Share Capitalism and Worker Wellbeing

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Abstract

We show that worker wellbeing is not only related to the amount of compensation workers receive but also how they receive it. While previous theoretical and empirical work has often been pre-occupied with individual performance-related pay, we here demonstrate a robust positive link between the receipt of a range of group performance schemes (profit shares, group bonuses and share ownership) and job satisfaction. Critically, this relationship remains after conditioning on wage levels, which suggests these pay methods provide utility to workers in addition to that through higher wages. These findings survive a variety of methods aimed at accounting for unobserved individual and job-specific characteristics. We investigate two potential channels for this effect. We first demonstrate that half of the positive effect can be accounted for by employees' tendency to reciprocate in return for the "gift" of share capitalism. Second, we show that these 'share capitalist' modes of pay dampen the negative wellbeing effects of what we typically think of as "bad" aspects of job quality. Finally, share-capitalist pay methods also have positive wellbeing spill-over effects on co-workers.

JEL Classification: J28; J33; J54; J63; J81; M52.
Keywords: job satisfaction; wages; compensation methods; working conditions.

1. **Introduction**

In the absence of detailed information on job attributes, worker wellbeing is often used as an indicator of job quality. If workers express greater job satisfaction it seems reasonable to think they are in better-quality jobs. Evidence suggests that the one job facet readily available in social surveys – wages – is indeed positively correlated with job satisfaction. In this paper we show that worker wellbeing is not only related to the amount of compensation they receive but also how they receive it.

The linking of pay to performance aims to compensate workers for the disutility of effort by equating marginal product and rewards. This may mean that subsequently employees look more favourably upon their job, provided the means by which reward is linked to effort is perceived as reasonable and fair, and provided the worker can influence output through his or her own efforts. If workers lack the job autonomy to influence output, or group-based incentives lead to a dilution of the incentive effect due to the 1/n problem, or if the employer sets the effort-reward ratio to the disadvantage of the worker, this may result in adverse consequences for worker well-being, including lower morale, and greater stress and anxiety, injury, and absenteeism.

What can be described as 'Share Capitalist' modes of pay may also affect worker well-being through a sense of firm co-ownership. Employees with a direct financial stake in the company presumably feel more engaged in the decision-making processes within the organization. Even when the ownership or profit-sharing stake is modest, the firm's promotion of such schemes may perform what Bowen and Ostroff (2004: 206) describe as "a symbolic or signalling function" to communicate a strong HRM system capable of aligning the interests of the organization and the individual. This sort of engagement is often associated with positive worker affect even though workers may suffer anxiety due to the risks associated with such high dependence on the fortunes of the firm.

What has been rather less-studied in this context is the idea that providing workers with some ownership stake in the firm rather than a higher wage may be viewed as a gift exchange, and hence affect employee wellbeing. Bryson and Freeman (2014) argue that

standard all-employee share-purchase plans are a "gift" from the employer, since they offer discounted shares, often by giving workers free shares for every share they buy, up to a limit. Unlike wages which are part of the employment contract, the employee is at liberty to refuse entry to a share plan. If only those who are prepared to reciprocate the gift enter the share plan, the plan will motivate additional effort and enhance employee wellbeing via the "warm glow" of reciprocating in return for a gift. The size of the reciprocal response may be proportionate to the value of the gift, but even symbolic gifts have sizeable effects on worker performance (Kosfeld and Neckermann, 2011). Worker responses to "bad conditions" at work can also be affected by how they are paid. Group incentive schemes may dampen the negative impact of poor working conditions on employee wellbeing via increased loyalty to the firm or by feelings of firm ownership in share-capitalist schemes. By way of contrast individual payment-by-results (PBR) – piece rates – are a pure incentive based on output, which is unlikely to affect worker wellbeing in the same way.

The main criticism of group-incentive forms of pay is that they run into free-rider problems. In practice free-riding problems may not manifest themselves in such schemes due to co-worker peer pressure and co-monitoring (Kandel and Lazear, 1992). Recent empirical work appears to confirm this (Freeman *et al*., 2010). Whilst this may be good for the company, a culture of worker co-monitoring focused on encouraging greater worker effort may be viewed negatively by some employees, thus undermining job satisfaction and worker motivation (Green and Heywood, 2010). This is akin to the effects of what Barker (1993) termed "concertive control" exercised in teams. On the other hand, it is possible that the high take-up of a share plan among co-workers may positively affect non-members' wellbeing. For instance, non-members may feel positively about being among reciprocating types of workers, especially if there is a positive production externality.

In the remainder of the paper we therefore consider four related questions. First, does receipt of contingent pay affect how workers feel, conditional on the wage they receive?

