Research report

The future of work: protected characteristics in a changing workplace

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Contents

Executive summary

The Equality and Human Rights Commission (EHRC) commissioned Learning and Work Institute (L&W) to explore the major drivers of changes in the world of work and analyse the equality and human rights implications for groups with different protected characteristics in Britain.

As part of this research, the impact of three long-term British labour market trends on people with certain protected characteristics have been examined. These are:

- the increase in flexible ways of working (whether by time or place)
- the growth of self-employment and the gig economy, and
- the increasing use of automation and artificial intelligence (AI).

In this report, long-term employment trends are defined as phenomena that have been around for more than a decade and have had a significant impact on how work is shaped. This research focused on the protected characteristics of age, disability, race, and sex due to limited data. There are challenges in measuring and interpreting the impacts of many of these long-term trends, so it is important to be cautious in drawing conclusions.

Work is becoming more flexible, digital and automated but these changes in the labour market do not affect everyone equally. Those who face more barriers to work can be disproportionately adversely affected by these trends. Conversely, these changes can also widen opportunities. We need to better understand what the data and evidence tell us about the impact on people with certain protected characteristics. But we must also acknowledge that these outcomes are not inevitable.

Many of the changes we see in the British labour market can help to improve the lives of people who have been traditionally excluded. While the focus of this research is on the implications for groups with different protected characteristics, human rights principles, such as equality of participation, non-discrimination and privacy rights, also apply. Human rights considerations need to be central to any response to these findings on behalf of governments.

This report is based on:

- a detailed literature review
- an analysis of Labour Force Survey data, and
- interviews and workshops with experts.

Since the Labour Force Survey does not allow us to measure the total number of workers in the gig economy, throughout the research we have measured the change in the number of workers on zero-hours contracts. Although this only provides a partial picture, it is one of the measurable indicators of the gig economy.

Research findings

Gig-economy, self-employment and automation

Many of the long-term trends we examined, such as increases in flexible work, the growth of the gig economy and self-employment and the increase in use of automation and AI, are growing faster for individuals with certain protected characteristics than the wider population.

If these trends continue, ethnic minorities, older workers and disabled people will be overrepresented in the gig economy, self-employment and industries at risk of automation. These groups may be more likely to benefit from the flexibility. However, they are also more likely to be affected by the increased job insecurity, precariousness and pay inequality linked to some of these labour market trends.

Workers from ethnic minorities

Since 2009, ethnic minority workers in Britain have seen a greater increase in the rate of flexible working and self-employment for than White British workers. Since 2013, there have been a greater proportion of workers from ethnic minorities on zero-hours contracts compared with White British workers.

Between 2009 and 2021, the number of workers from ethnic minorities employed in jobs at high risk of automation increased, while it fell for White British workers. Overall, in 2021, White British workers and workers from ethnic minorities were roughly equally likely to work flexibly, be self-employed, work in jobs at high risk of automation or be employed on zero-hours contracts.

Older workers

Those aged 50–69 in Britain have had the sharpest rises in self-employment and uptake of flexible working arrangements since 2009 compared to other age groups. Employment in jobs at high risk of automation has increased by 17% among 50–69-year-olds since 2009, while it fell among all other age groups. Workers in this age group are more likely to be self-employed compared to other age groups and are equally likely to work flexibly, on zero-hours contracts or in jobs at high risk of automation as workers aged 25–49.

Younger workers

Over the period from 2013 to 2019, the greatest increase in zero-hours contracts was for those aged 50-64. However, those aged 16-24 experienced the greatest rise in zero-hours contracts between 2020 and 2021 and this group is far more likely to work on zero-hours contracts or in jobs at high risk of automation compared to other age groups.

Women

Between 2009 and 2021, women's self-employment rose by 23%, while male self-employment fell by 2%. However, men in Britain are still more likely to be self-employed than women.

Women are more likely to use flexible working arrangements than men in Britain, but since 2009 the use of flexible working arrangements has increased at a faster rate among men. Between 2009 and 2021, employment in jobs at high risk of automation slightly fell for women and stayed approximately the same for men. As of 2021, women and men are around equally likely to work on zero-hours contracts or to be employed in jobs at high risk of automation.

Disabled people

Since 2013, disabled people in Britain have seen sharper increases in the rates of flexible working, self-employment, zero-hours contracted employment and employment in jobs at risk of automation than non-disabled workers. As of 2019, the number of disabled workers on zero-hours contracts in Britain was 154% higher than it was in 2013 (rising from approximately 60,000 to 160,000), while the number of non-disabled workers on zero-hours contracts was 42% higher (rising from approximately 400,000 to 570,000). These findings are investigated in more depth in the full report, presenting a new perspective on disability employment and the gig economy.

As of 2021, disabled workers are slightly more likely to have flexible working arrangements, be self-employed, work on zero-hours contracts or in jobs at high risk of automation.

Further research is needed into the experiences of disabled people working in the gig economy. Additional work would also be beneficial to uncover the number of disabled gig workers who are not on zero-hours contracts.

Differences across England, Wales and Scotland

The impact of some of these long-term trends is not felt equally across the different nations and regions in Britain, and changes in the number and types of jobs available in an area mean there continue to be differences between nations and regions. If the Government's plans to narrow geographical gaps and spread opportunity around the UK are to be successful, a better understanding of the unequal impact of these long-term changes is vital.

Flexible contracts

Flexible work accounts for almost a quarter (23%) of the workforces across British nations (6.7 million workers in England, 650,000 workers in Scotland and 370,000 workers in Wales have flexible time arrangements). The national and regional distribution of workers on contracts with flexible time arrangements in Britain is almost identical to the national and regional distribution of all other workers. However, the availability of other types of flexible work varies across nations and regions: for example, Wales has relatively widespread flexibility in terms of the time of work arrangements, but flexibility in place of work and informal flexibility is rarer than in Scotland and England.

Self-employment

As of 2021, self-employed workers make up 12% of the workforce in both England (around 3.3 million workers) and Wales (around 170,000 workers), and 10% of the workforce in Scotland (around 250,000 workers). Between 2009 and 2019, the share of self-employment increased slightly in England (from 13% to 15%) and Scotland (10% to 12%), while in Wales it remained consistent at 12%. In absolute terms, as of 2019, approximately two in five self-employed workers in Britain were located in London, the South East and the South West of England. During the coronavirus (COVID-19) pandemic, self-employment fell significantly across British nations and regions, with the biggest fall in London (from 19% of the workforce to 14% between 2019 and 2021).

Zero-hours contracts

Across England, Scotland and Wales, zero-hours contracted employment increased to around 3% of total employment in 2021 (with 850,000 people in England, 82,000 people in Scotland and 37,000 people in Wales working on zero-hours contracts in 2021). London and the South East of England account for the highest numbers of workers on zero-hours contracts – approximately one in three (33%) of all zero-hours workers in Britain. Zero-hours workers are over-represented in the South East of England, where 17% of all zero-hours workers, and 14% of all British workers, are employed.

Upskilling and training opportunities

Equal access to upskilling and training opportunities is essential for everyone who seeks it, regardless of their background, and should be seen in the wider context of equality in job opportunities, career progression, work retention and pay. However, access to upskilling and training opportunities is unequal and is influenced by many factors, such as age, industry, existing education and qualification level and caring responsibilities, among others.

Age

In Britain, older workers (aged 50+) are the least likely age group to receive in-work training (at 21% of workers), compared to those aged 16 to 24 years old (28%) and people aged 25 to 49 (25%). Given the increases in State pension age and societal expectations for working longer into older age, the potential effects of these differences could become more acute.

Industry and occupation groups

In all occupation groups, other than higher managerial and professional, workers from ethnic minorities are less likely to receive in-work training than White British workers.

Existing skill levels

Changes in the nature of jobs, such as an increase in remote working or gig economy work, mean that digital skills are essential for increasing numbers of jobs. However, digital exclusion and poverty mean there are inequalities in who is able to participate in the digital world. In particular, older people and disabled people are more likely to have gaps in their digital skills.

Further research

There needs to be further exploration of:

- ways to incentivise employers to provide in-work training in cases where they are less likely to do so, including for older workers and workers in lower skilled jobs, and
- whether or not the availability of affordable, flexible childcare could support greater participation in training as well as the labour market more widely.

Conducting this research also highlighted gaps and inconsistencies in the data available. There is often a lack of data on the differences between certain demographics and geographies, or the data sample is too small for comparable and reliable analysis. For example, it was not possible to analyse how disabled people's experiences varied by impairment type, or to conduct a detailed analysis of overlapping factors. There is a need for better disaggregated data to gain a deeper understanding of the effects of these long-term trends on people with certain protected characteristics.

Section 1: Introduction

The Equality and Human Rights Commission (EHRC) commissioned Learning and Work Institute (L&W) to explore the major drivers of changes in the world of work and analyse how these changes affect the equality and human rights of people with different protected characteristics in Britain.

This report:

- examines the impact of long-term employment trends on people with specific protected characteristics; age, sex, race and disability
- explores disability employment in the gig economy
- discusses the barriers to accessing upskilling and training opportunities faced by people with certain protected characteristics
- discusses what can be done to provide better support, and
- summarises the key findings and raises questions for further exploration.

Background

Our relationship with work is being altered by demographic changes, technological advancements and globalisation. Work is evolving continuously. How we work, how much we work, and when and where we work are constantly changing. While some of these changes are relatively recent, some are more long-standing.

These changes have overlapping impacts, with positive and adverse effects. They are also happening in the context of existing long-standing labour market inequalities (see Box 1). As such, shifts in the labour market have the potential to reduce or widen existing inequalities.

While we may not always able to control the changes, we can attempt to understand their impacts and respond to them is. This research aims to better understand how the future world of work looks for people with certain protected characteristics and address barriers to participation.

Facts on labour market inequalities

Inequalities in the labour market affect different demographic groups across the population such as in access to employment, earnings, hours worked, job security, the occupations and sectors people work in and other components of work. The considerable upheaval caused by the COVID-19 pandemic shone a further spotlight on structural inequalities in the labour market, due to its disproportionate impact on certain groups such as those on low incomes, disabled people, some ethnic minority groups and single parents (who are more likely to be women), which exacerbated existing inequalities (Evans and Clayton, 2021; EHRC, 2020).

Young people

Youth unemployment (16 to 24 year olds) is typically higher than the overall unemployment rate in the UK. In 2021, it was almost four times as high as the unemployment rate for adults aged 24 and over (14.3% and 3.8% respectively) (Egglestone et al., 2021, page 16).

Youth unemployment in the UK is now below pre-pandemic levels, but so is the number of young people in employment (Powell et al., 2022). This is because the economic inactivity of young people remains above pre-pandemic levels, in part due to rising participation in education.

Older people:

In 2020, UK workers aged 50 to 64 were far less likely to be in work than younger workers. The gap in the employment rate between those aged 50 to 64 and 35 to 49 was 13.2 percentage points in the April to June 2020 period. The employment rate for 50 to 64 year olds was at 72.0% and the employment rate for 35 to 49 year olds was 85.2% (Department for Work and Pensions, 2020).

There had been some progress. Since 2004, three quarters of the increase in people in work was people aged 50 and over (Centre for Ageing Better, 2020a). However, since the pandemic, this progress has reversed. One in four furloughed workers was aged 50 and over. The biggest rises in economic inactivity recently are among people aged 50 and over and people with long-term health problems and disabilities.

There is evidence that older workers face greater challenges returning to employment if unemployed, with 29% of unemployed people over 50 being unemployed for more than 12 months, compared to 20% and 13% of those aged 25 to 49 and 18 to 24, respectively (Centre for Ageing Better, 2020b).

Sex

In Q3 2021 (October to December), the employment rate of women aged 16 to 64 in the UK was 72.2%, compared to 78.8% for men aged 16 to 64 (Irvine et al., 2022). This means the employment gap between women and men aged 16 to 64 has fallen 3.2 percentage points over the last decade (from 9.8 percentage points in Q3 2011–12 to 6.6 percentage points in Q3 2021–22). The COVID-19 pandemic had a greater impact on the employment of men, with economic inactivity increasing most among men (Irvine et al., 2022).

The gender pay gap is commonly measured using the hourly wage, to avoid attributing gaps to differences in hours worked. In April 2021, the gender pay gap in median hourly pay (excluding overtime) between men and women was 7.9% for full-time employees (Irvine et al. 2022). That is a fall from 17% in 1997.

In 2021, women were more likely than men (aged 25 and over) to be in jobs paying the National Minimum Wage (5.5% to 7.8% and 4.1% to 5.6%, respectively) (Low Pay Commission, 2021, p. 50). Women were more likely to be paid less than the real Living Wage compared to men (25% and 18% respectively in April 2020) (Cominetti, McCurdy and Slaughter, 2021, page 61).

Ethnicity

In 2019, 78% of White people in Britain were employed, compared to 66% of people from all other ethnic groups combined (Office for National Statistics, 2021a).[1] This means the employment gap between White British people and all other ethnic groups combined was 12 percentage points (compared to 16 percentage points in 2004).

Between 2004 and 2019, the largest increases in the employment rate were in the combined Pakistani and Bangladeshi ethnic group (from 44% to 56%) and the White Other ethnic group (from 71% to 83%).

[1] Data after 2019 is not available yet. The Office for National Statistics is adjusting the data to reflect the effects of population changes and the COVID-19 pandemic on labour market statistics.

The ethnicity pay gap is defined as the difference in pay between White employees and all other ethnic groups combined. In 2019, the ethnicity hourly median pay gap was 2.3 percentage points. This is its narrowest level since 2012 (Office for National Statistics, 2020a).[2]

Disability

The disability employment gap is the difference between the employment rate for non-disabled and disabled people. In the UK in 2021 around half of disabled people aged 16 to 64 (53.5%) were employed compared with around 8 in 10 (81.6%) non-disabled people. Disabled people with severe or specific learning difficulties, autism and mental illness had the lowest employment rates (Office for National Statistics, 2022).[3]

This gap narrowed by 4 percentage points between 2013 (earliest comparable year) and the start of the COVID-19 pandemic, from 33.1 percentage points in Q2 2013 to 29.1 percentage points in Q2 2020 (Department for Work and Pensions, 2022).[4] There was an initial increase at the start of the pandemic. However this has since reduced. In Q2 2021 the disability employment gap was 0.7 percentage points lower than the gap a year earlier.

In 2020–21, the difference in median hourly pay between non-disabled and disabled employees was 16.5 percentage points (TUC, 2021a). This gap is lower than 2019–20, when disabled employees earned 20 percentage points less than their non-disabled counterparts, but still higher than 2017–18 when the gap was 15.2 percentage points (TUC, 2021a).

[2] Adjusting for pay-determining characteristics (for example, age and sex) reduces the pay gaps for most ethnicities, suggesting some of these pay gaps may result from differences in characteristics rather than ethnicity.

[3] According to analysis using Labour Force Survey data for July to September 2021.

