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ORIGINAL ARTICLE

Do employers' equality certifications improve equality outcomes? An assessment of the United Kingdom's Two Ticks and Disability Confident schemes

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Abstract

This article contributes to debates on equality, diversity and inclusion by exploring the efficacy of employers' equality certifications, focusing on the UK government's Two Ticks and Disability Confident certifications. In Study 1, using data on Two Ticks certification matched into the nationally representative Workplace Employment Relations Study 2011, we found the adoption of disability equality policies and practices, the prevalence of disabled people in the workforce and disabled people's experience of work were no better in Two Ticks than in non-Two Ticks workplaces. In Study 2, using Department for Work and Pensions data on Disability Confident certification matched into WorkL 2021–2023 data (the world's largest employee experience database), we found that the proportion of the workforce that is disabled is no higher in Disability Confident Level 1 'Committed' organisations and Level 3 'Leader' organisations than in non-Disability Confident organisations. While the proportion of the workforce that is disabled is higher in Disability Confident Level 2 'Employer' organisations than in non-Disability Confident organisations, just 22 per cent of Disability Confident organisations are at this

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level. Disabled people's experience of work was no better in Disability Confident than in non-Disability Confident organisations. Our findings therefore question the efficacy of these employers' equality certifications.

1 | INTRODUCTION

There has been a proliferation of equality certifications available to employers in recent years. Well-known examples include Athena SWAN, Business in the Community, Race for Opportunity, Stonewall Top Global Employers and Two Ticks 'Positive About Disabled People'/Disability Confident. This proliferation reflects notable efforts by third parties (including employers' groups, civil society organisations and governments) to improve equality, diversity and inclusion (EDI) outcomes by establishing standards of good employer practice, encouraging employer adherence to these standards and recognising employers leading these efforts.

However, it is questionable whether all equality certifications will prove equally effective in improving EDI outcomes. Certifications vary considerably in how they function, particularly regarding their assessment regimes. For example, the Stonewall Diversity Champions scheme involves rigorous independent assessment and monitoring to ensure certified employers uphold the required standards. Reflecting this, Colgan et al. (2007) find evidence of improved equality practices among participating employers. However, many other certifications, for example, the UK government's Two Ticks/Disability Confident schemes, are either only weakly assessed or not independently assessed at all. Such certifications require employers to do little more than make a public commitment to uphold EDI standards. If employers then act on this commitment, the certification may well have the desired positive effects. However, the absence of rigorous independent assessment raises the possibility that employers will seek certification to secure the associated reputational benefits, while not adopting the anticipated practices or improving EDI outcomes. Consistent with this argument, there is no evidence that Athena SWAN certification, which relies on employer self-assessment rather than rigorous independent evaluation, has enhanced females' careers in medical schools (Gregory-Smith, 2018).

This article contributes to this debate, and debates on disability and EDI more widely (Barnes, 2020; Bruyère, 2019; Schur et al., 2009, 2014; Stone & Colella, 1996), by exploring the efficacy of two equality certifications – the UK government's Two Ticks 'Positive About Disabled People' and 'Disability Confident' schemes. The Two Ticks scheme was introduced in 1990, having been developed by the UK government in close collaboration with employers. By 2016, over 4400 employers had achieved certification. The scheme was then superseded by 'Disability Confident', under which 19,182 employers have achieved certification covering more than 11 million employees, according to government estimates (HM Government, 2022). As the UK's most widely adopted equality certifications, Two Ticks and Disability Confident provide(d) highly recognisable indicators of employer (apparent) commitment to disability equality, with certified employers displaying the logos on job advertisements, application forms and websites. The aim of both schemes is to improve employers' disability equality practices and disabled people's employment outcomes. For example, the UK government states in relation to Disability Confident that certification 'gives employers the knowledge, skills and confidence they need to attract, recruit, retain and progress disabled people in the workplace' and 'raise their ambition ... to increase disabled people's employment opportunities' (HM Government, 2021, p. 54).

We explore the efficacy of the Two Ticks and Disability Confident schemes in two separate studies. Study 1 (on Two Ticks) draws on the nationally representative Workplace Employment Relations Study (WERS) 2011 into which we match data from the UK government's Department for Work and Pensions (DWP) listing of employers with Two Ticks certification. Study 2 (on Disability Confident) draws on the WorkL 2021–2023 employee experience database into which we match the DWP's listing of employers with Disability Confident certification. Despite its centrality to the UK government's disability employment policy, Two Ticks was subject to remarkably little research. Our analysis, therefore, provides a significant addition to the evidence base on it. Disability Confident has not been subject to any prior systematic research; hence, our analysis of it is entirely novel.

2 | DISABILITY DISADVANTAGE AND TWO TICKS/ DISABILITY CONFIDENT

Disabled people around the globe continue to encounter considerable labour market disadvantage (Bruyère, 2019). In the United Kingdom, for example, the disability employment gap has increased from around 25 percentage points in 1990 to 30 percentage points in 2023. Disabled people in the United Kingdom move out of work at nearly twice the rate of non-disabled people and move into work at less than one-third of the rate (House of Commons, 2021). Disabled employees also report poorer experiences of work than non-disabled employees regarding job discretion, work–life balance, fair treatment, job-related mental health and job satisfaction (Jones, 2016; Jones et al., 2021; Schur et al., 2009). Additionally, successive WERS surveys show that the adoption of disability equality practices in Britain has remained at very low levels, despite the prevalence of written disability equality policy statements having increased (Dex & Forth, 2009; van Wanrooy et al., 2013). These trends reflect the acknowledged limitations of the UK's Disability Discrimination Act 1995 (subsumed into the Equality Act 2010) (Foster & Fosh, 2010; Woodhams & Corby, 2007). Given that consecutive UK governments have rejected calls from disabled people's organisations to strengthen this legislation, it is important to explore the potential for alternative forms of regulation (including voluntary employer certifications such as Two Ticks and Disability Confident) to improve disabled people's employment outcomes. The following sections discuss Two Ticks and Disability Confident in turn.

2.1 | Two Ticks

Two Ticks was launched in 1993 to help address disability-related employment disadvantage in the United Kingdom. It required participating employers to declare adherence to five commitments: (1) to interview all disabled applicants who met the minimum criteria for a job vacancy and to consider them on their abilities; (2) to discuss with disabled employees, at any time but at least once a year, what both parties could do to make sure disabled employees developed and used their abilities; (3) to make every effort when employees became disabled to make sure they stayed in employment; (4) to take action to ensure that all employees developed the appropriate level of disability awareness; and (5) to review the commitments each year and assess what had been achieved, plan ways to improve on them and inform their employees about progress and future plans. The anticipation, therefore, was that in certified organisations the adoption of disability equality practices and the proportion of the workforce that is disabled would be higher, and disabled employees' experience of work would be better, than in non-certified organisations.

However, the scheme received significant criticism from disability campaign groups, particularly regarding the absence of independent monitoring to ensure employer adherence to the expected commitments. The certification process required employers simply to indicate their agreement with the Two Ticks commitments to JobCentre Plus (the government agency running the scheme), and there was no inspection or recertification process to assess whether employers were adhering to these commitments. Instead, compliance was dependent on employer good faith and self-enforcement (Hoque et al., 2014), with the government emphasising the business case for employing disabled people as the reason why employers would be motivated to comply. This absence of independent inspection and enforcement nevertheless raised the possibility that employers could obtain (and retain) certification to demonstrate their compliance with social expectations and secure the associated reputational benefits while simultaneously adopting few of the anticipated practices and failing to improve disability employment outcomes. Indeed, given such concerns, the Trades Union Congress Disabled Workers' Conference (2016, pp. 8–9) described the scheme as 'a fig leaf for employer inaction'.

