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# Patterns of organizational ownership and employee well-being in Britain

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#### Abstract

This paper seeks to contribute to the current debate about corporate governance and work relations in two ways: it extends the analysis to include employees' subjective well-being and it considers a wider range of ownership models using Hansmann's typology as a guide. It argues that a key input into subjective well-being is provided by the scope to undertake work that is intrinsically as well as extrinsically rewarding. Rosen's theory of compensating wage differences is used as a lens to examine the problems of contracting over the intrinsic and extrinsic benefits of jobs as the former are largely intangible, whereas the latter are more easily codified and enforced. This asymmetry gives rise to moral hazard problems, which make the former more dependent on trust. Ownership models help to resolve this because they provide clear signals about an employer's value priorities, and its likely adherence to them after hiring. The study uses data from the British Workplace Employment Relations Survey. The results suggest that ownership models do indeed facilitate different trade-offs between intrinsic and extrinsic rewards that may be beneficial to many workers, warranting more attention to alternative forms of ownership to promote greater employee well-being.

# 1 | INTRODUCTION

Recent decades have seen a rapidly growing interest in the effects of corporate governance on firms' employment relations and human resource practices. Particularly salient has been the

synthesis paper by Gospel and Pendleton (2003) whose authors outline six ways in which governance models influence management's employment relations decisions. Each has been the subject of subsequent papers. Several explore the links with declining union influence (e.g. Meyer, 2019), the impact on employment volatility (Bacon et al., 2019; Heil, 2020; Perez, 2014), investments in training and human capital (Black et al., 2007; Liu et al., 2014; Tian & Gamble, 2018), with high commitment and decent work practices (Conway et al., 2008; Kubo, 2018), pay and incentives (Pendleton et al., 2017) and with more system-wide. inter-firm relations (Aguilera & Jackson, 2010; Brammer et al., 2012). With some exceptions, such as Konzelmann et al. (2006), these studies have mostly focused on material aspects, such as union strength, pay, employment and HR practices.

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This paper extends the debate by focusing on the effect of ownership rights on employee subjective well-being, and considers Gospel and Pendleton's first theme: the priority given to the owners' financial over employee concerns by different ownership models. It is an exploratory study of how such models influence employee willingness to trade material benefits in favour of greater subjective well-being. The case for extending the ambit of economic well-being to include employees' subjective experience has been put forcefully by the Stiglitz Commission (2009). That builds on a long stream of research by psychologists and more recently by economists, on the impact of subjective well-being on physical and mental health (e.g. Kanfer et al., 2017; Karasek, 1979; Ryan & Deci, 2000; Warr, 2019; Frijters & Krekel, 2019; Oswald, 2010). It also reflects deeper concerns among European trade unions over the desirability of trading 'qualitative' for 'quantitative' demands as it has in Germany (Streeck, 1981), and among the French and Italian unions that debated, in the 1970s, whether they should negotiate higher pay to compensate for poor working conditions, or instead campaign directly for their improvement.

The paper focuses on models of ownership, arguing that employee willingness to engage in this exchange is facilitated by some models more than others. The root of the problem is that ownership confers residual control rights which, in the presence of incomplete contracts, shape governance processes (Hart, 1995). In employment contracts, managerial prerogative plays a key role in governing work assignments, and thus determining how much time is allocated to intrinsically rewarding work. To put more flesh on this, the paper draws on Hansmann's (1996) classification of ownership models according to the set of 'patrons'<sup>1</sup> (stakeholders) on behalf of whom such residual control rights are exercised. In brief, these comprise investors, producers, consumers, public purpose beneficiaries as for charities and citizens for public ownership. The goals of these patrons impart different value orientations to their respective models. Drawing on his typology, this paper explores their influence on access to intrinsically rewarding work, and thus subjective well-being.

To examine the effect of ownership models on employee well-being, this paper uses the lens of compensating wage differences (CWDs) theory because that focuses explicitly on how workers' objectives, their 'utility', encompass both material, extrinsic and subjective, intrinsic, benefits. In addition, it explains how employers may position themselves on labour markets by structuring the jobs they offer in order to attract workers seeking different bundles of these benefits. However, this 'sorting' process. may be impeded by difficulties of contracting over subjective benefits because they tend to be intangible and hard to codify, whereas material benefits can be codified and enforced by employment tribunals. As a result, the parties may prioritize the more easily enforced material benefits. The paper argues that certain ownership models facilitate this process by imparting greater predictability over the intrinsic qualities of jobs, and how management is

<sup>&</sup>lt;sup>1</sup>That is 'all persons who transact with the firm either as purchasers of the firm's products or as sellers to the firm of supplies, labour or other factors of production' (p. 12).

likely to exercise residual control rights over work assignments after hiring. They do so because of the different types of patrons on whose behalf these rights are exercised. This predictability then makes it easier for workers to engage a trade-off between extrinsic and intrinsic benefits in the confidence that they will not be exploited, thus enhancing worker choice.

The paper proceeds as follows. It opens with a brief discussion of key concepts, notably employee subjective well-being and its relationship with intrinsic attributes of work as manifest in their 'hedonic' and 'eudaimonic' dimensions, and represented empirically in this paper by work satisfaction and commitment. Then follows a brief explanation of how compensating wage differentials enable workers to 'sort' into jobs offering their preferred bundle of extrinsic and intrinsic benefits, and how this process can be facilitated by the diverse values embedded in each type of ownership model. This is supported by a brief review of existing evidence on how their several priorities and behaviour are reflected in their employment and human resource decisions, and how this can inform workers' job choices. Following Hansmann's typology, the expectation is that, owing to the tradability of their ownership rights, investor-owned firms will tend to prioritize extrinsic benefits, and that models designed to serve other types of patrons will give more space to a variety of intrinsic benefits. The paper's statistical analysis starts by comparing the mix of intrinsic and extrinsic benefits across different ownership models. It then considers a number of possible composition and selection effects, which might provide alternative explanations of this pattern, notably differences in the strength of employee representation, the nature of their work systems and industry characteristics. Next, to interpret this pattern, the paper explores the extent to which contracting over intrinsic benefits depends on a degree of trust. This is done by exploring the perception of breach induced by the disruptive effect on work organization of the 2008/09 financial crash. A strong sense of prior employer commitment would give rise to a strong sense of breach among affected employees, and hence a decline in trust. The paper concludes by noting some limitations, and asking whether encouraging greater diversity of ownership forms could increase subjective well-being in the economy.

The data source is the British Workplace Employment Relations Survey, a nationally representative sample of workplaces with five or more employees, combining questionnaires to management and a sample of employees in each workplace. For this paper, WERS has some limitations, notably that one cannot follow the experience of individual employees. On the other hand, it offers an unrivalled view across a wide range of ownership models, and the experiences and earnings of their employees. In addition, the 2004 and 2011 surveys span the immediate effects of the unanticipated shock generated by the 2008/09 financial crash.

### 2 | EMPLOYEE SUBJECTIVE WELL-BEING AND COMPENSATING WAGE DIFFERENCES

In his distillation of several decades of psychological research, Warr (2019) distinguishes two dimensions of subjective well-being: 'hedonic' and 'eudaimonic'. These lie at the core of the OECD's (2013) proposals for national statistical measures of well-being. In their review of psychological studies using the two concepts, Huta and Waterman (2014) argue the first relates to the inherent 'pleasure/ enjoyment/ life satisfaction/ happiness' of the activity, and the second to 'caring about and contributing to a broader context'. In the work context, intrinsic motivation comprises both dimensions, the first being more individual in its focus, and the second more collective (Deci & Ryan, 2008). The first is reflected in the widely used measurement scales developed by Amabile et al. (1994) and whose questions focus on hedonic aspects. The second is reflected in

Meyer and Allen's (1997) concept of commitment, and its associated measurement scales. Meyer and Allen argue this comprises three elements: affective, normative, and continuance commitment. The first two relate directly to the pro-social dimensions of intrinsic motivation: relations with one's immediate co-workers and achievement of joint work goals, and a shared normative purpose, such as that of a charity or promoting public health. Continuance commitment relates to the build-up of co-worker relationships as well as organization-specific skills.

Social psychologists and labour economists converge in recognizing that the content of intrinsic motivation varies between individuals. Indeed, Amabile et al. (1994) developed their intrinsic and extrinsic scales in order to investigate such differences. However, the two disciplines diverge in their approach to substitution between extrinsic and intrinsic benefits. Whereas psychologists, such as Deci and Ryan (2008) treat intrinsic benefits as fulfilling basic human needs for competence, autonomy and relatedness, economists have focused on the process by which workers may substitute extrinsic for intrinsic benefits. This trade-off is central to the theory of 'compensating wage differentials' (CWD) as recast by Rosen (1986) and subsequent studies (see the overview by Borjas, 2016, ch. 5). This application treats lack of intrinsic benefit as a 'disamenity' for the worker, on a par with unhealthy or dangerous working conditions, and which employers can mitigate by investing resources in designing work systems to make them more attractive. A dramatic illustration was Volvo's investment in redesigning its production system to make it more appealing to Swedish workers (Berggren, 1992).

On the workers' side, the core insight of CWD theory is that workers are attracted by both extrinsic and intrinsic benefits and, to varying degrees, are willing to trade one for the other. Their utility function can be represented thus:

$$u_i = f\left(w_i, \, s_i\right) \tag{1}$$

where  $u_i$  represents their 'utility', and  $w_i$  and  $s_i$ , respectively, their wage and work satisfaction. In the present context, a stronger preference for intrinsic benefits is reflected in a willingness to accept a larger wage discount, other things being equal. Borjas (2016) proposes that the aggregate supply curve in a particular labour market comprises a 'spectrum' of workers who vary with respect to such discounts.<sup>2</sup> Employers then adapt their jobs according to the segment of that spectrum from which they wish to recruit.

