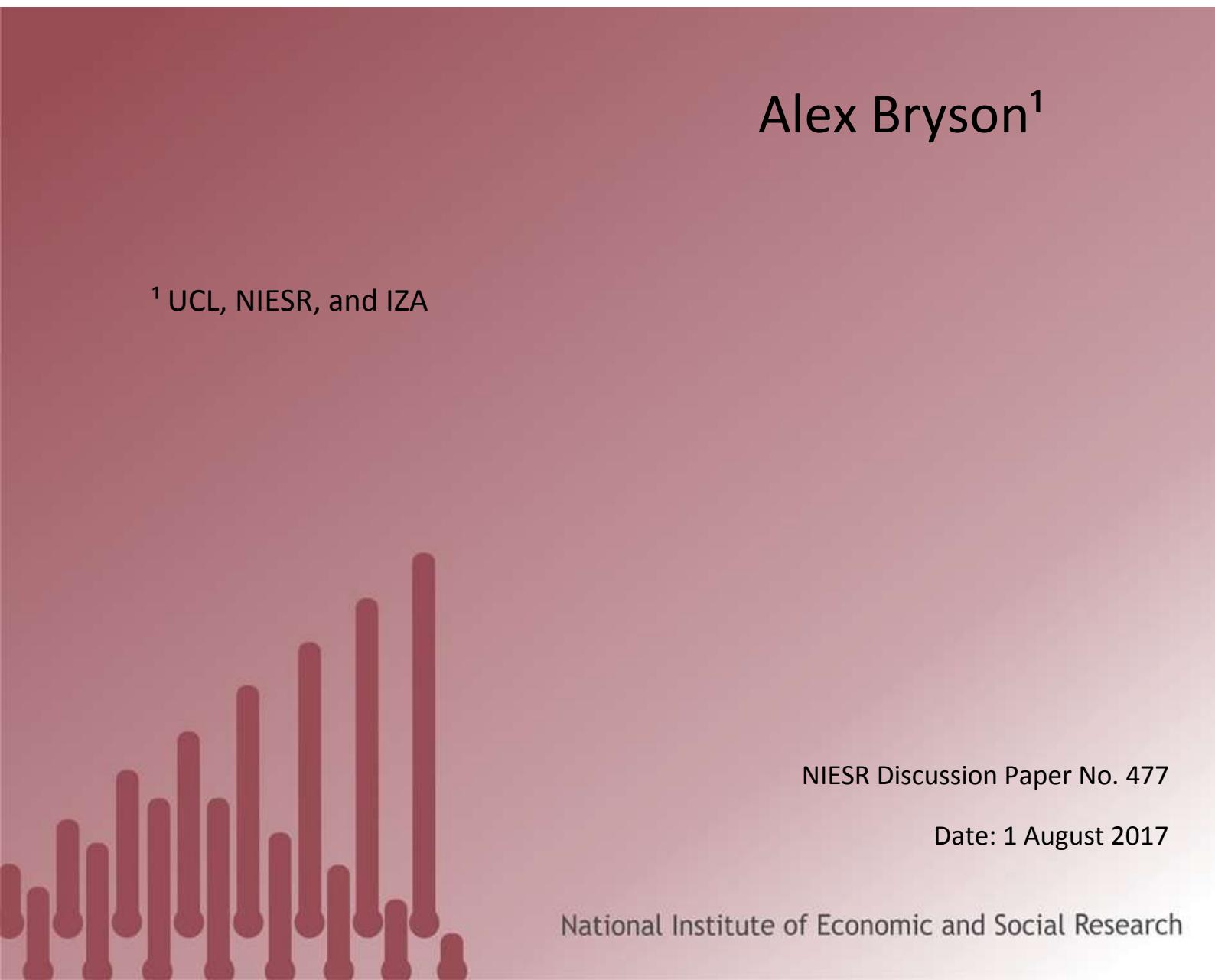


MUTUAL GAINS? IS THERE A ROLE FOR EMPLOYEE ENGAGEMENT IN THE MODERN WORKPLACE?



Alex Bryson¹

¹ UCL, NIESR, and IZA

About the National Institute of Economic and Social Research

The National Institute of Economic and Social Research is Britain's longest established independent research institute, founded in 1938. The vision of our founders was to carry out research to improve understanding of the economic and social forces that affect people's lives, and the ways in which policy can bring about change. Seventy-five years later, this remains central to NIESR's ethos. We continue to apply our expertise in both quantitative and qualitative methods and our understanding of economic and social issues to current debates and to influence policy. The Institute is independent of all party political interests.

National Institute of Economic and Social Research

2 Dean Trench St

London SW1P 3HE

T: +44 (0)20 7222 7665

E: enquiries@niesr.ac.uk

niesr.ac.uk

Registered charity no. 306083

This paper was first published in August 2017

© National Institute of Economic and Social Research 2017

Mutual Gains? Is There a Role for Employee Engagement in the Modern Workplace?

Alex Bryson

Abstract

I examine the history of employee engagement and how it has been characterised by thinkers in sociology, psychology, management and economics. I suggest that, while employers may choose to invest in employee engagement, there are alternative management strategies that may be profit-maximising. I identify four elements of employee engagement – job ‘flow’, autonomous working, involvement in decision-making at workplace or firm level, and financial participation – and present empirical evidence on their incidence and employee perceptions of engagement, drawing primarily from evidence in Britain. I consider the evidence regarding the existence of mutual gains and present new evidence on the issue. I find a non-linear relationship between human resource management (HRM) intensity and various employee job attitudes. I also find the intensity of HRM use and employee engagement are independently associated with improvements in workplace performance. I consider the implications of the findings for policy and employment practice in the future.

Acknowledgements

Alex Bryson thanks the Department for Business, Energy and Industrial Strategy, the Economic and Social Research Council, the Advisory, Conciliation and Arbitration Service and the National Institute of Economic and Social Research as the originators of the Workplace Employee Relations Survey data, and the Data Archive at the University of Essex as the distributor of the data. All errors and omissions remain the sole responsibility of the author.

Contact details

Alex Bryson, a.bryson@ucl.ac.uk

1. The History Of Employee Engagement

For over two centuries debate concerning labour's role in capitalist production has been dominated by two competing paradigms. The first treats labour as a simple input to production, like capital and land, which can be bought and sold on the market and deployed like any other factor of production. The second starts from the premise that labour is 'different' or 'special' because it consists of human beings with desires and needs, some of which may conflict with those of capital owners. As such, relations of production are necessarily social relations, and relations between the representatives of capital and labour are human relations. Both paradigms preoccupied two of the founders of modern-day political economy, Karl Marx and Adam Smith. Both emphasised imperatives in the capitalist system to minimise the costs of production and maximise control over labour power through the organization of the production process and job redesign. Smith describes the destruction of craft skills in a pin-making factory in pursuit of profits, thus prefiguring Marx's description of the alienation workers feel through the division of labour underpinning the capitalist mode of production.¹ Yet, at the same time, both reflect on the tacit skills workers possess and the importance capital attaches to the extraction of the surplus value locked in the minds and abilities of labour.

