

[Very preliminary, not to be quoted]

Workplace gender diversity and employee well-being in Britain: a WERS2004 based analysis

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Abstract

There has been considerable change in diversity at workplaces in Britain in recent years, and diversity policy is taking centre stage in employers' recruitment practices both in public and private sectors. The increasing diversity and interventions meant to promote and/or protect it are despite evidence of widespread discrimination at workplaces in Britain. If discrimination is as widespread as the existing evidence suggests, the growing diversity - especially if driven by labour cost considerations, rather than by active equality policies supplementing anti-discrimination legislations- could well have adverse impacts on employees' well-being. This research investigates whether gender diversity has adverse impact on well-being and, if so, the role policy may play to mitigate such effects. The paper uses the 2004 British Workplace Employment Relations Survey data, a nationally representative linked employer-employee dataset of workplaces with at least five employees, and controls for a range of measurable employee, workplace and HRM practice influences as well as employing an econometric technique that accounts for unmeasured workplace influences. The findings reported in the paper suggest a well-being penalty associated with gender diversity. Although the results obtained are preliminary and to be exposed to further scrutiny, they nevertheless concur with findings in the discrimination literature. The obvious prescription in this circumstance is that of pursuing active policies with training and development-focused initiatives aimed at fostering gender equality and minimizing/mitigating the adverse well-being effect of gender diversity

Key words: *Diversity, well-being, linked employer-employee data, Britain*

JEL classification: *J82, J7, I31*

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1. Introduction

There has been considerable change in the diversity of employees at workplaces in Britain in recent years. This is attributed to some important developments including tight labour market conditions, demographic changes and regulatory measures. There are various reasons why employers may opt for a diverse workforce. At one pole, some employers may promote diversity to reduce labour costs or to cope with supply shortages. At the opposite pole, some employers may believe that diversity offers business advantage or support the ethical proposition that employees should be valued as individuals (CIPD 2003; Jones 2006). Regardless of the underlying reasons, diversity policy has taken centre stage in employers' recruitment practices both in public and private sectors.¹

The increasing diversity and interventions meant to promote and/or protect it are taking place despite mounting evidence of widespread discrimination on race and/or ethnicity (Frijters *et al.* 2006, Shields and Price 2002, Pudney and Shields 2000a, Pudney and Shields 2000b), gender (Peccei and Lee 2005, Jones *et al.* 2003, Wright and Ermisch 1991) and disability (Jones *et al.* 2003, Madden 2004) in workplaces in Britain.² If discrimination is as widespread as these studies indicate, the growing diversity – particularly if driven by labour cost considerations, rather than by active equality policies supplementing anti-discrimination legislations – could well have adverse impacts on employees' well-being. On the impact of diversity on well-being, there are very few studies in Britain (Frijters *et al.* 2006, Peccei and Lee 2005, Shields and Price 2002), and they all focus on a single aspect of diversity. Nevertheless, some of these studies (Frijters *et al.* 2006 and Shields and Price 2002) highlight an important challenge for policy in that they find adverse effect of diversity on well-being, in line with predictions of economic theories of discrimination. Does this mean that diversity, in all its different forms, has adverse impact on well-being? Conversely, what role can policy play to mitigate such effects? There could be circumstances under which the impact of diversity on well-being could be positive. For example, Kochan *et al.* (2003) reported adverse effects of racial diversity on team processes being mitigated through training and development-focused initiatives. On the contrary, other studies, for example Peccei and Lee (2005) and Fields and Blum (1997), find that workers in gender-balanced groups have higher level of job satisfaction vis-à-vis those working in homogeneous groups.

There are two main issues emerging from the existing research. First, the scope in which diversity itself is defined. In this regard, some argue that diversity has not been studied in its various forms. Jackson *et al.* (2003), for example, state that studies on diversity have not been able to capture the impact on well-being of the full spectrum of workplace diversity. Others, on the other hand, argue that diversity is best studied when defined narrowly. Harrison and Sin (2006) argue that “diversity is meaningful only when it is narrowly defined or dimensionalized” (p. 199). Secondly, the impact of diversity on well-being has not been firmly established, with impacts being sometimes positive and sometimes negative. This may be due to different reasons including the way diversity is defined and the particular measure of well-being considered.

This paper attempts to establish the wellbeing effect of gender diversity and is the first in a series of papers analysing workplace diversity along the dimensions of gender, ethnicity,

¹ For example, a recent CIPD report on recruitment and retention indicates one in four employers has an explicit diversity policy that is also supported by a range of active practices (White *et al.* 2004, Hoque and Noon 2004, Perotin and Robinson 2000).

² Berthoud and Blekesaune (2007) also discuss issues of employment disadvantage faced by certain social groups - ethnic minorities, women, some religious groups and the disabled - in Britain in a recent report.

disability and age. For the purpose, it defines a measure of workplace diversity following Blau (1977), Harrison & Sin (2006), Leonard & Levine (2006a) and relates this to a series of wellbeing measures monitored in the WERS2004 survey. The research seeks to establish whether diversity at workplaces in Britain has any impact on employee well-being measured variously and, if so, ways in which policy might influence adverse effects, if any, that diversity may have on wellbeing. The study also attempts to establish whether there is a link between equality provisions at the workplace and the extent of workplace diversity to be able to conjecture about any gap between workplace policy statements and practice. The WERS2004 data have at least two important advantages that allow addressing the questions we pose. First, the data have more measures of employee well-being and a more extensive set of information on workplaces, employees, and human resource management practices vis-à-vis previous WERS sweeps (WERS1998), which has been used in some of the existing studies, or, for that matter, other datasets used to study diversity in the literature. This will not only allow us to investigate the impact of diversity on aspects of well-being hitherto unexplored, but we will also be able to control for more observable influences on well-being (especially in regard to workplace contextual variables) than has been done so far, thereby exhaustively isolating the impact of diversity on well-being. Secondly, the data have extensive information on different aspects of employee composition at the workplace which we use to construct various indices of diversity. That the data is a linked data also enables us to exploit the nested structure therein to control for workplace level unmeasured effects.

2. Related theory and research

2.1. Theoretical background

Diversity has been addressed through economics, sociology, and social psychology though there is some disagreement about theoretical predictions relating to its impact on well-being. In the economics context, the relevant theoretical explanations relate to theories of discrimination. The leading theories here are those that relate discrimination to either preference (Becker 1957; Arrow 1972, 1973; Phelps 1972) or information (Aigner and Cain 1977)³. The former stipulates that discrimination occurs when people behave as if they refuse to change their stereotypes about the capabilities of discriminated individuals or groups. It is to do with preference and may not change in the face of favourable information about the group. The information explanation, on the other hand, states that discrimination, that is discrimination by the employer, is the result of asymmetric information regarding the productivity of the discriminated individual and such stereotypes alter with information (Aguero 2005). There are alternative theoretical explanations in sociology, psychology and organizational demography. These explanations dwell on how the relative composition of workgroups impact psychological well-being of groups and/or individuals therein through its affect on attitudes and interactions between groups (Pfeffer 1983); there are also theories of group information and problem solving (Schippers et al. 2003), which address performance rather than well-being. The commonly used explanation include; the *similarity-attraction paradigm* which states that in the absence of detailed information about others, individuals would prefer to associate with other individuals that are visibly similar to them and the *social categorisation paradigm* (deriving chiefly from Tajfel 1978), which suggests that individuals would define others as either part of one's circle or outside of it. Applications of the latter mostly suggest that as group composition becomes more evenly balanced, well-being improves (although the opposite inference has also sometimes been drawn). Blalock (1967) offered a group size explanation that also has prominence in sociological

³ Other, more recent, theories of discrimination include those that are based on language difference (Lang 1986) and Identity (Akerlof and Kranton 2000).

and social psychological research. According to this explanation, as a minority group grows in size it would be viewed as a greater threat in the competition for scarce resources (Maume and Sebastian 2007) and this leads to increased conflict.

Following on Becker's (1957) pioneering theoretical construct, it is possible to formulate a theoretical/economic framework to study the wellbeing effect of workplace diversity. Suppose there are two groups of workers M , say males, and F , females. Assume that workers in group M have a 'test for discrimination' against members of F ; two types of theoretical models can be arrived at depending on the assumed potential effect of workplace integration on wellbeing. First, assume the case where wellbeing does not vary with the extent of integration at the workplace so that;

$$wb_M = (1 - di)wb_F$$

where wb stands for well-being; $d > 0$ and $i = 1$ if the workforce is integrated and 0 otherwise.

Secondly, assume that the impact of diversity on well-being varies with the proportion of the F workers at the workplace. In this case, the well-being of the M workers will be a negative function of the proportion of the F workers, i.e.,

$$wb_M = f(e_F/e_T)$$

where $f' < 0$ and where e_T is the sum of M employment and F employment. Replacing $(.)$ by an index function of the sort outlined earlier – instead of proportions – should allow addressing issues of non-linearity that may be essential here.

2.2. Review of the literature

Diversity research concerns the heterogeneity of employees within a workgroup of interest along various demographic, occupational, and psychological characteristics, among others, within workgroups of interest. Gender, ethnicity, and age are the most commonly studied elements of diversity, and while numerous other dimensions have been or might be considered, these categories are of particular interest because of their connection with discrimination and inequality. However, the existing literature, tells us little concerning well-being. This is not because of a dearth of diversity research: Jackson et al. (2003) found 63 studies for the period 1997-2002, but noted that these contained very little about affective outcomes. Earlier reviews (e.g., Millikin and Martins 1996) tended to conclude that diversity, in general, was associated with reduced satisfaction at work, but this seems to have been based on weak evidence. Fields and Blum (1997) pointed out that the evidence on diversity and satisfaction was drawn from a few studies using old, non-representative, and/or poorly controlled data; Maume and Sebastian (2007) made much the same criticisms. Peccei and Lee (2005) found eight US studies assessing the relation of gender proportions to satisfaction, but similarly noted the paucity of control information in these studies.

Part of the reason for this dearth of evidence on well-being is that most diversity research, largely taking place in the USA, has not pursued the connection with inequality. The leading studies there (e.g. Jehn et al. 1999; Jackson and Joshi 2004; Kochan et al. 2003; Pelled et al. 1999; Leonard and Levine 2006a, 2006b) have been typically conducted in a single large organization, with an active policy of encouraging diversity,

and compared performance outcomes across multiple teams that vary in levels of one or several types of diversity.