LGBT

The evidence base on inequalities in employment based on sexual orientation and gender identity is weak and inconsistent. The 2018 national LGBT Survey, a self-selecting survey of over 100,000 respondents, found that 80% of Lesbian, Gay and Bisexual respondents aged 16 to 64 had been employed in the preceding 12 months. This was broadly consistent with the employment levels shown in the Labour Force Survey at the time, which showed 75% of the whole UK population aged 16 to 64 were in employment. Transgender respondents were less likely to say they were employed in the previous 12 months compared to other respondents in the LGBT Survey (63% versus 83%). (Government Equalities Office, 2022).

Maternity

Research from 2016 on pregnancy and maternity-related discrimination and disadvantage in Britain found that 11% of mothers surveyed said they felt forced to leave their job. This included those who had been dismissed, made compulsorily redundant when others in their workplace were not, or treated so poorly they felt they had to leave their job (EHRC, 2016).

One in five mothers (20%) said they experienced harassment or negative comments about pregnancy or flexible working from their employer and / or colleagues. The survey also found that 10% of mothers said their employers discouraged them from attending antenatal appointments.

Research aims

This research set out to identify long-term employment trends in the labour market in Britain and explore their impact on people with different protected characteristics. Due to limited data, it focuses specifically on the protected characteristics of age, disability, race, and sex. This research aims to inform the EHRC's future thinking about inequalities in the labour market and ways to overcome them.

The research had two phases. The first stage of the research sought to address the following research questions:

1. How do the changes we are seeing in the economy of Britain, such as the shift from physical spaces to online employment, the expansion of the gig economy and the growth of AI and new technologies, affect the long-term employment trends of people with certain protected characteristics?

2. What are the equality and human rights implications of these long-term, structural changes, in terms of access to work and experience of it?
3. How can governments across Britain reduce the negative impacts of future challenges and take advantage of the opportunities for all groups across British society?

The analysis from the first stage of the research was used to identify potential areas for further exploration. While the future of work presents many important challenges to equality that need attention, the time and budget constraints meant that this report focused on two areas in more detail. These were selected according to the following criteria:

- intersectional (does the theme offer scope to explore the impact(s) by more than one protected characteristic?)
- original (does this theme say something new?)
- future-oriented (is this theme forward-looking?)
- challenges and inequality (does the theme point to one of the most pressing current inequalities?)
- doable (is research possible on this theme?)

Based on these five criteria, two themes were chosen for the second phase of this research:

1. **disabled workers in the gig economy:**
    a. what the increasing participation of disabled workers in the gig economy means for the inequalities they face
    b. how it will impact disability employment and the disability pay gap in the future, and
    c. what could be done to better support disabled workers.

2. **upskilling and training for people with certain protected characteristics**:
    a. the barriers to accessing upskilling and training opportunities faced by people with certain protected characteristics,
    b. how opportunities can be made more accessible and inclusive, and
    c. what can be done to better address some of the current barriers.

The second phase of research looked into the protected characteristics of age, sex, race and disability.

Methodology

For phase 1 of the research we used the following methods.

Literature review

Our literature review explored British long-term employment trends and their impact on people with certain protected characteristics. It focused on evidence since 2016 to be as up-to-date and relevant as possible.

The review focused on peer-reviewed academic journal articles, qualitative and quantitative research published by think tanks and research organisations. Where evidence for Britain was unavailable, UK sources were used.

A call for evidence to collect information on ongoing or unpublished research was shared with over 1,300 stakeholders. The outputs were included in the literature review.

Analysis of labour market statistics

Data from the Labour Force Survey, covering May 2009 – November 2021, was analysed. The Labour Force Survey is a large survey collected by the Office for National Statistics (Office for National Statistics). It is the main source for national statistics on employment, unemployment and other labour market issues. Its coverage is UK-wide, although this research focused exclusively on Britain (England, Scotland and Wales).

For analysis of each theme (flexible working, self-employment and the gig economy, and automation), the number of people with each protected characteristic in each of these types of employment has been calculated and indexed to a year (2009 unless otherwise stated; this was chosen as the base year because it is acceptable for the analysis of the last decade, while being the first year following the recession).

All analysis for disabled workers has been indexed to 2013, due to a change in the definition of disability for data collection. All analysis on zero-hours contracts has been indexed to Q4 2013, following a change in the figures from 2013 because of increased public awareness of what zero-hours contracts are and a change in Office for National Statistics methodology (for more on this, see Office for National Statistics 2018a). There were further changes to the methodology at the start of 2020 which introduced another discontinuity into the series from January 2020 onwards (see Office for National Statistics 2021b for details). For this reason, some caution is needed when looking at changes in the use of zero-hours contracts over periods of time which span breaks in the series.

The changes in levels of employment for each theme have been analysed using various points between 2009 and 2021. This is to indicate both the growth in the number of people in various forms of work and to highlight the disparities between groups.

Due to small sample sizes, analysis for disabled workers could not be conducted by impairment type. The disaggregation by ethnicity is limited to the main ethnic groups of White British and ethnic minority, with the latter including Black, Asian, Mixed and White Other. Analysis into the effects of automation follows Office for National Statistics methodology and assigns risks of automation to the industry in which the individual is employed (Office for National Statistics, 2019). All quantitative findings reported from our analyses are statistically significant.

Stakeholder Reference Group

A stakeholder reference group was established. It included experts from academia, think tanks and research organisations across Britain. The stakeholder organisations included:

- Close the Gap
- Centre for Ageing Better
- Young Women's Trust
- Business Disability Forum
- Ernst & Young
- Strathclyde University
- Trades Union Congress
- Cardiff University
- Confederation of British Industry
- Henley Business School
- Institute for the Future of Work

- Resolution Foundation
- Acas, and
- Bevan Foundation.

Two stakeholder reference group meetings were held. The first was held in phase 1 to discuss the research direction. The second happened in phase 2 to review research findings.

For phase 2 of the research we also used the following methods.

Interviews

There were interviews held with 11 stakeholders from academia, NGOs, consultancies, disability rights groups and think tanks. The stakeholders were invited to take part in interviews based on their relevant expertise in:

- the gig economy
- disability rights
- upskilling and training
- specific protected characteristics.

These interviews aimed to gather insights from experts on the two themes chosen for further exploration in the research.

Expert workshops

In February 2022, two workshops were held on the topics of disability and the gig economy, and upskilling and training. The workshops were attended by more than 30 senior stakeholders from:

- think tanks
- universities
- charities
- frontline providers
- research organisations
- NGOs.

Additional data analysis

Data was analysed on on the two themes chosen for further exploration in the research:

- disabled workers in the gig economy (Theme 1)

- upskilling and training for people with certain protected characteristics (Theme 2).

For Theme 1, we examined data from the Labour Force Survey on:

- the disability employment gap
- the characteristics of disabled people on zero-hours contracts, and
- the regional and sectoral distribution of disabled workers on zero-hours contracts.

For Theme 2, the Annual Population Survey data was analysed for access to in-work training opportunities across groups of people by protected characteristic.

Data from the L&W Adult Participation in Learning survey was also used to gain insights into how participation in learning and barriers to learning vary by some protected characteristics (where data is available). Data from Lloyds Essential Digital Skills Index was used to highlight which groups of people are more likely to have gaps in essential digital skills.

Section 2: Long-term trends and inequalities in the British labour market

Key findings

- Long-term trends in the British labour market include more flexible working, the growth of the gig economy and self-employment, and increases in automation and artificial Intelligence (AI).
- These trends are likely to have a greater impact on individuals with certain protected characteristics compared to the wider population in the future.
- The COVID-19 pandemic is likely to have accelerated some of the long-term labour market trends, such as the move to flexible working hours and locations, and the growth of the gig economy.
- People with certain protected characteristics – such as ethnic minorities or disabled people – are more likely to be affected by reduced job security, precariousness and pay inequality because of the growth of the gig economy and self-employment.
- The impact of these long-term changes is not felt equally across the nations and regions of Britain and so also varies for people with certain protected characteristics across Britain.

Long-term employment trends

In this report, long-term employment trends are defined as phenomena that have been around for more than a decade and have had a significant impact on how people work. In the literature, these long-term trends are sometimes called megatrends or tectonic plates. This report focuses on three of these long-term employment trends in Britain:

- increasing uptake of flexible ways of working
- growth in alternative ways of working such as self-employment and the gig economy, and

- greater use of automation and artificial intelligence (AI).

The impact of these changes is not being felt equally. New frameworks and policies may be required to ensure that equality and human rights standards are maintained and improved in future. To achieve a labour market that is accessible and inclusive to everyone, it is vital to understand how different groups will be affected by the trends to arrive at appropriate responses.

Increases in flexible ways of working

One of the defining features of the modern British labour market is its flexibility. In Britain the uptake of flexible working arrangements has increased slowly but steadily over the last decade (CIPD, 2019).

- Flexible work by time means employees can choose how they schedule their working hours, for example by using flexitime, compressed or reduced hours, or annualised hours (where they have a set amount of hours to achieve in a year).

- Flexible work by place means employees can choose where they work, for example choosing remote or hybrid working.

Flexibility at work offers greater autonomy for employees. They can have more choice over where and when they work. This can make the labour market more accessible to people. However, this is not always the case. It is vital to ensure that changes to the nature of jobs benefit both employers and employees.

A way to measure the overall change in flexible working arrangements across Britain is to look at the uptake of flexible terms of working in Labour Force Survey data. In this data, flexible working includes:

- working flexible or part-time hours
- job sharing
- annualised hours
- on-call working
- working nine-day fortnights or 4.5-day work weeks.

It does not include zero-hours contracts or remote working.

From Labour Force Survey data, we see that the overall number of workers on flexible contracts in Britain rose 14% from 2009 to 2019 (from around 5.1 million to 5.8 million). Working flexible hours increased during the COVID-19 pandemic, eventually falling as the labour market started to recover. The number rose by 21% between October to December 2019 and October to December 2020 (from 6.3 million to 7.7 million), before falling to 7.1 million between April and June 2021. Since then, headline employment numbers have continued to improve. As of October to December 2021, the number of people on flexible contracts is 53% higher than it was in 2009 (rising from around 5.1 million to 7.7 million), making up almost a quarter (23%) of all workers, compared to 17% in 2009. The data shows that, since 2009, inflexible employment has declined slightly and flexible employment accounts for all growth.

Our analysis of Labour Force Survey data suggests that the national and regional distribution of workers on flexible contracts in Britain is almost identical to the distribution of all other workers. Flexible work by time accounts for around a quarter of the workforce across Britain, with 6.7 million workers in England, 650,000 workers in Scotland and 370,000 workers in Wales having flexible time arrangements.

The Chartered Institute of Personnel and Development's (CIPD) ranking of nations and regions by availability of flexible work provides insight into the relative availability of:

1. flexible time of work
2. flexible place of work and
3. informal flexibility (CIPD, 2022).

Informal flexibility is defined as:

- choosing how start and end times are determined
- having the ability to take a couple of hours off during the working day to deal with personal matters or to take leave at short notice, and
- the frequency of unforeseen work demands or availability for work in one's free time.

This analysis shows differences in the types of flexible work available across nations and regions. For example, Wales ranks highly for the availability of flexible times of work, but second lowest for the availability of flexible place of work arrangements and informal flexibility. Scotland, on the other hand, ranks around average across all three types of flexibility, compared to other British nations and regions.

It is not clear how much of the increased move to flexible working during the COVID-19 pandemic – whether in terms of time or place – will be permanent. However, as more evidence is collected, it appears that the demand for increasing flexibility continues. Research by the Trades Union Congress (TUC) showed that, in Britain, more than nine out of ten people (91%) who worked remotely during the pandemic wanted to continue working from home at least some of the time after the pandemic (TUC, 2021b).

Changes to policy

Government policy across Britain has also been shifting towards promoting greater availability of flexible work, even before the pandemic. In 2014, the UK Government extended the right to request flexible working, previously only available to parents and carers, to all employees with 26 weeks qualifying service (Department for Business, Energy and Industrial Strategy, 2021a). The extension aimed to raise awareness of flexible working options among employees and employers and address negative perceptions of flexible working by making the right to request available to all, rather than a subset of employees.

More recently, in September 2021, the UK Government announced the intention to make the right to request flexible working available to employees from day one of starting the job, rather than after 26 weeks of continuous service (Department for Business, Energy and Industrial Strategy, 2021a). A consultation on this, from the Department for Business, Energy and Industrial Strategy, closed in December

2021. However, legislation has not yet been brought to the UK parliament to include these changes in an Employment Bill.

Employment and industrial relations law is a reserved matter in Scotland and Wales, so any progress on this will impact all three nations. The Welsh Government has set a long-term target for 30% of the Welsh workforce to work remotely on a regular basis and committed to no more than 50% of Welsh Government staff in the office at once (Welsh Government, 2022a). In Scotland's Fair Work Action Plan, the Scottish Government committed to promoting the development of flexible workplaces and, as an employer, to continue to offer a wide range of flexible working options (Scottish Government, 2021).

Increases in self-employment and the gig economy

Another defining trend of the British labour market in recent years has been the growth in self-employment and alternative forms of work, such as gig work (Giupponi and Xu, 2020).

'Self-employed' is an umbrella term used to define a wide group of workers, from freelancers and independent contractors to small-business owners.

A gig worker is a person who works in temporary positions or on short-term contracts as an independent contractor (Huws, 2021). Gig workers can be found across a wide range of fields, from drivers to teaching assistants. They work on a short-term, project basis, rather than as permanent or fixed-term employees of an organisation.

Self-employment

The proportion of self-employed people in Britain has increased steadily over recent decades, rising from 12% of all workers in 2009 to 14.3% in 2019. The COVID-19 pandemic reversed this trend, with self-employment falling back to 12.3% in 2021. However, in 2021 the absolute number of self-employed workers in Britain was still 6% higher than it was in 2009 (rising from around 3,500,000 to 3,700,000).

In England, the share of self-employment increased slightly (from 13% to 15%) between 2009 and 2019. London experienced the largest increase in the share of self-employment in England (from 15% to 19%). Scotland has seen a marginal (2%) increase in self-employment to 12% of the workforce in 2019, while in Wales the share of self-employment stayed approximately the same at 12%.

In absolute terms, approximately two in five self-employed people in Britain were located in London, the South East and the South West of England in 2019. During the pandemic, self-employment fell significantly across British nations and English regions, with the biggest fall in London (from 19% to 14% of the workforce between 2019 and 2021).

The gig economy

It is challenging to understand the true scale of the gig economy. It is generally accepted that it has been steadily increasing over the past decade. For instance, a study conducted by the Royal Society for the Encouragement of Arts, Manufactures and Commerce (RSA) estimated that 1.1 million people in Britain were working in the gig economy in 2016 (Balaram et al., 2017).

More recent research carried out by the University of Hertfordshire and BritainThinks in November 2021 found that 15% of surveyed[5] working adults in England and Wales work via gig economy platforms at least once a week, compared to 5.8% in 2016 (Spencer and Huws, 2021).

When estimating the size of the gig economy, it is important to remember that many gig workers accept this type of work in addition to other forms of employment, and may not self-identify as gig workers.