There is, therefore, a conundrum employers face when deciding how to manage labour. Do they adopt a labour intensification strategy aimed at driving costs down and controlling labour, or do they adopt a work enrichment strategy founded on principles of employee engagement with a view to eliciting collaboration and co-operation with workers in expectation of what Tom Kochan and Paul Osterman (1994) have referred to as "mutual gains"?

From a theoretical perspective, it is plausible that multiple equilibria are possible since there may be more than one way to compete in the production of goods and services. Which option firms adopt is, arguably, a "strategic choice" (Child, 2000), rather than something determined by technology and market competition. How much employers can adopt the labour intensification strategy is bounded by labour regulations on minimum wages, maximum hours and health and safety, while their ability to adopt labour enrichment/engagement will be bounded by the quality of labour and management skills. But at least, in principle, one can conceive of the degree of employee engagement being a product of decisions made by firms, sometimes in conjunction with labour and the state, as one means to maximise profits.

The "choice" perspective is not shared by all. Some maintain that the design of jobs and production processes is largely determined exogenously by technological developments. In the 1960s, Blauner (1966) and others expressed great optimism at the new opportunities to re-skill labour afforded by technological innovation. Labour process theorists, on the other hand, maintain there is a clear, unequivocal imperative in a capitalist mode of production to design and re-design jobs in such a way as to deskill labour, thus driving down costs and limiting labour's bargaining power vis-à-vis employers. This position is exemplified in the classic work of Braverman (1974) whose book *Labour and Monopoly Capital* was a direct counter to what, at least in retrospect, appears to have been

¹ Smith (1776) says "the man whose whole life is spent in performing a few simple operations, of which the effects are perhaps always the same, or very nearly the same, has no occasion to exert his understanding or to exercise his invention in finding out expedients for removing difficulties which never occur. He naturally loses, therefore, the habit of such exertion, and generally becomes as stupid and ignorant as it is possible for a human creature to become... But in every improved and civilized society this is the state into which the labouring poor, that is, the great body of the people, must necessarily fall, unless government takes some pains to prevent it".

unbridled optimism regarding opportunities for job enrichment and employee engagement arising from technological advances.²

Others have emphasised heterogeneity in capitalist processes, with some industries and settings being conducive to fundamentally different forms of capital-labour relations in which owner-worker demarcations are often blurred. For instance, in their book *The Second Industrial Divide* Piore and Sabel (1984) describe high value-added firms producing niche products with highly skilled labour founded on familial ownership structures underpinned by collaborative social relations and political support, an arrangement they label “flexible specialization” that exists in places such as North Eastern Italy. Others emphasize the potential of worker ownership to improve job quality and opportunities for employee decision-making, either through cooperatives, such as the ones existing in Mondragon in Spain, or through employee share ownership schemes that characterize large firms in some parts of the United States (Kruse et al., 2010). Some case studies indicate the two strategies of employee engagement and labour intensification can co-exist within the same firm or across the supply chain delivering a single product, the production of Apple’s iPhone beginning with design in Silicon Valley and production by Foxconn in China being the exemplar.³

2. The Concept Of Employee Engagement And The Employer Scorecard

The concept “employee engagement” is not easily defined and measured because it is a multi-faceted concept. In the moment, employees are commonly understood to be “engaged” in their work when they are immersed in it. For psychologists, this is the state of being in the “flow” or “the zone” (Csikszentmihályi, 1990). Engagement of this type is linked to job satisfaction and wellbeing, in part because it often entails activity which is intrinsically rewarding, but also because it is characterised by a sense of personal control, or agency which, under the psychological models developed by Karasek (1979) and Karasek and Theorell (1990), are key facets of jobs which explain variance in worker stress and wellbeing.

A second element in job-oriented “engagement” extends beyond a point-in-time to on-going engagement, as indicated by the employee’s opportunities for job-related autonomous decision-making, either as an individual or in a team setting. Job-related control and autonomy are core elements in Human Resource Management (HRM) which seeks to devolve responsibility and control to the employee as the best means of eliciting tacit skills and knowledge. When first proposed in the HR literature it was promoted as a counter to the command-and-control style of management underpinning Taylor’s principles of scientific management which Ford and others adopted in the early part of the 20th Century (Walton, 1972; 1985).

A third aspect of employee engagement relates to employee involvement in decision-making above the job level – either at plant or firm level – through representation in governance structures (on the board, through a works council, or via union representation). This type of employee engagement provides employees with a “voice” at work capable of influencing corporate decision-making

² Blauner (1966) famously describes the degree of job autonomy and control afforded an operative in a continuous process plant by virtue of technological advances. Braverman (1974), on the other hand, maintains that the profit motive imbues capitalism with an imperative to deskill labour, even if new technologies offer alternative possibilities.

³ Together with Google, Apple is often cited as the “poster child” for modern, innovative, and creative production in the IT world, whereas Foxconn is best known for the suicide rates among workers on the i-Phone production line <https://www.theguardian.com/technology/2017/jun/18/foxconn-life-death-forbidden-city-longhua-suicide-apple-iphone-brian-merchant-one-device-extract>

through processes of consultation or bargaining, relating to a variety of issues ranging from the location or expansion of a plant, through to a corporation's environmental footprint.

The fourth and final aspect of employee engagement is employees' financial participation in their firm. Profit-related pay and employee share ownership plans are two of the most common forms of what has come to be known as "shared capitalism" (Kruse et al., 2010), whereby employees' fortunes are tied to those of the firm, blurring the division between capital and labour. The common assumption is that employees are more likely to be engaged in all aspects of the firm when they are co-owners, even if their overall share of capital is small.

Having identified four components of employee engagement, what empirical evidence is there as to the degree to which employees feel engaged at work? We take each component in turn. Evidence on 'flow' is minimal, partly because few empirical studies proxy 'flow'. Perhaps the best evidence we have relates to employees' momentary wellbeing at work, as indicated by their happiness in the moment. Using data for the United Kingdom collected at random moments via a smartphone Bryson and MacKerron (2017) isolate the independent association between episodes of paid work and momentary happiness and anxiety.⁴ They find that paid work is ranked lower than all but one of the other 39 activities people engage (only being sick in bed scored worse). The effect is equivalent to a 7-8% reduction in happiness relative to circumstances in which someone is not working. Working continues to be negatively correlated with momentary happiness, even when it is combined with other activities that are pleasurable, and even if one conditions on feelings of stress. It is conceivable that individuals do not record their moments of greatest happiness when in the 'flow', leading to a potential attenuation of the positive effects of work on happiness, but this is unlikely to account for the size of the negative effect identified.⁵ The study contains no detail on job quality or governance arrangements, so it is not possible to distinguish between different work settings, some of which may be more pleasurable than others. Instead, the study obtains the average effect of engaging in work versus not doing so. The implication is that the employee wellbeing arising from fulfilling and engaging work is not easily discernible.