As well as this US dominated literature on diversity, there are a few British studies, some with an economic and others with a sociological perspective. In a recent study that focus on ethnic diversity, Frijters *et al.* (2006) find job satisfaction of whites to be significantly lower in workplaces with a high density of ethnic minorities, indicating the adverse impact of ethnic/gender diversity. Peccei and Lee (2005) study the impact of gender diversity on job satisfaction and find that gender similarity has a positive impact on job satisfaction, particularly for men. Other studies of oblique interest to diversity research include Rose (2005), which finds some evidence of gender diversity in the trends of job satisfaction in the 1990s and Shields and Price (2002) who find that ethnic minority nurses experience a significant reduction in job satisfaction due to racial harassment. On issues of methodology, the need to control for as many observable influences as possible has been emphasised in previous studies. For example, Peccei and Lee (2005) stress this point in a study of job satisfaction. Maume and Sebastian (2007) also reinforce this point. They find diversity (proportion from minority groups) to be negatively related to the job satisfaction of white employees in the absence of controls, but the effect is removed when job characteristics are controlled for. The data we use allow us to control for such influences much more comprehensively than in previous research. The issue of interaction effects is also another point emphasised by some studies. Pelled *et al.* (1999) point to a variety of interaction effects between diversity and task characteristics that are worth investigating. Leonard and Levine (2006a) suggest interacting measures of diversity with group dummies to isolate possible differences in the way different groups react to diversity.

Differentiating between a genuinely committed and strategic diversity policy and cases where employers pay lip-service to diversity and equal opportunities but lack systematic action is important. Bertrand and Mullainathan (2004), and Pager and Quillian (2005), provide evidence that often underlines the gap between policy statements and practice. Also, the 'management of diversity' is increasingly seen as part of the human resource management portfolio (CIPD 2003), and by considering the two jointly we aim to test whether there is genuine commitment towards diversity policy. To address these issues, we construct summary measures of workforce practices and also conduct sensitivity analysis.

3. Data and empirical methodology

3.1 Data

The data used in this paper come from the 2004 British Workplace Employment Relations Survey (WERS2004), which is one of the most authoritative sources of information on employment relations in Great Britain. It offers linked employer-employee data representative of all workplaces with five or more employees.⁴ The WERS2004 survey covers a whole host of issues relating to both employers and employees, allowing the inclusion of an array of individual and workplace level attributes into the analysis undertaken in this paper. The estimation sub-sample used in this study comprises of 18029 employees in some 1,456 workplaces with complete information on all the variables of interest.⁵ A summary of the explanatory variables used in the empirical modelling is given in Table A8 in the Appendix. These include: (i) employee-level correlates such as demographic and human capital characteristics, occupation, tenure, pay

⁴The survey population was all British workplaces but those in Agriculture, hunting & forestry, fishing, mining & quarrying, private households with employed persons, extra-territorial organizations and bodies comprising of at least five employees (Kersley *et al.* 2006).

⁵ This is from the original/starting sample of 22451 employees in 2295 workplaces.

as well as correlates reflecting employees' assessment of job-level gender segregation and skills match, and (ii) workplace-level correlates such as establishment size, industry and region.

There are three sets of variables that form the basis of this study. The first set of variables relates to WERS2004 survey questions that monitor how satisfied employees are with aspects of their job. The survey asked each employee to rate – on a five-point scale from 'very satisfied' to 'very dissatisfied' – how satisfied they were on: (i) the sense of achievement they get from their work; (ii) the scope for using their own initiative; (iii) the amount of influence they have over their job; (iv) the training they receive; (v) the amount of pay they receive; (vi) their job security; (vii) their work itself and (viii) their involvement in decision making. For the purpose of the empirical analysis undertaken, each of the 'facet' satisfaction variables with five categories has been collapsed into a binary variable that assumes a value of one if an employee is 'very satisfied' or 'satisfied' and zero otherwise. An overall satisfaction indicator has also been generated on the basis of the scale constructed from the eight dummy variables. The second set of variables relates to the survey questions that monitor job related anxiety. There are six questions that probe as to how much of the time over the past few weeks – on a five-point scale from 'all of the time' to 'Never' – employees felt (i) tense; (ii) calm; (iii) relaxed; (iv) worried; (v) uneasy, and (vi) content. As before, each of these job related anxiety measures has been collapsed into a dummy variable that assumes a value of one if an employee responded 'all of the time' for the positive questions or 'never' for the negative ones and zero otherwise.⁶ An overall job related anxiety measure has also been generated on the basis of a scale constructed from the six dummies. To proxy employee well-being, we also construct an all encompassing well-being variable on the basis of the scale obtained from the eight facets of satisfaction and the six measures of job related anxiety. Table A7 in the appendix reports some descriptive statistics of each of these 17 outcome variables.

The third set of variables that deserve particular discussion here are those relating to establishment level workforce composition. WERS2004 monitors establishment level workforce composition along several dimensions including; (i) gender; (ii) ethnicity (white/non-white); (iii) disability, and (iv) age (50 or over). Using the information on each of these and the total number of employees on payroll at the establishment, diversity indices that reflect the degree of balance in the workforce composition of workplaces in Britain along the four measures have been constructed (more discussion on how the indices are constructed in the next sub-section).

Various studies have defined diversity as the proportion/percentage of the minority group in question. However, such a measure fails short of capturing diversity. In their recent study, Leonard and Levine (2006a) elucidate the shortcomings of such an approach on two important grounds. First, using percentage measures of workforce composition fails to distinguish diversity from (minority) group effects. Secondly, it fails to address issues of nonlinearity. We use Blau's Index (Blau 1977) to construct diversity indices (see next section on this) which address these two issues. Also, interacting each of the diversity indices with dummies for different demographic groups, say gender or race, allows capturing possible group differences in the response to workplace diversity which we explore. Tables A1 through A5 in the Appendix give average measures of overall and subgroup workforce diversity along the four measures mentioned, together with

⁶ By way of addressing possible concerns regarding the miss-classification of these responses, a set of ordinal measures of satisfaction and job related anxiety have also been generated. Findings from these versions will appear in upcoming revisions of this paper.

percentages of workforce composition. As would be expected and as reported in Table A1 in the Appendix, gender signifies the most balance in workforce composition, followed by being 50 years or over. In contrast, long-term work limiting disability and ethnicity indicate the least balance in 2004 workforce composition. Tables A2 – A5 report percentages and diversity indices by major sub-groups including (i) weekly pay, (ii) establishment size, (iii) occupation, (iv) industry, (v) type of ownership, and government office region. Focusing on gender, women occupy the lowest weekly pay scales (68.4%) (and full-time employment – 43.5%); relatively smaller sized establishments (58%); personal service (76.8%) and sales & customer service occupations (65.6%); the health (78.6%) and education (74.6%) industrial sector, and public sector (63.8%) vis-à-vis their men counterparts. Unlike ethnicity based measures, where there is considerable regional imbalance in workforce composition, there is a fairly balanced gender composition of employees across the regions.

Table A6 in the appendix reports some crude measures of High Performance Work Systems (HPWS), a summary of which has been used in a version of each of the empirical modelling undertaken.⁷ These measures are categorised along seven sub-themes comprising of (i) the practice of recruitment & fair treatment at work; (ii) appraisal & grievance procedures; (iii) management active policy practices; (iv) flexible work arrangement; (v) pay & incentive systems including sharing arrangement, (vi) employee participation, and (vii) union representation & management-employee communication. The reported summary measures indicate considerable differences in the distribution of the HPWS summary measures by workplace characteristics, particularly establishment size. This may not be totally unexpected given that at least some of the HPWS practices may not be relevant or even appropriate for smaller establishments that may not be diverse due partly to their small size. If this is so, the construction of summary measures of HPWS and/or their use in further analysis of workplace diversity and its impact on employee outcome needs to take this point into account. This is particularly important in view of the evidence in the existing literature that points towards some size-related disparity in diversity and/or equality concerns.

3.2 Empirical methodology

The first methodological issue of importance relates to the construction of the diversity indices of interest to our study in general and gender diversity in particular. We use Blau's Index⁸ (Blau 1977, Harrison & Sin 2006, Leonard and Levine 2006) to measure diversity, which is given by

$$D^k = 1 - \sum_i S_k^2,$$

where D^k represents diversity index of type k and S_k represents the share of each constituent sub-group, k , of employees in the workforce of interest. The indices defined in such a way assume a theoretical value ranging from a minimum of 0, signifying perfect homogeneity, to a maximum of 1 signifying perfect heterogeneity. In practical applications, however, the maximum value the index assumes is restricted to the ratio $(k-1)/k$ where k is the total number of categories of interest in the measurement of a

⁷ These HPWS measures are very crude and have been generated from the scale obtained from Cronbach's alpha statistics, better summary measures will follow in upcoming revisions.

⁸ This index is equal to 1 minus the Herfindahl (or Herfindahl-Hirschman) Index which is commonly used in Industrial Economics discussion regarding firm concentration.

particular type of diversity. As Leonard and Levine (2006) argue, an index constructed in this way addresses issues of non-linearity in the measurement of diversity as well as allowing distinguishing diversity from (minority) group effects, advantages that the commonly used percentage measures of diversity do not offer.