Second, are there spillovers from co-worker participation in share capitalism affecting non-participants' wellbeing? Third, does the size of the group-incentive payment affect worker wellbeing? Finally, does group incentive pay dampen the negative effects of poor working conditions on employee wellbeing? The remainder of the paper is organised as follows. Section Two presents existing empirical evidence, and Section Three describes our data and empirical approach. Section Four presents the results and Section Five concludes.

2.   Empirical Evidence

According to Kruse *et al.*'s (2010: 262) review of 12 contributions, the evidence on contingent pay and worker wellbeing is mixed. Recent work tends to find a positive association between contingent pay and job satisfaction, although they differ in their particular findings. Green and Heywood (2008) find that profit-related pay/bonuses and performance pay are both positively associated with various job satisfaction measures, although only the effect of profit-related pay and bonuses is robust to the inclusion of worker fixed effects. Kruse *et al.* (2010: 273-274, 286) find positive associations between profit-sharing/gain-sharing and job satisfaction, but the effect is contingent on the size of the payout. Other recent literature demonstrates that specific forms of individual performance pay are associated with higher injury rates (Bender *et al.*, 2012) and greater absenteeism from work (Frick and Simmons, forthcoming), suggesting that they may also reduce worker wellbeing.

In early work, Blakemore *et al*. (1987) find empirical support in the Panel Survey of Income Dynamics (PSID) for their model predicting that bonuses reduce quits, while Lakhani (1988) found that reenlistment bonuses reduced quit rates in the U.S. Army. More recently Bryson and Freeman (2014) use the single-firm ShareCo data used in this paper to show that share-plan participation is associated with a lower intention to quit. Kruse *et al*. (2012) confirm that more intensive share-capitalist regimes reduce voluntary turnover and increase the intention to stay, even among the "100 Best Companies to Work For in America", where we might anticipate little variation. The explanation

appears to be the positive association between share-capitalist modes of pay and a better quality of working life, as indicated by more trusting relations with supervisors, increased participation in decision making and greater information sharing, which go to make up what they term a "more positive workplace culture".

It is very clear that higher pay raises pay satisfaction, and that pay relativities also affect pay satisfaction (Brown *et al.*, 2008). There is also a substantial literature supporting Rosen's (1974) contention that higher pay can compensate workers for facing poorer conditions at work. Poor conditions are liable to affect all employees' wellbeing negatively - unless they are fully compensated for those adverse conditions through a higher wage or other benefits - but workers may be less concerned about the rectification of these conditions if doing so affects the price of their shares or the size of their profit share. This consideration, coupled with the potential for share-capitalist employees to identify more closely with the employer than do other employees, may mean that their job satisfaction is less sensitive to working conditions than that of other employees.

3. Data and Empirical Approach

The key challenge in this literature is the identification of the causal effects of contingent pay on worker wellbeing. A related concern is unobserved worker heterogeneity with respect to their disutility of effort, ability, or their preferences for risk or reciprocity. Since contingent pay works as a selection device (Lazear, 1986; 2000), we might anticipate a positive association between contingent forms of pay and employee wellbeing in the case when workers are able to sort by preference. On the other hand, if there are constraints on workers' ability to choose their preferred compensation package, workers may be 'misallocated'. For example, if the number of firms offering shares to employees does not meet employee demand, employees may queue for jobs offering share plans, permitting employers to pick from the queue. Conversely, PBR is standard in some occupations, such that workers wishing to work in those occupations have little choice but to accept PBR as part of their compensation package. An ideal experiment to establish the effects of contingent pay on worker wellbeing would involve randomly

treating individuals, occupations or workplaces within a firm with a particular wage or payment method, or randomly taking a person and moving her to a new firm with a different pay regime. We do not here have such experimental data. Our approach is instead to use three, complimentary, data sources to establish a credible set of evidence on (1) the effect of contingent-pay schemes on job satisfaction; (2) how contingent pay influences the dissatisfaction workers receive from poor working conditions; and (3) the spillover effect of contingent pay on non-recipients' job satisfaction. We below set out our underlying empirical approach and describe, in turn, how each data set is used.

Our initial interest is in providing credible evidence on the relationship between payment methods and job satisfaction via regressions of the form:

$$JS_i = \alpha' PayType_i + \beta'_x X_i + \varepsilon_i \qquad\qquad (1)$$

Where $Paytype_i$ is a vector of performance-related payment methods received by worker i, JS_i is reported job satisfaction and X_i is a vector of controls. Job satisfaction has been shown to be a useful predictor of various work-related behaviors, such as quits (Freeman, 1978, Clark, Georgellis and Sanfey, 1998, and Clark, 2001), absenteeism (Clegg, 1983) and productivity (Mangione and Quinn, 1975, and Patterson *et al*., 1997). As such, it is often considered to be a viable index of the work-related component of utility. The job satisfaction regressions throughout the paper are estimated using linear techniques, as Frijters and Ferrer-i-Carbonell (2004) suggest that the difference between estimation using cardinal and ordinal estimation is not particularly important.