However, although Two Ticks was central to the UK government's disability employment policy for three decades, it was, as mentioned above, subject to relatively little research. Just two studies explored its association with employer disability equality practices, with Goldstone and Meager (2002) reporting greater adoption of such practices among Two Ticks than among non-Two Ticks employers, but Hoque et al. (2014) finding this not to be the case. Regarding its association with workforce disability prevalence, two studies (Goldstone & Meager, 2002; Woodhams & Corby, 2007) found this to be higher in Two Ticks than non-Two Ticks employers. This appears inconsistent with concerns regarding the scheme's effectiveness (e.g., Trades Union Congress Disabled Workers' Conference, 2016). However, the positive results within these studies may be attributable to measurement error, given the data on workforce disability prevalence was drawn from management respondents, who may not be reliable sources of evidence on this matter given that many employers have no recording system in place, while in those that do the system may be hampered by employee unwillingness to disclose their disability status (see Jones, 2016). These studies may have also been affected by common method bias problems, with information on both the independent (Two Ticks status) and dependent (disability prevalence) variables being provided by the same management respondent. This could have led to an overstatement of the Two Ticks effect given managers' general support for voluntarist approaches (such as Two Ticks) and their tendency to report such approaches as successful (Özbilgin & Tatli, 2011).

Study 1 seeks to add to the evidence base by using matched WERS/DWP data to explore whether Two Ticks employers employed disabled people in proportionately greater numbers than non-Two Ticks employers; whether they were more likely to have adopted policies and practices aimed at improving disabled people's outcomes; and whether disabled employees' experience of work was better (and gaps in the experience of work between disabled and non-disabled employees were smaller) in Two Ticks than in non-Two Ticks workplaces.

Our analysis extends the prior research in three ways. First, the potential measurement error outlined above in studies relying on managerial estimates of workforce disability prevalence (Goldstone & Meager, 2002; Woodhams & Corby, 2007) is addressed in our analysis by our use of a measure that draws on employees' own self-reports of their disability status rather than relying on management estimates.

Second, the aforementioned common method bias problems affecting prior studies are reduced in our study given the dependent and independent variables are drawn from different data sources (i.e., WERS and DWP, respectively). While common method bias problems may have over-inflated the Two Ticks effect in research based on management respondents (Goldstone & Meager, 2002;

Woodhams & Corby, 2007), they may have led to an understatement of the effect in research based on union representatives (Hoque et al., 2014), given that unions are typically critical of voluntarist approaches to equality, hence may downplay their effectiveness (Özbilgin & Tatli, 2011).

Third, prior research did not explore whether disabled people's experience of work was better in Two Ticks than in non-Two Ticks organisations and whether disability gaps in the experience of work were smaller. This is an important issue given disabled people's experiences of work are crucial in determining whether they remain in employment (Jones, 2016). Hence, our analysis of the implications of certification for disabled people's job discretion, work–life conflict, fairness perceptions, job-related mental health and job satisfaction represents a significant contribution to the literature. Our analysis of this matter draws on responses from over 1200 disabled employees in WERS, thus answering the call from scholars for disability research to give primacy to disabled people's own voices (Barnes, 2020; Watson, 2020, p. 96; Williams & Mavin, 2012).

2.2 | Disability Confident

The DWP replaced Two Ticks with the Disability Confident scheme in 2016. Similar to Two Ticks, Disability Confident seeks to encourage employers to improve disability employment processes and practices, and disabled people's employment outcomes. It has three levels of certification through which the government expects employers to progress. Level 1 Disability Confident 'Committed' organisations agree to five commitments (inclusive and accessible recruitment, communicating vacancies, offering an interview to disabled people, providing reasonable adjustments, supporting existing employees) and at least one activity (work experience, work trials, paid employment, apprenticeships, job shadowing, traineeships, internships, student placements, sector-based work academy placements). Level 2 Disability Confident 'Employers' are required to conduct a self-assessment around two themes: 'getting the right people for your business' and 'keeping and developing your people'. Level 3 Disability Confident 'Leaders' need to have their self-assessment validated (usually by another 'Leader' – hence there is some monitoring by peers at this level, though this may be weak given it arguably lacks independence); provide a short narrative; confirm they are employing disabled people; and report on disability, mental health and well-being using the government's Voluntary Reporting Framework. At the end of 2023, there were 19,182 Disability Confident certifications, divided into 14,467 (75 per cent) at Level 1 'Committed', 4143 (22 per cent) at Level 2 'Employers', and 572 (3 per cent) at Level 3 'Leaders'.

Study 2 assesses the implications of Disability Confident for disabled people's employment outcomes, drawing on responses from 127,890 employees in the WorkL database, into which we match data from the DWP regarding the Disability Confident status of the respondents' organisations. This enables an assessment of whether the proportion of employees who are disabled is higher among Disability Confident organisations than among non-Disability Confident organisations, and whether disabled people's experiences of work are better (and disability gaps in the experience of work are smaller). Throughout the analysis, we explore Disability Confident Levels 1, 2 and 3 separately.

As was the case for our analysis of Two Ticks, the dependent (disability employment outcomes) and independent (Disability Confident status) variables are drawn from different data sources (WorkL and DWP, respectively), thereby minimising common method bias problems. Also, given the research is based on employees' own self-reports of their disability status and experience of work, our analysis avoids the potential measurement error associated with earlier analyses of

Two Ticks, as well as further answering the call for disability research to give primacy to disabled people's own voices (Barnes, 2020; Watson, 2020, p. 96; Williams & Mavin, 2012).

3 | THE STUDIES

3.1 | The data

As mentioned above, Study 1 utilises linked employer–employee data from the 2011 WERS (Department for Business, Innovation and Skills, National Institute of Economic and Social Research, Advisory, Conciliation and Arbitration Service, Policy Studies Institute, 2014). The data are nationally representative of British workplaces with five or more employees across all industry sectors when probability weighted to account for the complex nature of the WERS survey design. WERS comprises a workplace-level employer survey and a linked employee-level survey based on a random sample of employee respondents in the workplaces within the workplace-level survey. The employer survey comprises 2680 observations (response rate 46.5 per cent). The employee survey was distributed to a random sample of up to 25 employees in 2170 workplaces where the manager answering the employer survey permitted it, with employees selected anonymously by the WERS interviewer from the list of all employees at the workplace using a randomised numerical selection method. Within each workplace, all employees (disabled or otherwise) had an equal chance of selection into the sample, and surveys were made available in alternative formats. The employee survey comprises 21,981 employees (response rate 54.3 per cent).

We merged data on the Two Ticks status of workplaces into the WERS survey from a list of 4400 employers holding the Two Ticks award at the time the WERS survey was undertaken. The DWP (the awarding body) compiled this list from information provided by the regional offices of JobCentre Plus. We added Company Reference Numbers (CRNs) to this list (for the private sector workplaces), and then handed the data to the UK Office for National Statistics Secure Research Service, who added enterprise reference numbers (using the CRNs for private sector workplaces and a name match for public sector workplaces), thus enabling us to merge the list into WERS. This matching process identified that 323 workplaces in the public and private sectors within WERS 2011 had Two Ticks certification (after we excluded charities, workplaces with missing data, and workplaces where employer respondents had not given consent to link their WERS responses to other data sources). As the matched data contravened normal WERS conventions on anonymity, we were required to conduct the analysis in the UK Data Service's SecureLab. The workplace-level analysis contains 1997 workplaces, and the individual-level analysis contains 13,775 employee responses, of whom 1244 (9 per cent) are disabled employees.

Study 2 draws on responses from 127,890 UK employees, of whom 5676 (4.4 per cent) are disabled, in the WorkL employee experience database. We exclude employees in the database who are working in charities or are working overseas. The WorkL database pools the results of standardised anonymous employee engagement surveys conducted on a commercial basis by WorkL for client organisations across 26 industry sectors to form the world's largest database on employee happiness and engagement. The data were collected between 2021 and 2023 and include 44,068 (35 per cent) public sector employees and 83,822 (65 per cent) private sector employees. We hand-matched by organisation name, the DWP's listing of employers with Disability Confident certification at the time and the WorkL data were collected into the WorkL database. This matching process identified that 50,614 employees in the WorkL database were in Disability Confident organisations, thus enabling an individual-level analysis of the effects of Disability Confident. No

observations were excluded due to missing data as employees are only included in the WorkL database if they submit a full set of responses.