Turning to employees' direct influence over the design and conduct of their own jobs, this appears limited, raising questions about the extent to which employees can be truly engaged in their jobs. The British Workplace Employment Relations Survey (WERS) indicates that around half of employees in Britain reported having "a lot" of influence over "how the work is done" and "the order in which tasks are done"; four-in-ten report "a lot" of influence over "the pace of work" and "the tasks done in the job"; while roughly one-in-three have "a lot" of influence over "start and finish times". Only 16 per cent report "a lot" of influence over all five aspects of their job (van Wanrooy et al., 2013: 106). Although employees' perception of the influence they have over their jobs has risen marginally between 2004 and 2011, HR managers' perceptions of employee job influence shows no change since the late 1990s (van Wanrooy et al., 2013: 105; Wood and Bryson, 2009: 162). Another national survey - the Skills and Employment Survey (SES) - indicates job-related influence in the 2000s is lower than it was in the 1990s (Felstead et al., 2015).

⁴ People who downloaded the Mappiness app receive randomly timed 'dings' on their phone to request that they complete a very short survey. They are asked to rate how happy they feel and how relaxed they are; whether they are alone and, if not, whom they are with; whether they are indoors, outdoors or in a vehicle; and whether they are at home, at work or elsewhere. Finally, they are asked what they were doing 'just now'.

⁵ Furthermore, there is an earlier smaller study from the United States using the Day Reconstruction Method which obtains similar findings (Kahneman et al., 2004).

The much-vaunted autonomous team-working arrangements intended to devolve responsibility for work organization to groups of employees are not as widespread as earlier HRM proponents anticipated. By 2011, autonomous work teams operated in just over four-in-ten private sector workplaces in Britain and half of the private sector workplaces in France (Askenazy and Forth, 2016: 147). In Britain, the share of employees covered by them has only risen marginally since the late 1990s (Bryson and Forth, 2016).

If employers and employees can both benefit from employee engagement, why is it that job-related autonomy and control are not widespread? One possibility is that employees do not want employers to devolve responsibilities to them for designing and organizing their work. Additional responsibilities might be perceived as job demands which, as is well-established in the literature, generate job-related stress and anxiety, often with no additional financial compensation. There is some evidence, both from WERS (van Wanrooy et al., 2013: 102-103) and the European Social Survey (McManus and Perry, 2012: 05-106), that job demands have been rising in Britain, as indicated by the percentages agreeing to the statement “My job requires that I work very hard” (Bryson and Forth, 2016: 163). However, increasing job demands are pervasive and are not primarily driven by measures to increase worker job control. Furthermore, surveys in both the United States and Britain indicate that there is an “influence gap”, with employees wanting *more* influence over their jobs, not less (Bryson and Freeman, 2013).

Another possibility is that managers do not want to cede control to employees through work enrichment and engagement. This concern appears reasonable from a standard principal-agent perspective where the employer is concerned about shirking among employees afforded greater autonomy and control (Holmstrom and Milgrom, 1991), or from a more radical Marxian perspective in which capital and labour have fundamentally different interests and the workplace is “contested terrain” (Edwards, 1979). Control of workers through close supervision, pay incentives, and appraisal systems all grew in Britain in the late 1980s and early 1990s (Gallie et al., 2004), and appraisal systems became more widespread during the 2000s (Bryson and Forth, 2016). White et al. (2004: 100) estimated that in 2002 ICT-based monitoring systems linked to individual performance appraisal were “already covering around half the [British] workforce and appear to be spreading rapidly”. These trends are hard to reconcile with a shift towards job enrichment and employee engagement.

For employees to engage in decision-making at workplace or firm level they need to be able to express their opinions away from the production line or shop-floor in committees, boardrooms, town hall meetings and other fora. Workers’ voice is often conveyed through their representatives. Workers’ rights to workplace representation are written into international conventions and some are guaranteed by national or international law. Legal frameworks differ markedly across countries. In some, it is relatively easy for employees desirous of representation to trigger it, as in the case of union representation in France (Amossé and Forth, 2016) and works councils’ representation in Germany (Addison, 2009). In other countries, such as the United States and the United Kingdom, the legislative framework makes it more difficult for workers to obtain representation, even if they have a strong desire for it, leading to a “representation gap” (Towers, 1997; Freeman et al., 2007). Whether an employee can engage in decision-making at workplace or firm level varies markedly across European countries due to variance in the incidence of workplace representation (Forth et al., 2017).

To the extent that statute provides for worker representation, it is no longer a choice on the part of the employer to offer that representation to employees and the engagement that comes with it. In

practice, worker representatives are present in only a minority of workplaces in most European countries (Forth et al., 2017: Figure 1). Similarly, while workers in some companies have rights to information, consultation and representation at company level, guaranteed via an EU Directive, these representative structures tend to be confined to larger companies operating transnationally. There is substantial variance in workers' rights to board-level representation across Europe (Williamson, 2013). It seems that where companies have a choice regarding the presence of workers on the board, they choose not to. Few, if any, firms in Britain have chosen to include worker representatives on their board, unless required to do so under EU law governing transnationals.⁶

Employers are often hostile or ambivalent to trade union representation, even when union representatives are present, and even in countries like France where the concept of dialogue between Social Partners has strong roots (Amossé and Forth, 2016). Asked directly, employers usually prefer to consult directly with employees than via union representatives (Amossé and Forth, 2016: 95-97). These employer preferences, coupled with the steep decline in the incidence of union representation and union membership in many parts of the world⁷, makes it increasingly difficult for workers to rely solely on union forms of representation to engage in decision-making at workplace or firm level. However, employers continue to value employees' input into decision-making processes. Despite the decline in union representation in British workplaces since the early 1980s, the percentage of workplaces (and employees) with no mechanisms for employees to express their voice has remained small and static at around one-fifth. This is due to a surge in direct forms of two-way communication between employees and employers such as team briefings and all staff workplace meetings (van Wanrooy et al., 2014: 18; Bryson and Forth, 2016: 155; Bryson et al., 2013) which are employer investments to procure employee "voice" without having to rely on third parties such as trade unions (Willman et al., 2014). Similar voice mechanisms exist in other countries such as France, although they are not as extensive (Amossé and Forth, 2016: 80-85).

Employee evaluations of how good managers are at engaging them in decision-making raise doubts about the effectiveness of these management practices. In Britain in 2011, around half rated their managers as "good" or "very good" at seeking the views of employees or their representatives; fewer than half rated them as "good" or "very good" at responding to suggestions from employees or their representatives; and only one-third rated them "good" or "very good" at allowing employees or their representatives to influence decisions (van Wanrooy et al, 2014: 18). It is perhaps unsurprising, therefore, that only four-in-ten employees were either "satisfied" or "very satisfied" with the amount of involvement in decision-making they had at the workplace (van Wanrooy et al., 2013: 74).