Zero-hours contracts

The Labour Force Survey does not allow us to measure the total number of workers in the gig economy. However, it is possible to see the change in the number of workers on zero-hours contracts, which is one of the indicators of the gig economy.

[5] The survey included fieldwork and a survey of 2,201 workers in England and Wales.

As of 2021, the number of workers on zero-hours contracts in Britain is 108% higher than it was in 2013 (rising from around 470,000 to around 970,000), making up 3% of all current workers. Some of this apparent increase may be due to changes in the approach to collecting data on the use of zero-hours contracts at the start of 2020, but even prior to 2020 there was a clear upward trend in the use of zero-hours contracts.

Across England, Scotland and Wales, zero-hours contracted employment increased to around 3% of total employment in 2021 (with 850,000 people in England, 82,000 people in Scotland and 37,000 people in Wales working on zero-hours contracts in 2021).

Approximately one in three (33%) of all zero-hours workers in Britain are in London and the South East of England. Zero-hours workers are over-represented in the South East of England, where 17% of all British zero-hours workers – and 14% of all British workers – are employed.

Reasons for increases

Several factors can explain this increase in self-employment and workers on zero-hour contracts. Flexibility around working hours and the opportunity to work remotely are considered important pull (favourable) factors. Both self-employment and the gig economy can provide more flexibility around where and when the work needs to be done compared to traditional employment. Self-employed people can have more autonomy over what type of work they do. They may sometimes be more able to negotiate their terms when needed.

This can be especially important to people with caring responsibilities and fluctuating health conditions. There are multiple research papers showing that self-employed people have higher job satisfaction (Binder and Blankenberg, 2021).

On the other hand, it is also important to understand if people are pushed to self-employment or the gig economy because they could not find suitable opportunities in traditional employment (Giupponi and Xu, 2020). The wider casualisation of the British labour market, relative lack of better alternatives and negative experiences as an employee can act as key push (less favourable) factors (Bevan Foundation, 2021). These shifts towards alternative employment can result in less security for some workers, particularly for young people, ethnic minorities and low-skilled women (OECD, 2019).

There is sometimes a tendency to associate self-employment and zero-hour contracts with flexible working. Although the growth in these ways of working means more people can enjoy a form of flexibility, it also raises questions around job security, working conditions and career progression.

Changes to the number and nature of jobs due to automation and artificial intelligence (AI)

As AI continues to develop to replicate tasks previously completed by humans, it has the potential to make certain jobs obsolete. This issue relates to wider discussions about how technological developments and automation can lead to job losses.

Some projections predict the 'hollowing out' of jobs as a result of automation, which involves a reduction in the number of 'mid-paid' jobs while the number of low- and high-paid jobs remains the same or increases (House of Commons Work and Pensions Committee, 2021). In contrast, a 2019 report by the Institute for Public Policy Research (IPPR) argued that automation is likely to create more jobs than it replaces, with growth concentrated in two sectors: healthcare and professional, and scientific and technical services (Roberts et al., 2019).

It is challenging to predict which jobs will be most affected by the increasing use of automation. In this research, we follow the Office for National Statistics methodology which assigns probabilities of automation to the industry in which the individual is employed (Office for National Statistics, 2019). According to this methodology, the three occupations with the highest probability of automation are:

- waiting staff
- shelf fillers, and
- elementary sales occupations.

The three occupations at the lowest risk of automation are:

- medical practitioners
- higher education teaching professionals, and
- senior professionals of educational establishments.

According to this methodology, the overall number of workers in high-risk jobs in Britain rose by 8% from 2009 to 2019 (from 6,232,000 to 6,718,000). The COVID-19 pandemic altered this trend, reducing the number of high-risk (and low-risk) jobs overall. However, this reduction may be short-term, as it is in high-risk sectors (retail, accommodation, and hospitality) where workers have experienced the highest falls in jobs during the pandemic (Egglestone et al., 2021).

For hospitality, it is currently unknown whether the automation that appeared in the pandemic (for example booking tables online, ordering meals online at the table to reduce table service needs) will continue or reduce in due course. As of 2021, the proportion of workers in high-risk industries is 20%, down from 21.5% in 2009 and from a peak of 22.8% in 2016.

Some researchers have argued that the debate should focus on examining how roles will change because of automation, rather than whether jobs will disappear (Centre for Social Justice, 2019). A report by the RSA has argued that AI and automation could increase productivity, phase out mundane work, and increase the importance of human-centric jobs (Dellot and Wallace-Stephens, 2017). For example, algorithms in healthcare could allow nurses to play a more active role in diagnosis, and the use of robots in social care could allow workers to focus on building relationships with patients instead of physically demanding tasks such as cleaning. AI – a type of automation – also brings about changes to the nature of jobs, as increasingly it is being used in recruitment, task allocation, and monitoring workforce performance (Briône, 2020).

Impact of long-term trends on people with certain protected characteristics

This section discusses how the three long-term trends examined in this research (namely: the increase in flexible working, the growth of self-employment and the gig economy, and the use of AI and automation) affect people with certain protected characteristics

There are two points to note before exploring the effects of British labour market changes on people with certain protected characteristics:

1. There are other long-term trends not covered in this research that affect the labour market, such as the transition to green jobs, the impact of leaving the European Union and the increasingly ageing population. The three long-term trends examined in the first phase of this research were chosen based on their relevance to inequalities faced in the British labour market by people with certain protected characteristics.
2. These long-term trends are often intertwined, making it difficult to pinpoint where issues and solutions sit. Although we have approached these issues separately below to identify the challenges and opportunities that come with them, their overlapping nature means that they should not be considered discrete from each other.

Age

Uptake of flexible working arrangements

In Britain between 2009 and 2019, workers aged 50 to 69 years old experienced the sharpest increase in flexible working (a 27% increase in the number of older workers in flexible work). This was followed by workers aged 25 to 49 years old (a 10% increase), with no increase for workers aged 16 to 24 years old.

In 2009 approximately 5 million workers were employed in flexible work, 6% of people aged 16 to 24, 9% of those aged 25 to 49 and 9% of those aged 50 to 69. Flexible working arrangements increased throughout the COVID-19 pandemic for workers of all ages.

By 2021 those employed in flexible work had increased to 7.7 million workers. Of workers aged 16 to 24, 15% had flexible working arrangements, as did 25% of those aged 25 to 49 and 24% of people aged 50 to 69. Older workers were consistently employed more in flexible work. There are many reasons that could explain this difference, including individual needs and job requirements (CIPD, 2019). For example, older people are more likely to work flexibly to manage health conditions, caring responsibilities and / or to adjust towards retirement.

Changes in self-employment

Between 2009 and 2019, people aged 50 to 69 experienced the sharpest increase in self-employment (a 43% increase). This was followed by younger workers aged 16 to 24 (a 25% increase), then workers aged 25 to 49 years old (a 17% increase). Self-employment fell across all age groups during the pandemic, falling most for those aged 25 to 49.

As of 2021, the number of self-employed 16 to 24-year-olds has risen by 17% (from around 130,000 to around 157,000) and the number of self-employed 50- to 69-year-olds has risen by 24% (from around 1.3 million to around 1.6 million) compared with 2009. Conversely, self-employment levels for people aged 25 to 49 fell by 7% in the same period.

The proportion of workers in each age group who were self-employed is at similar levels to 2009, but there was a gradual increase prior to the pandemic. In 2021, workers aged 50 to 69 were the most likely to be self-employed, at 17% (rising from 18% in 2009 to 20% pre-pandemic before dropping back). In comparison, 11% of workers aged 25 to 49 and only 4% of workers aged 16 to 24 were self-employed, whereas in 2009 these were 12% and 4%, respectively.

Zero-hours contracted employment

Younger workers are the most likely age group to work on zero-hours contracts. Of workers aged 16 to 24 in 2021, 11% were employed on zero-hours contracts, compared to only 2% and 3% of those aged 25 to 49 and 50 to 69, respectively.

From 2013 to 2019, zero-hours contracted employment rose for all age groups, with the largest relative rise for the oldest workers. Figure 3 shows that, among 50- to 69-year-olds, zero-hours contracted employment increased by 83% in this time (rising from approximately 110,000 to 200,000): from 1% to 2% of that age group. There was a 51% increase among workers aged 16 to 24 years old (170,000 to 260,000): an increase from 4% to 11% of workers in that age group. Workers aged 25 to 49 years old experienced a 28% increase in this time (rising from 180,000 to 260,000), an increase from 1% to 2% of workers in that age group. Since 2020 those aged 16-24 have experienced the greatest increases in the use of zero-hours contracts.

Older workers in jobs at high risk of automation

Overall since 2009, the number of workers employed in jobs at high risk of automation increased among workers aged 50 to 69, while it fell for all workers of other age groups. However all age groups experienced a one to two percentage point decrease in the proportion of workers who were employed in jobs at high risk of automation.

The number of workers aged 50 to 69 in high-risk jobs was 26% higher in 2019 compared to 2009 (from around 1.5 million to around 1.8 million workers). Over the same period, the number of 25- to 49-year-old workers in high-risk jobs increased by 7% (from approximately 3.1 million to 3.4 million workers), while for young workers (aged 16 to 24) this number fell by 7% (from around 1.6 million to around 1.5 million people).

Over the course of the pandemic, between October to December (Q4) 2019 and April to June (Q2) 2021, employment in jobs at high risk of automation fell for all age groups. It fell most significantly for workers aged 25 to 49 (by 12%), followed by workers aged 50 to 69 (by 7%). For 16- to 24-year-olds, it fell only by 1%.

However, workers aged 16 to 24 are the most likely of all age groups to work in jobs at high risk of automation. In 2021, 43% of this group worked in these jobs (dropping from 45% in 2019), as opposed to 17% and 18% of workers aged 25 to 49 and 50 to 69 (dropping from 19% and 20% respectively in 2009). The drops experienced by all age groups could therefore be highlighting the overall changes in the sector mix of employment and risks of automation, rather than particular biases according to age.

Challenges of working from home for young people

A Deloitte (2021)[6] survey shows that younger workers are more likely to find working from home difficult. Over half (58%) of employees aged under 35 said they were finding working from home 'challenging', compared to an average of 44% for all remote workers.

This could be related to younger workers being more likely to have limited or shared space for working at home (Parry et al., 2021).[7] Young workers also report having to work more unpaid overtime at home than other groups (Richardson and Klein, 2021). Working from home also might deprive new workers, who are often young people, of valuable learning opportunities from observing problem-solving, negotiations and decision-making in the workplace.

In the future world of work, it will be important to ensure that the implications for different age groups are considered.

Disability

The overall number of disabled people in employment in Britain

Between 2013 and 2021, the number of employed disabled people has grown by 58%, from 2.9 million to 4.6 million. This compares to a 7% increase in non-disabled people in employment from 28.5 million to 30.6 million.

The number of disabled people on flexible contracts

The number of disabled workers on flexible contracts rose 58% from 2013 to 2019 (19% to 21% of disabled workers), far more than the 8% increase for non-disabled workers (from 18% to 19% of non-disabled workers). This increase continued throughout the COVID-19 pandemic for both groups. The number of disabled workers on flexible contracts increased by 127% (from approximately 540,000 to 1.1 million) from 2013 to 2021, while for non-disabled workers the number rose by 43% (from 4.5 million to 6 million).

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[6] Survey of 1,248 UK workers aged 16–75.

[7] A survey of 32,471 workers in 17 countries around the world between 17 November – 11 December 2020, including over 8,567 working specifically in the gig economy.

In 2021, disabled and non-disabled workers were almost equally likely to work flexibly, with 26% of disabled workers and 25% of non-disabled workers having flexible working arrangements, an increase from 19% and 18% respectively in 2013.

Many disabled people and representative organisations have advocated for greater availability of flexible and remote working. For some, remote working can be a way to gain and retain employment, as it helps to overcome some accessibility issues (EHRC, 2017). Under the Equality Act 2010, flexible working arrangements can also be a reasonable adjustment for disabled workers.

The number of self-employed disabled people

As of 2021, the number of self-employed disabled people is 27% higher than it was in 2013, while the number of non-disabled self-employed people fell by 7% during this time. The number of self-employed disabled people rose from approximately 480,000 to around 630,000, whereas for non-disabled people it remained similar at about 3.2 million. However, the proportion of self-employed disabled people fell from 17% in 2013 to 14% in 2021, whereas proportions of self-employed non-disabled people reduced only slightly from 13% in 2013 to 12% by 2021.

The number of disabled people who are self-employed in Britain increased by 41% between 2013 and 2019, compared to a 16% increase for non-disabled people over this period (see Figure 2, page 41). However, the overall number of self-employed people (regardless of disability status) fell during the pandemic.

Zero-hours contracts for disabled workers

The increase in zero-hours contracted employment has been greater for disabled workers than non-disabled workers (see Figure 3, page 42). As of 2019, the number of disabled workers on zero-hours contracts in Britain was 154% higher than it was in 2013 (rising from approximately 60,000 to 160,000), while the number of non-disabled workers on zero-hours contracts was 42% higher (rising from approximately 400,000 to 570,000). As of 2021, 4% of disabled workers and 3% of non-disabled workers are employed on zero-hours contracts,.

Disabled workers in jobs at high risk of automation

As of 2021, disabled workers are slightly more likely to be employed in jobs at high risk of automation, with 22% of disabled workers employed in such jobs, compared to 20% of non-disabled workers. This is a small reduction from 24% and 23% respectively in 2013. Over the last decade, disabled workers had the highest increases in employment in jobs at high risk of automation of all of the groups analysed in this research. However, this still marked a decrease in the overall proportion of disabled workers in jobs at high risk of automation.

The number of disabled workers in high-risk jobs rose 50% from 2013 to 2019, compared to a 2% fall for non-disabled workers. This increase continued throughout the pandemic for disabled workers. The number of disabled workers in high-risk jobs was 47% higher in 2021 compared to 2013 (increasing from around 700,000 to 1 million workers). In contrast, the number of non-disabled workers in high-risk jobs fell by 12% during the same period (from around 5.8 million to around 5 million workers).

Government obligations to disabled workers

The UK Government has obligations to protect the rights of disabled people in work. Article 27 of the United Nations Convention on the Rights of Persons with Disabilities requires states to protect the rights of people with disabilities to just and favourable working conditions. This includes equal opportunities and equal remuneration for work of equal value, safe and healthy working conditions, including protection from harassment, and the redress of grievances. It is important to review the impact of labour market trends as well as employer practices on the fulfilment of these rights.

Race

Increases in flexible working

Figure 1 (see page 40) indicates that the number of workers from ethnic minorities on flexible contracts rose by 79% from 2009 to 2019, compared to 7% for White British workers. This saw the proportion of workers on flexible contracts increase from 18% of ethnic minority workers and 19% of White workers to 20% of both groups in 2019.

This increase continued throughout the COVID-19 pandemic for all groups, with the number of workers from ethnic minorities on flexible contracts 171% higher in 2021 compared to 2009 (from approximately 700,000 to 1,740,000 workers), while the number of White British workers on flexible contracts only rose by 38% (from 4.5 million to 6 million). In 2021, this increased further, with 26% of workers from ethnic minorities and 25% of White British workers having flexible working arrangements.

