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Citation: Forth, J. ORCID: 0000-0001-7963-2817 and Rincon-Aznar, A. (2008). Equal Opportunities, Employee Attitudes and Workplace Performance. London, UK: Department for Business, Enterprise and Regulatory Reform.

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**EMPLOYMENT RELATIONS RESEARCH
SERIES NO. 38**

Equal opportunities, employee
attitudes and workplace
performance: findings from
WERS 1998

MARCH 2008

EMPLOYMENT RELATIONS RESEARCH SERIES NO. 38

**Equal opportunities, employee attitudes
and workplace performance: findings from
WERS 1998**

BY

JOHN FORTH & ANA RINCON-AZNAR

NATIONAL INSTITUTE OF ECONOMIC AND SOCIAL RESEARCH

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Employment Market Analysis and Research (EMAR) is a multi-disciplinary team of economists, social researchers and statisticians based in the Employment Relations Directorate of the Department for Business, Enterprise and Regulatory Reform.

Our role is to provide the evidence base for good policy making in employment relations, labour market and equality and discrimination at work. We do this through:

- Conducting periodic benchmark surveys
- Commissioning external research reports
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- Assessing the regulatory impact of new employment laws
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About this publication

The project manager for this report was Jane Carr, Senior Research Officer in the EMAR branch.

Published in March 2008 by the Department for Business, Enterprise and Regulatory Reform. © Crown Copyright 2008

URN 08/575 ISBN 978-0-85605-707-6

This report can be ordered at: <http://www.berr.gov.uk/publications>

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Foreword

The Department for Business, Enterprise and Regulatory Reform (BERR) leads work to create the conditions for business success through competitive and flexible markets that create value for businesses, consumers and employees. It drives regulatory reform, and works across Government and with the regions to raise levels of UK productivity. It is also responsible for promoting choice and quality for consumers through competition policy and for ensuring an improved quality of life for employees.

As part of that work the Employment Market Analysis and Research branch (EMAR) of the Department manages a research programme to inform policy making and promote better regulation on employment relations, labour market and equality and discrimination at work issues.

This report examined the relationship between equal opportunities policies and practices and the possible benefits to organisations and disadvantaged groups. Findings were based on data from the 1998 Workplace Employee Relations Survey (WERS).

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Grant Fitzner

Director, Employment Market Analysis and Research

Acknowledgements

We acknowledge the Department for Business, Enterprise and Regulatory Reform, the Advisory, Conciliation and Arbitration Service, the Economic and Social Research Council and the Policy Studies Institute as the sponsors of the 1998 Workplace Employee Relations Survey and the UK Data Archive as the distributors of the data. The authors remain solely responsible for the interpretation of the data and for any errors.

Contents

Foreword	i
Acknowledgements.....	ii
Contents.....	iii
List of Tables	iv
Executive summary	v
Introduction	1
Research methodology.....	8
Results.....	13
Concluding remarks	18
References	20
Annex A: Equal opportunities questions in WERS98	22
Annex B: Tables of results.....	24
Annex C: Baseline models.....	47
Employment Relations Research Series	80

List of Tables

Table 1	Prevalence of equal opportunities policies and practices in Britain	5
Table B1	Employee attitudes (non-managerial employees)	24
Table B2	Workplace-level outcomes (private sector)	26
Table B3	Control variables used in analysis of employee-level outcomes	27
Table B4	Control variables used in analysis of workplace-level outcomes	32
Table B5	Equal opportunities indicators used in analysis of employee workplace-level outcomes	35
Table B6	Impact of equal opportunities policies and practices on relationship between employees and managers, by gender	37
Table B7	Impact of equal opportunities policies and practices on organisational attachment, by gender	39
Table B8	Impact of equal opportunities policies and practices on relationship between employees and managers, by ethnicity	41
Table B9	Impact of equal opportunities policies and practices on organisational attachment, by ethnicity	43
Table B10	Impact of equal opportunities policies and practices on relationship between employees and managers, by disability	45
Table B11	Impact of equal opportunities policies and practices on organisational attachment, by disability	46
Table C1	Baseline models of employees perceptions of fairness	47
Table C2	Baseline models of employees perceptions of respect	52
Table C3	Baseline models of employees perceptions of the quality of relations	57
Table C4	Baseline models of employees' perception of loyalty to the organisation	63
Table C5	Baseline models of employees perceptions of shared values	68
Table C6	Baseline models of employees perceptions of pride in the organisation	73
Table C7	Baseline models of labour productivity and financial performance	78

Executive summary

This report examined the relationship between the provision of equal opportunities and practices and attitudes of disadvantaged groups towards the organisation for which they work. It also examined the relationship between equal opportunity provision and practices and the benefits to businesses in terms of labour productivity and financial performance.

The findings were somewhat mixed. They support the notion that the presence of equal opportunities may have a positive impact on some attitudes for both ethnic minority and disabled employees. These findings however did not hold for female employees.

The impact on businesses was also somewhat equivocal. Higher productivity was associated with the presence of an equal opportunities policy, but lower productivity was associated with equal opportunity monitoring practices. There was little evidence to suggest that equal opportunity policies affected financial performance (either positively or negatively).

Aims and objectives

This paper aimed to look at the relationship between the provision of equal opportunities and the benefits to businesses and disadvantaged groups. Analysis was based on examining the association between equal opportunity activities and outcomes on two levels: the level of the individual employee and the level of the employing establishment. Employee level outcomes included: the quality of employee-management relations; satisfaction with the respect received from managers; perceived degree of fair treatment by managers; and the level of attachment of the employee to the organisation (eg sharing the values and degree of loyalty towards the organisation). Employer level outcomes were based on managers' subjective ratings of labour productivity and financial performance at their establishment.

Equal opportunities and disadvantaged groups

The findings in relation to equal opportunities practices and policies and outcomes for disadvantaged groups were somewhat mixed. However a number of positive associations were observed between the presence of equal opportunity practices and employee level outcomes for ethnic minorities and disabled employees, particularly in respect of the relationship between management and employees. EO practices were also positively associated with attachment to the workplace for ethnic employees. No significant associations were observed when looking at the association between equal opportunities policies and these same outcomes for females.

Equal opportunities and workplace outcomes: productivity and financial performance

Hypotheses in connection with economic benefits were only partially supported. There was an association between higher productivity levels and non-specified equal opportunity policies but lower productivity was associated with equal opportunity monitoring activities. There was little evidence to suggest that EO policies affected financial performance (either positively or negatively) based on the limited analysis that was possible.

Limitations of this study

There were a number of limitations to this study. Firstly analysis was based on cross-sectional data and direction of causality between the variables and outcomes measured cannot be determined reliably. Secondly many factors will impact on labour productivity and financial performance and the WERS 1998 data does not capture all of the possible variables that might be influential in this respect. Thirdly the data contains only a small number of questions on the nature of equal opportunities policies and practices at the sampled workplaces. These issues could not be fully addressed in the current study but highlight issues for further attention in any subsequent research

About this project

This research was commissioned by the Department of Trade and Industry, as part of its employment relations research programme. Publication of the report was unfortunately delayed. The Department for Business, Enterprise and Regulatory Reform publishes it as a contribution to the evidence base on equality at work.

The report is based on a secondary analysis of the 1998 Workplace Employee Relations Survey (WERS). This was a nationally representative survey of workplaces with 10 or more employees covering all sectors except agriculture and mining. It included both private and publicly-owned establishments. The survey involved two elements: firstly a face-to-face interview with managers in 2,191 workplaces, and secondly a self-completion employee questionnaire distributed to a simple random sample of 25 employees in each of workplaces where a management interview had been achieved, yielding a total of 28,237 employee questionnaire returns.

About the authors

John Forth and Ana Rincon-Aznar both work at the National Institute of Economic and Social Research (NIESR). John Forth holds the position of Research Fellow; Ana Rincon-Aznar holds the position of Research Officer.

CHAPTER ONE

Introduction

Introduction

Existing analysis of survey data indicates that around three-quarters of all workplaces in Great Britain with 10 or more employees have a formal, written policy on the provision of equal opportunities within their establishment (Kersley et al, 2006). As attempts are made to increase the proportion of employers that actively support equal opportunities, and to make existing policies more effective, there is an increasing emphasis on the impact of such practices. Nevertheless, robust, quantitative evidence on the impact of equality initiatives is remarkably scarce.

A small amount of quantitative research does exist to show that equal opportunities initiatives are effective in promoting equal treatment (see, for example, Noon and Hoque, 2001). But much of the existing quantitative evidence on the broader impact of equal opportunities attempts to associate policies or practices with distant measures of business performance such as share prices (Hersch, 1991; Wright et al, 1995). In such studies, it is usually impossible to account for the vast array of other factors that may impact upon such aggregate measures of performance, creating the risk of identifying spurious correlations. The more detailed, case-study evidence often focuses on more immediate outcomes, but is also partial since it is commonly restricted to the experience of large organizations (see, for example: Rutherford and Ollerearnshaw, 2002; Metcalf and Forth, 2000). In consequence, there is a lack of representative and reliable quantitative evidence on the broader impact of equal opportunities at workplace level.

This short study represented an attempt to investigate this area using data from the 1998 Workplace Employee Relations Survey (WERS98). We looked first at the association between equal opportunities initiatives and certain aspects of an employee's relationship with their employer and at the association with their degree of organizational attachment. We then examined the association between equal opportunities initiatives and some broader workplace-level outcomes, namely levels of labour productivity and financial performance.

Context

The principle of equal opportunity is widely advocated among policy-makers and practitioners in the field of employment in Britain. Legislation to outlaw employment discrimination on the basis of gender or marital status was introduced in 1975 and similar legislation to outlaw discrimination in respect of race followed one year later. Discrimination on the basis of disability finally became unlawful in 1995, although a quota system intended to promote the employment of disabled people had been in place since the 1940s.¹ Alongside

¹ Anti-discrimination legislation has more recently been extended to cover religious belief, sexual orientation and age. However, we focus our discussion on the three areas that were covered by legislation at the time of the 1998 WERS survey, which forms the basis for our analysis.

legislative initiatives, a number of non-departmental government bodies also work to promote the principles of equality of opportunity and to combat discrimination. The introduction of legislation and the activities of these various equality-focused organizations have undoubtedly enhanced the employment opportunities available to women, ethnic minorities and disabled people. However, levels of participation and achievement still remain unequal. For instance, women have a lower employment rate than men and, within employment, are also less likely to progress to the upper levels of the occupational hierarchy. Women are also found to earn less than men, even after one controls for a variety of personal and job characteristics (Anderson et al, 2001). Similar pictures emerge for ethnic minorities and disabled people.²

There are a variety of supply-side factors which go some way towards explaining these patterns. As we have already noted, family responsibilities are a barrier to participation for some women. Differences in the stock of education inhibit equality among ethnic minorities and whites, although students from some ethnic minority groups are now registering higher levels of achievement than whites.

However, demand-side factors also play their part in sustaining inequality. One such factor is the unequal provision of employment opportunities. This may occur through direct discrimination, which might take the form of deliberately recruiting only white employees. Or it may occur through indirect discrimination, which is less obvious. One example might be the use of promotion criteria based on length of service, rather than ability to do the job, which may disadvantage women who have had career breaks. A clear indication that employees still perceive such inequality to be present in the provision of employment opportunities is provided not least by the number of cases brought to Employment Tribunals (Employment Tribunal Service, 2007).

The benefits and costs of equal opportunities

The moral or ethical arguments for equality of opportunity arguably should be sufficient in themselves to persuade employers to implement effective equal opportunities policies and practices. But an emphasis has recently been placed on the more positive economic advantages of promoting equal opportunity – what are more commonly termed the ‘business benefits’.

Although the focus on business benefits may be criticised for diverting attention from the moral arguments, many believe that an emphasis on the economic advantages represents the most effective means of encouraging employers to actively promote equality of opportunity in the future (see, for example, Ross and Schneider, 1992).

The benefits to employers of promoting equality of opportunity may be summarised under the following headings.

Enhanced supply of labour:

One of the most frequently cited benefits of promoting equality of opportunity is that it provides the employer with access to a larger pool of labour. Any form of discrimination in the recruitment process will inevitably reduce the number of potential applicants for a particular post. In addition, discrimination in the

² See Twomey (2001, 2002) and Smith and Twomey (2002). The general patterns remain evident in more recent survey data.

promotion process will also limit the supply of talent to higher levels of the organization. By ensuring that recruitment and promotion is based solely upon ability, equal opportunity policies and practices can help to reduce labour shortages and improve the quality of the workforce, and thereby have a positive impact on overall levels of productivity.

Enhanced relations with employees and employee attachment to organisation:

To the extent that equal opportunities initiatives reduce or eliminate discrimination and unfair treatment, they can assist in reducing grievances and improving relations within the organization. Such outcomes may have a knock-on effect in reducing absenteeism and labour turnover, by enhancing employees' attachment to the organization. Again this may have a positive impact on levels of labour productivity, and could also reduce labour costs.

Enhanced creativity within the organisation:

If the provision of equal opportunities leads to a more diverse workforce, the introduction of employees with different perspectives could have a positive impact on levels of creativity and therefore lead to better problem solving and decision making. One might therefore expect the provision of equal opportunities to lead to enhanced product or service quality and, again, higher levels of productivity.

Market success:

Finally, a more diverse workforce may also enable an organization to better serve its existing customer base through: an improved ability to identify their needs; a greater capacity to adapt to differences in language and culture; and an increased degree of legitimacy with existing customers from diverse backgrounds. In these ways, a more diverse workforce may also help the organization to widen its customer base, thereby increasing sales.

Penalty avoidance:

Finally, the costs of being found in breach of anti-discrimination legislation should also provide a strong impetus for employers to promote equality of opportunity, not least because compensation awards in discrimination cases have no upper limit and tend to substantially exceed the value of awards in other cases.

Having listed some of the potential benefits, it is important to recognise, however, that the promotion of equal opportunities may also generate costs for an employer. These potential costs may be summarised as follows:

Implementation, monitoring and training costs:

Effective equal opportunities policies and practices are likely to reduce the likelihood of the employer being found in breach of anti-discrimination legislation. However, there are clearly management and administration costs involved in the development and implementation of equal opportunities policies and practices. These include the costs of: compiling and disseminating new policies and procedures; replacing discriminatory employment practices; and equalising pay and conditions. Equally, there are costs involved in the monitoring of processes such as recruitment and promotion, and in the training of staff to promote awareness of equal opportunities issues.

Potential misunderstandings and conflict:

Whilst greater diversity in the workforce may promote creativity, it may also create difficulties in reaching consensus. Furthermore, diversity may increase the potential for misunderstandings and conflict, since employees are less likely to share the same knowledge, values and assumptions.

Dangers of tokenism:

There is a risk that the introduction of a partial or ineffective approach to equal opportunities may have an adverse affect on motivation and job satisfaction among disadvantaged groups if the new approach is viewed as toothless or as merely a sign of tokenism.

Naturally, if equality of opportunity can be implemented effectively so that the benefits outweigh any potential costs, the provision of equal opportunities can also be expected to contribute to increased organizational competitiveness and improved financial performance. Yet it is clear that organizations' attempts to promote equal opportunities take many different forms. And it is argued that certain approaches are more effective than others in securing real equality of opportunity - and hence the accompanying benefits.

The practice of equal opportunities

A number of authors in the field emphasise the importance of adopting an approach to equal opportunities that is strategic, systematic and comprehensive (Ross and Scheider, 1992; Jewson et al, 1995; Kandola and Fullerton, 1998). The approach promoted by these authors has the following common features:

- *Assessment of needs* – requiring an examination of workforce statistics, personnel policies and the prevailing organizational culture
- *Clarity of objectives* – requiring a clear vision of what the organization intends to achieve
- *Clear accountability and effective communication* – requiring top management commitment and ownership of the policy throughout the organization
- *Co-ordinated activity* – requiring the integration of equal opportunities into the full range of business practices and the provision of appropriate training
- *Evaluation* – requiring progress to be monitored and evaluated.

