

Disability and the UK Labour Market: Evidence from the Labour Force Survey

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This presentation is based on a series of projects and academic publications which have benefitted from the input of a significant number of co-authors.

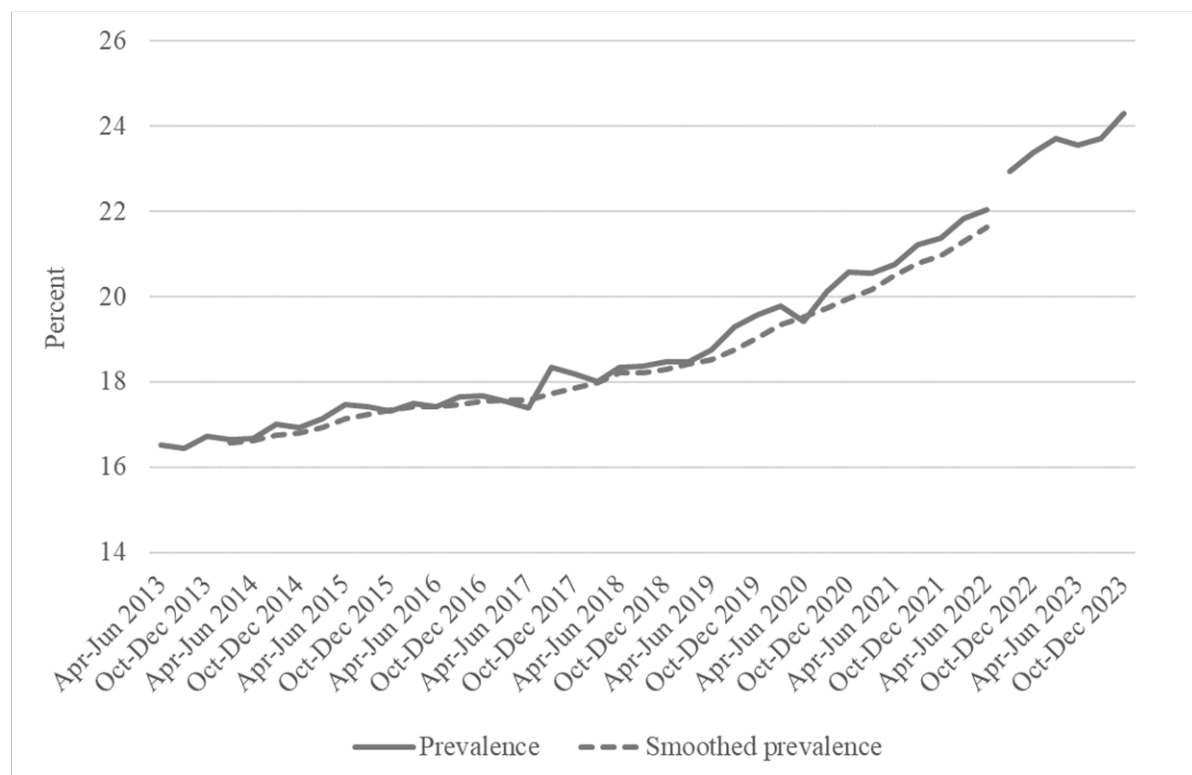
Disability

- Long-term limiting health problem
- Labour Force Survey (LFS)
 - Activity-limiting (aligned to Equality Legislation)
 - Work-limiting
- Activity-limiting (2013-)
 - *‘Do you have any physical or mental health conditions or illnesses lasting or expecting to last 12 months or more?’*
 - Those who respond positively are then asked, *‘Does your condition or illness reduce your ability to carry out day-to-day activities?’* to which individuals can respond Yes, a little; Yes, a lot; and Not at all.