It is also vital that a study of the impact of diversity on well-being isolates confounding factors, which may be wrongly attributed to diversity, from effects that can truly be attributed to diversity. This necessitates controlling for as many observable employee, workplace and HRM practice related influences as possible, in addition to employing statistical techniques that account for unobserved influences. We use a whole host of observable employee and workplace covariates. As well as this, we also account for workplace level unobserved characteristics by exploiting the nested structure of the WERS data, which is best modelled using multilevel modelling framework. With few exceptions (for example, Shields and Wheatley 2002, Frijters *et al.* 2006, Leonard and Levine 2006a, 2006b), most of the studies investigating the issue of diversity do not account for unmeasured influences that may possibly confound the effect of diversity. Such effects may be particularly important at the workplace level considering that variations in the effects of diversity and the policies which seek to counteract discrimination are likely to be found among workplaces given possible differences in their employment policies. Taking this into account, we propose to use multi-level analytical designs which, as advocated by Jackson *et al.* (2003), are more attractive.⁹

The level and type of diversity observed at workplaces as well as policies therein are less likely to represent random phenomena, given the role employer and employee preferences may play. To the extent that this is the case, addressing the issue of non-randomness becomes crucial. We account for potential non-randomness by employing statistical techniques that enable us to disentangle workplace unobserved influences that characterise such non-randomness. We do this primarily by exploiting the nested structure of the WERS 2004 data, where employees (level-1 units) are nested within workplaces (level-2 units). Thus, the impact of gender diversity on well-being (wb) can be modelled using the random intercept (Skrondal and Rabe-Hesketh 2004, Rodriguez and Goldman 2001, Goldstein and Rasbash 1996) model. Indexing employees and workplaces by i and j , respectively, the model can be specified as;

$$wb_{ij} = \eta_{0j} + \beta_1 D_j^g + \beta_2 x_{ij} + \beta_3 x_j + \varepsilon_{ij},$$

where η_{0j} are establishment specific intercepts, D_j^g represents gender diversity measured as an index and β_1 is the coefficient associated with gender diversity, x_{ij} represents employee level covariates with associated coefficient of β_2 , x_j represents establishment specific covariates, including summary measures of workforce practice, with corresponding coefficient β_3 , and ε_{ij} representing employee level residual terms. The intercept term η_{0j} has a workplace random component so that;

$$\eta_{0j} = \gamma_{00} + \xi_{0j},$$

⁹ It is essential that employee and establishment level weights are used, if one is to extrapolate the findings of our research to the population of workplaces in the UK. The estimation results reported in Tables 1 – 17 do not use weights, something to be included in subsequent revisions of this paper.

where the γ_{00} is the mean intercept and ξ_{0j} represents the random effect or the deviation of the establishment specific intercept η_{0j} from the mean. Letting $\theta \equiv \text{Var}(\varepsilon_{ij})$ and $\psi \equiv \text{Var}(\xi_{0j})$, the two level random intercept multilevel model we employ assumes that the clusters j are independent and satisfy the assumptions;

$$\begin{aligned}\varepsilon_{ij} | x_{ij} &\sim \text{N}(0, \theta), \\ \text{Cov}(\varepsilon_{ij}, \varepsilon_{i'j}) &= 0, \quad i \neq i' \\ \xi_{0j} | x_{ij} &\sim \text{N}(0, \psi), \\ \text{Cov}(\xi_{0j}, \varepsilon_{ij}) &= 0.\end{aligned}$$

Substituting equation (2) into equation (1), the full model is given by;

$$wb_{ij} = \gamma_{00} + \beta_1 D_j^k + \beta_2 x_{ij} + \beta_3 x_j + \xi_{0j} + \varepsilon_{ij},$$

Because our well-being indicators are binary variables, we need to use appropriate link function, which in our case is the logit link, to be able to address issues of non-linearity in the outcome variables considered.¹⁰

4. Results and discussion

Preliminary results form the estimation of seventeen equations relating to (i) the eight facets of job satisfaction, (ii) the six measures of job anxiety, (iii) the two generated measures of overall satisfaction and overall anxiety, and (iv) an all encompassing (i+ii) measure of well-being equations are reported in Tables 1 & 2. To check for robustness, up to five versions of each of the seventeen equations have been estimated with a varying/increasing set of variables and the results obtained are pretty much consistent.¹¹ As can be seen from Tables 1 & 2, the reported estimation results are more or less in line with findings in the wider literature on the determinants of job satisfaction and/or job related anxiety. For example, the (relatively) young are significantly less likely to be satisfied vis-à-vis their older/middle aged (age 40-49) counterparts; females are significantly more likely to be satisfied compared to their male counterparts; those with lower educational qualification are more likely to be satisfied than their counterparts with higher (degree+) qualification; those with dependants are significantly less likely to be satisfied vis-à-vis their counterparts without dependents; those that are member of trade unions are significantly less likely to be satisfied etcetera (more discussion here). Also, excepting with one of the seventeen well-being equations estimated, we find a statistically significant unmeasured workplace level effect, supporting our argument for the need to account for unobserved workplace effects in a study of workplace diversity and its effect on employee outcomes.

¹⁰ The multilevel setup was to be estimated using GLLAMM. However, due to the excessively long time the glamm models take to converge the estimation results reported in this paper are obtained using random effects logit estimation procedures in STATA which give equivalent results if one ignores weights. All estimation results reported in this paper are unweighted as a result. Weighted versions of these results will be supplied in subsequent iterations of the paper.

¹¹ These results show the main effects of gender diversity. Results that include the interaction of gender diversity with gender are available up on request. It is important to identify further interaction effects which will be provided in subsequent revisions of this paper.

What is of immediate interest to this particular study is in fact the well-being effect of gender diversity, which can be read from the first row of Tables 1 & 2, for each of the seventeen well-being equations estimated. As can be seen from Table 1, the gender diversity coefficient is negative and statistically significant in four of the seven facets of job satisfaction and the overall job satisfaction equation estimated, although two of these are weakly significant. Table 2 reports estimation results relating to the effect of gender diversity on job related anxiety and overall well-being. We find negative and statistically significant effect of gender diversity on all measures of job related anxiety, including the overall job related anxiety measure. Table 2 also reports findings relating to the effect of gender diversity on (overall) well-being. This particular finding also suggests a negative but weakly significant effect of gender diversity on our 'global' measure of well-being.

5. Summary and Conclusion

This paper has investigated the well-being effect of workplace gender diversity using the WERS2004 linked employer-employee data and a statistical technique that is best suited to analysing such data. Controlling for a range of measurable employee and workplace characteristics and accounting for unmeasured workplace heterogeneity, the paper reports preliminary findings relating to the well-being effect of gender diversity. The results constitute the first in the series of outputs expected from the 'workplace diversity and employee well-being in Britain' study. Though preliminary, these findings nevertheless seem to tell the story, albeit guardedly, that there is a well-being cost associated with workplace gender diversity. These results are yet to be exposed to further scrutiny. However, a negative well-being effect of gender diversity may not be unrealistic given the existing evidence in the literature on gender discrimination. If this is so, the focus should be on ways of minimizing such adverse well-being effects of gender diversity. The key for attaining this objective may lie in pursuing active policies with training and development-focused initiatives in an attempt to foster gender equality and minimize/mitigate the adverse well-being effect of gender diversity.

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Table 1: Satisfaction with different facets of the (your) job

	Satisfaction with sense of achievement		Satisfaction with scope for own initiative		Satisfaction with influence on the job		Satisfaction with training on the job		Satisfaction with amount of pay	
	Coeff.	Z-stat	Coeff.	Z-stat	Coeff.	Z-stat	Coeff.	Z-stat	Coeff.	Z-stat
Gender diversity	-0.458	-2.80	0.001	0.01	-0.031	-0.21	-0.489	-2.91	0.211	1.23
Age<30	-0.278	-4.89	-0.093	-1.64	-0.110	-2.10	0.172	3.22	0.066	1.16
Age30-39	-0.096	-1.88	-0.006	-0.12	-0.013	-0.27	-0.010	-0.21	-0.012	-0.24
Age50-59	0.194	3.64	0.073	1.38	0.069	1.45	0.107	2.22	-0.014	-0.28
Age60+	0.783	7.42	0.439	4.44	0.438	5.05	0.380	4.48	0.452	5.22
Female	0.267	5.51	0.165	3.40	0.137	3.08	0.198	4.44	0.343	7.26
Married	0.150	3.69	0.187	4.64	0.098	2.64	-0.003	-0.09	0.113	2.83
White	-0.102	-1.26	0.052	0.65	-0.023	-0.32	-0.143	-1.88	0.174	2.12
Children <7yrs old	0.035	0.68	0.060	1.15	0.058	1.23	-0.026	-0.54	0.015	0.30
Other dependents	-0.129	-2.66	-0.114	-2.37	-0.110	-2.48	-0.156	-3.46	-0.103	-2.15
Disabled	-0.250	-4.67	-0.196	-3.68	-0.238	-4.78	-0.176	-3.47	-0.163	-2.98
No academic qualification	0.294	3.98	0.267	3.64	0.243	3.62	0.374	5.52	0.091	1.28
O-level	0.154	2.53	0.107	1.75	0.109	1.96	0.244	4.32	0.089	1.51
A-level	0.059	0.81	-0.043	-0.59	-0.072	-1.06	0.121	1.75	0.037	0.51
Other qualification	0.115	2.12	0.090	1.64	0.000	0.01	0.163	3.28	0.001	0.01
Missing qualification	0.373	2.41	0.417	2.68	0.207	1.53	0.272	2.01	0.128	0.90
Job done only/mainly by men	-0.053	-0.97	-0.067	-1.21	-0.118	-2.32	-0.234	-4.53	-0.008	-0.15
Job done only/mainly by women	-0.197	-3.83	-0.249	-4.95	-0.236	-5.11	-0.110	-2.32	-0.252	-5.06
Job done by me/self	0.272	3.38	0.364	4.39	0.507	6.92	-0.166	-2.42	0.181	2.59
Weekly pay <110	-0.233	-2.33	-0.448	-4.62	-0.532	-5.96	0.006	0.06	-0.765	-8.09
Weekly pay 111-180	-0.158	-1.89	-0.344	-4.21	-0.349	-4.66	0.016	0.21	-1.098	-13.42
Weekly pay 181-260	-0.233	-3.79	-0.388	-6.37	-0.322	-5.71	-0.070	-1.21	-1.056	-16.78
Weekly pay 261-360	-0.204	-3.87	-0.294	-5.57	-0.296	-6.11	-0.182	-3.69	-0.775	-14.75
Tenure <1 year	0.283	4.36	-0.007	-0.10	-0.079	-1.35	0.273	4.57	0.378	6.12
Tenure 1-2 years	0.137	2.07	-0.063	-0.96	-0.120	-1.99	0.086	1.41	-0.007	-0.11
Tenure 2-5 years	0.076	1.43	-0.092	-1.74	-0.137	-2.84	-0.007	-0.15	-0.023	-0.45
Tenure 5-10 years	0.096	1.73	-0.003	-0.05	-0.041	-0.80	-0.054	-1.05	0.00	0.00
On permanent contract	0.108	1.54	0.201	3.00	0.164	2.64	0.233	3.65	-0.048	-0.73