Unfortunately, it is unclear as to how prevalent this 'ideal' approach is in practice. The series of Workplace Employee Relations Surveys (WERS) is the most comprehensive source of reliable and representative survey data on employment practices in Britain. The 1998 survey, which we use in this study, was the first in the series to include questions on the nature of equal opportunities policies and practices at the sampled establishment, but the questions were somewhat limited.³ Essentially, WERS98 provides information on the following:

- Whether the establishment has a formal, written equal opportunities policy
- The areas covered by the policy (e.g. sex, race, disability, religion)

³ The more recent 2004 WERS had not yet become available at the time that the analysis was undertaken.

- Whether the establishment implements practices to promote equality of opportunity (e.g. monitoring promotions, reviewing selection procedures or making adjustments to accommodate disabled employees)
- Whether the core group of non-managerial employees at the establishment have received training in equal opportunities in the last 12 months
- Whether the establishment has made any attempt to measure the effects of its equal opportunities policies on the workplace or its employees.

The precise wording of these questions is provided in Appendix A. The responses to each question are tabulated below. The first column of data in Table 1 shows the percentage of establishments with each of the policies or practices; the second column of data shows the percentage of employees that work in such establishments.

Table 1. Prevalence of equal opportunities policies and practices in Britain

	Establishments	Employees
Policy		
Any equal opportunities policy	67	80
Policy covering:		
Sex	57	73
Race	57	73
Disability	55	70
Sex, Race and Disability	54	69
Supporting practices		
Any supporting practices	50	72
Keep employee records with ethnic origin identified	30	48
Collect statistics on posts held by men and women	25	47
Monitor promotions by gender, ethnicity etc	11	25
Review selection and other procedures to identify indirect discrimination	20	39
Review the relative pay rates of different groups	14	23
Make adjustments to the workplace to accommodate disabled employees	26	50
Training		
Any training in equal opportunities in past 12 months	14	19
Evaluation		
Any attempt to measure the effects of equal opportunities policies	11	24

Source: WERS 1998

Note: * percentages are based on data from 2,191 establishments with 10 or more employees. For further descriptive information on the prevalence of equal opportunities and practices, see Anderson et al (2004)

The questions available in WERS98 allowed us to derive indicators of the breadth and depth of equal opportunities policy and practice at the establishment. And they allowed us to identify the incidence of three of the five components of the 'ideal model': *Assessment of needs* (through the questions on monitoring and procedural reviews); *Co-ordinated activity* (through the question on training); and *Evaluation* (through the question on the measurement of outcomes). But they did not allow us to identify the remaining two components: *Clarity of objectives* and *Clear accountability*. In view of the emphasis placed in

the literature on the importance of each element of the ideal model this obviously represents a limitation to our study. However, there are few establishments that, even with the broad indicators provided by WERS98, can be said to be taking a comprehensive approach to equal opportunities. And indeed, at the other end of the spectrum, there are many establishments without even a formal written policy on equal opportunities. The proportion of establishments that live up to the 'ideal' model is likely to be very small indeed – possibly too small to show up in any significant numbers in a representative sample survey. Accordingly, in the absence of better data, we proceed with our (albeit limited) measures of equal opportunities in the knowledge that they do provide us with at least a basic indication of the range of equal opportunities activity across establishments.

Evidence from previous research

The existing evidence on the impact of equal opportunities policies and practices on employee attitudes and workplace performance is largely qualitative in nature. This evidence is summarized by Kandola and Fullerton (1998), Metcalf and Forth (2000) and Rutherford and Ollerearnshaw (2002), among others. The evidence itself largely consists of case studies of specific organizations that have been able to realise the some of the business benefits listed in Section 1.3. Given the qualitative nature of the evidence, it is often difficult to generalise from the experience of these, often large, organizations to the wider population of employers. In particular, there is a notable lack of quantitative evidence from representative samples of firms or workplaces.

Despite the availability of data on equal opportunities in WERS98, there has been no systematic analysis of the impact of such practices on employee attitudes using the WERS98 data as far as we are aware. Some studies have looked at job characteristics, including earnings (Anderson et al, 2001), receipt of training (Noon and Hoque, 2001) and the extent of interaction with supervisors (also Noon and Hoque, 2001), but none have looked at employee attitudes, which is our particular focus. Nevertheless, some research on employee attitudes has included indicators of equal opportunities practices as control variables in multivariate analysis that has focused primarily on other employment practices.

Dex and Smith (2001) and Gray (2002) included indicators of equal opportunities practices in their analyses of the impact of family-friendly working practices on employee commitment. Both analyses identified some positive effects on commitment for private sector employees in restricted models controlling only for employer characteristics. Dex and Smith also identified negative effects in equivalent models for public sector employees. However, when Dex and Smith added further variables to control for employee characteristics, all of these effects became non-significant at the 5% level. In a further study of employees' attitudes, Bryson (2000) included a simple indicator of whether a workplace has a formal, written equal opportunities policy in his models of employees' perceptions of fair treatment. But again the indicator was not significant at the 5% level.

There is a similar paucity of WERS-based research on the impact of equal opportunities practices on workplace performance. Perotin and Robinson (2000) is the only known example which takes this issue as its focus. Perotin and Robinson undertook a dedicated analysis of the impact of equal opportunities on the level of labour productivity and found that workplaces with a formal, written equal opportunities policy have higher levels of labour productivity than

workplaces without a policy, after controlling for other factors. But they also found that levels of productivity are lower in those establishments with an extensive range of monitoring and review practices that support equal opportunities. They suggest that this latter result may illustrate short-term disruption arising from the introduction of extensive policies, or adverse reactions from previously-advantaged groups.

Dex, Smith and Walters (2001) and Gray (2002) included indicators of equal opportunities practices as control variables in research into the impact of family-friendly working practices on labour productivity using WERS98. Gray entered separate variables to identify different equal opportunities practices and, somewhat in keeping with Perotin and Robinson, found that the monitoring of posts was negatively associated with the level of labour productivity. Dex, Smith and Walters, on the other hand, found that their composite measure of equal opportunities was not significantly related to levels of labour productivity. It is not immediately clear as to why their results should differ from those obtained in the other two studies mentioned here.

Finally, Dex, Smith and Walters (2001) and Gray (2002) also included indicators of equal opportunities practices as control variables in models of financial performance using WERS98. Again, somewhat different results were obtained. Dex, Smith and Walters found that their composite measure of equal opportunities was not significantly related to levels of financial performance. But Gray found significant positive associations with the presence of an equal opportunities policy and the review of selection procedures.

CHAPTER TWO

Research methodology

2.1 Aims and objectives

The research aimed to examine the association between equal opportunities activities and a number of outcomes measured at the level of the individual employee and at the level of their employing establishment. In the analysis, we controlled for other factors that were associated with the specified outcomes in order to identify the independent effects of equal opportunities policies and practices.

In the first part of our analysis, we focused our attention upon employee attitudes that may be directly influenced by the presence of effective equal opportunities policies. Our first set of employee attitudes concerned the relationship between employees and the employer. They were as follows:

- Perceived degree of fair treatment by managers
- Extent of satisfaction with the respect received from managers
- Quality of relations between managers and employees

The second set of employee attitudes concerned the level of attachment, or the commitment, of the employee to their employing organization. The three measures capture:

- Degree of loyalty to the organization
- Extent to which the employee shared the values of their organization
- Extent to which the employee was proud to say who they worked for.

If equal opportunities policies were effective in reducing or eliminating unequal treatment, minority employees who were covered by effective equal opportunities policies might be expected to give higher ratings on each of these dimensions than minority employees who were not covered by such policies. If this was found to be the case, it would provide evidence that equal opportunities policies do offer business benefits, since; all other things being equal, higher levels of employee satisfaction and commitment could be expected to reduce the likelihood of grievances, absenteeism and labour turnover.⁴

To the extent that equal opportunities policies may be associated with the satisfaction and commitment of employees from disadvantaged groups, as well as upon the effective use of their skills (for which no indicator was available),

⁴ One might suppose that it would be more appropriate to look at the direct impact of equal opportunities on the incidence of equality-related grievances, but this is not a straightforward proposition with WER98 data, since it is known that such actions are more likely to occur in establishments with formal equality policies, but are less likely to be upheld. WERS98 provides no indicators of the success of such actions. Any direct analysis of labour turnover rates and recruitment difficulties is equally problematic because of the lack of detailed information on the principal terms and conditions offered to those joining or leaving the establishment, such as pay, fringe benefits and hours of work.

such policies may also have had a positive impact on overall levels of labour productivity at establishment level. If particular equal opportunities practices were found to be positively associated with overall levels of labour productivity, this would indicate a clear business benefit. However, the nature of any association could not be taken for granted since the overall level of labour productivity within an establishment would be primarily determined by the impact of any policies on the majority group (males, white employees, those without work-limiting disabilities). Their reaction to the provision of equal opportunities could be positive or negative.

Finally, we also examined the association between equal opportunities and establishments' financial performance, using the richness of the WERS98 dataset to control for a range of intervening variables. As in the case of labour productivity, the nature of any association could not be taken for granted since the provision of equal opportunities policies may be accompanied by various additional costs in the areas of recruitment, wages and training.

Data

As we have already noted, our data is taken from the Workplace Employee Relations Survey of 1998 (Department of Trade and Industry, 1999). This nationally representative sample survey of workplaces with 10 or more employees covered all sectors except agriculture and mining and included both private and publicly-owned establishments. With appropriate weighting to compensate for the complex sampling design, these survey results can be generalised with confidence to the population of workplaces in Great Britain employing 10 or more employees in early 1998. These 340,000 or so establishments employed roughly 18.6 million employees, 82 per cent of employees in England, Scotland and Wales.

We used two linked elements of the 1998 survey for our analysis. One was the management interview, carried out face-to-face with the most senior workplace manager responsible for personnel or employee relations. The other was the survey of employees, administered within workplaces where a management interview had been achieved.

Management interviews were conducted in 2191 workplaces with a response rate of 80.4 per cent. Most of the questioning was about the workplace as a whole. However, for some practices where intra-establishment variation was anticipated, there was more focused questioning about up to nine occupational groups. Other questions were asked about only the largest occupational group. This management interview provided much detailed information about the characteristics of the workplace and the personnel practices that applied to each of the occupational groups. The interview also provided subjective indicators of the levels of labour productivity and financial performance at the establishment, relative to other workplaces in the same industry.

The WERS98 survey of employees consisted of a short, anonymous self-completion questionnaire that was distributed to a simple random sample of 25 employees (or all employees in workplaces having 10-24) in the 1880 cases (85 per cent) where management permitted it. Of the 44,283 questionnaires distributed, 28,237 (64 per cent) usable ones were returned. With some corrective weighting for non-response bias, these data can be generalised to the

population of employees in Great Britain employed in all but the very smallest workplaces. The survey provided a variety of data about the employee and their job, including the six evaluative measures outlined in Section 2.1.

Our analysis of employee attitudes was confined to non-managerial employees so as to avoid the use of data from managerial employees who may have been rating their own performance as managers in sustaining good relations with staff. The six employee-level measures are tabulated for non-managerial employees in Table B1 (see Appendix B). Across each of the six measures, it can be seen that employees are generally more likely to give positive ratings than negative ones. However, there is a good spread of positive and negative ratings across each of the six measures.

Our analysis of workplace productivity and financial performance was confined to private sector workplaces, since most public sector establishments were routed around these questions in WERS98.⁵ In the case of financial performance, we restricted our analysis to those workplaces who defined this concept in terms of profitability or value-added (as opposed to sales, costs or some other measure). The two workplace-level measures are tabulated for private sector workplaces in Table B2. Here, it can be seen that employers are very unlikely to rate themselves “A lot below average” on either labour productivity or financial performance. This has been a feature of the responses to these subjective measures throughout the WERS series. Nevertheless, these measures are still considered valuable for the type of analysis proposed here (see Machin and Stewart, 1990, for a discussion).

Estimation strategy

As is evident from Tables B1 and B2, each of the outcomes were recorded as ordinal variables on five-point scales (e.g. Very satisfied; Satisfied; Neither satisfied nor dissatisfied; Dissatisfied; Very dissatisfied). The ordered probit regression model is the appropriate method to use in such circumstances. In each of the regressions, the independent impact of equal opportunities policies and practices was identified by the inclusion of dummy variables, with the general specification taking the following form:

$$y = \alpha + \beta X + \gamma EO + \varepsilon$$

where:

y is the outcome variable – for example the employee’s rating of fair treatment or the manager’s rating of the level of labour productivity – which takes ordinal values from 1 to 5, where higher values represent better ratings

X is a vector of control variables (see below)

EO are our indicators of EO policies and practices.

⁵ The analysis of employee attitudes was also conducted separately for the private sector in order to examine the sensitivity of the employee-level analysis to the exclusion of public sector employees. However, the results were not qualitatively different and so we present the results for private and public sector employees combined.

The regressions of employee attitudes were estimated separately for different groups (i.e. male and female, ethnic minorities and whites, disabled and non-disabled) in order to establish whether policies affect only disadvantaged groups.

All of the analysis accounts for the complex sample design of the WERS98, which incorporated variable probability sampling at both the establishment and employee levels and, in the case of the employee survey, the use of a cluster sampling methodology.

Control variables

The WERS98 dataset contained a wide range of information on each employee, their job and their employing establishment, enabling us to account for many of the factors that may be correlated both with the listed outcomes and with the presence of equal opportunities policies and practices.

The control variables we used in our models of employee-level outcomes (respect, fair treatment, quality of relations and our three measures of organizational attachment) can be grouped under the following headings:

- *Employee characteristics*
e.g. gender, ethnicity, disability, age, education
- *Job characteristics*
e.g. occupation, tenure, hours, earnings, receipt of training, availability of family-friendly working arrangements
- *Human resource practices*
e.g. consultation and communication practices, unionisation, payment systems, grievance procedures, fringe benefits
- *Workplace characteristics*
e.g. number of employees, ownership, workforce composition, industry sector, region

The full list of control variables that we used in our employee models is shown in Table B3.

The control variables we used in our models of workplace-level outcomes (labour productivity and financial performance) were comprised of those listed under the latter two headings. These variables are presented in Table B4.

Nevertheless, whilst many of the factors that may impact upon the listed outcome measures can be controlled for, the WERS dataset does not offer sufficiently detailed information to fully capture all of the possible influences. For instance, one might expect employees who are highly motivated by monetary incentives to report low levels of organizational attachment to their employer, all other things being equal. WERS98 provides no information on employees' intrinsic motivations. Similarly, the WERS98 data do not provide controls for capital intensity and quality, both of which are likely to be important in determining labour productivity. The possibility of omitted variable bias must therefore be acknowledged.

Equal opportunities indicators

In order to provide a practical basis for analysis, we generated a number of composite indicators of equal opportunities policy and practice from the numerous indicators presented in Table 1.

Our models began by utilising a number of separate variables which indicated the presence of policies and procedures that related to a particular disadvantaged group, taking women, ethnic minorities and disabled people in turn. We then utilised variables which identified workplaces with a comprehensive approach to equal opportunities in respect of the particular disadvantaged group in question. This comprehensive approach is defined as the combined presence of a written policy, supporting practices and equality training, plus measures to evaluate their effectiveness.

Each of the indicators discussed here, and used in our models, is presented in Table B5.