Disability

- Self-reported
 - Measurement error
 - Justification bias
 - Sensitive to small changes in questions and survey design

Figure 1: Disability Prevalence 2013-2023, LFS

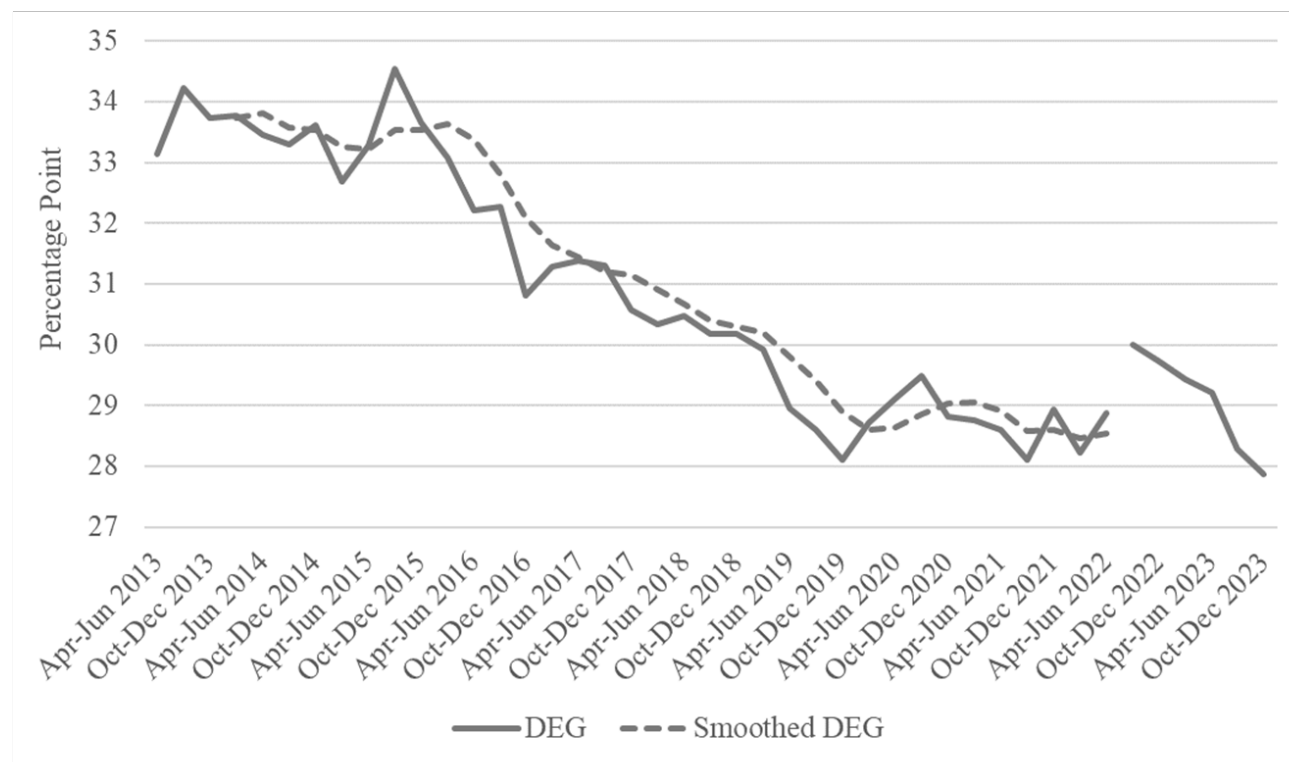


Notes: Authors calculations based on ONS data Table A08 economic activity of people with disabilities. Sample is aged 16-64. LFS 2013-2023. Government Statistical Service Harmonised (activity-limiting) disabled. The smoothed rate is a rolling 4 quarter average to remove seasonal variation. Data from July to September 2022 onward has been reweighted, causing a discontinuity. The ONS also advise caution when interpreting short-term changes in headline rates over the later period.

