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ABSTRACT

Workplace Disability: Whose Wellbeing Does It Affect?*

The paper examines the link between workplace disability (WD) and job satisfaction (JS) in Britain using linked data from WESR2011. The results obtained indicate workplaces with respondents with disabilities report lower JS vis-à-vis workplaces without such respondents in the private sector. Within private sector workplaces with mixed respondents, the JS of respondents without disabilities declines with the percentage of respondents with disabilities. Also, workplace disability policies and practices are positively (negatively) associated with the JS of respondents with (without) disabilities in the sector. The sector may have to re-examine its dealings with issues of workplace disability.

JEL Classification: J14, J82, J7, I31

Keywords: workplace disability, job satisfaction, linked data, Britain

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"…*across the life span* (*and environmental conditions*) *everyone experiences limitations and impairments – those who do not currently have disabilities may be referred to as* '*temporarily able-bodied*…'" (Schur *et al*. 2013, p. 12)

"…*disability affects us all – as disabled people ourselves, and as the carers, family, friends, employers, colleagues, and educators of disabled people – and it is the task of all of us to remove the barriers that prevent some from participating fully, and equally, in society*" (HLSC, 2016; p. 5)

1. Introduction

There are two important policy drives in Britain that make research into issues of workplace disability vital. First, rising life expectancy and the pressure this puts on public finances have led to the drive for extending the working age beyond the State pension age. The prevalence of disability rises with age; and thus this policy initiative is likely to increase the incidence of workplace disability.[1] Secondly, tightening budgetary conditions have led to measures aimed at encouraging people with disabilities to move away from disability benefits and into employment. This policy initiative too is likely to increase the degree of workplace disability. One wonders, if such policy drives and the statutes aimed at promoting the employment of people with disabilities may benefit from more research into the implications of workplace disability (WD) on employment outcomes. This paper attempts to examine empirically if there is a link between the level of workplace job satisfaction (JS) and the degree of WD in Britain.

Job satisfaction forms an integral part of subjective well-being fitting within the broader notion of mental health and with a link to individual well-being (Argyle 1989; Warr 1994, 1999; Sousa-Poza and Sousa-Poza 2000; Rode 2004; Kahneman & Krueger 2006). Traditionally, it has been regarded as an important predictor of labour market behaviour such as quits and absenteeism (Hamermesh 2001; Clark *et al*. 1998; Akerlof *et al*. 1988; Levy-Garboua *et al*. 2007) job performance and productivity (Iaffaldano & Muchinsky 1985), organisational performance (Ostroff 1992) and innovation (Shipton, *et al*. 2006), among others. In the UK, even though workplace accidents and musculo-skeletal disorders have been declining generally, reported

[1] The prevalence of disability among adults over the State Pension age stands at 45% compared with that for working age adults, which is 16% (DWP 2014).

stress and mental health problems continue to escalate (Vickerstaff *et al.*, 2012; HSE, 2009). There has also been renewed interest in the measurement and analysis of subjective wellbeing outcomes in public policy discourses in Britain and elsewhere (Dolan *et al*. 2011; Oswald 2010; Stiglitz *et al*. 2009; Black 2008).

Research into the link between JS and WD in Britain can be informative for employers and policy makers alike for a number of reasons. *First*, Britain is reported to have one of the largest numbers of people with disabilities vis-à-vis other OECD countries, with the size of disability benefit claimants tripling from its level in the 1970s and proportionately fewer claimants being in employment due to employment disadvantage for people with disabilities (Jones 2016; Baumberg et al. 2015; Blekesaune 2007; EHRC 2008). *Secondly*, although there has been some progress since the introduction of statutes aimed at addressing discrimination against people with disabilities, there is evidence of discrimination on the basis of health and disability (Jones 2008, 2006; EHRC 2008, Berthoud and Blekesaune 2007, Madden 2004, Jones *et al*. 2003).[2] The 2016 HLSC report on whether the Equality Act 2010 adequately supports the fight against disability discrimination concluded that much more needs to be done in this respect (HLSC, 2016). This evidence may mean that people with disabilities experience a reduction in their JS due to co-worker and employer discrimination. Equally, co-workers without disabilities may experience a reduction in their JS if, for example, they perceive employees with disabilities or the workplaces hiring them somehow affect them adversely, or they have a taste for discrimination against co-workers with disabilities.[3] *Third*, although there has been a growing interest in recent years, there is a dearth of evidence relating to the link between WD and workplace JS. Crucially, the existing evidence linking JS and WD is not clear-cut, with some conflicting findings. For example, Pegan and Malo (2008) and Uppal (2005) find workers with disabilities reporting higher levels of job satisfaction while Jones *et al*. (2014) and Perales and Tomaszewski (forthcoming) find the opposite result.

This paper aims to gain some new insights into whether WD adversely affects JS; and, if so, to explore whether the adverse link may be due to the nature of workplaces, co-workers' prejudice or some combination of these. It uses data form

[2] The main statutes include the 1995 Disability Discrimination Act and The Equality Act 2010.
[3] For example, co-workers may perceive the 'reasonable adjustment' provision, which the 1995 DDA instituted to accommodate the needs of people with disabilities and which includes flexible working, adversely affects them.

WERS2011 and deploys alternative empirical approaches that allow firmly establishing the JS-WD link. The results obtained reveal that: (*i*) workplaces with respondents with disabilities report significantly lower JS vis-à-vis workplaces without such respondents, (*ii*) within workplaces with mixed respondents, workplace JS is found to decline with the percentage of respondents with disabilities, (*iii*) respondent disability status based sub-group analysis uncovers that the reduction in JS found is exclusive to co-workers without disabilities, (*iv*) disability-friendly workplace policies and practices increase (reduce) the JS of employees with (without) disabilities. That the adverse link between JS and the percentage of respondents with disabilities found is specific to co-workers without disabilities seems to suggest factors related to intergroup dynamics, including co-worker discrimination, being the reason behind the adverse link. However, all the findings are specific to the private sector. This suggest that workplace related factors, including what Schur *et al*. (2013; 2005) refer to as '*corporate culture*', may be the more credible culprits behind the adverse JS-WD link. It seems, therefore, that the private sector has to devise a strategy that deals with issues of workplace disability more effectively.

The remainder of the paper is organised as follows. Section Two provides theoretical background and the review of related literature. Section Three describes the data and variables used in the empirical analyses conducted. Section Four discusses the empirical approaches deployed. Section Five discusses the results before the final section concludes the paper.

2. Background and related literature

The need for more research into WD and employment outcomes in Britain cannot be over emphasized. Various recent estimates put the proportion of working age people with long-standing illness or impairment to be in excess of 30 per cent of the population. Of this, some 17 per cent have a limiting long-term illness, impairment or a disability (HLSC 2016; DWP 2014; Jones and Wass 2013).[4] Thus, people with disabilities constitute a significant proportion of the labour force in Britain; and this proportion is set to increase given current demographic projections. Regardless of whether disability is viewed as a fluid and continuous notion (i.e. the

[4] Compared with other European countries Britain is reported to have larger numbers of people with long-term illnesses, although the figures are comparable to that of the USA (Blekesaune 2007, Stone-Romero, *et al.*, 2006, EHRC 2008).

Universalist view of disability) or as a fixed and dichotomous one, its influence extends beyond those with the condition.

There is considerable variation in the nature of disability conditions among people with disabilities. Notwithstanding such variations, the bulk of the evidence suggests that people with disabilities fare worse in labour market outcomes generally vis-à-vis their counterparts without disabilities. The employment gap is estimated to be in excess of 40 percentage points (Jones and Wass 2013; DWP, 2014). Official figures from the DWP report that people with disabilities are more likely to be in employment now than in the past. Berthoud (2011), on the other hand, reports that the 'disability employment penalty' has increased from 17% in 1987 to 28% in 2000.[5] Importantly, fewer than 50 (75) percent of the people with (without) disabilities are in employment in Britain. Also, some 50 (15) percent of the people with (without) disabilities are economically inactive (Smith and Twomey, 2002; Kersley *et al*., 2006).

The bulk of the evidence on WD and employment outcomes focuses on disparities in terms of wages/earnings and benefits, hours of work, job security/layoff, (re-)employment, promotions, decision making and training, among others. The broad consensus is that employees with disabilities fare worse in these outcomes vis-à-vis their counterparts without disabilities (Schur *et al*. 2009; Jones and Latreille 2010; Jones 2008, 2007, 2006; Jones *et al*. 2003, Baldwin and Schumacher 2002, Madden 2004, Kersley et al., 2006, Berthoud and Blekesaune, 2007, Berthoud 2011, 2008, 2006; Kidd *et al*. 2000). On the other hand, there is generally a dearth of evidence on the JS-WD link, although there has been a growing interest in research in the area more recently, and the limited existing evidence is not clear-cut with conflicting findings as the review below underscores.

Using data from the Australian HILDA survey Jones *et al*. (2014) found that work-limiting disability reduced job satisfaction in a causal manner. Jones (2016) used data from WERS2004 to find that employees with disabilities expressed less job satisfaction and commitment towards their organization vis-à-vis their counterparts without disabilities. Using data from WERS2011 and a 'within-job' model, Perales and Tomaszewski (forthcoming) found that workers with disadvantaged statuses

[5] Berthoud (2011)'s data are slightly dated; but he attributes the difference between his and DWP's account of the trend in the employability of people with disabilities to the increase in the reported prevalence of disability in the Labour Force Survey, which DWP's report relies on.

generally report higher satisfaction with the same jobs vis-à-vis those with advantaged statuses. However, workers with lasting health conditions were found to have lower job satisfaction vis-à-vis their counterparts without disabilities, a result the authors regarded as "a major exception" to the pattern of their findings. Uppal (2005) used nationally representative Canadian data to find workers with mobility disabilities no longer had lower job satisfaction than their counterparts without disabilities once workplace characteristics were controlled for. However, a negative link between disability and job satisfaction persisted for workers with other types of disabilities even after controlling for workplace characteristics albeit with lower magnitude. Burke (1999) also examined the work and health experiences of women in nine occupational groups in Ontario and found that women with disabilities have lower job satisfaction and other wellbeing indicators vis-à-vis women without disabilities.