CHAPTER THREE

Results

Summary of analysis

We begin by reporting on the results from our analysis of the six indicators of employee attitudes, which can be sub-divided into two groups:

Indicators of the relationship between employees and managers:

- fair treatment from managers
- respect from supervisors/ line managers
- quality of relations between managers and employees

Indicators of the degree of organisational attachment:

- loyalty to the organization
- shared values with the organization
- pride in the organization.

The associations between these outcomes and our various measures of equal opportunities practices are presented in Tables B6-B11. For each measure, we present separate models for all employees, females, males, ethnic minorities, whites, disabled people and non-disabled people. Inevitably, the small samples sizes for ethnic minorities and disabled people mean that the coefficients for these two groups were somewhat less well defined.

We then turn to our two workplace-level outcomes:

- labour productivity
- financial performance.

The associations with our various measures of equal opportunities practices are presented in Table B12.

For both strands of the analysis, the baseline models containing the full sets of control variables are presented in Appendix C. These control variables are omitted from the tables in Appendix B for brevity. The coefficients on the control variables in the various baseline models were broadly in line with those obtained in previous studies (e.g. Bryson, 2000; Bryson and Wilkinson, 2001; Dex and Smith, 2001).

Equal opportunities in respect of gender

Table B6 presents the results from the regressions (by gender) of employee satisfaction with the degree of fair treatment they receive from supervisors and line managers, the amount of respect they received and the quality of relations with managers. Table B7 presents the results in respect of employees' ratings of organisational attachment.

Table B6 shows few significant associations between these ratings and measures of equal opportunities practices in respect of gender.⁶ The only significant associations are: first, a positive association between the presence of a non-specific equal opportunities policy and perceived fairness, but then only among men; and second, a positive association with the combined practice of both collecting statistics and reviewing employment procedures, but then only in the 'all employees' model for perceived respect. In the latter case, splitting the sample of employees by gender renders the association non-significant among both men and women, something which seems to be due to the drop in sample sizes rather than any substantial change in the coefficients.

Moving on to the models of organisational attachment, we find substantially more statistically significant associations. But the pattern of results remains somewhat puzzling. First, we find that men give higher ratings on the 'loyalty' item if their workplace has equal opportunities practices unrelated to gender (i.e. relating to ethnicity or disability), or if their workplace reviews employment procedures to identify sex discrimination. Second, men give higher ratings on the 'loyalty' item if their workplace pursues a comprehensive approach in respect of gender equality, involving an EO policy, practices, training and evaluation. There are no statistically significant positive associations between the EO indicators and women's ratings of organisational attachment. There are, however, some negative associations – among both men and women – with a workplace having actively evaluated its EO policies and procedures.

Equal opportunities in respect of ethnicity

Tables B8 and B9 present the associations between employees' attitudes and equal opportunities practices in respect of ethnicity. The results were more intuitive in so much as the statistically significant positive associations were concentrated among the ethnic minority sub-sample, rather than among whites.⁷

For ethnic minorities, there were a number of positive associations with specific equal opportunities practices relating to ethnicity, such as the collection of ethnicity statistics. The use of equal opportunities training was also positively associated with ethnic minorities' ratings of fairness, respect and managerial relations (although it was not associated with organisational attachment). A comprehensive approach to EO in respect of ethnicity - involving a specific EO policy, targeted practices, training and evaluation – was associated with higher ratings of 'loyalty' and 'pride in the organisation'. Finally, across all measures there was a consistent positive association for ethnic minorities with the presence of a non-specific equal opportunities policy, although this was somewhat counter-intuitive as there was no positive association with the presence of an equal opportunities policy that specifically cited race, except in the case of 'shared values'.

⁶ Given the large sample sizes, we focus the discussion on coefficients that are at least statistically significant from zero at the 5 per cent level.

⁷ Given the relative sample sizes, we focus on coefficients that are at least statistically significant from zero at the 5% per cent level for whites, but significant at 10% for ethnic minorities.

Equal opportunities in respect of disability

Tables B10 and B11 present the associations between employees' attitudes and equal opportunities practices in respect of disability.⁸

The results presented in B10 were interesting. Disabled employees' ratings of fairness and managerial relations were higher in the presence of an equal opportunities policy that explicitly cited disability. However, the fact of having made adjustments to accommodate employees with disabilities was unrelated to disabled employees' attitudes, as were the indicators of EO training and evaluation and the comprehensive measure of EO practice.

Turning to organisational attachment in B11, the presence of an EO policy that explicitly cited disability was positively associated with 'loyalty'. Otherwise, the results were mixed. As in Tables B7 and B9, we generally saw a negative association between organisational attachment and a workplace having evaluated their EO measures. And turning to look at the associations with a comprehensive approach to EO in respect of disability, the only statistically significant associations were positive ones found among the non-disabled group. The coefficient within the disabled group in respect of 'loyalty' was positive and larger than the coefficient for the non-disabled group, but was non-significant because of the smaller sample, whilst the coefficients within the disabled group on 'shared values' and 'pride' were negative (although similarly non-significant).

Summary of equal opportunities and disadvantaged groups

Summarising the results for the three measures that were concerned with the relationship between managers and employees, there were a small number of findings that supported the notion that equal opportunities could have a tangible impact on the attitudes of employees from traditionally-disadvantaged groups. Among ethnic minorities, we found a positive association with the collection of ethnicity statistics and with the delivery of EO training at the workplace. We also found a positive association among disabled employees with the presence of an EO policy that explicitly covered disability. However, there were no equivalently supportive results in respect of EO policies concerning gender equality and there are many other non-significant associations in the tables of results.

Summarising the results for the three measures of organisational attachment, we found that the presence of a specific EO policy was positively associated with 'shared values' among ethnic minorities and with 'loyalty' among disabled employees. Targeted EO practices also had a positive association with 'loyalty' among ethnic minorities, but they also exhibited some positive associations among whites, non-disabled employees and men. A similarly unexpected pattern of results was found in respect of the associations between following a comprehensive approach to EO and measures of organisational attachment.

Finally, we found that employees in workplaces that had tried to measure the effectiveness of their EO approach often gave lower ratings of organisational attachment than employees in workplaces that had not tried to do so. This could be indicative of reverse causality, with those workplaces engaging in some

⁸ Given the relative sample sizes, we focus on coefficients that are at least statistically significant from zero at the 5% per cent level for non-disabled employees, but significant at 10% for disabled employees.

evaluation of their EO policies and procedures having done so in response to apparent weaknesses or problems with their approach.

Workplace-level outcomes: labour productivity and financial performance

Turning our attention to broader, workplace-level outcomes, we present the results of our regressions of labour productivity and financial performance in Table B12. The baseline models are presented in Table C7.

In keeping with other multivariate analyses of labour productivity and financial performance based on WERS data, our models contained only small numbers of significant terms.⁹ The absence of data on capital intensity and quality, together with the presence of only partial indicators of labour quality, limited our analysis of labour productivity, whilst our analysis of financial performance was severely restricted by the absence of data on capital investments, the quality of marketing activities and so on. However, we were able to control for a wide range of employment practices that have been shown to be associated with productivity and financial performance in other studies.

The equal opportunities indicators that we used in these models took the same form as those used in our employee-level models, but we restricted ourselves to those indicators which focused on the gender aspect of equal opportunities since we expected that, among the three disadvantaged groups, it was women who would have the greatest impact on overall levels of workplace performance by virtue of their greater numbers.¹⁰

Considering the impact of EO policies on labour productivity, we found that the highest levels of productivity were found in workplaces with equal opportunities policies in which the grounds were not specified. One might speculate that these could have been workplaces with an advanced approach to equal opportunities, which focused on the full diversity of the workforce rather than particular disadvantaged groups (the so-called 'managing diversity' approach). However, on further investigation, it appeared that they had very few supporting practices and so it was more accurate to categorise them as rather limited in their approach.

We also found that workplaces which undertook monitoring activities tended to have lower levels of productivity than workplaces which did not. This is somewhat in line with Perotin and Robinson's finding that levels of labour productivity were lower in workplaces with extensive supporting practices (Perotin and Robinson, 2000). However, it is not clear in our models as to why those workplaces which only reviewed their procedures, without monitoring the composition of their workforce, or both monitored and reviewed, did not also register lower levels of productivity than workplaces which did neither.

Finally, our indicators of EO training, EO evaluation and a comprehensive approach in respect of gender equality showed no statistically significant associations with productivity.

⁹ Our focus extends to the 10 per cent level of statistical significance in view of the small sample sizes.

¹⁰ The constraints of the study meant that we were not able to explore other options. One could, of course, develop arguments to support a different focus, say on practices targeted at ethnicity.

Turning to the models of financial performance, there were a number of positive coefficients associated with the EO indicators, but none were statistically significant. The only statistically significant association was a negative one with the use of EO training.

We should note at this point that the sample available for the analysis of financial performance was somewhat smaller than that available for the analysis of labour productivity. This would have contributed to the general absence of statistically significant associations.

CHAPTER FOUR

Concluding remarks

Summary

In summary, the results of our examination of the business benefits of equal opportunities were rather mixed.

We identified a small number of positive associations between our equal opportunities indicators and our various outcomes that were in line with standard expectations. The most notable of these were perhaps: the positive associations between the presence of an EO policy and disabled employees' perceptions of the employee-manager relationship; the positive associations between EO training and ethnic minorities' perceptions of the employee-manager relationship; and the positive associations between a comprehensive EO approach and ethnic minorities' ratings of organisational attachment.

However, we have also identified a number of results which are not readily explained. In particular, we found that some aspects of EO practice were positively associated with higher levels of organisational attachment among men but not among women. And we found that some aspects of practice were positively associated with higher levels of organisational attachment among non-disabled employees but not among disabled employees.

In addition, it is noteworthy that we found no real evidence of a positive association of gender-specific policies among women, and that we found no clear positive associations between gender-specific policies and workplace performance.

Conclusions

Taken as a piece, the results of the study did not point towards any consistent and general conclusions about the impact of EO policies. However, this study is not alone in that respect. It is interesting to note that similar studies in this broad area – such as Perotin and Robinson's investigation of the link between equal opportunities and labour productivity (Perotin and Robinson, 2000) and Dex and Smith's study of the association between family-friendly working arrangements and organizational attachment (Dex and Smith, 2001) – have also yielded results which are not wholly in line with conventional expectations.

It is, of course, difficult to judge the extent to which the results reflect data limitations. One might argue that large-scale datasets, even those of such complexity and richness as WERS98, are too blunt an instrument to act as the basis for a fully robust and comprehensive examination of the impact of equal opportunities initiatives.

First, it could be argued that, in any such dataset, one will invariably lack the detail that would ideally be required to reliably identify workplaces in which either unfair treatment or true equality of opportunity are being practiced. Improved EO measures – particularly those which identify a progressive approach across a range of disadvantaged groups – would be helpful in this regard. However, it is perfectly possible for an employer to provide equality of opportunity without

having formal policies and procedures, although one might expect that it is more difficult to do so with any degree of certainty.

Second, whilst our analysis could include many of the factors that may impact upon the listed outcome measures, the WERS dataset does not offer sufficiently detailed information to fully capture all of the possible influences. WERS98 provides no information on employees' intrinsic motivations. Similarly, the WERS98 data do not provide controls for capital intensity and quality, both of which are likely to be important in determining labour productivity. The possibility of omitted variable bias must therefore be acknowledged.

Third, one might also argue that it is always likely to be difficult to separately identify the independent impact of equal opportunities practices from the impact of other employment practices or subtle contextual factors which will inevitably be difficult to measure. One must also acknowledge that any such analysis which relies only on cross-section data does run a risk that the results will be subject to simultaneity bias, meaning that the direction of causality cannot always be reliably determined. For example, it may prove easier for managers to introduce and sustain equality initiatives in establishments with above-average productivity. With the cross-section data that we have available to us, we can therefore only establish whether robust associations exist; one is left to speculate as to the direction of causality. The cross-sectional nature of the employee data also raises the prospect of selection bias, whereby employees from disadvantaged groups either avoid or leave unfair workplaces. These issues can only be properly addressed with longitudinal data or by employing sophisticated econometric techniques. Neither approach was feasible within the confines of the present study.

The results of some existing case studies clearly suggest that equal opportunities initiatives can yield economic benefits for businesses in certain situations. But our quantitative exploration, across a small number of dependent variables and utilising a rich, but limited data set, has provided only partial evidence in support of this notion.

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Annex A: Equal opportunities questions in WERS98

These questions are taken from the WERS98 cross-section management interview schedule. It should be noted that the questions do not all follow each other in the interview schedule.

IPOLICY

Does this workplace [or organisation of which it is a part of] have a formal written policy on equal opportunities or managing diversity?

1. Yes
2. No

If policy

IGROUN01-IGROUN10^{^*}

Does the policy specifically address equality of treatment or discrimination on any of the grounds listed on this card? Are there any others?

1. Sex/Gender
2. Ethnic minority or Racial groups
3. Religion
4. Marital status
5. Disability
6. Age
7. Sexual orientation
8. Trade Union membership
9. Any other type of discrimination
10. None of these

If policy

IMEASUR

Have you tried to measure the effects of your equal opportunities policies on the workplace or on the employees at this establishment?

1. Yes
2. No

IPRACTI1-IPRACTI7^{^*}

Can you tell me whether any of the things on this list are done or apply at this workplace?

1. Keep employee records with ethnic origin identified
2. Collect statistics on posts held by men and women
3. Monitor promotions by gender, ethnicity etc.
4. Review selection and other procedures to identify indirect discrimination
5. Review the relative pay rates of different groups
6. Make adjustment to the workplace to accommodate disabled employees
7. None of these

If any experienced employees in the largest non-managerial occupation have received formal off-the-job training in the last 12 months

CHOW01-CHOW10^*

Did this training cover any of the matters listed on this card?

1. Computing skills
2. Team working
3. Improving communication
4. Operation of new equipment
5. Customer service/liaison
6. Health and safety
7. Problem-solving methods
8. Equal opportunities
9. Reliability and working to deadlines
10. Quality control procedures
11. None of these

Annex B: Tables of results

Table B1 Employee attitudes (non-managerial employees only)

	Unweighted	Weighted
How good would you say managers here are at treating employees fairly?		
Very good	12	12
Good	39	39
Neither good nor poor	27	27
Poor	13	13
Very poor	9	10
<i>Total number of observations</i>	<i>24,143</i>	
How satisfied are you with the respect you get from supervisors / line managers?		
Very satisfied	14	14
Satisfied	44	44
Neither satisfied nor dissatisfied	21	21
Dissatisfied	13	13
Very dissatisfied	9	9
<i>Total number of observations</i>	<i>24,566</i>	
In general, how would you describe relations between managers and employees here?		
Very good	14	15
Good	39	38
Neither good nor poor	27	27
Poor	13	13
Very poor	6	6
<i>Total number of observations</i>		
Do you agree or disagree with the statement: "I feel loyal to my organization"?		
Strongly agree	14	14
Agree	50	50
Neither agree nor disagree	24	24
Disagree	8	8
Strongly disagree	3	3

<i>Total number of observations</i>	<i>24,375</i>	
Do you agree or disagree with the statement: "I share many values of my organization"?		
Strongly agree	8	7
Agree	43	42
Neither agree nor disagree	35	35
Disagree	12	12
Strongly disagree	3	4
<i>Total number of observations</i>	<i>23,397</i>	
Do you agree or disagree with the statement: "I am proud to tell people who I work for"?		
Strongly agree	15	15
Agree	39	40
Neither agree nor disagree	33	32
Disagree	8	8
Strongly disagree	4	4
<i>Total number of observations</i>	<i>24,390</i>	

Table B2 Workplace-level outcomes (private sector only)

	Unweighted	Weighted
How would you assess your workplace's labour productivity [when compared with other establishments in the same industry]?		
A lot better than average	12	13
Better than average	40	37
About average for industry	42	45
Below average	5	4
A lot below average	1	1
<i>Total number of observations</i>	<i>1,289</i>	
How would you assess your workplace's financial performance [when compared with other establishments in the same industry]?		
A lot better than average	19	17
Better than average	43	42
About average for industry	31	34
Below average	6	6
A lot below average	1	1
<i>Total number of observations</i>	<i>828</i>	

Second panel restricted to those workplaces defining financial performance in terms of 'profits or value-added'.

