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Inequality and the Economic Cycle: Disabled Employees' Experience of Work During the Great Recession in Britain

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Abstract

Using unique questions introduced into the 2011 British Workplace Employment Relations Study, a detailed matched employee-employer survey, this paper compares disabled and non-disabled employees' experience of the 2008-2009 recession to contribute a cyclical perspective on disability-related disadvantage at work. We find that disabled employees are more likely to report recession-induced changes to workload, work organisation, wages and access to training, even after controlling for personal, job and workplace characteristics. There is limited evidence that workplace equality characteristics moderate these relationships to protect disabled employees. These findings have particular resonance in the context of the COVID-19 recession.

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Keywords: Disability, Recession, Working Conditions, Workplace Employment Relations Study.

Introduction

The Great Recession (2008-2009), which affected many countries, saw the sharpest contraction in GDP in the UK since the 1930s and renewed academic and policy interest in the influence of the economic cycle on labour market inequality. While previous studies have considered the implications for inequality in terms of gender, age and race (see, for example, Hoynes *et al*. 2012; Neumark and Button 2014; Rubery and Rafferty 2013), the consequences for disabled people have been relatively neglected. Furthermore, given concern about the impact of the recession on job quality (Gallie *et al*. 2014), prior studies provide an incomplete analysis of inequality and the economic cycle as they typically focus on the probability of employment, while overlooking potential cyclical inequality in other features of work. In connecting the literature on cyclical inequality with studies of disabled employees' experience of work (see, for example, Hoque *et al*. 2017; Jones 2016; Schur *et al*. 2009), this paper makes a distinct empirical contribution by providing the first evidence of differential changes in working conditions between disabled and non-disabled employees as a result of the Great Recession. The findings are of particular relevance to employers and government in the context of the current COVID-19 recession.

Prior research exploring the impact of the economic cycle on disabled people has been largely based on data from the US and has focused almost exclusively on employment. These studies suggest that disabled people are 'last hired, first fired' (Kruse and Schur 2003: 31) and, during the Great Recession, disabled people were found to suffer a greater proportional decline in employment, higher rates of job loss, and higher unemployment than non-disabled people (Fogg *et al*. 2010; Kaye 2010; Livermore and Honeycutt 2015; Mitra and Kruse 2016).

In the UK, the Great Recession had a more modest impact on unemployment than anticipated on the basis of historical and international comparisons. This has been attributed to labour market flexibility as firms 'hoarded labour, cut hours and lowered pay' (Bell and Blanchflower 2010: R3). Although studies report that this had 'major implications for the quality of work'

(Gallie *et al*. 2014: 208), with increased pressure and reduced job-related well-being among employees (Green *et al*. 2016; Russell and McGinnity 2014), inequality in the in-work experience of the recession, particularly in relation to non-pecuniary dimensions of work (such as work organisation and workload), has received little attention in the literature on inequality and the economic cycle (Biddle and Hammermesh 2013). Moreover, such analysis is completely absent in the context of disability.

This is surprising given a separate strand of literature provides consistent evidence of gaps in the in-work experience of disabled compared to non-disabled employees that extend beyond earnings (DeLeire 2001; Longhi *et al*. 2012) to encompass aspects of job quality such as working time and job satisfaction (Hoque *et al*. 2017; Jones 2007; Jones 2016; Schur *et al*. 2009). While several studies have explored the influence of organisational equality characteristics on these gaps (see, for example, Schur *et al*. 2009), no previous study has considered the potential moderating role of organisational characteristics on disability gaps relating to the economic-cycle.

Drawing on a unique range of questions introduced in a nationally representative matched employer-employee survey for Britain – the 2011 Workplace Employment Relations Study (WERS) – this paper integrates these strands of literature (on inequality and the economic-cycle and in-work disability gaps) and fills a policy-relevant evidence gap at their intersection by exploring disabled employees' experience of the Great Recession relative to their non-disabled counterparts.

Our first aim is to consider whether the in-work experience of the Great Recession differed between disabled and non-disabled employees in Britain across a range of recession-induced changes at work, including working time and wages, and also lesser explored changes to workload, work organisation, training and non-wage benefits. Using the rich information on personal, job and workplace characteristics available in WERS, we control for the influence of other confounding factors on disability-related gaps, for example, the concentration of disabled

employees in cyclically sensitive jobs or workplaces (Gore and Parckar 2009; Kaye 2010), in order to identify the residual or unexplained within-workplace disability gap, which may indicate inequality in the implementation of recession-induced organisational change. At the time of the Great Recession, disabled people in the UK were protected by the 1995 Disability Discrimination Act (subsequently replaced by the Equality Act 2010), which made it unlawful to discriminate against disabled people and required employers to make 'reasonable adjustments' to prevent disabled people from being disadvantaged. In accordance with broader international principles such as Article 27(1(b)) of the United Nations Convention on the Rights of Persons with Disabilities, this included discrimination (either directly or indirectly) in relation to the terms of employment. In this context, evidence of within-workplace disability-related gaps in recession-induced in-work change may highlight potential weaknesses in the implementation of the UK's legislative framework.

Our second aim responds to recent calls for greater exploration of employer practices in the analysis of disability inequality at work (Schur *et al*. 2016), and utilises the matched employee-employer nature of WERS to assess whether the relative experience of disabled employees varies across workplace equality characteristics. More specifically, we explore whether residual within-workplace disability gaps are moderated by the adoption of disability-specific equality practices, public sector ownership, trade union recognition and employee perceptions of managerial fairness. As such, our findings contribute to broader debates on the impact of organisational practices on disabled employees' work-related outcomes (Stone and Colella 1996), particularly the effectiveness of workplace equality practices and culture (Schur *et al*. 2009).

The next section outlines and connects two strands of literature to which this analysis contributes: the economic cycle and inequality and in-work disability gaps. We then consider the variables measuring employees' experience of the recession in WERS, and describe our

statistical approach, before reporting and discussing the results. The final section briefly concludes.

Integrating Related Literatures

This section outlines the research gap at the intersection of two distinct literatures regarding the impact of the economic cycle on labour market inequality and the in-work experience of disabled employees. The latter forms part of much broader and growing international academic and policy attention on disability inequality (see, for example, World Health Organisation and World Bank 2011) which, in the context of the labour market, has tended to focus on employment, despite increasing recognition of the importance of 'decent' work (United Nations 2018). However, consistent with the focus and depth of the underlying literature, and more closely aligned institutional context, we largely restrict our attention to evidence from the US and UK.