While the WorkL database has certain advantages, particularly regarding its large scale, widespread industry coverage, and the anonymous nature of the survey design which mitigates against response bias (i.e., that disabled people will opt out of the survey or not declare their disability), it also has certain limitations. One potential limitation is that it was collected on a commercial basis and not with national representativeness in mind. It is likely, therefore, that small and medium-sized enterprises (SMEs) are under-represented, though this may not introduce significant bias given prior research showing disability employment outcomes are no different in SMEs than in large firms (Bacon & Hoque, 2022). Also, given the commercial nature of the data, it is possible that better employers (i.e., who are concerned about employee well-being) will be disproportionately represented, hence selection bias is possible. This may deflate estimates of disability gaps in the experience of work, given employers' focus on employee well-being may benefit disabled employees disproportionately. However, it could either inflate or deflate the Disability Confident effect. On the one hand, Disability Confident organisations in the survey may be less likely than Disability Confident organisations overall to seek certification purely for artificial reputational benefits, thus suggesting an inflated Disability Confident effect. On the other hand, if the non-Disability Confident organisations in the sample are more likely than the average organisation to be concerned about employee well-being, their treatment of disabled people is likely to be better than that of the average non-Disability Confident organisation, thus deflating the Disability Confident effect. Hence, the implications of the aforementioned selection bias for the Disability Confident effect may be neutral overall.

3.2 | Dependent variables

3.2.1 | Study 1: Disability equality policies and practices

(i) *Disability equality policy statement.* Respondents to the WERS employer survey were asked 'Does this workplace or the organisation of which it is a part have a formal written policy on equal opportunities or managing diversity?' Respondents answering affirmatively were then asked, 'Does the policy explicitly mention equality of treatment or discrimination on any of the following grounds', with 'Disability' being one of the response options. We coded workplaces with a formal written policy on equal opportunities or managing diversity that explicitly mentions disability as 1 or 0 otherwise (mean = 0.612).

(ii) *Disability equality practices and 'empty shell' disability equality policy statements.* Respondents to the employer survey were asked about the presence of the following practices at the workplace, all coded 1 = 'Yes' and 0 = 'No': recruitment and selection monitored by disability (mean = 0.159); recruitment and selection procedures reviewed to identify indirect discrimination by disability (mean = 0.155); promotions monitored by disability (mean = 0.074); promotion procedures reviewed to identify indirect discrimination by disability (mean = 0.086); relative pay rates reviewed by disability (mean = 0.029); special recruitment procedures to encourage applications from disabled people (mean = 0.071); and formal assessments of workplace accessibility for disabled employees or job applicants (mean = 0.453). We constructed a count measure of the *number of disability equality practices adopted* (scale from 0 to 7, mean = 0.994).

This mean is notable given it shows British workplaces have implemented, on average, fewer than one in seven of the disability equality practices asked about, despite the majority having a

formal written disability equality policy statement, thus suggesting that many formal disability equality policy statements are ‘empty shells’ (Hoque & Noon, 2004). To establish whether ‘empty shell’ disability equality policy statements are less prevalent in Two Ticks than non-Two Ticks workplaces, we constructed an ‘*Empty shell*’ equality policy statement dichotomous variable in which 1 = workplaces with a disability equality policy statement and none of the disability equality practices listed above; and 0 = workplaces with a disability equality policy statement and at least one of the disability equality practices (mean = 0.348). The mean is notable in that it shows that 34.8 per cent of workplaces with a disability equality policy statement do not have *any* supporting disability equality practices (hence these statements can be considered ‘empty shells’).

(iii) *Number of flexible working practices*. The adjustment most frequently requested by disabled employees is flexible working schedules (Schur et al., 2014). We therefore draw on the employer survey questions that asked about the presence of flexible working practices at the workplace, all coded 1 = ‘Yes’ and 0 = ‘No’ as follows: ‘working at or from home in normal working hours’ (mean = 0.300); ‘flexi-time (where an employee has no set start or finish time but an agreement to work a set number of hours per week or per month)’ (mean = 0.337); ‘job sharing schemes (sharing a full-time job with another employee)’ (mean = 0.139); ‘the ability to reduce working hours (e.g., switching from full-time to part-time employment)’ (mean = 0.542); ‘compressed hours (i.e., working standard hours across fewer days)’ (mean = 0.187); ‘the ability to change set working hours (including changing shift pattern)’ (mean = 0.478). We constructed a count measure of the number of the flexible working practices adopted (scale from 0 to 6; mean = 1.983).

3.2.2 | Studies 1 and 2: Disability employment outcomes

(i) *Proportion of the workforce disabled*. Study 1 utilises WERS employee responses to the question ‘Are your day-to-day activities limited because of a health problem or disability that has lasted, or is expected to last, at least 12 months?’, with the following response options: ‘No’; ‘Yes, limited a little’; or ‘Yes, limited a lot’. Respondents in the latter two categories are defined as disabled. This measure is consistent with the UK Equality Act and government surveys across Europe.

We used this measure to construct a workplace-level workforce disability prevalence dependent variable (mean = 0.066) by dividing the total number of disabled respondents to the survey at the workplace by the total number of respondents at the workplace (hence, if there were 20 respondents at the workplace in total, and five of these were disabled, the workplace has a workforce disability prevalence of 25 per cent). To reduce the possibility of sampling error in workplaces in which the proportion of respondents to the management survey is low relative to the size of the workforce, we excluded workplaces with fewer than three respondents to the question on disability status. This resulted in the exclusion of 128 workplaces (of which 10 were Two Ticks workplaces). The average workplace within our analysis had 35.4 employees (after weighting the data) and had employee responses from 24.3 per cent of its total workforce.

In Study 2, respondents in the WorkL survey were asked ‘Are you registered disabled?’, with response options ‘Yes’ or ‘No’ (coded 1 = disabled; 0 = otherwise; mean = 0.044). This is lower than the WERS mean reported above and also the Labour Force Survey (LFS) mean (15.6 per cent). There are two potential explanations for this. First, while the LFS is a household survey, WorkL is an employer survey and this may deter people from declaring their disability, given concerns that doing so may lead (despite assurances of anonymity) to discriminatory effects.

Second, WorkL uses a different question than the LFS, notably using the term ‘disabled’ in asking individuals about their disability status. The LFS purposely avoids this term to help

capture individuals who have activity-limiting conditions yet do not identify as disabled. In addition, WorkL asks individuals whether they are 'registered' disabled. This can be viewed as a meaningful measure of respondents' disability status given many groups of disabled people in the UK encounter repeated requests to register as disabled. For example, blind or deaf individuals must register for financial and taxation support, and registration is necessary to access several state benefits. Local authorities also require individuals to register as disabled to access services such as 'Blue Badge' parking, concessionary travel, social services, heating and home improvement assistance. Medical services require individuals to register as disabled for GP prioritisation, prescription charge exemptions and vaccination prioritisation. Other organisations also require registration for accessible travel, toilet access, signing and loop systems and banking services (UK Parliament, 2023). This measure is nevertheless likely to produce a lower mean than in the LFS given that not all disabled people in the United Kingdom are required to register.

In addition, the WorkL measure may be subject to response bias, given that by asking respondents if they are 'registered' disabled, it may be more likely to capture individuals with more severe activity limiting conditions (deaf/ blind individuals, e.g., who are particularly likely to have to register). This might inflate the Disability Confident effect in our analysis, given that Disability Confident organisations, if they are better employers of disabled people, might be particularly expected to hire and retain disabled people with such conditions than non-Disability Confident organisations.

However, the measure has certain advantages. First, asking respondents if they are registered disabled, implies an objective rather than subjective measure of disability. This might reduce justification bias, whereby individuals with poorer experiences of work are more likely to classify themselves as disabled as a justification for these poorer experiences. Second, the objective nature of the measure avoids the potential that disabled people with ostensibly similar conditions will report their disability differently across different workplaces as a function of their treatment within the workplace.

(ii) *Proportion of the workforce severely disabled.* In Study 1, the WERS question described in (i) is used to construct a workplace-level dependent variable calculated by dividing the total number of severely disabled employees within the workplace (respondents answering 'Yes, a lot') by the total number of employees within the workplace (mean = 0.013).