Other studies, on the other hand, report an outright positive, a qualified positive or no significant link between JS and WD. Pegan and Malo (2008) used Spanish data from the ECHP to find that workers with disabilities are more likely to report higher levels of job satisfaction, which they attribute to such workers having lower expectations about jobs in the first place vis-à-vis workers without disabilities. Having studied 30,000 employees from fourteen companies in the US monitored over the period 2001-2006, Schur *et al*. (2009) found that where employees reported higher (lower) levels of company fairness and responsiveness, they found no (higher) significant gap in terms of job satisfaction, company loyalty, willingness to work hard and turnover between employees with and without disabilities. They concluded that *corporate cultures*, which are responsive to the needs of all employees, are especially beneficial for employees with disabilities.

The review above highlighted two main points. *First*, there is a general consensus that employees with disabilities fare worse in terms of most employment outcomes due to stereotypes and associated stigmas from employers, co-workers and clients despite some evidence suggesting that workers with disabilities "have lower turnover and absenteeism rates, and perform as well, if not better, than people without disability" (Stone-Romero, *et al.* 2006, p. 402). *Secondly*, there is a lack of consensus regarding the JS-WD link. Evidently, the reviewed studies cover different settings, use different datasets and methodologies. There is also considerable heterogeneity in the conditions of disability, not to mention the 'thorny issue' of measuring them. Nonetheless, the conflicting evidence concerning the JS-WD link warrants further

research in order to offer less ambiguous evidence to employers and policy makers alike.

3. Data

3.1 Overview of the data and the study sample

The data come from the 2011 British Workplace Employment Relations Surveys (WERS2011). The WERS2011 constitute the most recent and authoritative source of information on employment relations in Britain covering a whole host of topics relating to both employers and employees. The surveys solicited responses from managers and employees through: (*i*) management questionnaire, which was administered in a face-to-face interview with managers in charge of the day-to-day task of employment relations and (*ii*) employee questionnaire, which was self-completed by up to 25 employees in participating workplaces. WERS2011 offer linked employer-employee data representative of all workplaces with five or more employees in Britain (van Wanrooy *et al*. 2013).

The 2011 survey monitored 2680 establishments in total. Of these, 1923 establishments took part in the employee surveys, constituting the *initial sample* for the analysis conducted in this paper. The elimination of missing values on relevant workplace and employee characteristics led to the retention of a *final sample* of 1769 workplaces, which makes up 92% of the initial sample of workplaces. Of the retained final sample of workplaces, 984 workplaces had at least one respondent with a self-reported disability (see details on the wording of the disability question in the next sub-section), while the remaining 785 workplaces had none. Of those workplaces with at least one respondent with a disability, 970 workplaces had a mix of respondents with and without disabilities, while 14 workplaces had all their respondents reporting to have disabilities. As detailed in Section 4, the analysis examining the JS differentials *between* workplaces with and without respondents with disabilities uses all 1769 workplaces in the final sample, thus covering 92.2% of the workplaces with responding employees. On the other hand, the analyses investigating the within workplace JS-WD dynamics, which necessitate a mix of respondents with and without disabilities, relies only on the 970 workplaces that had the two types of respondents thus relying on 50.4% of the workplaces with responding employees.

3.2 Definition of variables

3.2.1. Outcome (*JS*) *and key control* (*WD*) *measures*

The WERS2011 survey solicited employees' response on nine different facets of JS as well as whether they had a health problem or a disability. Employees' responses to these questions have been used to generate workplace-level JS outcome and disability status measures as follows. The WERS2011 survey asked employees to rate – on a five-point scale from 'very satisfied' to 'very dissatisfied' – "*how satisfied are you with the following aspects of your job*": (*i*) the sense of achievement they get from their work; (*ii*) the scope for using their own initiative; (*iii*) the amount of influence they have over their job; (*iv*) the training they receive; (*v*) the opportunity to develop their skills, (*vi*) the amount of pay they receive; (*vii*) their job security; (*viii*) the work itself and (*ix*) their involvement in decision making. Self-reported levels of satisfaction on each of the facets with 5-point scores have been reverse coded so that their respective values increase with the level of reported satisfaction, where '1' is ''very dissatisfied'' and '5' is ''very satisfied''. These reverse coded responses were used to yield three different workplace JS outcomes.

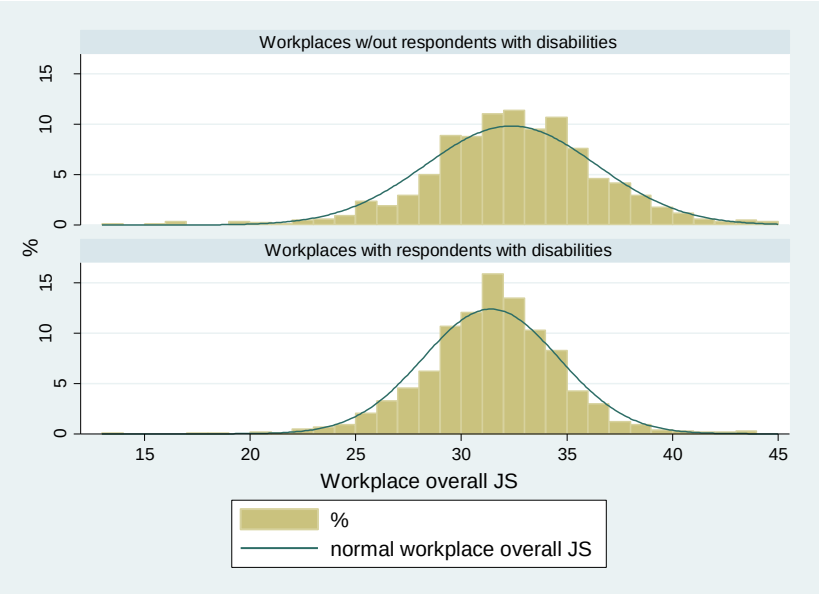
First, the responses to each of the domains (*k*) are averaged over the total number of *respondents* (*i*) in each retained workplace (*j*) to yield '*workplace average domain-specific JS*' – i.e. $\bar{y}_{jk} = \sum_{i=1}^{N} \frac{y_{ijk}}{N}$, where $1 \le i \le 25$; $j = 1,...,1769$, & $k = 1,...,9$.

Summing across these average domain-specific JS outcomes – i.e., $y_j = \bar{y}_j = \sum_{k=1}^{9} \bar{y}_{jk}$ – yielded the *first outcome measure* – '*workplace average overall JS*' which ranges between 13 and 45 for the final sample of workplaces with and without respondents with disabilities. Figure 1 depicts plots of the *workplace average overall JS* disaggregated by the qualitative WD measure, while Tables A1 and A2 in the Appendix provide summary statistics on these outcomes.

Secondly, for workplaces with a mix of respondents with self-reported disabilities (N_1) and without (N_2), thus in this case $N = N_1 + N_2$, a similar averaging was carried out as before; but this time separately over the total number of respondents with and without disabilities in each workplace. This yielded separate '*average domain-specific JS outcomes for respondents with disabilities*' & '*average domain-specific JS outcomes for respondents without disabilities*'. That is,

$\bar{y}_{jk}^{d} = \sum_{i=1}^{N_d} \frac{y_{ijk}^{d}}{N_d}$, where $1 \le i < 25;\ j = 1,...,970;\ k = 1,...,9$ and $d = 1,2$. Summing across each of these average domain-specific JS outcomes then yielded the two remaining JS outcome measures – '*workplace average overall JS for respondents with disabilities*' and '*workplace average overall JS for respondents without disabilities*' – i.e., $y_j^d = \bar{y}_j^d = \sum_{k=1}^{9} \bar{y}_{jk}^{d}$.[6]

Figure 1: Workplace overall JS, by workplace WD status



The paper uses two key WD measures as alternative controls, which are both obtained from employees' own responses on whether they had a health problem or disability. The WERS2011 survey question monitoring disability status is the following: "*Are your day-to-day activities limited because of a health problem or disability which has lasted, or is expected to last, at least 12 months? Please include problems related to old age*", with three possible answers of '*no*', '*yes, limited a little*' and '*yes, limited a lot*'. In the original sample of workplaces with responding employees, 89.6%, 8.3% and 1.3% of the respondents reported '*no*', '*yes, limited a little*' and '*yes, limited a lot*' respectively. If an employee responded '*yes*' to the disability question, i.e. regardless of whether the condition limits one's day-to-day

[6] Principal Component Analysis (PCA) on the nine facets of JS identified a single factor with an eigen value above 1 (4.72) and a Kaiser-Meyer-Olkin (KMO) sampling adequacy measure of 0.90. This supports the approach of generating a single/overall measure of JS at the level of the individual respondent. The approach adopted in this paper computed workplace average JS measure, however. Perales and Tomaszewski (forthcoming) have used a similar approach.

activities 'a little' or 'a lot', the employee is regarded as having a health problem or a disability in this paper. Also, the paper makes the reasonable assumption that if a health condition is reported to limit one's day-to-day activities, the condition must also limit one's work activities.[7]

The *first* measure of WD generated is *a qualitative measure of WD*, which takes a value 1 if at least one employee in a workplace reported to have a disability and 0 otherwise. This dummy measure of WD is used in the investigation of the JS differential between workplaces that have respondents with disabilities and those that do not. The summary statistics in Table A1 shows that 56% of the retained workplaces in the final sample had at least one respondent self-reporting to have a disability. *Secondly, a continuous measure of WD* has also been generated for the sub sample of workplaces with a mix of respondents with and without disabilities. This is achieved by computing a % measure of workplace disability – i.e., $\left[(N_1/N)\times 100\right]$.[8] As can be seen from Table A1 in the Appendix, 9.3% of the respondents in the retained final sample of all workplaces reported to have disabilities. This figure increases to 16.7% (Appendix Table A1), if only workplaces with at least one respondent with a disability are considered; and 15.5% (Appendix Table A2) if only workplaces with mixed respondents are considered, i.e. excluding workplaces with all or none of their respondents reporting to have disabilities.

Table 1 reports a summary of the workplace-level average domain-specific and overall JS outcomes computed for all workplaces. The Table also reports differences in these outcomes between workplaces with and without respondents with disabilities as well as between the private and the public sectors. In all cases, there are statistically significant differences in JS between workplaces with and without disabilities, in favour of the latter. Thus, the raw data reveals that workplaces that do not have respondents with disabilities have a higher level of JS on average whether this is viewed in terms of specific domains or in aggregation. With the exception of two of the nine domains, viz. '*the sense of achievement*' and '*the work itself*', there are also statistically significant differences in the levels of reported JS between the private and the public sector, in favour of the former.