Self-employment higher for ethnic minorities

The number of self-employed workers from ethnic minorities rose by 88% between 2009 and 2019, while the number of self-employed White British workers rose by 19% during the same period.

Self-employment fell for both groups during the pandemic, but as of 2021, the number of self-employed workers from ethnic minorities is still 60% higher than it was in 2009 (an increase from around 500,000 to 850,000 workers), while the number of White British self-employed workers has fallen by 2% (from approx. 2.9 million to 2.8 million workers). In 2021, 13% of workers from ethnic minorities and 12% of White British workers were in self-employment compared to 14% and 12% respectively in 2009).

The literature shows that disadvantages in the labour market may increase the likelihood of becoming self-employed (Broughton, 2015). For example, migrants in the UK (many of whom are from ethnic minorities) tend to have higher rates of self-employment, which may reflect a lack of other employment opportunities. The disproportionate increase in self-employment among ethnic minorities could be a result of discrimination faced in traditional jobs (Clark, 2015). However, more research is needed to understand how the experience of self-employment differs by race and ethnicity.

Zero-hours contracted employment

Between 2013 and 2019, the number of ethnic minority workers on zero-hours contracts increased by 96%, while the number of White British workers on zero-hours contracts increased by 29%. This increase continued through the pandemic for all workers on zero-hours contracts. By 2021, 3 per cent (approximately 710,000) of White British workers were on zero-hours contracts compared with around 4% (260,000) of workers from ethnic minorities.

Workers in jobs at high risk of automation

The likelihood of working in jobs at high risk of automation changed little for both ethnic minority and White British workers between 2009 and 2019, reducing from 27% to 26% of ethnic minority workers and from 22% to 21% of White British workers. During the pandemic the percentage of ethnic minority workers in jobs at high risk of automation dropped drastically and in 2021 they had become equally likely to work in jobs at high risk of automation as White British workers (20% for both groups). Whether this effect is temporary or not remains to be seen.

However, employment in jobs at high risk of automation had been higher for ethnic minorities between 2009 and 2019, and the number of ethnic minority workers in those jobs increased while it fell among White British workers. The number of workers from ethnic minorities in jobs at high risk of automation was 60% higher in 2019 compared to 2009 (rising from approximately 1 million to 1.6 million workers), while the number of White British workers changed little (from approximately 5 million to 5.1 million workers).

The pandemic has disrupted this trend. Over the course of the pandemic, from Q4 2019 to Q2 2021, the number of workers from ethnic minorities in high-risk jobs fell by 15%, while the number of White British workers in high-risk jobs fell by 5%.

Sex

Flexible working arrangements

Between 2009 and 2021 in Britain, on average 22% of women in work had flexible working arrangements compared to 16% of men. This is according to our analysis of data from the Labour Force Survey. Literature suggests that this contributes to some disadvantages for women, for example the gender pay gap (Costa Dias et al. 2018), and negative consequences for career progression (Chung, 2020).

The COVID-19 pandemic, lockdowns, and widespread working from home for both men and women may have changed some of the negative perceptions around flexible work. Some evidence suggests that the appetite for continued remote working is equally high for men and women, and that the gender care gap narrowed during the pandemic between March and October 2020 (from 6.96 to 4.59 hours per week) (Nicks et al., 2021b).

On the other hand, there is evidence to suggest that there were differences between how men and women experienced remote working during the pandemic, with women being more likely to report negative impacts on health, work–life balance and stress (Jones and Bano, 2021; Aviva, 2021). However, this requires further research to distinguish which patterns are long term and which are likely caused by unique circumstances during the pandemic.

Increase of flexible working arrangements

The number of women on flexible contracts rose 10% from 2009 to 2019, while the number of men on flexible contracts rose by 33% during the same period.

This increase continued throughout the pandemic for both sets of workers. As of 2021, the number of women on flexible contracts is approximately 44% higher than in it was in 2009 (an increase from around 3.1 million to around 4.3 million), while the number of men on flexible contracts has risen by 65% (from around 2.1 million to around 3.5 million).

The proportion of women on flexible contracts increased from 24% in 2009 to 29% in 2021, and the proportion for men increased from 15% in 2009 to 22% in 2021. Still, in November 2021, over 800,000 more women than men were working flexibly.

Growth of self-employment

The number of self-employed women rose 48% from 2009 to 2019, while the number of self-employed men rose 19% during the same period. The rise in female self-employment more closely paralleled the rise in female employment.

The fall in self-employment between 2019 and 2021 was greater for men (-19%) than women (-16%). Overall, between 2009 and 2021, men's self-employment fell by 4% (to around 2.4 million men) while women's self-employment rose 24% (from around 1 million to around 1.3 million women). Similar changes were observed in the proportion of employees in self-employment: despite the overall fall, men were more likely to be self-employed than women in 2021, with 15% of men in self-employment (decreased from 17% in 2009) compared to 9% of women (increased from 8% in 2009).

There is potential for these long-term employment trends to contribute to the gender pay gap. The higher proportion of women working part time is a key driver of the gender pay gap (Costa Dias et al., 2018). Controlling for other factors, women are more likely than men to say they have faced negative career consequences from working flexibly, while men are more likely to feel that their

workload has been negatively affected by colleagues' flexible working (Chung, 2020).

While women were entering self-employment at an increasing rate before the pandemic, the gender pay gap in self-employment persists. According to figures from the Office for National Statistics, men in full-time self-employment earned £363 a week in 2018, while women in full-time self-employment earned £243 (Office for National Statistics, 2018).

Rising numbers of women and men on zero-hours contracts

The numbers of women and men on zero-hours contracts rose from 2013 to 2019 (by 67% and 44% respectively). The increase in the uptake of this work continued through the pandemic for men and even more so for women. As of 2021, 3% of male workers (approximately 410,000) were on zero-hours contracts compared with 4% of female workers (around 560,000).

The gig economy

In the overall gig economy, which is wider than zero-hours contracts, some evidence suggests that gig workers are more likely to be men. For example, a 2018 panel survey found that among those involved in the gig economy, 54% were men and 46% were women compared to 49% and 51% respectively in the overall population (Department for Business, Energy and Industrial Strategy, 2018).

Another survey found that gig workers are more than twice as likely to be men (69%) than women (31%) (Balaram et al., 2017). There are also sex-based differences in types of gig employment, and how visible those types of employment are. Women are more likely to work in jobs such as care and cleaning, while men are more likely to be delivery drivers (Fletcher, 2021).

When it comes to earnings from the gig economy, women tend to have lower earnings and use gig work to supplement other sources of income. Nearly 75% of women in the gig economy earn less than the taxable threshold (compared to 61% of all gig workers), while 66% of female gig workers are in other work (Balaram et al., 2017).

Employment in jobs at high risk of automation

The number of women in high-risk jobs was 7% higher in 2019 than in 2009 (an increase from approximately 3.2 million to around 3.4 million women), while it was 9% higher for men (from 3.1 million to 3.3 million men).

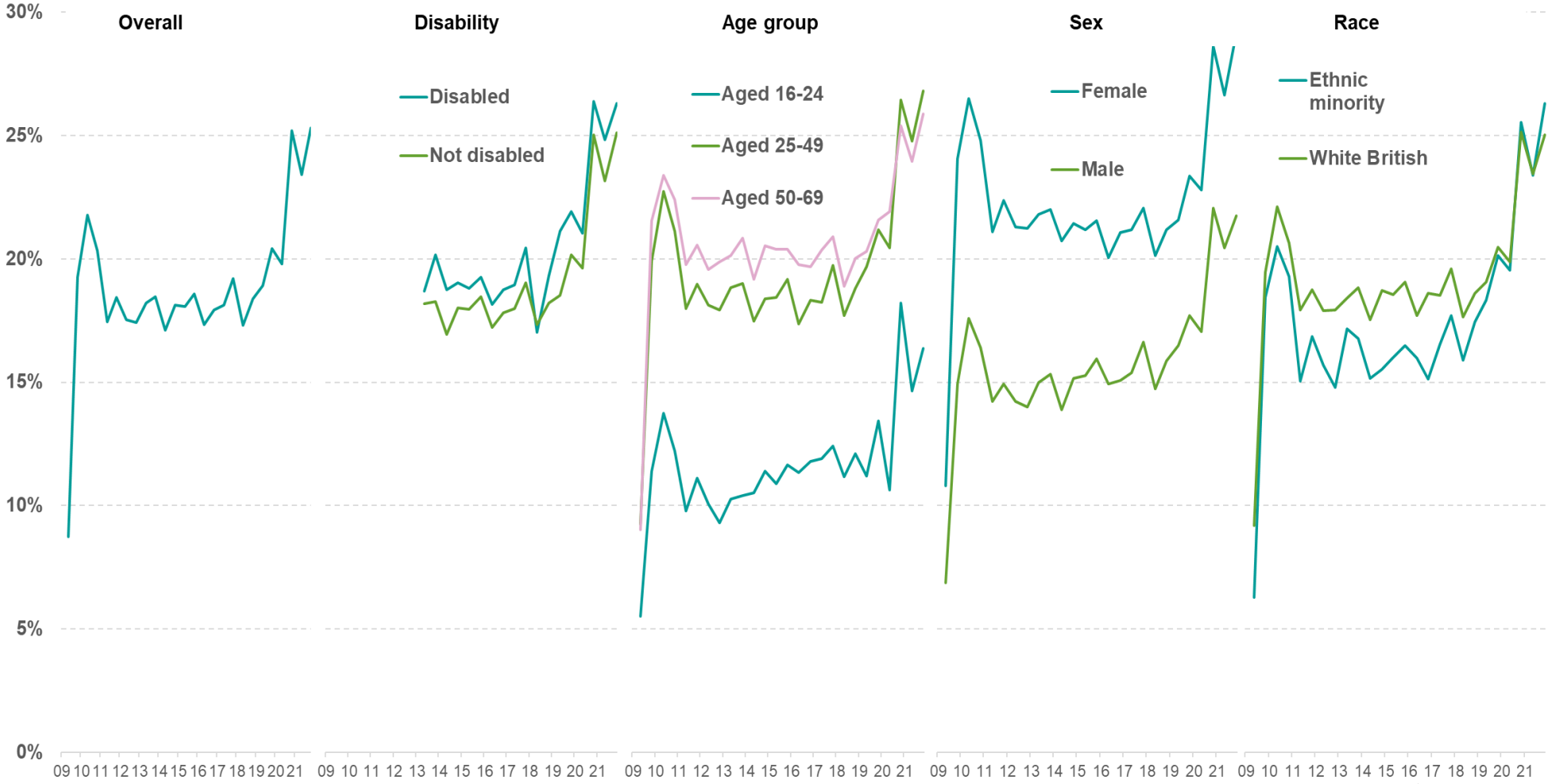
Employment in high-risk jobs fell for both men and women during the COVID-19 pandemic, but at a faster rate among women. Between Q4 2019 and Q2 2021, employment in high-risk jobs fell by 9% among women (to around 3 million women), while it fell by 7% among men (to around 3.2 million men). In 2021, 21% of female workers and 20% of male workers worked in jobs at high risk of automation, a decrease from 24% of female and 21% of male workers since 2009.

At the same time, the potential benefits of automation vary across sectors, and therefore affect men and women differently. For example, the IPPR found that automation is most likely to create jobs in the care sector, where women are overrepresented, and in the professional, scientific and technical services sector, where women are underrepresented in higher-paid positions (Roberts et al., 2019).

Illustrating the data

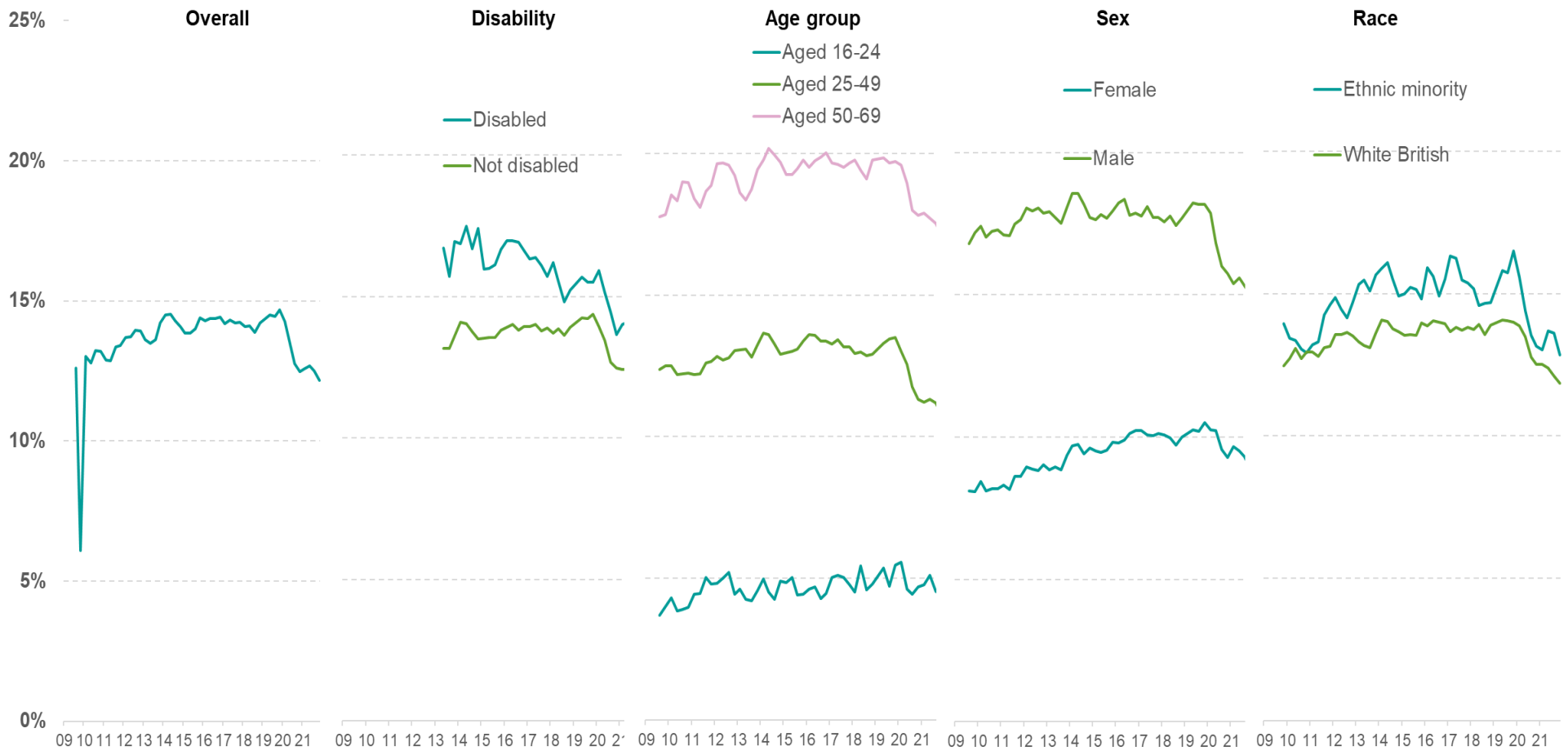
Pages 40 to 43 show graphs that illustrate the data used in this section.