The primary way in which performance-related pay is thought to operate is by compensating workers for the additional effort that they expend. In the absence of controls for wages. the estimated coefficients on pay type provide information on the combined effect of both performance pay and wages on worker utility. Of potentially more interest is the conditional effect of performance pay on worker utility holding wages constant, as in the following equation:

$$JS_i = \alpha' PayType_i + \beta'_x X_i + \lambda Wage_i + \varepsilon_i \qquad\qquad (2)$$

Here the estimated coefficient on payment method now illustrates the effect of receiving performance-related pay holding wages constant. We below estimate variants of these equations using three different data sets.

3.1 Dataset 1: ShareCo

The first set of regressions appeal to a single-firm database which includes worker-reported information on job satisfaction. The company, ShareCo (a pseudonym), is a multinational business services corporation employing roughly 12,000 full-time equivalent employees globally. Our data come from a dedicated web-based survey, designed by the authors in conjunction with the firm. We here analyse pooled data for the UK data that was collected in 2007 and 2010.

The job satisfaction measure in ShareCo is based on responses to the question: "*How satisfied are you in your job?*" with responses recorded on a 5-point Likert scale where 1=very dissatisfied and 5=very satisfied. Importantly for our purposes, the company's operates an employee share purchase plan (ESPP) which is central to its remuneration strategy.[2] We initially estimate variants of Equations (1) and (2) where the specific vector of payment methods is share-plan membership and whether the worker is a salaried employee who is also paid bonuses or commissions. We also include a control for the worker's perceptions of the proportion of employees in the work-unit who belong to the share plan. The *X's* are a set of individual-level demographic and job characteristics, which are presented in the footnote to Table 1.

For each OLS estimate we run counterparts with work-unit fixed effects. These units, which proxy for groups of employees who work in close proximity to one another,

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[2] The ESPP in the UK is a Shareholder Incentive Plan (SIP) which offers tax advantages to those buying and selling shares, together with matched shares from the firm (whereby the firm gives employees a free share for each share they purchase). For details on the Share Plan and the surveys see Bryson and Freeman (2010).

identify employees working in the same office and the same business division or business unit. Their inclusion allows us to estimate the effect of share-plan participation effects on employee behaviours *within* the work units in our data, thus accounting for any unobservable fixed elements of the working environment which might induce plan participation and other employee behaviours, and at the same time influence job satisfaction.

3.2   Dataset 2: European Working Conditions Survey (EWCS)

We second analyze the 2000/01 and 2005 waves of the European Working Conditions Survey (EWCS) to establish whether individual receipt of various forms of contingent pay is associated with satisfaction with their working conditions.[3] Roughly 1,000 employees are surveyed in 31 European countries, including all member countries of the European Union. Our estimation sample is 33,510 after deleting observations with missing observations and those workers who report that they are single traders (that is, working in an organization where they are the sole worker). We estimate variants of (2) on the responses to the question: "*On the whole, are you very satisfied, satisfied, not very satisfied or not at all satisfied with working conditions in your main paid job?*" In all models we control for country fixed effects models to produce within-country estimates, thus overcoming the potential problem of the cross-country comparability of ordinal subjective wellbeing responses. The EWCS oversamples workers in small countries but contains detailed weights to adjust for the relative likelihood of workers appearing in the sample. All of the empirical estimates we present use these weights, although our results do not qualitatively change if we do not use weights. In addition to its cross-country coverage, the chief advantage of the EWCS is its very rich data on payment methods, the nature of the job, and its hazards and risks. This allows us to test the effect of payment methods on satisfaction with working conditions and the proposition that share capitalism may mediate employee attitudes towards "harsh" working conditions. We provide further details below and in the notes to Table 2.

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[3] The 2010 EWCS lacks the more disaggregated payment method information available in the previous waves, and so we do not use it here.