Disability Employment Gap (DEG)

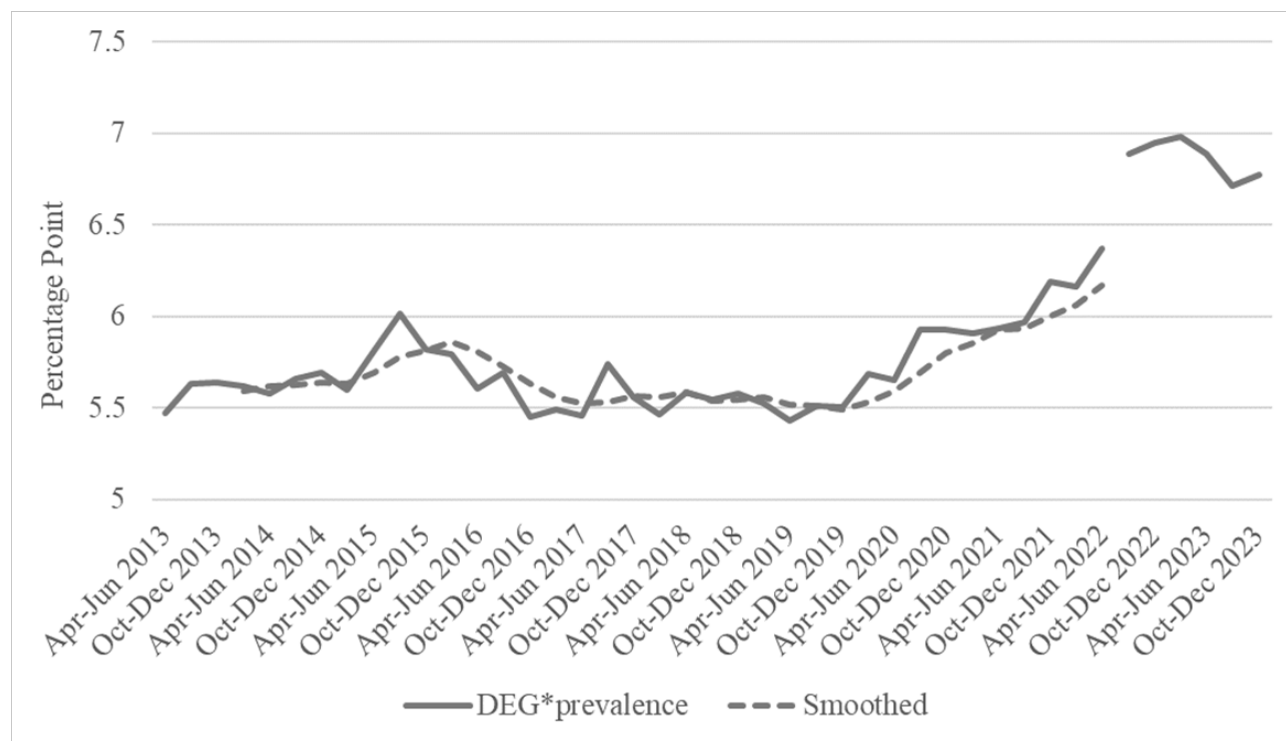
- Percentage point gap in the employment rates between disabled and non-disabled people
 - Large and enduring
 - Focus of policy attention

Figure 2: DEG and Smoothed DEG 2013-2023, LFS



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Figure 3: DEG x Prevalence 2013-2023, LFS