Figure 1: Change in the percentage of workers with flexible working arrangements, by certain protected characteristics, 2009–2021, Britain



Source: L&W calculations of UK Labour Force Survey (Q2 2009 – Q4 2021)

Figure 2: Change in the percentage of self-employed workers, by certain protected characteristics, 2009–2021, Britain



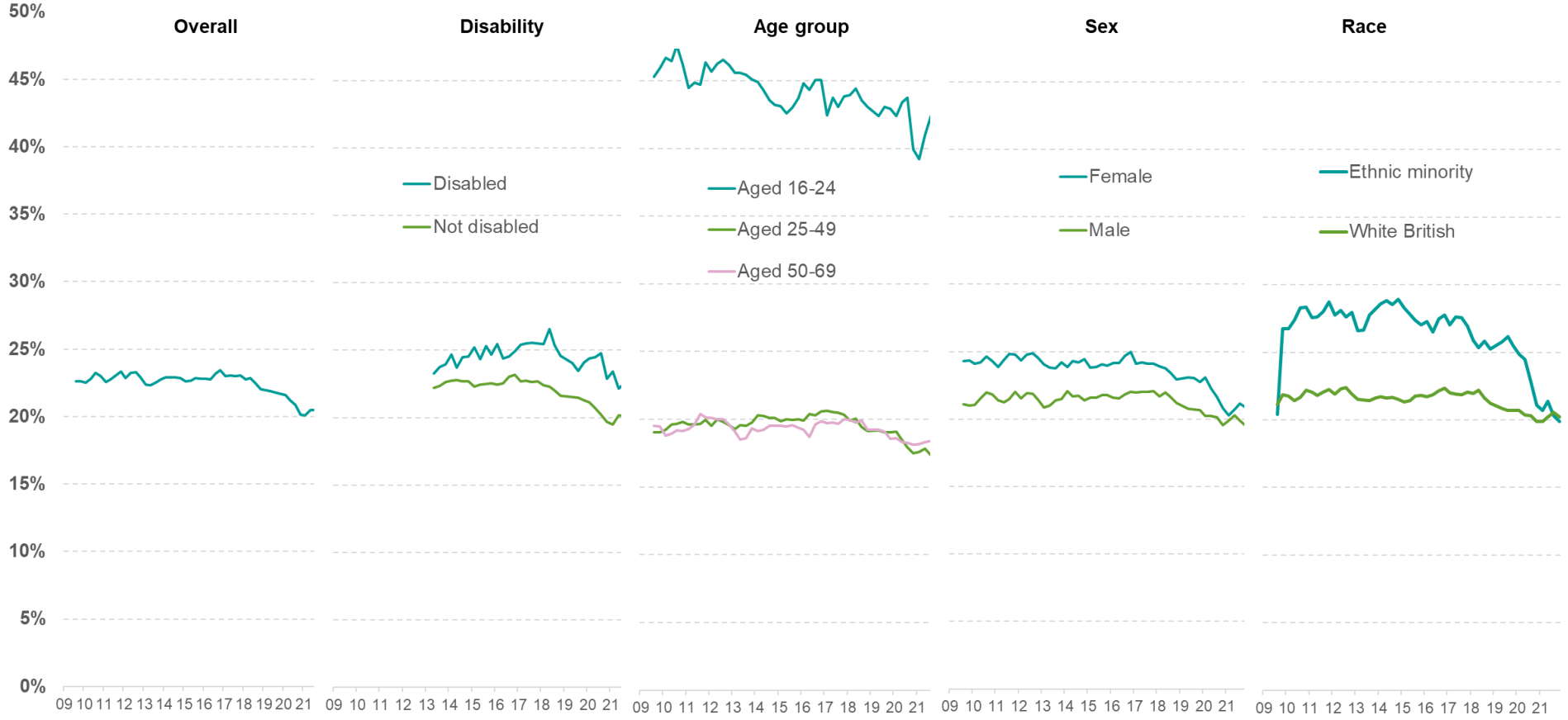
Source: L&W calculations of UK Labour Force Survey (Q2 2009 – Q4 2021)

Figure 3: Change in the percentage of workers employed on a zero-hours contract, by certain protected characteristics, 2013–2021, Britain

Source: L&W calculations of UK Labour Force Survey (Q4 2013 – Q4 2021)

Notes: The red line indicates a discontinuity in the data on zero-hours contracts at the start of 2020.

Figure 4: Change in the percentage of workers employed in jobs at high-risk of automation, by certain protected characteristics, 2009–2021, Britain



Source: L&W calculations of UK Labour Force Survey (Q2 2009 – Q4 2021)

Implications of long-term employment trends on equality in the labour market

Based on the literature review and stakeholder engagement, this research has identified 10 areas of concern in relation to the impact of labour market trends on the equality of the labour market.

1) **Flexible working can affect the progression of workers' careers and earnings**. The increase in flexible working arrangements is welcomed by many people. However, it is important to ensure flexible working benefits both employees and employers. For example, working part-time tends to limit employees' earnings and career prospects, both at the time and in the long term (CIPD, 2019).

   Research suggests this is largely due to the concentration of part-time roles in low-paid, less senior positions with fewer progression opportunities (CIPD, 2019). However, it can also be attributed to differences in accumulated years of experience or even a stigma towards flexible workers among the wider workforce (CIPD, 2019; Costa Dias et al., 2018; Chung, 2020). A survey of young parents in the UK showed many young parents expressed concern that exercising their legal rights to request flexible working would negatively affect them at work (TUC, 2017).

   The response to this situation is not to limit flexible working options. On the contrary, ensuring that flexible working is available and visible in a range of sectors, roles and seniority levels could benefit a greater number of people and improve career progression options for those who work flexibly.

2) **There is a risk of workers' rights being reduced and precariousness increasing in association with the gig economy.** Gig workers engage with their jobs on an ad-hoc basis, have an irregular work schedule, might need to invest or provide capital for the work, and are likely to organise the work through some sort of digital medium (Stewart and Stanford, 2017).

   Studies point to the risk of unfair conditions and inequalities of being a gig worker. For example, a 2021 study found that the majority of the 11 most popular gig economy platforms failed to meet basic standards of fairness when benchmarked against the study's Fairwork principles. The same study also showed that only two of the 11 platforms guaranteed to pay a minimum wage after their costs (Bertolini et al. 2021),

3) **Growth in the gig economy changes the likelihood of workers being in a union.** Unionisation is associated, in general, with better pay and working

conditions. Internationally, unionisation is lower among gig workers, and they may be precluded from forming unions due to being classified as independent contractors (Johnston and Land-Kazlauskas, 2019). This can mean workers may lack platforms to raise their concerns, represent their interests or negotiate their terms of employment (Johnston and Land-Kazlauskas, 2019).

Unionisation is relatively low across the private sector, but low union membership among the lowest-paid private-sector employees is particularly concerning as they are the workers in most need of support and security (Tomlinson, 2021).

4) **AI can perpetuate gender and ethnicity biases.** AI has implications for equality beyond potential changes in jobs. Algorithms are increasingly being used in workplaces to perform or assist various tasks in recruitment, task allocation, and monitoring workforce performance (Briône, 2020). Since AI uses pre-existing data to learn how to make decisions, it risks extending pre-existing inequalities. For example, discrimination arises when algorithms used in recruitment have been trained predominantly using examples of CVs from men (EIGE, 2022).

   Similarly, online algorithms used for the targeting of job ads, when trained on past data, have been shown to have gender and ethnicity biases. This resulted, for instance, in young women seeing fewer STEM-related job adverts, and Asian men being more likely to see ads to become taxi drivers (Centre for Data Ethics and Innovation, 2020).

   Research shows that there is very low diversity in AI workforces in the UK, with over one half of the surveyed firms employing no women and two in five firms having no employees from ethnic minorities (Dabhi et al.,2021). This lack of diversity increases the risk of discrimination and bias being programmed into AI (Dabhi et al.,2021).

5) **If these trends continue, people with certain protected characteristics may benefit from them; but they are also more likely to be affected by reduced job security, precariousness and pay inequality related to these trends.** Ethnic minorities, older workers and disabled people are likely to be more affected by reduced job security, precariousness and pay inequality linked to trends such as the gig economy, self-employment and automation**.**

   Further consultations are needed on the impact of British labour market trends on people with certain protected characteristics to address ‘one-sided flexibility’, ensuring all workers can benefit equally with flexibility being a two-way street.

6) **These long-term changes vary across nations and regions.** London and the South East account for the highest numbers of workers on zero-hours contracts – approximately one in three (33%) of all zero-hours workers in Britain. Zero-hours workers are over-represented in the South East of England, where 17% of all zero-hours workers are employed.

   In terms of uptake of flexible working by time, the North East of England ranks first (at 29%) followed by West Midlands (at 28%). Wales ranks highly in terms of the availability of flexible time of work, but at the same time ranks second-lowest in terms of the availability of flexible place of work arrangements and informal flexibility, compared to other British nations and to English regions.

   Some of the changes in the flexibility and nature of employment may be related to urban employment and business. Rural areas may not benefit in the same way, or may face particular challenges, for example, in access to transport or childcare provision. The reasons behind variations in availability and uptake of flexible work across nations and regions need to be further explored.

Deep dive: disabled workers in the gig economy

The first phase of the research identified a stark increase in the number of disabled people employed on zero-hours contracts. This is only an indicator and a partial measure of the gig economy. However, it was chosen as an area for further analysis in phase two of the research, partly because of the longstanding labour market inequalities experienced by disabled people.

Based on findings from the literature review, data analysis and stakeholder engagement, this section aims to better understand disability employment in the gig economy. It provides:

- an overview of disability employment on zero-hours contracts
- demographics of disabled workers on zero-hours contracts, and
- the implications for equality in the labour market.

Disabled people in the labour market

While not a homogeneous group (as people with more severe impairments often experiencing greater disadvantage overall), disabled people experience some of the worst outcomes in the UK labour market. Disabled people are less likely to be employed (at only 53.5%), compared to non-disabled people, 81.6% of whom are employed (Office for National Statistics, 2022).

Once in employment, disabled people are twice as likely to move out of work than their non-disabled counterparts. Between 2014 and 2019, disabled workers moved out of employment at around twice the rate (8.8% every year) of non-disabled workers (4.9% every year) (Department for Work and Pensions, 2022).

Disabled people in work are likely to be paid less than their non-disabled counterparts and this pay gap increased during the pandemic (Atay et al., 2021). At the same time, disabled people face extra living costs. Research in the UK conducted by Scope showed that on average, disabled people faced a ‘disability price tag’ of up to £583 per month in 2019 (John et al., 2019).

In July 2020, 19.5% of disabled people in Britain had struggled to pay their bills, and 21.3% had to borrow money or rely on credit in the last seven days, compared to 13.4% and 18.2% of non-disabled people respectively (EHRC, 2020).

Despite the challenges faced by disabled people in accessing the labour market, the number of disabled people in employment has been steadily increasing. Between 2013 and 2020, the number of disabled people in employment increased by 1.41 million, an increase of 47% (Powell, 2021). During the same period, the number of non-disabled people in employment increased by 457,000, an increase of 2%. The reasons for this increase (Atay et al., 2021) are:

- As information about disability and health conditions becomes more widely available, a higher proportion of the working population reports a disability due to greater awareness or reduced stigma.
- The overall UK working-age population and employment rate have also been increasing since 2013.

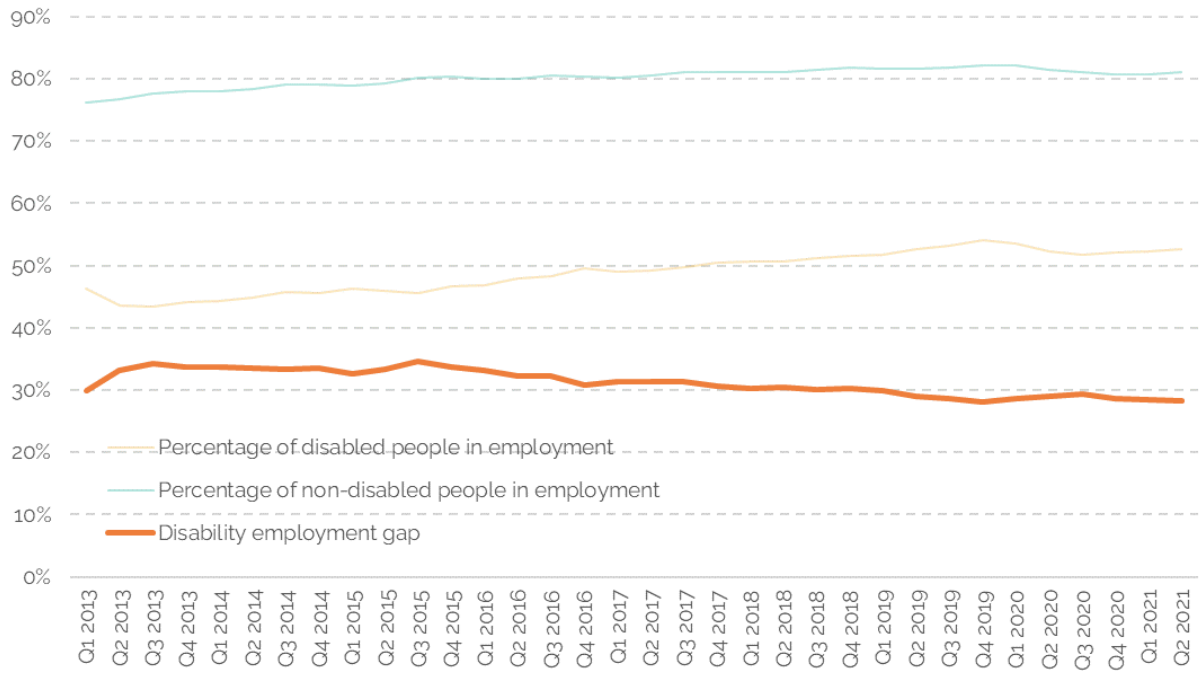
In 2017, the UK Government announced a target to increase the employment of disabled people by one million by 2027. This would require 4.5 million disabled people to be in employment by 2027, although the target is arguably less ambitious than the original 2015 Conservative party manifesto pledge to halve the disability employment rate gap (Atay et al., 2021).

The impact of the COVID-19 pandemic

The COVID-19 pandemic continues to pose a challenge in achieving this aim. During 2020, many disabled people stopped looking for work and became economically inactive (Atay et al., 2021). Research conducted by Learning and Work Institute in 2021 showed the disability employment gap in the UK widened from 28.1 percentage points to 29 percentage points between Q4 2019 and Q4 2020 . During the first year of the pandemic, disabled people were more likely to be temporarily away from paid work compared to their non-disabled peers (Atay et al., 2021). This is likely partly a result of the furlough scheme disproportionately helping disabled people.