3.3   Dataset 3: British Household Panel Survey (BHPS)

We run similar analyses for a panel of employees in the UK using the British Household Panel Survey (BHPS), a general survey covering a random sample of approximately 10,000 individuals in 5,500 British households per year, rising to figures of 16,000 and 9,000 respectively in later waves. We use 11 waves of the BHPS from 1998 to its cessation in this form in 2008, as these years have consistent information on two forms of performance related pay:

> *In the last 12 months have you received any bonuses such as a Christmas or quarterly bonus, profit-related pay or profit sharing bonus, or an occasional commission?* [this excludes overtime payments]; and *Does your pay include performance-related pay?*
> (Taylor *et al*. 2006)

which we use to create indicators of bonus/profit-share receipt and other performance-related pay receipt, respectively. A novel feature of this data is that if an individual receives a bonus they also report the annual amount. This allows us to examine the relationship between size of contingent payment and job satisfaction, but also to exclude small sources of contingent pay (such as Christmas bonus payments) that are unlikely to have marked effects on worker utility. This data has a wide range of information about individual and household demographics, health, labour-force status, employment and values. There is both entry into and exit from the panel, leading to unbalanced data. The BHPS is a household panel: all adults in the same household are interviewed separately. Our dependent variable is overall job satisfaction, which is derived from the question: "*All things considered, how satisfied or dissatisfied are you with your present job overall using the same 1-7 scale?*". The key advantage of the BHPS is not only its ability to track individual workers over time, but also its job histories data, which allows us to track individuals in specific jobs over time. Following the approach outlined in Green and Heywood (2014) we augment a standard job satisfaction model with worker-job fixed effects. In this way we seek to examine the role of contingent pay methods on job satisfaction holding both individual and work-specific characteristics constant.

3.4 Extensions

Having estimated the relationship between payment methods and job satisfaction we investigate two potential channels of effect. First, returning to ShareCo we utilise unique information on organizational loyalty and perceptions of fairness, both of which may be influenced directly by performance-related pay. The loyalty channel may especially hold for methods such as profit sharing and share receipt, where one purpose is to make workers 'part-owners' of the firm and so view it is a joint enterprise. Equally, fairness is more generally seen as a critical factor determining the successful implementation of performance-pay schemes . The organizational loyalty measure in ShareCo is an additive scale based on three questions. Employees reply using a five-point Likert scale running from "strongly agree" to "strongly disagree" in response to the statements "*I feel very loyal to this organization*", "*I find that my values and the company's values are very similar*" and "*Overall this company is a good place to work*". We create a scale from 3 (low attachment) to 15 (high attachment) which has a scale-reliability coefficient of 0.84. The fair-treatment measure is also an additive measure based on the same Likert-scale coding in response to the statements "*I am fairly paid relative to my ShareCo colleagues in a similar job*" and "*I am fairly paid relative to employees with similar jobs in other companies*". The scale, which has a reliability coefficient of 0.75, captures the degree to which employees feel they are fairly paid.[4] We then augment equation (2) by including these measures, the main purpose of which is to assess the extent to which any variation in job satisfaction due to payment method can be explained by potential effects on loyalty and fairness.

Our second extension is to ask whether performance pay can mitigate the negative effects of bad working conditions: Do those with poor working conditions react less negatively to them when they are in receipt of bonus and profit-based payments? We examine this in

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[4] Correlations between these five items were explored using principal components factor analysis with varimax rotation. The items loaded on the two dimensions used to compute the scales described in the text with eigen factors of 1.17 and 2.72 respectively.

two ways. First, we exploit the wide range of information in the EWCS to compare how the influence of bad working conditions on job satisfaction varies according to the receipt of differing payment types. Second, we utilise the BHPS which allows us to focus on within worker-job estimates of the impact of working conditions on job satisfaction and how this varies according to payment type. The BHPS does not have an enormous amount of information on working conditions. We here consider two aspects of the job which might realistically be considered to be negative: working unpaid overtime and commuting time.

4.   Results

4.1   Does share ownership and profit-related pay improve worker wellbeing?

Our first question is to ask whether share and other profit-related pay schemes are associated with higher worker wellbeing. Table 1 provides evidence from ShareCo and demonstrates that their employees are more satisfied with their jobs if they are members of the company share plan (Table 1, row 1). The finding is robust to the inclusion of work-unit fixed effects, suggesting the result is not driven by fixed unobservable differences across office/business units which may influence both satisfaction and the individual's decision to join the share plan. It is also robust to conditioning on log wages.

INSERT TABLE 1

Having conditioned on one's own share plan membership status, ShareCo employees' job satisfaction also rises with the percentage of their peers who they think belong to the company share plan (Table 1, row 2). This result is again robust to the inclusion of work-unit fixed effects which account for the fixed unobservable characteristics of the working environment influencing individual job satisfaction and co-workers' propensity to join the share plan. The finding is consistent with the existence of a positive wellbeing spillover externality from co-workers' share ownership. We added an interaction term between the

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individual's membership status and perceptions of peers' membership rate to the model to see if there was any differential between members and non-members in the size of the spillover effect. The interaction is not statistically significant, so the size of the spillover effect is similar for members and non-members.

Salaried employees in receipt of a bonus or commission, that is, those whose pay is partly tied to results, have higher job satisfaction than observationally equivalent employees who do not receive a bonus. However, this effect shrinks and becomes less precise once it is conditioned on work-unit fixed effects (Table 1, row 3). This suggests that at least some of this positive association reflects work-unit level variation in the use of commissions.

