	9745	11885	12168	12002
adj. R-sq	0.052	0.049	0.044	0.052	0.036	0.038	0.042
Bottom quintile	-0.008	-0.004	-0.006	-0.041*	-0.046***	-0.025	-0.053***
	[-0.52]	[-0.23]	[-0.31]	[-2.54]	[-3.31]	[-1.79]	[-3.73]
N	8861	7639	7509	8036	9996	10222	9963
adj. R-sq	0.046	0.044	0.05	0.047	0.053	0.039	0.05

Source: ASHE.
Quintiles are defined with respect to the base wage.
Models show the coefficient on the dummy variable identifying performance pay jobs.
Controls: industry (1 digit), occupation (1 digit), gender, age, full-time/part-time status, job tenure, whether permanent/temporary job, whether covered by a collective agreement, region (9 regions), firm size, whether firm foreign-owned, firm age.
t-statistics in parentheses ($p<0.05$; ** $p<0.01$; *** $p<0.001$

Table 7: Average annual growth in log of total real hourly wages, for employees in same job, by earnings quintile, after controlling for firm performance (performance sample)

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Top quintile	0.099**	0.081***	0.057*	0.060**	0.053***	0.049***	0.072***
	[2.89]	[3.99]	[2.32]	[3.05]	[4.25]	[4.06]	[6.41]
N	3837	3736	3489	3911	5537	6169	6031
adj. R-sq	0.262	0.229	0.345	0.239	0.22	0.282	0.262
2nd quintile	0.02	0.009	0.024*	0.018	0.018*	0.01	-0.001
	[1.94]	[0.80]	[2.27]	[1.87]	[2.29]	[1.32]	[-0.12]
N	3783	3552	3528	3672	5238	5759	5400
adj. R-sq	0.133	0.14	0.101	0.151	0.149	0.224	0.164
Middle quintile	0.024	0.008	0.045**	0.025*	0.004	0.018	0.012
	[1.70]	[0.54]	[3.03]	[2.02]	[0.52]	[1.89]	[1.50]
N	2902	2766	2860	3095	4549	4971	4954
adj. R-sq	0.114	0.097	0.111	0.116	0.105	0.109	0.137
4th quintile	0.007	0.022	0.060**	0.009	0.003	0.037***	0.001
	[0.44]	[1.32]	[3.12]	[0.58]	[0.25]	[3.63]	[0.17]
N	3007	2718	2620	2911	5004	5528	5300
adj. R-sq	0.065	0.054	0.081	0.066	0.062	0.053	0.058
Bottom quintile	-0.085**	0.039	-0.024	-0.036	-0.067**	-0.03	-0.070***
	[-2.66]	[1.34]	[-0.78]	[-1.19]	[-3.02]	[-1.41]	[-3.38]
N	2746	2630	2494	2731	4388	4778	4411
adj. R-sq	0.076	0.092	0.083	0.055	0.127	0.07	0.076

Source: ASHE.
Quintiles are defined with respect to the base wage.
Models show the coefficient on the dummy variable identifying performance pay jobs.
Controls: as indicated for Table 6, plus firm performance.
t-statistics in parentheses ($p<0.05$; ** $p<0.01$; *** $p<0.001$)

Table 8: Average annual growth in log of real hourly base pay, for employees in same job, by earnings quintile (full sample)

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Top quintile	0.066***	0.043***	0.081***	0.071***	0.064***	0.057***	0.079***
	[4.48]	[4.01]	[5.62]	[5.99]	[7.28]	[6.47]	[9.50]
N	11668	11058	10427	10789	12880	13186	13345
adj. R-sq	0.212	0.193	0.226	0.203	0.223	0.232	0.205
2nd quintile	0.021**	0.002	0.023***	0.022***	0.018***	0.017***	0.012*
	[3.16]	[0.30]	[3.59]	[3.41]	[3.38]	[3.30]	[2.45]
N	11809	10640	10613	10847	12913	13209	13262
adj. R-sq	0.098	0.067	0.111	0.104	0.118	0.147	0.118
Middle quintile	0.022***	0.015*	0.029***	0.011	0.008	0.017**	0.017***
	[3.30]	[2.04]	[4.12]	[1.69]	[1.60]	[2.89]	[3.31]
N	11046	9922	10025	10397	12520	12704	12735
adj. R-sq	0.082	0.065	0.066	0.072	0.082	0.058	0.079
4th quintile	0.012	0.005	0.011	0.005	0.001	0.026***	0.007
	[1.64]	[0.76]	[1.53]	[0.69]	[0.15]	[4.30]	[1.32]
N	10751	9561	9457	9742	11881	12165	11999
adj. R-sq	0.053	0.048	0.043	0.051	0.035	0.04	0.042
Bottom quintile	0.031	0.022	0.02	-0.012	-0.031*	-0.005	-0.034*
	[1.82]	[1.31]	[1.05]	[-0.73]	[-2.08]	[-0.34]	[-2.31]
N	8823	7600	7482	7990	9937	10168	9913
adj. R-sq	0.06	0.051	0.06	0.063	0.059	0.046	0.057