(iii) *Job discretion.* Prior studies show that disabled employees generally report lower job discretion than non-disabled employees, despite the importance of job discretion in helping many disabled individuals perform their roles (Stone & Colella, 1996). In both Study 1 and 2, we therefore assess whether disabled employees' job discretion is higher in certified than non-certified organisations, and whether gaps between disabled and non-disabled employees in job discretion are smaller. Drawing on established measures of decision latitude and task control (Jackson et al., 1993), WERS asks employee respondents: 'In general, how much influence do you have over the following? The tasks you do in your job; the pace at which you work; how you do your work; the order in which you carry out tasks; the time you start or finish your working day?', each measured on a 4-point scale from 0 = 'none' to 3 = 'a lot'. Responses loaded onto a single factor (Cronbach's $\alpha = 0.86$) and were combined into a single scale (range 0–12) with higher values denoting higher job discretion (mean = 8.87).

WorkL measures job discretion using three items from thriving at work scales (Peters et al., 2021): 'I am allowed to make decisions'; 'I am trusted to make decisions'; 'I have what I need to do my job well'. These are measured on an 11-point scale from 0 = 'disagree' to 10 = 'agree'. Responses loaded onto a single factor (Cronbach's $\alpha = 0.82$) and were combined into a single scale (range 0–30) with higher values denoting higher job discretion (mean = 21.65).

(iv) *Work-life conflict*. Work-life balance is especially important for disabled people's employment (Bacon & Hoque, 2022; Schur et al., 2014). Therefore, we assess whether disabled people report less work-life conflict in Two Ticks than non-Two Ticks workplaces and whether disability gaps in work-life conflict are smaller.¹ Regarding this, respondents were asked: 'Now thinking about your commitments at this workplace and outside of work, do you agree or disagree with the following?' (on a 5-point scale from 1 = 'strongly disagree' to 5 = 'strongly agree'): 'I often find it difficult to fulfil my commitments outside of work because of the amount of time I spend on my job' (*work interference with life*) (mean = 2.76); and 'I often find it difficult to do my job properly because of my commitments outside work' (*life interference with work*) (mean = 2.00). These questions, which capture the bi-directional nature of work-life conflict (Frone et al., 1992), are adapted from Carlson et al.'s (2000) time-based work/family interference scale and have been used in several prior studies (e.g., Stavrou & Solea, 2021; Wood et al., 2020).

(v) *Fairness perceptions*. As disabled employees report better treatment in workplaces with a culture of fairness (Schur et al., 2009), we assess whether disabled people report higher fairness perceptions and whether disability gaps in fairness perceptions are smaller, in certified than non-certified organisations. Previous research suggests that overall fairness is best captured by general statements about managers in the workplace (Ambrose & Schminke, 2009) and that single-item questions are effective in capturing overall fairness perceptions (Colquitt & Rodell, 2015). For Study 1, we use the WERS single-item question asking, 'To what extent do you agree or disagree that managers here treat employees fairly' (5-point scale from 1 = 'strongly disagree' to 5 = 'strongly agree') (mean = 3.47). Several prior studies have used this question (e.g., Jones et al., 2021; Ramsay et al., 2000; Schulz et al., 2022). For Study 2, we use the WorkL single-item fairness perceptions measure asking, 'I am fairly paid' (11-point scale from 0 = 'disagree' to 10 = 'agree') (mean = 6.73).

(vi) *Job-related mental health*. We assess whether disabled people report better job-related mental health in certified than non-certified organisations and whether disability gaps in job-related mental health are smaller. Regarding Study 1, WERS includes Warr's (1990) measure, with respondents being asked: 'Thinking of the past few weeks, how much time has your job made you feel each of the following: tense/ depressed/ worried/ gloomy/ uneasy/ miserable?' (5-point scale coded 0 = 'all the time' to 4 = 'never'). Responses loaded onto a single factor (Cronbach's $\alpha = 0.91$) and were combined into a single scale (range 0–24; mean = 17.97), with higher values denoting better job-related mental health. Regarding Study 2, WorkL includes a 4-item standard academic measure to assess affective well-being and happiness at work (Krueger & Stone, 2014) (11-point scale from 0 = 'disagree' to 10 = 'agree'): 'I am happy (and feel safe) with my working environment'; 'I rarely feel anxious or depressed at work'; 'My employer cares for my well-being'; 'I feel happy at work'. Responses loaded onto a single factor (Cronbach's $\alpha = 0.84$) and were combined into a single scale (range 0–40; mean = 27.11), with higher values denoting better job-related mental health.

(vii) *Job satisfaction*. We assess whether disabled people report higher job satisfaction in certified than non-certified organisations and whether disability gaps in job satisfaction are smaller. Regarding Study 1, WERS includes an eight-item (see Rose, 2007) measure assessed on a 5-point scale (coded 0 = 'very dissatisfied' and 4 = 'very satisfied') that asked respondents how satisfied they were with different elements of their job (sample item: 'how satisfied are you with the sense of achievement you get from your work?'). The items loaded onto a single factor (Cronbach's $\alpha = 0.86$) and were combined into a single scale (range 0–32; mean = 20.53) with higher values denoting higher satisfaction. Regarding Study 2, WorkL uses a four-item measure of job satisfaction (11-point scale from 0 = 'disagree' to 10 = 'agree') to assess levels of psychosocial support

associated with health and sustainable employability (House et al., 1988): 'I am being developed'; 'I have a good relationship with my manager'; 'I enjoy my job'; 'I am treated with respect'. The items loaded onto a single factor (Cronbach's $\alpha = 0.88$) and were combined into a single scale (range 0–40; mean = 28.55) with higher values denoting higher satisfaction.

The disability employment outcome dependent variables used in Study 1 (based on WERS) and Study 2 (based on WorkL) are summarised in Table A1 in the [Appendix](#).

3.2.3 | Independent variables

(i) *Two Ticks (Study 1)*. We merged DWP data on the Two Ticks status of the workplace into the WERS data following the procedure outlined above. We then created variables at both the workplace and individual level. For the workplace-level variable, we coded workplaces as 1 = 'has Two Ticks', and 0 = 'otherwise' (mean = 0.081). For the individual-level variable, we coded respondents 1 = 'in a Two Ticks workplace', and 0 = 'otherwise' (mean = 0.183).²

(ii) *Disability Confident (Study 2)*. We merged DWP data on the Disability Confident status of the respondents' employer following the procedure outlined above. We coded respondents 1 = 'not in a Disability Confident organisation' (0.604); 2 = 'in a Disability Confident Level 1 organisation' (0.123); 3 = 'in a Disability Confident Level 2 organisation' (0.203); and 4 = 'in a Disability Confident Level 3 organisation' (0.070). The total percentage of employees in a Disability Confident organisation (39.6 per cent) accords roughly with the UK government's estimate of 11 million employees (i.e., approximately a third of all people in employment in the United Kingdom). This suggests the combined WorkL/ DWP data offer scope for a credible and representative depiction of the implications of Disability Confident certification for disabled people's employment outcomes.

(iii) *Disabled employee*. For Study 1, the individual-level 'Disabled employee' independent variable was taken from the WERS employee survey. As outlined above, respondents were asked 'Are your day-to-day activities limited because of a health problem or disability that has lasted or is expected to last, at least 12 months?' We created a dichotomous dependent variable in which 1 = 'disabled' (respondents stating 'Yes, limited a little' or 'Yes, limited a lot'), and 0 = otherwise (mean = 0.087). For Study 2, the 'Disabled employee' dependent variable described above was used as an independent variable in the analysis of disabled people's experience of work.

3.2.4 | Control variables

We included controls in our equations for organisational and (where relevant) individual characteristics that prior studies have shown to influence EDI practices and workforce diversity. Study 1 controls for organisational characteristics including organisation size (employees), log of workplace size (employees), Standard Industrial Classification major group, public/ private sector, national ownership and single independent workplaces. As the rates of disability employment vary by region, occupation, working hours (e.g., part-time employment) and unionisation (Ali et al., 2011), we controlled for these factors. As relational demography suggests workforce diversity increases the level of internal support for equality initiatives (Dobbin et al., 2011), we controlled for the proportion of workforce female, ethnic minority, aged 50 or over. Additional controls in the individual-level analysis included: weekly pay; marital status; age; job tenure; highest academic qualification; ethnicity; gender; and dependent children (see Jones, 2016).³

Study 2 controls for the industry of the respondent's organisations and individual-level characteristics (occupation, management/non-management, age, job tenure, ethnicity, gender and sexual orientation).