Table B3 Control variables used in analysis of employee-level outcomes

	Unweighted	Weighted
Employee characteristics:		
Female	47	51
Ethnic minority	4	4
Disabled	6	6
Age:		
Less than 20 years old	4	6
20-24	8	8
25-29	13	13
30-39	27	27
40-49	25	24
50-59	18	18
60 or above	4	5
Highest educational qualification:		
Degree level	23	18
A-level	16	15
O-level	27	27
CSE	12	13
None	24	28
Any vocational qualifications	37	37
Job characteristics:		
Occupation:		
Professional	16	12
Assoc. Professional & Technical	10	9
Clerical and secretarial	25	20
Craft and skilled	9	11
Personal service	12	13
Sales	8	10
Operative and assembly	10	14
Other occupations	9	11
Tenure:		
Less than 1 year	17	17
1 year	13	13
2-4 years	23	23
5-9 years	22	22

10 years or more	26	26
Permanent contract	92	92
Weekly hours	36	35
Weekly earnings:		
Less than £80	12	16
£81-£180	22	24
£181-£260	24	24
£261-£360	20	18
£361-£540	17	14
£541 and above	5	4
Union member	42	40
Availability of family-friendly arrangements:		
Flexible working time or location	44	41
Parental leave or nursery	29	28
Leave for family emergencies	32	35
Guaranteed job security	16	13
Training received in past year:		
None	38	42
Less than 1 day	9	10
1 day	15	13
2-4 days	21	18
5-9 days	9	8
10 days or more	9	9
Lot of influence over range of tasks	23	23
Lot of influence over pace of work	32	32
Lot of influence over how work is done	46	45
Human resource practices:		
Number of recognised unions:		
None	39	41
One	24	23
Two or more	37	36
One-site union representation	49	50
Employee perception of whether union is taken seriously by management:		
Taken seriously	81	81
Not taken seriously	8	8
Don't know / Not answered	11	11

Non-union representative	13	14
Joint consultative committee	35	38
Formal practices for two-way, face-to-face communication	89	88
Formal practices for one-way, face-to-face communication	80	79
Information provided to employees about performance or plans	89	88
Employee relations specialist	51	54
Investors In People accredited	35	35
Profit-sharing or share ownership scheme	42	43
Employer pension scheme for non-managerial employees	83	81
Health insurance for non-managerial employees	18	16
Four or more weeks' paid annual leave for non-managerials	93	91
Extra-statutory sick pay for non-managerials	79	79
Fringe benefits harmonized between managerials and non-managerials	60	56
Performance appraisals linked to training and development	76	74
Problem-solving groups	50	51
Preference for internal recruitment	35	35
Employees led to expect long tenure	72	76
Employees not expected to balance work and family life without help	9	9
Formal grievance procedure	96	96
Formal disciplinary procedure	96	95
Formal disputes procedure	66	66
Percentage of supervisors trained in people-management skills:		
60% or more	38	39
1-59%	39	37
None	15	16
No supervisors	9	8
Attitude tests in recruitment	32	34
Competency tests in recruitment	62	60
Most recent pay award for LOG:		
Higher than rest of industry	14	15
Same as rest of industry	70	69

Lower than rest of industry	11	10
Not known	6	6
Workplace characteristics:		
Number of employees (natural log)	4.8	5.1
Ownership characteristics:		
UK-owned; private sector; owner-manager	8	9
UK-owned; private sector; no owner-manager	46	46
Foreign-owned; private sector	11	14
Public sector	36	31
Single independent establishment	19	22
Age of establishment:		
Under 4 years	9	9
5-9 years	10	12
10-24 years	20	22
25 or more years	48	56
Don't know	14	
Greenfield site	6	6
Percentage of employees female	50	50
Percentage of employees part-time	25	27
Percentage of employees from ethnic minority groups	4	4
Financial performance:		
Above average for industry	50	50
At or below average for industry	35	36
No comparison possible	15	14
Industry sector:		
Manufacturing	14	23
Electricity, gas and water	4	1
Construction	5	3
Wholesale and retail	13	15
Hotels and restaurants	4	4
Transport and communications	6	6
Financial intermediation	6	4
Other business services	9	8
Public administration	10	9
Education	12	10

Health	12	13
Other community services	5	3
Region:		
East	8	9
East Midlands	8	9
London	13	10
North East	5	5
North West	10	12
Scotland	11	10
South East	16	15
South West	9	8
Wales	4	4
West Midlands	9	10
Yorkshire and Humberside	8	8
Total number of observations	24,973	

Table B4 Control variables used in analysis of workplace-level outcomes

	Unweighted	Weighted
Human resource practices:		
Number of recognised unions:		
None	61	79
One	20	15
Two or more	19	5
One-site union representation	32	11
Non-union representative	14	9
Joint consultative committee	28	14
Formal practices for two-way, face-to-face communication	86	78
Formal practices for one-way, face-to-face communication	76	66
Information provided to employees about performance or plans	85	79
Employee relations specialist	50	24
Investors In People accredited	31	28
Profit-sharing or share ownership scheme	60	45
Fringe benefits harmonized between managerials and non-managerials	44	46
Performance appraisals linked to training and development	73	57
Problem-solving groups	46	30
Multi-skilling among largest occupational group	35	36
Percentage of agency workers:		
None	62	81
Less than 5 per cent	25	10
5 per cent or more	12	9
Any employees on short-term contracts	35	19
Percentage of employees in higher-skilled occupations	37	39
Team working among largest occupational group	63	51
Training for largest occupational group in last year:		
None	18	32
Less than 2 days	31	25
2 days or more	51	43
Paternity leave available	52	38
Flexible working patterns available	58	46
Parental leave or childcare assistance available	38	28
Core employees have lot of variety in their work	37	46
Core employees have lot of discretion over working methods	20	29

Core employees have lot of control over work pace	20	26
Employees led to expect long-term employment	74	79
Employees not expected to balance work and family without help	6	5
Workplace characteristics:		
Number of employees (natural log)	4.7	3.4
Ownership characteristics:		
UK-owned; private sector; owner- manager	14	22
UK-owned; private sector; no owner-manager	70	68
Foreign-owned; private sector	16	10
Single independent establishment	25	39
Age of establishment:		
Under 4 years	10	11
5-9 years	13	19
10-24 years	25	23
25 or more years	39	31
Don't know	14	16
Greenfield site	7	6
Percentage of employees female	46	50
Percentage of employees part-time	25	30
Percentage of employees from ethnic minority groups	5	4
Occupation of core employees:		
Professional	8	7
Assoc. professional & Technical	7	5
Clerical & Secretarial	15	16
Craft & Skilled	14	16
Personal Service	7	10
Sales	16	21
Operative & Assembly	19	14
Routine unskilled	13	12
Number of competitors:		
Less than five	31	29
Five or more	53	56
Establishment does not trade outside organization	17	16
Industry sector:		
Manufacturing	20	17
Electricity, gas and water	5	0
Construction	5	5
Wholesale and retail	21	25

Hotels and restaurants	8	10
Transport and communications	7	5
Financial intermediation	7	4
Other business services	14	13
Education	3	3
Health	7	12
Other community services	5	5
Region:		
East	8	8
East Midlands	8	6
London	14	12
North East	4	5
North West	12	12
Scotland	9	8
South East	17	19
South West	9	10
Wales	4	3
West Midlands	9	10
Yorkshire and Humberside	7	8
Total number of observations	1513	

Table B5 Equal opportunities indicators used in analysis of employee and workplace-level outcomes

	Non-managerial employees		Private sector establishments	
	Unweighted	Weighted	Unweighted	Weighted
<i>Policy:</i>				
No policy	17	20	26	43
Areas not specified	6	6	8	10
Policy covers gender	77	75	66	47
No policy	17	20		
Areas not specified	6	6		
Policy covers race	77	75		
No policy	17	20		
Areas not specified	5	5		
Areas specified, but not disability	5	5		
Policy covers disability	73	71		
<i>Supporting practices:</i>				
No supporting practices	28	28	37	59
Practices not relating to gender	14	13	15	13
Collects gender statistics	14	13	13	9
Reviews procedures	11	11	12	10
Collects gender statistics and reviews procedures	34	35	24	9
No supporting practices	28	28		
Practices not relating to race	11	11		
Collects ethnicity statistics	17	15		
Reviews procedures	11	11		
Collects ethnicity statistics and reviews procedures	33	35		
No supporting practices	28	28		
Practices not relating to disability	23	21		
Makes adjustments for disabled people	50	51		
<i>Training:</i>				
Largest occupational group has	20	19	11	9

received training in equal opportunities				
<i>Evaluation:</i>				
Workplace has attempted to measure the impact of its EO policies	22	24	13	5
<i>Combinations:</i>				
Policy covering gender + Collects gender statistics and reviews procedures + trains + evaluates	7	8	3	2
Policy covering ethnicity + Collects ethnicity statistics and reviews procedures + trains + evaluates	7	8		
Policy covering disability + Makes adjustments for disabled people + trains + evaluates	7	8		
Total number of observations	24,973		1,513	

Table B6 Impact of equal opportunities policies and practices on relationship between employees and managers, by gender

	All	Female	Male	All	Female	Male	All	Female	Male
	Fairness	Fairness	Fairness	Respect	Respect	Respect	Quality of relations	Quality of relations	Quality of relations
Policy:									
Areas not specified	0.087	-0.035	0.188**	0.067	-0.007	0.157*	0.093	0.009	0.176*
Policy covers gender	-0.013	-0.072	0.021	-0.043	-0.083	-0.011	0.003	-0.052	0.056
Practices:									
Practices not related to gender	0.068	0.078	0.022	0.06	0.052	0.061	0.085	0.049	0.086
Collects gender statistics	0.035	0.028	0.028	0.074*	0.083	0.056	0.036	0.022	0.027
Reviews procedures	-0.003	-0.037	0.017	0.021	-0.017	0.045	0.019	-0.014	0.026
Collects gender statistics and reviews procedures	0.076*	0.05	0.08	0.077**	0.078	0.081	0.063	0.07	0.044
EO training	0.013	-0.002	0.01	0.061	0.066	0.026	0.065	0.064	0.04
EO evaluation	-0.03	-0.029	-0.004	-0.036	0.019	-0.071	-0.015	-0.013	0.004
Policy covering gender + Collects gender statistics and reviews procedures + trains + evaluates	0.044	0.077	0.02	-0.002	0.019	0	0.04	0.017	0.077
Observations	17496	8886	8610	17793	9087	8706	17670	8997	8673

F statistic	19.347	10.805	13.174	23.481	11.779	14.845	23.947	12.132	14.197
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* significant at 10%; ** significant at 5%; *** significant at 1%

Table B7 Impact of equal opportunities policies and practices on organisational attachment, by gender

	All	Female	Male	All	Female	Male	All	Female	Male
	Loyalty	Loyalty	Loyalty	Shared values	Shared values	Shared values	Pride	Pride	Pride
Policy:									
Areas not specified	0.023	-0.029	0.081	0.009	-0.09	0.107	0.046	0.01	0.078
Policy covers gender	-0.01	-0.058	0.001	-0.024	-0.086	-0.002	-0.006	-0.052	0.014
Practices:									
Practices not related to gender	0.120***	0.083	0.133**	0.084**	0.073	0.076	0.079*	0.062	0.081
Collects gender statistics	0.044	0.066	0.032	0.042	0.072	0.014	0.014	0.046	-0.011
Reviews procedures	0.081*	0.031	0.123**	0.087*	0.017	0.142**	0.07	0.028	0.105*
Collects gender statistics and reviews procedures	0.049	0.022	0.081	0.049	0.057	0.055	0.036	0.049	0.04
EO training	-0.006	-0.022	-0.007	0.026	0.022	0.011	-0.015	-0.022	-0.03
EO evaluation	-0.139***	-0.137***	-0.115**	-0.076*	-0.021	-0.115**	-0.068*	-0.088	-0.04
Policy covering gender + Collects gender statistics and reviews procedures + trains + evaluates	0.156**	0.121	0.194**	0.038	0.011	0.058	0.088	0.082	0.099
Observations	17683	9016	8667	17027	8684	8343	17654	8998	8656
F statistic	17.441	8.294	12.226	19.968	9.99	13.824	19.441	9.056	13.733

* significant at 10%; ** significant at 5%; *** significant at 1%

Table B8 Impact of equal opportunities policies and practices on relationship between employees and managers, by ethnicity

	All	Ethnic minority	White	All	Ethnic minority	White	All	Ethnic minority	White
	Fairness	Fairness	Fairness	Respect	Respect	Respect	Quality of relations	Quality of relations	Quality of relations
Policy:									
Areas not specified	0.056	0.750***	0.032	0.061	0.653**	0.042	0.078	0.596**	0.061
Policy covers ethnicity	-0.002	-0.087	-0.002	-0.039	0.247	-0.047	0.011	-0.022	0.011
Practices:									
Practices not related to ethnicity	0.045	-0.039	0.041	0.055	-0.271	0.061	0.071	-0.086	0.07
Collects ethnicity statistics	0.039	0.346**	0.022	0.059	0.335*	0.051	0.035	0.075	0.031
Reviews procedures	0.066	-0.251	0.067	0.084**	0.07	0.086**	0.083	-0.338	0.09
Collects ethnicity statistics and reviews procedures	0.02	0.16	0.014	0.025	-0.064	0.029	0.012	0.04	0.01
EO training	0.005	0.281*	-0.001	0.057	0.285*	0.058	0.068	0.317*	0.064
EO evaluation	-0.021	0.019	-0.022	-0.023	0.063	-0.029	0.002	-0.082	0.001
Policy covering ethnicity + Collects ethnicity statistics and reviews procedures + trains + evaluates	0.075	-0.157	0.076	0.024	-0.296	0.027	0.043	-0.039	0.042

Observations	17496	643	16853	17793	673	17120	17670	660	17010
F statistic	19.034	3.922	18.82	23.761	4.979	23.143	23.897	4.311	23.412

* significant at 10%; ** significant at 5%; *** significant at 1%

Table B9 Impact of equal opportunities policies and practices on organisational attachment, by ethnicity

	All	Ethnic minority	White	All	Ethnic minority	White	All	Ethnic minority	White
	Loyalty	Loyalty	Loyalty	Shared values	Shared values	Shared values	Pride	Pride	Pride
Policy:									
Areas not specified	0.007	0.442*	-0.007	0.026	0.856***	-0.001	0.015	0.745**	-0.004
Policy covers ethnicity	-0.006	0	-0.016	-0.024	0.328*	-0.035	0.002	0.136	-0.006
Practices:									
Practices not related to ethnicity	0.090*	0.729***	0.073	0.077	0.016	0.073	0.049	0.244	0.044
Collects ethnicity statistics	0.075*	0.856***	0.059	0.042	0.149	0.032	0.039	0.191	0.036
Reviews procedures	0.080*	0.331	0.075*	0.126***	0.264	0.124**	0.083*	0.095	0.084*
Collects ethnicity statistics and reviews procedures	0.049	0.764***	0.038	0.02	0.153	0.011	0.023	0.106	0.023
EO training	-0.005	0.091	-0.004	0.03	-0.069	0.035	-0.013	0.169	-0.016
EO evaluation	-0.141***	-0.267*	-0.136***	-0.063	-0.097	-0.062	-0.066	0.002	-0.064
Policy covering ethnicity + Collects ethnicity statistics and reviews procedures + trains + evaluates	0.150**	0.382*	0.133*	0.037	0.035	0.037	0.083	0.416*	0.066
Observations	17683	662	17021	17027	622	16405	17654	664	16990