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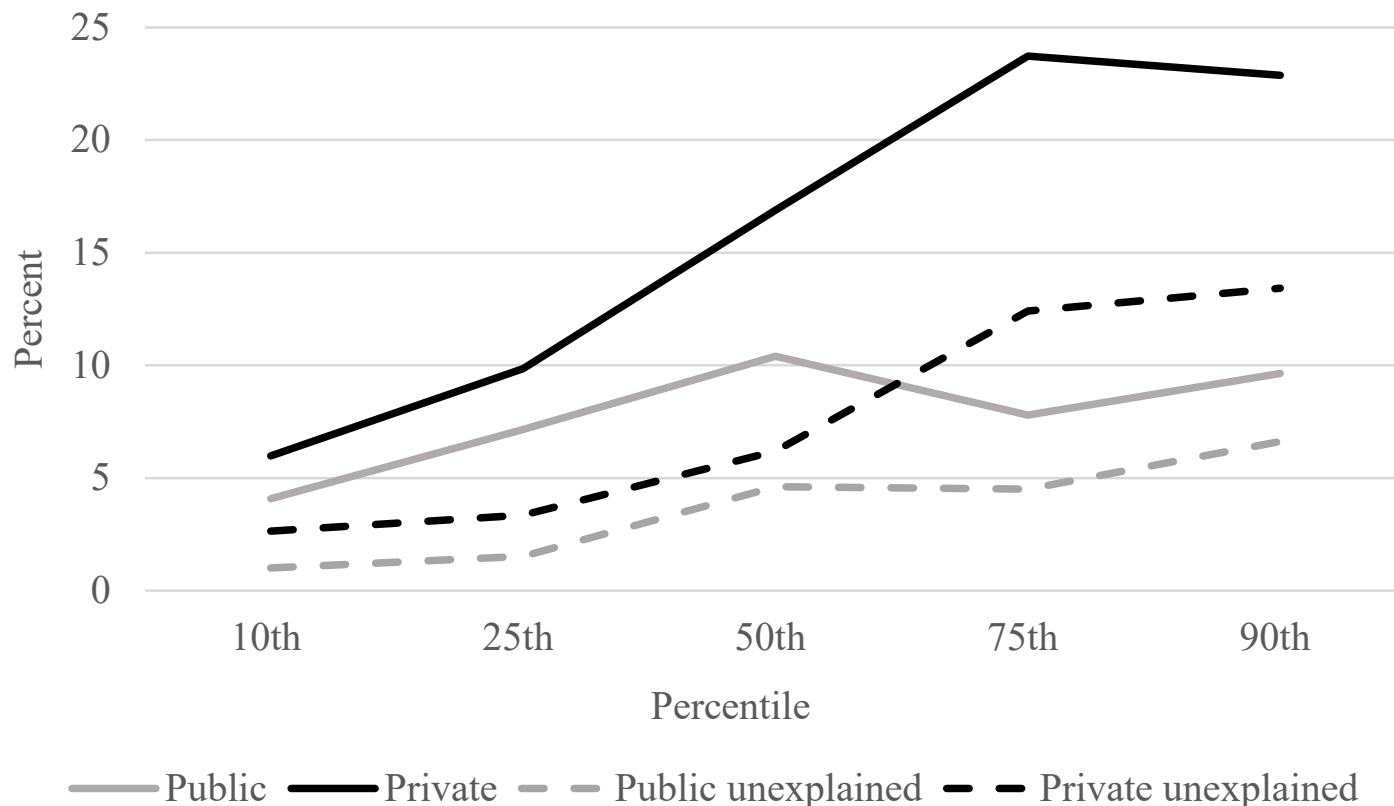
Decomposing the DEG

- The LFS contains detailed information on other personal characteristics known to influence employment
 - For example, age, education, region
- Decompose DEG into its explained and unexplained components
 - Largely unexplained by other personal characteristics (Jones, 2006)
 - Debate about drivers of the unexplained DEG
 - Discrimination
 - Correspondence study (Armenak *et al.*, 2024)

Disability Pay Gap (DPG)

- The impact of disability on labour market outcomes extends beyond employment
 - Gaps in pay, hours and other job characteristics relatively neglected
- DPG shows no sign of diminishing
- Decompose DPG in a similar way to employment
 - Personal and job-related characteristics
 - Less than 50% explained (Jones *et al.*, 2006)
 - Similar debates about identifying discrimination
- Insights from exploring the wage distribution (Jones, 2024)
 - ‘Glass ceilings’ and ‘sticky floors’

Figure 4: The DPG and unexplained DPG across the wage distribution, by sector



Notes: (i) RIF decompositions are calculated using the relevant non-disabled coefficients as the baseline. (ii) Wage equations include a constant term, year x quarter fixed effects and controls for personal and work-related characteristics and occupation.