INSERT TABLE 2

In a similar manner we use cross-European data for 31 countries drawn from the 2000/2001 and 2005 waves of the EWCS to provide further evidence on the link between payment methods and job satisfaction. While the EWCS lacks the ability to control for, for instance, work units it does contain highly-detailed information on workplace characteristics, tasks and hazards – many of are likely to be correlated with the use of performance pay. Table 2 shows the effect of 4 different, non-mutually exclusive, payment types with an increasingly complete control vector. All models incorporate country fixed effects so that the correlations with methods of pay are based on within-country comparisons. Model (1) contains an intercept term and four dummy variables identifying different types of contingent pay, along with income level, gender and age. This initial model demonstrates a negative effect of piece rates on job satisfaction, no effect of group bonuses and positive effects from share payments and profit shares. Model (2) incorporates a rich array of controls for occupation, industry, tenure, hours, flexible employment contracts and firm size, while model (3) includes a battery of controls for autonomy, task type, work hazards, shift work etc., which are detailed in the notes to Table 2. While their inclusion substantially improves the fit of the model the positive relationships between job satisfaction, on the one hand, and profit sharing and

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share payments on the other remain. However, the impact of piece rates tends to zero as we add controls, suggesting that the initial negative relationship reflects the type of jobs and working conditions in which piece rates are used.

We explore the effect of payment methods on worker utility using two further survey data sets for the UK. First, Table 3 reports estimates of the effect of the receipt of the two types of performance pay responses in the BHPS, drawn from the 1998-2008 waves. We first show pooled estimates and then panel estimates that hold within-job, within-worker, and characteristics constant. Similar to the results for the EWCS there is no statistically significant relationship between individual performance pay and job satisfaction. However, bonus receipt or profit sharing is associated with higher job satisfaction. This is robust to the introduction of job-worker fixed effects. This means that for a given worker in a given job, the switch to bonuses/profit shares leads to increased job satisfaction, holding wages constant.

INSERT TABLE 3

A further advantage of the BHPS is that individuals who respond "Yes" to bonus/profit share receipt are then asked the amount of payment they received from this method. This allows us to extend the previous models to examine how the size of the bonus influences job satisfaction. There main motivation for this is the concern that linearising the effect of these payments across payment size may miss important non-linearities, such as potential negative effects of small bonuses on worker behaviour (Gneezy and Rustichini, 2000). The initial estimates correspond to the final two columns of Table 3 where the bonus/profit share receipt indicator is instead replaced by the amount of the bonus. The results reveal that in both the pooled and within worker-job models job satisfaction is increasing in the bonus amount. Including a quadratic term in the bonus amount indicates that the response is potentially non-linear. To explore further, we re-estimate the model with an indicator for small or large bonus payments (greater or less than £1,000). While large bonuses are, perhaps naturally, associated with the greatest job satisfaction, there is no evidence of a negative effect of smaller bonuses on worker wellbeing.

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INSERT TABLE 4

To summarise, there is a strong positive association between share-capitalist approaches to payment and job satisfaction. This is true across a variety of institutional settings, including cross-Europe, within firm and across the UK. Moreover, using a variety of data we have demonstrated how this result is robust to approaches that identify within-workplace and within worker-job effects of share capitalism on job satisfaction. Taken together, we have a body of evidence that suggests that the introduction of contingent-payment methods such as share ownership and profit sharing increase worker wellbeing. In our subsequent analysis we seek to examine, in turn, two possible channels through which group-payment receipt may influence worker wellbeing positively: (1) worker reciprocity and (2) wage compensation for bad working conditions.

4.2   Does worker reciprocity account for the wellbeing effects of share-plan participation?

INSERT TABLE 5

Table 5 replicates the analysis in the final two columns of Table 1 but now conditioning on organizational loyalty and perceptions of fair pay. These may be important if the association between share-plan participation and job satisfaction is driven by more favourable views of the firm, as might be the case if plan participants feel the plan represents gift-exchange. Wages are insignificant here, but the estimated coefficients on organizational loyalty and perceived fair pay are positive, large and statistically significant. As a result, the models account for roughly two-fifths of the variance in job satisfaction, compared to only around one-tenth in Table 1. Furthermore, the introduction of these new variables reduces the plan membership coefficient by one-half while the coefficient for perceptions of peers' membership falls markedly and becomes statistically insignificant. It therefore appears that much of the plan membership effect stems from greater organizational loyalty and a heightened perception of pay fairness than is apparent

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among non-participants. Still, individual plan membership remains statistically significant in most of the models, so that these channels do not fully account for the association.