Full-time	0.013	0.21	-0.013	-0.21	-0.053	-0.94	0.137	2.40	-0.487	-8.17
Work over 48hrs	0.127	3.03	0.150	3.59	0.071	1.86	-0.051	-1.31	-0.139	-3.35
Skill req. is higher	-0.364	-9.74	-0.450	-12.03	-0.278	-8.27	-0.357	-10.58	-0.450	-12.68
Skill req. is lower	-0.705	-8.89	-0.677	-8.52	-0.685	-8.97	-0.770	-9.68	-0.285	-3.50
Professional occupation	-0.141	-1.67	-0.403	-4.68	-0.582	-7.77	-0.125	-1.70	-0.280	-3.75
Associate professional or technical	-0.218	-2.91	-0.320	-4.10	-0.475	-6.98	-0.154	-2.34	-0.408	-6.05
Admin & secretarial	-0.594	-7.93	-0.640	-8.25	-0.643	-9.32	-0.243	-3.62	-0.259	-3.75
Skilled trades	-0.296	-3.14	-0.517	-5.36	-0.625	-7.23	-0.176	-2.03	-0.429	-4.75
Personnel services	-0.075	-0.74	-0.376	-3.83	-0.626	-7.25	-0.017	-0.20	-0.562	-6.15
Sales & customer services	-0.729	-7.27	-0.739	-7.28	-0.889	-9.47	0.056	0.60	-0.329	-3.27
Process, plant & machine operatives	-0.841	-9.17	-0.952	-10.15	-0.999	-11.58	-0.012	-0.14	-0.365	-4.01
Elementary occupations	-0.751	-8.61	-0.664	-7.44	-0.659	-8.17	-0.007	-0.09	-0.317	-3.78
Trade union member	-0.295	-6.54	-0.268	-6.04	-0.274	-6.69	-0.006	-0.15	-0.186	-4.11
Log of workplace age	0.022	1.09	-0.025	-1.31	-0.015	-0.87	0.016	0.73	-0.030	-1.40
Privately owned establishment	0.218	3.39	0.206	3.42	0.274	4.91	0.076	1.14	0.161	2.37
Establishment size 5-9	0.664	4.36	0.399	2.77	0.491	3.69	0.211	1.38	0.373	2.38
Establishment size 10-24	0.402	3.28	0.336	2.89	0.403	3.72	0.064	0.49	0.471	3.53
Establishment size 25-49	0.266	2.22	0.183	1.63	0.204	1.93	0.044	0.35	0.225	1.71
Establishment size 50-99	0.316	2.62	0.231	2.03	0.267	2.51	0.061	0.47	0.234	1.76
Establishment size100-199	0.132	1.11	0.013	0.11	0.019	0.18	-0.003	-0.02	0.295	2.22
Establishment size200-499	0.143	1.18	0.127	1.11	0.165	1.52	0.159	1.20	0.264	1.95
Establishment size500-999	0.303	2.25	0.088	0.69	0.145	1.21	-0.043	-0.29	0.170	1.13
Establishment size1000-1999	0.210	1.36	0.046	0.32	0.031	0.22	0.137	0.82	0.278	1.63
Manufacturing	-0.187	-2.29	-0.030	-0.38	0.071	0.95	-0.219	-2.46	0.076	0.84
Construction	0.240	2.09	0.306	2.76	0.432	4.21	0.180	1.50	0.268	2.22
Whole sale & retail Trade	0.139	1.54	0.147	1.69	0.291	3.55	-0.025	-0.27	-0.209	-2.15
Hotel, rest & transport	0.013	0.14	-0.017	-0.20	0.100	1.24	0.067	0.70	0.216	2.22
Public & community services	0.225	2.69	0.146	1.85	0.217	2.92	0.152	1.70	0.089	0.98
Education	0.681	6.63	0.532	5.52	0.419	4.72	0.251	2.39	0.340	3.20
Health	0.507	5.46	0.477	5.47	0.422	5.28	0.594	6.30	0.222	2.34
North East	-0.034	-0.32	-0.005	-0.05	-0.094	-1.01	-0.031	-0.28	0.101	0.88
Yorkshire & the Humber	0.081	0.93	0.055	0.67	0.011	0.14	0.016	0.18	0.265	2.82

East Midlands	-0.074	-0.81	0.123	1.41	-0.062	-0.76	0.024	0.24	0.175	1.76
West Midlands	0.005	0.07	0.019	0.25	-0.010	-0.13	0.023	0.27	0.085	0.97
East of England	-0.066	-0.80	-0.061	-0.80	-0.101	-1.39	-0.047	-0.53	0.000	0.00
London	-0.132	-1.65	-0.166	-2.19	-0.122	-1.71	-0.083	-0.98	-0.113	-1.31
South West	0.015	0.18	-0.002	-0.02	-0.019	-0.26	0.075	0.86	0.019	0.21
Scotland	-0.088	-1.15	-0.105	-1.46	-0.141	-2.07	-0.060	-0.73	0.179	2.14
Wales	0.137	1.33	0.176	1.79	0.087	0.97	0.177	1.63	0.044	0.39
Summary measure of HPWS	-0.045	-1.02	-0.094	-2.29	-0.103	-2.66	-0.019	-0.40	-0.090	-1.90
Constant	0.885	3.85	1.227	5.53	0.764	3.72	-0.174	-0.75	0.016	0.07
\square	0.049		0.032		0.0342		0.0876		0.08235	
LR test of $\rho=0$	93.400		43.31		64.19		346.880		264.29	
Log-likelihood	-10203.51		-10144.57		-11673.23		-11901.14		-10947.82	
No. of observations	18029									

Table 1 (Cont'd)

	Satisfaction with job security		Satisfaction with the work itself		Satisfaction with involvement in decision		<i>Overall (1-8) Satisfaction</i>	
	Coeff.	Z-stat	Coeff.	Z-stat	Coeff.	Z-stat	Coeff.	Z-stat
Gender diversity	-0.195	-0.94	-0.378	-2.36	-0.285	-1.73	-0.306	-1.83
Age<30	0.312	5.40	-0.153	-2.68	-0.016	-0.30	0.033	0.59
Age30-39	0.085	1.68	-0.092	-1.80	-0.003	-0.05	-0.018	-0.35
Age50-59	0.094	1.81	0.162	3.04	0.010	0.20	0.139	2.67
Age60+	0.548	5.75	0.717	6.79	0.280	3.24	0.698	7.04
Female	0.115	2.40	0.315	6.51	-0.023	-0.49	0.285	5.95
Married	0.101	2.48	0.116	2.83	0.115	2.93	0.147	3.67
White	0.111	1.37	0.098	1.24	0.074	0.94	-0.032	-0.40
Children <7yrs old	-0.055	-1.09	0.093	1.80	-0.004	-0.08	0.003	0.06
Other dependents	-0.218	-4.58	-0.110	-2.25	-0.072	-1.54	-0.218	-4.61
Disabled	-0.186	-3.45	-0.224	-4.19	-0.158	-2.96	-0.271	-5.14
No academic qualification	0.230	3.15	0.455	6.15	0.033	0.46	0.341	4.70
O-level	0.020	0.32	0.229	3.79	0.124	2.13	0.172	2.88
A-level	0.134	1.81	0.139	1.89	0.070	0.98	0.043	0.59
Other qualification	0.046	0.86	0.154	2.87	0.024	0.47	0.115	2.17
Missing qualification	0.070	0.48	0.204	1.37	0.089	0.64	0.395	2.62
Job done only/mainly by men	-0.185	-3.34	-0.065	-1.19	-0.236	-4.37	-0.151	-2.78
Job done only/mainly by women	-0.118	-2.28	-0.150	-2.91	-0.140	-2.89	-0.267	-5.28
Job done by me/self	-0.029	-0.39	0.272	3.39	0.258	3.71	0.275	3.47
Weekly pay <110	0.107	1.06	-0.054	-0.53	-0.476	-5.07	-0.391	-3.96
Weekly pay 111-180	-0.064	-0.76	-0.165	-1.96	-0.436	-5.52	-0.469	-5.72
Weekly pay 181-260	-0.063	-0.99	-0.222	-3.61	-0.484	-8.02	-0.464	-7.60
Weekly pay 261-360	-0.243	-4.58	-0.268	-5.13	-0.424	-8.22	-0.459	-8.80
Tenure <1 year	-0.022	-0.34	0.315	4.81	0.238	3.89	0.232	3.61
Tenure 1-2 years	-0.021	-0.31	0.130	1.97	0.045	0.71	0.046	0.70
Tenure 2-5 years	-0.059	-1.11	0.063	1.19	-0.019	-0.37	-0.046	-0.89
Tenure 5-10 years	-0.018	-0.32	0.053	0.95	-0.032	-0.60	-0.017	-0.31
On permanent contract	1.374	19.94	0.090	1.27	0.116	1.76	0.395	5.91