3.3 | Analysis procedure

3.3.1 | Study 1

The relationship between Two Ticks certification and workplace-level disability equality policy and practice adoption is tested using survey probit where the dependent variable is dichotomous (disability equality policy, and 'empty shell' policy), and survey Poisson where it is a count measure (number of disability practices and flexible working practices adopted). The relationship between Two Ticks and workforce disability prevalence is tested using fractional logit (Papke & Wooldridge, 1996). The relationship between Two Ticks and disabled employees' experience of work is tested using multi-level mixed effects modelling incorporating both fixed and random effects, given the multi-level structure of the data in which employee responses are nested within workplaces. This allows the variance to be partitioned into within (Level 1) and between (Level 2) workplace variation, thus enabling between-workplace variance to be controlled for. This prevents assumptions of independence between observations in multiple regression from being violated, given that employees within a workplace are not independent from each other. The amount of variance due to between-workplace variation ranges from $0.006/[0.536 + 0.006] = 1.1$ per cent for life interference with work to $0.133/[0.921 + 0.133] = 12.6$ per cent for fairness perceptions.

To evaluate differences in the size of the disability gap in the experience of work between Two Ticks and non-Two Ticks workplaces, the dependent variables (job discretion, work-life conflict, fairness perceptions, job-related mental health and job satisfaction) are first regressed onto the independent variable for the respondent's disability status, and a 'Disabled \times Two Ticks' interaction term was then entered into the equations, with the direction and significance of the interaction term denoting differences in the size of the disability gap between Two Ticks and non-Two Ticks workplaces. To test whether disabled employees reported better outcomes in Two Ticks than non-Two Ticks workplaces, we calculated post hoc linear combinations of the 'Two Ticks' main effect and the 'Disabled \times Two Ticks' interaction effect, with positive significance denoting better outcomes for disabled employees in Two Ticks than non-Two Ticks workplaces.

We weighted the analysis throughout to account for the complex nature of the WERS survey design, allowing unbiased population estimates to be obtained. In the multi-level models, the weights were scaled to ensure the consistency of the weights across lower-level clusters. First-level (observation-level) weights were scaled so they summed to the sample size of their corresponding second-level cluster.

3.3.2 | Study 2

The relationship between Disability Confident certification and workforce disability prevalence is tested in an individual level probit equation in which the dependent variable is the individual's disability status and the independent variable is the categorical Disability Confident variable (i.e., non-Disability Confident; Disability Confident Level 1; Disability Confident Level 2; Disability Confident Level 3). The reference category is 'non-Disability Confident', thus demonstrating

TABLE 1 The relationship between Two Ticks and disability equality policies and practices.

	(1) Disability equality policy statement	(2) Number of disability equality practices adopted
Two Ticks workplaces	-0.082 (0.246)	0.121 (0.117)
<i>F</i>	5.06	13.88
Prob > <i>F</i>	0.000	0.000
<i>N</i>	1962	1912
	(3) 'Empty shell' policy statement	(4) Number of flexible working practices adopted
Two Ticks workplaces	-0.396 (0.268)	-0.067 (0.067)
<i>F</i>	2.41	10.05
Prob > <i>F</i>	0.000	0.000
<i>N</i>	1485	1997

Note: Survey probit analysis (Equations 1 and 3); survey Poisson (Equations 2 and 4). Coefficients given, standard errors in brackets. All public and private sector workplaces. Workplace-level controls included.

whether the respondent's probability of identifying as disabled is greater if they are employed within a Disability Confident organisation (Levels 1–3) than within a non-Disability Confident organisation. Controls are included as outlined above.

The implications of Disability Confident for disabled employees' experience of work are tested using a series of Ordinary Least Squares (OLS) equations at the individual level in which the dependent variables are the job discretion, fairness perceptions, job-related mental health and job satisfaction measures outlined above and the independent variables are the individual's disability status and their organisation's Disability Confident status. Control variables are included as outlined above. To evaluate whether disability gaps in the experience of work vary between Disability Confident and non-Disability Confident organisations, we interact the individual's disability status variable with the Disability Confident categorical variable, with the direction and significance of the interaction term denoting differences in the size of the disability gap between Disability Confident Levels 1, 2 and 3 organisations and non-Disability Confident organisations. To test whether disabled employees in Disability Confident organisations report better outcomes than employees in non-Disability Confident organisations, we calculate post hoc linear combinations of the 'Disability Confident' main effects and the different interaction terms, with positive significance denoting better outcomes for disabled employees in Disability Confident than in non-Disability Confident organisations.

Given the number of observations in our equations, in both studies we use a 5 per cent cut-off for statistical significance.

4 | STUDY 1 RESULTS (TWO TICKS)

4.1 | Disability equality policy and practices

Table 1 reports the analysis of the adoption of formal disability equality policy statements, disability equality practices, 'empty shell' disability equality statements and flexible working practices in Two Ticks and non-Two Ticks workplaces.

TABLE 2 Proportion of the workforce disabled and severely disabled in Two Ticks and non-Two Ticks workplaces.

	Proportion of the workforce disabled	Proportion of the workforce severely disabled
Two Ticks workplaces	0.232 (0.188)	0.195 (0.388)
<i>F</i>	3.34	3.98
Prob > <i>F</i>	0.000	0.000
<i>N</i>	1329	1329

Note: Fractional logit model. Coefficients given, standard errors in brackets. All public and private sector workplaces. Workplace-level controls included.

Regarding disability equality policy statements, the first equation in Table 1 shows that Two Ticks workplaces were no more likely than non-Two Ticks workplaces to have such statements (-0.082 , $p =$ non-significant). Regarding disability equality practices, Equation (2) in Table 1 shows the overall number of practices was no higher in Two Ticks than in non-Two Ticks workplaces (0.121 , $p =$ non-significant). This is notable given it suggests the extremely limited adoption of such practices within British workplaces was common to Two Ticks as well as non-Two Ticks workplaces. Equation (3) shows disability equality policy statements were no less likely to be empty shells in Two Ticks than in non-Two Ticks workplaces (-0.396 , $p =$ non-significant). Equation (4) shows the number of flexible working practices adopted was no different in Two Ticks than in non-Two Ticks workplaces (-0.067 , $p =$ non-significant).

4.2 | Disability employment outcomes

Our first area of interest here is whether the proportion of the workforce that is disabled or severely disabled is higher in Two Ticks than in non-Two Ticks workplaces. The results in Table 2 show this was not the case regarding the proportion of the workforce that is either disabled (0.232 , $p =$ non-significant) or severely disabled (0.195 , $p =$ non-significant).

Our second area of interest concerns disabled people's experience of work. We assess whether disabled employees' experience of work was better in Two Ticks than in non-Two Ticks workplaces and whether disability gaps in the experience of work were smaller in Two Ticks than in non-Two Ticks workplaces.

Table 3 shows, as anticipated, significant disability gaps in the experience of work, with disabled employees reporting lower job discretion (-0.503 , $p < 0.01$), higher life interference with work (0.158 , $p < 0.01$), higher work interference with life (0.294 , $p < 0.01$), poorer fairness perceptions (-0.192 , $p < 0.01$), poorer job-related mental health (-2.632 , $p < 0.01$) and lower job satisfaction (-1.559 , $p < 0.01$) than non-disabled employees. These outcomes were not better overall (i.e., for all employees) in Two Ticks than in non-Two Ticks workplaces regarding job discretion (0.034 , $p =$ non-significant), life interference with work (0.008 , $p =$ non-significant), fairness perceptions (0.007 , $p =$ non-significant), job-related mental health (-0.030 , $p =$ non-significant) and job satisfaction (-0.060 , $p =$ non-significant). However, work interference with life was lower overall in Two Ticks than in non-Two Ticks workplaces (-0.192 , $p < 0.01$).⁴

Regarding disability gaps in the experience of work, the Disabled \times Two Ticks interaction terms reported in Table 3 were non-significant for job discretion (-0.369), life interference with work (0.072), work interference with life (-0.081), job-related mental health (-0.014) and job

TABLE 3 Disability, Two Ticks, and employees' experience of work.