Because workers differ in their skills and other attributes, the relevant comparator is the pay they could earn in alternative jobs, and which they forgo in favour of greater intrinsic benefits. This can be represented as follows:

$$w_{ci} = w_i - \bar{w} \tag{2}$$

where  $w_i$  is the worker's current wage, and  $\bar{w}$  what they could earn elsewhere, the market value of their skills and experience. The difference,  $w_{ci}$ , will be referred to as 'compensatory pay', taking a negative value when pay is forgone for greater intrinsic benefits, and a positive value when employers pay a premium to compensate for lack of such benefits.<sup>3</sup>

<sup>&</sup>lt;sup>2</sup> He describes this as 'hedonic' because it shows labour supply taking account of both the wage and the job disamenity.

<sup>&</sup>lt;sup>3</sup> In theory,  $\bar{w}$  could represent alternative pay if the worker were indifferent to the disamenity. However, as explained later, its estimation will reflect average valuations by other workers. The choice of reference point should not affect the results in this paper.

The availability of workers' preferred bundles of extrinsic and intrinsic benefits is constrained by the employers' cost of adapting their work systems. In the 'strong' version of the theory, where productivity is assumed constant across work systems, that cost has to be covered fully by the wage discount.<sup>4</sup> Thus, if the cost is low, employers can cover it by recruiting workers who are attracted by more interesting work in exchange for a correspondingly lower wage. On the other hand, if it is high, perhaps because of its technology, then the necessary wage discount may be too great to attract sufficient workers, and the employer is better off providing extrinsic benefits.<sup>5</sup> Out of the interaction between the two sides of the labour market, employers adjust their packages of pay and interesting work and workers sort themselves into the firms whose bundles they prefer.

The employer's need to cover the cost of providing more intrinsically interesting work can generate difficulties when contracting over the mix of tangible extrinsic and intangible intrinsic benefits. Job seekers may lack information about the true nature of the work offered, and therefore be uncertain as to what is a mutually fair wage discount. Additionally, given the employer's powers to direct work, they may not trust its assurances regarding how much time will be devoted to intrinsically interesting tasks after they are hired. It might be objected that there are simple solutions to this: the employer may care about possible quits. However, as Gibbons and Henderson (2012) argue, such sanctions are costly for employees, and the intangible nature of intrinsic benefits often makes 'breach' ambiguous and risky to 'punish'. This would reduce employee willingness to accept the wage discount, and so deter employers from investing in more interesting work. Alternatively, the employer might offer a 'risk premium' to cover such eventualities; however, this uses extrinsic benefits to compensate for possible loss of intrinsic ones. Either way, a lack of trust between the two parties may cause both to focus on extrinsic rewards because these can be more easily monitored and enforced, thus limiting the supply of intrinsically interesting work. Hence, the potential contribution of ownership models.

A notable feature of the ownership models in this paper is that, to varying degrees, they provide built-in commitments regarding the exercise of residual control rights, reflecting the goals of their key patrons. Most important is that their forms are well known to all parties, and so provide a clear guide to expected priorities, and for identifying potential breach. They offer, therefore, a more solid grounding for reputation than mere past behaviour and inferences based on the employer's perceived interests. Being administratively complex to change, they impart a degree of stability to expectations. As will be seen shortly, many involve explicit commitments to certain kinds of values in addition to managerial efficiency, and so enable management to 'tie its hands' in a way that the past investments in work organization prioritized by CWD can only do implicitly. This 'tying of hands' and commitment to a certain mode of operation entail costs for firms. Although such organizational investments differ from the examples of capital intensity cited by Rosen and Borjas, they may, nevertheless, incur analogous opportunity costs for employers. For example, state schools have very different business models from the highly profitable 'crammers', which also pay high results-based bonuses to their tutors (Gerhard & Newman, 2020: 352).

<sup>&</sup>lt;sup>4</sup> Borjas argues that if reorganization raised productivity, then it would pay the firm to make the investment anyway. In their advocacy for more participatory management, Appelbaum and Batt (1994: ch. 9) argue that short-term costs could exceed 15% of payroll. Potential productivity gains may also be reduced in a multi-tasking environment if employees vire their time towards tasks of greater intrinsic benefit (Shin & Grant, 2020).

<sup>&</sup>lt;sup>5</sup> A slightly different approach is taken by Francois (2003). His theory of 'donated labour' treats intrinsic benefits as potentially advantageous to both parties, thus attenuating the employer's productivity constraint.

# 3 | EVIDENCE ON THE VALUE PRIORITIES ASSOCIATED WITH DIFFERENT OWNERSHIP MODELS

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Before proceeding to the empirical analysis, it is helpful to review key aspects of how the ownership models of Hansmann's typology give rise to distinctive employment and human resource practices. The two investor-owned models, the PLC and the non-family private limited company, provide benchmarks against which the others can be compared because they have been the focus of much of the recent debate and are the most strongly associated in theory with prioritizing extrinsic rewards.

# 3.1 | The public limited company

In the conventional shareholder firm, where the key productive assets are tradeable, and there is a market for corporate control, it is difficult for managers to commit to non-financial goals in a manner that is credible to their employees. Firms may adopt the public limited company (PLC) format to raise finance, and spread the risks of ownership (Richter & Schroeder, 2008), but as Shleifer and Summers (1988) argue, this militates against their building implicit contracts with their employees as these may not be transferrable to new owners. This is illustrated in the case studies of private equity buy-outs by Appelbaum et al. (2013). Pendleton and Gospel (2005) echo this view in relation to Britain, and confirm the priority of shareholder value over employment levels in take-overs, mergers and acquisitions. Equity funding is also negatively associated with job tenure, training, and positively associated with pay dispersion, a potential indicator of greater emphasis on financial incentives (Black et al., 2007).

Yet, this view of the PLC is something of a limiting case. Growing ownership concentration in Britain has caused many large investors to become 'locked in', giving management some leeway for key human resource and employment relations decisions (Pendleton & Gospel, 2005). Conway et al. (2008) found that shareholder pressures were not necessarily a barrier to the adoption of high-performance work systems despite the substantial investments needed for supporting policies. Additionally, recent legal changes have strengthened some employee interests, such as the 2006 and subsequent legislation protecting formal terms and conditions of employment on the transfer of undertakings (ACAS, 2016), and extending directors' responsibilities to take account of the interests of employees under the 2006 Companies Act (BEIS, 2016: 37). Nevertheless, these tend to focus on codified benefits, and so offer only limited support to implicit contracts. Thus, overall, one would expect the PLC to prioritize extrinsic, financial, rewards when seeking to attract employees, but the theoretical model should be seen as a limiting case.

### 3.2 | Private and family-owned firms

The private limited company offers an alternative model to the PLC. Its assets are privately owned but not traded. Most such firms are either privately owned or family owned and managed. Concerning the former, although there has been extensive debate as to whether their employment and HR practices are harsher than those of PLCs, as a result of lesser public visibility, and greater pressure for financial returns, recent work suggests their practices are somewhat similar (Bacon

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et al., 2019; Gospel et al., 2014). In contrast, in family firms, although the attribution of formal rights is clear, the multiple social ties that characterize many of them exert an indirect influence over how they are exercised. Family ties provide an alternative, informal, mechanism for internal governance often emphasizing inter-generational survival, which can spill over to other stakeholders (Lubatkin et al., 2005; Nicholson, 2008). Longevity favours social ties with employees, and the absence of stock market pressures means that the implicit contracts between them are less likely to be disrupted. Indeed, Mullins and Schoar (2016) reported that founders and CEOs of firms with greater family involvement displayed a stronger stakeholder focus. Family firms may be better able to provide their workers with long-term implicit contracts and develop trust relations (Mueller & Philippon, 2006; Sraer & Thesmar, 2007). Thus, compared with other investor-owned firms, family firms are likely to benefit from closer alignment with employee goals, and hence display stronger work satisfaction and commitment.

## 3.3 | Co-ownership

Co-ownership embraces mostly professional service partnerships and producer and consumer cooperatives. The key assets are owned by all or a sub-set of the stakeholders (Hansmann, 1996). When members leave or retire, they may sell their stake to other members, but in general ownership rights are not tradable. Co-ownership may relate to joint reputational assets, as is common in professional partnerships (Levin & Tadelis, 2005; Morrison & Wilhelm, 2004), or to physical assets, as in the producer cooperatives (Craig & Pencavel, 1993).

Co-ownership modifies the principal–agent relationship and creates space for consideration of a wider mix of goals compared with the conventional firm. In professional partnerships, typically the partners work as a collective of owner-managers making key decisions often by majority voting (Hansmann, 1996). In producer cooperatives, workers determine objectives, and managers are their agents (Ben-Ner et al., 1993), and compared with conventional firms, they have been found to balance a wider range of goals beyond income, to include employment and working time (Craig & Pencavel, 1993). In Europe, consumer cooperatives provide a common variant of co-ownership and are likely to include employees among their stakeholders by virtue of their wider social objectives (Hansmann, 1996). In Britain, although aspiring to operate as a form of social enterprise, combining commercial effectiveness and wider social and employee well-being, the enquiry set up by Tony Blair's government found many of them to have been falling short on both fronts for several decades (Cooperative Commission, 2001).