Financial participation in the firm offers employees opportunities to influence decision-making directly as financial stake-holders. Despite tax-breaks to induce firms to introduce all-employee share plans and profit-sharing in countries like Britain, and the requirement for larger firms to have financial participation schemes in France, only a minority of employees in these and other countries hold shares or receive income contingent on the firm's or workplace's performance (Bryson et al., 2013). When they do, they rarely hold a significant financial stake in the firm, or seek to

⁶ A lively debate is on-going. Mike Ashley, owner and CEO of Sports Direct, has proposed worker representation on its board but the proposal has been met by scepticism given the company's track record on worker rights <https://www.theguardian.com/business/2017/mar/09/sports-direct-workers-representative-mike-ashley>. The UK government are consulting over proposals for worker involvement in corporate governance https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/584013/corporate-governance-reform-green-paper.pdf

⁷ Across all OECD countries average union density fell from 34.7% in 1960 to 16.7% in 2014 https://stats.oecd.org/Index.aspx?DataSetCode=UN_DEN#

substantially alter corporate decision-making by exercising their voting rights in board-room decision-making.⁸ That said, employees are more likely to express positive attitudes towards management and the running of the firm where the firm has financial participation schemes and members of all-employee share ownership plans are significantly more likely than other employees to say they feel like co-owners in the firm (Kruse et al., 2010). Shared capitalist payment methods are also independently associated with greater employee job satisfaction, even conditioning on wage levels (Bryson et al., 2016). This, together with the finding that in both Europe and the United States, employees in firms with financial participation schemes are more likely to be in jobs with high degrees of autonomy (Bryson et al., 2013), suggests there may be a link between financial participation and greater employee engagement.

3. Are There Mutual Gains?

The main contention in Kochan and Osterman's (1994) book is that firms and their employees benefit from the introduction and maintenance of the right sorts of HRM practices, what are known as "high-involvement", "high commitment" or "high performance" workplace practices (Walton, 1985; Lawler, 1986; Appelbaum, 2000). For firms, the benefits accrue through improvements in labour productivity and profitability, while for employees they arise through intrinsic rewards related to engaging in enjoyable work, controlling their own working environment, having a "say" at work, and feeling part of the enterprise.

The literature on management practices has developed rapidly in the intervening quarter century, particularly in economics. "Management" is no longer viewed purely as the preserve of business school gurus and managerial scientists. Instead, it is recognised as a key input into the production process – a technology entering the production function alongside capital and labour (Bloom and Van Reenen 2012 (BVR forthwith)). However, those practices deemed critical in this framework are not necessarily those likely to elicit employee engagement. For BVR the core set of practices are target setting, monitoring, and incentives – arguably the pillars of the scientific management orientation propounded by Taylor and adopted by Ford. BVR find strong correlations between these practices and firm productivity and performance within and across countries (Bloom et al., 2014). Indeed, they argue differences in managerial practices account for a substantial part of the variance in productivity across firms within industries, thus helping to explain the huge heterogeneity in firm performance within industries emphasised by Syverson (2011) and others. BVR maintain these practices are not simply correlated with better performance, rather they have a causal impact on productivity and performance (Bloom et al., 2017).

The implication of BVR's work is that there is sub-optimal use of these practices among firms in general, and that more intensive adoption of them would lead to improvements in productivity and performance. This is a controversial stance. Others argue that what works for some firms may not work for others, either because HRM's success is contingent on firms' competitive strategies, or because they are contingent on the other policies and practices deployed at the firm – what are referred to as external and internal fit respectively (Milgrom and Roberts, 1995; Huselid, 1995; Becker and Huselid, 1998).⁹ The implications are that firms may need to experiment with various

⁸ In an on-going study of employees in a multi-national firm with an all-employee share ownership plan I find that half the members and ex-members of the ESOP had never voted in the firm's annual general meeting and a further one-in-ten did not know whether they had or not. Of those who had voted, one-in-three followed others' recommendations when voting.

⁹ The forerunner to the 'fit' perspective is the resource based view (RBV) of the firm which emphasises the need for firms to manage human, physical and organizational resources to succeed (Saridakis et al., 2017: 88-89).

practices before identifying what works for them, while the internal fit perspective suggests the precise *configuration* of HRM practices is likely to matter.

Notwithstanding this objection, if the sub-set of practices emphasised by BVR are so successful, one might question the value of engaging employees through a more extensive set of practices, even if they do benefit employees. The core HRM practices highlighted in the early high commitment management literature were those that transformed job and work organization through the devolution of control to workers, offering the autonomy required to optimise their own working arrangements (Lawler, 1986; Walton, 1985). It is commonly assumed that initial and on-going training is necessary to underpin the transition to such a system and maintain it in the face of worker turnover and modifications to production. Additional support is thought to be desirable, through supervisory oversight, appraisal and incentivisation (Forth and Millward, 2004; Appelbaum et al., 2000). This is a fundamentally different perspective on what might “work” when compared to BVR’s conception, stemming largely from the assumption that performance improvements brought about by transforming HRM occur because they engage employees in their jobs and decision-making more generally at the workplace.

Although there is debate about the optimal configuration of HRM practices and whether the returns to such practices are homogeneous across firms, there is increasing evidence to suggest that firms can and often do increase productivity via investments in HRM. There are studies in addition to BVR’s to suggest this is the case, and many of these include a more complete set of HRM practices than those used by BVR, including those that have the potential to raise employee engagement (see reviews by Wood and Bryson, 2009; Bloom and Van Reenen, 2011; Saridakis et al., 2017). Less is known about *how* HRM improves productivity but some studies suggest performance benefits accrue through employee engagement and through improvements in workers’ well-being. One study has identified a causal linkage between individual worker happiness and individual productivity (Oswald et al., 2015). A couple of studies suggest this link also exists at organizational level (Bryson et al., 2017; Böckerman and Ilmakunnas, 2012). It is possible that HRM may benefit firms by increasing worker wellbeing through practices designed to engage employees. The literature on links between HRM practices and employee wellbeing is mixed, but recent evidence suggests that what matters is the intensity with which the HRM system is implemented by management: “shallow” HRM can actually reduce employees’ intrinsic job satisfaction and organizational commitment, but more intensive HRM use is positively associated with both (White and Bryson, 2013).

In the remainder of this section, we present new evidence on the presence or otherwise of mutual gains. We do so using linked employer-employee data that is representative of all workplaces in Britain in 2004 and 2011, but we confine our attention to the private sector since most of the theory and evidence presented earlier focuses attention on the market-oriented economy. The analyses we perform are relatively simple but are sufficient to identify independent associations between HR practices, employee engagement and workplace performance. The sampling methodology and the survey weights used in the analysis mean we can extrapolate from these results to employees and workplaces in the population of private sector workplaces in Britain with at least five employees. First, we undertake employee-level analyses to establish what relationship there might be between workplace HRM practices¹⁰ and five aspects of what might be loosely be termed “employee engagement”, namely intrinsic job satisfaction; job-related contentment; organizational commitment; perceived job autonomy; and employee ratings of how good management are at

¹⁰ The HRM domains are described in detail in Appendix Table A1.

involving employees in decision-making. Second, we examine the correlates of workplace performance focusing primarily on the role of HRM practices, on the one hand, and employee expressions of “engagement” on the other. A nice feature of our data is that employee perceptions are taken from employees, while the data on managerial practices is collected from the HR managers in their workplaces.