Source: ASHE.
Quintiles are defined with respect to the base wage.
Models show the coefficient on the dummy variable identifying performance pay jobs.
Controls: see Table 6.
t-statistics in parentheses (p<0.05; ** p<0.01; *** p<0.001)

Table 9: Percentage growth in hours worked, for employees in same job, for all employees and by earnings quintile (full sample)

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
All employees	0.001	0.004**	0.001	0.002	0.003**	0.000	0.002*
	[0.75]	[3.25]	[0.48]	[1.41]	[3.01]	[-0.50]	[2.14]
N	51679	46725	45900	47913	58827	60262	59913
adj. R-sq	0.008	0.01	0.011	0.015	0.016	0.01	0.011
Top quintile	-0.001	-0.001	0.001	-0.001	-0.002	-0.003	-0.001
	[-0.59]	[-0.59]	[0.49]	[-0.31]	[-1.17]	[-1.67]	[-0.47]
N	11209	10642	10032	10520	12514	12849	13040
adj. R-sq	0.027	0.029	0.041	0.014	0.056	0.033	0.029
2nd quintile	0.001	0.004	-0.003	0.003	0.001	0.000	0.001
	[0.25]	[1.89]	[-1.24]	[1.52]	[0.61]	[0.17]	[0.35]
N	11350	10225	10157	10518	12555	12793	12910
adj. R-sq	0.02	0.022	0.026	0.019	0.033	0.026	0.015
Middle quintile	-0.002	-0.004	-0.009***	-0.003	-0.002	-0.004*	-0.002
	[-1.04]	[-1.63]	[-3.49]	[-1.19]	[-0.74]	[-2.18]	[-0.88]
N	10449	9427	9551	9939	12078	12242	12214
adj. R-sq	0.019	0.02	0.028	0.033	0.029	0.026	0.031
4th quintile	-0.001	0.001	0.001	-0.005	0.002	-0.005*	0.002
	[-0.58]	[0.44]	[0.21]	[-1.78]	[0.91]	[-2.11]	[0.74]
N	10038	8878	8825	9190	11232	11498	11339
adj. R-sq	0.028	0.045	0.028	0.036	0.034	0.026	0.03
Bottom quintile	0.000	0.008*	0.006	0.007*	0.010***	0.001	0.004
	[0.05]	[2.35]	[1.63]	[2.03]	[3.38]	[0.27]	[1.15]
N	7432	6438	6373	6868	8615	8705	8525
adj. R-sq	0.014	0.016	0.018	0.021	0.019	0.016	0.018

Source: ASHE.
Quintiles are defined with respect to the base wage.
Models show the coefficient on the dummy variable identifying performance pay jobs.
Controls: see Table 6.
t-statistics in parentheses (p<0.05; ** p<0.01; *** p<0.001

Table 10: Hazard ratios for job exit, PRP jobs versus non-PRP jobs

	Hazard ratio	Robust Std. Err.	t-statistic	N
Full sample	0.709	0.005	-47.64	207441
Top quintile	0.670	0.012	-22.78	44588
2nd quintile	0.707	0.012	-20.81	44792
Middle quintile	0.708	0.012	-20.58	42067
4th quintile	0.710	0.012	-20.81	39255
Bottom quintile	0.732	0.012	-19.7	30169
Controlling for performance:				
Full sample	0.711	0.009	-25.64	72570
Top quintile	0.726	0.024	-9.63	16853
2nd quintile	0.686	0.021	-12.55	16332
Middle quintile	0.722	0.023	-10.17	13464
4th quintile	0.677	0.020	-13.32	13768
Bottom quintile	0.729	0.019	-12.05	11018

Source: ASHE.
Quintiles are defined with respect to the base wage.
Models show the coefficient on the dummy variable identifying performance pay jobs.
Controls: see Table 6.