As argued above, disability has been neglected in analyses of labour market inequality during the Great Recession compared to other protected groups defined by gender, age and race (see Hoynes *et al*. 2012; Neumark and Button 2014; Rubery and Rafferty 2013). This is surprising given many of the arguments put forward could similarly apply to disability. For example, inter-group differences may arise as a consequence of job segregation combined with variation in the cyclical sensitivity across types of work. Indeed, Hoynes *et al*. (2012) attribute a substantial proportion of differences in the cyclical sensitivity of employment on the basis of gender, race and age in the US to cyclical differences across occupations and industries. In the context of disability, Gore and Parckar (2009) argue more generally that pre-existing disadvantage, including in relation to educational attainment, will render disabled people more sensitive to economic downturns.

The cyclical sensitivity of labour market outcomes among protected groups might also arise as a consequence of greater opportunities for employer discrimination in slack labour markets, where an abundance of job applicants reduces the 'cost' of discrimination (Becker 1957; Biddle

and Hammermesh 2013; Neumark and Button 2014). Downturns might also heighten employer concern about disabled employees' productivity (DeLeire 2001; Longhi *et al*. 2012), encouraging or reinforcing statistical discrimination (Phelps 1972). Further, prejudice itself may vary over the economic cycle. For example, Johnston and Lordan (2016) identify a positive relationship between self-reported racial prejudice and unemployment in the UK which they attribute to increased competition for job opportunities. Beyond this, economic downturns may weaken employer and government support for equality and disadvantaged groups (Rubery and Rafferty 2013). This may be particularly significant for disabled employees if it risks the withdrawal of reasonable adjustments that accommodate impairments at work (Harwood 2014).

Evidence in relation to these arguments is, however, limited. In the US, as mentioned earlier, Kruse and Schur (2003) report disabled people's employment in the 1990s was particularly sensitive to the economic cycle. Similarly, even after accounting for job characteristics, Mitra and Kruse (2016) report that disabled workers had higher rates of job displacement during the Great Recession.[i] In a European study, Reeves *et al*. (2014) also find that individuals with chronic illness and health limitations were more at risk of unemployment during the Great Recession. In contrast, Berthoud (2011) suggests that, in the UK, disabled people's employment rates were more stable relative to their non-disabled counterparts during downturns in the 1980s and 1990s.

Although studies have explored the cyclical sensitivity of earnings inequality in relation to gender (Biddle and Hammermesh 2013) and race (Johnston and Lordan 2016), and thus started to address evidence gaps at the intersection between the economic cycle and in-work equality literature, this has rarely extended beyond pay. Moreover, it has not included disability, with the exception that Haveman and Wolfe (1990) suggest the 1980's recession may explain the decline in the relative earnings of disabled workers in the US.

The relative absence of disability from research on the economic cycle is particularly surprising given the growing body of international evidence on disability inequality at work,

with disabled employees being more likely than their otherwise comparable non-disabled counterparts to work part-time (Jones 2007), earn less per hour (DeLeire 2001; Longhi *et al*. 2012), and hold more negative perceptions of their experience of work including job satisfaction (Schur *et al*. 2009), ill-treatment and bullying (Fevre *et al*. 2013), and treatment by managers (Jones 2016).[ii] In comparing disabled and non-disabled employees' experience of recession-induced changes to working conditions, we therefore extend this disability equality literature and integrate it with the literature on the equality impact of the economic cycle. Facilitated by the unique questions introduced in WERS 2011, we consider non-pecuniary dimensions of work (such as work organisation and workload), which are underexplored in the context of inequality and the economic cycle generally, and which might be particularly significant for disabled people given the importance of reasonable adjustments (Harwood 2014).

Empirical studies exploring disability inequality at work have previously used matched employee-employer data to examine whether organisational characteristics moderate disability gaps in-work outcomes, as Stone and Colella (1996) proposed. For example, Schur *et al*. (2009) report negative disability gaps in turnover, willingness to work hard, loyalty and job satisfaction among US workplaces, except in those perceived as particularly fair by all employees (which they argue reflects a more supportive 'corporate culture'). In the UK, however, the evidence is less clear. Jones (2016) finds a modest role for workplace characteristics in determining disability gaps in perceived treatment of workers by managers, job satisfaction and organisational commitment. Although Hoque *et al.* (2017) find smaller disability gaps in perceptions of fair treatment by managers in workplaces with a range of equality practices this is not evident for measures of employee wellbeing. In addressing our second aim, we extend this dimension of the literature to consider the potential moderating role of organisational equality characteristics on disabled employees' relative experience of the recession.

In doing so, we build on Schur *et al*. (2009) and Jones (2016) to focus on the influence of four organisational characteristics. First, the intensity of disability equality policies at the

workplace is proxied by information on disability-specific substantive practices (Hoque and Noon 2004; Hoque *et al.* 2017). Second, we distinguish public sector workplaces given the 2006 Disability Equality Duty (replaced subsequently by the 2011 Public Sector Equality Duty) imposed additional legislative requirements on the public sector. Third, we consider trade union recognition given the positive role of unions in promoting equality and supporting disabled employees (Hoque and Bacon 2014; Bacon and Hoque 2015).[iii] Finally, we use a measure of average employee perceptions of managerial fairness at the workplace to proxy fairness in organisational culture (Schur *et al*. 2009).

The Workplace Employment Relations Study (2011)

This analysis uses matched employee-employer data from WERS 2011, a nationally representative and periodic survey of British workplaces with five or more employees in all industry sectors (with the exception of agriculture, hunting, forestry and fishing, and mining and quarrying).[iv] The management questionnaire (MQ) is completed by the person with responsibility for employment relations and, where he/she agrees, the employee questionnaire (EQ) is sent to a random sample of up to 25 employees. The response rates for the MQ and EQ are 46% and 54% respectively (van Wanrooy *et al*. 2013) and matched responses are available for 21,981 employees in 1,923 workplaces.

Experience of the recession

Questions in both the MQ and EQ capture the experience of the recession. In response to *Did any of the following happen to you as a result of the most recent recession, whilst working at this workplace?,* employees were asked to record all of the following that applied: *I was not working at this workplace during the recession; My workload increased; My work was reorganised; I was moved to another job; My wages were frozen or cut; My non-wage benefits (e.g. vehicles or meals) were reduced; My contracted working hours were reduced; Access to*

paid overtime was restricted; I was required to take unpaid leave; Access to training was restricted; None of the above.