Thus, in principle, co-ownership enables members to determine organizational priorities, and the common practice of majority decisions means that they will reflect the motivational preferences of the median member. Such decision processes also work best when there is occupational homogeneity (Hansmann, 1990). Reviewing studies of professional service partnerships, Van Nordenflycht (2010) argues that competence and fair dealing combined with peer monitoring reinforce such values, and are critical to their reputational viability. Socialization into partnership values is stressed during the entry and promotion phases (Landers et al., 1996), and the same processes may cause the benefits of their values spill over to workers in noncore occupations (Smets et al., 2013). Thus, co-ownership is likely to be associated with hedonic motivation for partnerships and producer cooperatives, which may be traded against extrinsic rewards.

# 3.4 | Public purpose and charitable organizations

Public purpose, non-profit, organizations, such as charities, play an increasing part within the modern economy, often taking on government-funded projects, for example, care of vulnerable citizens (Antunes, 2012). Control over their key assets, material and reputational, is predetermined by fiduciary arrangements in their articles of association (Hansmann, 1996). Under current UK legislation, they have an obligation to serve the 'public benefit', which is underpinned by making their residual claimants their stated beneficiaries. Although comparisons are limited, a series of studies of for-profit and non-profit nursing homes found that, consistent with the idea of prosocial motivation, the latter were more likely to delegate to their employees, and provided better quality for care dimensions that are hard to monitor (Ben-Ner et al., 2015, 2018). As the latter organizations' public purpose is fixed, their management is in effect committed to specific prosocial goals, enabling it to draw on 'donated labour' (Francois, 2003; Hansmann, 1996). Thus, under this model, one may anticipate that higher levels of work satisfaction, and especially, prosocial commitment will be combined with lesser compensatory pay.

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# 3.5 | Public ownership

Public service providers belong to a class of activities providing collective goods, which can form the basis for their 'mission', enabling them to attract employees who value that mission (Besley & Ghatak, 2005). Democratically elected governments alternate and periodically redefine their public service mission, and they also come under pressure from voters to provide more for less. This can create tensions for 'principled-agents' who joined with one conception of public service only to find their view at odds with a new government's policy. Public services differ greatly in the collective goods they provide, and this may affect the nature of shared missions, which may, in turn, affect employee perceptions of intrinsic benefits. When the collective good is more focused on regulatory and bureaucratic activities, it may be more amenable to top-down redefinition of mission than when focused on the needs of individual citizens. The activities differ also in terms of the human capital assets contributed by employees. Aoki (2010) argues the latter give employees stronger influence over work and organizational goals. In view of the subsequent analysis, their greater human capital assets and expert knowledge in education and healthcare give them more leverage to define and sustain their own conceptions of public service goals than in public administration. For both reasons then, this study divides the public sector into four broad categories: education, health and social care, public administration and government-owned industries.

All four categories provide examples of recent goal conflicts, including the debate in schools over the focus on tasks related to teaching for qualifications versus those fostering a deeper subject understanding (Sellgren, 2017); in hospitals over managerial efficiency and local provision (Bloom et al., 2010); in prisons over monitoring versus rehabilitation (Koumenta, 2010); and the transition from monopoly public service to deregulated business in the government-owned industries. Where employees' skills give them greater influence, and the collective good is more citizen, and less regulatory-oriented, one can expect a closer alignment with their intrinsic work values, and reduced levels of compensatory pay.

The growth of hybrid forms followed the government's Efficiency Unit (1988) report. Many of these sought more streamlined principal-agent relationships, such as government

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agencies and quasi autonomous non-government bodies (Quangos). These have considerable management autonomy, but remain responsible to government departments. However, practice has proved uneven, and in 2010, the then government reviewed their transparency, accountability and value for money. In many of these hybrid bodies, a 'culture of targets' had developed which many front-line employees felt conflicted with their primary objective of providing public services.

# 4 | EMPIRICAL APPROACH AND DATA

If this paper's argument is correct, certain features relating to the distinctive bundles of intrinsic and extrinsic benefits associated with ownership models should hold. The pattern of differences between them, as reflected in their respective coefficients, should stable over time. Models offering high levels of intrinsic benefits should be characterized by reduced compensatory pay, and this pattern should be robust to potential composition and selection effects. Some of the key relationships to be explored in the data can be visualized as below:

$$s_i = \alpha_s + \beta_{sj}\delta_j + controls + \varepsilon_s \tag{3}$$

and

$$w_{ci} = \alpha_{wc} + \beta_{wcj}\delta_j + controls + \varepsilon_{wc}$$
(4)

where  $s_i$  and  $w_{ci}$ , respectively, denote workers' intrinsic benefits and compensatory pay, and the  $\delta_j$  are dummy variables representing the different ownership models, and  $\alpha$  and  $\varepsilon$  are the constant and the error terms. The distinctive bundles associated with the ownership models are represented by their respective beta coefficients ( $\beta_j$ ), and it is anticipated that those relating to greater intrinsic benefits should be inversely related to compensatory pay. An additional question concerns the ability of firms to position themselves along the aggregate supply curve, as suggested by Borjas. If ownership models enable them to locate on a particular segment, then an apparent overall inverse relationship between intrinsic and extrinsic benefits should disappear once we control for ownership model. This can be examined adapting an approach used by Bryson et al. (2012) to explore directly the relationship between compensatory pay and intrinsic benefits, and seeing how far ownership models affect this. If ownership is highly influential, then one would expect to find that an inverse relationship at the aggregate level, with no controls, would break down once account is taken of ownership. This can be visualized as follows:

$$s_i = \alpha_s + \beta_{wc} w_{ci} + \beta_{sj} \delta_j + \beta_x \delta_j w_{ci} + \varepsilon_s$$
(5)

where  $\beta_{wc}$  represents the relationship with compensatory pay, and  $\beta_{sj}$  and  $\beta_x$ , respectively, the effects of the simple controls for ownership models and their interactions with compensatory pay.

Finally, the paper explores the impact on employee trust in their employers as a result of measures adopted to deal with the shock generated by the crash. This compares the experience of workers before and after the crash, and its potential effect on the implicit contracts in their workplaces.

# 4.1 | Measurement of key variables and sample

For ownership models, WERS interviewers ask managers to identify the 'formal status of the workplace, or the organization of which it is part' from a list of 12 cases, comprising the main legally recognized patterns. In line with the previous discussion, private limited companies were divided into those which were more than 50% family owned, and the public sector was divided into four categories using the Standard Industrial Classification, public education, public health and social care, public administration, comprising the administrative and security activities of central and local government, and government-owned industries. Some smaller intermediate public/private categories were grouped together as 'hybrids'.<sup>6</sup> This resulted in 13 ownership categories, including PLCs (Table 1).

For subjective well-being indicators, the WERS employee questionnaire includes questions about their work satisfaction work experience. These were designed in relation to widely used measurement scales, and have been used by a number of other researchers (van Wanrooy et al., 2013). The survey questions used are shown in Box 1. They comprise work satisfaction, and organizational commitment, as well as employee trust in management. The work satisfaction questions use a reduced version of the scales set out in Warr et al. (1979). Those on commitment take key dimensions of Meyer and Allen's (1997) scales, mentioned earlier, and reflect collective dimensions of intrinsic benefits, notably employees' sense that their work involves a sense of shared purpose with their co-workers and employers. Perceived deviations from good faith behaviour by management will affect employees' trust, and here the questions relate to their views of management's dealings with them. The questions involve five-point Likert scales. The individual questions were condensed into indices using factor analysis for the full sample for 2004 and 2011.<sup>7</sup> The Cronbach alpha coefficients in the box show a high degree of concordance among the listed questions. WERS also includes a question on pay satisfaction, omitted from the measure of work satisfaction above.

For direct measures of work system disamenities, notably low task autonomy, it was decided to use information provided by the management respondents on the task environment of employees in the largest non-managerial occupational group in the workplace.<sup>8</sup> This restriction was to avoid problems of common method variance, which can arise when one uses information from the same respondents on the dependent and independent variables, in this case work satisfaction and task autonomy. It comes at the cost of a smaller sample, but provides a closer alignment between employees' experience and their task autonomy (Tables 6 and 8).

<sup>&</sup>lt;sup>6</sup> This concerned public service agencies, other non-trading public corporations and QUANGOs.

<sup>&</sup>lt;sup>7</sup> Factor scores have a mean of zero and a standard deviation of one, so that roughly two thirds of observations lie between plus and minus one.

<sup>&</sup>lt;sup>8</sup> The management replies on work system attributes were aggregated into two categories of low-, and high-discretion work following a method used by Lorenz and Valeyre (2005) to characterise work systems using multiple correspondence analysis.