Full-time	-0.065	-1.04	-0.087	-1.37	0.032	0.54	-0.066	-1.09
Work over 48hrs	-0.073	-1.75	0.119	2.85	0.166	4.12	0.052	1.25
Skill req. is higher	-0.196	-5.36	-0.407	-10.85	-0.353	-10.13	-0.479	-13.06
Skill req. is lower	-0.480	-5.88	-0.655	-8.23	-0.647	-7.69	-0.813	-10.29
Professional occupation	-0.029	-0.36	-0.149	-1.82	-0.834	-11.17	-0.464	-5.59
Associate professional or technical	-0.127	-1.80	-0.110	-1.50	-0.700	-10.51	-0.463	-6.20
Admin & secretarial	-0.055	-0.76	-0.399	-5.39	-0.965	-14.05	-0.695	-9.23
Skilled trades	-0.204	-2.21	-0.289	-3.13	-1.134	-12.60	-0.621	-6.67
Personnel services	-0.341	-3.59	0.011	0.11	-0.904	-10.28	-0.510	-5.26
Sales & customer services	-0.165	-1.58	-0.504	-5.00	-1.006	-10.25	-0.759	-7.46
Process, plant & machine operatives	-0.021	-0.22	-0.574	-6.30	-1.304	-14.16	-0.860	-9.28
Elementary occupations	-0.050	-0.56	-0.613	-7.07	-0.956	-11.58	-0.688	-7.82
Trade union member	-0.211	-4.53	-0.212	-4.71	-0.240	-5.41	-0.307	-6.87
Log of workplace age	0.053	1.99	0.025	1.30	-0.020	-0.98	0.005	0.23
Privately owned establishment	0.052	0.63	0.215	3.43	0.162	2.47	0.174	2.64
Establishment size 5-9	0.231	1.21	0.291	1.96	1.111	7.33	0.630	4.05
Establishment size 10-24	0.220	1.33	0.192	1.59	0.682	5.29	0.411	3.23
Establishment size 25-49	-0.056	-0.34	0.102	0.87	0.361	2.85	0.194	1.56
Establishment size 50-99	0.077	0.47	0.094	0.80	0.353	2.76	0.241	1.92
Establishment size 100-199	-0.049	-0.29	-0.008	-0.07	0.125	0.97	0.082	0.66
Establishment size 200-499	-0.182	-1.08	0.033	0.28	0.162	1.24	0.119	0.94
Establishment size 500-999	-0.287	-1.55	-0.014	-0.11	0.236	1.63	0.146	1.04
Establishment size 1000-1999	-0.226	-1.06	-0.052	-0.35	0.105	0.63	0.070	0.44
Manufacturing	-0.188	-1.72	-0.122	-1.53	0.014	0.16	-0.083	-0.97
Construction	0.397	2.64	0.140	1.27	0.458	3.92	0.418	3.50
Whole sale & retail Trade	0.495	4.25	0.236	2.64	0.223	2.39	0.249	2.66
Hotel, rest & transport	0.294	2.48	0.162	1.85	0.075	0.79	0.090	0.97
Public & community services	0.217	1.95	0.256	3.13	0.091	1.05	0.281	3.24
Education	0.622	4.74	0.571	5.72	0.569	5.52	0.685	6.55
Health	0.694	5.94	0.384	4.26	0.383	4.19	0.668	7.06
North East	-0.041	-0.29	-0.050	-0.49	-0.150	-1.35	-0.167	-1.53
Yorkshire & the Humber	0.073	0.62	0.098	1.14	0.109	1.21	0.091	1.00

East Midlands	0.008	0.06	0.008	0.09	0.062	0.64	0.079	0.82
West Midlands	-0.014	-0.13	0.005	0.06	0.035	0.42	0.031	0.37
East of England	-0.197	-1.80	-0.048	-0.60	-0.105	-1.22	-0.179	-2.11
London	-0.035	-0.34	-0.253	-3.27	-0.079	-0.95	-0.195	-2.36
South West	-0.043	-0.39	0.048	0.59	0.114	1.34	0.050	0.58
Scotland	0.060	0.57	-0.073	-0.97	-0.023	-0.29	-0.077	-0.96
Wales	-0.052	-0.39	0.066	0.65	0.239	2.27	0.127	1.19
Summary measure of HPWS	-0.079	-1.35	-0.045	-1.05	-0.048	-1.05	-0.088	-1.94
Constant	-0.858	-3.12	0.777	3.44	0.087	0.38	0.955	4.11
\square	0.161525		0.04182		0.073484		0.064054	
LR test of rho=0	844.08		68.78		217.7		160.87	
Log-likelihood	-10947.07		-10132.73		-11173.26		-10582.67	
No. of observations	18029							

Table 2: Measures of job related anxiety

	Do not feel tense		Feel calm		Feel relaxed		Do not feel worried		Do not feel uneasy	
	Coeff.	Z-stat	Coeff.	Z-stat	Coeff.	Z-stat	Coeff.	Z-stat	Coeff.	Z-stat
Gender diversity	-0.666	-3.28	-0.892	-2.63	-1.086	-2.90	-0.494	-2.98	-0.546	-3.69
Age<30	-0.088	-1.09	-0.445	-2.91	-0.413	-2.47	-0.093	-1.41	0.080	1.41
Age30-39	-0.128	-1.71	-0.245	-1.75	-0.140	-0.92	0.032	0.54	0.147	2.86
Age50-59	-0.043	-0.57	0.050	0.38	-0.023	-0.15	0.069	1.15	0.046	0.86
Age60+	0.378	3.47	0.655	3.94	0.846	4.76	0.470	5.12	0.506	5.97
Female	-0.281	-3.94	-0.275	-2.18	-0.414	-3.01	-0.296	-5.20	0.044	0.91
Married	0.056	0.95	-0.025	-0.24	-0.142	-1.27	-0.033	-0.72	0.060	1.47
White	-0.106	-0.94	-1.063	-7.09	-0.675	-3.71	0.107	1.14	0.093	1.15
Children <7yrs old	0.059	0.81	0.010	0.07	0.189	1.30	-0.047	-0.80	-0.004	-0.09
Other dependents	-0.260	-3.58	-0.116	-0.93	-0.165	-1.17	-0.281	-4.88	-0.190	-3.85
Disabled	-0.308	-3.72	-0.276	-1.89	-0.243	-1.52	-0.220	-3.43	-0.222	-3.95
No academic qualification	0.561	5.37	0.717	3.68	0.876	4.02	0.355	4.28	0.317	4.36
O-level	0.307	3.29	0.369	1.99	0.429	2.08	0.277	3.80	0.245	3.97
A-level	0.244	2.18	0.123	0.54	0.030	0.12	0.133	1.50	0.168	2.23
Other qualification	0.118	1.33	0.136	0.74	0.248	1.22	0.082	1.19	0.130	2.31
Missing qualification	0.666	3.73	0.707	2.38	0.619	1.78	0.532	3.57	0.171	1.21
Job done only/mainly by men	0.002	0.02	-0.346	-2.42	-0.328	-2.12	0.030	0.47	0.014	0.24
Job done only/mainly by women	-0.162	-2.25	-0.404	-3.10	-0.437	-3.05	-0.121	-2.08	-0.125	-2.51
Job done by me/self	0.055	0.52	0.087	0.51	-0.084	-0.43	0.038	0.44	0.071	0.97
Weekly pay <110	0.777	6.28	1.019	4.59	1.170	4.80	0.705	6.85	0.437	4.76
Weekly pay 111-180	0.360	3.30	0.725	3.84	0.960	4.59	0.509	5.79	0.232	2.97
Weekly pay 181-260	0.370	4.36	0.528	3.44	0.687	3.99	0.364	5.36	0.186	3.11
Weekly pay 261-360	0.033	0.42	-0.019	-0.13	0.157	0.91	0.142	2.32	0.123	2.33
Tenure <1 year	0.725	8.30	0.358	2.32	0.428	2.48	0.343	4.82	0.337	5.36
Tenure 1-2 years	0.514	5.61	0.217	1.33	0.492	2.79	0.227	3.05	0.191	2.93
Tenure 2-5 years	0.205	2.65	0.052	0.39	0.251	1.67	0.114	1.88	0.131	2.48
Tenure 5-10 years	0.162	1.98	-0.029	-0.20	0.001	0.00	0.106	1.68	0.155	2.80
On permanent contract	0.043	0.49	-0.029	-0.19	-0.067	-0.41	-0.061	-0.84	0.042	0.63
Full-time	-0.263	-3.19	0.073	0.49	-0.003	-0.02	-0.225	-3.35	-0.152	-2.58

Work over 48hrs	-0.522	-8.49	-0.099	-0.91	-0.124	-1.03	-0.490	-10.11	-0.381	-9.10
Skill req. is higher	0.082	1.59	0.201	2.15	0.090	0.88	0.230	5.51	0.041	1.14
Skill req. is lower	-0.410	-3.07	-0.053	-0.23	0.043	0.19	-0.290	-2.77	-0.618	-6.53
Professional occupation	0.119	0.81	-1.130	-2.67	-0.932	-2.15	0.165	1.48	0.165	1.93
Associate professional or technical	0.306	2.46	0.154	0.67	0.259	1.05	0.286	2.99	0.162	2.13
Admin & secretarial	0.533	4.43	0.274	1.24	0.287	1.18	0.585	6.30	0.400	5.34
Skilled trades	0.892	6.56	0.954	4.01	0.635	2.34	0.921	8.62	0.525	5.64
Personnel services	0.410	2.88	0.663	2.77	0.205	0.75	0.442	3.91	0.254	2.72
Sales & customer services	0.237	1.58	0.320	1.26	0.427	1.52	0.462	3.98	0.228	2.30
Process, plant & machine operatives	0.811	6.00	0.450	1.83	0.441	1.64	1.038	9.86	0.687	7.51
Elementary occupations	0.801	6.31	0.837	3.85	0.693	2.88	0.969	9.72	0.685	8.05
Trade union member	-0.097	-1.49	-0.123	-1.03	-0.169	-1.27	-0.191	-3.71	-0.236	-5.27
Log of workplace age	0.002	0.08	0.045	1.01	0.043	0.88	-0.020	-0.98	-0.027	-1.44
Privately owned establishment	0.271	3.26	0.336	2.32	0.314	1.95	0.143	2.14	0.167	2.87
Establishment size 5-9	0.315	1.58	0.411	1.23	0.739	1.74	-0.113	-0.73	0.042	0.31
Establishment size 10-24	0.018	0.10	-0.346	-1.11	0.236	0.59	-0.372	-2.80	-0.253	-2.20
Establishment size 25-49	0.063	0.37	0.084	0.28	0.403	1.03	-0.262	-2.03	-0.156	-1.39
Establishment size 50-99	0.063	0.36	-0.013	-0.04	0.454	1.16	-0.262	-2.01	-0.113	-1.01
Establishment size 100-199	0.081	0.47	0.004	0.01	0.324	0.82	-0.098	-0.76	-0.094	-0.83
Establishment size 200-499	0.139	0.80	-0.184	-0.59	0.192	0.48	-0.062	-0.47	-0.144	-1.25
Establishment size 500-999	-0.110	-0.57	-0.506	-1.41	-0.054	-0.12	-0.200	-1.38	-0.047	-0.37
Establishment size 1000-1999	0.080	0.36	-0.124	-0.32	0.055	0.11	0.107	0.65	0.007	0.05
Manufacturing	0.209	1.90	-0.068	-0.34	-0.405	-1.89	0.172	1.98	0.024	0.31
Construction	0.077	0.53	-0.077	-0.29	-0.399	-1.36	0.007	0.06	0.109	1.05
Whole sale & retail Trade	0.180	1.55	0.479	2.51	-0.126	-0.60	0.240	2.59	0.247	2.99
Hotel, rest & transport	0.207	1.79	0.237	1.23	0.063	0.31	0.162	1.75	0.051	0.61
Public & community services	0.418	3.82	0.369	1.90	0.310	1.55	0.195	2.20	0.199	2.58
Education	0.220	1.62	-0.258	-0.99	-0.558	-1.91	-0.038	-0.35	0.296	3.20
Health	0.025	0.21	0.300	1.50	0.124	0.59	-0.075	-0.77	-0.004	-0.05
North East	0.287	2.20	0.015	0.06	0.274	1.10	0.318	3.03	0.087	0.91
Yorkshire & the Humber	0.091	0.84	0.238	1.38	0.297	1.51	0.143	1.65	0.002	0.02
East Midlands	0.054	0.47	0.069	0.37	0.184	0.88	-0.057	-0.61	0.025	0.30