Table 1: Conditional Association Between HRM Domains and Employee Job Evaluations

	Intrinsic Job Satisfaction	Job contentment	Organizational commitment	Job autonomy	Managerial scorecard for engagement
Incentives	-0.102 (2.76)**	-0.022 (0.68)	-0.076 (2.22)*	-0.059 (1.45)	0.007 (0.16)
Record keeping	0.012 (0.29)	-0.048 (1.37)	-0.030 (0.92)	-0.019 (0.44)	-0.059 (1.24)
Targets	-0.104 (2.23)*	-0.021 (0.59)	-0.084 (2.12)*	-0.092 (1.83)	-0.134 (2.37)*
Participation	0.000 (0.00)	0.020 (0.62)	0.055 (1.52)	-0.017 (0.38)	0.092 (1.71)
Selection	-0.036 (1.00)	0.026 (0.89)	0.028 (0.85)	-0.120 (2.85)**	-0.004 (0.08)
Team-working	0.018 (0.56)	0.022 (0.79)	-0.009 (0.31)	0.069 (1.88)	0.010 (0.22)
Training	0.052 (1.40)	-0.049 (1.47)	0.069 (2.04)*	0.022 (0.51)	0.102 (2.04)*
TQM	0.005 (0.12)	-0.060 (1.93)	0.034 (0.94)	0.040 (0.93)	-0.003 (0.05)
Constant	2.606 (8.36)**	1.557 (6.11)**	2.064 (7.87)**	10.535 (30.00)**	0.825 (2.39)*
R ²	0.10	0.11	0.12	0.16	0.10
N	25,714	25,931	25,254	25,557	23,743

(1) The dependent variables are the following. Intrinsic job satisfaction: an additive scale running from -8 to +8 based on responses to “how satisfied are you with the following aspects of your job...sense of achievement; scope for initiative; the amount of influence over your job; the amount of involvement in decision-making at this workplace”. Responses are recorded on a 5-point Likert scale from “very satisfied” (+2) to “very dissatisfied” (-2). Job contentment: an additive scale running from -6 to +6 based on responses to “Thinking of the past few weeks, how much of the time has your job made you feel...tense; worried; uneasy” with responses coded “all the time” (-2) to “never” (+2). Organizational commitment: an additive scale running from -6 to +6 based on responses to “to what extent do you agree or disagree with the following statements about working here...I feel loyal to my organization; I share many of the values of my organization; I am proud to tell people who I work for”. Responses are recorded on a 5-point Likert scale from “very satisfied” (+2) to “very dissatisfied” (-2). Job autonomy: an additive scale running from 0 to 15 based on responses to “In general how much influence do you have over the tasks you do in your job; the pace at which you work; how you do your work; the order in which you carry out tasks; the time you start or finish your working day” with responses coded “a lot (3) to “none2 (0). Managerial score card for engagement: an additive scale running from -6 to +6 based on employee responses to “how good would you say managers at this workplace are at seeking the views of employees or employee representatives; responding to suggestions from employees or employee representatives; allowing employees or employee representatives to influence final decisions” with responses coded “very poor” (-2) to “very good” (+2). (2) A full description of the eight HRM domains is provided in Appendix Table A1. Each is entered as a z-score into the model. (3) Controls: *Demographics*: gender; age (6 dummies); race; married; disability; highest qualification (8 dummies); union member. *Job*: tenure (5 dummies); contract type (3 dummies); usual hours (5 dummies); log hourly pay. *Workplace*: single-establishment organization; number of employees; region (11 dummies); establishment aged over 25 years; % age 16-21; % age 50+; age diversity; proportion female; gender diversity; proportion non-white; proportion part-time; union density; % manager; % professionals; % associate professionals; and a year dummy. (4) T-statistics in parentheses. Statistical significance * $p<0.05$; ** $p<0.01$

Although the eight HRM domains are jointly statistically significant for all five employee engagement outcomes¹¹ only training is positively and significantly associated with any of the outcome measures, and even here only in two cases (organizational commitment and the managerial scorecard for engagement). Two of the domains emphasized by BVR (incentives and targets) are negatively associated with job satisfaction and organizational commitment (with targets also associated with lower perceptions of manager's ability to engage employees).

¹¹ The p values for the joint significance tests range from .00 in the case of job autonomy to .03 for managerial employee engagement.

Table 2: Conditional Association Between HRM Scores and Employee Job Evaluations

	Intrinsic Job Satisfaction	Job contentment	Organizational commitment	Job autonomy	Managerial scorecard for engagement
HRM Score	-0.049 (2.23)*	-0.054 (3.22)**	-0.037 (1.83)	-0.051 (2.09)*	-0.044 (1.48)
HRM Squared	0.001 (1.71)	0.001 (2.57)*	0.001 (1.75)	0.001 (1.47)	0.001 (1.46)
Constant	3.426 (7.43)**	2.402 (6.98)**	2.452 (6.27)**	11.421 (22.87)**	1.226 (2.20)*
R^2	0.10	0.11	0.11	0.15	0.10
N	25,714	25,931	25,254	25,557	23,743

(1) See Table 1 for notes

By summing the HRM scores for all eight domains a somewhat different picture emerges. The association between HRM intensity and the five engagement measures is non-linear, following a u-shaped pattern (Table 2). As employers add HR practices at low levels of intensity, job satisfaction, job contentment and job autonomy tend to fall, but the squared term is positive – significantly so in the case of job contentment and on the margins of significance for intrinsic job satisfaction. A similar pattern is apparent for organizational commitment, although both terms are only statistically significant at a 90 per cent confidence interval. The implication is that the returns to HRM intensity rise after a certain point, that is, once HRM is deployed intensively, just as White and Bryson (2013) observed in relation to job satisfaction and organizational commitment.