Disabled people were more than twice as likely to be unemployed long-term compared to non-disabled people at the end of 2020. According to the Office for National Statistics, there are signs of recovery in employment for disabled people (Office for National Statistics, 2022). The long-term impact of the pandemic on disabled people in employment is still unknown, although it is likely that many challenges faced by disabled people before the pandemic will continue.

Figure 5: Disability employment gap from Q1 2013 to Q2 2021



Source: L&W Calculations of UK Labour Force Survey (from Q1 2013 to Q2 2021)

The gig economy and disabled workers: disabled workers on zero-hours contracts

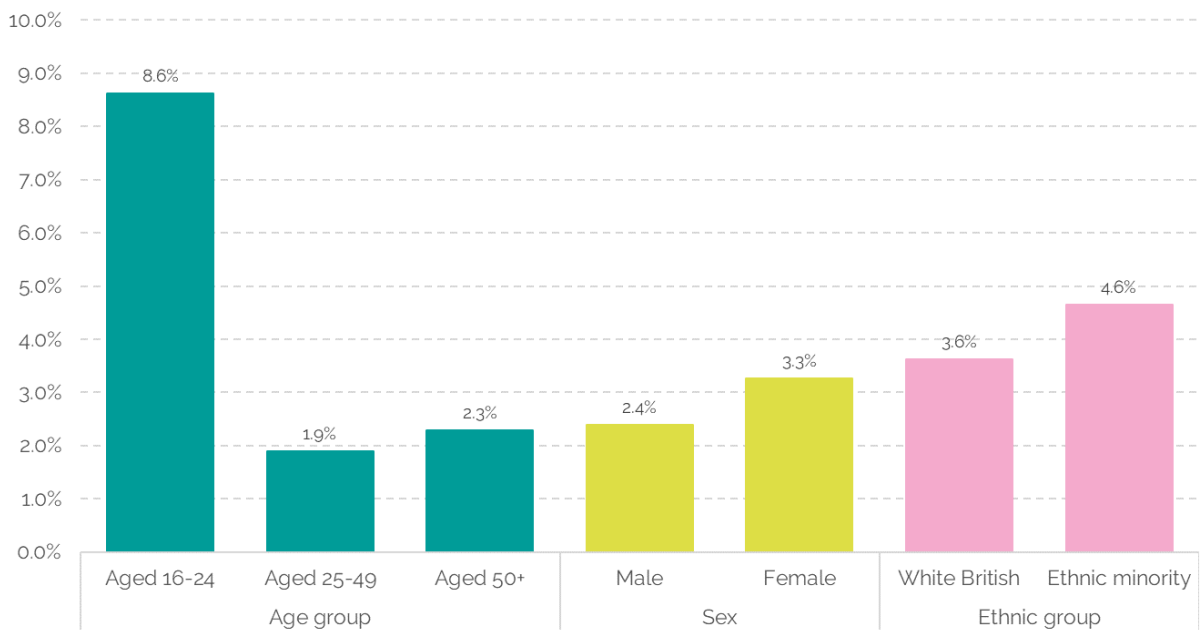
While the gig economy is studied widely, disabled workers' experiences of the gig economy is less understood. As the previous chapter showed, there is evidence of a greater increase in the proportion of disabled workers on zero-hours contracts over the past decade relative to non-disabled workers, a proxy measure for the scope of employment in the gig economy).

Demographics of disabled workers on zero-hours contracts

People are more likely to be disabled as their age increases. However, the youngest disabled workers (those aged 16 to 24) are most likely to be on zero-hours contracts (8.6%) compared to 1.9% of disabled people aged 25 to 49 years old. This is similar to the trends we see for the overall population and non-disabled people in these age groups.

Disabled workers from ethnic minorities are more likely to be on zero-hours contracts compared to White British disabled people (4.65% and 3.6% respectively), despite White British workers being more likely to be disabled than ethnic minority workers. This may be due in part to slightly more workers from ethnic minorities being on zero-hours contracts (4%) compared to White British workers (3%). Disabled women are also slightly more likely to be on zero-hours contracts (3.3%) than disabled men (2.4%).

Figure 6: Proportion of disabled workers on zero-hours contracts, by age, sex, and ethnicity, Britain



Source: L&W Calculations of Labour Force Survey (Q2 2013–Q2 2021)

Industry composition of disabled workers on zero-hours contracts

Overlapping protected characteristics shape the experiences of disabled workers in the gig economy. The most common industries and occupations for disabled workers on zero-hours contracts vary by age, sex, and ethnicity.

The overall distribution by industry of disabled and non-disabled workers on zero-hours contracts is broadly similar. Both disabled and non-disabled workers on zero-hours contracts are most likely to work in health and social work, wholesale and retail, or the education sector.

As seen in Figures 7 and 8 (see pages 52 and 53), the youngest disabled workers (aged 16 to 24) are considerably more likely than disabled workers from other age groups to be employed on zero-hours contracts in wholesale, retail and vehicle repair (16% compared to 9% of 25 to 49 year-olds and 7% of those aged 50+), in accommodation and food services (36% compared to 17% of 25 to 49 year-olds and 7% of those aged 50+), and in routine and semi-routine occupations. Older disabled workers are more likely than disabled workers from other age groups to be employed on zero-hours contracts in health and social work (33% compared to 24% of 25–49-year-olds and 16% of those aged 16-24) and in lower managerial and professional occupations and intermediate occupations.

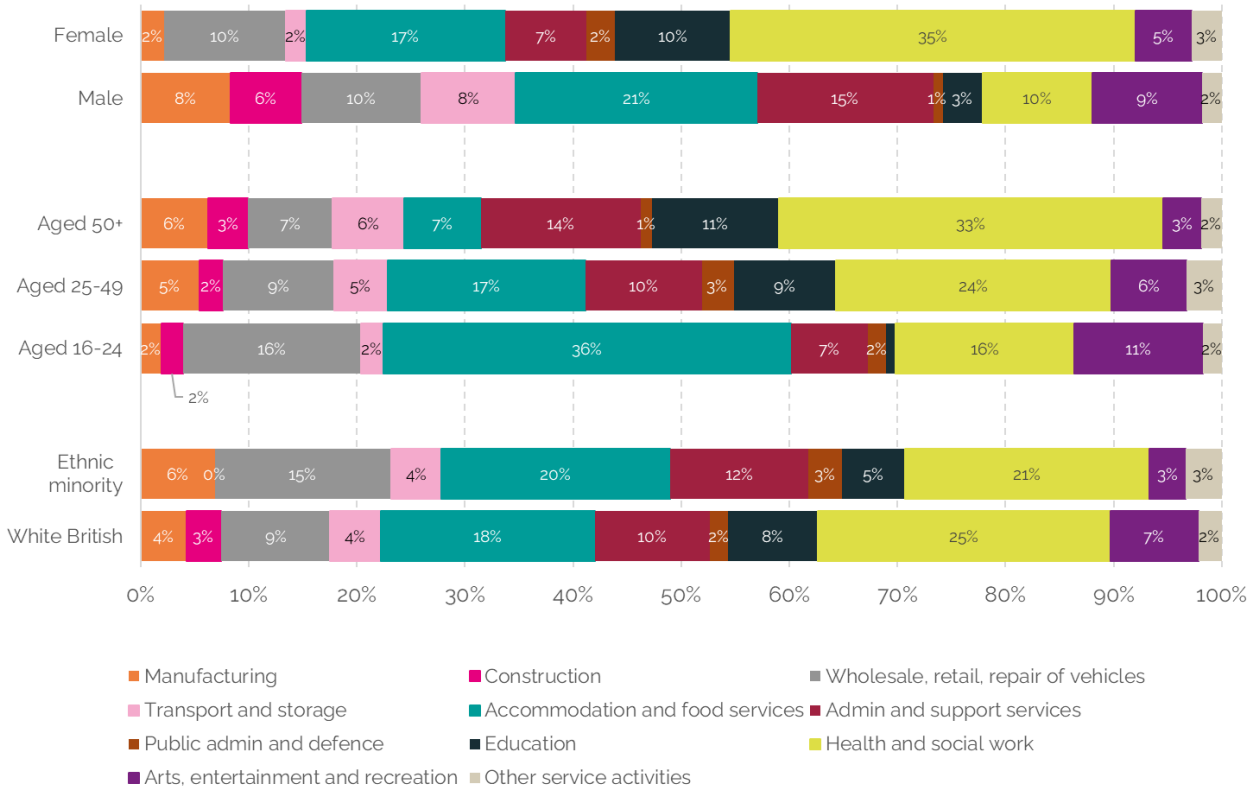
Disabled male workers are substantially more likely than disabled female workers to be employed on zero-hours contracts in construction (6% compared to 0%), admin and support services (15% compared to 7%), manufacturing (8% compared to 2%) and in transport and storage (8% compared to 2%) (see Figure 7 on page 52). Conversely, disabled female workers are considerably more likely than disabled male workers to be employed on zero-hours in health and social work (35% compared to 10%) and in education (10% compared to 3%).

As shown in Figure 8 (see page 53), disabled male workers are substantially more likely than disabled female workers to be employed in routine occupations (30% compared to 18%) and lower supervisory technical occupations (13% compared to 6%). Disabled female workers are considerably more likely than disabled male workers to be employed in semi-routine occupations (at 39% and 24% respectively) and intermediate occupations (16% compared to 9%).

Disabled ethnic minority workers are more likely than their White British counterparts to be employed on zero-hours contracts in wholesale, retail and vehicle repair (15% compared to 9%) (Figure 7). Disabled ethnic minority workers on zero-hours contracts are also somewhat more likely than their White British counterparts to be employed in semi-routine occupations (35% compared to 32%) and lower supervisory and technical occupations (12% compared to 8%) (Figure 8).

Conversely, disabled White British workers are more likely than disabled workers from ethnic minorities to be employed on zero-hours contracts in health and social work (25% compared to 21%), in arts, entertainment and recreation (7% compared to 3%), and in routine occupations (24% compared to 19%).

Figure 7: Industry distribution of disabled workers on zero-hours contracts, Britain



Source: L&W Calculations of UK Labour Force Survey (Q2 2013–Q2 2021)

Figure 8: Occupational composition of disabled workers on zero-hours contracts

Source: L&W Calculations of UK Labour Force Survey (Q2 2013–Q2 2021)

Geographical differences across Britain

As of 2019, the national and regional distribution of zero-hours workers remains similar to the regional distribution of all other workers on more secure contracts, with a few exceptions of regions where barriers to secure work could potentially be higher.

The disability employment rate follows overall employment trends across nations and regions (House of Commons, 2021). In England, the disability employment gap in 2020 to 21 was 26.6%, while in Scotland it was 32.8% and in Wales it was 32.9% (Department for Work and Pensions, 2022). In England, the disability employment gap was narrowest in the South East (22.4%) and widest in the North East (33.1%).

The distribution of disabled workers on zero-hours contracts is also similar to disability employment trends across the country. Compared to zero-hours non-

disabled workers, there are a higher proportion of disabled zero-hours workers in the South East, East Midlands, Yorkshire and the Humber, and Wales. Disabled zero-hours workers are also overrepresented in these regions when compared to the working population average against non-zero-hour employment.

Conversely, there is a relatively lower proportion of disabled zero-hours workers in the East of England, London and in Scotland, compared to zero-hours workers without a disability. This could be interpreted as a positive (avoiding difficulties in accessing basic worker rights) or a negative (missing out on potential job opportunities). There is also under representation in these regions when compared to the working population average.

Figure 9: Regional distribution of workers by disability status and contract type, Britain

Source: L&W Calculations of UK Labour Force Survey (Q2 2013–Q2 2021)

Disabled workers in the gig economy: is it a choice?

The gig economy is neither wholly positive nor wholly negative. This was made clear by experts that participated in this research. While some people celebrate the low barriers for entry and the flexibility that comes with the gig economy, others highlight the decreased security in worker's rights. This section is drawn from the literature review and expert interviews conducted in this research.

Several features of the gig economy make it more attractive for disabled people. The bar for entry is often lower for gig jobs compared to traditional roles, with many gig economy roles not requiring a formal application process. This can make them more attractive to people who often face additional barriers of entry (for example, disadvantages or discrimination within traditional interview processes), such as young people, ethnic minorities or disabled people.

Flexibility

Flexibility is one of the key features of jobs in the gig economy. Many disabled people may benefit from additional flexibility due to fluctuating health conditions or care needs. Disabled people and disability rights activists have been advocating for more flexibility in the workplace.

Many gig jobs can accommodate this need for flexibility more easily than some traditional roles. However, some experts interviewed were sceptical about how many choices disabled people have in the gig economy. They highlighted that sometimes gig work is a choice necessitated by the fact that disabled people are discriminated against in mainstream employment or are unable to find other jobs.

The impact of the COVID-19 pandemic

Since the COVID-19 pandemic there has been an increasing number of employers offering jobs with a more flexible use of time and work, with some aspect of hybrid working. However, some experts argued the increase in the number of disabled people on zero-hours contracts has been due to reduced job opportunities during the pandemic. It was mentioned that some unemployed people might have accepted short-term, insecure jobs during the pandemic, leading to the increase in the number of people on zero-hours contracts.

Access to benefits

One of the concerns from disability rights experts is the potential disconnects between gig economy employment and benefits systems. Experts highlighted that disability-related benefits are often not as flexible as gig-work income. The system is poorly suited to fluctuating working hours and levels of income over time. This particularly affects people with health conditions that cause fluctuating energy levels, which change how much work can be taken over different time periods.

Research shows that disabled people are disproportionately affected by welfare sanctions (Leonard Cheshire, 2019). Further investigation is needed to understand the experiences of disabled gig workers in receipt of benefits, the barriers to participation and how they can be better supported. Experts suggested that a review of how the conditionality framework of disability benefits affects disabled gig workers may be beneficial.

Accessibility and meeting the needs of disabled people

Some experts also highlighted that some gig jobs are incompatible with disabled people's needs. The incompatibility starts with the design of the platforms that the jobs are promoted on, which are not designed with disabled people and accessibility in mind.

A further aspect is the disadvantage faced by disabled people when it comes to meeting performance requirements. For example, in many gig economy jobs, automated performance monitoring is used, and people are paid according to how quickly they complete a task (for example, delivery). Under traditional employment contracts, disabled workers can claim reasonable adjustments. However, these types of performance measurements may not be suited for arranging reasonable adjustments, resulting in increased discrimination against disabled workers.

A major theme from experts was that the gig economy should not be viewed as simply good or bad – what matters is whether it is people's first choice (rather than being necessitated by a lack of other options), and whether it meets their needs. Disabled people's experiences of the gig economy need to be better understood, so that negative experiences do not remain hidden or underexplored.

Section 3: Upskilling and training for people with certain protected characteristics

Key findings

- Changes in the labour market increase the importance of upskilling and training for everyone. Therefore, equal access to upskilling and training opportunities is essential for everyone, regardless of their protected characteristics.
- Access to upskilling and training opportunities is influenced by many factors, such as age, industry, existing education and qualification level and caring responsibilities, among others. These factors result in inequalities in upskilling and training across groups of people with certain protected characteristics.
- Digital skills are increasingly essential in the world of work. However, there are stark inequalities in who is able to participate in the digital world, related to digital exclusion and digital poverty. In particular, older people and disabled people are more likely to have gaps in digital skills.
- To ensure equal access to upskilling and training opportunities, employers and governments must eliminate the barriers to participation that different people may face.