A number of features of this question are worth noting. First, it is only meaningful for those employed in their current workplace during the recession, which results in 11% of employees being excluded, and these are likely to include those most affected by the recession through redundancy, workplace closure, and/or actions that motivate a change of employer.[v] Second, it relies on employees' recollections of changes to workplace practice, whether or not correctly attributed to the recession (which itself may depend on managerial attribution), and, in some instances, their interpretation of the recession itself. For example, the prevalence of a wage freeze or cut in these data suggests that public sector employees attribute the government's austerity policy as a response to the recession. Since these interpretations may differ between individuals, responses are subject to measurement error, a further source of which arises because respondents are required to recall the effects, which may extend over multiple years.[vi] Third, reporting a recession-induced reduction in non-wage benefits, overtime or training, is only possible for individuals in receipt of, or with access, prior to the recession. This is likely to underestimate the extent of these changes, which are measured as a proportion of all employees.[vii] Fourth, employees are asked to identify recession-induced change but provide no indication of the duration or intensity (for example, a wage freeze is not distinguished from a wage cut), although employees may be more likely to recall significant and persistent changes. Lastly, experience of the recession may differ beyond those dimensions explicitly listed. It is not possible, for example, to distinguish slow wage growth from wage growth exceeding historical trends, or constant workload from workload reductions.

Notwithstanding these restrictions, this information is unique in enabling exploration of employees' experiences of the Great Recession regarding rarely scrutinised changes to workload, work organisation and training (exceptions include Felstead *et al*. 2012; Mason and Bishop 2015), in addition to more established measures of hours and earnings. As such, the

analysis captures a range of recession-induced management practices used to 'buffer' the impact on job losses (Teague and Roche 2014). Moreover, in identifying employees' lasting perceptions, it highlights issues that most affect employees and therefore provides a complementary perspective to information on formal policies and practices obtained from managers (Felstead *et al*. 2012), or from tracing outcomes over time where it is often difficult to separate cyclical influences from long-term trends and other short-term policy innovations (Gallie *et al*. 2014; Green *et al*. 2016; Mason and Bishop 2015; Russell and McGinnity 2014). Indeed, the WERS measures have previously been used to explore the differential recession response by firm size (Lai *et al*. 2016), and the implications of recession-induced change for employee trust (Brown *et al*. 2015) and well-being (Wood and Ogbonnaya 2016).

A binary variable is created for each of the nine possible recession-induced changes experienced by employees. Throughout, we interpret each as a distinct but adverse change in working conditions from the employee's perspective, although recognising that such practices may be viewed relatively positively should the alternative be redundancy (Green *et al*. 2016).[viii] An aggregate measure is also created to capture any of the changes listed (*any recession-induced in-work change*). As firms may respond to the recession by adopting multiple practices (Teague and Roche 2014), the number of separate responses (0-9) (*number of recession-induced in-work changes*) is also used to proxy the intensity of the employee experience (Brown *et al*. 2015), under the assumption that multiple separate changes have a greater impact than any single change alone.[ix]

While employees' experience is the focus of our analysis, managers are asked to report whether any of fourteen employment-related actions were taken in response to the recession. These are listed in the supplementary appendix, which also provides analysis of their relationship with employee-reported recession-induced changes (Table SA.1). Although not designed to be congruent, since the manager reports formal workplace practices which may only affect a subset of employees, the proportion of employees reporting recession-induced

change is significantly higher in workplaces where the corresponding action is reported by the manager, providing some reassurance as to the reliability of employee responses. Nevertheless, evidence of employee-reported recession-induced change in workplaces without a manager-reported action highlights important differences in the nature of employee and employer reported measures.

Disability

Although recognised as complex, disability is typically understood to be the outcome of the interaction between health and contextual factors, which include personal and environmental barriers (see, for example, World Health Organisation and World Bank 2011). In line with the UK Equality Act (2010), the definition in WERS is designed to capture activity-limiting disability and does not require an individual to identify as being disabled, or to disclose this to their employer. All employees are asked: *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?* To which they can respond: *No; Yes, limited a little; Yes, limited a lot.* As in Hoque *et al*. (2017) and Shantz *et al*. (2018), employees are defined as disabled (9.7%) if they are either limited *a little* or *a lot.* This approach is consistent with the definition in the Labour Force Survey (LFS) which is used to track progress on UK government disability commitments. The prevalence of disability in the 2011 LFS (11.9%) is also comparable to WERS.[x] While our focus on a 'global' binary measure of disability is also consistent with much of the existing literature, we recognise the potential importance of heterogeneity regarding impairment type, visibility, duration and age of disability onset. Unfortunately, no more detailed information on disability is collected in WERS.

It is possible that an individual's disability status may have changed since the recession, hence our measure of disability also suffers from measurement error in that some individuals who did not report disability at that time will now report disability and *vice versa*, downward biasing its true influence. More importantly, since disability is recorded after the impact of the

recession this gives rise to the possibility of reverse causation, whereby employees with a more negative experience of the recession are more likely to report disability. While this would lead to an overestimate of the relationship between disability and the recession, and cannot be discounted, it should be minimised by two features of the analysis. First, the sample is conditional on employees remaining with the same employer over the period, thereby reducing the potential influence of justification bias, where non-employed individuals report disability to justify their employment and/or welfare status (see, for example, Black *et al*. 2017). Second, a relatively small proportion of employees with disability report mental health problems (see Jones 2016), which are more likely to originate from work-related anxiety arising from the recession.

Workplace equality characteristics

While we recognise organisational priorities may change during a recession (Harwood 2014; Rubery and Rafferty 2013), there is likely to be underlying variation between workplaces in their emphasis on equality (Schur *et al*. 2005, 2009; Stone and Colella 1996). As noted above, we explore four workplace-level indicators which extend the equality characteristics analysed by Schur *et al*. (2009) and Jones (2016). Three are based on information from the MQ. First, we proxy the intensity of disability equality policies using the number of disability specific supporting practices (maximum of 7). These include: monitoring recruitment and selection, promotions and relative pay, by disability; formal assessment of workplace accessibility; and special procedures to encourage job applications from disabled people. Second, we distinguish public sector workplaces, which employ about a quarter of our sample, from all other workplaces. Third, we consider workplaces with trade union recognition, which cover about half of our sample. Finally, following Schur *et al*. (2009), we use information from the EQ to construct a measure of the average employee perception of managerial fairness at the workplace, and explore whether the disability gap varies across quartiles of the workplace

distribution to capture non-linear effects. Appendix Table A.1 provides further details and summary statistics for each measure.[xi]