[7] Distinguishing between those whose health condition limits their day-to-day activities 'a little' and 'a lot' is not feasible empirically given that only 1.3% of all respondents in the original sample reported the health condition limits their day-to-day activities 'a lot'. This drops further in the final sample.

[8] A % measure, as opposed to a count measure of respondents with disabilities, is preferable since it is more likely that there would be a respondent with a disability the larger the number of respondents in a workplace (depending on workplace size, there can be up to 25 respondents in some workplaces in WERS).

[Table 1 about here]

Table 2 reports summary statistics on average domain-specific and overall workplace-level JS disaggregated by the disability status of respondents in the sub-sample of workplaces with a mix of respondents with and without disabilities. The final column reports that there are significant differences in JS between the two groups of respondents, those without disabilities reporting higher levels of JS vis-à-vis co-respondents with disabilities. Looking at sectoral differences within each group of respondents reveals that respondents in the private sector generally report significantly higher levels of JS compared with their counterparts in the public sector (columns 4 and 8).

[Table 2 about here]

Figure 2: Workplace *overall* JS & % respondents with disabilities, all and mixed workplaces

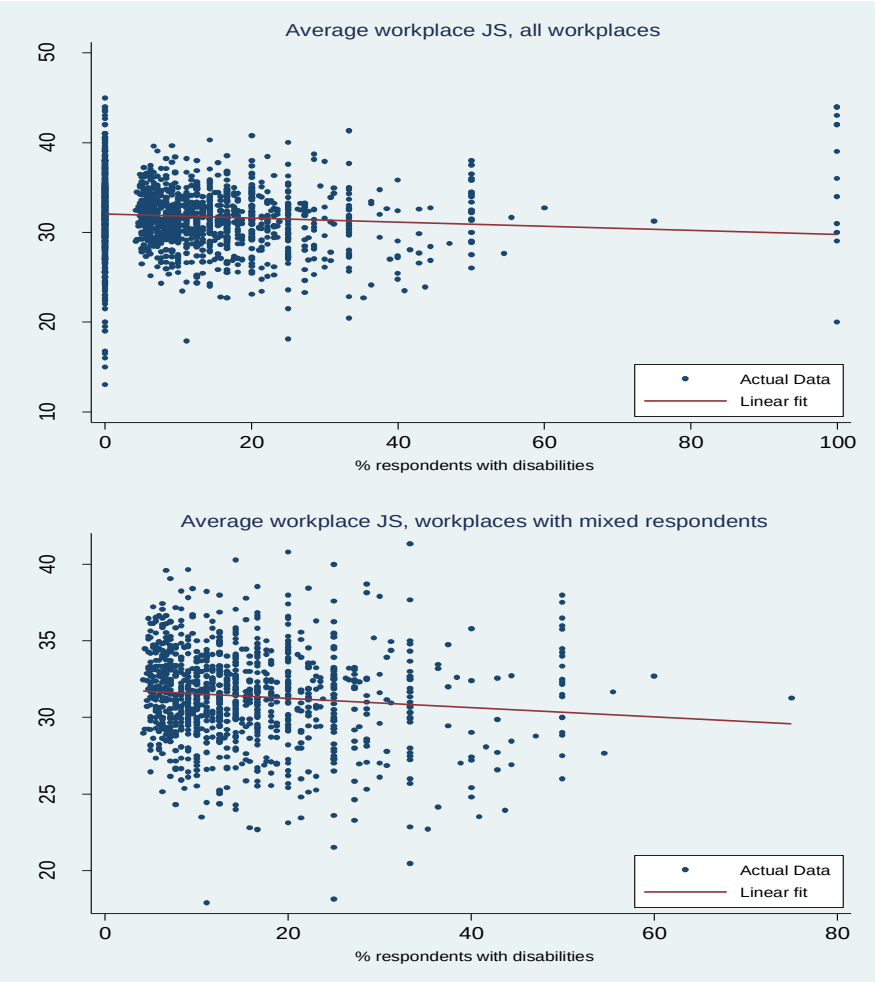


Figure 2 depicts the average workplace JS and the percentage of respondents with disabilities. The top panel shows the JS-WD patterns for the full sample of workplaces, including those with 100% of the respondents reporting to have disabilities and those that have none. The bottom panel, on the other hand, is specific to those workplaces with mixed respondents only, i.e., those with respondents with and without disabilities. In both cases, the raw data reveals a negative relationship between average workplace JS and the percentage of respondents with disabilities. Although the difference appears to be marginal, the negative relationship is more apparent in the bottom panel.

3.2.2. Workplace disability policies & practices and other controls

Accounting for the type of workplace disability policy and practice is essential in examining the JS-WD link. The workplace disability policy and practice measure used in the empirical analysis is a count measure generated from employers' '*yes*'/'*no*' responses to each of the following seven questions, which relate to whether the workplace: (*i*) "has formal strategic plan on employee diversity", (*ii*) "whether the strategic plan explicitly mentions disability", (*iii*) "monitors promotion to identify indirect discrimination by disability", (*iv*) "reviews promotions to identify indirect discrimination by disability", (*v*) "review relative pay to identify indirect discrimination by disability", (*vi*) "whether employer has special procedure to encourage workers with disabilities" and (*vii*) "if the workplace has made formal assessment of accessibility of the workplace to those with disabilities".

Table 3 reports summary statistics on the count measure of workplace disability policy and practice together with each of its seven constituent parts. For the full sample, the Table reveals that there is significant difference between workplaces with and without respondents with disabilities in terms of each of the workplace disability policy and practice measure (columns 1 to 4). Accordingly, workplaces with respondents with disabilities score significantly higher in terms of disability 'friendly' policies and practices. The Table also reports significant difference in the policy and practice measures between the private and the public sectors (columns 5 to 7), with the latter scoring higher in these measures. Similarly, the data for the sub-sample of workplaces with and without disabilities reveals statistically significant difference between the private and the public sector (columns 8 to 11), with the public sector

once again scoring better in terms of each of the policy and practice measures including the count one.

[Table 3 about here]

A number of other workplace-level controls has been used in the empirical analysis conducted, which include workplace age, workplace size, ownership, industry and geographic location. Employers have also provided information on the number of employees they have who are paid 'adult national minimum wage or less'. This has been used to generate a workplace-level measure of the % of employees on the minimum wage or less. Although it may be crude, this control is thought to provide some measure of the level of job quality. Tables A1 and A2 in the Appendix provide summary statistics on the full range of outcome and control variables used in the analysis undertaken for, respectively, all workplaces in the final sample and for the sub-sample of workplaces with a mix of respondents with and without disabilities.

4. Study hypotheses and empirical strategy

4.1 *Study hypotheses*

A priori, employer and/or co-worker centred theoretical explanations can be put forward to explain disparities in JS across and within workplaces. On the former, some workplaces can be less pleasant due to poor pay and conditions (similar to Acemoglu 2001; Layard 2004) and/or inferior '*corporate culture*' (Schur *et al*. 2013, 2009).[9] One may reasonably assume that people with disabilities sort into less pleasant workplaces, on average, compelled by employer discrimination and other restrictions, experiencing lower JS in such workplaces. If so:

Hypothesis 1: 'less pleasant' workplaces entail a JS penalty vis-à-vis pleasant ones.

[9] Acemoglu (2001) and Layard (2004) dwell on jobs – "bad jobs" – in particular, rather than the workplace as used here. Corporate culture is defined as "the explicit and implicit attitudes, norms, policies, and practices in an organization" (Schur *et al*. 2013, p. 72). Abowd *et al*. (1999) found that firm effects explain only small proportions of the inter-industry and firm-size wage differential. If so, the type of workplace 'corporate culture' and/or conditions may be more important here.

Within workplaces with mixed respondents, the JS penalty may increase with the group size (%) of respondents with disabilities. This may be for two main reasons. First, some unscrupulous employers with inferior corporate culture, who may not employing people with disabilities otherwise, may recruit such people driven by cost considerations. If so, the larger the group size of employees with disabilities, the more miserable the workplace might be with a larger reduction in JS. Secondly, there may be identity theory and inter-group competition related explanation (Akerlof and Kranton 2000; Alesina and La Ferrara 2000, 2005). Accordingly, the utility individuals drive from joining a group depends positively (negatively) on the share of their (other) group members. In a workplace setting, where incentives may be linked to team effort and where competition among co-workers may be the rule rather than the exception, group identity based rivalry may create strained interpersonal relations, which may in turn adversely affect employee JS.

Hypothesis 2: within 'less pleasant' workplaces, the JS penalty increases with the group size of co-workers with disabilities.

The question of which group of employees may take the brunt of the JS reduction, if any, may be an empirical matter since the JS-WD dynamics can be hypothesised to go either way. First, co-worker discrimination, stereotypes and associated stigmas can reduce the JS of employees with disabilities.[10] Co-worker discrimination occurs when people behave as if they refuse to change their stereotypes about the capabilities of discriminated individuals or groups. It is to do with taste and may not change in the face of favourable information about the group, for example regarding the capabilities of people with disabilities (Becker 1971; Arrow 1972, 1973; Phelps 1972).[11] Equally, insufficient accommodation of employees with disabilities or inferior corporate culture, which are found to be particularly beneficial for employees with disabilities (Schur *et al*. 2009), can also reduce the JS of employees with disabilities.

[10] Employers with a taste for discriminating people with disabilities may not recruit them in the first place, even though one cannot rule out circumstances where cost considerations force some unscrupulous employers to do so. Co-worker discrimination may thus be a valid focus in the within workplace setting considered here.

[11] Other, theories of relevance include information, where (employer) discrimination is the result of asymmetric information regarding (the productivity of) the discriminated individual (Aigner and Cain 1977), language (difference) based discrimination (Lang 1986) and Lazear (1999)'s communication costs explanation of (racial) diversity.

On the contrary, it may be that employees with disabilities have lower expectations of securing jobs to begin with, given the labour market restrictions they face; and perhaps they cherish their jobs better and report a higher JS (Pegan and Malo 2008). Also, the presence of employees with disabilities in workplaces and necessary adjustments thereof might somehow be construed adversely by employees without disabilities, perhaps due to envy and/or a taste for discrimination. If so, this may reduce the JS of co-workers without disabilities particularly if such workers are unable to sort into better workplaces; and given that they cannot blame their misfortune on employer disability discrimination or similar restrictions as their counterparts with disabilities might do. If so, employees without disabilities may report lower JS.