Table 3: Workplace Performance

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Mean employee attitudes:</i>						
Satisfaction	0.050	0.086		0.086	0.084	0.082
	(0.82)	(1.47)		(1.49)	(1.44)	(1.42)
Contentment	-0.064	-0.030		-0.013	-0.018	-0.015
	(1.47)	(0.56)		(0.24)	(0.34)	(0.28)
Commitment	0.058	0.019		0.031	0.032	0.031
	(0.87)	(0.33)		(0.54)	(0.55)	(0.54)
Autonomy	0.003	-0.048		-0.043	-0.043	-0.041
	(0.09)	(1.38)		(1.19)	(1.21)	(1.15)
Engagement	0.114	0.133		0.123	0.119	0.120
	(3.04)**	(2.67)**		(2.47)*	(2.39)*	(2.41)*
<i>HRM Domains:</i>						
Incentives			0.049	0.073		
			(0.65)	(1.00)		
Record keeping			0.015	0.019		
			(0.25)	(0.32)		
Targets			0.069	0.062		
			(0.86)	(0.78)		
Participation			0.056	0.082		
			(0.66)	(0.98)		
Selection			-0.054	-0.069		
			(0.82)	(1.05)		
Team-working			-0.031	-0.023		
			(0.59)	(0.45)		
Training			0.128	0.110		
			(1.70)	(1.47)		

TQM		0.030	0.018			
		(0.38)	(0.23)			
HRM Score				0.022	0.051	
				(3.22)**	(1.72)	
HRM Score squared					-0.001	
					(1.02)	
Constant	4.801	3.348	1.910	3.446	2.804	2.513
	(14.02)**	(3.95)**	(2.79)**	(4.08)**	(3.25)**	(2.78)**
Controls	No	Yes	Yes	Yes	Yes	Yes
R ²	0.05	0.15	0.15	0.16	0.16	0.16
N	1,781	1,781	1,787	1,781	1,781	1,781

Notes: (1) Dependent variable: an additive scale combining managers' responses to three questions: "Compared to other workplaces in the same industry how would you assess your workplace's...financial performance; labour productivity; quality of product or service". Responses are recorded on a 5-point Likert scale from "a lot better than average" to "a lot below average". The "a lot below average" and "below average" codes are collapsed and scales scored from 0 to 3 where 3="a lot above average". Summing them gives a scale of 0 ('below average' performance on all three items) to 9 (performance 'a lot better than average' on all 3 items). (2) Employee attitudes: those described in footnote 1 to Table 1, aggregated to workplace-level means. (3) A full description of the eight HRM domains is provided in Appendix Table A1. Each is entered as a z-score into the model. (4) Controls: *Employee data aggregated to workplace means*: log hourly pay; tenure (5 dummies); contract type (3 dummies); usual hours (5 dummies); job demands additive scale consisting of two items based on how strongly employees agreed with the following statements: "My job requires that I work very hard" and "I never seem to have enough time to get my work done" (the two items are summed with the scale running from zero ("strongly disagree" on both items) to eight ("strongly agree" to both items)); single-item job security index running from (0,4) based on agreement with the statement "I feel my job is secure in this workplace" where 4 indicates strong agreement. *Workplace*: single-establishment organization; number of employees; region (11 dummies); establishment aged over 25 years; % age 16-21; % age 50+; age diversity; proportion female; gender diversity; proportion non-white; proportion part-time; union density; % manager; % professionals; % associate professionals; and a year dummy. (5) T-statistics in parentheses. Statistical significance * p<0.05; ** p<0.01

What is the association between workplace performance and employee measures of engagement, variously defined, and HRM practices? Table 3 presents results from workplace-level analyses for private sector workplaces pooled from WERS surveys in 2004 and 2011. The performance measure, obtained from managerial responses, is described in footnote 1 to the table. The models contain an extensive set of controls described in footnote 4. The employee attitudes are those analysed in Table 1, but now they are aggregated to the mean for each workplace and introduced together to see whether they explain any of the variance in workplace performance. They are jointly statistically significant in all the models presented.¹² However, only one of the measures – employees' perceptions of how good managers are at engaging them in terms of seeking their opinions, responding to suggestions and allowing employees to influence decision-making – is positively and statistically significant. It remains so in all six models. Although the HRM domains are also jointly statistically significant, none of the domains is statistically significant individually (models (3) and (4)). However, workplace performance is higher where HRM intensity is greater, a relationship that is linear (models (5) and (6)).

To explore the mechanisms that may link employee engagement to workplace performance we reran the same models on the three components to the workplace performance additive scale, namely labour productivity, financial performance and the quality of service and output. These models indicate that perceptions of how good managers are at employee engagement were linked to labour productivity and not to financial performance or quality of service or output.¹³ This was also the case with the HRM additive score capturing HRM intensity.

4. Conclusions and Implications

In this paper, I have examined the history of employee engagement and how it has been characterised by thinkers in sociology, psychology, management and economics. There are only a small number of instances in which employees have rights to information, consultation or representation under the law and, although there are common rules governing health and safety at work requiring employers to meet minimum labour standards, employers have a great deal of discretion as to the extent to which they choose to invest in employee engagement. Since there are alternative management strategies that may be profit-maximising it is uncertain, *a priori*, how much they will invest in employee engagement.

I identify four elements of employee engagement – job 'flow', autonomous working, involvement in decision-making at workplace or firm level, and financial participation – and present empirical evidence on their incidence and employee perceptions of engagement, drawing primarily from evidence in Britain. There is only minimal evidence regarding employee feelings of being in the 'flow'. However, in the moment individuals are far less happy engaged in work than they are engaged in all other activities, apart from being sick in bed. Thus, while there is clear evidence that

¹² P values for their joint significance range from .016 to .022.

¹³ Mean employee perceptions of employers' ability to engage employees was statistically significant in all the labour productivity models and in none of the models for financial performance or quality.

paid work is important to people, that it affects evaluations of their lives and own self-worth, and that they feel much worse if they are deprived of it, *in the moment* it has the flavour of something that they'd rather not be doing. This disutility from work raises questions about the extent to which they are 'engaged' in it. Autonomous working is not uncommon, though only a small minority of employees have autonomy over most aspects of their work, and the HR practices that some thought would promote that autonomy are not as widespread as some early HRM proponents anticipated. The same might be said for the incidence of employee "voice" mechanisms and financial participation.

I present new evidence regarding the existence of "mutual gains" using the Workplace Employment Relations Surveys for 2004 and 2011. There are few independent associations between domains of HRM and employee job attitudes. However, there is an association between the intensity with which HRM is deployed and some of these attitudes. That relationship is u-shaped, so that increasing HRM use at low levels can be disadvantageous in terms of its associations with how employees feel at work. However, at higher levels of HRM intensity adding further HRM practices can elicit employee engagement. This finding suggests employers need to be wary about how much HRM they are implementing. An earlier study focusing solely on satisfaction and commitment which found similar results suggested that HRM may be a signalling device to employees, with low-intensity HRM signalling a half-hearted attempt to engage employees, as opposed to a more fulsome HRM regime capable of signalling the employer's serious attempt to engage employees (White and Bryson, 2013).

The acid test, from an employer perspective, is whether these investments can 'pay off' in terms of workplace performance. To assess this, we introduced mean employee attitude scores and HRM practices into models estimating employer perceptions of their own workplace's performance. I control for a wide variety of potential confounders to isolate the independent association between employee engagement measures, HRM and performance. What stands out from this analysis is that employee engagement – as measured by an additive index capturing employee perceptions of how good managers are at seeking their views, responding to them and allowing them to influence decision-making – was the only employee attitude that was robustly associated with higher workplace performance. Specific HRM practices tended not to be, though HRM intensity was positive and statistically significant. Further analyses indicated that these positive associations between workplace performance, engagement and HRM intensity were driven by the links between engagement, HRM and labour productivity specifically, and not financial performance or quality of output or service.