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Private Itd company (family) 45       57       8       72       29       81       36       109         Co-ownership       37       41       4       70       19       35       4       44         Partnership/self-proprietor       37       41       4       7       74       42       44         Partnership/self-proprietor       36       38       78       66       12       74       42       44         Unitionally society       31       15       66       67       4       65       78         Public benefit       31       15       66       67       4       65       78         Company lud by guarante       70       82       17       25       23       86       78         Company lud by guarante       70       82       17       25       23       86       78         Company lud by guarante       70       82       17       25       36       37       86         Company lud by guarante       70       82       23       86       13       1       66         Company lud by guarante       70       82       53       13       1       67       64	Private ltd company (other)	20	30	31	67	36	74	52	16	1291	161
Co-ownership       37       41       4       70       19       59       55       4       440         Partnership/self-proprietor       37       41       4       70       19       59       55       4       440         Co-operative, mutual,       36       38       78       66       12       74       42       1       44         Ublic benefit       33       15       66       67       4       65       88       8       789         Vultic benefit       33       15       66       67       4       65       131       1       64         Trust/charity       33       15       66       67       23       95       131       1       64         Company lid by guarante       70       92       23       95       131       1       64         Company lid by guarante       70       95       131       1       64       64         Company lid by guarante       70       92       53       103       2       95       95       96       96         Inon-profit       16       15       15       16       16       16       166       166	Private ltd company (family	) 48	57	8	72	29	81	39	16	1093	163
Partnership/self-proprietor         37         41         40         50         50         51         41         44           Co-operative, mutual, friendly society         36         38         78         66         12         74         42         1         44           Ublic benefit         31         15         66         67         4         65         88         8         789           Public benefit         31         15         66         67         4         65         789         789           Unon-profit)         31         15         66         67         23         95         131         1         64           (non-profit)         2         18         80         51         15         16         64           (non-profit)         2         18         16         16         16         64         64           (non-profit)         2         18         16         16         16         64         64           (non-profit)         2         18         16         16         16         64         64         64         64         64         64         64         64         64         64	Co-ownership										
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Public benefit       33       15       66       67       4       65       88       8       789         Turst/charity       33       15       66       67       4       65       131       1       64         Company lid by guarantee       70       82       13       5       131       1       64         Company lid by guarantee       70       82       16       25       103       2       99         Established by Royal Charter 89       0       99       66       52       53       103       2       99         Established by Royal Charter 89       0       99       66       52       53       103       2       99         Ublic hold transter 80       0       99       66       7       86       16       7       92         Ublic healthcare       11       18       83       46       6       89       66       7       76         Ublic healthcare       11       18       83       46       67       7       76       76         Ublic healthcare       11       83       46       6       7       7       76       76       76	Co-operative, mutual, friendly society	36	38	78	66	12	74	42	1	4	6
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Established by Royal Charter $\$0$ 0       90       66       52       53       103       2       99         Public hybrids       22       18       80       51       15       86       138       6       646         Classical public       23       36       82       54       11       82       64       70       925         Ublic education       25       36       82       54       11       82       64       70       925         Ublic healthcare       11       18       83       46       6       89       169       70       70       70         Public healthcare       11       18       83       46       6       89       169       70       70       70         Public healthcare       11       18       83       46       75       56       4       70       746         Oto wored industry       3       25       85       16       75       76 </td <td>Company ltd by guarantee (non-profit)</td> <td>70</td> <td>82</td> <td>17</td> <td>25</td> <td>23</td> <td>95</td> <td>131</td> <td>1</td> <td>64</td> <td>7</td>	Company ltd by guarantee (non-profit)	70	82	17	25	23	95	131	1	64	7
Public hybrids         22         18         80         51         15         86         138         6         646           Classical public         Classical public         25         36         82         54         11         82         64         70         925           Public bealthcare         11         18         83         46         6         89         169         6         780           Public healthcare         11         18         83         46         6         89         169         6         780           Public healthcare         11         18         83         46         6         89         169         780         780           Public healthcare         11         18         83         46         6         75         76         780           Public Admin         9         8         9         78         78         76         76         780           Gov owned industry         3         25         85         16         75         76         76           All categories         23         28         86         16         75         56         4         75	Established by Royal Charte	er 89	0	66	<b>66</b>	52	53	103	2	66	12
Classical publicPublic education253682541182647925Public healthcare111883466891696780Public Admin9897584901077746Gov owned industry32585861675564350All categories23284868287658100821Notes: Sample: Panel, 2011, data for establishments using employment weights (pqempwtnr_apr13) for cols. 1-5, and 7 and 8. Col. 6; financial performance sample weight10 unweighted. Col. 5: 'routine occumations' comprise SOC codes 4-9.	Public hybrids	22	18	80	51	15	86	138	6	646	77
Public education         25         36         82         54         11         82         64         7         925           Public healthcare         11         18         83         46         6         89         169         6         780           Public healthcare         11         18         83         46         6         89         169         6         780           Public Admin         9         8         97         58         4         90         107         7         746           Gov owned industry         3         25         85         16         75         56         4         350           All categories         23         28         48         68         28         76         56         4         350           Notes: Sample: Panel, 2011, data for establishments using employment weights (pqempwtrr_apr13) for cols. 1-5, and 7 and 8. Col. 6; financial performance sample weight 0. Unweighted. Col. 5; frontine occurations' comprise SOC codes 4.9.	Classical public										
Public healthcare         11         18         83         46         6         89         169         6         780           Public Admin         9         8         97         58         4         90         107         7         746           Gov owned industry         3         25         85         86         16         75         56         4         350           All categories         23         28         48         68         28         76         746         350           Notes: Sample: Panel, 2011, data for establishments using employment weights (pqempwtnr_apr13) for cols. 1-5, and 7 and 8. Col. 6; financial performance sample weight 10 unweighted. Col. 5; 'routine occumations' comprise SOC codes 4-9.	Public education	25	36	82	54	11	82	64	7	925	72
Public Admin         9         8         97         58         4         90         107         7         745           Gov owned industry         3         25         85         86         16         75         56         4         350           All categories         23         28         48         68         28         76         56         4         350           Notes: Sample: Panel, 2011, data for establishments using employment weights (pqempwtnr_apr13) for cols. 1–5, and 7 and 8. Col. 6; financial performance sample weight 10 unweighted. Col. 5; 'routine occupations' comprise SOC codes 4-9.	Public healthcare	11	18	83	46	6	89	169	6	780	06
Gov owned industry         3         25         85         86         16         75         56         4         350           All categories         23         28         48         68         28         76         58         100         8821           Notes: Sample: Panel, 2011, data for establishments using employment weights (pqempwtnr_apr13) for cols. 1–5, and 7 and 8. Col. 6; financial performance sample weight 10 unweighted. Col. 5: 'routine occupations' comprise SOC codes 4-9.	Public Admin	6	8	67	58	4	90	107	7	746	63
All categories         23         28         48         68         28         76         58         100         8821           Notes: Sample: Panel, 2011, data for establishments using employment weights (pqempwtnr_apr13) for cols. 1–5, and 7 and 8. Col. 6; financial performance sample weight 10 unweighted. Col. 5: 'routine occupations' comprise SOC codes 4-9.	Gov owned industry	3	25	85	86	16	75	56	4	350	32
Notes: Sample: Panel, 2011, data for establishments using employment weights (pqempwtnr_apr13) for cols. 1–5, and 7 and 8. Col. 6; financial performance sample weigh 10 unweighted. Col. 5; 'routine occupations' comprise SOC codes 4-9.	All categories	23	28	48	68	28	76	58	100	8821	989
	<i>Notes</i> : Sample: Panel, 2011, data fi 10 unweighted. Col. 5: 'routine oc	or establishme cupations' con	nts using employ aprise SOC code	yment weights s 4-9.	(pqempwtnr_a	pr13) for cols. 1-	-5, and 7 and 8.	Col. 6; financi	al performance samp	ole weights (fpq	wtnr), cols. 9 and

TABLE 1 Employment characteristics of panel workplaces by ownership model 2011

LSE

# Box 1. Summary of the WERS questions on employee engagement/alienation

LSE

#### Satisfaction

How satisfied with the

- sense of achievement from work
- scope for using your own initiative
- amount of influence you have over job
- training you receive?
- opportunity to develop your skills in your job
- your job security?
- the work itself?

Cronbach alpha = 0.8273

Note: pay satisfaction omitted.

#### Commitment

- I share many of the values of my organization
- I feel loyal to my organization
- I am proud to tell people who I work for

```
Cronbach alpha = 0.8491
```

Trust

Managers here:

- can be relied upon to keep to their promises
- are sincere in attempting to understand employees' views
- deal with employees honestly
- understand about employees' responsibilities outside the workplace
- encourage people to develop their skills
- treat employees fairly

```
Cronbach alpha = 0.9237
```

Compensatory pay

Based on the difference between actual employee reported weekly earnings and their estimated labour market earnings based on their skills, experience occupation, gender and usual weekly hours.

# 4.1.1 WERS measures of employee well-being

Compensatory pay is calculated from the information employee respondents provide on their usual weekly earnings and hours, as well as details of skills and experience. The latter enable an approximation of  $\bar{w}$  (see Equation 2) by estimating the pay they could expect in alternative jobs with average levels of disamenity. Earnings before deductions are provided across 14 pay

ranges. The lower and upper bounds approximate to p05 and p95 of the all-employee distribution of weekly earnings in the national Annual Survey of Earnings and Hours (ASHE). To reduce measurement error, adjustments were made for those outside the recorded pay ranges.<sup>9</sup> Potential earnings,  $\bar{w}$ , were estimated by computing a 'Mincer'-style earnings function (named after Mincer, 1974), regressing log weekly earnings on respondents' highest qualification, labour market experience, experience squared, current job tenure, one-digit occupation and gender, with usual weekly hours included to allow for part-time working. The regression explained 64% of the overall variation in earnings. The regression residuals provide the estimates of compensatory pay: a negative residual ( $w_i - \bar{w}$ ) signifying pay forgone to avoid the disamenity. As with all residual estimations, one should be mindful of other possible factors, which depress actual earnings, such as monopsony.