Hypothesis 3: within 'less pleasant' workplaces, the question of which group of employees takes the brunt of the JS reduction can only be settled empirically.

4.2 *Empirical strategy*

The paper deploys three different empirical approaches, each of which uses the *overall* JS outcome measures described in Section 3. The *first* approach examines whether there is a JS differential between workplaces with and without respondents with disabilities. The raw data summarised in Section 3 revealed that there is a JS differential in favour of workplaces without respondents with a disability. A multivariate analysis using all 1769 workplaces in the final sample is conducted to examine if the JS-WD differential observed in the raw data remains after controlling for a broad range of workplace characteristics. The model to be estimated has the following form:

$$(1) \qquad y_j = \alpha_j + d_j'\theta + \mathbf{x}_j'\beta + \varepsilon_j, \quad j = 1,..., J$$

where j indexes workplaces (j=1,…,1769); d is a dummy measure of WD (1 if a workplace has respondents with disabilities); $\mathbf{x}$ stands for the vector of workplace characteristics, which includes the workplace policy and practice measure as well as the broad range of other workplace characteristics discussed in Section 3, and ε_j is the workplace-level idiosyncratic error term.

The *second* empirical approach focuses on the sub-sample of workplaces with a mix of respondents with and without disabilities. This analysis allows examining the within workplace JS-WD pattern depicted in Figure 2 and the raw data described in Section 3. The second model to be estimated is given by:

$$(2) \qquad y_j = \alpha_j + wd'_j\delta + \mathbf{x}'_j\beta + \varepsilon_j, \quad j = 1,..., J$$

where, as before, j indexes workplaces (j=1,…,970); wd is the continuous (%) measure of WD and the other arguments are as in equation (1).

The *third* approach also focuses on the sub-sample of workplaces with a mix of respondents. However, here the JS outcomes used are those that are disaggregated by the disability status of respondents within each workplace as described in detail in Section 3, i.e. the average workplace overall JS for respondents *with* disabilities and the average workplace overall JS for respondents *without* disabilities. These represent outcomes for two different groups of respondents within the same workplaces. As such, they are likely to be correlated due to common observable and unobservable workplace characteristics shared by the two groups. Given this, modelling the two outcomes jointly is appropriate. To this end, the third approach deploys the Seemingly Unrelated Regression (SUR) model (Zellner, 1962), which is specified as follows:

$$(3) \qquad \begin{cases} y_j^1 = \alpha_j^1 + wd'_j\delta_j^1 + \mathbf{x}'_j\beta_j^1 + \varepsilon_j^1 \\ \\ y_j^2 = \alpha_j^2 + wd'_j\delta_j^2 + \mathbf{x}'_j\beta_j^2 + \varepsilon_j^2 \end{cases}, \; j = 1,..., J$$

where, as before, j indexes workplaces (j=1,…,970); wd represents the continuous measure of WD; $\mathbf{x}$ stands for the vector of workplace characteristics, the superscripts 1 and 2 represent respondents with and without disabilities respectively, and ε_j^d with $d = 1,2$ are the idiosyncratic error terms each of which is assumed to be conditionally homoscedastic, independent across workplaces and with zero mean. As noted earlier, equation (3) represents JS outcomes for two different groups of respondents within the same workplaces. As a result, it is likely that $E(\varepsilon_j^1\varepsilon_j^2 \mid \mathbf{x}) = \sigma^{1,2} \neq 0.$ The SUR framework accounts for such correlation between the two equations using the GLS estimator, which also provides Chi-squared statistics

from the Breusch-Pagan test on the independence of the errors from the jointly estimated equations.[12] This analysis will inform if hypothesis 3 or hypothesis 4 is the most likely explanation.

5. Empirical results and discussion

Table 4 reports results based on the first approach (equation 1) described in the preceding section, with three different specifications for the full sample of workplaces and separately by ownership status. The results reveal a negative link between the workplace overall JS and qualitatively measured WD. The relationship is only marginally significant in the second and third specifications estimated for the full sample; but confirms the raw data pattern. Thus, workplaces with respondents with disabilities generally have a lower average overall JS vis-à-vis workplaces without such respondents. Workplace ownership based sub-group analysis uncovers that the negative link found holds only for the private sector, with no significant link found for the public sector.

Table 5 reports results based on the second empirical approach (equation 2), which is based on workplaces with mixed respondents only and using continuously measured WD. As in the first analysis, three different specifications of the JS equation have been estimated. The results obtained indicate that there is no statistically significant link between average workplace overall JS and the group size (%) of respondents with disabilities for the combined sample. However, ownership status based sub-group analysis uncovers that for workplaces in the private sector there is strongly significant negative link between average workplace overall JS and WD. In other words, workplace JS generally declines with the percentage of respondents with disabilities in the private sector. What is more, the sub-group analysis also reveals that for workplaces in the private sector there is a significant negative relationship between overall JS and the workplace disability policy and practice measure used. These results seem to suggest therefore that in the private sector, workplace overall JS declines: (*i*) as the percentage of respondents with disabilities increases and (*ii*) with the number of disability friendly workplace policy and practice measures in place.

[12] This also provides some efficiency gain from combining the two equations of interest. Another advantage of the SUR model is that it permits conducting joint test(s) of significance on the coefficients of interest from the two equations straightforwardly. Tests on the joint significance of the WD and the disability equality measure have been carried out; and results, not reported here, reject the null that the WD and the disability equality coefficients are zero in the two equations estimated.

Table 6 reports results from the SUR model (equation 3), controlling for the full set of workplace characteristics that includes the workplace policy and practice measure.[13] In all cases, the Breusch-Pagan test of independence rejects the null hypothesis of 'no contemporaneous correlation' lending support for estimating the JS equations for the two groups of employees jointly. The results for the full sample of workplaces with mixed respondents (columns 1 & 2) show that there is no significant link between JS and WD for either group of respondents. Thus, in line with the results reported in Table 5 (column 3), no distinction can be made between respondents with and without disabilities for the combined sample. However, workplace ownership status based sub-group analysis uncovers a divergent JS-WD link between respondents with and without disabilities in private sector workplaces (columns 3 & 4). Specifically, there is a significant negative link between JS and the group size (%) of respondents with disabilities for respondents without disabilities. Thus, the private sector specific negative link between JS and WD that the second analysis revealed is peculiar to respondents without disabilities.

The estimated coefficients on the count measure of workplace disability policies and practices are also found to be instructive. Specifically, disability friendly workplace policies and practices are found to increase the JS of respondents with disabilities in the combined sample of private and public sector workplaces. Sub-group analysis uncovers contrasting results for respondents with and without disabilities in private and public sector workplaces. In particular, disability friendly workplace policies and practices are linked with a reduction of the JS of respondents without disabilities in the private sector. On the other hand, these policies and practices are linked with an increase in the JS of respondents with disabilities in the public sector. The discrepancy between private and public sector workplaces in terms of their scores on the workplace disability policies and practices measures is something that the raw data summarised in Table 3 (columns 9 to 11) highlighted. What the SUR based analysis has uncovered additionally is the divergence between respondents with and without disabilities in private and public sector workplaces.

Aside from the link between JS and the key controls of WD and workplace policies and practices, the empirical analyses conducted controlled for a number of other workplace characteristics as pointed earlier. Some of the results that run across

[13] SUR estimation results with no workplace control and excluding the workplace policy and practice control are provided in Appendix Tables A3 and A4 respectively.

the analyses conducted include the following. Workplaces in the private sector are found to have a significant JS advantage over their counterparts in the public sector generally as the three empirical analyses have revealed, which the raw data described in Section 3 have also highlighted. No significant link is found between the job quality measure used (% of employees on minimum wage) and JS in the first two analyses conducted. However, the SUR based analysis reveals some significant positive link between the size (%) of employees on the minimum wage and JS for the combined sample of workplaces. Ownership based sub-group analysis reveals that the positive link found is specific to respondents with disabilities in the private sector. Another result that only emerges in the SUR based analysis is the link between workplace age and JS, which suggests a negative link between JS and workplace age for respondents with disabilities in the combined sample. Sub-group analysis reveals that the JS-workplace age link found for respondents with disabilities is barely significant for the public sector, thus the link being more relevant for respondents with disabilities in the private sector. Compared with small sized workplaces (5 to 9 employees), larger workplaces have significantly lower JS as the analysis on the full sample reveals. A different picture emerges from the analysis using workplaces with mixed respondents however. In particular, the JS-workplace size link found is specific to the private sector for the most part, as the second analysis revealed, and for respondents without disabilities in particular, as the results from SUR reveal. The relationships between the industrial and regional background of workplaces, on the one hand, and JS, on the other, are varied in nature to yield a systematic narration.

6. Summary and Conclusion

The paper examined the link between workplace job satisfaction (JS) and workplace disability (WD). It highlighted that job satisfaction is an integral part of overall well-being, fitting within the broader notion of mental health and directly contributing to a number of employment and workplace outcomes. The paper argued that employees with disabilities may end up in less pleasant workplaces compelled by discrimination and other restrictions. In workplaces with employers and co-worker practices and attitudes less befitting of employees with disabilities, wrong perceptions about people with disabilities may create strained interpersonal relations, which may impact workplace JS adversely. Employees with disabilities may take the brunt of the adverse impact on JS, being at the receiving end of poor workplace practices and

attitudes. On the other hand, if employees without disabilities with discriminating attitudes or who are resentful of co-workers with disabilities are unable to sort away, they may be the ones taking the brunt of the adverse impact on JS feeling stuck.

The review of related literature highlighted that: (*i*) workplaces with respondents with disabilities report lower JS, (*ii*) workplace JS may decline with the degree of WD, (*iii*) the decline in JS may be stronger in workplaces with less accepting 'corporate culture', and (*iv*) the evidence on which group of workers (those with or without disabilities) take the brunt of the reduction in JS associated with WD is at best mixed. The paper used rich data from the 2011 WERS and carried out investigations deploying several empirical approaches to test the hypotheses proposed. The results obtained are robust to alternative econometric specifications and confirm the patterns observed from the raw data. Specifically: (*i*) workplaces with employees with disabilities report lower JS vis-à-vis workplaces without such respondents, (*ii*) workplace ownership status based sub-group analysis reveals that the adverse link found is specific to private sector workplaces, (*iii*) within private sector workplaces with a mix of respondents, workplace JS of respondents without disabilities is found to decline with the percentage of respondents with disabilities, and (*iv*) disability friendly workplace policies and practices are found to increase (reduce) the JS of respondents with (without) disabilities in the private sector.