Statistical Analysis

The influence of the recession (R_{ij}), as measured by each of the variables introduced above, is modelled for the *i*th employee within the *j*th workplace as follows:

$$R_{ij} = \alpha_0 + \alpha_1 D_{ij} + \beta_1 X_{ij} + \varphi W_{ij} + \gamma_1 Z_j + \varepsilon_{ij} \quad (1)$$

Our particular interest is the association with disability status (D_{ij}), which is measured relative to employees without an activity limitation. A rich set of control variables are introduced sequentially to capture the characteristics of the individual, their job and their workplace, which may affect the experience of the recession. Personal characteristics (X_{ij}) include age band, gender, marital status, ethnicity and highest qualification, and are designed to capture the influence of other equality characteristics and elements of pre-existing disadvantage which may heighten the cyclical sensitivity of disabled employees (Gore and Parckar 2009). In an additional specification, job characteristics (W_{ij}) such as occupation, temporary and part-time employment, tenure and trade union membership are included to identify the average disability gap among individuals within similar roles.[xii] Albeit not exhaustive, these job characteristics capture the key dimensions over which employers might implement intra-workplace variation in their response to the recession. Workplace characteristics (Z_j) from the MQ include region, industry and sector, nationality of ownership, workplace size, single establishments and workplace age, and are designed to capture differences in the cyclical sensitivity of workplaces.[xiii] The inclusion of a comprehensive set of job and workplace characteristics is intended to capture the influence of 'protected' or 'buffer' jobs (Rubery and Rafferty 2013), and distinguish the influence of disability from the concentration of disabled employees in less secure jobs (Kaye 2010) and/or in cyclically sensitive industries (Gore and Parckar 2009). In

the most comprehensive specification, the average disability gap is thus measured for comparable workers, that is, after controlling for personal, job and workplace characteristics.[xiv] Appendix Table A.1 provides full definitions and means for all the control variables. After removing missing information on the variables of interest, our remaining sample is 15,881 employees in 1,792 workplaces.

In a final specification, workplace characteristics are replaced by workplace fixed effects to capture unobserved workplace heterogeneity, and where the within-workplace disability gap can be interpreted as relative to comparable workers within the same workplace.[xv] To facilitate the inclusion of workplace fixed effects, all specifications are estimated using Ordinary Least Squares (OLS). Where linear probability models are estimated for binary dependent variables, the sign, size and significance of the coefficients are comparable to marginal effects estimated from probit models. In all models the data are weighted to account for both the selection of workplaces and employees within workplaces, and standard errors are adjusted for the clustering of employees within workplaces.

In the absence of longitudinal data, we are unable to control for time invariant unobserved employee heterogeneity. It is considered unlikely that differences in the reported experience by disability will purely reflect this because evidence relating to the effect of disability on subjective well-being finds no gap five years prior to onset, evidence of recovery post-onset, and declines in well-being specific to life domains (Powdthavee 2009). These concerns are further reduced by the specific nature of the measures of recession-induced change and the focus on change rather than levels. Nevertheless, individual level unobserved heterogeneity affecting both the reporting of disability and recession-induced in-work change remains a potential source of bias.

To explore variation across workplaces in the within-workplace disability gap, equation (1) is also estimated including interactions between disability and the workplace-level equality characteristics introduced above, designed to proxy the equality of implementation of

recession-induced change.[xvi] We acknowledge these characteristics are measured post-recession. While sector and union recognition are generally stable across time, the measures of equal opportunities practice and, particularly, employee perceptions of managerial fairness may be influenced by the recession itself.[xvii] While the latter may give rise to reverse causality between employees' experiences of the recession and workplace characteristics, it seems less likely that it would affect the within-workplace disability gap. For simplicity, we restrict our analysis of workplace equality characteristics to a comprehensive specification which controls for personal and job characteristics, and for workplace fixed effects. The latter capture the direct effects of workplace equality characteristics. While the estimates for all eleven dependent variables are qualitatively similar (see supplementary appendix Table SA.5), results for three measures are presented in full (workload increased, wage freeze or cut, and the number of recession-induced changes) on the basis that the subsequent analysis show these to capture critical dimensions of the differential experience by disability.

Results

Disability gaps in recession-induced in-work change

Table 1 presents the mean values of the employee-reported measures of recession-induced in-work change. A number of points are worth noting. About 60% of employees who worked at the same workplace during the recession report being affected by recession-induced change, consistent with changes in work practices being an important cyclical response. On average employees report 1.3 changes with the most commonly reported a wage freeze or cut (reported by nearly one third), followed by increased workload, work reorganisation and restrictions in paid overtime. About 5% of employees report being required to move to another job, having their non-wage benefits reduced, and having their contracted hours reduced. Even fewer employees (2%) report being required to take unpaid leave. Disabled employees are more likely to report at least one recession-induced change and, on average, report a greater number of

changes. The difference between disabled and non-disabled employees (the disability gap) is significant at the 5% level across the different changes with the exception of reductions to non-wage benefits (significant at the 10% level), the requirement to take unpaid leave, reduced hours and being moved to another job.

INSERT TABLE 1 HERE

Table 2 explores how the relationship between disability and the experience of the recession changes after successively controlling for personal, job and workplace characteristics in columns 2, 3 and 4 respectively.[xviii] Disabled employees are 7 percentage points more likely to report any recession-induced change relative to their non-disabled counterparts and, consistent with the descriptive statistics, they are significantly more likely to report increased workload, work reorganisation (at the 10% level), a wage freeze or cut, restrictions to paid overtime and restrictions to access training. Introducing controls for personal characteristics in column (2) widens the disability gap slightly in most cases, indicating disabled employees' more negative experience of the recession does not simply reflect differences in personal characteristics such as age or educational attainment. The additional controls for job-related characteristics such as occupation and contract type introduced in column (3) typically have only a small narrowing impact on the disability gap, suggesting it is not a reflection of differences in the type of work between disabled and non-disabled individuals, which perhaps increase the risk of job loss (Kaye 2010) rather than within-job change. The inclusion of workplace characteristics in column (4) has a further consistent but again relatively small narrowing influence on the disability gap, thus providing only modest support for the role of between-workplace differences in explaining variation between disabled and non-disabled employees (Gore and Parckar 2009). Even after accounting for personal, job and workplace characteristics, disabled employees remain more likely to report any recession-induced change. The higher rate of reporting a wage freeze or cut is consistent with evidence of a counter-cyclical unexplained wage gap in relation to gender (Biddle and Hammermesh 2013) and race (Johnson and Lordan

2016), and highlights an underexplored potential discriminatory channel through the wages of job stayers.