The sample used is drawn from the British Workplace Employment Relations Surveys, WERS, for 2004 and 2011.<sup>10</sup> This is a nationally representative survey comprising 2700 workplaces in 2011 with five or more employees, 989 of which form a panel with 2004. It was decided to use panel establishments to work with the same set of establishments at both dates, for a better indication of stability over time, and to minimize problems arising from churn among workplaces. These can affect the measurement of work satisfaction as recently formed 'joiner' workplaces tend to have higher satisfaction than 'leaver' ones (van Wanrooy et al., 2013). To deal with the smaller numbers in the panel survey, many of the analyses used pooled data for both years. WERS includes a questionnaire survey to random samples of individual employees with responses from about 730 of the panel establishments. The management surveys provide details of establishments, and the employee surveys, information on well-being, employee characteristics and pay.

The WERS sample of establishments is stratified, so that weights are necessary. The employee survey is based on a random sample of a specified number of employees in the workplace, all employees in small workplaces and 20 in larger ones. Employee weights are based on those of the establishment adjusted for a differential response by gender.<sup>11</sup> Different weights were used for the effects of capital intensity as this was derived from the 2004 Financial Performance Questionnaire (Table 7). For the effects of the crash, Table 10 uses mean values for well-being in the panel establishments and establishment weights. As most of the background information in Table 1 relates to shares of employees covered, establishments were weighted according to their employment.

To gauge the strength of implicit contracts supporting employees' preferred mix of intrinsic and extrinsic benefits, the paper examines the effect of the financial crash, which van Wanrooy et al. (2013) show was associated with extensive changes in terms and conditions of employment as employers sought to adapt to the crisis. Two methods were used. First, comparison of current employees hired before and after the crash, taking them, respectively, as a 'treatment' and a 'control' group. WERS asked respondents whether they had joined their current workplace after the recession. 'Propensity score matching' (PSM) was used to identify workers in both categories who were observationally equivalent in terms of their labour market characteristics based on a

<sup>&</sup>lt;sup>9</sup> The lower bound was roughly 50% below p10 weekly earnings for all employees and the upper bound roughly 20% above p90 in both years. Employees below the lower bound were divided up by age, and the relevant National Minimum Wage rates applied. Those above the upper bound were divided up by one-digit occupation and gender, and the relevant full time p90 earnings were applied.

<sup>&</sup>lt;sup>10</sup> Full details are provided at https://www.gov.uk/government/publications/the-2011-workplace-employment-relationsstudy-wers

<sup>&</sup>lt;sup>11</sup> Using this knowledge, panel establishment employee weights for 2011 were mapped onto employees in 2004.

logistic regression (Bryson et al., 2017). The relatively small numbers in the control group limit the aggregate breakdown to that shown in Table 9.

LSE

Second, to investigate the sense of breach by ownership model, mean values from the employee responses for the panel workplaces were compared for 2004 and 2011. WERS asked whether their work had increased, been reorganized, or they have been moved to another job as a result of the recession. The share of employees thus affected in each workplace was compared with corresponding changes in the mean values of the well-being measures and trust. To gauge the effect of perceived employer commitments to respect intrinsic benefits, workplaces were categorized according to whether their ownership model involved 'weak' or 'strong' commitments. The former comprised PLCs and non-family private firms. As the panel comprises workplaces, not individual employees, one has to treat the employee survey as providing samples from the same workplace population at both dates. To improve their consistency, recent hires were excluded. Also excluded were small workplaces with three or less respondents because the survey weights are much greater for these establishments, and magnify any statistical error from small numbers of respondents.

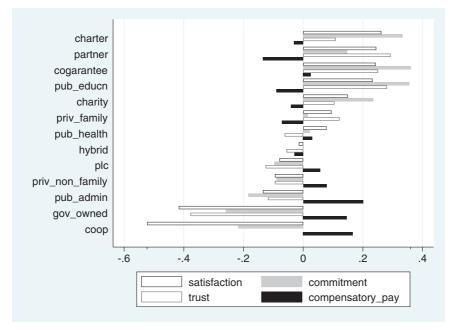
### 5 | ANALYSIS AND RESULTS

An overview of selected workplace characteristics is provided in Table 1. The largest employment shares in 2011 are in PLCs and non-family private limited companies, respectively, accounting for about 24% and 16% of employment, and public services, which account for a further 24% (col. 8). The other ownership models represent about a third of employment, but for some, such as cooperatives, sample numbers are small. The majority of PLCs were listed, and they had more complex structures than the other models, being more likely to be subsidiaries and foreign-owned. They were also more intensive users of payment-by-results (PBR) for non-managerial employees (col. 5). Co-ownerships are almost entirely UK-owned, are somewhat smaller than private firms, and a high percentage of partnerships are single establishment (cols. 1 and 2). Investor-owned firms are present across a wide range of sectors, whereas some other models are more sectorally concentrated: partnerships in business services and health care; cooperatives and mutuals in distribution, and financial services; and charities in education, health and community services. Royal charter organizations include mostly professional associations and educational institutions. The remaining nationalized industries in 2011 were concentrated in Transport and Communication. In the classical public sector, education, health, administration and government-owned industries are subject to quite different arrangements, the latter especially employing considerably greater proportions of employees in routine occupations (col. 4). Overall, ownership status shows great stability between 2004 and 2011. The big switches in the WERS panel occurred between PLCs and private limited companies, where about 6% of workplaces overall moved in either direction. A modest number of partnerships became PLCs, and vice versa.

## 5.1 | Ownership models and employee well-being

An overview of well-being scores and compensatory pay by ownership model is provided in Figure 1, and with more detail in Table 2, which shows the mean values on which Figure 1 is based, together with their 95% confidence intervals. The models are ranked by their level of work





**FIGURE 1** Mean values of well-being measures and compensatory pay by ownership model [Colour figure can be viewed at wileyonlinelibrary.com]

satisfaction (factor scores). Ownership models with mean scores that are statistically significant above or below zero, at 95%, are indicated by the symbols '+', '-', with '0' for those in between.

Four main observations emerge from this first overview. First, there is a clear pattern of distinctive bundles of extrinsic and intrinsic benefits among the major ownership models, which corresponds to what one would expect from the evidence in the review section. Employees in PLCs and private non-family firms lie somewhat below the average for the well-being measures, and receive compensatory pay. Their large employment share means they will necessarily lie close to the overall mean. Family firms score more highly than the previous two on both well-being measures, and as anticipated, have lesser compensatory earnings. Among co-ownerships, partnerships likewise score highly on work satisfaction, as one might expect from their professional and associate professional membership, and pay a price in lower compensatory earnings. Charities and charter-based organizations score particularly highly on commitment, and also experience reduced compensatory earnings. A similar pattern applies for public education. Although located close to the overall mean for well-being, public healthcare, nevertheless, scores above PLCs and private non-family firms. The exceptions will be discussed shortly. Second, there is a significant degree of stability over time in the rank orders of models for satisfaction, commitment and compensatory pay, as shown by the high rank correlations between 2004 and 2011 (0.835: Table 3, col. 1). Third, there is a clear inverse relationship between the scores of the different models for compensatory pay on the one hand and work satisfaction and commitment on the other, shown by their negative rank correlations of between -0.75 and -0.84, all significant at the 1% level (Table 3, col. 8). And finally, Figure 2 presents the overall relationship between compensatory pay and increasing disamenity using the conventional representation of the aggregate supply curve from CWD, but focusing on ownership models rather than individual firms. Plotting the mean values of

	Satisfaction	5	Commitment	C	Trust	C	Compensatory pay*	CI	Panel etabs
	1	2	3	4	S	9	7	×	6
Established by Royal Charter	0.262	+	0.333	+	0.109	0	-0.041	0	12
Partnership/self-proprietor	0.245	+	0.147	+	0.293	+	-0.141	T	61
Company ltd by guarantee (non-profit)	0.243	+	0.360	+	0.251	+	0.010	0	7
Public education	0.233	+	0.356	+	0.281	+	-0.093	T	72
Trust/charity	0.150	+	0.235	+	0.105	+	-0.047	I	69
Private ltd company (family)	0.095	+	0.015	0	0.122	+	-0.071	T	163
Public healthcare	0.079	0	0.022	0	-0.062	0	0.028	0	06
Public hybrids	-0.015	0	0.001	0	-0.056	0	-0.031	0	77
Public limited company plc	-0.080	I	-0.096	I	-0.126	I	0.049	+	173
Private ltd company (other)	-0.095	I	-0.090	I	-0.095	I	0.084	+	161
Public Admin	-0.135	I	-0.184	I	-0.118	I	0.199	+	63
Gov owned industry	-0.417	T	-0.259	I	-0.378	I	0.160	+	32
Co-operative, mutual, friendly society	-0.523	I	-0.218	0	-0.000	0	0.180	+	6
7	14,601		14,772		14,610		13,420		989

Ownership model mean values for well-being indicators (sorted by satisfaction) TABLE 2 \*Compensatory pay: negative values reflect a negative residual implying pay forgone. Sample: pooled panel, individual employee weights.

B

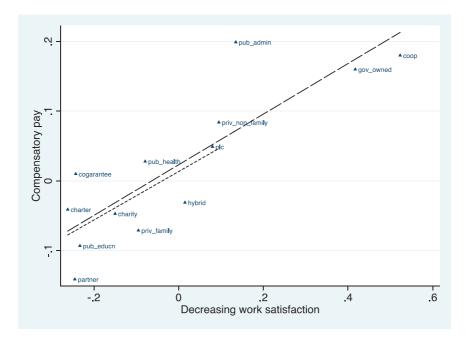
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#### TABLE 3 Spearman rank correlations for Table 2

	Comparison of for 2004–2011	f mean		of model means a	cross m	easures			
	1	2	3	4	5	6	7	8	9
								Compensatory	
	2004: 2011		Satisfaction	Commitment		Trust		pay	
Satisfaction	0.835	****	1	0.923	****	0.791	****	-0.841	****
Commitment	0.896	****		1		0.791	****	-0.753	****
Trust	0.685	****				1		-0.813	****
Compensatory pay	0.632	**						1	

N = 13 ownership models. Sample: see Table 2. Rank correlation of satisfaction and commitment at 0.923 based on Table 2,4, cols. 1 and 3. Raw means for col. 1 available on request. Significance levels: 1%, \*\*\*\*, 2%; \*\*\*\*, 5%; \*\*\*, 10%; \*, 20%, +; not significant, -.