That the adverse link between JS and WD found is specific to workplaces in the private sector suggests that the sector may have to go some way towards dealing with issues of workplace disability more efficiently. In particular, there may be a role for promoting a corporate culture that is more suitable to the needs of a diverse group of employees. In this respect, it is worth reiterating the point Scheur *et al*. (2014) and Kochan *et al*. (2003) make concerning the role that formal training and other informal conducts may play in promoting managers' and co-workers' awareness of the value of accommodating all employees and championing diversity in workplaces so that their composition resembles more like the broader workforce and/or society.

The paper is rigorous in many ways, including the rich data used and the alternative empirical approaches deployed, which have confirmed the robustness of the results obtained. This is reassuring in many ways. On the other hand, there are some caveats worth pointing. First, the nine domains of JS considered do not directly monitor worker attitude towards issues of workplace disability. We may, therefore, be measuring this indirectly at best. Secondly, although the results obtained are very

much in line with the patterns observed from the raw data as well as being robust across the different specifications, the reliance on the WERS2011 cross-section is unlikely to make them entirely clean of possible endogeneity problems. Given these, the findings in the paper may have to be read somewhat cautiously.

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Table 1: Workplace-level average domain-specific and overall JS outcomes, all workplaces and by workplace disability & ownership status

	All workplaces	Those w/out respondents with disabilities (2)	Those with respondent with disabilities (3)	Diff (2 – 3)	Private workplaces (5)	Public workplaces (6)	Diff (5 – 6)
Sense of achievement	3.87	3.91	3.85	0.057**	3.88	3.87	0.010
Scope for using own initiative	3.92	3.98	3.87	0.113***	3.95	3.86	0.085***
Amount of influence over the job	3.65	3.74	3.58	0.163***	3.71	3.51	0.193***
Training received	3.43	3.47	3.40	0.069**	3.46	3.37	0.087***
Opportunity to develop one's skills	3.41	3.47	3.37	0.108***	3.45	3.33	0.122***
Amount of pay received	3.03	3.08	2.99	0.085***	3.05	2.99	0.065**
Job security	3.46	3.54	3.39	0.147***	3.58	3.18	0.401***
The work itself	3.88	3.92	3.84	0.074***	3.89	3.85	0.033
Involvement in decision making	3.27	3.38	3.19	0.189***	3.34	3.13	0.211***
Overall satisfaction	31.93	32.48	31.48	1.005***	32.30	31.09	1.207***
No. of workplaces	1769	785	984		549	1220	

Table 2: Within workplace average JS differential between respondents with and without disabilities, workplaces with a mix of respondents and by ownership status of respondents with a mix of respondents

	Respondents w/out a disability				Respondents with disabilities				Diff (1–5)
	All workplaces (1)	Private workplaces (2)	Public workplaces (3)	Diff (2–3)	All workplaces (5)	Private workplaces (6)	Public workplaces (7)	Diff (6–7)	
Sense of achievement	3.87	3.88	3.86	0.023	3.70	3.70	3.70	-0.002	0.167***
Scope for using own initiative	3.90	3.93	3.85	0.074***	3.71	3.74	3.67	0.073	0.188***
Amount of influence over the job	3.61	3.68	3.50	0.182***	3.38	3.45	3.26	0.194***	0.234***
Training received	3.44	3.47	3.39	0.087***	3.17	3.24	3.07	0.175***	0.265***
Opportunity to develop one's skills	3.40	3.45	3.33	0.116***	3.09	3.16	2.98	0.175***	0.313***
Amount of pay received	3.02	3.04	2.99	0.055*	2.81	2.85	2.74	0.100	0.213***
Job security	3.42	3.57	3.19	0.375***	3.19	3.34	2.95	0.399***	0.233***
The work itself	3.86	3.88	3.83	0.047*	3.70	3.73	3.65	0.078	0.161***
Involvement in decision making	3.23	3.30	3.11	0.190***	2.95	3.01	2.85	0.165***	0.279***
Overall satisfaction	31.75	32.20	31.05	1.149***	29.69	30.23	28.87	1.357***	2.054***
No. of workplaces	970	587	383		970	587	383		

Table 3: Disability friendly workplace policies and practices, workplaces with all and mixed respondents as well as by WD and ownership status

	All workplaces							Workplaces with mixed respondents			
Workplace ….	All (1)	Those w/out respondents with disabilities (2)	Those with respondents with disabilities (3)	Diff (2–3)	Public (5)	Private (6)	Diff (5–6)	All (8)	Public (9)	Private (10)	Diff (9-10)
Is covered by formal strategic plan covering employee diversity (0/1)	0.50	0.43	0.56	-0.124***	0.63	0.45	0.183***	0.56	0.65	0.50	0.143***
Has formal written policy explicitly mentioning disability equality (0/1)	0.80	0.71	0.86	-0.145***	0.92	0.74	0.183***	0.86	0.92	0.83	0.098***
Monitors promotion to identify indirect discrimination by disability (0/1)	0.17	0.12	0.21	-0.093***	0.37	0.08	0.288***	0.22	0.39	0.11	0.279***
Reviews promotions to identify indirect discrimination by disability (0/1)	0.19	0.14	0.23	-0.084***	0.33	0.13	0.206***	0.23	0.33	0.16	0.174***
Reviews relative pay to identify indirect discrimination by disability (0/1)	0.10	0.07	0.12	-0.048***	0.20	0.05	0.147***	0.12	0.20	0.07	0.123***
Has special procedures to encourage those with disabilities when filling vacancies (0/1)	0.21	0.15	0.27	-0.120***	0.44	0.11	0.327***	0.27	0.46	0.14	0.325***
Has made formal assessment of accessibility to those with disabilities (0/1)	0.65	0.58	0.71	-0.136***	0.86	0.56	0.302***	0.71	0.86	0.62	0.248***
Count of all policies and practices	2.62	2.21	2.96	-0.750***	3.75	2.12	1.637***	2.98	3.82	2.43	1.391***
No. of workplaces	1769	785	984		549	1220		970	383	587	

Table 4: Estimates of workplace overall JS and WD, all workplaces

		All			Private			Public	
WD (0/1)	-0.980***	-0.491*	-0.494*	-1.079***	-0.883***	-0.855***	-0.655	-0.281	-0.250
	(0.289)	(0.253)	(0.252)	(0.377)	(0.318)	(0.319)	(0.414)	(0.385)	(0.378)
Employees on Minimum Wage (%)		0.009	0.009		0.007	0.007		0.001	0.000
		(0.007)	(0.007)		(0.008)	(0.007)		(0.013)	(0.013)
Log workplace age		0.030	0.026		0.019	-0.000		0.013	0.021
		(0.097)	(0.097)		(0.134)	(0.132)		(0.148)	(0.149)
Single establishment		0.053	0.029		0.539	0.481		-0.263	-0.150
		(0.305)	(0.307)		(0.420)	(0.409)		(0.438)	(0.437)
Private establishment		1.828***	1.783***						
		(0.284)	(0.287)						
Workplace size (base 5 to 9 employees)									
10-24 employees		-1.504***	-1.493***		-1.445***	-1.418***		-1.921*	-1.976*
		(0.493)	(0.494)		(0.537)	(0.539)		(1.108)	(1.113)
25-49 employees		-2.599***	-2.589***		-3.266***	-3.203***		-1.680*	-1.650*
		(0.729)	(0.725)		(0.953)	(0.934)		(0.975)	(0.985)
50-99 employees		-2.737***	-2.712***		-2.882***	-2.790***		-2.618***	-2.678***
		(0.575)	(0.569)		(0.760)	(0.723)		(1.009)	(1.012)
100-199 employees		-2.268***	-2.239***		-1.771***	-1.644***		-3.439***	-3.459***
		(0.470)	(0.476)		(0.523)	(0.548)		(0.984)	(0.986)
200-499 employees		-2.606***	-2.554***		-2.192***	-2.040***		-3.153***	-3.307***
		(0.448)	(0.461)		(0.557)	(0.589)		(0.974)	(0.979)
500-999 employees		-2.506***	-2.444***		-1.866***	-1.733***		-3.290***	-3.545***
		(0.492)	(0.512)		(0.568)	(0.594)		(1.025)	(1.034)
1000-1999 employees		-2.761***	-2.672***		-1.878***	-1.719***		-3.139***	-3.468***
		(0.453)	(0.476)		(0.616)	(0.641)		(0.946)	(0.960)
2000+ employees		-1.959***	-1.853***		-2.010***	-1.747***		-1.785*	-2.155**
		(0.469)	(0.503)		(0.587)	(0.655)		(1.011)	(1.035)
Industry (base manufacturing)									
Construction		0.445	0.493		0.083	0.136		-3.079**	-3.196***
		(0.783)	(0.799)		(1.108)	(1.112)		(1.199)	(1.232)
Whole sale & retail trade		0.765*	0.779*		0.942*	0.934*		-7.726***	-7.237***
		(0.455)	(0.459)		(0.484)	(0.487)		(1.167)	(1.235)
Hotels, restaurants & transport services		-0.715	-0.706		-0.205	-0.230		-5.390***	-5.281***
		(0.607)	(0.602)		(0.626)	(0.613)		(0.857)	(0.879)
Finance & business services		1.264***	1.280***		1.303***	1.334***		-1.034	-0.953