COVID-19

- Impact on disability-related labour market inequality (Jones, 2022)
 - Pre-COVID risk factors (2019)
 - Key workers, shut down industries
 - Health risks
 - O*NET linked to occupation e.g. proximity to others, exposure to disease
 - Working from home
 - Short-run COVID impacts (2020 compared to 2019)
 - Temporarily away from work (furlough)
 - Working from home

Table 1: Disability Gaps in COVID-19 Work-related Risk Factors

	<i>Shutdown industry</i>		<i>Key worker</i>	
	(1)	(2)	(1)	(2)
Disabled	0.019*** (0.004)	0.015*** (0.004)	0.009 (0.005)	0.002 (0.005)
Personal characteristics	No	Yes	No	Yes
Adjusted- R^2	0.00	0.07	0.00	0.03
N	62,674	61,389	62,631	61,352
	<i>Proximity to others</i>		<i>Exposure to disease</i>	
	(1)	(2)	(1)	(2)
Disabled	1.356*** (0.175)	0.910*** (0.174)	1.810*** (0.260)	0.906*** (0.255)
Personal characteristics	No	Yes	No	Yes
Adjusted- R^2	0.00	0.06	0.00	0.09
N	61,432	60,173	61,432	60,173
	<i>Mainly work from home</i>		<i>Ability to work from home</i>	
	(1)	(2)	(1)	(2)
Disabled	0.016*** (0.004)	0.012*** (0.004)	0.035*** (0.010)	0.029*** (0.009)
Personal characteristics	No	Yes	No	Yes
Adjusted- R^2	0.00	0.03	0.00	0.16
N	62,871	61,579	62,717	61,441

Notes: Authors calculations based on the QLFS 2019 (waves 1 and 5). (i) Reference category is non-disabled. (ii) Robust standard errors in parentheses. (iii) * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. (iv) All models include a constant and quarter fixed effects. (v) All figures relate to workers (employees and the self-employed).

Table 2: COVID-19 Labour Market Indicators, Difference-in-Difference Estimates

<i>Temporarily away from work</i>	(1)	(2)	(3)	(4)
Disability	0.043*** (0.007)	0.038*** (0.007)	0.033*** (0.007)	0.032*** (0.007)
Post-COVID-19	0.095*** (0.004)	0.095*** (0.004)	0.096*** (0.004)	0.096*** (0.004)
Disability × Post-COVID-19	0.041*** (0.012)	0.040*** (0.012)	0.039*** (0.012)	0.039*** (0.012)
Personal characteristics	No	Yes	Yes	Yes
Work-related characteristics	No	No	Yes	Yes
Occupation and industry	No	No	No	Yes
<i>N</i>	37,155	36,741	36,493	36,348
Adjusted- <i>R</i> ²	0.03	0.04	0.04	0.05
<i>Working from home</i>	(1)	(2)	(3)	(4)
Disability	0.019** (0.008)	0.018** (0.008)	0.017*** (0.006)	0.021*** (0.006)
Post-COVID-19	0.038*** (0.004)	0.034*** (0.004)	0.039*** (0.004)	0.038*** (0.004)
Disability × Post-COVID-19	-0.020* (0.011)	-0.019* (0.011)	-0.022** (0.010)	-0.020** (0.010)
Personal characteristics	No	Yes	Yes	Yes
Work-related characteristics	No	No	Yes	Yes
Occupation and industry	No	No	No	Yes
<i>N</i>	37,144	36,731	36,485	36,340
Adjusted- <i>R</i> ²	0.00	0.04	0.26	0.28

Notes: Authors calculations based on the QLFS 2019 and 2020 (wave 5). The sample is the working-age population for employment, workers (employees and self-employed) for temporarily away and working at home and employees for pay. (i) Reference categories are non-disabled and pre-COVID-19. (ii) Robust standard errors in parentheses. (iii) **p* < 0.10, ***p* < 0.05, ****p* < 0.01. (iv) All models include a constant term.