Since labour productivity is usually cited as the primary mechanism by which engagement and HRM practices should influence workplace performance, the findings presented here are consistent with the HRM literature discussed earlier. However, our analyses are not sufficient to identify a causal relationship between engagement, HRM and workplace performance. The literature in general has made little headway in this respect, largely because it is difficult to discount potential confounding factors without randomly assigning workplace practices that might affect employee engagement. There is one study, conducted in China, which randomly assigned homeworking among tele-workers to the benefit of workers, whose work satisfaction improved, and the firm, which saw an increase in productivity (Bloom et al., 2015). However, such evidence is rare. Furthermore, if the success or otherwise of various practices is contingent on the firm's other practices, or the market environment, we cannot be sure whether "what works" in one setting will work in others, or on other occasions. The implication is that firms might do well to consider experimenting with practices, and evaluate the outcomes rigorously, perhaps on a continuous basis.

In the absence of more evidence about the value of employee engagement and the role HRM practices can play in fostering it and improving performance, it seems firms will focus on the costliness of such investments, making it unlikely that firms will independently switch to greater employee engagement. Since governments often view employee engagement as a good, and sometimes show signs of legislating in support of more employee engagement¹⁴, there may be value in policy makers considering what role they can play in promoting greater employee engagement in workplaces than currently exists.

¹⁴ See, for example, the UK government's response to a consultation regarding worker representation in corporate governance
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/640631/corporate-governance-reform-government-response.pdf

References

- Addison, J.T. (2009). *The Economics of Codetermination: Lessons from the German Experience*. New York: Palgrave Macmillan
- Amossé, T. and Forth, J. (2016) "Employee Expression and Representation at Work: Voice or Exit?", Paper 3 in Amossé, T., Bryson, A., Forth, J. and Petit, H. (eds.) *Comparative Workplace Employment Relations: An Analysis of Britain and France*, Palgrave Macmillan, pp. 61-103
- Appelbaum, E., Bailey, T., Berg, P., and Kalleberg, A. (2000) *Manufacturing Advantage: Why High-performance Work Systems Pay Off*, Ithaca, NY: ILR Press
- Askenazy, P. and Forth, J. (2016) "Work organization and human resource management: does context matter?", Paper 5 in Amossé, T., Bryson, A., Forth, J. and Petit, H. (eds.) *Comparative Workplace Employment Relations: An Analysis of Britain and France*, Palgrave Macmillan, pp. 141-177
- Becker B. E. and Huselid, M.A. (1998) "High performance work systems and firm performance: A synthesis of research and managerial implications". In Ferris GR (ed.) *Research in Personnel and Human Resources Management*, Vol. 16. Stamford, CT: JAI Press, 53–101.
- Blauner, R. (1966) *Alienation and Freedom: The Factory Worker and His Industry*, Chicago: University of Chicago Press
- Bloom, N., Brynjolfsson, E., Foster, L., Jarmin, R.S., Patnaik, M., Saporta-Eksten, I. and Van Reenen, R. (2017) "What Drives Differences in Management?", NBER Working Paper No. 23300
- Bloom, N., Liang, J., Roberts, J. and Ying, Z. J. (2015) "Does Working from Home Work? Evidence from a Chinese Experiment", *The Quarterly Journal of Economics*, 130, 1: 165-218
- Bloom, N., Lemos, R., Sadun, R., Scur, D. and Van Reenen, J. (2014) "The new empirical economics of management", *The Journal of the European Economic Association*, 12, 4: 835–876
- Bloom, N. and Van Reenen, J. (2012) "Human Resource Management and Productivity", Paper 19 in O. Ashenfelter and D. Card (eds.) *Handbook of Labor Economics*, Vol. 4b: 1697-1767
- Bloom, N. and Van Reenen, J. (2016) "Management as Technology", NBER Working Paper No. 22327
- Böckerman P. and Ilmakunnas P. (2012) "The job satisfaction-productivity nexus: A study using matched survey and register data", *Industrial and Labor Relations Review* 65(2): 244–262
- Braverman, H. (1974) *Labour and Monopoly Capital: The Degradation of Work in the Twentieth Century*, Monthly Review Press, New York and London
- Bryson, A., Clark, A. E., Freeman, R.B., and Green, C. P. (2016) "Share Capitalism and Worker Wellbeing", *Labour Economics*, 42: 151-158
- Bryson, A. and Forth, J. (2016) "The UK's Productivity Puzzle", Paper 5 in Askenazy, P., Bellmann, L., Bryson, A. and Moreno-Galbis, E. (eds.) *The Productivity Puzzle across Europe*, Oxford University Press, pp. 129-173
- Bryson, A., Forth, J. and Stokes, L. (2017) "Does Worker Wellbeing Affect Workplace Performance?", *Human Relations*, 70, 8, 1017-1037
- Bryson, A., Forth, J. and Stokes, L. (2017) "How Much Performance Pay is there in the Public Sector and What Are Its Effects?", *Human Resource Management Journal*, doi: 10.1111/1748-8583.12153

- Bryson, A. and Freeman, R. B. (2013) 'Employee Perceptions of Working Conditions and the Desire for Worker Representation in Britain and the US', *Journal of Labor Research*, 34, 1: 1-29
- Bryson, A., Freeman, R., Lucifora, C., Pellizzari, M and Perotin, V. (2013) "Paying for Performance: Incentive Pay Schemes and Employees' Financial Participation", in T. Boeri, C. Lucifora and K. J. Murphy (eds.) *Executive Remuneration and Employee Performance-related Pay: A Transatlantic Perspective*, Oxford University Press
- Bryson, A., Stokes, L. and Wilkinson, D. (forthcoming) "Can HRM Improve Schools' Performance?", UCL mimeo
- Bryson, A., Willman, P., Gomez, R. And Kretschmer, T. (2013) 'The Comparative Advantage of Non-Union Voice in Britain, 1980-2004', *Industrial Relations: A Journal of Economy and Society*, 52, S1: 194-220
- Child, J. (2000) "Managerial Strategies, New Technology and the Labour Process", Paper 18 in D. Preece, I. McLoughlin and P. Dawson (eds.) *Technology, Organization and Innovation: Critical Perspectives on Business and Management*, pp. 453-486, Routledge, London
- Csikszentmihályi, M. (1990) *Flow: The Psychology of Optimal Experience*, Harper and Row
- Delery, J. E., and Doty, D. H. (1996) "Modes of theorizing in strategic human resource management: Tests of universalistic, contingent and configurational performance predictions", *Academy of Management Journal*, 39(4): 802-835
- Edwards, R. C. (1979) *Contested Terrain: The Transformation of Work in the Twentieth Century*, Basic Books
- Felstead, A., Gallie, D. and Green, F. (2015) *Unequal Britain at Work*, Oxford University Press
- Forth, J., Bryson, A. and George, A. (2017) "Explaining Cross-National Variation in Workplace Employee Representation", *European Journal of Industrial Relations*, DOI: 10.1177/0959680117697861
- Forth, J. and Millward, N. (2004) "High involvement management and pay in Britain", *Industrial Relations*, 43: 98-119
- Forth, J. and McNabb, R. (2008) "Workplace performance: a comparison of subjective and objective measures in the 2004 Workplace Employment Relations Survey", *Industrial Relations Journal*, 39: 2, 104-123
- Freeman, R., Boxall, P. and Haynes, P. (eds.) *What Workers Say: Employee Voice in the Anglo-American Workplace*, Cornell University Press
- Gallie, D., A. Felstead, and Green, F. (2004) "Changing patterns of task discretion in Britain", *Work, Employment and Society* 18, 2: 243– 66
- Holmstrom, B. and Milgrom, P. (1991) "Multitask principal-agent analyses: incentive contracts, asset ownership and job design", *Journal of Law, Economics and Organization*, 7: 24-52
- Huselid, M. A. (1995) "The Impact of Human Resource Management Practices on Turnover, Productivity and Corporate Financial Performance", *Academy of Management Journal*, 38, 3: 635-672
- Ichniowski C. and Shaw, K. (2009) "Insider econometrics: empirical studies of how management matters", NBER Working Paper 15618. National Bureau of Economic Research, Cambridge