INSERT TABLE 2 HERE

In the final column (5) workplace fixed effects capture unobserved workplace heterogeneity and, for some measures, the disability gap widens slightly relative to column (4). Indeed, for the first time, disabled employees are more likely to report they were required to take unpaid leave. In contrast, the influence of disability on restrictions to paid overtime diminishes and is only significant at the 10% level, consistent with an important role for unobserved workplace characteristics. In the most comprehensive specification, relative to their non-disabled counterparts, disabled employees are more likely to report being affected by increased workload and work reorganisation, a wage freeze or cut, and restricted access to training, but there is no variation in terms of having hours or non-wage benefits reduced, or being moved to another job.[xix] Overall, the relationship between disability and the experience of the recession is largely unaffected by the inclusion of a comprehensive set of personal, job and workplace characteristics and thus reflects the effect of disability *per se* rather than differences in the jobs disabled employees hold.

While it is not possible to identify the drivers of this residual within-workplace disability gap, it may reflect within-workplace inequality in the implementation of recession-induced changes. As Schur *et al*. (2009) note, even organisation-wide policies, which may not be expected to give rise to inequality, may be subject to local interpretation and implementation. Further, changes to workload and work organisation may depend on an individual's role. It is particularly in terms of the latter where a line manager's perceptions, attitudes and/or prejudice might give rise to inequality in treatment (Schur *et al*. 2005). Individualised responses may however, also be a consequence of an enhanced focus on productivity, which itself might depend on work-limiting disability (Longhi *et al*. 2012).

Workplace equality characteristics

If inequality in treatment is a driver of the disability gap in the experience of the recession, this may be moderated by workplace equality characteristics. Table 3 presents results in which the within-workplace disability gap is allowed to vary by workplace, more specifically by disability equality practices, sector, union recognition and employee perceptions of managerial fairness. The coefficient estimates relate to the fixed effects specification where the dependent variables of increased workload, a wage freeze or cut and the number of recession effects are presented in the upper, middle and lower panel respectively.

Columns (1)-(3) present the interactions between disability and the intensity of equality practices, public sector and trade union recognition respectively. The interaction between disability and equality practices has a significant influence on reporting a wage freeze or cut, and indicates that the disability gap is smaller in workplaces with a greater number of equality practices, consistent with a greater likelihood of monitoring relative earnings. This is confirmed in additional analysis based on a more specific measure of monitoring relative pay by disability which covers about 11 percent of employees, where the disability gap in reporting a recession-induced wage freeze or cut is insignificant in monitoring workplaces (results available on request). There is no evidence (at the 5% level of significance) of a moderating role for the public sector or trade union recognition for any of the recession measures, suggesting these workplace characteristics are unrelated to disabled employees' relative experience of the recession.[xx] This is perhaps surprising given the role of unions in wage bargaining, but is consistent with evidence of a limited influence of unions on firms' response to the recession (Teague and Roche 2014), and possibly reflects the pace and scale of workplace change in the Great Recession.

Column (4) includes an interaction with quartiles of workplace average employee perceptions of managerial fairness. Despite some significant interaction terms for quartile 3, there is no consistent evidence that the disability gap varies with employee perceptions of fairness.[xxi] The results are robust to the simultaneous inclusion of all interaction terms, which

account for the possible overlap between the workplace equality characteristics in column (5). Overall, therefore, with the exception of the impact of equality practices on reporting a wage freeze or cut, there is no evidence that disabled employees' relative within-workplace experience of the recession varies consistently across workplace equality characteristics.

It is possible that our workplace characteristics simply do not capture differences in the equality of implementation of recession-induced change. For example, inequality may be driven at a more local level such as via line managers (Foster and Scott 2015). However, finding workplace equality characteristics provide limited protection for disabled employees during the recession aligns to arguments that in a downturn, employer priorities relating to equality (and the broader business case) may be marginalised relative to short-term economic performance (Rubery and Rafferty 2013; Harwood 2014; Reeves *et al*. 2014).

The absence of consistent variation in the disability gap across workplaces could alternatively suggest a role for common, workplace independent, factors. For example, if disabled employees have on average more limited bargaining power they might be less able to resist workplace change. Disabled employees might also find it more difficult to adjust to organisational change (see Roulstone and Williams 2014 for a discussion of 'glass partitions'), particularly modifications to workload or work reorganisation made without consideration of reasonable adjustments, and this might give rise to a more prominent recollection of the same recession-induced practice. Moreover, despite the breadth of measures used, no information is available on the extent of job mismatch pre-recession which, if greater among disabled employees, may motivate more within-work change (see Mitra and Kruse 2016 for a discussion in relation to job displacement). Similarly, if the nature of work reorganization included elements such as a reduction in flexible working, it may have a more pronounced impact leading to greater recall amongst disabled employees.[xxii] Further, while the measures relate to specific recession-induced changes, as they reflect perceptions of such change, we are unable to exclude the possibility that unobserved pre-existing disadvantage leads to a differential evaluation,

especially given evidence of increased anxiety relating to unfair treatment, job insecurity and job status among employees during the recession (Gallie *et al*. 2014).

INSERT TABLE 3 HERE

Conclusion

The labour market impact of the Great Recession varied across workers (Hoynes *et al*. 2012). While previous studies in the UK have considered the implications for inequality in terms of gender (Rubery and Rafferty 2013) and race (Johnston and Lordan 2016), the influence of disability has been neglected. More generally, the focus on employment has meant that, with the exception of earnings, and despite more general concerns about job quality in the UK (Gallie *et al*. 2014), inequality in the in-work experience of the recession has largely been overlooked. This has resulted in gaps in the international literature in two areas: inequality and the economic cycle and the in-work experience of disabled people, with important implications for employer practice and government policy.

We address these gaps by exploring the experience of disabled employees during the Great Recession, using questions in WERS 2011 which directly ask employees about recession-induced changes to work. In doing so, we provide the first evidence on the cyclicality of the in-work experience of disabled employees. Consistent with growing evidence of a less positive in-work experience (Fevre *et al*. 2013; Jones 2016), we find that, relative to non-disabled employees, disabled employees are more likely to report being affected by recession-induced change, particularly in relation to workload, work organisation, wages and training. As such, organisational responses to a downturn which affect employee working conditions may form a neglected source of inequality at work. In this respect, the analysis identifies an important environmental factor (the economic cycle) which has been overlooked by theoretical frameworks explaining the treatment of disabled employees (for example, Stone and Colella 1996).