In addition we estimated models that incorporated feelings of co-ownership.[5] This latter was positively associated with plan membership, and strongly positively associated with job satisfaction. Its introduction reduces the plan-membership coefficient by roughly half in the job-satisfaction equations. The membership dummy remains statistically significant, albeit only at the 90 percent confidence level. This continues to be the case when organizational loyalty and perceptions of fair pay are also added to the model. Perceptions of co-ownership thus clearly matter when explaining job satisfaction among ShareCo employees , and they account for a sizeable part of the plan-membership effect, but not all of it.

4.3   Do share-capitalist payment methods dampen the negative effects of poor working conditions on employee job satisfaction?

Using the EWCS and BHPS we now ask whether tying employee remuneration to firm or to group performance makes a difference to the way in which employees respond to "bad" working conditions.

INSERT TABLE 6

Table 6 reports analyses from the EWCS akin to those reported in Table 2 but this time splitting the sample into those who receive some form of share-capitalist compensation – income from share ownership in their firm, profit-sharing or group-based performance-

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[5] Employees were asked to rate themselves on a scale of 1 to 10 in response to the question "*How much do you feel like a co-owner of this company?*"

related pay – and those who do not. The table presents a selection of coefficients where there are marked differences in the relationship between job characteristics and satisfaction with working conditions across the two groups of employees.[6] While the coefficients are similar across many characteristics, in general those receiving share capitalist type payments appear more tolerant of a range of negative working conditions . For instance they are less negatively affected by working to tight deadlines, their work pace being set by their boss, threats/discrimination in the workplace or working shifts. These effects emerge despite the fact that the model controls directly for wages and for the receipt of compensation for bad or dangerous working conditions.[7] This analysis therefore offers some support for the proposition that share-capitalist employees are more tolerant of "harsh" conditions at work than they might be in the absence of share capitalism.

INSERT TABLE 7

The analysis of BHPS panel data confirms that incentive payments mitigate the effects of bad working conditions. Due to data limitations we focus on two measures of the latter: overtime hours and travel to work time (minutes). Our approach is to estimate the negative effect of these two working conditions and then, through the inclusion of interactions, see whether this effect differs when bonus/profits shares are received. The first two columns of Table 7 refer to pooled analysis. We can see there that both overtime hours and travel to work time are negatively correlated with overall job satisfaction. However, in both cases the interaction term with incentive payments is positive and significant. The size of the estimated coefficients in column 1 implies that overtime hours significantly reduce satisfaction, but only for those who do not receive incentive payments. Our results suggest that job satisfaction is increasing in unpaid overtime hours for those working unpaid overtime and receiving performance pay. This may reflect that

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[6] Many job characteristics and working conditions had similar effects across both subgroups. For example, the effects of having very physical jobs were similarly negatively associated with satisfaction with working conditions in the case of both types of employee. The full models are available on request.

[7] It is notable that wage effects are more pronounced in the case of share capitalist employees, with relatively low wages being more negatively associated with lower satisfaction and high wages being more positively associated with satisfaction than in the case of employees who were not in receipt of shares, profit sharing or group-based performance pay.

workers on PRP are receiving an explicit rent on this extra effort which non-PRP worker do not (although recall that log wages are being held constant here). Equally, in column 2 job satisfaction is only negatively correlated with travel to work time for those who do not receive incentive payments (we can reject at the ten per cent level the hypothesis that -0.258+0.165 is equal to zero). Columns 3 and 4 show the results holding worker-job fixed effects constant. These results are essentially unchanged. This suggests that the pooled results do not result from either unobservable worker or job characteristics that jointly influence job satisfaction, working conditions and payment type.

5.   Conclusion

In this paper we show that worker wellbeing is not only related to the amount of compensation workers receive but also how they receive it. Those in receipt of group performance bonuses or profit shares, and those in share-ownership schemes, have higher job satisfaction than other employees, conditional on their wages. These findings hold across three quite different data sets and are robust to the inclusion of work-unit fixed effects in the ShareCo data, remarkably detailed job controls in the EWCS data and individual fixed effects in the BHPS panel data. In the ShareCo setting we demonstrate that co-workers' decision to participate in a share plan has an independent positive impact on individuals' job satisfaction, regardless of their own share-plan membership status. While, we find an association between bonus amounts and job satisfaction that increases in bonus size.

We investigate two channels through which these 'share capitalist' modes of pay achieve positive outcomes. First, in a single-firm setting, we find that about half of the share-capitalism effect can be accounted for by employees' tendency to reciprocate in return for the "gift" of share capitalism. In a broader survey data setting we show that another channel is through these payment methods 'dampening', or in some cases negating, the negative wellbeing effects of what we typically think of as "bad" aspects of job quality.