**FIGURE 2** Compensatory pay and decreasing work satisfaction [Colour figure can be viewed at wileyonlinelibrary.com]

compensatory pay and increasing dissatisfaction from Table 2, it shows how the ownership models occupy distinctive segments along that curve.

The results so far also highlight three notable surprises, although their position does not affect the overall relationship: the regression lines fitted with and without these observations have very similar slopes (Figure 2). From the review of Hansmann's typology, one would expect workers in cooperatives, government-owned firms and public administration to have forgone compensatory pay in favour of greater well-being. The results for cooperatives may reflect small sample numbers, but they also likely reflect problems affecting that sector, notably a failing 'social enterprise' model evoked previously. Government-owned firms, although remaining under public ownership, were concentrated in sectors facing deregulation, and in the case of the postal service, subsequent privatization, completed in 2013. Public Administration is the most puzzling. This may be due to

its changing 'mission', particularly acute in this part of the public sector, owing to the spread of New Public Management since the 1980s (Barzelay, 2001). Work intensification and reduced satisfaction and commitment had already been observed in the 1998 WERS, and underlined again for 2011 (Konzelmann et al., 2006; van Wanrooy et al., 2013). In view of the long duration of this process, one might have expected pressures of recruitment and retention to have resulted in increased compensatory pay, which would be consistent with its outlier position in Figure 2. However, given the mechanisms of public sector pay determination, it is not clear that the associated budgetary restrictions would have enabled such adjustments, so the puzzle remains.

# 5.2 | Collective bargaining coverage

Collective bargaining can act as a constraint on management actions enabling employees to monitor its decisions and exert collective pressure to enforce both formal and informal agreements (Doucouliagos et al., 2017). There has also been an extensive debate about its apparent negative relationship with worker satisfaction, whether dissatisfied workers are more likely to join unions, whether unions mobilize dissatisfaction in order to bargain effectively or whether more aware workers are more critical (e.g. Borjas, 1979; Green & Heywood, 2015; Bessa et al., 2020; Laroche, 2016). Whatever the direction of causation, it could be argued that high coverage enables unions to bargain for higher pay to compensate for less satisfying work. Given the differences in bargaining coverage (see Table 1, col. 3), it is possible that the effect of ownership would disappear once they are taken into account.

This is examined in Table 4. Its impact could be manifest in two ways: as a factor exerting a uniform effect across all ownership models, such that composition effects could explain much of the apparent effect of ownership models. This would show by including coverage as a simple control variable. Alternatively, its influence could vary within each model, for example, differently within PLCs than in charities. This can be gauged by interacting coverage with ownership models. Table 4 shows the main coefficients for each model as progressively greater account is taken of the extent of bargaining coverage. Taking satisfaction, column 1 shows the main effects for the base case with no controls for bargaining coverage. The coefficients mirror the pattern shown in Table 2, except that this time they show divergences from PLCs, the reference category. Bargaining coverage is included as a simple control in column 3 and as an interaction in column 5. The main effects show a high degree of correspondence even as controls are increased. Although coverage is shown to be associated with well-being in Table 4, the high rank correlations (Table 5, columns 2 and 3) confirm that the 'league table' of ownership models is not greatly disturbed by inclusion of controls for coverage. The same holds true for the negative rank correlation with the coefficients on compensatory pay when that is subject to the inclusion of controls (cols. 4 and 5). While the coefficients on the interactions suggest that the effect of coverage does vary between models, it is not enough to undermine the robust pattern of well-being main effects by ownership.<sup>12</sup> Thus, the overall picture suggests that whatever the statistical effect of collective bargaining on

<sup>&</sup>lt;sup>12</sup> The difference between the high rank correlations between the coefficients and the low value of the variance explained  $(r^2)$  in the regressions may come about because, according to CWD, the firm's decision on pay is determined by the relative valuation of compensatory pay and job amenity of the marginal employee. This may result in high levels of variance in the well-being measures, and a low  $r^2$ .

Ownershin model: PLC	Satisfaction	tion					Commitment	nent					Compensatory pay	tory pay				
reference case	Base		Control		Interaction	ion	Base		Control		Interaction	u	Base		Control	đ	Interaction	u
Column	1	2	3	4	2	6	7	8	6	10	11	12	13 1	14 1	15	16 17		18
Classical private																		
Private ltd company (other)	-0.004	I	-0.014	I	-0.103	+	0.018	I	0.010	I	-0.049	I	0.028 -	1	0.030	I	0.042	1
Private ltd company (family)	0.185	**	0.092	+	0.029	I	0.122	**	0.057	I	0.041	I	-0.129 *	****	• 611.0	**	-0.140	**
Co-ownership																		
Partnership/self-proprietor	0.336	** **	0.248	** **	0.166	*	0.258	** **	0.196	***	0.169	**	-0.201 *	****	-0.192		-0.216	***
Co-operative, mutual, friendly society	-0.405	****	-0.474	***	-0.632	* **	-0.071	I	-0.117	+	-0.220	* **	0.126 *	* *	0.133	**	0.148	*
Public benefit																		
Trust/charity	0.234	****	0.263	** **	0.128	+	0.336	** **	0.355	** **	0.245	****	-0.104 *		+ 01.07	*	-0.213	** **
Company ltd by guarantee (non-profit)	0.355	***	0.283	***	0.216	*	0.498	* * *	0.447	**	0.443	* **	-0.048		-0.041	1	-0.091	I
Established by Royal Charter	0.377	* *	0.494	***	0.113	I	0.475	* * *	0.557	***	0.295	I	-0.100	1	. III.0-	1	-0.243	I
Public hybrids	0.073	I	0.163	* **	0.180	I	0.104	+	0.167	***	0.418	****	-0.087 +	+	* 960.0-	*	-0.313	××
Classical Public																		
Public education	0.329	*****	0.425	** **	0.224	***	0.468	****	0.536	** **	0.515	****	-0.156 *	****	-0.165		-0.207	*
Public healthcare	0.185	×	0.288	** **	-0.070	I	0.146	* *	0.218	** **	-0.000	I	-0.029 -	I	-0.039	1	-0.004	I
Public Admin	-0.038	I	0.096	+	-0.450	I	-0.068	I	0.026	I	-0.170	I	0.142 *	**	0.128	**	-0.148	I
Gov owned industry	-0.339	***	-0.212	** **	0.010	I	-0.169	**	-0.079	I	0.479	***	0.103 *	**	* 160.0	*	0.201	** **
% covered by collective agt			-0.250	** **	-0.409	***			-0.176	** **	-0.246	* **			0.025	I	-0.008	I
Private ltd company (other)					0.205	*					0.141	I				1	-0.038	I
Private ltd company (family)					0.034	I					-0.160	I					0.140	+
Partnership/self-proprietor					0.285	+					0.011	I					0.155	I

TABLE 4 Ownership models and well-being controlling for bargaining coverage

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<table-container>Matrix formation and the field of the fi</table-container>	Ownershin model · PLC	Satisfaction			Commitment			Compensatory pay	,	
I         2         3         4         5         6         7         8         9         10         15         16         17         16         17           1 </th <th>ence case</th> <th>Base</th> <th>Control</th> <th>Interaction</th> <th>Base</th> <th>Control</th> <th>Interaction</th> <th>Base</th> <th>Control</th> <th>Interaction</th>	ence case	Base	Control	Interaction	Base	Control	Interaction	Base	Control	Interaction
1         0.43         0.44         0.47         0.47         0.47         0.47         0.47         0.44         0.	mn	1 2	3 4		7 8					
Anticipant         D33         Best         D31         C <thc< th="">         C         <thc< th=""></thc<></thc<>	perative, mutual, endly society									
ande         013         -         013         -         013         -         013         -         013         -         013         -         013         -         013         -         013         -         013         -         013         -         013         -         013         -         013         -         013         -         -         013         -         -         013         -         -         013         -         -         013         -         -         013         -         -         013         -         -         013         -         013         -         013         -         -         013         -         -         013         -         -         013         -         013         -         013         -         013         -         013         -         013         -         013         -         013         -         013         -         013         -         013         -         013         -         013         -         013         -         013         013         -         013         013         013         -         013         013         013         013 </td <td>t/charity</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	t/charity									
1         0.49         -         0.49         -         0.43         -         0.43         -         -         0.46         -         -         0.46         -         -         0.46         -         -         0.46         -         -         0.46         -         -         0.46         -         -         0.46         -         -         0.46         -         -         0.46         -         -         0.46         -         -         0.46         -         -         0.46         -         -         0.46         -         -         0.46         -         -         0.46         -         -         -         0.46         -         -         -         0.46         -         -         -         -         0.46         -	pany ltd by guarantee on-profit)									
	olished by Royal arter									
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	c education									
	c healthcare									
$\begin{array}{l l l l l l l l l l l l l l l l l l l $	c Admin									
	owned industry									
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		0.014 ****			0.020 ****					
	tant									
	ber of obs	14,392	14,392	14,392	14,563	14,563	14,563	13,233	13,233	13,233
0.000         0.001         0.001         0.001         0.001         0.001         0.001         0.002         0.042         600<		18.03	17.35	12.69	18.89	18.59	22.2	5.86	5.52	6.72
0.039         0.049         0.053         0.038         0.047         0.041         0.042           600	> F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
600 600 600 600 600 600 600 600	lared	0.039	0.049	0.053	0.038	0.043	0.047	0.041	0.042	0.049
	ers	600	600	600	600	600	600	600	600	600

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Noter: Sample: employees in panel establishments, pooled by year. Clustered (estab) standard errors, weighted estimates. 600 clusters. Significance levels as in Table 3.