We find that controlling for job and workplace characteristics typically has a small impact on the disability gap in the experience of the recession, suggesting it can be predominantly attributed to disability *per se* rather than reflecting a concentration of disabled employees in cyclically-sensitive jobs and workplaces. This implies a relatively limited role for pre-existing disadvantage (Gore and Parckar 2009) and 'protected' or 'buffer' jobs (Rubery and Rafferty 2013) as determinants of the differential experience of disabled employees during the recession, and potentially signals weaknesses in the implementation of equality legislation in the UK.

We propose two possible explanations for the residual within-workplace disability gap in the experience of the recession. First, there may be inequality in the treatment of disabled employees when implementing workplace recession-induced change. Indeed, differential treatment, though illegal under UK equality legislation, may be exacerbated during a recession due to greater ability to exercise a 'taste for discrimination' (Becker 1957) or statistical discrimination (Phelps 1972) when the number of job seekers is high, and/or when corporate and government priorities shift towards economic performance and away from equality (Harwood 2014; Rubery and Rafferty 2013). Second, differences may arise if the same recession-induced change is experienced differently by disabled employees, for example, as a consequence of greater difficulty in adjusting to workplace change (Roulstone and Williams 2014), work-intensification, and/or because these changes reinforce real or perceived pre-existing disadvantage (Jones 2016). It is possible that part of this differential experience may itself reflect discrimination where, for example, it arises as a consequence of organisational barriers which might be expected to be removed through 'reasonable adjustments' under equality legislation. Regardless of the underlying reason, given the negative relationship between recession-induced job changes and job-related well-being (van Wanrooy *et al*. 2013; Wood and Ogbonnaya 2016), this within-workplace disability gap adds to existing concern relating to disabled employees' well-being at work (Hoque *et al*. 2017; Jones 2016).

To shed light on the potential drivers of the residual within-workplace disability gap, our analysis also explored the extent to which this residual within-workplace disability gap varies across workplace equality characteristics. To the extent that our measures of disability equality practices, sector, union recognition and employee perceptions of managerial fairness are accurate proxies, the absence of substantial variation suggests that, rather than reflecting inequality in implementation, the disability gap reflects factors common across workplaces. Nevertheless, this may still reflect indirect discrimination arising from organisational change prohibited under UK equality legislation. An alternative interpretation, in line with the arguments of changing priorities away from equality due to financial pressure (Rubery and Rafferty 2013; Harwood 2014), is that these workplace equality characteristics are ineffective in protecting disabled employees during recessions. The only exception is in terms of a wage freeze or cut where disability equality practices, particularly those targeted at monitoring relative wages, reduce the gap, and seem to support recent calls in the UK for mandatory organisational (gender) pay gap reporting to be extended to disability. Although not inconsistent with Jones' (2016) findings of limited variation in disability gaps in the experience of work across several workplace equality characteristics, potential cyclicality in the effectiveness of equality practices warrants further investigation, including across countries and for other protected characteristics, and may offer an additional explanation for observed counter-cyclical unexplained wage and employment gaps.

These findings should be concerning for employers and policymakers internationally, particularly given the protective UK legislative context and, especially in light of the COVID-19 recession. They point to the need for careful scrutiny of the implications of recession-induced organisational decisions, the government policy response and labour market outcomes for disabled people over the economic cycle. This should extend beyond employment rates and include in-work measures, where our evidence suggests there is a role for government in

supporting and encouraging employers to maintain a focus on disability equality during economic contractions.

Finally, we acknowledge a number of caveats and make suggestions for future research. The self-reported nature of our measures of the experience of the recession are subject to a number of limitations and, in this application, individual level unobserved heterogeneity affecting both the reporting of disability and recession-induced in-work change remains a potential source of bias. In this respect, our analysis should be used to complement more traditional examination of objective outcomes such as employment, labour market transitions and relative earnings over the cycle. International scrutiny of similar measures would, however, provide an important test of the generalisability of the findings and their sensitivity to institutional context. We acknowledge that in focusing on people who retain work we ignore those likely to have experienced the most severe impact of the recession through job loss and workplace transitions, and in relation to these indicators, additional attention on the differential impact between disabled and non-disabled people in the UK is warranted. Yet, by analysing unique in-work measures, this paper contributes a cyclical perspective to disability disadvantage at work to highlight the importance of the external environment for disability inequality. Building on this, work reorganisation associated with COVID-19 should form a significant theme for future research on work-related inequality among disabled people.

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Table 1. Employee-reported Experience of Recession by Disability Status

	All	Disabled	Non-disabled
Any recession-induced in-work change	0.598	0.660***	0.592
Workload increased	0.284	0.360***	0.277
Work reorganised	0.185	0.212**	0.182
Moved to another job	0.054	0.064	0.053
Wage freeze or cut	0.324	0.367***	0.320
Non-wage benefits reduced	0.055	0.069*	0.053
Hours reduced	0.047	0.037	0.048
Paid overtime restricted	0.184	0.231***	0.180
Required to take unpaid leave	0.019	0.020	0.019
Access to training restricted	0.118	0.152***	0.115
Number of recession-induced in-work changes	1.269	1.515***	1.245

Notes to table: Data are weighted and standard errors are clustered at the workplace level. *, **, *** denote significant difference between disabled and non-disabled employees at the 10%, 5% and 1% significance level respectively. The sample size is about 19,000 employees but varies across measures.