	(1) Job discretion		(2) Life interference with work	
Disabled	-0.503*** (0.193)	-0.450** (0.218)	0.158*** (0.052)	0.148** (0.060)
Employees in Two Ticks workplaces	0.034 (0.154)	0.065 (0.155)	0.008 (0.041)	0.001 (0.042)
Disabled × Two Ticks		-0.369 (0.384)		0.072 (0.094)
Wald chi ²	1213.57	1217.59	278.79	281.69
Prob > chi ²	0.000	0.000	0.000	0.000
Level 1 intercept	6.904	6.905	0.536	0.536
Level 2 intercept	0.312	0.310	0.006	0.006
N	13,515	13,515	13,703	13,703
	(3) Work interference with life		(4) Fairness perceptions	
Disabled	0.294*** (0.061)	0.306*** (0.070)	-0.192*** (0.073)	-0.229*** (0.084)
Employees in Two Ticks workplaces	-0.192*** (0.060)	-0.185*** (0.062)	0.007 (0.065)	-0.016 (0.068)
Disabled × Two Ticks		-0.081 (0.121)		0.260** (0.126)
Wald chi ²	765.66	766.68	849.49	857.74
Prob > chi ²	0.000	0.000	0.000	0.000
Level 1 intercept	1.012	1.012	0.921	0.920
Level 2 intercept	0.063	0.063	0.133	0.134
N	13,734	13,734	11,713	11,713
	(5) Job-related mental health		(6) Job satisfaction	
Disabled	-2.632*** (0.433)	-2.630*** (0.500)	-1.559*** (0.375)	-1.522*** (0.430)
Employees in Two Ticks workplaces	-0.030 (0.280)	-0.029 (0.290)	-0.060 (0.314)	-0.038 (0.323)
Disabled × Two Ticks		-0.014 (0.773)		-0.261 (0.639)
Wald chi ²	843.99	860.25	808.88	819.40
Prob > chi ²	0.000	0.000	0.000	0.000
Level 1 intercept	21.692	21.692	25.688	25.689
Level 2 intercept	1.448	1.448	3.384	3.383
N	13,570	13,570	13,097	13,097

Note: Mixed effects multilevel model. Coefficients given, standard errors in brackets. All public and private sector workplaces. Workplace and individual level controls included.

*** $p < 0.01$;

** $p < 0.05$.

satisfaction (-0.261), suggesting these disability gaps were no smaller in Two Ticks than in non-Two Ticks workplaces. However, the Disabled \times Two Ticks interaction term was significant (0.260 , $p < 0.05$) regarding fairness perceptions, suggesting the disability gap in fairness perceptions was smaller in Two Ticks than in non-Two Ticks workplaces.

Turning to whether disabled employees reported better experiences of work in Two Ticks than non-Two Ticks workplaces, this is given by the linear combinations of the Two Ticks coefficients and the interaction terms. Regarding fairness perceptions, as would be anticipated given the positively significant Disabled \times Two Ticks interaction term, disabled employees in Two Ticks workplaces reported better fairness perceptions than disabled employees in non-Two Ticks workplaces ($-0.016 + 0.260 = 0.244$, $p < 0.05$).⁵ Regarding work interference with life, as reported above, this was lower overall in Two Ticks than in non-Two Ticks workplaces. Reflecting this, disabled employees in Two Ticks workplaces reported less work interference with life than disabled employees in non-Two Ticks workplaces ($-0.185 + -0.081 = -0.266$, $p < 0.05$), even though Two Ticks was not, as demonstrated by the non-significant interaction term, associated with a smaller work interference with life disability gap. However, disabled employees did not report better experiences of work in Two Ticks than in non-Two Ticks workplaces regarding job discretion ($0.065 + -0.369 = -0.304$, $p =$ non-significant), life interference with work ($0.001 + 0.072 = 0.073$, $p =$ non-significant), job-related mental health ($-0.029 + -0.014 = -0.043$, $p =$ non-significant) or job satisfaction ($-0.038 + -0.261 = -0.299$, $p =$ non-significant).

5 | STUDY 2 RESULTS (DISABILITY CONFIDENT)

Our first area of interest in Study 2 concerns the relationship between the individual's disability status and the Disability Confident status of their organisation. The results are reported in Table 4.

These results show that employees in Disability Confident Level 2 organisations are more likely to be disabled than employees in non-Disability Confident organisations (0.040 , $p < 0.05$). However, employees in Disability Confident Level 1 organisations (0.018 , $p =$ non-significant) and Disability Confident Level 3 organisations (0.046 , $p =$ non-significant) are no more likely to be disabled than are employees in non-Disability Confident organisations. This suggests that while the proportion of the workforce that is disabled is higher in Disability Confident Level 2 organisations than in non-Disability Confident organisations, this is not the case for Disability Confident Level 1 and Level 3 organisations.

To explore the economic significance of the statistically significant Disability Confident Level 2 finding, we conducted post hoc predicted probability tests, which show that employees' predicted probability of being disabled is 0.043 in non-Disability Confident organisations, compared with 0.047 in Disability Confident Level 2 organisations. Therefore, while the difference is statistically significant, its economic significance is marginal. It should also be remembered that DWP data show only 22 per cent of Disability Confident organisations are at Level 2. Therefore, there is no evidence that in 78 per cent of Disability Confident organisations (i.e., those at Levels 1 and 3) the proportion of the workforce that is disabled is higher than in non-Disability Confident organisations.

Turning to disabled employees' experience of work, Table 5 shows that within the WorkL data disabled employees report lower job discretion (-0.979 , $p < 0.01$), poorer fairness perceptions (-0.313 , $p < 0.01$), poorer job-related mental health (-1.505 , $p < 0.01$) and lower job satisfaction (-1.469 , $p < 0.01$) than non-disabled employees.

TABLE 4 Disability employment prevalence in Disability Confident Level 1, 2 and 3 organisations.

	Employee disability status
<i>Reference category: employees in non-Disability Confident organisations</i>	
Employees in Disability Confident Level 1 organisations	0.018 (0.020)
Employees in Disability Confident Level 2 organisations	0.040** (0.017)
Employees in Disability Confident Level 3 organisations	0.046 (0.026)
Prob > chi ²	0.000
N	127,890

Notes: Employee disability status dependent variable: 1 = employee is disabled; 0 = employee is not disabled.

Probit analysis. Coefficients given, standard errors in brackets. All public and private sector workplaces. Controls for individual and organisational characteristics included.

** $p < 0.05$.

Regarding the overall differences between Disability Confident and non-Disability Confident organisations for all employees, job discretion is *lower* overall in Disability Confident organisations (Level 1: -0.160 , $p < 0.01$; Level 2: -0.305 , $p < 0.01$; Level 3: -0.151 , $p < 0.05$) than in non-Disability Confident organisations, but job satisfaction (Level 1: 0.058 ; Level 2: -0.008 ; Level 3: 0.013) and job-related mental health (Level 1: 0.008 ; Level 2: -0.136 ; Level 3: -0.106) are no different. However, fairness perceptions are better overall in Disability Confident organisations at Level 1 (0.073 , $p < 0.01$), Level 2 (0.051 , $p < 0.05$) and Level 3 (0.155 , $p < 0.01$) than in non-Disability Confident organisations.

Turning to whether disability gaps in the experience of work are smaller in Disability Confident than in non-Disability Confident organisations, none of the interaction terms in Table 5 are significant (job discretion: 0.247 for Level 1, -0.223 for Level 2, 0.210 for Level 3; fairness perceptions: -0.052 for Level 1, 0.000 for Level 2, -0.096 for Level 3; job-related mental health: 0.228 for Level 1, -0.135 for Level 2, -0.601 for Level 3; job satisfaction: 0.464 for Level 1, -0.142 for Level 2, 0.173 for Level 3). This suggests the levels of disadvantage that disabled employees experience regarding these outcomes relative to non-disabled employees is no lower in Disability Confident organisations than in non-Disability Confident organisations.