There have been structural changes in the economy that are affecting the way we work. An ageing population, technological developments and impacts of Brexit and the COVID-19 pandemic are transforming the skills that are needed in the labour market.

This chapter:

- discusses why upskilling and training are necessary
- examines specific barriers to access faced by people with certain protected characteristics.
- reviews in more detail the inequalities in digital skills (because digital skills cut across the trends in the future of work, from increases in remote working to gig work to automation), and
- proposes areas where governments and employers could better support people with certain protected characteristics.

Upskilling does not offer a single solution to the inequalities that exist in the labour market. In fact, experts suggest that bias and discrimination pose barriers to the career progression of people with certain protected characteristics even when they are highly qualified. However, this report views access to development opportunities as important to all individuals and the future of work and therefore highlights areas where action is needed to improve equality in access.

Why upskilling and training are necessary

According to research by the Confederation of British Industry (CBI), nine in ten employees across the UK will need new skills by 2030 (CBI, 2020). As automation and AI creates new jobs but also puts some at risk, employees are likely to need to retrain to find new jobs or adapt to changing roles. Changes in the nature of jobs, such as an increase in remote working or gig economy work, mean that digital skills are essential for increasing numbers of jobs.

With the UK Government aiming to achieve its net-zero goals by 2050, new green skills will also be in demand, especially in sectors such as green energy, manufacturing, and construction (Department for Business, Energy and Industrial Strategy, 2021b). As the workforce becomes older and working lives become longer, opportunities to upskill throughout people's careers become increasingly important.

Investing in skills is crucial for increasing productivity levels, mitigating skills shortages and promoting innovation. A study by PricewaterhouseCoopers (PwC) and the World Economic Forum found that effective upskilling initiatives can help create 5.3 million net new jobs globally by 2030 (World Economic Forum, 2021).

McKinsey research also showed that with effective reskilling the productivity levels of the UK could increase by between 6% and 12% (McKinsey & Company, 2020). This would be particularly important as productivity levels in the UK have broadly stagnated since 2008, while the British labour market is currently showing fewer unemployed people than vacancies.

Upskilling and training policy in the UK

For foundational or essential skills, government investment is important. Adults in England are legally entitled to fully-funded essential English, maths, and digital skills learning, as well as to study for their first full qualification at up to level 3 for individuals aged 19 to 23 (ESFA, 2021). These entitlements are set out in the Apprenticeships, Skills and Children Learning Act 2009.

In Wales, in addition to these entitlements, there is a Welsh language entitlement (Welsh Government, 2017). In Scotland, the Big Plus campaign offers free advice and tutoring to support adults to improve literacy and numeracy (Skills Development Scotland, 2022).

However, in England adult participation in learning has fallen 50% over the last decade for those taking qualifications at Level 2 and below. There has been a 33% reduction in the number of adults taking Level 3 qualifications between 2010–11 and 2020–21. Even with the announcement of increased funding as part of the Comprehensive Spending Review, including the £2.5 billion National Skills Fund, total spending has reduced by 38% between 2010–11 and 2021 (Sibieta et al, 2022).

A number of new upskilling schemes have been announced across British nations and regions in recent years:

- In 2019, Welsh Government launched two pilot schemes aimed at upskilling and retraining adult learners: Personal Learning Accounts and Flexible Adult Learning Programme (Colleges Wales, 2020).
- In Scotland, the National Transition Training Fund was launched in 2020 to help adults retrain for a move into sectors with the greatest potential for future growth and job opportunities (Scottish Government, 2020). Individual Training Accounts were introduced to help improve work-related skills and qualifications (Skills Development Scotland, 2017).

- In September 2020, the UK Government also announced the Lifetime Skills Guarantee, which gives adult learners in England (who will be studying for their first full Level 3 qualification) the opportunity to study a fully funded course to improve their employability or retrain for a new job (Department for Education, 2021).

Essential digital skills vary by certain protected characteristics

Digital skills cut across many of the trends relating to the future of work. From the increasing prevalence of working from home to the expansion of the gig economy and automation, the importance of digital skills in the world of work is growing. Basic digital skills, such as proficiency in Microsoft Office or the ability to communicate digitally, have become essential skills for many workers.

Over nine in ten (92%) businesses say that having a basic level of digital skills is important for employees at their organisation (Dromey, 2021). Digital skills are also increasingly important for job searches and applications. Four in five (82%) job vacancies ask for digital skills (Dromey, 2021).

However, the Lloyds Essential Digital Skills Index data demonstrates that there are stark differences in digital skills by disability status, working hours, qualification levels and age groups (Lloyds Bank, 2021).

The data shows digital skills gaps across demographic characteristics. By age group:

- adults aged 55 and over are least likely to have essential digital skills, with 67% having gaps in foundational digital skills
- 72% having gaps in essential digital skills for life
- 55% having gaps in essential digital skills for work (compared to 1%, 3% and 26% respectively for those aged 18 to 34).

There is little difference in digital literacy by ethnic group. Men and women are approximately equally likely to have essential digital skills for work (at 66% and 64% respectively). However, women are less likely than men to have foundational digital skills (80% compared to 87% of men) and essential digital skills for life (at 74% compared to 82% of men).

People with sensory impairments are significantly more likely to have gaps in digital capabilities than people with no impairments:

- 45% have gaps in foundational digital skills

- 49% have gaps in life digital skills
- 45% have gaps in work digital skills

(compared to 12%, 17% and 34% respectively for people with no impairments).

Since digital skills are measured by the ability to complete digital tasks, digital skills gaps are also reflective of disabled people's access to assistive technologies.

Foundational-level skills consist of:

- using the different menu settings on a device to make it easier to use
- finding and opening different applications or programmes on a device
- updating and changing a password when prompted to do so
- turning on a device and logging in to any accounts or profiles
- opening an Internet browser to access websites
- utilising the available controls on a device, and
- connecting a device to a wifi network.

Life and work tasks consist of:

- problem solving
- communicating
- financial transactions
- handling information, and
- being safe and legal online.

A full task list is available in the appendix of 2021 Lloyds Essential Digital Skills report.

Barriers to accessing training and upskilling for people with certain protected characteristics

Access to upskilling and training opportunities is not equal. It is influenced by factors such as:

- age
- industry
- existing qualification levels, and
- caring responsibilities.

These factors can make it more difficult for people to access training.

Our expert interviews and wider evidence review identified that the barriers to accessing upskilling and training can be broken into categories. Many of the barriers highlighted below affect people with certain protected characteristics disproportionately. This means people with certain protected characteristics can find it more difficult to access adult learning and skills training.

Time commitments and costs

The Work Foundation analysis of the 2017 Skills and Employment Survey showed that 21% of working parents in the UK felt childcare costs to be a barrier to accessing training (Walker et al., 2020). They also found that being on lower pay, long working hours and time pressures prevent people from accessing training opportunities.

Digital poverty

Digital exclusion also prevents some people from being able to access training in the UK (Aldridge et al., 2020). With the number of people learning online increasing since the COVID-19 pandemic, those who do not have access to digital devices and data or lack the skills to engage are being left behind.

Unequal engagement from employers

Employer involvement in the provision of in-work training varies across sectors and job roles. Employees in professional occupations and those who already have higher levels of qualifications are more likely to receive training from employers in the UK (Office for National Statistics, 2017).

Our interviews with experts highlighted that this can be explained by employers being most likely to see the economic case for upskilling related to technical or firm-specific skills. Experts also suggest that employees with certain protected characteristics, such as older workers, can be overlooked by employers when decisions are made about who gets training, due to biases.

Attitudinal barriers

People’s negative past experiences of education, or negative self-beliefs, can be a barrier to engaging in learning. For example, evidence suggests that feeling too old to learn can be a barrier to participation in learning, which is discussed in more detail below.

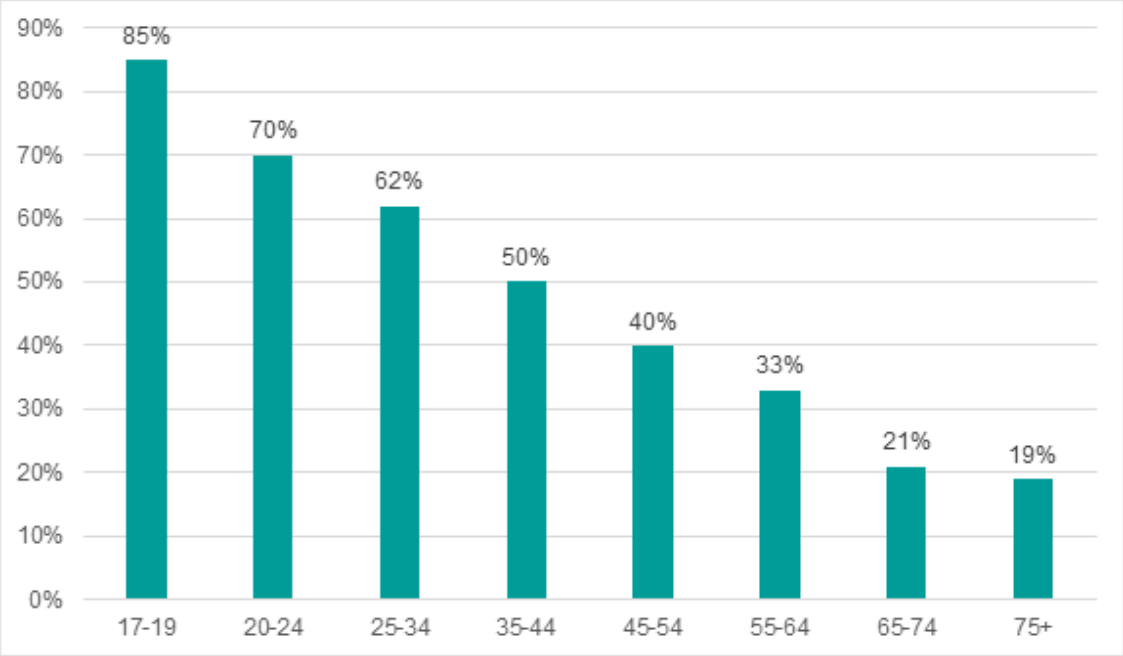
Age

L&W's Adult Participation in Learning survey demonstrates that participation in learning in the UK declines dramatically with age (Figure 10). The survey uses a broad definition of learning, including formal, non-formal, informal and self-directed learning.

Seventeen to 19-year-olds are the most likely to report engaging in learning, with a rate of 85%. As age increases the rate of participation in learning drops to:

- 70% of adults aged 20 to 24
- 62% of 25- to 34-year-olds
- half of adults aged 35 to 44
- two fifths of 45- to 54-year-olds
- a third of adults aged 55 to 64, and
- around a fifth of adults aged 65 and over.

Figure 10: Adult participation in learning by age, UK, 2021



Source: L&W Adult Participation in Learning Survey (Jones et al., 2021)

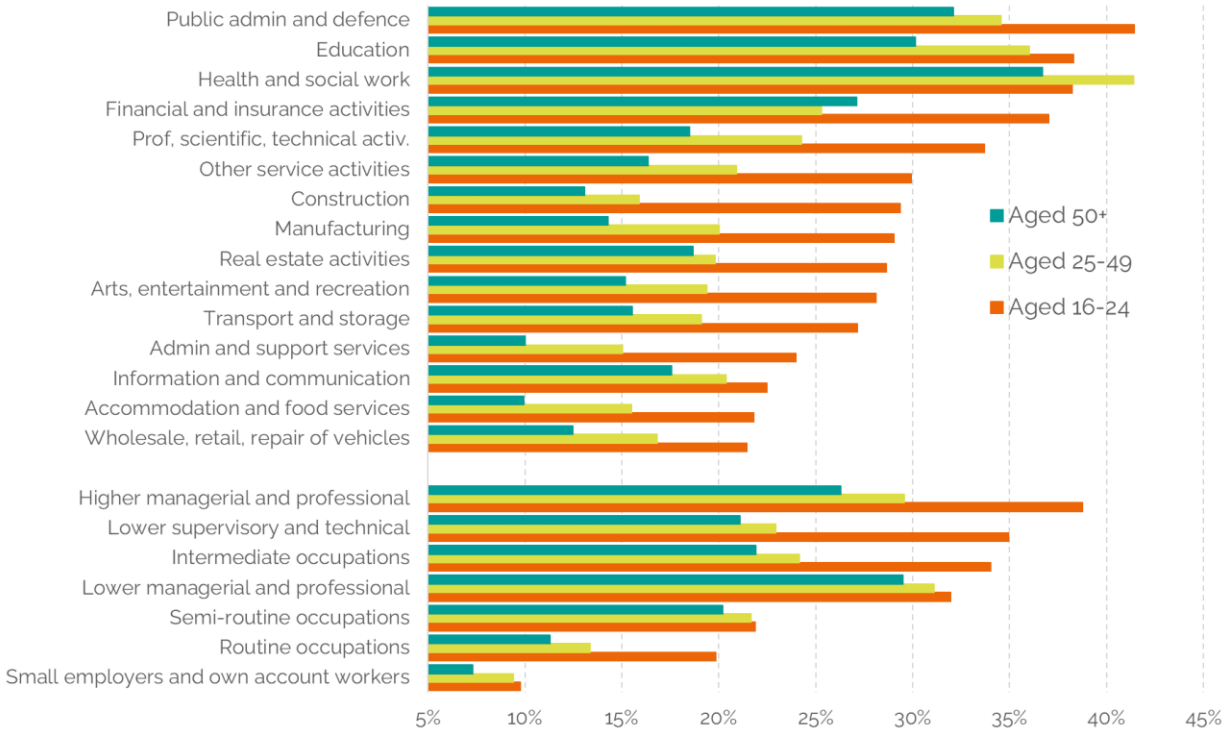
The likelihood of accessing in-work training also decreases with age. Analysis of the 2019 Annual Population Survey data shows that

- the youngest workers in Britain (those aged 16 to 24) were most likely to receive in-work training (28%)

- for those aged 25–49, the likelihood was 25%
- this decreased to 21% for those aged 50 and over.

Across all industries other than health and social work, the youngest workers were most likely to receive in-work training (see Figure 11). The greatest disparity occurred in construction, where the youngest workers were 16% more likely to receive in-work training than the oldest workers. The youngest workers are also most likely to receive in-work training across every occupation group.

Figure 11: The proportion of workers who received in-work training related to development in the last three months, across occupation group and industry in Britain (2019)



Source: L&W analysis of Annual Population Survey (APS) 2019. Industries with small sample sizes have been excluded.