Table 2. Disabled Employee's Reported Experience of the Recession

		Without controls (1)	Personal characteristics (2)	Personal and job characteristics (3)	Personal, job and workplace characteristics (4)	Workplace fixed effects (5)
Any recession-induced in-work change	Disabled	0.068***	0.072***	0.066***	0.060***	0.069***
		(3.66)	(3.86)	(3.59)	(3.29)	(3.40)
	Adj R^2	0.002	0.034	0.068	0.104	0.242
	F-test	13.42 (0.00)	12.10 (0.00)	16.41 (0.00)	19.44 (0.00)	10.16 (0.00)
Workload increased	Disabled	0.077***	0.082***	0.083***	0.076***	0.064***
		(4.14)	(4.29)	(4.45)	(4.09)	(3.14)
	Adj R^2	0.002	0.020	0.050	0.072	0.156
	F-test	17.11 (0.00)	8.70 (0.00)	15.04 (0.00)	12.77 (0.00)	6.07 (0.00)
Work reorganised	Disabled	0.029*	0.032**	0.029*	0.024	0.038**
		(1.91)	(2.06)	(1.85)	(1.59)	(2.33)
	Adj R^2	0.000	0.012	0.026	0.046	0.137
	F-test	3.66 (0.06)	4.77 (0.00)	7.43 (0.00)	6.52 (0.00)	2.73 (0.00)
Moved to another job	Disabled	0.009	0.011	0.009	0.006	0.004
		(1.02)	(1.23)	(1.06)	(0.69)	(0.39)
	Adj R^2	0.000	0.004	0.012	0.021	0.057
	F-test	1.04 (0.31)	2.93 (0.00)	3.95 (0.00)	3.21 (0.00)	1.72 (0.01)
Wage freeze or cut	Disabled	0.049***	0.041**	0.038**	0.037**	0.058***
		(2.63)	(2.30)	(2.20)	(2.23)	(3.58)
	Adj R^2	0.001	0.044	0.074	0.153	0.327
	F-test	6.90 (0.01)	21.61 (0.00)	18.02 (0.00)	25.01 (0.00)	11.38 (0.00)
Non-wage benefits reduced	Disabled	0.011	0.014	0.015	0.014	0.016
		(1.12)	(1.47)	(1.56)	(1.48)	(1.42)
	Adj R^2	0.000	0.016	0.024	0.038	0.130
	F-test	1.24 (0.27)	6.93 (0.00)	5.10 (0.00)	4.26 (0.00)	3.76 (0.00)
Hours reduced	Disabled	-0.007	-0.010	-0.010	-0.007	-0.001
		(0.81)	(1.14)	(1.25)	(0.90)	(0.15)
	Adj R^2	0.000	0.004	0.032	0.059	0.294
	F-test	0.66 (0.42)	1.30 (0.17)	3.39 (0.00)	2.66 (0.00)	2.36 (0.00)
Paid overtime restricted	Disabled	0.057***	0.059***	0.044***	0.040**	0.032*

		(3.34)	(3.60)	(2.69)	(2.52)	(1.88)
	Adj R^2	0.002	0.030	0.068	0.092	0.217
	F-test	11.16 (0.00)	10.91 (0.00)	13.24 (0.00)	10.23 (0.00)	5.63 (0.00)
Required to take unpaid leave	Disabled	0.005	0.005	0.005	0.006	0.011**
		(1.01)	(1.11)	(0.96)	(1.21)	(2.08)
	Adj R^2	0.000	0.003	0.006	0.016	0.215
	F-test	1.02 (0.31)	2.01 (0.01)	1.48 (0.04)	1.39 (0.02)	1.28 (0.13)
Access to training restricted	Disabled	0.038***	0.054***	0.050***	0.047***	0.037***
		(2.72)	(3.88)	(3.64)	(3.53)	(2.69)
	Adj R^2	0.001	0.032	0.056	0.082	0.163
	F-test	7.41 (0.01)	12.53 (0.00)	11.47 (0.00)	9.38 (0.00)	6.51 (0.00)
Number of recession-induced in-work changes	Disabled	0.268***	0.288***	0.262***	0.242***	0.259***
		(4.57)	(4.95)	(4.58)	(4.53)	(4.52)
	Adj R^2	0.003	0.038	0.074	0.133	0.288
	F-test	20.88 (0.00)	14.13 (0.00)	17.49 (0.00)	17.47 (0.00)	10.34 (0.00)

Notes to table: The sample (15,881 employees) is constrained to be the same across specifications. All models are estimated by OLS. Data are weighted and standard errors are clustered at the workplace level. Absolute t-statistics are reported in parenthesis under coefficient estimates, p-values are reported in parenthesis alongside values for F-statistics. '*' '**' '***' denote the significance from zero at the 10%, 5% and 1% level respectively. Specification (1) includes disability only. Personal characteristics (not reported) include age band, gender, marital status, ethnicity and highest qualification. Job characteristics (not reported) include occupation, temporary and part-time employment, tenure and trade union membership. Workplace characteristics (not reported) include region, industry and sector, ownership, workplace size, single establishments and workplace age.

Table 3. Disabled Employee's Reported Experience of the Recession by Workplace Characteristics

Workload increased	(1)	(2)	(3)	(4)	(5)
Disabled	0.066**	0.062**	0.081**	0.073*	0.094
	(1.98)	(2.30)	(2.28)	(1.72)	(1.62)
Disabled x Equality practices	-0.002	-	-	-	-0.002
	(0.19)				(0.16)
Disabled x Public sector	-	0.005	-	-	0.009
		(0.13)			(0.18)
Disabled x Trade union	-	-	-0.024	-	-0.028
			(0.55)		(0.54)
Disabled x Fairness Q2	-	-	-	0.021	0.002
				(0.38)	(0.03)
Disabled x Fairness Q3	-	-	-	-0.095*	-0.088
				(1.70)	(1.51)
Disabled x Fairness Q4	-	-	-	0.053	0.046
				(0.83)	(0.68)
N	15,124	15,881	15,649	15,881	14,894
Adj R^2	0.150	0.156	0.157	0.157	0.151
F-test	5.89 (0.00)	5.91 (0.00)	5.80 (0.00)	5.78 (0.00)	5.19 (0.00)
Wage freeze or cut					
Disabled	0.106***	0.067***	0.078***	0.065*	0.140***
	(4.17)	(3.07)	(2.73)	(1.66)	(2.90)
Disabled x Equality practices	-0.021***	-	-	-	-0.024***
	(2.86)				(2.96)
Disabled x Public sector	-	-0.026	-	-	0.036
		(0.85)			(0.87)
Disabled x Trade union	-	-	-0.037	-	-0.046
			(1.05)		(1.14)
Disabled x Fairness Q2	-	-	-	0.027	0.036
				(0.57)	(0.73)
Disabled x Fairness Q3	-	-	-	-0.046	-0.055
				(0.93)	(1.06)
Disabled x Fairness Q4	-	-	-	-0.015	-0.039
				(0.27)	(0.67)
N	15,126	15,881	15,649	15,881	14,894
Adj R^2	0.326	0.327	0.328	0.328	0.327
F-test	10.60	11.04	10.89	10.67 (0.00)	9.43 (0.00)
	(0.00)	(0.00)	(0.00)		
Number of recession-induced in-work changes					
Disabled	0.284***	0.252***	0.307***	0.347***	0.515***
	(3.21)	(3.43)	(3.57)	(2.79)	(3.14)
Disabled x Equality practices	-0.013	-	-	-	-0.015
	(0.51)				(0.46)
Disabled x Public sector	-	0.020	-	-	0.146
		(0.18)			(0.96)
Disabled x Trade union	-	-	-0.106	-	-0.260*
			(0.93)		(1.72)
Disabled x Fairness Q2	-	-	-	0.050	0.010
				(0.31)	(0.06)
Disabled x Fairness Q3	-	-	-	-0.323**	-0.389**
				(1.97)	(2.31)
Disabled x Fairness Q4	-	-	-	-0.078	-0.171
				(0.49)	(0.94)
N	15,124	15,881	15,649	15,881	14,894
Adj R^2	0.282	0.288	0.290	0.289	0.285
F-test	10.08	10.06	9.96 (0.00)	9.76 (0.00)	9.00 (0.00)
	(0.00)	(0.00)			