Insights from the Longitudinal LFS

- 4 year panel of the Local Labour Force Survey (within the Annual Population Survey (APS)) (Jones *et al.*, 2018)
 - Not designed as a panel
 - An underutilised resource, albeit not nationally representative
 - Disability is dynamic
 - Onset and exit
 - Opportunities to explore disability selection, onset and duration effects
 - Apply panel data methods
 - Closer to causal relationships

Table 3: Dynamic Patterns of Work-Limiting Disability

	All	Male	Female	Older	Younger	High Quals	Low Quals
Irregular	5.60	5.70	5.49	7.01	4.47	4.89	6.33
Continuously Disabled	9.58	10.30	8.86	14.50	5.67	5.99	13.55
Consistent Onset	5.03	4.95	5.11	6.35	3.98	4.45	5.61
Consistent Exit	4.85	5.10	4.59	5.71	4.16	4.16	5.63
Continuously Non-disabled	74.95	73.94	75.96	66.42	81.72	80.51	68.88
<i>N</i>	71,331	35,550	35,781	31,553	39,769	36,795	33,818

Notes: Data based on individuals in LLFS panel (2004-2010) with a minimum of 3 consecutive observations.

Table 4: Work-limiting Disability Consistent Onset and Exit Effects

	Employment	% change	Hours	% change
Onset (t^*-2)	0.007 (0.70)	1	0.693* (1.82)	3
Onset (t^*-1)	-0.004 (0.40)	-1	0.176 (0.44)	1
Onset (t^*)	-0.069*** (6.06)	-9	-2.380*** (5.52)	-9
Onset (t^{*+1})	-0.125*** (8.90)	-16	-4.897*** (9.34)	-18
Onset (t^{*+2})	-0.167*** (8.46)	-21	-6.288*** (9.00)	-23
Exit (t^-2)	-0.013 (0.75)	-3	-0.705 (1.08)	-5
Exit (t^-1)	0.011 (0.59)	2	0.074 (0.11)	0
Exit (t^-)	0.043** (2.34)	9	1.000 (1.47)	7
Exit (t^+1)	0.042** (2.23)	9	1.085 (1.54)	7
Exit (t^+2)	0.040** (2.05)	9	1.396* (1.87)	9
N	247,763		244,658	
Individuals	71,256		71,227	
F-test	87.73 (0.00)		141.30 (0.00)	
F-test (onset)	40.26 (0.00)		48.44 (0.00)	
F-test (exit)	9.46 (0.00)		7.12 (0.00)	

Notes: Coefficient estimates from the fixed effects model described by equation (1). Control variables (coefficients not presented) include time period, mode of interview, age and age squared, presence of children in the household, full-time student, highest educational qualification and marital status. The omitted group is (t^*-3) or (t^-3). Absolute T statistics are presented in parenthesis and *, **, *** denote significance at the 1, 5 and 10% level respectively. Percentage change figures are calculated relative to the omitted group (t^*-3 or t^-3). The F-tests for joint significance refer to all coefficients in the model, the onset coefficients and the exit coefficients respectively. In each case the p-value is presented in parenthesis.