Regarding whether disabled employees in Disability Confident organisations report better experiences of work than their counterparts in non-Disability Confident organisations, this is given by the linear combinations of the Disability Confident coefficients and the interaction terms. Disabled employees do not report higher levels of job discretion in either Level 1 ($-0.171 + 0.247 = 0.076$, $p =$ non-significant), or Level 3 ($-0.161 + 0.210 = 0.049$, $p =$ non-significant) organisations than disabled employees in non-Disability Confident organisations, and in Disability Confident Level 2 organisations disabled employees report *lower* levels of job discretion than disabled employees in non-Disability Confident organisations ($-0.295 + -0.223 = -0.518$, $p < 0.05$). Regarding fairness perceptions, these are no better among disabled employees in Disability Confident organisations than among disabled employees in non-Disability Confident organisations either at Level 1 ($0.075 + -0.052 = 0.023$, $p =$ non-significant), Level 2 ($0.051 + 0.000 = 0.051$, $p =$ non-significant) or Level 3 ($0.160 + -0.096 = 0.064$, $p =$ non-significant). This is also the case for job-related mental health (Level 1: $-0.002 + 0.228 = 0.226$, $p =$ non-significant; Level 2: $-0.130 + -0.135 = -0.265$, $p =$ non-significant; Level 3: $-0.076 + -0.601 = -0.677$, $p =$ non-significant) and

TABLE 5 Disability Confident and disabled and non-disabled employees' experience of work.

	(1) Job discretion		(2) Fairness perceptions	
Disabled	-0.979*** (0.088)	-0.978*** (0.115)	-0.313*** (0.036)	-0.299*** (0.047)
<i>Reference category: Employees in non-Disability Confident organisations</i>				
Employees in Disability Confident Level 1 organisations	-0.160*** (0.057)	-0.171*** (0.058)	0.073*** (0.023)	0.075*** (0.024)
Employees in Disability Confident Level 2 organisations	-0.305*** (0.048)	-0.295*** (0.049)	0.051** (0.020)	0.051** (0.020)
Employees in Disability Confident Level 3 organisations	-0.151** (0.075)	-0.161** (0.076)	0.155*** (0.031)	0.160*** (0.031)
Disabled × Level 1		0.247 (0.272)		-0.052 (0.111)
Disabled × Level 2		-0.223 (0.219)		0.000 (0.090)
Disabled × Level 3		0.210 (0.327)		-0.096 (0.134)
Prob > F	0.000	0.000	0.000	0.000
N	127,890	127,890	127,890	127,890
	(3) Job-related mental health		(4) Job satisfaction	
Disabled	-1.505*** (0.126)	-1.457*** (0.164)	-1.469*** (0.125)	-1.510*** (0.164)
<i>Reference category: Employees in non-Disability Confident organisations</i>				
Employees in Disability Confident Level 1 organisations	0.008 (0.081)	-0.002 (0.083)	0.058 (0.081)	0.037 (0.083)
Employees in Disability Confident Level 2 organisations	-0.136 (0.069)	-0.130 (0.071)	-0.008 (0.069)	-0.001 (0.071)
Employees in Disability Confident 3 organisations	-0.106 (0.107)	-0.076 (0.109)	0.013 (0.106)	0.005 (0.109)
Disabled × Level 1		0.228 (0.389)		0.464 (0.388)
Disabled × Level 2		-0.135 (0.314)		-0.142 (0.313)
Disabled × Level 3		-0.601 (0.468)		0.173 (0.467)
Prob > F	0.000	0.000	0.000	0.000
N	127,890	127,890	127,890	127,890

Notes: OLS analysis. Coefficients given, standard errors in brackets. All public and private sector workplaces. Controls for individual and organisational characteristics included.

*** $p < 0.01$;

** $p < 0.05$.

for job satisfaction (Level 1: $0.037 + 0.464 = 0.501$, $p =$ non-significant; Level 2: $-0.001 + -0.142 = -0.143$, $p =$ non-significant; Level 3: $0.005 + 0.173 = 0.178$, $p =$ non-significant). There is no evidence, therefore, that disabled employees in Disability Confident organisations report a better experience of work than disabled employees in non-Disability Confident organisations. Indeed, in the case of job discretion, this is *lower* among disabled employees in Disability Confident Level 2 organisations than among disabled employees in non-Disability Confident organisations.

6 | DISCUSSION

This article explores the efficacy of employers' equality certifications by drawing on matched data to provide an assessment of the UK government's Two Ticks and Disability Confident schemes, thereby contributing to the study of employer EDI practices and outcomes in organisations particularly regarding disability (Barnes, 2020; Bruyère, 2019; Schur et al., 2009, 2014; Stone & Colella, 1996).

Turning first to Two Ticks, our findings support Hoque et al.'s (2014) concerns regarding the scope for employers' equality certifications to improve EDI. Contrary to Goldstone and Meager (2002), we find no evidence that disability equality policy statements and practices were more prevalent in Two Ticks than non-Two Ticks workplaces. It thus appears that Two Ticks represented an example of an 'empty shell' (Hoque & Noon, 2004), whereby certified employers were no more likely than non-certified employers to implement the anticipated equality practices. Given this, it is perhaps unsurprising that we also find no support for studies reporting higher workforce disability prevalence in Two Ticks than in non-Two Ticks workplaces (Goldstone & Meager, 2002; Woodhams & Corby, 2007). The difference between our findings and those of previous studies may be due to either the reduction of potential common method bias within our study design or because our workforce disability prevalence dependent variable is based on employees' self-reports of their disability status rather than managers' estimates (which, as discussed earlier, can be subject to measurement error).

We also find disabled employees' experience of work was barely any better, and that disability gaps in the experience of work were barely any smaller, in Two Ticks than in non-Two Ticks workplaces. While this is perhaps to be expected, given disability equality policy and practice adoption was no greater in Two Ticks than in non-Two Ticks workplaces, this is concerning given disabled people's experiences of work are crucial in determining whether they remain in employment (Jones, 2016).

Turning to Disability Confident, we find little evidence (and no evidence at Level 1 and Level 3) that the proportion of the workforce that is disabled is higher in Disability Confident than in non-Disability Confident organisations. We also find disability gaps in the experience of work are no smaller and that disabled employees' experience of work is no better in Disability Confident organisations (at any certification level) than in non-Disability Confident organisations. This suggests certification may represent little more than window-dressing that allows certified employers to claim unwarranted reputational benefits while masking ongoing disadvantage (Short & Toffel, 2010, p. 364).

Our findings have several practical implications. For disabled job seekers and employment advisers, they caution against assuming that certified employers are more likely than non-certified employers to hire and retain disabled people or provide a better experience of work. For employers, although certification may offer a potentially attractive form of diversity branding, it could ultimately prove counterproductive. If certified employers are found not to have achieved

the expected outcomes (as our research suggests), and if this results in the certification being discredited, certified employers may incur charges of hypocrisy or diversity-washing.

Our findings also have implications for the design and potential future reform of the Disability Confident scheme. In particular, they support arguments regarding the need for greater independent monitoring to ensure certified employers uphold the expected standards (Hoque et al., 2014; Trades Union Congress Disabled Workers' Conference, 2016). Regarding this, our finding that Level 3 'Leaders' do not have better disability outcomes than non-Disability Confident employers is notable, given it implies the peer monitoring currently conducted at this Level (i.e., by other Level 3 'Leaders') is insufficient to ensure standards are upheld. Our findings also underline the importance of calls from several leading bodies including the Centre for Social Justice (2021), the Work and Pensions Committee (2023) and the Disability Employment Charter⁶ for the Disability Confident certification criteria to be reformed so it assesses whether the employer has achieved certain disability employment outcomes (minimum thresholds regarding workforce disability prevalence at Levels 2 and 3, for instance) rather than the adoption of specific processes and practices (as is the case currently). This would help ensure certification provides a more meaningful labour market signal to disabled people.

However, rather than implementing such revisions, the government has instead focused on increasing the number of certified employers, with 19,182 employers being certified at the end of 2023. While the government cites increased certification as a significant step forward, our research suggests it represents a false impression of progress (see also: Work & Pensions Committee, 2023). Particularly concerning is the possibility that the government might use this increase to side-step calls for more interventionist or legislative approaches (Hoque et al., 2014). This might be viewed as a form of 'symbiotic inaction' stemming from *de facto* government-employer collusion whereby intervention-averse employers seek certification to help create an illusion of progress, thus legitimising government arguments that greater intervention is unnecessary.

Our findings also have implications for the Disability Confident Business Leaders' Group, which oversees the scheme to ensure it meets the needs of business and disabled people and provides specialist events and training to Disability Confident organisations. This group comprises 16 private sector organisations, 11 of which are at Level 3. Given our finding that disability employment outcomes are no better in Level 3 organisations than in non-Disability Confident organisations, this questions the legitimacy of these organisations to play the leadership role accorded to them by government.