West Midlands	-0.196	-1.85	-0.199	-1.12	0.131	0.70	-0.091	-1.08	-0.139	-1.89
East of England	0.032	0.31	-0.207	-1.14	-0.150	-0.72	-0.075	-0.87	0.000	0.01
London	-0.130	-1.14	-0.048	-0.27	-0.110	-0.51	-0.039	-0.44	-0.060	-0.79
South West	0.213	2.10	-0.018	-0.10	0.288	1.54	0.100	1.20	0.063	0.85
Scotland	0.409	4.31	0.035	0.21	0.103	0.53	0.238	3.03	0.030	0.43
Wales	0.020	0.15	0.455	2.24	0.686	3.15	0.037	0.35	0.033	0.35
Summary measure of HPWS	-0.047	-0.84	-0.162	-1.72	-0.082	-0.79	-0.065	-1.44	-0.046	-1.16
Constant	-2.914	-9.08	-3.425	-6.27	-4.193	-6.50	-1.788	-7.10	-1.363	-6.24
χ^2	0.0416355		0.026385		0.047786		0.0293151		0.0264052	
LR test of rho=0	20.67		1.12		2.65		23.91		29.56	
Log-likelihood	-5913.62		-2235.01		-1936.66		-8299.02		-10262.56	
No. of observations	18029									

Table 2 (Cont'd)

	Feel content		Feel composed		Overall well-being (satisfaction & job related anxiety)	
	Coeff.	Z-stat	Coeff.	Z-stat	Coeff.	Z-stat
Gender diversity	-0.677	-2.38	-0.731	-3.22	-0.275	-1.69
Age<30	-0.145	-1.19	-0.216	-2.35	-0.125	-2.24
Age30-39	-0.095	-0.83	-0.114	-1.35	-0.029	-0.59
Age50-59	-0.018	-0.16	0.093	1.12	0.074	1.48
Age60+	0.805	5.75	0.710	6.27	0.730	8.59
Female	0.137	1.33	-0.254	-3.17	0.159	3.41
Married	0.012	0.15	-0.052	-0.81	0.090	2.27
White	-0.177	-1.13	-0.153	-1.24	0.048	0.61
Children <7yrs old	-0.130	-1.13	0.123	1.51	0.076	1.55
Other dependents	-0.108	-1.05	-0.287	-3.55	-0.185	-3.92
Disabled	-0.264	-2.16	-0.268	-2.97	-0.267	-4.92
No academic qualification	0.783	5.04	0.657	5.57	0.407	5.82
O-level	0.394	2.74	0.365	3.37	0.202	3.44
A-level	0.255	1.45	0.295	2.29	0.034	0.47
Other qualification	0.306	2.29	0.119	1.13	0.075	1.45
Missing qualification	0.844	3.43	0.760	3.94	0.391	2.86
Job done only/mainly by men	-0.172	-1.39	-0.022	-0.25	-0.128	-2.37
Job done only/mainly by women	-0.386	-3.75	-0.208	-2.57	-0.253	-5.18
Job done by me/self	0.167	1.22	0.035	0.30	0.238	3.44
Weekly pay <110	0.604	3.37	0.861	6.24	-0.105	-1.14
Weekly pay 111-180	0.343	2.18	0.627	5.26	-0.189	-2.41
Weekly pay 181-260	0.348	2.76	0.409	4.29	-0.280	-4.66
Weekly pay 261-360	0.030	0.25	0.074	0.83	-0.325	-6.26
Tenure <1 year	0.497	3.87	0.676	6.99	0.335	5.48
Tenure 1-2 years	0.376	2.79	0.557	5.53	0.064	1.02
Tenure 2-5 years	0.134	1.18	0.166	1.93	0.009	0.18
Tenure 5-10 years	0.080	0.66	0.150	1.67	0.004	0.07

On permanent contract	-0.081	-0.67	0.029	0.30	0.288	4.33
Full-time	0.000	0.00	-0.167	-1.82	-0.076	-1.30
Work over 48hrs	-0.091	-1.02	-0.422	-6.18	-0.092	-2.26
Skill req. is higher	0.007	0.09	0.118	2.05	-0.355	-10.21
Skill req. is lower	-0.304	-1.55	-0.408	-2.72	-0.809	-9.17
Professional occupation	-0.015	-0.08	-0.037	-0.21	-0.361	-4.79
Associate professional or technical	-0.130	-0.79	0.344	2.41	-0.335	-5.00
Admin & secretarial	-0.257	-1.58	0.509	3.69	-0.403	-5.87
Skilled trades	0.124	0.63	0.981	6.44	-0.399	-4.46
Personnel services	0.392	2.26	0.436	2.72	-0.389	-4.43
Sales & customer services	-0.132	-0.64	0.251	1.49	-0.402	-4.13
Process, plant & machine operatives	0.027	0.14	0.892	5.88	-0.410	-4.57
Elementary occupations	0.055	0.32	0.999	7.08	-0.248	-3.04
Trade union member	-0.187	-1.91	-0.103	-1.42	-0.254	-5.72
Log of workplace age	0.005	0.14	0.000	-0.01	-0.004	-0.18
Privately owned establishment	0.475	4.12	0.298	3.17	0.304	4.68
Establishment size 5-9	0.885	3.25	0.250	1.17	0.653	4.36
Establishment size 10-24	0.178	0.71	-0.307	-1.60	0.491	3.82
Establishment size 25-49	0.206	0.84	-0.152	-0.81	0.270	2.14
Establishment size 50-99	0.339	1.37	-0.138	-0.73	0.287	2.25
Establishment size 100-199	0.197	0.79	-0.095	-0.50	0.191	1.49
Establishment size 200-499	0.135	0.52	-0.137	-0.71	0.217	1.67
Establishment size 500-999	-0.279	-0.93	-0.390	-1.81	0.098	0.68
Establishment size 1000-1999	0.387	1.24	0.031	0.13	0.099	0.60
Manufacturing	-0.090	-0.53	0.099	0.79	-0.049	-0.56
Construction	0.301	1.46	0.047	0.29	0.484	4.20
Whole sale & retail Trade	0.216	1.30	0.318	2.47	0.199	2.16
Hotel, rest & transport	0.243	1.45	0.139	1.07	0.210	2.24
Public & community services	0.415	2.62	0.357	2.84	0.283	3.26
Education	0.644	3.48	0.150	0.96	0.640	6.25
Health	0.533	3.37	0.083	0.62	0.552	6.08
North East	-0.007	-0.04	0.364	2.51	-0.004	-0.03

Yorkshire & the Humber	-0.116	-0.73	0.019	0.15	0.058	0.65
East Midlands	0.127	0.80	0.079	0.62	0.020	0.21
West Midlands	-0.182	-1.23	-0.235	-1.96	-0.026	-0.31
East of England	-0.179	-1.20	-0.070	-0.59	-0.106	-1.25
London	0.002	0.01	-0.151	-1.17	-0.180	-2.17
South West	0.054	0.38	0.146	1.27	-0.019	-0.22
Scotland	-0.010	-0.07	0.338	3.13	-0.007	-0.09
Wales	0.143	0.80	0.085	0.57	0.175	1.67
Summary measure of HPWS	-0.140	-1.79	-0.076	-1.20	-0.084	-1.86
Constant	-3.985	-8.76	-3.099	-8.71	-0.886	-3.86
\square	0.0352611		0.060383		0.069966	
LR test of rho=0	3.59		29.56		208.61	
Log-likelihood	-3169.23		-5028.65		-11120.83	
No. of observations	18029					

Appendix

Table A1: Measures of Workplace Diversity ($N=18029$)

<i>Percentages, mean values across workplaces</i>		
	Mean	Linearised Std. Err.
% Female	48.8393	0.2764
% Ethnic	6.7469	0.1387
% Disabled	1.1639	0.0378
% Over50	21.7913	0.1488
<i>Diversity indices, mean values across workplaces</i>		
Gender diversity	0.3233	0.0014
Ethnic diversity	0.0867	0.0012
Disability diversity	0.0195	0.0004
Age diversity	0.2926	0.0014

Table A2: Average Measures of Workplace *Gender Diversity*, subgroups ($N=18029$)