- Karasek J. R. A. (1979) "Job demands, job decision latitude, and mental strain: Implications for job redesign", *Administrative Science Quarterly*, 285-308
- Karasek, R. and Theorell, T. (1990) *Healthy Work*. New York: Basic Books
- Kersley, B., Alpin, C., Forth, J., Bryson, A., Bewley, H., Dix, G. and Oxenbridge, S. (2006) *Inside the Workplace: Findings from the 2004 Workplace Employment Relations Survey*, Routledge, London
- Kochan, T. and Osterman, P. A. (1994) *The Mutual Gains Enterprise: forging a winning partnership among labor, management and government*, Harvard Business School Press
- Kruse, D., Freeman, R. and Blasi, J. (2010) *Shared Capitalism at Work: Employee Ownership, Profit and Gain Sharing, and Broad-based Stock Options*, University of Chicago Press
- Lawler, E. E. (1986) *High Involvement Management*, San Francisco: Jossey-Bass
- McManus, S. and Perry, J. (2012) "Work and wellbeing. Hard work? Employment, work-life balance and wellbeing in a changing economy", in Park, A., Clery, E., Curtice, J., Phillips, M. and Utting, D. (eds.) (2012), *British Social Attitudes: the 29th Report*, London: NatCen Social Research, pp. 91-115
- Milgrom, P. and Roberts, J. (1995) "Complementarities and fit: Strategy, structure and organizational change in manufacturing", *Journal of Accounting and Economics*, 19: 179-208
- Oswald A. J., Proto E. and Sgroi D. (2015) "Happiness and productivity", *Journal of Labor Economics*, 33(4): 789–822
- Piore, M. J. and Sabel, C. F. (1984) *The Second Industrial Divide: Possibilities for Prosperity*, Basic Books, New York
- Saridakis, G., Lai, Y. and Cooper, C. L. (2017) "Exploring the relationship between HRM and firm performance: a meta-analysis of longitudinal studies", *Human Resource Management Review*, 27, 1: 86-96
- Smith, A. (1776) *The Wealth of Nations: An Inquiry into the Nature and Causes of the Wealth of Nations*, William Strahan and Thomas Cadell
- Stokes, L., Bryson, A. and Wilkinson, D. (2017) "Does Leadership Matter for School Performance?", UCL/NIESR mimeo
- Sverson, C. (2011) "What Determines Productivity?", *Journal of Economic Literature*, 49, 2: 326-365
- Towers, B. (2007) *The Representation Gap: Change and Reform in the British and American Workplace*, Oxford: Oxford University Press
- Van Wanrooy, B., Bewley, H., Bryson, A., Forth, J., Freeth, S., Stokes, L. and Wood, S. (2013) *Employment Relations in the Shadow of Recession: Findings from the 2011 Workplace Employment Relations Study*, Palgrave MacMillan
- Walton R. E. (1972) "How to counter alienation in the plant", *Harvard Business Review* 50, 6: 70–81
- Walton, R. E. (1985) "From commitment to control in the workplace", *Harvard Business Review*, 63, 2: 77-84
- White, M. and Bryson, A. (2013) 'Positive Employee Attitudes: How Much Human Resource Management Do You Need?', *Human Relations*, 66, 3: 385-406
- White, M, Hill, S., Smeaton, D. and Mills, C. (2004) *Managing to Change? British Workplaces and the Future of Work*, Palgrave MacMillan
- Williamson, J. (2013) *Workers on the Board: the case for workers' voice in corporate governance*, TUC: London
- Willman, P., Bryson, A., Gomez, R. and Kretschmer, T. (2014) "Employee voice and the transaction cost economics project", Paper 4 in A. Wilkinson, J. Donaghey, T. Dundon, R. Freeman (eds.) *Handbook of Research on Employee Voice*, pp. 52-65, Edward Elgar, Cheltenham
- Wood, S. and Bryson, A. (2009) 'High involvement management', Paper 7 in W. Brown, A. Bryson, J. Forth and K. Whitfield (eds.) *The Evolution of the Modern Workplace*, pp. 151-175, Cambridge University Press

Wu, N., Hoque, K., Bacon, N., Llusrar, J. C. B. (2017) "High performance work systems and workplace performance in small, medium-sized and large firms", *Human Resource Management Journal*, 25, 4: 408-423

Appendix Table A1: Management Practices

HRM Domain:	HRM measures for each domain:	KR20
Incentives (0,4)	Any performance pay; managers appraised; 100% non-managers appraised; non-manager appraisal linked to pay	0.22
Records (0,9)	Sales, costs, profits, labour costs, productivity, quality, turnover, absence, training	0.71
Targets (0,11)	Volume, costs, profits, ULCs, productivity, quality, turnover absence, training, job sat, client sat	0.79
Teams (0,4)	100% largest non-managerial occupation in teams; teams depend on each other to perform work; team responsible for products and services; team jointly decides how to do the work	0.59
Training (0, 5)	80% largest non-managerial occupation had on-job training lasts 12 months; workplace has strategic plan with employee focus; Investors in People Award; standard induction programme for new staff in largest non-managerial occupation; number of different types of training provided is above population median.	0.45
TQM (0, 3)	Quality circles; benchmarking; formal strategic plan for improving quality.	0.24
Participation (0,5)	Formal survey of employee views in last 2 years; management-employee consultation committee; workforce meetings with time for questions; team briefings with time for questions; employee involvement initiative introduced in last 2 years.	0.38
Selection (0,7)	References used in recruitment; recruitment criteria include skills; recruitment criteria include motivation; recruitment criteria include qualifications; recruitment criteria include experience; recruitment includes personality or aptitude test; recruitment includes competence or performance test.	0.31

Note: KR20 is the Kuder-Richardson coefficient of reliability used for dichotomous items.