		(0.463)	(0.469)		(0.499)	(0.503)		(0.995)	(0.927)
Public and community services		1.262***	1.302***		1.710***	1.757***		-3.217***	-3.209***
		(0.388)	(0.401)		(0.430)	(0.432)		(0.771)	(0.799)
Education		2.335***	2.421***		1.600***	1.898***		-1.212	-1.267
		(0.460)	(0.490)		(0.604)	(0.659)		(0.774)	(0.809)
Health		2.199***	2.232***		2.146***	2.245***		-2.275***	-2.202***
		(0.419)	(0.430)		(0.515)	(0.539)		(0.773)	(0.801)
Region (base, North East)									
North West		-1.152**	-1.165**		-1.617**	-1.659**		-0.562	-0.533
		(0.524)	(0.521)		(0.787)	(0.757)		(0.721)	(0.746)
Yorkshire & the Humber		-0.379	-0.399		-0.547	-0.602		-0.326	-0.277
		(0.536)	(0.528)		(0.828)	(0.785)		(0.666)	(0.697)
East Midlands		-0.226	-0.228		-0.332	-0.366		0.299	0.302
		(0.602)	(0.599)		(0.762)	(0.732)		(0.898)	(0.910)
West Midlands		-1.461**	-1.466**		-2.517***	-2.516***		-0.387	-0.376
		(0.581)	(0.578)		(0.829)	(0.805)		(0.676)	(0.712)
East of England		-0.215	-0.256		-0.425	-0.466		-0.107	0.064
		(0.523)	(0.529)		(0.792)	(0.770)		(0.645)	(0.685)
London		-0.402	-0.406		-1.244	-1.230		0.486	0.525
		(0.578)	(0.575)		(0.891)	(0.867)		(0.743)	(0.767)
South East		-0.856	-0.887		-1.588**	-1.653**		0.198	0.300
		(0.556)	(0.556)		(0.782)	(0.750)		(0.698)	(0.739)
South West		-0.885	-0.926		-1.475*	-1.516*		-0.486	-0.320
		(0.570)	(0.572)		(0.832)	(0.800)		(0.763)	(0.773)
Scotland		-1.056**	-1.074**		-0.962	-1.030		-0.805	-0.747
		(0.533)	(0.533)		(0.701)	(0.675)		(0.766)	(0.802)
Wales		-0.733	-0.747		-0.524	-0.661		-0.299	-0.259
		(0.572)	(0.568)		(0.954)	(0.941)		(0.684)	(0.712)
Disability Friendly Policies & Practices			-0.044			-0.118			0.138
			(0.077)			(0.121)			(0.088)
Constant	31.909***	32.249***	32.373***	32.431***	34.255***	34.504***	31.282***	36.247***	35.702***
	(0.253)	(0.828)	(0.836)	(0.315)	(1.041)	(1.025)	(0.372)	(1.402)	(1.478)
R-squared	0.032	0.222	0.222	0.036	0.223	0.226	0.016	0.286	0.292
No. of Workplaces		1,769			1,220			549	

Robust standard errors in parentheses
Estimates use WERS2011 establishment survey weights. There are no public sector workplaces in the wholesale and retail industry.
*** p<0.01, ** p<0.05, * p<0.1

Table 5: Estimates of workplace overall JS and WD, workplaces with mixed respondents only

		All			Private			Public	
WD (%)	-0.026	-0.024	-0.023	-0.077***	-0.066***	-0.068***	0.015	0.007	0.005
	(0.016)	(0.015)	(0.015)	(0.021)	(0.016)	(0.015)	(0.018)	(0.018)	(0.018)
Employees on Minimum Wage (%)		0.004	0.004		0.007	0.006		0.000	-0.001
		(0.007)	(0.007)		(0.009)	(0.008)		(0.016)	(0.016)
Log workplace age		-0.015	-0.023		-0.098	-0.158		-0.022	-0.018
		(0.104)	(0.104)		(0.147)	(0.140)		(0.160)	(0.159)
Single establishment		-0.301	-0.362		0.657	0.478		-0.645	-0.549
		(0.310)	(0.312)		(0.474)	(0.438)		(0.396)	(0.407)
Private establishment		1.793***	1.710***						
		(0.305)	(0.309)						
Workplace size (base 5 to 9 employees)									
10-24 employees		-1.796**	-1.785**		-2.447**	-2.603***		-1.251	-1.444
		(0.888)	(0.887)		(0.964)	(0.942)		(2.630)	(2.622)
25-49 employees		-2.932**	-2.960**		-4.576***	-4.632***		-0.827	-0.873
		(1.245)	(1.236)		(1.505)	(1.428)		(2.499)	(2.492)
50-99 employees		-2.768***	-2.780***		-3.597***	-3.768***		-1.879	-1.980
		(0.866)	(0.864)		(0.927)	(0.897)		(2.534)	(2.526)
100-199 employees		-2.472***	-2.449***		-2.857***	-2.771***		-2.847	-2.939
		(0.856)	(0.857)		(0.915)	(0.892)		(2.506)	(2.498)
200-499 employees		-2.718***	-2.655***		-2.764***	-2.658***		-2.555	-2.741
		(0.825)	(0.827)		(0.911)	(0.889)		(2.510)	(2.508)
500-999 employees		-2.758***	-2.689***		-3.087***	-3.026***		-2.328	-2.555
		(0.863)	(0.867)		(0.913)	(0.882)		(2.544)	(2.545)
1000-1999 employees		-3.331***	-3.204***		-3.674***	-3.636***		-2.344	-2.633
		(0.881)	(0.888)		(1.056)	(1.025)		(2.501)	(2.513)
2000+ employees		-2.131**	-1.956**		-3.621***	-3.197***		-0.600	-0.921
		(0.869)	(0.883)		(1.037)	(1.009)		(2.505)	(2.526)
Industry (base manufacturing)									
Construction		-0.001	0.122		-0.784	-0.575		-2.906*	-3.076*
		(1.040)	(1.071)		(1.552)	(1.581)		(1.595)	(1.641)
Whole sale & retail trade		1.192*	1.230*		0.673	0.668			
		(0.645)	(0.656)		(0.677)	(0.700)			
Hotels, restaurants & transport services		-1.114	-1.089		-1.165*	-1.252**		-4.695***	-4.730***
		(0.691)	(0.685)		(0.663)	(0.625)		(1.287)	(1.295)
Finance & business services		1.508***	1.570***		0.701	0.846*		-0.553	-0.571

		(0.463)	(0.477)		(0.498)	(0.498)	(1.363)	(1.315)
Public and community services		1.169***	1.259***		1.281***	1.385***	-3.002**	-3.110**
		(0.451)	(0.472)		(0.405)	(0.414)	(1.253)	(1.277)
Education		2.219***	2.415***		0.691	1.448**	-0.830	-0.991
		(0.515)	(0.553)		(0.645)	(0.674)	(1.230)	(1.273)
Health		2.440***	2.503***		1.829***	2.016***	-1.834	-1.889
		(0.490)	(0.504)		(0.493)	(0.501)	(1.151)	(1.158)
Region (base, North East)								
North West		-0.221	-0.271		-0.177	-0.587	-0.322	-0.312
		(0.585)	(0.581)		(0.536)	(0.459)	(0.812)	(0.835)
Yorkshire & the Humber		0.248	0.175		0.755	0.285	-0.769	-0.742
		(0.619)	(0.598)		(0.752)	(0.645)	(0.733)	(0.764)
East Midlands		0.716	0.690		0.872	0.478	0.831	0.817
		(0.625)	(0.621)		(0.622)	(0.544)	(0.901)	(0.910)
West Midlands		-1.132*	-1.148*		-1.964***	-2.180***	-0.707	-0.726
		(0.597)	(0.595)		(0.589)	(0.567)	(0.733)	(0.760)
East of England		0.216	0.103		0.389	-0.011	-0.327	-0.217
		(0.544)	(0.550)		(0.654)	(0.626)	(0.688)	(0.727)
London		-0.460	-0.496		-0.213	-0.386	-0.321	-0.283
		(0.625)	(0.618)		(0.756)	(0.677)	(0.823)	(0.848)
South East		-0.462	-0.547		-1.057*	-1.417**	0.163	0.222
		(0.604)	(0.607)		(0.625)	(0.593)	(0.733)	(0.769)
South West		-0.183	-0.295		0.576	0.194	-0.835	-0.738
		(0.676)	(0.679)		(0.925)	(0.866)	(0.865)	(0.875)
Scotland		-0.312	-0.380		-0.090	-0.548	-0.444	-0.393
		(0.555)	(0.552)		(0.486)	(0.445)	(0.774)	(0.813)
Wales		0.164	0.123		0.532	-0.099	-0.082	-0.096
		(0.595)	(0.584)		(0.691)	(0.679)	(0.772)	(0.795)
Disability Friendly Policies & Practices			-0.086			-0.275**		0.091
			(0.086)			(0.116)		(0.092)
Constant	31.309***	32.041***	32.332***	32.337***	35.270***	36.508***	30.388***	34.826***	34.707***
	(0.257)	(1.245)	(1.250)	(0.329)	(1.308)	(1.242)	(0.307)	(2.938)	(2.940)
R-squared	0.009	0.265	0.267	0.061	0.345	0.361	0.004	0.366	0.368
No. of Workplaces		970			587			383	

Robust standard errors in parentheses

Estimates use WERS2011 establishment survey weights. There are no public sector workplaces in the wholesale and retail industry.

*** p<0.01, ** p<0.05, * p<0.1

Table 6: SUR estimates of workplace overall JS & WD, workplaces with mixed respondents only