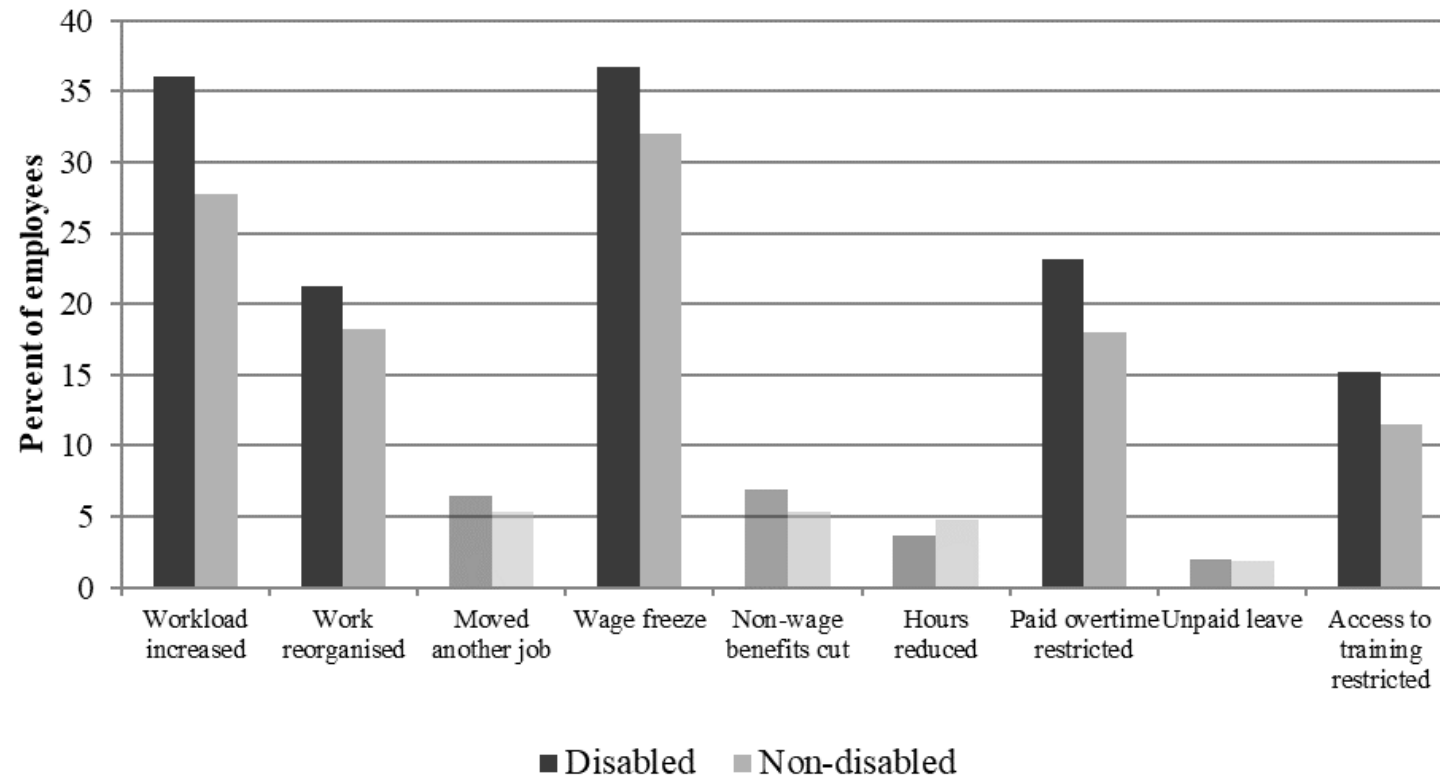
Heterogeneity

- Heterogeneity among disabled people based on the nature of disability:
 - Type
 - Physical and mental impairment
 - Severity
 - Multiple health problems
- Heterogeneity based on other personal characteristics
 - Education
 - Area

Beyond the LFS...

- Role of the employer
 - Workplace Employment Relations Survey (WERS)
 - Linked employee-employer data
 - Workplace policies and practices (Jones and Latreille, 2010)
 - ASHE-Census
 - Payroll data
 - DPG within and between firms
- Broader measures of job quality/wellbeing
 - Job satisfaction, perceptions of management (Jones, 2016)
 - Impact of specific events e.g. financial crisis (Jones *et al.*, 2021)

Figure 5: Employee-Reported Experience of Recession by Disability Status



Notes: 2011 Workplace Employment Relations data are weighted and standard errors are clustered at the workplace level. *, ** and *** denote significant difference between disabled and non-disabled employees at the 10, 5 and 1 percent significance level, respectively. The sample size is about 19,000 employees but varies across measures.

Conclusions

- Labour Force Survey provides a key source of information on disability-related labour market inequality in the UK
 - Explore trends
 - Analyse determinants
- Significant disability-related labour market disadvantage
 - Exists among otherwise comparable individuals
 - Extends beyond employment to in-work outcomes
- Opportunities to explore
 - Heterogeneity by the nature of disability
 - Heterogeneity by personal and work-related characteristics
 - Sector (Jones, 2024)
 - Unions (Jones, 2024)
- Additional insights from longitudinal analysis
 - Dynamics of disability
 - Labour market transitions

Conclusions

- Important areas of future work
 - Role of, and impact on, the household
 - Disability and non-employment
- Future data collection
 - Continued reliance on the LFS for information on disability
 - Survey response rates
 - Need to modernise/enhance data collection
 - Discontinuities
- Complementary sources of information
 - There will always be questions that can't be answered using the LFS/APS....

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