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Table 1: Job Satisfaction, Share Plan Membership and Bonus Commission in ShareCo

	Without wages		With wages	
	OLS	Work Unit Fixed Effects	OLS	Work Unit Fixed Effects
Member	.23 (4.64)	.22 (4.37)	.23 (4.57)	.23 (4.33)
% Member	.08 (4.49)	.09 (4.41)	.08 (4.24)	.08 (4.21)
Commission	.15 (2.42)	.11 (1.79)	.15 (2.30)	.12 (1.74)
Constant	-32.76 (1.11)	-44.96 (1.26)	-43.47 (1.43)	-64.57 (1.79)
Adj. R^2	.08	.09	.08	.09

Notes:

(1)   The membership dummy is based on the response to the question "*Are you a member of a ShareCo Share Plan?*" The percent membership is based on the following question: "*What percentage of workers in your business unit do you think are members of the ShareCo Share Plan?*" with responses coded 1=None, 2=1-19% 3=20-39% 4=40-59% 5=60-79% 6=80-99% 7=100%. The item is entered linearly. The "Commission" dummy is one of three dummies identifying contractual status, the others being hourly paid and salaried without commission. The "Commission" coefficient is evaluated against the base category of "Salaried without bonus/commission". Models contain an intercept term and the following controls: age (5 dummies); male; white; degree; professional qualification; household status (4 dummies); sociability scale; risk scale; majority of household income is ShareCo earnings; occupation   (7 dummies); supervisory status; hours worked (4 dummies); tenure (5 dummies); a dummy for the year of the survey. The sociability scale is an additive scale counting the number of times employees ticked a box in response to the following question: "*Do you take part in the following activities, either as part of your job or outside work? Please select as many as apply to you...Member of a trade/professional body or association; work in schools, colleges, universities; involved in charities or voluntary bodies; member of a social, sports or arts club; active member of a political party; active member of a religious group; socialising with co-workers outside of work*".   The risk scale is based on responses to the question "*Are you generally a person who is fully prepared to take risks or do you try to avoid taking risks?*" where 1="unwilling to take risks" and 10="fully prepared to take risks".

(2)   Sample N=1,887 without wages; 1,816 with wages. The fixed effects models absorb 54 work unit dummies. T-statistics in parentheses.

Table 2 Satisfaction with Working Conditions and Contingent Pay, European Working Conditions Survey (EWCS) 2000-2005.

	(I)	(II)	(III)
Piece Rate	-0.0944***	-0.0605***	-0.0197
	(0.0203)	(0.0207)	(0.0204)
Profit Share	0.0728***	0.0814***	0.0643**
	(0.0282)	(0.0261)	(0.0252)
Group Bonus	0.0260	0.0285	-0.0142
	(0.0403)	(0.0406)	(0.0416)
Share Payment	0.103**	0.0936*	0.0817*
	(0.0475)	(0.0496)	(0.0477)
Constant	3.420***	3.672***	3.642***
	(0.0800)	(0.111)	(0.112)
Observations	33,510	31,113	29,149
Adj. R^2	0.097	0.126	0.218

Robust standard errors in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively. All estimates adjusted with population weights. Controls in model (I) gender, age, age^2, income and country (31 dummies); (II) adds controls for occupation (9 dummies), industry (12 dummies) tenure, hours worked, flexible contract work and firm size. (III) adds controls for autonomy over speed, work methods and order of jobs, quality assessment, problem solving, exposure to noise, vibrations, high temperatures, low temperatures, smoke fumes, chemicals, radiation, tiring positions, heavy loads, whether the worker teleworks, homeworks, commutes more than 30 minutes each day, night shift, whether the job is repetitive, monotonous, complex, involves task rotation, shift work, whether work pace is set by colleagues, by the machine, by the boss or by targets, whether the job is often at high speed and whether there are long hours.

TABLE 3 Incentive Payments and Job Satisfaction, BHPS 1998-2008, Private Sector Workers

	(1) Pooled OLS	(3) Worker-Job Match Fixed Effects
Ln Wage (2001£)	0.119***	0.130***
	(0.0165)	(0.0128)
Performance Pay	-0.0272	-0.0153
	(0.0195)	(0.0168)
Bonus/Profit Share	0.0740***	0.0684***
	(0.0154)	(0.0129)
Constant	6.709***	6.378***
	(0.175)	(0.133)
Observations	48,045	48,045
Adj. R^2	0.050	0.045
Number of worker-job matches		1,976

Robust standard errors in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively. Column (1) includes controls for male, age, age^2, marital status, health status, A-Level, Diploma, Degree or higher, union coverage, large firm (####+), promotion opportunities, employer funded pension, industry (9 dummies), occupation (9 dummies), region (11 dummies). Column (2) omits time invariant controls.