Notes to table: Data are weighted and standard errors are clustered at the level of the workplace. Absolute t-statistics are reported in parenthesis under coefficient estimates, p-values are reported in parenthesis alongside values for F-statistics. '*' '**' '***' denote the significance from zero at the 10%, 5% and 1% level respectively. All specifications include personal and job characteristics, and workplace fixed effects as Table 2 (column 5). Omitted groups are disabled x private and voluntary sector (column 2), disabled x no trade union recognition (column 3) and disabled x workplace fairness Q1.

[i] There is no evidence, however, that this widened income inequality among disabled people, as the impact of the downturn was moderated by welfare support (Jajtner *et al*. 2020), consistent with its counter-cyclical nature.

[ii] Fogg *et al*. (2011) show that during the recession disabled workers in the US were more likely to work part-time but have a similar probability of low pay conditional on full-time work. It is, however, not possible to attribute these findings to the recession *per se*.

[iii] We note caveats to this argument as collective bargaining and uniform practice may restrict the ability of workplaces to make tailored individual adjustments (Schur *et al*. 2005).

[iv] Source: Department for Business, Innovation and Skills, Advisory Conciliation and Arbitration Service, National Institute of Economic and Social Research (2015).

[v] Disabled employees are less likely to report *I was not working at this workplace during the recession*, consistent with lower job mobility but this difference is not significant after accounting for age. Responses to this question also decrease with tenure. The results are not, however, sensitive to restricting the sample on the basis of minimum tenure of one and five years (about 95% and 60% of the sample respectively) (see supplementary appendix Table SA.3).

[vi] The survey was administered between March 2011 and June 2012. While the recession formally lasted for 6 quarters (Q2 2008–Q3 2009), labour market adjustment typically occurs with a lag. Recession-induced changes occurring after 2011-2012 will not be captured in the analysis.

[vii] WERS does not contain information about access prior to the recession. However, our interest is in the disability-gap rather than the extent of recession-induced change *per se*. Data from the 2007 Labour Force Survey show that disabled employees have no significant difference in the receipt of paid overtime but are about 10% less likely to have undertaken job-related training in the last 13 weeks. In terms of the latter, our measure of the disability-related gap may therefore be downward biased.

[viii] Several of the possible responses such as *my work was reorganised* are not unequivocally negative but are interpreted as such given the context of the question. Supporting this, van Wanrooy *et al*. (2013) find a negative impact of recession-induced changes on employee well-being in WERS.

[ix] The measures are typically significantly positively correlated (*r* ranges from 0.00 (*hours reduced* and *workload increased*) to 0.38 (*workload increased and work reorganised*)). We also explored generating indices reflecting 'work quantity', 'work benefits' and 'work organisation', but Cronbach's alpha indicated relatively low internal consistency between items.

[x] While we explored the sensitivity of the findings to separating disabled employees limited *a little* (8.4%) from those limited *a lot* (1.3%), the latter were not always intuitive and lacked statistical power, consistent with the small sample size. The findings with respect to the binary measure are, however, largely robust to using an index of disability on the basis of severity.

[xi] Given that the formality of practices in response to the recession might vary by employment size and might relate to equality in implementation, we also tested for differences by workplace and organisation size. Although there is some evidence of a narrower disability gap within large organisations none of the differences were significant at the 5% level. Estimates are available on request.

[xii] We acknowledge that job characteristics may be influenced by the recession and this motivates both the selection of broad measures, which are likely to be less sensitive, and their sequential inclusion. For this reason we exclude a control for hourly earnings.

[xiii] The results are not sensitive to the exclusion of workplace size which may be affected by recession-induced workplace change.

[xiv] The results are not sensitive to controlling for the number of manager-reported recession-induced actions (0-14) as a proxy for intensity of employment-related adjustment at the workplace (see supplementary appendix Table SA.3).

[xv] The results are not sensitive to restricting the sample to the 1,043 workplaces with at least one disabled employee (see supplementary appendix Table SA.3).

[xvi] Results for equation (1) including interactions between disability and gender, age group and highest qualification are presented in supplementary appendix Table SA.4, and show relatively few significant differences in the disability-gap across personal characteristics.

[xvii] Of the 989 workplaces in the 2004-2011 WERS panel sample 97% report the same sector and 92% report the same union recognition during both years. Both the number of disability equality practices (r=0.55) and average employee workplace fairness (r=0.34) are significantly correlated over the same period despite the change in employee sample in the latter.

[xviii] A full set of coefficient estimates relating to the most comprehensive specification (with personal, job and workplace fixed effects) are provided in supplementary appendix Table SA.2 but all sets of coefficient estimates are available on request. The probability of experiencing recession-induced change increases with educational qualifications, job tenure, working full-time and in the public sector.

[xix] For being *moved to another job* the within-workplace disability gap is positive and significant for those with qualifications below GCSE level (see supplementary appendix Table SA.4).
[xx] There is some evidence that the relationship between disability and work reorganisation is more pronounced in the public sector (see supplementary appendix Table SA.5).
[xxi] This finding is robust to using a continuous measure of employee perceptions of fairness, constructing the average based on non-disabled employees and restricting the sample to workplaces with 3 or more employee responses.
[xxii] Again though there are reasons to argue that the impact would be mitigated in workplaces which are more sensitive to disability equality (through, for example, workplace adjustments), which is not consistent with our results.