	All		Private		Public	
	Respondents with disabilities	Respondents w/out disabilities	Respondents with disabilities	Respondents w/out disabilities	Respondents with disabilities	Respondents w/out disabilities
WD (%)	-0.018	-0.008	-0.049	-0.055***	0.002	0.018
	(0.039)	(0.017)	(0.049)	(0.017)	(0.055)	(0.016)
Employees on Minimum Wage (%)	0.041**	-0.007	0.052***	-0.006	0.011	-0.011
	(0.017)	(0.009)	(0.015)	(0.011)	(0.042)	(0.019)
Log workplace age	-1.108***	0.113	-1.351***	-0.035	-1.121*	0.144
	(0.344)	(0.102)	(0.309)	(0.134)	(0.584)	(0.150)
Single establishment	0.117	-0.299	-0.005	0.382	0.529	-0.330
	(0.840)	(0.337)	(1.327)	(0.441)	(1.115)	(0.424)
Private establishment	2.708***	1.504***				
	(0.782)	(0.316)				
Workplace size (base 5 to 9 employees)						
10-24 employees	-0.473	-1.886**	-1.838	-2.736***	0.709	-1.529
	(1.721)	(0.901)	(2.204)	(0.919)	(3.616)	(2.406)
25-49 employees	-1.824	-3.199**	-4.285*	-4.928***	0.415	-0.950
	(1.751)	(1.293)	(2.196)	(1.455)	(3.395)	(2.225)
50-99 employees	-2.256	-2.643***	-2.861	-3.905***	-3.147	-1.491
	(1.756)	(0.883)	(2.118)	(0.869)	(3.618)	(2.276)
100-199 employees	-1.462	-2.499***	-1.843	-2.987***	-2.600	-2.732
	(1.684)	(0.854)	(2.241)	(0.862)	(3.419)	(2.227)
200-499 employees	-1.714	-2.880***	-2.344	-2.813***	-1.817	-3.037
	(1.712)	(0.840)	(2.204)	(0.866)	(3.468)	(2.241)
500-999 employees	-2.952*	-2.580***	-2.731	-3.053***	-4.783	-2.214
	(1.702)	(0.867)	(2.136)	(0.847)	(3.443)	(2.286)
1000-1999 employees	-2.056	-3.453***	-3.612	-3.855***	-2.412	-2.842
	(2.025)	(0.866)	(2.893)	(0.976)	(3.608)	(2.236)
2000+ employees	0.613	-2.210**	-0.992	-3.309***	0.566	-1.190
	(1.891)	(0.892)	(2.739)	(1.040)	(3.582)	(2.260)
Industry (base manufacturing)						
Construction	-1.397	0.007	-3.798	0.004	-3.154	-6.010***
	(2.302)	(0.998)	(3.155)	(1.398)	(4.425)	(2.025)
Whole sale & retail trade	0.442	1.434**	-0.767	0.978		
	(1.552)	(0.668)	(1.670)	(0.705)		
Hotels, restaurants & transport services	-1.929	-0.804	-1.543	-1.106*	-6.619	-6.560***
	(1.618)	(0.658)	(1.631)	(0.600)	(4.537)	(1.764)

Finance & business services	-1.561	2.082***	-2.617*	1.461**	-1.255	-2.740
	(1.484)	(0.547)	(1.565)	(0.575)	(4.072)	(1.785)
Public and community services	-0.557	1.340***	-0.906	1.580***	-3.481	-5.527***
	(1.257)	(0.504)	(1.273)	(0.435)	(4.122)	(1.712)
Education	-0.084	2.619***	0.386	1.726**	-3.323	-3.160*
	(1.429)	(0.616)	(2.037)	(0.727)	(4.220)	(1.726)
Health	0.871	2.612***	0.107	2.333***	-2.260	-4.174**
	(1.299)	(0.575)	(1.456)	(0.540)	(3.874)	(1.705)
Region (base, North East)						
North West	-2.117*	-0.146	-2.169	-0.689	-2.635	-0.176
	(1.202)	(0.570)	(1.333)	(0.500)	(1.774)	(0.776)
Yorkshire & the Humber	-1.946	0.255	-1.437	0.164	-3.082**	-0.635
	(1.276)	(0.624)	(1.619)	(0.654)	(1.535)	(0.834)
East Midlands	-3.556**	1.259**	-4.029**	0.994	-3.477	1.239
	(1.438)	(0.638)	(1.612)	(0.710)	(2.393)	(0.796)
West Midlands	-4.974***	-0.595	-7.389***	-1.610**	-2.144	-0.546
	(1.281)	(0.597)	(1.390)	(0.630)	(1.430)	(0.801)
East of England	-2.603**	0.408	-4.121**	0.181	-2.437	0.154
	(1.145)	(0.592)	(1.719)	(0.669)	(1.518)	(0.764)
London	-1.509	-0.453	-0.967	-0.461	-1.950	-0.180
	(1.846)	(0.596)	(1.592)	(0.722)	(2.466)	(0.790)
South East	-0.378	-0.768	0.179	-2.028***	-1.361	0.271
	(1.316)	(0.633)	(1.663)	(0.653)	(1.833)	(0.764)
South West	-1.323	-0.221	0.940	-0.221	-2.758*	-0.489
	(1.120)	(0.687)	(1.483)	(0.831)	(1.420)	(0.876)
Scotland	-2.022*	-0.222	-2.104	-0.768	-2.253	-0.036
	(1.089)	(0.590)	(1.419)	(0.522)	(1.615)	(0.854)
Wales	0.067	0.270	-1.946	-0.048	0.599	0.049
	(1.388)	(0.579)	(2.230)	(0.557)	(1.765)	(0.801)
Disability Friendly Policies & Practices	0.421**	-0.139	0.233	-0.373***	0.473**	0.092
	(0.177)	(0.092)	(0.313)	(0.124)	(0.237)	(0.098)
Constant	34.009***	32.069***	39.727***	36.468***	37.177***	36.435***
	(2.855)	(1.295)	(3.445)	(1.241)	(5.777)	(2.990)
Breusch-Pagan test of independence [Chi2(1)/Pr.]		57.182/0.000		21.763/ 0.000		35.306/ 0.000
No. of Workplaces		970		587		383

Robust standard errors in parentheses
Estimates use WERS2011 establishment survey weights. There are no public sector workplaces in the wholesale and retail industry.
*** p<0.01, ** p<0.05, * p<0.1

Appendix

Table A1: Descriptive statistics on outcome and control variables, ALL workplaces

	All workplaces				Workplaces w/out respondents with disabilities				Workplaces with respondents with disabilities			
	Mean	St. Dev	Min	Max	Mean	St. Dev	Min	Max	Mean	St. Dev	Min	Max
Outcomes												
Workplace Av JS	31.93	3.66	13	45	32.48	4.04	13	45	31.48	3.26	13	44
Workplace Av JS, disabled	29.76	6.08	9	45					29.76	6.08	9	45
Workplace Av JS, nondisabled	32.08	3.59	13	45	32.48	4.04	13	45	31.75	3.15	18.9	41
Controls												
Has respondents with disabilities (0/1)	0.56	0.50	0	1	0.00	0.00	0	0	1.00	0.00	1	1
% respondents with disabilities	9.31	13.40	0	100	0.00	0.00	0	0	16.73	14.10	4.17	100
% on minimum wage	5.91	16.54	0	100	7.94	18.95	0	100	4.29	14.14	0	100
Disability policies and practices	2.62	1.76	0	7	2.21	1.68	0	7	2.96	1.74	0	7
Private establishment	0.69	0.46	0	1	0.79	0.41	0	1	0.61	0.49	0	1
Single establishment	0.29	0.45	0	1	0.35	0.48	0	1	0.24	0.43	0	1
Log workplace age	3.17	1.05	0	6.80	3.07	1.03	0	6.80	3.25	1.07	0	6.6
Size5-9	0.11	0.31	0	1	0.18	0.39	0	1	0.05	0.22	0	1
Size10-24	0.19	0.39	0	1	0.29	0.45	0	1	0.11	0.31	0	1
size25-49	0.15	0.35	0	1	0.14	0.35	0	1	0.15	0.36	0	1
size50-99	0.16	0.36	0	1	0.11	0.31	0	1	0.20	0.40	0	1
Size100-199	0.12	0.33	0	1	0.09	0.28	0	1	0.15	0.36	0	1
Size200-499	0.12	0.33	0	1	0.09	0.29	0	1	0.15	0.36	0	1
Size500-999	0.06	0.24	0	1	0.03	0.18	0	1	0.08	0.27	0	1
Size1000-1999	0.04	0.20	0	1	0.03	0.17	0	1	0.05	0.23	0	1
Size2000+	0.05	0.22	0	1	0.05	0.21	0	1	0.06	0.23	0	1
Manufacturing	0.10	0.30	0	1	0.10	0.30	0	1	0.10	0.30	0	1
Construction	0.03	0.18	0	1	0.04	0.19	0	1	0.03	0.17	0	1
Whole sale & retail trade	0.10	0.30	0	1	0.14	0.34	0	1	0.08	0.27	0	1
Hotels, restaurants & transport services	0.12	0.32	0	1	0.13	0.34	0	1	0.10	0.31	0	1
Finance & business services	0.14	0.34	0	1	0.18	0.38	0	1	0.10	0.31	0	1
Public and community services	0.20	0.40	0	1	0.16	0.37	0	1	0.23	0.42	0	1
Education	0.15	0.35	0	1	0.13	0.34	0	1	0.16	0.36	0	1
Health	0.16	0.37	0	1	0.12	0.33	0	1	0.19	0.40	0	1

North East	0.04	0.20	0	1	0.04	0.19	0	1	0.04	0.20	0	1
North West	0.14	0.35	0	1	0.13	0.34	0	1	0.15	0.35	0	1
Yorkshire & the Humber	0.08	0.27	0	1	0.08	0.26	0	1	0.08	0.27	0	1
East Midlands	0.07	0.25	0	1	0.06	0.24	0	1	0.07	0.25	0	1
West Midlands	0.08	0.28	0	1	0.08	0.28	0	1	0.09	0.28	0	1
East of England	0.08	0.27	0	1	0.07	0.25	0	1	0.09	0.29	0	1
London	0.12	0.33	0	1	0.15	0.36	0	1	0.09	0.29	0	1
South East	0.14	0.35	0	1	0.15	0.36	0	1	0.13	0.34	0	1
South West	0.09	0.28	0	1	0.09	0.29	0	1	0.08	0.28	0	1
Scotland	0.11	0.31	0	1	0.10	0.30	0	1	0.12	0.32	0	1
Wales	0.05	0.22	0	1	0.04	0.21	0	1	0.06	0.23	0	1
No. of Workplaces	1769				785				984			

Table A2: Descriptive statistics on outcome and control variables, workplaces with MIXED respondents only