	Comparisons o	f main effects wit	h hase case	Comparisons of main effects with compensatory p	th
	1	2	3	4	5
	Base case coefficients: (no controls)	CB coverage as control (main coefficients)	CB interaction main coefficients	Compensatory pay coeffs with CB control	Compensatory pay coeffs with CB interacted
Column	1	2	3	5	6
Satisfaction	1.000	0.855	0.729	-0.781	-0.603
		****	****	****	**
Commitment	1.000	0.951	0.462	-0.692	-0.539
		****	+	***	*
Compensatory pay	1.000	0.986	0.629		
		****	**		

#### TABLE 5 Ownership models and bargaining coverage: rank correlations

Explanation Table 5: for satisfaction: col. 2 shows the rank correlation of the main coefficients by model in Table 4 cols. 1 and 3 to be 0.855, implying little change when bargaining coverage is introduced as a simple control variable. Col. 3 shows the correlation between the main coefficients in Table 4 cols. 1 and 5 when bargaining coverage is introduced as an interaction variable. Rank correlations, n = 12: Significance levels as in Table 3, Sample: see Table 4.

well-being, neither its distribution across models, nor its operation within them, diminish their effect on well-being.<sup>13</sup>

## 5.3 | Controlling for 'routine' work

Aoki's extension of Hart's theory emphasizes the importance of employees' human capital assets as a counterweight to ownership of key material assets. Vis-à-vis management, the former confer both individual bargaining power, and the capacity for greater work autonomy, such that their distribution across the ownership models could overstate the effect of ownership. A number of empirical studies have also observed a widespread statistical relationship between occupational level and measures of job and work satisfaction (Clark, 1996; Rose, 2003; Pilcher & Wallace, 2009). As can be seen in Table 1 (col. 4), the mix of occupations varies markedly across ownership models, and this could reflect differences in work systems, and hence in the scope for job autonomy, a significant factor in well-being. Might its distribution thus account for the observed patterns of well-being and compensatory pay? The same procedure was conducted as for bargaining coverage; however, as the detailed results tell a similar story, Table 6 reports only the rank correlations. The 'base case' remains the main effects for satisfaction and commitment before inclusion of controls (shown in Table 4 cols. 1, 7 and 13).

Despite a negative relationship for both intrinsic measures for being in 'routine' work, its inclusion as a control caused little change in the main effects by ownership model. These display strongly positive rank correlations and confirm that the ownership effect remains robust both to the inclusion of a simple control (col. 3) and as an interaction (col. 4). Columns 5 and 6 extend this

<sup>13</sup> A similar analysis was undertaken using a wider range of voice channels available in WERS ,such as briefings, meetings and joint consultation. The impact of their inclusion was also small.

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					Comparisons of well-being base case	being base case
		Comparisons of main	Comparisons of main effects with base case	e	with compensatory pay	ay
		<b>Comparison with</b>				
	ŝ	base case for	Low discretion as	Low discretion:		Compensatory pay
	Base case (no controls)	bargaining coverage (Table 4)	control (main coefficients)	interaction (main coefficients)	with low discretion as control	interacted with low discretion
Column	1	2	3	4	5	6
Satisfaction	1.000	0.970	1.000	1.000	-0.713	-0.753
		****	***	****	****	****
Commitment	1.000	0.951	0.993	0.991	-0.713	-0.743
		****	***	* ***	***	***
Compensatory pay	1.000	0.867	0.993	0.967		
		***	***	****		
Notes: $n = 12$ ownership m	odels. Employees in the la	Notes: n = 12 ownership models. Employees in the largest occupational group in the workplace in low discretion jobs as identified by management. Sample: employee respondents in panel	the workplace in low disc	retion jobs as identified by	management. Sample: emp	loyee respondents in panel

2 í 5 2 24 b establishments, employee weights. Significance levels as in Table 3. A value of 1 signifies no change in the rank order.

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test to the inverse relationship with compensatory pay, again comparing the base case coefficients to those on compensatory pay as that is subjected to the same work system controls. The results again confirm a robust inverse relationship. Thus, the inclusion of controls for routine work has little effect on the pattern of intrinsic and extrinsic benefits by ownership model. Because analysis of routine work was limited to members of the largest occupational group, as explained previously, column 2 compares the base case coefficients for the three variables with those of the full sample shown in Table 4. The high rank correlations confirm their consistency.<sup>14</sup>

## 5.4 | Controlling for scale and capital intensity

The third test of whether ownership models influence well-being and compensatory pay addresses some possible selection effects and focuses on the employers' side of CWD theory. For example, firms in a capital-intensive activity might adopt the PLC model in order to raise necessary finance, and at the same time find that the technology constrains their ability to adapt work organization pushing them towards extrinsic benefits. Idson (1990) explains the lower levels of satisfaction found in large plants by their more formal organization, which implies reduced scope to adapt the work environment. In similar vein, in their presentations of CWD, both Rosen (1986) and Borjas (2016) cite examples where high capital intensity makes it more expensive for employers to remove disamenities. In both cases, according to CWD, these factors raise the cost of redesigning work, and so induce employers to emphasize extrinsic benefits instead. Capital intensity is measured in WERS as capital per full-time equivalent employee (variable nallkfte). The ownership models vary considerably in employment size and capital intensity (see Table 1 cols. 2 and 7), making these potential alternative explanations of ownership effects on well-being. As before, this is tested by introducing employment size and capital intensity as control and interaction variables, and comparing changes in the rank order of coefficients on the 12 models (Table 7). Whereas the effect of employment size is applied to the same sample as Table 4, capital intensity was available across all ownership models only for 2004, and for the reduced financial performance sample. As can be seen, inclusion of employment size has little effect either on the rank order of coefficients of the well-being indicators by model, or on their inverse relationship with compensatory pay. While pointing in the same direction, the results for capital intensity are less clear, but the sample is smaller.15

In sum, after controlling separately for all three factors, bargaining coverage, work system, scale and capital intensity, it can be seen that the pattern of main effects of the ownership models is quite robust, and this applies to satisfaction and commitment and their inverse relationship with compensatory pay. It would seem sufficiently strong for the models to provide a clear signal in labour markets to aid the matching process. This concludes the demonstration of a clear pattern of influence of ownership models on well-being and compensatory pay, and that is not diminished by the inclusion of other potential factors.

<sup>&</sup>lt;sup>14</sup> The analysis was also carried out for the full panel sample using routine occupations (SOC codes 4-9), and similar results were obtained.

<sup>&</sup>lt;sup>15</sup> Apart from the smaller sample size, the standard deviation on the capital labour ratio is large, particularly for PLCs where the lowest 5% have ratios below one, hence the difference between columns 2 and 7 in Table 1.

**TABLE 7**Ownership models and well-being: controlling for employment size and capital-intensity Rankcorrelations of main effects by ownership model

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	Comparing base cas	se main effects with		
	those when control (rank correlations)		Comparing main ef compensatory pay	fects with those on
Column	1	2	3	4
Base case (no controls)	Emp size as control variable	Emp size interaction (main coeffs)	Both base case	Both with size controls
Satisfaction	0.979	0.767	-0.755	-0.804
	****	****	****	****
Commitment	0.979	0.720	-0.678	-0.762
	****	****	***	****
Compensatory pay	0.909	0.511		

**:				
Panel 7b: Capital per	r full-time equivale	ent employee (establis	shment means)	
	Comparing base	case main effects		
	with those when	controls are		
	included (rank c	orrelations)	Comparisons wit	th compensatory pay
Column	1	2	4	5
Base case (no	K/L as control	K/L interaction		Both with K/L
controls)	variable	(main coeffs)	Both base case	controls
Satisfaction	0.998	0.944	-0.546	-0.648
	****	****	*	**
Commitment	0.993	0.953	-0.448	-0.494
	****	****	+	+
Compensatory pay	0.979	0.965		
	****	****		

*Note:* N = 12 ownership models.

Panel A: Coefficients based on individual employees in panel establishments, pooled 2004/11; employee panel weights. (N = 14.5k employees, as in previous tables. Log employment size.

Panel B: Value of capital per full-time equivalent employee in 2004 (nallkfte). Based on co-worker establishment means (N = 500 estabs) for the well-being and compensatory pay variables using the Financial Performance Questionnaire sample and its weights. Full cross-section sample used because of reduced sample for FPQ. Significance levels as in Table 3.

# 5.5 | The mediating role of ownership

Figure 2 illustrates how the ownership models clustered at different points on the aggregate supply curve linking compensatory pay and increasing work dissatisfaction, and potentially, play a key role in the sorting process envisaged by CWD theory. This can be examined in more detail adapting an approach used by others (e.g. Bryson et al., 2012), which regresses work satisfaction directly onto, in this case, compensatory pay, and tests for the mediating effect of ownership by observing how that relationship changes as controls are introduced for ownership model. In line with the approach of these authors, additional controls are introduced for work disamenity and workoad and for the variables considered in the previous paragraphs. As explained previously, the

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analysis is confined to employees in the largest occupational group to obtain a better alignment between employee reported work satisfaction and management reported job autonomy. The key results to emerge in Table 8 are that an aggregate-level inverse relationship between satisfaction and compensatory pay declines and becomes statistically non-significant once account is taken of ownership model. This is very much in line with the picture in Figure 2, which implied that it was the ownership models which enabled organizations and their workers to contract over extrinsic and subjective intrinsic benefits.