Table 4 Job Satisfaction and Bonus Size, BHPS 1998-2008

	(1) OLS	(2) Worker-Match FE	(3) Worker-Match FE + Bonus^2	(3) Small & Large Bonuses
Ln Wage (2001£)	0.115***	0.126***	0.120***	0.120***
	(0.0167)	(0.0129)	(0.0129)	(0.0129)
Other PRP	-0.0131	-0.00394	-0.00868	-0.0228
	(0.0194)	(0.0165)	(0.0165)	(0.0168)
Real Bonus (£'000s)	0.005**	0.006***	0.013***	
	(0.002)	(0.001)	(0.001)	
Real Bonus^2 (£'000s)			-0.000***	
			(0.000)	
Bonus<£1000				0.0204
				(0.0145)
Bonus>=£1000				0.173***
				(0.0202)
Constant	6.745***	6.219***	6.446***	6.441***
	(0.176)	(0.697)	(0.133)	(0.133)
Observations	48,111	48,111	48,111	48,111
Adj. R^2	0.050	0.045	0.046	0.046
Number of Worker-Job Matches		1,976	1,976	1,976

Robust standard errors in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively. All controls as per Table 3.

Table 5: Job Satisfaction, Share Plan Membership and Bonuses in ShareCo

	OLS	FE
Member	.11 (2.79)	.10 (2.36)
% Member	.03 (1.81)	.03 (1.84)
Commission	.05 (1.11)	.06 (1.20)
Log wage	-.00 (0.14)	-.01 (0.27)
Loyalty	.23 (25.56)	.23 (24.30)
Fairness	.04 (3.76)	.04 (3.62)
Constant	-35.58 (1.50)	-34.90 (1.21)
Adj. R^2	0.43	0.42

Notes:
(1)   Models contain controls described in notes to Table 1 plus log annual salary, and additive scales for organizational commitment and perceptions of fair pay. See text for details.
(2)   Sample N=1,816. T-statistics in parentheses.

Table 6: Impact of "harsh" Working Conditions on Satisfaction with Working Conditions Among Those With and Without Share Capitalist Types of Compensation

	(1) With Share Capitalism	(2) Without Share Capitalism
Commute > 30 mins	-0.0470	-0.0242
	(0.0367)	(0.0149)
10+ hours at least once per month	0.0133	-0.0289
	(0.0486)	(0.0214)
Work to tight deadlines	-0.0500	-0.0937***
	(0.0430)	(0.0190)
Pace set by targets	-0.0113	-0.0346**
	(0.0398)	(0.0167)
Pace set by machines	0.0267	0.0199
	(0.0523)	(0.0212)
Pace set by Boss	-0.0155	-0.0624***
	(0.0398)	(0.0161)
Number of types of threat/discrimination	-0.0804***	-0.139***
	(0.0255)	(0.0129)
Health or Safety at risk at work	-0.295***	-0.360***
	(0.0472)	(0.0181)
Number of hazards exposed to	-0.0246**	-0.0161***
	(0.00987)	(0.00429)
Shift Work	-0.0784	-0.0512**
	(0.0571)	(0.0212)
Night Shift	0.0167	0.00241
	(0.0558)	(0.0235)
High Speed	-0.100**	-0.0634***
	(0.0436)	(0.0175)
Constant	2.709***	3.518***
	(0.417)	(0.114)
Observations	2,809	24,013
Adj. R^2	0.307	0.253

Robust standard errors in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively (1) See Table 2 Model (2) for details of model specifications.

Table 7 Incentive Pay, Job Satisfaction and Job Disamenities, BHPS 1998-2008

	Pooled OLS		Worker-Job FE	
Ln Wage (2001£)	0.145***	0.0825***	0.149***	0.0868***
	(0.0153)	(0.0137)	(0.0115)	(0.0105)
Performance Related Pay	0.00573	0.00460	0.0123	0.00665
	(0.0195)	(0.0196)	(0.0162)	(0.0157)
Unpaid Overtime Hours	-0.0163***		-0.0159***	
	(0.00193)		(0.00145)	
Commute Time (mins)		-0.00258***		-0.00233***
		(0.000418)		(0.000318)
PRP*Unpaid Overtime Hours	0.00513**		0.00539***	
	(0.00246)		(0.00204)	
PRP*Commute Time (mins)		0.00165***		0.00186***
		(0.000564)		(0.000463)
Constant	6.614***	6.789***	6.355***	6.545***
	(0.150)	(0.155)	(0.111)	(0.114)
Observations	71,747	68,921	71,747	68,921
Adj. R^2	0.046	0.046	0.042	0.041
Number of Worker-Job Matches			2,252	2,225

Robust standard errors in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively. All controls as per Table 3.