	Percentages		Diversity indices	
	Mean	Linearised Std. Err.	Mean	Linearised Std. Err.
<i>Weekly pay</i>				
<=110	68.395	0.719	0.299	0.005
111-180	65.137	0.813	0.314	0.005
181-260	51.249	0.652	0.330	0.003
261-360	41.493	0.573	0.325	0.003
>=361	40.397	0.401	0.330	0.002
<i>Establishment size</i>				
5 to 9	55.750	1.320	0.283	0.007
10 to24	56.213	0.712	0.283	0.004
25to49	50.659	0.647	0.293	0.003
50to99	49.513	0.630	0.325	0.003
100to199	45.566	0.526	0.368	0.003
200to499	39.228	0.597	0.344	0.003
500to999	42.541	0.697	0.387	0.004
1000to1999	44.885	1.149	0.357	0.006
2000+	49.326	1.410	0.338	0.005
<i>Occupations</i>				
Managers and senior officials	45.079	0.761	0.352	0.004
Professional occupations	55.307	0.732	0.344	0.004
Associate professional and technical	50.835	0.615	0.361	0.003
Administrative and secretarial o	55.024	0.583	0.356	0.003
Skilled trades	21.756	0.695	0.250	0.005
Personal service occupations	76.767	0.747	0.254	0.005
Sales and customer service occupation	65.611	0.912	0.329	0.006
Process, plant and machine opera	23.445	0.670	0.272	0.005
Elementary occupations	43.950	0.812	0.309	0.004
<i>Industry</i>				
Manufacturing	23.382	0.400	0.292	0.003
Construction	15.855	0.514	0.234	0.006
W&R Trade	51.372	0.792	0.334	0.004
Hotel, Rest &Transport	39.149	0.840	0.326	0.005
Finance & business service	48.768	0.607	0.371	0.003
Public & community. Services, utilities	52.215	0.582	0.381	0.004
Education	74.638	0.355	0.325	0.004
Health	78.641	0.480	0.265	0.003
<i>Ownership</i>				
Public	63.838	0.450	0.319	0.002
Private	44.362	0.321	0.325	0.002
UK	46.950	0.394	0.322	0.002
UK & Foreign	38.978	0.739	0.333	0.004
Foreign	34.377	0.685	0.336	0.004
Public & NA	63.930	0.452	0.316	0.002
<i>Region</i>				
North East	47.157	1.456	0.282	0.008
North West	47.734	0.646	0.343	0.004
Yorkshire & the Humber	45.800	1.010	0.302	0.005
East Midlands	44.478	1.039	0.323	0.006
West Midlands	49.452	1.017	0.321	0.005
East of England	48.340	0.970	0.310	0.005
London	48.806	0.716	0.365	0.004

South East	52.935	0.794	0.320	0.004
South West	48.916	0.907	0.318	0.005
Scotland	49.109	0.830	0.319	0.004
Wales	53.889	1.305	0.295	0.007

Table A3: Average Measures of Workplace Ethnic Diversity, subgroups ($N=18029$)

	Percentage		Diversity indices	
	Mean	Linearised Std. Err.	Mean	Linearised Std. Err.
<i>Weekly pay</i>				
<=110	5.593	0.356	0.072	0.003
111-180	7.151	0.577	0.080	0.003
181-260	7.216	0.361	0.087	0.003
261-360	6.530	0.299	0.083	0.003
>=361	6.922	0.191	0.095	0.002
<i>Establishment size</i>				
5 to 9	5.514	0.701	0.048	0.005
10 to24	5.251	0.305	0.063	0.003
25to49	6.731	0.284	0.084	0.002
50to99	7.035	0.287	0.088	0.003
100to199	7.321	0.413	0.092	0.003
200to499	7.957	0.312	0.114	0.003
500to999	5.495	0.327	0.086	0.004
1000to1999	7.184	0.473	0.106	0.006
2000+	10.470	0.455	0.158	0.006
<i>Occupations</i>				
Managers and senior officials	6.352	0.385	0.086	0.004
Professional occupations	6.356	0.292	0.096	0.003
Associate professional and technical	6.716	0.295	0.093	0.003
Administrative and secretarial o	6.148	0.258	0.087	0.003
Skilled trades	4.323	0.417	0.049	0.003
Personal service occupations	6.995	0.394	0.096	0.004
Sales and customer service occupation	7.315	0.623	0.080	0.004
Process, plant and machine opera	7.523	0.557	0.082	0.004
Elementary occupations	8.758	0.559	0.098	0.004
<i>Industry</i>				
Manufacturing	6.363	0.391	0.065	0.003
Construction	2.324	0.219	0.039	0.004
W&R Trade	5.286	0.303	0.070	0.003
Hotel, Rest &Transport	8.320	0.666	0.086	0.004
Finance & business service	7.949	0.294	0.113	0.003
Public & community. Services, utilities	4.310	0.229	0.068	0.002
Education	6.487	0.316	0.092	0.003
Health	9.561	0.357	0.125	0.003
<i>Ownership</i>				
Public	6.703	0.215	0.092	0.002
Private	6.760	0.168	0.085	0.001
UK	6.887	0.217	0.083	0.002
UK & Foreign	7.023	0.302	0.099	0.004

Foreign	5.929	0.313	0.083	0.003
Public & NA	6.667	0.211	0.092	0.002
<i>Region</i>				
North East	4.086	0.655	0.058	0.008
North West	6.865	0.475	0.084	0.003
Yorkshire & the Humber	5.765	0.323	0.089	0.004
East Midlands	6.178	0.459	0.083	0.005
West Midlands	8.912	0.417	0.126	0.004
East of England	4.207	0.202	0.069	0.003
London	24.853	0.729	0.245	0.005
South East	4.505	0.187	0.077	0.003
South West	1.304	0.076	0.024	0.001
Scotland	1.107	0.063	0.020	0.001
Wales	1.584	0.115	0.029	0.002

Table A4: Average Measures of Workplace Disability Diversity, subgroups ($N=18029$)

	Percentage		Diversity indices	
	Mean	Linearised Std. Err.	Mean	Linearised Std. Err.
<i>Weekly pay</i>				
<=110	1.154	0.143	0.019	0.002
111-180	1.112	0.121	0.019	0.002
181-260	1.360	0.127	0.019	0.001
261-360	1.225	0.074	0.021	0.001
>=361	1.059	0.036	0.020	0.001
<i>Establishment size</i>				
5 to 9	0.990	0.183	0.015	0.002
10 to24	0.988	0.061	0.018	0.001
25to49	1.408	0.137	0.020	0.001
50to99	1.051	0.121	0.014	0.001
100to199	0.730	0.025	0.014	0.000
200to499	1.511	0.072	0.027	0.001
500to999	1.400	0.067	0.027	0.001
1000to1999	1.857	0.163	0.035	0.003
2000+	1.039	0.044	0.020	0.001
<i>Occupations</i>				
Managers and senior officials	0.954	0.075	0.017	0.001
Professional occupations	1.138	0.076	0.021	0.001
Associate professional and technical	0.974	0.062	0.018	0.001
Administrative and secretarial o	1.400	0.079	0.025	0.001
Skilled trades	1.342	0.164	0.020	0.002
Personal service occupations	0.993	0.094	0.018	0.002
Sales and customer service occupation	0.753	0.090	0.014	0.001
Process, plant and machine opera	1.005	0.121	0.016	0.001
Elementary occupations	1.745	0.210	0.023	0.002
<i>Industry</i>				
Manufacturing	1.650	0.155	0.020	0.001
Construction	0.986	0.068	0.019	0.001
W&R Trade	0.747	0.066	0.014	0.001
Hotel, Rest &Transport	0.928	0.160	0.015	0.002

Finance & business service	0.954	0.049	0.018	0.001
Public & community. Services, utilities	1.804	0.098	0.033	0.002
Education	0.837	0.041	0.016	0.001
Health	1.270	0.063	0.023	0.001
<i>Ownership</i>				
Public	1.657	0.092	0.027	0.001
Private	1.017	0.041	0.017	0.001
UK	0.960	0.047	0.016	0.001
UK & Foreign	1.092	0.069	0.020	0.001
Foreign	1.047	0.072	0.020	0.001
Public & NA	1.726	0.107	0.027	0.001
<i>Region</i>				
North East	0.509	0.048	0.010	0.001
North West	1.869	0.148	0.028	0.002
Yorkshire & the Humber	0.875	0.061	0.016	0.001
East Midlands	0.963	0.093	0.018	0.002
West Midlands	0.564	0.027	0.011	0.001
East of England	1.103	0.081	0.020	0.001
London	1.052	0.145	0.018	0.002
South East	1.119	0.066	0.021	0.001
South West	0.947	0.091	0.017	0.002
Scotland	1.195	0.098	0.020	0.002
Wales	2.430	0.423	0.025	0.002

Table A5: Average Measures of Workplace Age Diversity, subgroups ($N=18029$)

	Percentage		Diversity indices	
	Mean	Linearised Std. Err.	Mean	Linearised Std. Err.
<i>Weekly pay</i>				
<=110	21.603	0.465	0.280	0.005
111-180	23.222	0.517	0.298	0.005
181-260	21.715	0.334	0.294	0.003
261-360	21.826	0.319	0.295	0.003
>=361	21.457	0.229	0.293	0.002
<i>Establishment size</i>				
5 to 9	23.086	0.814	0.264	0.007
10 to24	22.249	0.386	0.280	0.004
25to49	23.070	0.298	0.306	0.003
50to99	19.184	0.282	0.274	0.003
100to199	20.130	0.285	0.286	0.003
200to499	22.269	0.287	0.316	0.003
500to999	21.444	0.377	0.305	0.004
1000to1999	22.300	0.635	0.303	0.007
2000+	24.067	0.485	0.347	0.005
<i>Occupations</i>				
Managers and senior officials	20.605	0.467	0.279	0.004
Professional occupations	22.280	0.381	0.309	0.004
Associate professional and technical	20.699	0.396	0.281	0.004
Administrative and secretarial o	22.229	0.363	0.292	0.003
Skilled trades	23.909	0.490	0.326	0.005

Personal service occupations	25.381	0.493	0.323	0.005
Sales and customer service occupation	15.634	0.575	0.219	0.006
Process, plant and machine opera	24.886	0.429	0.334	0.004
Elementary occupations	21.823	0.421	0.288	0.004
<i>Industry</i>				
Manufacturing	24.393	0.314	0.336	0.003
Construction	23.440	0.483	0.333	0.005
W&R Trade	18.506	0.479	0.250	0.004
Hotel, Rest &Transport	18.664	0.444	0.252	0.005
Finance & business service	15.544	0.313	0.224	0.004
Public & community. Services, utilities	21.406	0.408	0.285	0.004
Education	26.326	0.300	0.354	0.003
Health	30.266	0.396	0.365	0.003
<i>Ownership</i>				
Public	26.032	0.231	0.344	0.002
Private	20.525	0.178	0.277	0.002
UK	21.246	0.217	0.283	0.002
UK & Foreign	18.539	0.475	0.256	0.004
Foreign	18.800	0.372	0.269	0.004
Public & NA	25.786	0.236	0.341	0.002
<i>Region</i>				
North East	22.152	0.553	0.313	0.006
North West	19.504	0.317	0.274	0.004
Yorkshire & the Humber	19.716	0.529	0.273	0.006
East Midlands	23.327	0.541	0.311	0.006
West Midlands	23.735	0.574	0.302	0.005
East of England	24.882	0.457	0.329	0.004
London	17.250	0.370	0.247	0.005
South East	23.641	0.459	0.305	0.004
South West	23.776	0.507	0.311	0.005
Scotland	21.586	0.493	0.285	0.004
Wales	21.874	0.610	0.306	0.005