	All				Private				Public			
	Mean	St. Dev	Min	Max	Mean	St. Dev	Min	Max	Mean	St. Dev	Min	Max
Outcomes												
Workplace Av JS	31.44	3.08	17.9	41.3	31.92	2.98	17.9	41.3	30.72	3.09	18.1	38.4
Workplace Av JS, disabled	29.69	6.01	9	45	30.23	6.23	9	45	28.87	5.56	9	43
Workplace Av JS, nondisabled	31.75	3.15	18.9	41	32.20	3.10	18.9	41	31.05	3.10	19.8	39.3
Controls												
Has respondents with disabilities (0/1)	1.00	0.00	1	1	1.00	0.00	1	1	1.00	0.00	1	1
% respondents with Disability	15.53	10.00	4.2	75	15.38	10.41	4.2	54.5	15.75	9.34	4.5	75
% on minimum wage	4.27	14.12	0	100	6.17	16.96	0	100	1.36	7.13	0	100
Disability policies and practices	2.98	1.74	0	7	2.43	1.52	0	7	3.82	1.72	0	7
Private establishment	0.61	0.49	0	1	1.00	0.00	1	1	0.00	0.00	0	0
Single establishment	0.23	0.42	0	1	0.30	0.46	0	1	0.11	0.32	0	1
Log workplace age	3.25	1.06	0	6.6	3.08	1.04	0	6.6	3.51	1.04	0	5.9
Size5-9	0.04	0.20	0	1	0.06	0.24	0	1	0.01	0.10	0	1
Size10-24	0.11	0.31	0	1	0.15	0.35	0	1	0.05	0.23	0	1
size25-49	0.15	0.36	0	1	0.14	0.35	0	1	0.17	0.38	0	1
size50-99	0.20	0.40	0	1	0.19	0.39	0	1	0.21	0.41	0	1
Size100-199	0.15	0.36	0	1	0.16	0.36	0	1	0.14	0.35	0	1
Size200-499	0.15	0.36	0	1	0.15	0.36	0	1	0.15	0.36	0	1
Size500-999	0.08	0.28	0	1	0.09	0.29	0	1	0.07	0.26	0	1
Size1000-1999	0.05	0.23	0	1	0.03	0.18	0	1	0.09	0.28	0	1
Size2000+	0.06	0.24	0	1	0.03	0.18	0	1	0.10	0.30	0	1
Manufacturing	0.10	0.30	0	1	0.16	0.37	0	1	0.01	0.07	0	1
Construction	0.03	0.18	0	1	0.04	0.19	0	1	0.02	0.14	0	1
Whole sale & retail trade	0.08	0.26	0	1	0.12	0.33	0	1	0.00	0.00	0	0
Hotels, restaurants & transport services	0.11	0.31	0	1	0.13	0.33	0	1	0.08	0.26	0	1
Finance & business services	0.10	0.30	0	1	0.16	0.36	0	1	0.02	0.15	0	1
Public and community services	0.23	0.42	0	1	0.16	0.36	0	1	0.35	0.48	0	1
Education	0.16	0.36	0	1	0.07	0.26	0	1	0.29	0.46	0	1
Health	0.19	0.40	0	1	0.17	0.38	0	1	0.23	0.42	0	1
North East	0.04	0.20	0	1	0.04	0.19	0	1	0.05	0.22	0	1
North West	0.15	0.35	0	1	0.14	0.35	0	1	0.16	0.37	0	1
Yorkshire & the Humber	0.08	0.27	0	1	0.08	0.27	0	1	0.08	0.27	0	1

East Midlands	0.07	0.25	0	1	0.07	0.26	0	1	0.06	0.24	0	1
West Midlands	0.09	0.28	0	1	0.10	0.29	0	1	0.08	0.26	0	1
East of England	0.09	0.29	0	1	0.09	0.29	0	1	0.09	0.29	0	1
London	0.09	0.29	0	1	0.09	0.28	0	1	0.11	0.31	0	1
South East	0.13	0.34	0	1	0.15	0.36	0	1	0.10	0.30	0	1
South West	0.08	0.28	0	1	0.09	0.28	0	1	0.08	0.27	0	1
Scotland	0.12	0.32	0	1	0.12	0.32	0	1	0.12	0.32	0	1
Wales	0.05	0.23	0	1	0.04	0.20	0	1	0.08	0.26	0	1
No. of Workplaces	970				587				383			

Table A3: SUR estimates of workplace overall JS & WD, workplace with mixed respondents only without controls

	All		Private		Public	
	Respondents with disabilities	Respondents w/out disabilities	Respondents with disabilities	Respondents w/out disabilities	Respondents with disabilities	Respondents w/out disabilities
WD (%)	-0.026	-0.007	-0.076	-0.058***	0.018	0.032
	(0.035)	(0.019)	(0.049)	(0.022)	(0.048)	(0.021)
Constant	29.927***	31.296***	31.092***	32.294***	28.830***	30.410***
	(0.657)	(0.282)	(0.812)	(0.368)	(0.993)	(0.327)
No. of Workplaces	970	970	587	587	383	383

Robust standard errors in parentheses
Estimates use WERS2011 establishment survey weights.
*** p<0.01, ** p<0.05, * p<0.1

Table A4: SUR estimates of workplace overall JS & WD, workplaces with mixed respondents with workplace controls

	All		Private		Public	
	Respondents with disabilities	Respondents w/out disabilities	Respondents with disabilities	Respondents w/out disabilities	Respondents with disabilities	Respondents w/out disabilities
WD (%)	-0.014	-0.009	-0.051	-0.052***	0.011	0.020
	(0.038)	(0.016)	(0.049)	(0.019)	(0.051)	(0.017)
Employees on Minimum Wage (%)	0.038**	-0.006	0.051***	-0.004	0.016	-0.010
	(0.017)	(0.009)	(0.015)	(0.012)	(0.044)	(0.018)
Log workplace age	-1.146***	0.126	-1.402***	0.046	-1.145*	0.139
	(0.351)	(0.102)	(0.307)	(0.142)	(0.595)	(0.150)
Single establishment	-0.185	-0.200	-0.157	0.626	0.025	-0.428
	(0.844)	(0.330)	(1.305)	(0.480)	(1.131)	(0.423)
Private establishment	2.307***	1.637***				
	(0.800)	(0.312)				
Workplace size (base 5 to 9 employees)						
10-24 employees	-0.418	-1.904**	-1.971	-2.524***	1.717	-1.333
	(1.701)	(0.901)	(2.198)	(0.955)	(3.721)	(2.405)
25-49 employees	-1.961	-3.154**	-4.332**	-4.852***	0.655	-0.903
	(1.724)	(1.307)	(2.190)	(1.560)	(3.508)	(2.225)
50-99 employees	-2.313	-2.624***	-3.006	-3.672***	-2.619	-1.388
	(1.741)	(0.884)	(2.116)	(0.916)	(3.732)	(2.277)
100-199 employees	-1.354	-2.535***	-1.771	-3.103***	-2.116	-2.638
	(1.666)	(0.853)	(2.227)	(0.899)	(3.567)	(2.229)
200-499 employees	-1.409	-2.981***	-2.255	-2.956***	-0.844	-2.848
	(1.679)	(0.840)	(2.185)	(0.906)	(3.563)	(2.235)
500-999 employees	-2.613	-2.692***	-2.680	-3.135***	-3.599	-1.984
	(1.656)	(0.866)	(2.131)	(0.895)	(3.504)	(2.279)
1000-1999 employees	-1.438	-3.657***	-3.580	-3.906***	-0.906	-2.549
	(1.947)	(0.865)	(2.886)	(1.025)	(3.609)	(2.225)
2000+ employees	1.464	-2.492***	-0.632	-3.886***	2.244	-0.864
	(1.793)	(0.890)	(2.657)	(1.077)	(3.632)	(2.240)
Industry (base manufacturing)						
Construction	-0.801	-0.191	-3.621	-0.279	-2.269	-5.837***
	(2.352)	(0.976)	(3.151)	(1.367)	(4.233)	(2.040)
Whole sale & retail trade	0.628	1.372**	-0.772	0.985		
	(1.573)	(0.657)	(1.686)	(0.680)		
Hotels, restaurants & transport services	-1.803	-0.846	-1.617	-0.988	-6.434	-6.524***
	(1.622)	(0.676)	(1.644)	(0.650)	(4.526)	(1.783)

Finance & business services	-1.261	1.983***	-2.495	1.265**	-1.160	-2.721
	(1.519)	(0.541)	(1.560)	(0.595)	(4.170)	(1.843)
Public and community services	-0.118	1.195**	-0.818	1.438***	-2.915	-5.417***
	(1.221)	(0.494)	(1.269)	(0.436)	(3.960)	(1.746)
Education	0.871	2.304***	1.028	0.698	-2.484	-2.997*
	(1.374)	(0.584)	(1.795)	(0.673)	(4.057)	(1.754)
Health	1.179	2.510***	0.265	2.080***	-1.971	-4.117**
	(1.288)	(0.567)	(1.430)	(0.536)	(3.798)	(1.735)
Region (base, North East)						
North West	-2.356**	-0.067	-2.517*	-0.133	-2.687	-0.186
	(1.166)	(0.576)	(1.317)	(0.591)	(1.713)	(0.753)
Yorkshire & the Humber	-2.300*	0.372	-1.836	0.803	-3.223**	-0.662
	(1.236)	(0.654)	(1.625)	(0.779)	(1.466)	(0.809)
East Midlands	-3.686**	1.302**	-4.363***	1.528*	-3.404	1.253
	(1.470)	(0.652)	(1.546)	(0.815)	(2.469)	(0.779)
West Midlands	-5.052***	-0.569	-7.573***	-1.316**	-2.046	-0.527
	(1.281)	(0.604)	(1.352)	(0.650)	(1.420)	(0.765)
East of England	-3.155***	0.590	-4.460***	0.724	-3.010**	0.043
	(1.047)	(0.578)	(1.609)	(0.704)	(1.384)	(0.714)
London	-1.684	-0.396	-1.113	-0.227	-2.150	-0.219
	(1.829)	(0.607)	(1.614)	(0.837)	(2.439)	(0.763)
South East	-0.793	-0.631	-0.127	-1.537**	-1.673	0.210
	(1.327)	(0.634)	(1.641)	(0.691)	(1.869)	(0.722)
South West	-1.868*	-0.041	0.616	0.298	-3.263**	-0.587
	(1.126)	(0.682)	(1.403)	(0.914)	(1.430)	(0.866)
Scotland	-2.352**	-0.112	-2.493**	-0.146	-2.521	-0.088
	(1.028)	(0.593)	(1.201)	(0.549)	(1.547)	(0.814)
Wales	-0.135	0.337	-2.481	0.809	0.671	0.063
	(1.401)	(0.603)	(2.082)	(0.600)	(1.790)	(0.773)
Constant	35.425***	31.601***	40.778***	34.786***	37.803***	36.557***
	(2.887)	(1.265)	(3.302)	(1.325)	(5.787)	(2.989)
No. of Workplaces	970	970	587	587	383	383

Robust standard errors in parentheses
Estimates use WERS2011 establishment survey weights. There are no public sector workplaces in the wholesale and retail industry.
*** p<0.01, ** p<0.05, * p<0.1