# 5.6 | A test of breach of perceived employer commitments: necessity or moral hazard?

Establishing a pattern does not identify its underlying nature. According to the argument of this paper, ownership models matter because they enable employers to make credible commitments to respect agreements over bundles of extrinsic and intrinsic benefits. As a general rule, the strength of commitments is best revealed when put to the test, as would occur during a major unanticipated shock. Such was the 2008/09 financial crash. Across the private sector, pay was frozen and bonuses slashed (Brown & Marsden 2011). And in the public sector, there ensued a wave of budgetary cuts to restore public finances, and a programme of 'austerity' to restrict public spending. This spilled over onto the organizations working on government contracts, such as charities and public sector hybrids. Three quarters of employees were in establishments where management reported pay or job cuts (Table 1, col. 6). Many of the ensuing actions to cut costs and reorganize work would have disrupted the prior balance of intrinsic and extrinsic benefits in surviving jobs, and would likely be experienced as breach in workplaces with perceived employer commitments to respect intrinsic benefits. This would be manifest in a drop in well-being accompanied by a substantial drop in trust. This eventuality is examined in two stages. Did those party to pre-crash work norms, compared with those hired later, reveal signs of lower satisfaction and commitment, and even more, lower trust, and was this effect felt more strongly in models that had hired on the basis of greater intrinsic benefits?

To address the first, one needs to compare the experience of comparable employees who had experienced pre-crash norms in their workplace, and those hired subsequently. The former constitute a 'treatment' and the latter, a 'control' group. At the time of the 2011 survey, both would have been working under the new conditions, but only the former group would have experienced the change in their workplace. The propensity score matching results are shown in Table 9. As anticipated, well-being, and especially trust, among those engaged under the pre-crash norms were significantly below those hired more recently (see 'difference', col. 3), which is consistent with there being a sense of breach. In practice, this may understate the impact of perceived broken commitments because the effect of the crash was delayed for some public services, even beyond 2011.

The second question is whether the adverse effects of crash-induced workload changes on well-being and trust were greater for employees in ownership models where perceived employer commitments had been stronger. Thus, the models were divided into two categories: with 'weak' and 'strong' commitments to respect intrinsic benefits, the former comprising PLCs and private non-family firms. Tracking individual panel establishments, Table 10 compares how disruption to work patterns caused by the crash affected worker well-being and trust in workplaces governed by weak and strong commitments.

	1	3	3	4	S	9	7	×	6	10
Compensatory pay	-0.167	***	-0.171	* ** *	-0.133	*	-0.032	I	-0.130	I
Work pressure and autonomy										
Usual overtime hours			0.001	I	0.002	I	0.002	I	0.002	Ι
Supervisory duties			-0.064	* ** *	-0.067	***	-0.057	***	-0.056	* * *
Low discretion work			-0.318	*** **	-0.316	***	-0.210	****	-0.203	* * *
Bargaining and scale										
Bargaining coverage (pct)					-0.066	I	-0.042	I	-0.051	Ι
Employment size (log)					-0.048	*	-0.044	* * *	-0.039	* *
Ownership model dummies	No		No		No		Yes		Yes	
Ownership models interacted with compensatory pay	No		No		No		No		Yes	
Number of employee observations	5,072		5,072		4,985		4,985		4,985	
R-squared	0.008		0.040		0.050		0.101		0.105	
Establishment clusters	553		553		553		553		553	
F-test results										
Work pressure and autonomy			8.88	* ** *	10.85	*** **	9.19	****	8.61	* * *
Bargaining and scale of operation					2.88	*	3.48	* *	3.15	* *
Ownership model controls							13.24	****	11.83	* * *
Ownership and pay interacted									2.66	***

TABLE 8 Work satisfaction and compensatory pay

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	Pre-crash hires	Post-crash hires	_		
Column	1	2	3	4	5
			Difference Col.	Std error of	
Variable	Treated	Control	1 – Col. 2	difference	T-statistic
Satisfaction	0.020	0.166	-0.146	0.044	3.33
Commitment	0.077	0.268	-0.191	0.041	4.62
Trust	-0.026	0.307	-0.333	0.043	7.74
Treated n	5697				
Control n	534				

TABLE 9 Effect of the crash on well-being measures Comparing employees who joined pre- and post-crash

Employee data. Criterion: employee reported 'I was not working at this workplace during the recession' (WERS question qb5mull). Propensity score matching: using STATA psmatch2 based on logit estimation of the probability of being in the pre-crash group using one-digit occupation and sector categories, labour market experience, years of education, residual earnings, gender, temporary contract and in receipt of training as controls. Kernel estimates, with default bandwidth 0.06. Average treatment effects of the treated, ATT. Panel sample. Restricted to employees aged >22 and <65 to exclude new entrants. A T-statistic of 2.62 with over 120 observations is significant at the 1% level.

TABLE 10 Impact on well-being of workload change associated with the financial crisis of 2008/9

	Effect of crash-induced workload change on well-being								
	Models with strong commitments Non-private + family				Models with weak commitments Plc and private non-family				
Dependent variable:	Coef.	Sig	r <sup>2</sup>	п	Coef.	Sig	r <sup>2</sup>	n	
change 2004/11 in:	1	2	3	4	5	6	7	8	
Work satisfaction	-0.423	****	0.076	356	-0.243	ns	0.019	125	
Commitment	-0.579	****	0.083	356	-0.339	ns	0.0147	125	
Trust	-0.802	****	0.117	356	-0.476	ns	0.027	125	

*Notes*: Independent variable: share of employees in workplace reporting workload change. Dependent variable: change in mean well-being for establishment co-workers 2004–11. Controls: ownership model. The controls used in Tables 4–7, coverage, routine work and employment size failed the *F*-test for their inclusion. Panel estabs with >10 employees and >3 employee respondents. Panel estab weights;. Significance levels: as in Table 3.

The results show the adverse effect of crash-induced workload change on well-being, and especially on trust, was indeed greater for the 'strong commitment' than for the 'weak commitment' category (cols. 1 and 5). To check whether the difference in statistical significance between the two categories was due to different numbers of observations, the analysis was re-run after randomly discarding two-thirds of those in the 'strong' group. This confirmed the results shown. Finally, it might be asked why cuts in extrinsic benefits in the PLC/private category should not have led to a comparable sense of breach. The key seems to lie with their much more extensive use of variable pay (see Table 1, col. 5 above). This would have functioned both as a signal about the nature of the deal at the time of hiring and to provide a labour cost buffer attenuating the need for cuts in basic pay, as shown by an inverse correlation between use of payment-by-results and the incidence of crash-induced pay cuts.<sup>16</sup>

 $<sup>^{16}</sup>$  The rank correlation between models using pay cuts and PBR was about -0.8, slightly lower for individual than for collective PBR. The relationship also held when computed for individual employees covered.

Despite their binary limitations, taking both sets of results together sheds a consistent light on the nature of the exchange of extrinsic for intrinsic benefits, the latter's greater dependence on trust, and the role of ownership models in underpinning this process. The scale of the 2008/09 crash reveals their limits, but its exceptional nature also shows how far they can facilitate contracting over intrinsic and extrinsic benefits under normal conditions.

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## 6 | CONCLUSIONS

There is now considerable research evidence that the scope to exercise intrinsic motivation, whether hedonic or eudaimonic, contributes to employees' well-being, and this is surely an important dimension of employment that needs to be considered alongside the other effects of ownership models on employment relations. This paper contributes, hopefully, to opening up this dimension to further research. Although the paper does not seek to quantify the economic loss arising from a limited supply of intrinsically interesting work, the Gallup Global Workforce Survey (2017) shows that a great many workers appear unable to obtain it and feel disengaged from their work. The evidence in this paper suggests that one path to increased engagement could lie in encouraging greater use of these ownership models especially for service work where employers are often less constrained by the cost of adapting work systems. Turning to investor-owned firms, one might ask whether there are ways to ease the transaction cost pressures that bias their choices towards extrinsic incentives. Besley and Ghattak point out that, in theory, privately owned firms may assume missions for provision of collective goods, although for this to happen, this paper has argued that tradability of their ownership would need to offer greater protection for implicit contracts. One possibility is increased institutional employee influence in the boardroom. However, board-level representation is easily cut off from the workplace as research on the British experiments of the 1970s revealed (Brannen et al., 1976). Thus, there would need to be connecting channels between the boardroom and the workplace, as this is where intrinsic benefits are experienced, which should also be transferable to the new owners.

This study has a number of limitations, hence its exploratory nature. The small amount of change in ownership status of workplaces, and the reliance on cross-sectional data for much of the analysis, restricts identification of causal relationships. Several of the key relationships, such as between the surveyed well-being indicators and intrinsic motivation, had to be inferred rather than measured directly, and the method of estimating compensatory pay as a residual omits other potential factors than choice between intrinsic and extrinsic benefits. The case rests on the consistency between different pieces of evidence. There are also some unresolved exceptions warranting further analysis, such as public administration. Although the relatively small amount of movement between ownership categories may be an obstacle to the study of changes, it does lend substance to the idea that they provide stable frameworks for commitment to certain types of values, and to assist employees in selecting organizations whose values are close to their own motivational orientations.

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