F statistic	17.576	3.287	17.941	19.992	4.767	20.034	19.3	3.982	19.791
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* significant at 10%; ** significant at 5%; *** significant at 1%

Table B10 Impact of equal opportunities policies and practices on relationship between employees and managers, by disability

	All	Disabled	Non-disabled	All	Disabled	Non-disabled	All	Disabled	Non-disabled
	Fairness	Fairness	Fairness	Respect	Respect	Respect	Quality of relations	Quality of relations	Quality of relations
Policy:									
Areas not specified	0.099	0.271	0.086	0.068	-0.048	0.077	0.117	0.331	0.102
Areas specified, but not disability	0.015	0.144	0.01	-0.002	0.157	-0.015	0	0.218	-0.011
Policy specifies disability	-0.014	0.300**	-0.029	-0.048	0.101	-0.058	0.002	0.411***	-0.019
Practices:									
Practices not related to disability	0.078**	-0.014	0.077*	0.079**	0.009	0.085**	0.086*	0.046	0.091*
Makes adjustments	0.016	-0.007	0.011	0.037	0.026	0.033	0.025	-0.073	0.029
EO training	0.007	0.075	-0.009	0.065	0.093	0.061	0.065	0.155	0.047
EO evaluation	-0.018	-0.004	-0.012	-0.021	-0.068	-0.012	-0.006	0.112	-0.007
Policy covering disability + Makes adjustments + trains + evaluates	0.072	-0.255	0.087	-0.007	-0.332	0.008	0.046	-0.302	0.058
Observations	17496	1010	16486	17793	1015	16778	17670	1014	16656
F statistic	19.219	3.247	18.048	23.819	3.753	22.184	23.946	3.949	20.117

* significant at 10%; ** significant at 5%; *** significant at 1%

Table B11 Impact of equal opportunities policies and practices on organisational attachment, by disability

	All	Disabled	Non-disabled	All	Disabled	Non-disabled	All	Disabled	Non-disabled
	Loyalty	Loyalty	Loyalty	Shared values	Shared values	Shared values	Pride	Pride	Pride
Policy:									
Areas not specified	0.029	0.118	0.03	0.032	-0.248	0.038	0.049	-0.022	0.054
Areas specified, but not disability	0.008	0.337	-0.005	0.097	0.032	0.103	-0.003	0.355	-0.021
Policy specifies disability	-0.017	0.370***	-0.041	-0.051	0	-0.056	-0.006	0.215	-0.021
Practices:									
Practices not related to disability	0.130***	-0.135	0.141***	0.102***	-0.250*	0.114***	0.088**	-0.116	0.101**
Makes adjustments	0.03	-0.092	0.033	0.035	-0.218	0.039	0.018	-0.129	0.025
EO training	-0.013	0.03	-0.018	0.023	0.185	0.009	-0.031	0.039	-0.042
EO evaluation	-0.143***	-0.226*	-0.140***	-0.073*	-0.137	-0.061	-0.079*	0.091	-0.085*
Policy covering disability + Makes adjustments + trains + evaluates	0.177***	0.3	0.171***	0.048	-0.232	0.047	0.134*	-0.075	0.145*
Observations	17683	1013	16670	17027	984	16043	17654	1005	16649
F statistic	17.936	3.438	17.106	20.281	4.13	18.583	19.431	3.202	18.881

* significant at 10%; ** significant at 5%; *** significant at 1%

Annex C: Baseline models

Table C1 'Baseline' models of employees' perception of fairness

	All	Female	Male	Ethnic minorities	White	Disabled	Non-disabled
	Fairness	Fairness	Fairness	Fairness	Fairness	Fairness	Fairness
Employee characteristics:							
Female	-0.069**			-0.096	-0.058**	0.053	-0.072**
Ethnic minority	-0.089	-0.173**	-0.034			-0.287	-0.077
Disabled	-0.130**	-0.04	-0.192**	-0.436*	-0.124**		
Age:							
Less than 20	0.041	0.03	0.085	0.677**	0.027	-0.373	0.065
20 to 24 years old	0.110**	0.085	0.140**	0.127	0.106**	-0.048	0.109**
40 to 49 years old	0.034	0.039	0.034	0.202	0.022	-0.248**	0.055*
50 to 59 years old	0.164***	0.169***	0.181***	0.449**	0.153***	-0.188	0.189***
More than 60 years old	0.407***	0.372***	0.448***	1.196***	0.393***	0.419*	0.411***
Highest educational qualification:							
Degree level	-0.241***	-0.283***	-0.186***	-0.262	-0.255***	-0.638***	-0.222***
A-level	-0.175***	-0.177***	-0.164***	-0.033	-0.193***	-0.290*	-0.174***
O-level	-0.143***	-0.131***	-0.159***	-0.199	-0.152***	-0.405***	-0.127***
CSE	-0.045	0.022	-0.078	-0.381	-0.043	0.044	-0.048
Any vocational qualifications	-0.084***	-0.072**	-0.075**	-0.153	-0.077***	0.008	-0.083***

Job characteristics:							
Occupational group:							
Professional	0.035	-0.037	0.059	0.195	0.036	0.33	0.023
Assoc. professional & Technical	0.031	0.008	0.024	0.192	0.029	-0.022	0.03
Clerical & Secretarial	0.067	-0.06	0.193**	-0.319	0.081	-0.121	0.069
Craft & Skilled	-0.06	-0.006	-0.02	0.02	-0.066	-0.647***	-0.013
Personal Service	0.111**	0.011	0.179**	-0.044	0.105*	-0.231	0.139**
Sales	0.042	-0.079	0.128	0.079	0.052	-0.25	0.054
Operative & Assembly	-0.002	-0.096	0.064	-0.118	-0.003	0.028	-0.019
Tenure:							
Less than 1 year	0.507***	0.598***	0.438***	0.441*	0.515***	0.517***	0.519***
1 year	0.261***	0.355***	0.179***	0.451**	0.263***	0.139	0.278***
2-4 years	0.168***	0.193***	0.164***	0.096	0.171***	0.063	0.180***
5-9 years	0.041	0.113**	-0.02	-0.064	0.042	-0.203*	0.063*
Permanent contract	-0.05	-0.067	-0.009	-0.215	-0.042	0.08	-0.058
Weekly hours	-0.006***	-0.008***	-0.004**	0.011	-0.007***	-0.005	-0.007***
Weekly earnings:							
£81-£180	-0.08	-0.001	-0.290***	-0.256	-0.071	-0.272	-0.053
£181-£260	-0.092	0.008	-0.286**	-0.540*	-0.067	-0.193	-0.056
£261-£360	-0.021	0.108	-0.231*	-0.696**	0.016	-0.264	0.014
£361-£540	-0.018	0.043	-0.19	-1.156***	0.033	-0.23	0.023
£541 and above	0.193**	0.155	-0.005	-0.773*	0.234**	-0.366	0.240***
Union member	-0.081***	-0.077**	-0.102**	-0.005	-0.084***	-0.005	-0.081***

Flexible working time or location	0.239***	0.240***	0.235***	0.311***	0.236***	0.374***	0.234***
Parental leave or nursery	0.186***	0.207***	0.163***	0.201*	0.193***	0.214*	0.188***
Leave for family emergencies	-0.022	-0.022	-0.023	-0.121	-0.021	0.007	-0.022
Training in past year:							
1 day	0.153***	0.169***	0.132***	0.025	0.153***	0.449***	0.135***
2-4 days	0.276***	0.281***	0.274***	-0.038	0.286***	0.328**	0.273***
5-9 days	0.383***	0.378***	0.396***	0.267	0.378***	0.472***	0.384***
10 days or more	0.401***	0.391***	0.414***	-0.274	0.420***	0.402**	0.401***
Lot of influence over range of tasks	0.180***	0.183***	0.176***	0.224	0.179***	0.178	0.179***
Lot of influence over pace of work	0.052*	0.051	0.049	-0.097	0.061*	-0.125	0.063**
Lot of influence over how work is done	0.174***	0.198***	0.156***	0.163	0.173***	0.227**	0.173***
Human resource practices:							
Number of recognised unions:							
One	0.011	-0.018	0.008	-0.269	0.013	-0.143	0.016
Two or more	0.013	-0.041	0.022	-0.083	0.002	-0.184	0.017
On-site union representation	-0.047	-0.086*	0.017	0.164	-0.045	-0.027	-0.054
Employee perception of union treatment:							
Not taken seriously	-0.780***	-0.860***	-0.748***	-0.910***	-0.776***	-0.637***	-0.801***
DK/NA	-0.013	-0.047	0.008	-0.148	-0.007	0.04	-0.013
Non-union representative	0.002	0.002	0.001	-0.016	-0.002	0.07	-0.015
Joint consultative committee	0.005	0.039	-0.031	0.177	0	-0.031	0.012
Information provided to employees about performance or plans	0.041	0.067	0.037	0.769***	0.028	-0.183	0.054
ER specialist	0	-0.042	0.04	-0.058	-0.002	0.16	-0.014

Investors In People accredited	0.074***	0.085**	0.061	0.216*	0.073***	0.007	0.077***
Profit-Sharing or share ownership scheme	0.004	-0.012	-0.01	0.114	-0.003	-0.241**	0.006
Employer pension scheme for non-managerial employees	-0.027	0.083	-0.132**	0.395*	-0.039	0.132	-0.034
Extra-statutory sick pay for non-managerials	0.037	-0.007	0.083*	-0.399**	0.042	-0.224*	0.048
Fringe benefits harmonized between managerials and non-managerials	-0.009	-0.01	0.004	0.127	-0.009	0.162	-0.021
Performance appraisals linked to training and development	0.044	0.087**	0.017	-0.109	0.049	-0.002	0.044
Problem-solving groups	0.036	0	0.075**	-0.034	0.038	0.011	0.042
Preference for internal recruitment	0.032	0.05	0.025	-0.036	0.031	-0.141	0.041
Employees led to expect long tenure	0.071**	0.028	0.117***	0.193	0.072**	0.152	0.072**
Employees not expected to balance work and family without help	0.004	-0.008	0.015	0.657***	-0.009	-0.027	0.006
Formal grievance procedure	-0.053	-0.04	-0.078	-0.327	-0.05	-0.605**	-0.039
Percentage of supervisors trained in people-management skills (ref. 60% or more):							
1-59%	0.017	0.038	-0.012	0.03	0.018	0.048	0.011
None	-0.031	0.01	-0.098	0.078	-0.034	-0.166	-0.027
No supervisors	0.01	-0.044	0.061	0.056	0.016	-0.081	0.016
Attitude tests in recruitment	0.02	0.015	0.025	0.227**	0.018	-0.015	0.015
Competency tests in recruitment	-0.036	-0.044	-0.025	-0.189	-0.033	0.038	-0.034
Most recent pay award for LOG (ref: Higher than rest of industry):							
Same as rest of industry	-0.03	-0.066	0.018	0.206	-0.034	-0.047	-0.026
Lower than rest of industry	-0.118*	-0.132*	-0.082	0.236	-0.112*	-0.083	-0.116*
Not known	0.012	-0.068	0.105	0.103	0.005	0.055	0.023

Workplace characteristics:							
Number of employees (natural log)	-0.041***	-0.046**	-0.044**	-0.069	-0.039***	-0.114***	-0.031**
Ownership:							
UK-owned; private sector; owner-manager	-0.016	0.018	-0.019	0.008	-0.008	-0.542***	0.013
Foreign-owned; private sector	0.017	-0.007	0.03	-0.390**	0.024	-0.082	0.025
Public sector	0.004	0.087	-0.129*	0.276	-0.014	-0.267	0.014
Single independent establishment	0.002	-0.063	0.063	0.279*	-0.008	0.077	-0.014
Percentage of employees female	0.001	-0.001	0.002*	0.009**	0.001	-0.004	0.001
Percentage of employees part-time	0.003***	0.004***	0.001	-0.003	0.003***	0.005*	0.003***
Percentage of employees from ethnic minority groups	-0.002	-0.003	-0.001	0	-0.001	0	-0.002
Financial performance:							
Above average for industry	0.029	0.053	0.006	0.286**	0.027	-0.052	0.035
No comparison possible	0.032	0.008	0.058	0.364**	0.028	-0.178	0.041
Observations	18128	9246	8882	668	17460	1047	17081
F statistic	21.042	11.657	14.25	4.138	20.869	3.478	19.539

Notes:

1. significant at 10%; ** significant at 5%; *** significant at 1%
2. Industry dummies (11) and region dummies (10) not reported
3. Non-significant controls omitted: Job security guarantees; Greenfield site; Two-way communication; One-way communication; Health insurance; 4+ weeks' paid leave; Disciplinary procedure; Disputes procedure; Establishment age

Table C2 'Baseline' models of employees' perception of respect

	All	Female	Male	Ethnic minorities	White	Disabled	Non-disabled
	Respect	Respect	Respect	Respect	Respect	Respect	Respect
Employee characteristics:							
Female	0.094***			0.082	0.096***	0.280**	0.085***
Ethnic minority	0.039	-0.034	0.077			-0.034	0.035
Disabled	-0.124***	-0.061	-0.170***	-0.03	-0.125**		
Age:							
Less than 20	-0.071	-0.132*	-0.026	0.361	-0.08	-0.095	-0.064
20 to 24 years old	0.011	-0.024	0.049	0.022	0.014	-0.1	0.017
40 to 49 years old	0.129***	0.153***	0.103**	0.212	0.123***	-0.052	0.138***
50 to 59 years old	0.264***	0.329***	0.213***	0.289	0.259***	-0.175	0.302***
More than 60 years old	0.603***	0.580***	0.628***	1.182***	0.592***	0.371*	0.636***
Highest educational qualification:							
Degree level	-0.318***	-0.333***	-0.318***	-0.503**	-0.323***	-0.414**	-0.316***
A-level	-0.212***	-0.185***	-0.230***	-0.386*	-0.220***	-0.449***	-0.204***
O-level	-0.196***	-0.128**	-0.268***	-0.435**	-0.201***	-0.530***	-0.175***
CSE	-0.115**	0.018	-0.213***	-0.471*	-0.116**	-0.356**	-0.089*
Any vocational qualifications	-0.02	0.008	-0.022	-0.048	-0.016	-0.012	-0.017
Job characteristics:							
Occupational group:							