Table A6: Summary measures of High Performance Work Systems, HPWS ($N=18029$)

<i>Establishment size</i>	Recruitment & fair treatment at work		Appraisal & grievance procedures		Management active policy	
	Mean	Linearised	Mean	Linearised	Mean	Linearised
		Std. Err.		Std. Err.		Std. Err.
5 to 9	0.180	0.007	0.505	0.010	0.307	0.010
10 to24	0.186	0.004	0.549	0.006	0.360	0.006
25to49	0.267	0.004	0.587	0.004	0.433	0.004
50to99	0.304	0.004	0.585	0.004	0.497	0.004
100to199	0.341	0.005	0.531	0.004	0.516	0.005
200to499	0.387	0.005	0.503	0.003	0.530	0.006
500to999	0.404	0.006	0.464	0.004	0.598	0.007
1000to1999	0.422	0.009	0.491	0.006	0.608	0.008
2000+	0.611	0.006	0.415	0.005	0.687	0.006
<i>Industry</i>						
Manufacturing	0.219	0.004	0.447	0.004	0.398	0.006
Construction	0.251	0.009	0.472	0.012	0.394	0.011
W&R Trade	0.229	0.005	0.512	0.006	0.429	0.007

Hotel, Rest & Transport	0.243	0.006	0.478	0.007	0.467	0.008
Finance & business service	0.293	0.004	0.569	0.004	0.458	0.006
Public & community. Services, util	0.478	0.006	0.542	0.004	0.554	0.006
Education	0.407	0.004	0.645	0.004	0.529	0.005
Health	0.405	0.006	0.580	0.004	0.554	0.005
<i>Ownership</i>						
Public	0.471	0.004	0.570	0.003	0.597	0.003
Private	0.259	0.002	0.518	0.002	0.433	0.003
UK	0.249	0.003	0.517	0.003	0.402	0.003
UK & Foreign	0.290	0.004	0.525	0.005	0.520	0.006
Foreign	0.283	0.005	0.517	0.005	0.505	0.006
Public & NA	0.466	0.004	0.570	0.003	0.597	0.003

Table A6 (continued)

<i>Establishment size</i>	Flexible work arrangement		Pay & incentive system inc. sharing		Employee participation	
	Mean	Linearised Std. Err.	Mean	Linearised Std. Err.	Mean	Linearised Std. Err.
5 to 9	0.280	0.008	0.241	0.007	0.356	0.012
10 to 24	0.343	0.005	0.224	0.005	0.435	0.007
25 to 49	0.399	0.005	0.225	0.005	0.472	0.007
50 to 99	0.464	0.005	0.259	0.005	0.437	0.007
100 to 199	0.499	0.006	0.223	0.006	0.417	0.007
200 to 499	0.556	0.005	0.285	0.005	0.375	0.007
500 to 999	0.636	0.006	0.365	0.007	0.381	0.009
1000 to 1999	0.751	0.008	0.323	0.013	0.450	0.013
2000+	0.795	0.009	0.163	0.009	0.323	0.014
<i>Industry</i>						
Manufacturing	0.429	0.007	0.362	0.005	0.361	0.007
Construction	0.296	0.012	0.200	0.008	0.347	0.014
W&R Trade	0.353	0.006	0.334	0.005	0.345	0.008
Hotel, Rest & Transport	0.459	0.007	0.311	0.006	0.448	0.010
Finance & business service	0.471	0.005	0.371	0.005	0.351	0.006
Public & community. Services, utilities	0.574	0.006	0.128	0.005	0.462	0.008
Education	0.419	0.006	0.038	0.003	0.506	0.006
Health	0.680	0.006	0.048	0.003	0.530	0.009
<i>Ownership</i>						
Public	0.586	0.005	0.037	0.003	0.483	0.006
Private	0.436	0.003	0.315	0.002	0.390	0.003
UK	0.413	0.003	0.282	0.003	0.375	0.004
UK & Foreign	0.470	0.007	0.385	0.006	0.454	0.010
Foreign	0.520	0.007	0.420	0.006	0.402	0.008
Public & NA	0.583	0.005	0.044	0.003	0.484	0.005

Table A6 (Continued)

<i>Establishment size</i>	Union representation & mgt-employee communication		Combined/All	
	Mean	Linearised	Mean	Linearised
		Std. Err.		Std. Err.
5 to 9	0.070	0.007	0.194	0.006
10 to24	0.122	0.005	0.223	0.003
25to49	0.204	0.005	0.289	0.003
50to99	0.210	0.006	0.321	0.003
100to199	0.248	0.006	0.346	0.003
200to499	0.302	0.007	0.381	0.004
500to999	0.305	0.009	0.406	0.004
1000to1999	0.387	0.008	0.445	0.005
2000+	0.499	0.009	0.545	0.004
<i>Industry</i>				
Manufacturing	0.199	0.005	0.253	0.004
Construction	0.136	0.009	0.247	0.007
W&R Trade	0.070	0.004	0.242	0.004
Hotel, Rest &Transport	0.218	0.007	0.283	0.004
Finance & business service	0.119	0.004	0.301	0.003
Public & community. Services, utilities	0.421	0.008	0.443	0.005
Education	0.445	0.006	0.398	0.003
Health	0.308	0.007	0.421	0.004
<i>Ownership</i>				
Public	0.509	0.004	0.454	0.002
Private	0.138	0.002	0.278	0.002
UK	0.125	0.003	0.263	0.002
UK & Foreign	0.180	0.006	0.322	0.004
Foreign	0.169	0.006	0.317	0.004
Public & NA	0.498	0.005	0.451	0.002

Table A7: Descriptive stat of outcome variables ($N=18029$)

	Mean	Linearised Std Err
<i>Measures of satisfaction with aspects of job</i>		
1. Satisfaction with sense of achievement	0.7051	0.0042
2. Satisfaction with scope for own initiative	0.7194	0.0041
3. Satisfaction with amount of influence	0.5814	0.0045
4. Satisfaction with training you receive	0.5008	0.0046
5. Satisfaction with the amount of pay	0.3551	0.0044
6. Satisfaction with job security	0.6332	0.0044
7. Satisfaction with the work itself	0.7214	0.0041
8. Satisfaction with involvement in decision	0.4095	0.0046
9. Satisfaction with all of the above (gen from 1-8, $\alpha=0.7822$)	0.6786	0.0042
<i>Measures of how job makes one feel, past few weeks</i>		
10. Do not feel tense at work, past few weeks	0.1262	0.0031
11. Feel calm at work, past few weeks	0.0354	0.0018
12. Feel relaxed at work, past few weeks	0.0298	0.0017
13. Do not feel worried at work, past few weeks	0.2169	0.0039
14. Do not feel uneasy at work, past few weeks	0.3025	0.0043
15. Feel content at work, past few weeks	0.0522	0.0022
16. Feel composed at work, past few weeks (gen from 10-15, $\alpha=0.6943$)	0.1039	0.0029
17. Overall measure of wellbeing (gen from 1-8 & 10-16, $\alpha=0.7586$)	0.3777	0.0045

Table A8 Descriptive stat of regressors ($N=18029$)

	Mean	Linearised Std Err
Age<30	0.233	0.004
Age30-39	0.247	0.004
Age50-59	0.216	0.004
Age60+	0.051	0.002
Female	0.492	0.005
Married	0.667	0.004
White	0.941	0.002
Children <7yrs old	0.179	0.004
Other dependents	0.155	0.003
Disabled	0.119	0.003
No academic qualification	0.179	0.004
O-level	0.241	0.004
A-level	0.089	0.003
Other qualification	0.303	0.004
Missing qualification	0.017	0.001
Job done only/mainly by men	0.298	0.004
Job done only/mainly by women	0.267	0.004
Job done by me/self	0.072	0.002
Weekly pay <110	0.112	0.003
Weekly pay 111-180	0.110	0.003
Weekly pay 181-260	0.175	0.003
Weekly pay 261-360	0.207	0.004
Tenure <1 year	0.179	0.004
Tenure 1-2 years	0.131	0.003
Tenure 2-5 years	0.266	0.004
Tenure 5-10 years	0.177	0.003
On permanent contract	0.918	0.003

Full-time	0.778	0.004
Work over 48 hrs	0.468	0.005
Had training	0.615	0.005
Skill req. is higher	0.532	0.005
Skill req. is lower	0.047	0.002
Professional Occupations	0.107	0.003
Associate professional or technical	0.137	0.003
Admin & secretarial	0.174	0.003
Skilled trades	0.081	0.003
Personnel services	0.072	0.002
Sales & customer services	0.090	0.003
Process, plant & machine operatives	0.092	0.003
Elementary occupations	0.117	0.003
Trade union member	0.290	0.004
Privately owned establishment	0.770	0.004
Establishment size 5-9	0.119	0.004
Establishment size 10-24	0.166	0.003
Establishment size 25-49	0.141	0.003
Establishment size 50-99	0.139	0.003
Establishment size100-199	0.133	0.003
Establishment size200-499	0.144	0.003
Establishment size500-999	0.070	0.002
Establishment size1000-1999	0.041	0.002
Manufacturing	0.175	0.004
Construction	0.046	0.002
Whole sale & retail Trade	0.151	0.004
Hotel, rest & transport	0.107	0.003
Public & community services	0.105	0.002
Education	0.092	0.002
Health	0.132	0.003
North East	0.041	0.002
Yorkshire & the Humber	0.078	0.002
East Midlands	0.065	0.002
West Midlands	0.100	0.003
East of England	0.093	0.003
London	0.101	0.003
South West	0.086	0.002
Scotland	0.115	0.003
Wales	0.040	0.002
Summary measure of HPWS	0.435	0.004