To explore this matter further, we conducted a post hoc analysis comparing the Business Leaders' Group organisations within the WorkL data with non-Disability Confident organisations (replacing the Disability Confident categorical independent variable in Tables 4 and 5 with a dichotomous variable in which 1 = 'employees in Business Leaders' Group organisations' ($n = 3638$) and 0 = 'employees in non-Disability Confident organisations'). This analysis shows that the proportion of the workforce that is disabled is no greater in the Business Leaders' Group than in non-Disability Confident organisations and that disability gaps in job discretion, fairness perceptions, job-related mental health and job satisfaction are no smaller.⁷ The legitimacy of the Business Leaders' Group to play the leadership role accorded to it by government thus appears to be questionable.

Our analysis also has potential implications for other equality certifications that, similar to Two Ticks and Disability Confident, lack rigorous independent assessments of employer compliance (e.g., Age Positive Employer Champions, Business in the Community, Employers for Carers, Race for Opportunity). Although further research is needed on these certifications, should this find that certified employers do not have better EDI practices or outcomes than non-certified employers,

this will further suggest that employers' equality certifications should be revised to include rigorous independent monitoring and that employers should otherwise be wary of these schemes given potential accusations of diversity-washing.

Although our analysis contains several advantages over previous studies, including protection from common method bias given the matched data study design, and the inclusion of the voices of disabled employees themselves, it nevertheless has several limitations.

First, as outlined above, there are several potential limitations with the WorkL data on which the Disability Confident analysis is based. While the data benefit from their large scale, widespread industry coverage, and the anonymous survey design, they were not collected with national representativeness in mind. Hence, SMEs are likely under-represented, while better employers (i.e., who are concerned about employee well-being) may be over-represented, leading to potential selection bias. However, as discussed above, it is questionable whether this affects the validity of the findings, given it could either inflate or deflate the Disability Confident effect.

Second, as also outlined above, the disability measure in the WorkL data, which asks respondents if they are registered disabled, has certain advantages including its objective nature which helps avoid justification bias and reduces the potential for disabled people with ostensibly similar conditions to report their disability differently across different workplaces as a function of their treatment within the workplace. However, it likely results in an under-reporting of disability and may also lead to response bias given individuals with more activity-limiting impairments are likely to be over-represented. As argued earlier, this might inflate the Disability Confident effect, given that Disability Confident organisations (if they are better employers of disabled people) might be particularly likely to employ disabled people with more severe activity limitations. However, given we find limited difference in workforce disability prevalence between Disability Confident and non-Disability Confident organisations in our analysis, this adds to (rather than detracts from) our overall conclusion regarding the general ineffectiveness of Disability Confident.

Third, regarding our analysis of WERS, although this enables evaluations of some of the disability equality practices Two Ticks employers would be expected to adopt, they may have adopted other disability equality practices not asked about within the survey (although if so, our findings suggest these unobserved practices did not result in better disability employment outcomes).

Fourth, we lack information in both the Two Ticks and Disability Confident analysis on the specific nature and duration of respondents' disabilities. Therefore, we cannot explore the relationship between certification and the employment of disabled individuals with different impairments.

Fifth, while our analysis casts doubt on the likely effectiveness of non-assessed equality certifications more widely, we are only able to speculate on this matter. We therefore recommend further research exploring the effectiveness of these certifications.

Finally, some employers may actively avoid certification because they view it as a futile branding exercise, yet have nonetheless implemented effective disability employment practices. This could help explain the lack of variance between certified and non-certified workplaces at the aggregate level. This matter is worthy of further exploration.

7 | CONCLUSION

Our analysis shows Two Ticks certification was not associated with the greater adoption of disability equality policies and practices or better outcomes regarding workforce disability prevalence. It also finds very little evidence that it was associated with better outcomes regarding disabled

employees' experience of work. Similarly, our analysis of the successor Disability Confident scheme shows that it is not associated with higher workforce disability prevalence in the majority of certified organisations or with better outcomes regarding disabled employees' experience of work. Our findings therefore add to the literature that questions the efficacy of employers' equality certifications, suggesting they may mask rather than help resolve ongoing disadvantage.

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DATA AVAILABILITY STATEMENT

The article uses data from the 2011 Workplace Employment Relations Study, into which we merge data from the UK Department of Work and Pensions on workplaces with Two Ticks certification. Given that constructing the matched data set contravened normal WERS conventions on anonymity, the data were stored and analysed in the UK Data Service's secure data lab. As such, while the WERS data themselves are publicly available, we are unable to make the merged data file used to conduct the analysis publicly available. The article also uses data from the WorkL organisation. These data are not publicly available and the authors have had to seek permission from WorkL to use the data set and also to merge the DWP data on the Disability Confident status of the firms into it. As such, we are unable to make the data publicly available.

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ENDNOTES

- ¹The WorkL survey does not contain the necessary questions for a similar analysis of work–life balance in Disability Confident and non-Disability Confident organisations.
- ²The discrepancy between the proportion of respondents at individual-level and the proportion of workplaces with Two Ticks is explained by Two Ticks being more widely adopted among larger organisations. While 19.1 per cent of workplaces in organisations with 250 or more employees had Two Ticks, this was the case for just 1.5 per cent of workplaces in organisations with between 5 and 249 employees.
- ³Further details on the control variables and their means are available on request from the authors.
- ⁴To demonstrate the economic significance of this finding, we conducted a post hoc marginal effects analysis which shows the average work interference with life rating (on a scale of 1–5 with higher values denoting greater work interference with life) was 2.85 in non-Two Ticks workplaces and 2.66 in Two Ticks workplaces.
- ⁵To demonstrate the economic significance of this finding, we conducted a post hoc marginal effects analysis which shows (on a scale from 1–5 in which higher values denote higher fairness perceptions), that average ratings in non-Two Ticks workplaces were 3.17 for disabled people and 3.40 for non-disabled employees. In Two Ticks workplaces, they were 3.42 for disabled employees and 3.38 for non-disabled employees.

⁶The Charter (www.disabilityemploymentcharter.org) has been signed by approaching 160 organisations including all the United Kingdom's leading disability charities plus a growing number of large corporate employers.

⁷Results available on request from the authors.

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APPENDIX

TABLE A1 Disability employment outcome dependent variables in Study 1 (WERS) and Study 2 (WorkL).

	WERS 2011	WorkL
Proportion of the workforce disabled	Workplace-level variable calculated by dividing the total number of disabled respondents to the survey at the workplace by the total number of respondents at the workplace	Individual-level response to question asking, 'Are you registered disabled?', with response options 'Yes' or 'No'
Proportion of the workforce severely disabled	Workplace-level variable calculated by dividing the total number of severely disabled employees within the workplace by the total number of employees within the workplace	n.a.
Job discretion	Five items combined into a single scale with higher values denoting higher job discretion: 'In general, how much influence do you have over the following? The tasks you do in your job; the pace at which you work; how you do your work; the order in which you carry out tasks; the time you start or finish your working day?'	Three items combined into a single scale with higher values denoting higher job discretion: 'I am allowed to make decisions'; 'I am trusted to make decisions'; 'I have what I need to do my job well'
Work–life conflict	Two measures: 'I often find it difficult to fulfil my commitments outside of work because of the amount of time I spend on my job'; and 'I often find it difficult to do my job properly because of my commitments outside work'	n.a.
Fairness perceptions	Single item: 'To what extent do you agree or disagree that managers here treat employees fairly?'	Single item: 'I am fairly paid'

(Continues)

	WERS 2011	WorkL
Job-related mental health	Six items combined into a single scale: 'Thinking of the past few weeks, how much time has your job made you feel each of the following: tense/ depressed/ worried/ gloomy/ uneasy/ miserable?'	Three items combined into a single scale: 'I am happy (and feel safe) with my working environment'; 'I rarely feel anxious or depressed at work'; 'My employer cares for my well-being'; 'I feel happy at work'
Job satisfaction	Eight items were combined into a single scale. Sample item: 'How satisfied are you with the sense of achievement you get from your work?'	Four items were combined into a single scale: 'I am being developed'; 'I have a good relationship with my manager'; 'I enjoy my job'; 'I am treated with respect'.