Professional	0.05	0.042	0.013	-0.061	0.053	-0.002	0.063
Assoc. professional & Technical	-0.017	-0.061	-0.042	0.144	-0.023	-0.165	-0.004
Clerical & Secretarial	0.049	-0.02	0.109	-0.159	0.058	-0.123	0.061
Craft & Skilled	0.004	0.082	0.023	0.052	-0.001	-0.077	0.008
Personal Service	0.077	0.058	0.079	0.103	0.07	-0.171	0.102*
Sales	-0.023	-0.054	0.021	-0.266	-0.011	-0.407	0.002
Operative & Assembly	-0.046	-0.093	-0.015	0.227	-0.054	0.054	-0.062
Tenure:							
Less than 1 year	0.385***	0.410***	0.367***	0.375*	0.384***	0.429**	0.396***
1 year	0.158***	0.247***	0.065	0.041	0.165***	-0.355**	0.190***
2-4 years	0.086**	0.103*	0.077	-0.063	0.085**	-0.037	0.099**
5-9 years	0.017	0.03	-0.01	-0.017	0.014	-0.008	0.022
Permanent contract	-0.026	0.006	-0.02	-0.485**	-0.01	-0.062	-0.029
Weekly hours	-0.003	-0.005***	0.001	0.009	-0.003*	0.005	-0.003*
Weekly earnings:							
£81-£180	-0.133**	-0.014	-0.457***	0.078	-0.134**	-0.384**	-0.107**
£181-£260	-0.151**	-0.056	-0.410***	0.09	-0.148**	-0.709***	-0.102
£261-£360	-0.139*	0.087	-0.461***	0.02	-0.129*	-0.703**	-0.095
£361-£540	-0.128	0.036	-0.400***	-0.182	-0.111	-0.659**	-0.078
£541 and above	0.094	0.234	-0.185	0.08	0.107	-0.597	0.15
Union member	-0.113***	-0.079**	-0.135***	-0.064	-0.117***	-0.159	-0.107***
Flexible working time or location	0.212***	0.186***	0.226***	0.261***	0.209***	0.371***	0.204***
Parental leave or nursery	0.183***	0.204***	0.173***	0.320***	0.184***	0.230*	0.182***
Leave for family emergencies	-0.008	0.053	-0.049	0.086	-0.008	0.118	-0.012

Training in past year:							
1 day	0.140***	0.138***	0.141***	0.118	0.139***	0.330**	0.126***
2-4 days	0.234***	0.254***	0.216***	0.101	0.239***	0.397***	0.222***
5-9 days	0.317***	0.324***	0.315***	0.204	0.318***	0.538***	0.300***
10 days or more	0.355***	0.413***	0.309***	0.15	0.364***	0.157	0.361***
Lot of influence over range of tasks	0.253***	0.300***	0.217***	0.369***	0.248***	0.098	0.268***
Lot of influence over pace of work	0.073**	0.069*	0.071	0.144	0.075**	0.15	0.065*
Lot of influence over how work is done	0.292***	0.301***	0.291***	0.332**	0.292***	0.340***	0.288***
Human resource practices:							
Number of recognised unions:							
One	0.016	0	0.042	-0.686***	0.032	0.014	0.013
Two or more	0.017	0.025	0.017	0.012	0.012	0.051	0.015
On-site union representation	-0.01	-0.043	0	0.205	-0.014	-0.154	-0.004
Employee perception of union treatment:							
Not taken seriously	-0.687***	-0.688***	-0.692***	-0.770***	-0.685***	-0.716***	-0.690***
DK/NA	-0.087**	-0.114**	-0.072	-0.086	-0.085**	-0.146	-0.076*
Non-union representative	-0.02	-0.046	-0.004	0.121**	-0.031	0.044	-0.03
Joint consultative committee	0	0.061*	-0.049	0.134	-0.003	0.099	0.001
Information provided to employees about performance or plans	0.041	0.025	0.085	0.291	0.037	-0.072	0.048
ER specialist	0.048	0	0.096**	0.044	0.046	0.211**	0.031
Investors In People accredited	0.025	0.091***	-0.015	-0.014	0.026	-0.061	0.031
Profit-Sharing or share ownership scheme	-0.008	-0.045	0.004	-0.095	-0.011	-0.085	-0.007
Employer pension scheme for non-managerial employees	-0.021	0.049	-0.107*	-0.548**	-0.014	0.062	-0.023

Extra-statutory sick pay for non-managerials	0.036	-0.018	0.103**	0.038	0.042	-0.021	0.041
Fringe benefits harmonized between managerials and non-managerials	0.007	0.015	0.007	0.255*	0.002	-0.023	0.006
Performance appraisals linked to training and development	0.022	0.009	0.036	-0.22	0.032	0.125	0.014
Problem-solving groups	-0.003	-0.035	0.042	-0.293***	0.004	-0.01	0
Preference for internal recruitment	0.017	0.025	0.021	0.155	0.013	0.124	0.008
Employees led to expect long tenure	0.043	0.058	0.047	-0.088	0.05	-0.037	0.053*
Employees not expected to balance work and family without help	-0.017	-0.022	0.009	0.366**	-0.02	-0.205	-0.003
Formal grievance procedure	-0.077	-0.121	-0.038	0.720**	-0.091	-0.626**	-0.046
Percentage of supervisors trained in people-management skills (ref. 60% or more):							
1-59%	0.003	0.02	-0.025	-0.05	0.003	0.038	-0.007
None	-0.023	-0.009	-0.046	-0.162	-0.014	-0.034	-0.026
No supervisors	-0.007	-0.034	0.04	-0.312	0.011	-0.003	-0.009
Attitude tests in recruitment	-0.041	-0.029	-0.063*	0.054	-0.04	-0.031	-0.042
Competency tests in recruitment	-0.033	-0.016	-0.056	-0.135	-0.032	0.015	-0.031
Most recent pay award for LOG (ref: Higher than rest of industry):							
Same as rest of industry	0.021	-0.041	0.085*	0.08	0.016	-0.079	0.026
Lower than rest of industry	-0.028	-0.108	0.05	-0.11	-0.022	-0.015	-0.024
Not known	0.049	-0.09	0.170**	0.288	0.043	-0.041	0.066
Workplace characteristics:							
Number of employees (natural log)	-0.025*	-0.017	-0.029*	-0.078	-0.022	-0.079*	-0.02

Ownership:							
UK-owned; private sector; owner-manager	-0.055	-0.017	-0.044	-0.433	-0.043	-0.282	-0.038
Foreign-owned; private sector	-0.099**	-0.093	-0.096**	-0.115	-0.107**	-0.422***	-0.071*
Public sector	-0.037	-0.048	-0.064	-0.037	-0.042	0.171	-0.052
Single independent establishment	0.019	-0.063	0.092*	0.104	0.02	-0.058	0.019
Percentage of employees female	0.001	-0.002	0.002**	0.004	0	-0.003	0.001
Percentage of employees part-time	0.002**	0.002**	0	0.005	0.002**	0.003	0.002**
Percentage of employees from ethnic minority groups	-0.002	-0.002	-0.001	-0.004	-0.001	-0.004	-0.002
Financial performance:							
Above average for industry	0.052*	0.036	0.068*	0.193	0.048*	0.038	0.046*
No comparison possible	-0.009	0.006	-0.004	0.395**	-0.022	0	-0.012
Observations	18449	9462	8987	700	17749	1052	17397
F statistic	25.943	12.322	15.648	4.043	25.502	4.078	23.827

Notes:

1. significant at 10%; ** significant at 5%; *** significant at 1%
2. Industry dummies (11) and region dummies (10) not reported
3. Non-significant controls omitted: Job security guarantees; Greenfield site; Two-way communication; One-way communication; Health insurance; 4+ weeks' paid leave; Disciplinary procedure; Disputes procedure; Establishment age

Table C3 'Baseline' models of employees' perception of the quality of relations

	All	Female	Male	Ethnic minorities	White	Disabled	Non-disabled
	Quality of relations	Quality of relations	Quality of relations	Quality of relations	Quality of relations	Quality of relations	Quality of relations
Employee characteristics:							
Female	0.042			-0.118	0.053*	0.290**	0.03
Ethnic minority	0.075	-0.032	0.143*			0.109	0.062
Disabled	-0.091*	0.021	-0.152**	-0.195	-0.091*		
Age:							
Less than 20	0.145**	0.14	0.192*	0.624**	0.141*	0.031	0.161**
20 to 24 years old	0.154***	0.096	0.231***	0.048	0.162***	-0.055	0.158***
40 to 49 years old	0.033	0.062*	0.006	0.251	0.026	-0.231**	0.054
50 to 59 years old	0.103***	0.135***	0.077	0.161	0.098***	-0.209	0.133***
More than 60 years old	0.476***	0.444***	0.511***	0.840**	0.471***	0.482**	0.486***
Highest educational qualification:							
Degree level	-0.329***	-0.426***	-0.237***	-0.309	-0.340***	-0.472**	-0.317***
A-level	-0.261***	-0.293***	-0.230***	-0.491**	-0.264***	-0.125	-0.270***
O-level	-0.203***	-0.200***	-0.220***	-0.438**	-0.206***	-0.255*	-0.197***
CSE	-0.076*	-0.016	-0.107	-0.442*	-0.073	-0.173	-0.061
Any vocational qualifications	-0.039	-0.015	-0.026	-0.016	-0.036	0.068	-0.041

Job characteristics:							
Occupational group:							
Professional	0.061	0.068	0.024	0.694**	0.044	0.188	0.053
Assoc. professional & Technical	0.07	0.017	0.061	0.750**	0.056	-0.264	0.091
Clerical & Secretarial	0.081	0.011	0.127	0.224	0.084	-0.25	0.096*
Craft & Skilled	0.007	0.115	0.017	0.414	-0.007	-0.464**	0.044
Personal Service	0.145**	0.082	0.178**	0.492	0.129**	-0.390*	0.187***
Sales	0.125*	0.078	0.143*	0.385	0.129*	-0.401*	0.150**
Operative & Assembly	-0.003	-0.045	0.035	0.315	-0.014	-0.081	-0.017
Tenure:							
Less than 1 year	0.482***	0.564***	0.421***	0.495**	0.485***	0.400**	0.501***
1 year	0.172***	0.244***	0.119**	0.316	0.173***	-0.104	0.198***
2-4 years	0.119***	0.098**	0.148***	-0.061	0.122***	0.047	0.134***
5-9 years	0.026	0.033	0.007	0.108	0.019	-0.098	0.04
Permanent contract	-0.037	-0.004	-0.034	-0.193	-0.032	0.14	-0.048
Weekly hours	-0.005***	-0.007***	-0.002	0.012*	-0.005***	-0.005	-0.005***
Weekly earnings:							
£81-£180	-0.090*	-0.011	-0.277***	-0.331	-0.078	-0.172	-0.066
£181-£260	-0.109*	-0.036	-0.235**	-0.507	-0.084	-0.338	-0.07
£261-£360	-0.08	0.077	-0.237**	-0.906***	-0.036	-0.22	-0.049
£361-£540	-0.064	0.021	-0.17	-1.108***	-0.013	-0.4	-0.015
£541 and above	0.203**	0.114	0.077	-0.826*	0.253***	0.007	0.231**

Union member	-0.138***	-0.127***	-0.148***	-0.035	-0.141***	-0.195*	-0.134***
Flexible working time or location	0.288***	0.251***	0.329***	0.272**	0.286***	0.355***	0.284***
Parental leave or nursery	0.201***	0.235***	0.171***	0.222*	0.205***	0.138	0.208***
Leave for family emergencies	-0.080***	-0.073**	-0.089**	-0.087	-0.080***	0.047	-0.083***
Training in past year:							
1 day	0.138***	0.140***	0.143**	0.078	0.136***	0.420***	0.119***
2-4 days	0.253***	0.314***	0.208***	0.131	0.256***	0.390***	0.242***
5-9 days	0.333***	0.362***	0.329***	0.323*	0.328***	0.630***	0.313***
10 days or more	0.303***	0.359***	0.259***	0.035	0.308***	0.400**	0.291***
Lot of influence over range of tasks	0.215***	0.197***	0.233***	0.399***	0.205***	0.064	0.222***
Lot of influence over pace of work	0.059**	0.055	0.051	-0.033	0.065**	0.133	0.057*
Lot of influence over how work is done	0.151***	0.208***	0.106***	0.285**	0.152***	0.111	0.154***
Human resource practices:							
Number of recognised unions:							
One	0.014	-0.023	0.03	-0.233	0.015	-0.14	0.019
Two or more	-0.035	-0.04	-0.047	0.151	-0.052	-0.111	-0.041
On-site union representation	-0.085*	-0.142***	-0.02	-0.203	-0.079	0.029	-0.093*
Employee perception of union treatment:							
Not taken seriously	-0.822***	-0.991***	-0.762***	-1.134***	-0.812***	-0.960***	-0.821***
DK/NA	-0.028	-0.069	-0.02	0.11	-0.028	-0.134	-0.015
Non-union representative	-0.084**	-0.098**	-0.080*	-0.009	-0.093**	0.158*	-0.110***

Joint consultative committee	0.017	0.032	0	0.202	0.013	-0.002	0.024
Information provided to employees about performance or plans	0.06	0.074	0.061	0.536**	0.052	-0.048	0.066
ER specialist	0.021	-0.017	0.054	-0.032	0.019	0.180*	0.002
Investors In People accredited	0.077**	0.127***	0.044	0.308**	0.074**	0.112	0.072**
Profit-Sharing or share ownership scheme	-0.017	-0.056	-0.003	0.166	-0.024	-0.109	-0.022
Employer pension scheme for non-managerial employees	-0.061	0.034	-0.152**	-0.049	-0.06	0.280*	-0.077
Extra-statutory sick pay for non-managerials	0.019	-0.017	0.049	-0.064	0.019	-0.146	0.026
Fringe benefits harmonized between managerials and non-managerials	0.041	0.076*	0.017	0.155	0.041	0.099	0.036
Performance appraisals linked to training and development	0.014	0.025	0.017	-0.071	0.02	-0.114	0.019
Problem-solving groups	0.033	0.033	0.043	-0.194*	0.039	0.057	0.034
Preference for internal recruitment	0.065*	0.058	0.081*	0.065	0.060*	0.12	0.063*
Employees led to expect long tenure	0.088***	0.114***	0.073	0.101	0.090***	0.158	0.087***
Employees not expected to balance work and family without help	-0.031	-0.024	-0.03	0.412**	-0.04	0.095	-0.037
Formal grievance procedure	-0.118	-0.181	-0.067	-0.002	-0.12	-0.585**	-0.096
Percentage of supervisors trained in people-management skills (ref. 60% or more):							
1-59%	-0.002	0.051	-0.067	0.066	-0.002	-0.011	-0.007
None	-0.045	0.011	-0.126*	-0.199	-0.04	-0.063	-0.047
No supervisors	-0.01	-0.074	0.059	0.065	-0.003	-0.183	0.007

Attitude tests in recruitment	0.041	0.073	0.019	0.145	0.042	0.05	0.037
Competency tests in recruitment	-0.034	-0.04	-0.037	-0.037	-0.036	0.042	-0.033
Most recent pay award for LOG (ref: Higher than rest of industry):							
Same as rest of industry	-0.052	-0.115**	0.018	-0.036	-0.055	-0.134	-0.048
Lower than rest of industry	-0.164**	-0.204**	-0.092	-0.171	-0.154**	0.048	-0.176**
Not known	0.056	-0.113	0.224**	-0.271	0.058	0.162	0.055
Workplace characteristics:							
Number of employees (natural log)	-0.068***	-0.063***	-0.076***	-0.097*	-0.067***	-0.131***	-0.060***
Ownership:							
UK-owned; private sector; owner-manager	0.042	0.048	0.079	0.347	0.046	-0.273	0.062
Foreign-owned; private sector	0.019	-0.04	0.046	0.008	0.018	-0.079	0.031
Public sector	-0.002	0.046	-0.117	0.161	-0.012	-0.052	0.003
Single independent establishment	-0.014	-0.053	0.007	0.213	-0.02	-0.011	-0.024
Percentage of employees female	0.001	0	0.001	0.010**	0	-0.003	0.001
Percentage of employees part-time	0.003**	0.003**	0.002	-0.003	0.003***	0.003	0.003***
Percentage of employees from ethnic minority groups	-0.003*	-0.004*	-0.002	-0.004	-0.003	-0.010*	-0.003
Financial performance:							
Above average for industry	0.053	0.045	0.057	0.102	0.053	-0.017	0.055
No comparison possible	0.041	0.004	0.083	0.305*	0.034	0.067	0.031

Observations	18319	9369	8950	686	17633	1052	17267
F statistic	26.021	13.267	15.545	3.835	25.69	4.38	21.715

Notes:

1. significant at 10%; ** significant at 5%; *** significant at 1%
2. Industry dummies (11) and region dummies (10) not reported
3. Non-significant controls omitted: Job security guarantees; Greenfield site; Two-way communication; One-way communication; Health insurance; 4+ weeks' paid leave; Disciplinary procedure; Disputes procedure; Establishment age

Table C4 'Baseline' models of employees' perception of loyalty to the organisation

	All	Female	Male	Ethnic minorities	White	Disabled	Non-disabled
	Loyalty	Loyalty	Loyalty	Loyalty	Loyalty	Loyalty	Loyalty
Employee characteristics:							
Female	0.111***			-0.143	0.128***	0.103	0.111***
Ethnic minority	0.175***	-0.005	0.309***			0.033	0.213***
Disabled	-0.007	-0.006	0.014	-0.011	0.008		
Age:							
Less than 20	0.074	0.024	0.142	0.231	0.084	-0.159	0.096*
20 to 24 years old	-0.028	-0.016	-0.046	0.202	-0.044	-0.360*	-0.01
40 to 49 years old	0.151***	0.148***	0.154***	0.391**	0.139***	0.013	0.159***
50 to 59 years old	0.309***	0.351***	0.289***	0.640***	0.301***	0.208	0.314***
More than 60 years old	0.589***	0.470***	0.659***	0.624*	0.596***	0.393*	0.603***
Highest educational qualification:							
Degree level	-0.247***	-0.317***	-0.188***	-0.217	-0.268***	0.08	-0.280***
A-level	-0.141***	-0.173***	-0.121**	-0.015	-0.159***	0.108	-0.164***
O-level	-0.074**	-0.105**	-0.063	-0.309	-0.076**	0.046	-0.086**
CSE	-0.043	0.008	-0.073	-0.323	-0.046	-0.205	-0.04
Any vocational qualifications	-0.029	0.002	-0.045	-0.013	-0.027	-0.131	-0.023
Job characteristics:							
Occupational group:							

Professional	0.044	0.013	0.024	-0.197	0.054	0.533**	0.023
Assoc. professional & Technical	0.035	0.09	-0.045	0.074	0.033	0.437**	0.01
Clerical & Secretarial	0.086	0.173**	-0.057	-0.084	0.086	0.264	0.067
Craft & Skilled	0.023	0.109	-0.009	0.026	0.021	0.246	0.014
Personal Service	0.253***	0.272***	0.173*	0.243	0.241***	0.460**	0.238***
Sales	0.150**	0.206**	0.083	0.09	0.149**	0.252	0.140**
Operative & Assembly	-0.041	0.094	-0.088	-0.11	-0.04	0.475**	-0.08
Tenure:							
Less than 1 year	0.104**	0.145***	0.103*	0.313*	0.109***	0.094	0.114***
1 year	-0.014	0.081	-0.073	0.155	-0.01	-0.107	-0.002
2-4 years	-0.022	-0.007	-0.013	-0.001	-0.014	-0.056	-0.007
5-9 years	-0.05	0.011	-0.092*	-0.016	-0.042	-0.430***	-0.017
Permanent contract	0.051	0.029	0.086	-0.401**	0.064	0.354**	0.039
Weekly hours	0.001	-0.004	0.006***	0.004	0.001	0.009	0.001
Weekly earnings:							
£81-£180	-0.033	0.075	-0.237**	0.359	-0.026	-0.283*	-0.011
£181-£260	-0.057	0.09	-0.234**	0.214	-0.034	-0.618***	-0.003
£261-£360	0.023	0.266***	-0.206*	0.229	0.048	-0.619***	0.076
£361-£540	0.1	0.359***	-0.132	0.08	0.135	-0.658**	0.166*
£541 and above	0.312***	0.443**	0.049	0.279	0.350***	-0.519	0.379***
Union member	-0.058**	-0.041	-0.061	0.12	-0.063**	-0.276***	-0.048
Flexible working time or location	0.140***	0.104***	0.184***	-0.043	0.145***	0.086	0.140***
Parental leave or nursery	0.082***	0.155***	0.004	0.001	0.090***	-0.08	0.102***
Leave for family emergencies	-0.02	0.028	-0.075**	-0.104	-0.022	0.038	-0.025

Training in past year:							
1 day	0.189***	0.189***	0.193***	0.21	0.190***	0.276**	0.183***
2-4 days	0.239***	0.255***	0.228***	0.085	0.250***	0.333***	0.239***
5-9 days	0.291***	0.227***	0.349***	-0.068	0.304***	0.511***	0.283***
10 days or more	0.405***	0.370***	0.422***	-0.054	0.419***	0.544***	0.401***
Lot of influence over range of tasks	0.290***	0.297***	0.285***	0.237*	0.295***	0.082	0.304***
Lot of influence over pace of work	0.048	0.057	0.039	0.064	0.048	0.029	0.054
Lot of influence over how work is done	0.231***	0.220***	0.236***	0.462***	0.222***	0.499***	0.211***
Human resource practices:							
Number of recognised unions:							
One	-0.036	-0.037	-0.003	-0.244	-0.03	0.212	-0.052
Two or more	-0.013	-0.063	0.031	-0.142	-0.008	0.27	-0.034
On-site union representation	-0.019	-0.027	-0.034	0.362**	-0.034	-0.235	-0.008
Employee perception of union treatment:							
Not taken seriously	-0.577***	-0.610***	-0.571***	-0.252	-0.586***	-0.360**	-0.596***
DK/NA	0.015	0.02	-0.016	0.088	0.017	0.31	-0.006
Non-union representative	0.027	0.012	0.032	0.036	0.033	-0.096	0.031
Joint consultative committee	0.009	0.016	0.004	0.007	0.008	0.032	0.009
Information provided to employees about performance or plans	-0.008	-0.043	0.028	0.881***	-0.029	-0.086	-0.01
ER specialist	0.006	-0.025	0.046	-0.109	0.003	0.139	-0.008
Investors In People accredited	0.041	0.008	0.082**	-0.072	0.045	0.168*	0.036
Profit-Sharing or share ownership scheme	0.017	-0.049	0.059	0.181	0.01	0.093	0.01
Employer pension scheme for non-managerial employees	-0.089**	-0.054	-0.121**	-0.405**	-0.077*	-0.046	-0.095**

Extra-statutory sick pay for non-managerials	0.075**	-0.025	0.167***	0.042	0.071*	-0.055	0.083**
Fringe benefits harmonized between managerials and non-managerials	0.022	0.098***	-0.046	0.126	0.024	0.023	0.025
Performance appraisals linked to training and development	-0.009	-0.014	-0.014	0.042	-0.012	-0.084	-0.01
Problem-solving groups	0.047*	0.066*	0.027	-0.227**	0.054**	0.006	0.048*
Preference for internal recruitment	0.082***	0.060*	0.086**	0.133	0.082***	0.184**	0.077***
Employees led to expect long tenure	0.146***	0.145***	0.154***	0.048	0.147***	0.174*	0.146***
Employees not expected to balance work and family without help	0.104**	0.129**	0.067	0.257	0.101**	-0.056	0.110**
Formal grievance procedure	-0.130*	-0.129	-0.142	-0.868***	-0.128*	-0.168	-0.114
Percentage of supervisors trained in people-management skills (ref. 60% or more):							
1-59%	-0.026	-0.017	-0.047	-0.003	-0.02	-0.106	-0.022
None	-0.019	0.082	-0.143***	-0.354*	-0.006	0.054	-0.018
No supervisors	0.021	0.038	0.01	-0.04	0.03	0.171	0.016
Attitude tests in recruitment	0.02	0.026	0.004	0.132	0.026	0.178*	0.013
Competency tests in recruitment	0.002	0.044	-0.029	-0.022	-0.003	0.045	0.003
Most recent pay award for LOG (ref: Higher than rest of industry):							
Same as rest of industry	0.017	-0.053	0.084*	0.144	0.011	0.058	0.019
Lower than rest of industry	-0.083	-0.121	-0.025	0.171	-0.091	-0.07	-0.085
Not known	0.029	-0.057	0.115*	0.006	0.017	0.034	0.027
Workplace characteristics:							
Number of employees (natural log)	-0.033**	-0.022	-0.047***	-0.052	-0.030**	-0.071*	-0.028**

Ownership:							
UK-owned; private sector; owner-manager	-0.035	0.001	-0.045	-0.339	-0.034	-0.056	-0.035
Foreign-owned; private sector	0.088*	0.006	0.111*	-0.194	0.084*	0.492***	0.057
Public sector	-0.025	-0.034	-0.058	0.108	-0.039	0.173	-0.04
Single independent establishment	0.052	-0.049	0.125**	0.436***	0.042	-0.064	0.053
Percentage of employees female	0	-0.003**	0.001	0.005	0	-0.005*	0
Percentage of employees part-time	0.003***	0.004***	0.002	-0.002	0.003***	0.005*	0.003***
Percentage of employees from ethnic minority groups	-0.001	0.002	-0.002	0.006*	-0.004*	-0.001	-0.001
Financial performance:							
Above average for industry	0.032	0.029	0.02	0.251**	0.023	-0.07	0.035
No comparison possible	0.07	0.05	0.061	0.746***	0.051	0.09	0.068*
Observations	18331	9388	8943	688	17643	1051	17280
F statistic	18.467	9.003	12.794	2.808	18.892	3.166	18.258

Notes:

1. significant at 10%; ** significant at 5%; *** significant at 1%
2. Industry dummies (11) and region dummies (10) not reported
3. Non-significant controls omitted: Job security guarantees; Greenfield site; Two-way communication; One-way communication; Health insurance; 4+ weeks' paid leave; Disciplinary procedure; Disputes procedure; Establishment age

Table C5 'Baseline' models of employees' perception of shared values

	All	Female	Male	Ethnic minorities	White	Disabled	Non-disabled
	Shared values	Shared values	Shared values	Shared values	Shared values	Shared values	Shared values
Employee characteristics:							
Female	-0.02			-0.220*	-0.008	0.171	-0.027
Ethnic minority	0.058	-0.111	0.201***			0.255	0.056
Disabled	-0.141**	-0.02	-0.193**	0.066	-0.144**		
Age:							
Less than 20	-0.077	-0.113	-0.011	-0.009	-0.074	-0.487*	-0.064
20 to 24 years old	-0.077**	-0.100*	-0.046	-0.164	-0.077*	-0.663***	-0.052
40 to 49 years old	0.217***	0.228***	0.206***	0.421**	0.209***	-0.09	0.231***
50 to 59 years old	0.280***	0.316***	0.253***	0.376*	0.275***	-0.221	0.315***
More than 60 years old	0.509***	0.429***	0.583***	1.222***	0.492***	0.361	0.504***
Highest educational qualification:							
Degree level	0.055	0.014	0.099	-0.098	0.05	0.154	0.041
A-level	0.053	0.018	0.09	-0.028	0.045	-0.122	0.05
O-level	0.026	0.035	0.007	-0.102	0.025	-0.163	0.036
CSE	0.032	0.008	0.049	-0.144	0.029	-0.015	0.036
Any vocational qualifications	-0.025	0.013	-0.045	-0.169	-0.021	0.012	-0.023
Job characteristics:							

Occupational group:							
Professional	0.098	0.178*	0.012	0.265	0.103*	0.421*	0.097
Assoc. professional & Technical	0.111**	0.137*	0.08	0.545*	0.110*	0.191	0.113**
Clerical & Secretarial	0.111**	0.104	0.11	0.238	0.109**	0.133	0.109**
Craft & Skilled	-0.088	-0.122	-0.072	-0.261	-0.085	-0.217	-0.058
Personal Service	0.329***	0.351***	0.250***	0.522**	0.322***	0.526**	0.322***
Sales	0.200***	0.181**	0.179**	0.668*	0.191***	0.022	0.218***
Operative & Assembly	0.007	-0.149	0.055	-0.045	0.015	0.192	-0.004
Tenure:							
Less than 1 year	0.209***	0.279***	0.173***	0.063	0.211***	0.097	0.222***
1 year	0.081**	0.139***	0.049	-0.285	0.089**	-0.319*	0.103***
2-4 years	0.039	0.101**	0	-0.503**	0.049	0.036	0.045
5-9 years	-0.021	0.02	-0.05	-0.33	-0.014	-0.449***	0.012
Permanent contract	-0.066	-0.073	-0.028	-0.27	-0.064	-0.068	-0.07
Weekly hours	0	-0.002	0.003	-0.008	0.001	0.004	0
Weekly earnings:							
£81-£180	-0.049	0.021	-0.204*	0.196	-0.05	-0.360*	-0.029
£181-£260	-0.063	0.026	-0.220*	0.107	-0.059	-0.341	-0.035
£261-£360	0.032	0.163*	-0.158	0	0.045	-0.537**	0.069
£361-£540	0.133*	0.241**	-0.03	0.216	0.144*	-0.263	0.173**
£541 and above	0.454***	0.386*	0.313**	0.632	0.463***	-0.375	0.506***
Union member	-0.021	0.016	-0.06	0.034	-0.022	-0.073	-0.017
Flexible working time or location	0.146***	0.166***	0.133***	0.013	0.150***	0.370***	0.133***
Parental leave or nursery	0.119***	0.137***	0.097**	0.377***	0.114***	0.003	0.131***

Leave for family emergencies	-0.063**	-0.045	-0.086**	-0.057	-0.066**	0.008	-0.062**
Training in past year:							
1 day	0.168***	0.126***	0.213***	0.14	0.166***	0.375***	0.159***
2-4 days	0.245***	0.205***	0.282***	0.075	0.253***	0.408***	0.235***
5-9 days	0.379***	0.306***	0.440***	0.299*	0.383***	0.487***	0.364***
10 days or more	0.336***	0.267***	0.393***	-0.07	0.349***	0.453**	0.329***
Lot of influence over range of tasks	0.284***	0.322***	0.254***	0.308**	0.286***	-0.096	0.312***
Lot of influence over pace of work	0.041	0.012	0.069	0.012	0.043	0.195	0.027
Lot of influence over how work is done	0.153***	0.167***	0.146***	0.306***	0.147***	0.063	0.156***
Human resource practices:							
Number of recognised unions:							
One	0.045	0	0.120*	-0.273	0.051	0.325**	0.028
Two or more	-0.013	-0.037	0.006	-0.219	-0.011	0.009	-0.018
On-site union representation	-0.038	-0.066	-0.042	0.11	-0.043	-0.212	-0.034
Employee perception of union treatment:							
Not taken seriously	-0.590***	-0.684***	-0.553***	-0.867***	-0.584***	-0.727***	-0.605***
DK/NA	-0.051	0.025	-0.159**	-0.17	-0.05	-0.135	-0.037
Non-union representative	-0.012	-0.025	0.002	-0.047	-0.012	0.016	-0.015
Joint consultative committee	0.041	0.018	0.057	-0.012	0.045	0.223**	0.036
Information provided to employees about performance or plans	0.086**	0.132**	0.083	0.01	0.089**	-0.131	0.099**
ER specialist	0.02	-0.027	0.070*	-0.013	0.019	0.131	0.007
Investors In People accredited	0.071**	0.066*	0.070*	0.035	0.072**	-0.162*	0.096***
Profit-Sharing or share ownership scheme	-0.027	-0.098**	0.022	0.047	-0.03	0.041	-0.045

Employer pension scheme for non-managerial employees	-0.117***	-0.009	-0.197***	0.136	-0.117***	0.03	-0.125***
Extra-statutory sick pay for non-managerials	0.083**	0.009	0.158***	0.177	0.073*	0.122	0.087**
Fringe benefits harmonized between managerials and non-managerials	0.070**	0.122***	0.007	0.203	0.068**	-0.023	0.072**
Performance appraisals linked to training and development	0.028	0.039	0.018	-0.009	0.024	0.1	0.021
Problem-solving groups	0.073***	0.064*	0.073**	-0.138	0.078***	0.125	0.072***
Preference for internal recruitment	0.110***	0.121***	0.108***	0.094	0.114***	0.237**	0.103***
Employees led to expect long tenure	0.123***	0.099**	0.153***	0.186	0.126***	0.197*	0.125***
Employees not expected to balance work and family without help	0.07	0.111	0.025	0.24	0.065	0.313*	0.057
Formal grievance procedure	-0.041	-0.102	-0.007	0.129	-0.052	-0.288	-0.033
Percentage of supervisors trained in people-management skills (ref. 60% or more):							
1-59%	0.008	0.022	-0.009	-0.289**	0.021	0.086	-0.007
None	0.036	0.095	-0.043	-0.459***	0.048	0.106	0.031
No supervisors	0.061	0.076	0.052	-0.115	0.068	-0.159	0.069
Attitude tests in recruitment	0.058**	0.065	0.051	0.157	0.062**	-0.015	0.063**
Competency tests in recruitment	-0.013	0.01	-0.041	-0.106	-0.011	0.08	-0.012
Most recent pay award for LOG (ref: Higher than rest of industry):							
Same as rest of industry	-0.051	-0.132***	0.027	-0.056	-0.05	-0.107	-0.046
Lower than rest of industry	-0.187***	-0.218***	-0.129*	0.216	-0.195***	-0.069	-0.192***
Not known	-0.032	-0.182***	0.104	-0.09	-0.039	0.004	-0.025
Workplace characteristics:							

Number of employees (natural log)	-0.043***	-0.031	-0.050***	-0.081	-0.041***	-0.163***	-0.031**
Ownership:							
UK-owned; private sector; owner-manager	-0.051	-0.04	-0.056	-0.249	-0.047	-0.196	-0.043
Foreign-owned; private sector	-0.03	-0.046	-0.031	-0.228	-0.033	0.134	-0.03
Public sector	-0.091*	-0.149**	-0.05	0.197	-0.106**	0.27	-0.123**
Single independent establishment	0.01	-0.044	0.079	0.204	-0.003	-0.107	0.011
Percentage of employees female	0.001	0.001	0.001	-0.005	0.001	-0.002	0.001
Percentage of employees part-time	0.002*	0.002**	0	0.004	0.002*	0.002	0.002**
Percentage of employees from ethnic minority groups	0	0.002	-0.001	0.003	-0.001	-0.004	0
Financial performance:							
Above average for industry	0.054*	0.056	0.043	0.179	0.050*	-0.049	0.055*
No comparison possible	0.037	0.027	0.026	0.521***	0.023	-0.257	0.047
Observations	17659	9042	8617	647	17012	1020	16639
F statistic	20.687	9.881	13.885	4.627	20.984	4.39	18.948

Notes:

1. significant at 10%; ** significant at 5%; *** significant at 1%
2. Industry dummies (11) and region dummies (10) not reported
3. Non-significant controls omitted: Job security guarantees; Greenfield site; Two-way communication; One-way communication; Health insurance; 4+ weeks' paid leave; Disciplinary procedure; Disputes procedure; Establishment age

Table C6 'Baseline' models of employees' perception of pride in the organisation

	All	Female	Male	Ethnic minorities	White	Disabled	Non-disabled
	Pride	Pride	Pride	Pride	Pride	Pride	Pride
Employee characteristics:							
Female	0.103***			-0.137	0.121***	0.16	0.104***
Ethnic minority	0.188***	0.029	0.334***			-0.015	0.222***
Disabled	-0.005	0.026	0.004	-0.206	0.01		
Age:							
Less than 20	-0.068	-0.059	-0.02	-0.246	-0.053	-0.005	-0.058
20 to 24 years old	0.007	-0.019	0.036	0.018	-0.001	-0.15	0.009
40 to 49 years old	0.078**	0.064	0.090*	-0.028	0.079**	0.095	0.072**
50 to 59 years old	0.185***	0.234***	0.151***	0.198	0.184***	-0.046	0.199***
More than 60 years old	0.437***	0.309***	0.531***	1.259***	0.429***	0.367	0.437***
Highest educational qualification:							
Degree level	-0.368***	-0.417***	-0.305***	-0.342	-0.393***	-0.419**	-0.374***
A-level	-0.282***	-0.297***	-0.259***	-0.232	-0.295***	-0.176	-0.293***
O-level	-0.165***	-0.203***	-0.131***	-0.378	-0.164***	-0.335***	-0.158***
CSE	-0.065	-0.039	-0.076	-0.522*	-0.063	-0.307*	-0.044
Any vocational qualifications	0.014	0.039	0.006	-0.058	0.017	0.106	0.014
Job characteristics:							
Occupational group:							

Professional	0.071	0.034	0.079	0.427	0.07	0.377	0.061
Assoc. professional & Technical	0.045	0.076	0.007	0.455*	0.042	0.074	0.047
Clerical & Secretarial	0.043	0.058	-0.012	0.256	0.033	-0.164	0.05
Craft & Skilled	0.028	0.172	-0.005	-0.05	0.023	-0.172	0.048
Personal Service	0.368***	0.299***	0.338***	0.432	0.363***	0.326	0.375***
Sales	0.154**	0.13	0.186**	0.646**	0.132**	0.158	0.155**
Operative & Assembly	-0.056	-0.059	-0.041	0.375	-0.065	-0.09	-0.061
Tenure:							
Less than 1 year	0.302***	0.347***	0.311***	0.412**	0.305***	0.422**	0.306***
1 year	0.176***	0.259***	0.132**	-0.023	0.188***	0.072	0.188***
2-4 years	0.061*	0.090*	0.064	-0.343**	0.072**	0.112	0.064*
5-9 years	-0.003	0.032	-0.018	-0.176	0.005	-0.201*	0.018
Permanent contract	-0.011	-0.036	0.026	-0.419**	0	0.044	-0.015
Weekly hours	-0.003	-0.006**	0.001	-0.006	-0.003	0.009	-0.003*
Weekly earnings:							
£81-£180	-0.081*	0.044	-0.346***	0.188	-0.078	-0.642***	-0.029
£181-£260	-0.046	0.094	-0.220*	0.3	-0.037	-0.844***	0.025
£261-£360	0.062	0.185**	-0.12	0.069	0.085	-0.792***	0.134*
£361-£540	0.119	0.245*	-0.077	0.143	0.136	-0.687**	0.193**
£541 and above	0.396***	0.519**	0.145	0.467	0.418***	-0.972***	0.497***
Union member	-0.073***	-0.078*	-0.066	0.009	-0.075**	-0.14	-0.073**
Flexible working time or location	0.136***	0.124***	0.157***	0.051	0.142***	0.207**	0.131***
Parental leave or nursery	0.112***	0.138***	0.079**	0.061	0.119***	-0.074	0.128***
Leave for family emergencies	-0.038	0.009	-0.100***	0.012	-0.044*	-0.099	-0.035

Training in past year:							
1 day	0.200***	0.195***	0.212***	0.163	0.201***	0.195	0.197***
2-4 days	0.241***	0.245***	0.243***	-0.003	0.255***	0.133	0.250***
5-9 days	0.276***	0.250***	0.300***	0.216	0.275***	0.424**	0.263***
10 days or more	0.462***	0.401***	0.499***	0.07	0.475***	0.172	0.482***
Lot of influence over range of tasks	0.257***	0.313***	0.223***	0.320**	0.262***	0.126	0.275***
Lot of influence over pace of work	0.073***	0.039	0.098**	0.003	0.080***	0.067	0.071**
Lot of influence over how work is done	0.212***	0.196***	0.229***	0.422***	0.201***	0.547***	0.185***
Human resource practices:							
Number of recognised unions:							
One	-0.033	-0.044	-0.038	-0.319	-0.028	-0.106	-0.031
Two or more	-0.007	-0.057	-0.02	0.147	-0.016	0.006	-0.009
On-site union representation	-0.042	-0.076	-0.012	-0.074	-0.042	-0.034	-0.047
Employee perception of union treatment:							
Not taken seriously	-0.584***	-0.650***	-0.562***	-0.286	-0.593***	-0.727***	-0.575***
DK/NA	-0.063*	-0.011	-0.135***	-0.179	-0.060*	-0.05	-0.060*
Non-union representative	-0.005	-0.017	0.011	0.09	-0.008	-0.124	-0.002
Joint consultative committee	0.021	0.016	0.019	-0.021	0.022	0.039	0.028
Information provided to employees about performance or plans	0.003	-0.031	0.042	0.438**	-0.005	-0.096	0.008
ER specialist	0.026	0.014	0.043	0.098	0.022	0.148	0.01
Investors In People accredited	0.068**	0.054	0.090**	0.057	0.073**	0.024	0.077**
Profit-Sharing or share ownership scheme	-0.039	-0.107**	-0.008	-0.013	-0.036	-0.002	-0.049
Employer pension scheme for non-managerial employees	-0.008	0.073	-0.055	-0.158	-0.002	0.299*	-0.023

Extra-statutory sick pay for non-managerials	0.140***	0.073	0.215***	0.192	0.137***	-0.076	0.153***
Fringe benefits harmonized between managerials and non-managerials	0.064**	0.113***	0.022	0.11	0.066**	0.059	0.067**
Performance appraisals linked to training and development	-0.005	-0.003	-0.014	-0.114	-0.005	0.042	-0.015
Problem-solving groups	0.025	-0.011	0.042	-0.227**	0.031	0.03	0.02
Preference for internal recruitment	0.105***	0.106***	0.089**	0.131	0.103***	0.289***	0.096***
Employees led to expect long tenure	0.143***	0.143***	0.135***	-0.052	0.149***	0.002	0.156***
Employees not expected to balance work and family without help	-0.023	0.018	-0.065	0.041	-0.026	0.012	-0.023
Formal grievance procedure	-0.156*	-0.173	-0.153	-0.448	-0.165*	-0.058	-0.153*
Percentage of supervisors trained in people-management skills (ref. 60% or more):							
1-59%	0.001	-0.003	-0.004	0.189	-0.002	-0.065	-0.001
None	0.019	0.076	-0.054	-0.077	0.025	-0.152	0.027
No supervisors	0.026	-0.034	0.084	0.289	0.022	0.077	0.029
Attitude tests in recruitment	0.049	0.084**	0.02	0.273**	0.049	0.179*	0.044
Competency tests in recruitment	0.038	0.067*	0.011	-0.024	0.036	0.133	0.037
Most recent pay award for LOG (ref: Higher than rest of industry):							
Same as rest of industry	-0.014	-0.128**	0.088*	-0.026	-0.014	0.076	-0.014
Lower than rest of industry	-0.146**	-0.194**	-0.075	-0.067	-0.145**	0.082	-0.160**
Not known	-0.016	-0.117*	0.09	0.259	-0.025	-0.106	-0.001
Workplace characteristics:							
Number of employees (natural log)	0.011	0.008	0.018	-0.055	0.017	-0.085*	0.021

Ownership:							
UK-owned; private sector; owner-manager	-0.043	0.007	-0.07	-0.695**	-0.034	-0.184	-0.032
Foreign-owned; private sector	0.055	0.042	0.047	-0.053	0.049	0.228	0.052
Public sector	-0.129***	-0.101	-0.167**	-0.093	-0.136***	0.041	-0.147***
Single independent establishment	0.05	-0.009	0.100*	0.339*	0.043	0.035	0.049
Percentage of employees female	0	-0.001	-0.001	0.002	-0.001	-0.001	0
Percentage of employees part-time	0.001	0.001	0	-0.002	0.001	0.001	0.001
Percentage of employees from ethnic minority groups	-0.004**	-0.003	-0.005**	0.006*	-0.006***	-0.008	-0.004**
Financial performance:							
Above average for industry	0.044	0.059	0.025	0.015	0.041	0.005	0.04
No comparison possible	0.066	0.037	0.061	0.394**	0.05	0.101	0.059
Observations	18304	9368	8936	690	17614	1043	17261
F statistic	21.306	10.167	14.256	3.353	21.877	3.249	20.808

Notes:

1. significant at 10%; ** significant at 5%; *** significant at 1%
2. Industry dummies (11) and region dummies (10) not reported
3. Non-significant controls omitted: Job security guarantees; Greenfield site; Two-way communication; One-way communication; Health insurance; 4+ weeks' paid leave; Disciplinary procedure; Disputes procedure; Establishment age

Table C7 'Baseline' models of labour productivity and financial performance

	Labour productivity	Financial performance
Human resource practices:		
Number of recognised unions (ref. none):		
One	-0.131	-0.246
Two or more	-0.173	-0.317
On-site union representation	0.282	0.211
Non-union representative	-0.134	-0.125
Joint consultative committee	-0.378**	
Formal practices for two-way, face-to-face communication.	-0.206	-0.184
Formal practices for one-way, face-to-face communication.	-0.038	0.105
Information provided to employees about performance or plans	0.006	-0.236
ER specialist	-0.08	-0.316*
Investors In People accredited	0.214*	0.124
Profit-Sharing or share ownership scheme	0.259*	
Fringe benefits harmonized between managerials and non-managerials	0.072	0.009
Performance appraisals linked to training and development	-0.075	-0.051
Problem-solving groups	0.143	-0.334**
Multi-skilling	0.231*	-0.075
Percentage of agency workers:		
Less than 5 per cent	-0.207	-0.005
5 per cent or more	-0.137	-0.253
Any emps. on short-term contracts	0.05	-0.283
Percentage emps. in higher-skilled occs.	-0.004	-0.011**
Team working	0.253**	0.464***
Training for largest occupational group in past year:		
Less than 2 days	-0.055	0.409**
2 days or more	0.052	0.316*
Paternity leave available	0.084	0.311*
Flexible working patterns available	0.143	-0.121
Parental leave or childcare assistance available	-0.13	-0.316*
Core employees have lot of variety in their work	0.270**	0.278*
Core employees have lot of discretion over working methods	0.118	-0.084
Core employees have lot of control over work pace	-0.098	0.034
Employees led to expect long-term employment	0.398***	0.551***

Employees not expected to balance work and family without help	-	0.412
Workplace characteristics:		
Number of employees (natural log)	0.081	0.163*
Ownership:		
UK-owned; private sector; owner-manager	0.036	0.345
Foreign-owned; private sector	-0.042	0.278
Single independent establishment	0.086	-0.004
Establishment age:		
5-9 years	0.352*	0.410*
10-24 years	0.111	0.266
25 years or more	-0.027	0.114
DK/NA	0.299	0.786***
Greenfield site	0.264	0.945***
Percentage of employees female	-0.003	0.003
Percentage of employees part-time	0	-0.009**
Percentage of employees from ethnic minority groups	-0.016***	0.009
Occupation of core employees (ref. Professional):		
Assoc. professional & Technical	0.194	0.379
Clerical & Secretarial	0.789**	0.114
Craft & Skilled	0.336	0.182
Personal Service	-0.031	0.182
Sales	-0.145	0.118
Operative & Assembly	0.142	-0.361
Routine unskilled	-0.113	0.033
Number of competitors: (ref. None or few):		
Many	-	0.151
No external trade	-	0.434*
Observations	1125	715
F-statistic	3.007	2.701

Notes:

1. significant at 10%; ** significant at 5%; *** significant at 1%
2. Industry dummies (11) and region dummies (10) not reported
3. Non-significant variables omitted: Grievance procedure; Disciplinary procedure; Disputes procedure

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