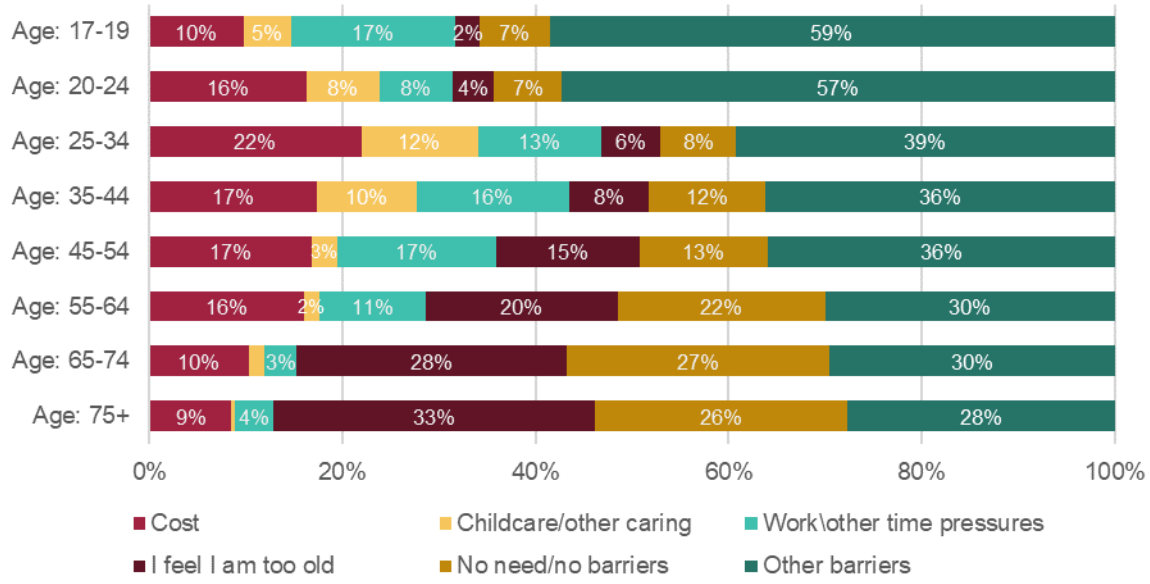
On the one hand, individuals at the start of their careers and with less work experience need more training to settle into and progress in their jobs. At the same time, experts interviewed for this research suggested that employer biases against older workers also contribute to these inequalities.

Investing in older workers can seem less attractive to employers who may view older workers as approaching retirement. Biases against older people's abilities, such as viewing them as less adaptable, can also negatively affect older workers' access to opportunities.

The evidence on inequalities in accessing training across age groups suggests that older people face particular barriers to participating in learning and training. L&W's Adult Participation in Learning Survey provides evidence on how barriers to taking up learning vary by age group (Jones et al. 2021).

Negative self-beliefs, namely feeling too old to learn, is the barrier that disproportionately affects older people the most – particularly those aged over 65, but also those aged 55 to 64 (see Figure 12). Other age groups are disproportionately affected by other barriers. For example, people aged 25 to 34 are more likely to report caring responsibilities as a barrier to learning compared to other age groups.

Figure 12: Barriers to participating in learning by age, UK, 2021



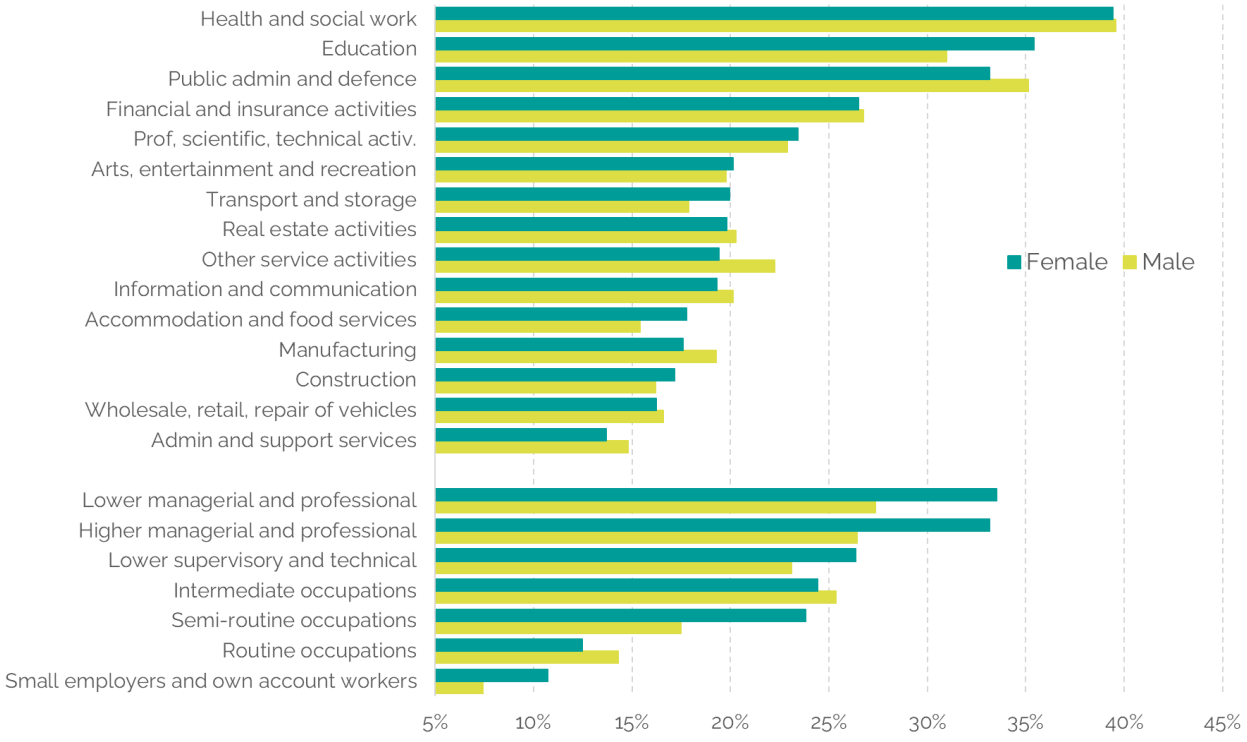
Source: L&W Adult Participation in Learning Survey (Jones et al. 2021).

Sex

According to L&W's 2021 Adult Participation in Learning Survey, men and women in the UK are almost equally likely to be current or recent learners (45% and 43% respectively) (Jones et al., 2021). However, Annual Population Survey data analysis conducted for this research demonstrates that in Britain, women are more likely to receive in-work training (27%) than men (22%). This may be to some extent due to women being overrepresented in sectors that provide relatively more in-work training, such as health and social work and education.

Across industries in Britain, women and men receive in-work training at similar rates (see Figure 13). Notably, women in managerial occupations (both higher and lower) are substantially more likely to receive in-work training than men.

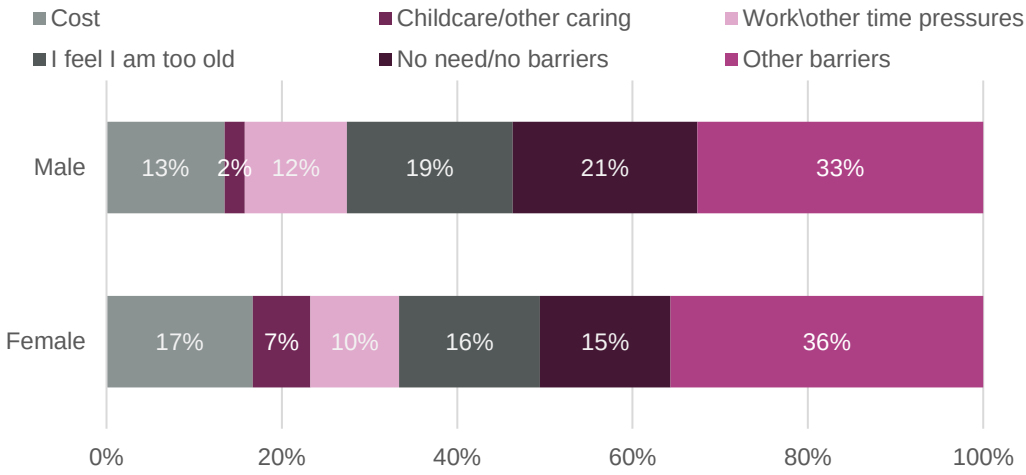
Figure 13: Proportion of male and female workers who received in-work training or training related to development in the last three months, across occupation group and industry, in Britain



Source: Annual Population Survey (APS) 2019. Industries with small sample sizes have been excluded.

Some of the barriers to engaging in learning are gendered. The Adult Participation in Learning Survey demonstrates that 'childcare and other caring responsibilities' is the barrier disproportionately affects women that most (see Figure 14, page 68).

Figure 14: Barriers to participating in learning by gender, UK, 2021



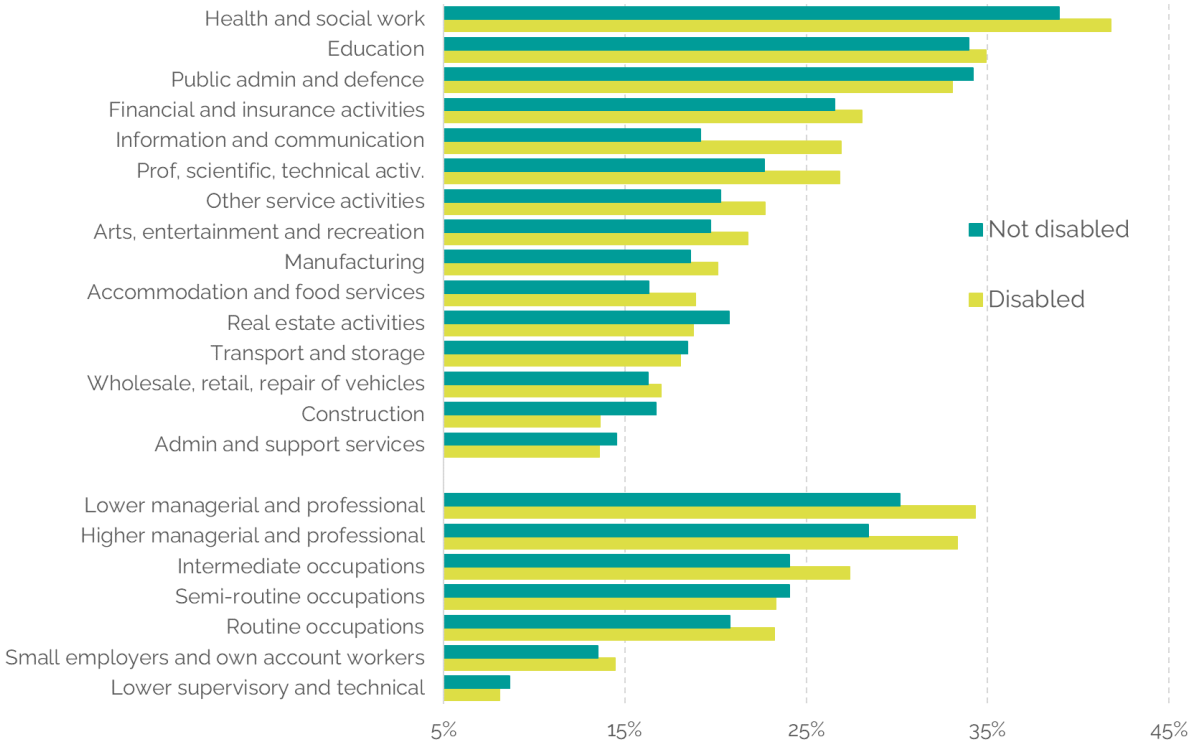
Source: L&W Adult Participation in Learning Survey (Jones et al., 2021).

Disability

Annual Population Survey data analysis suggests that in Britain disabled workers are broadly as likely to have received in-work training (26%) as workers without a disability (24%). When looking across industries, generally disabled and non-disabled workers receive in-work training at similar rates. Notable disparities occur in the information and communication industry, where disabled workers are eight percentage points more likely to receive training.

Disabled workers are also slightly more likely to receive in-work training across most occupation groups (see Figure 15, page 69). Exceptions to this are lower supervisory and technical and semi-routine occupations, where workers without a disability are marginally more likely to receive in-work training.

Figure 15: Proportion of workers who received in-work training or training related to development in the last three months, across occupation group and industry, in Britain (2019)

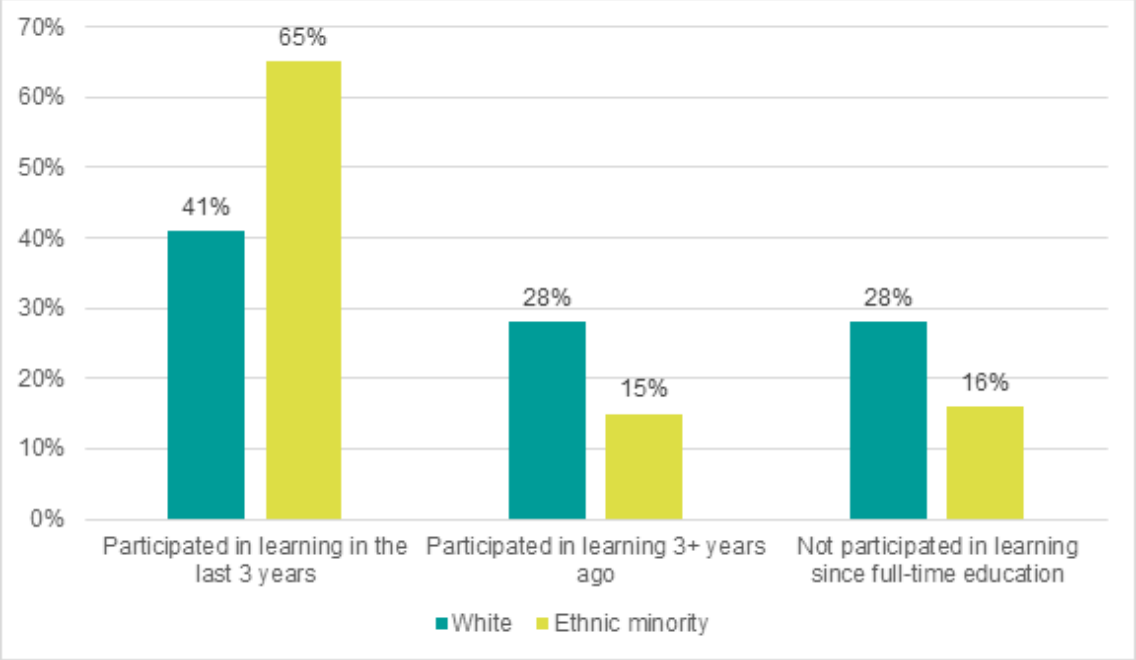


Source: Annual Population Survey (APS) 2019. Industries with small sample sizes have been excluded.

Ethnic group

In the 2021 Adult Participation in Learning survey, respondents from ethnic minorities were significantly more likely to be current or recent learners when compared to respondents from White backgrounds (Figure 16, page 70). Age may explain some of this difference because in the UK people from ethnic minorities are more likely to be younger (Ethnicity facts and figures, 2018).

Figure 16: Adult Participation in Learning by ethnicity, UK, 2021



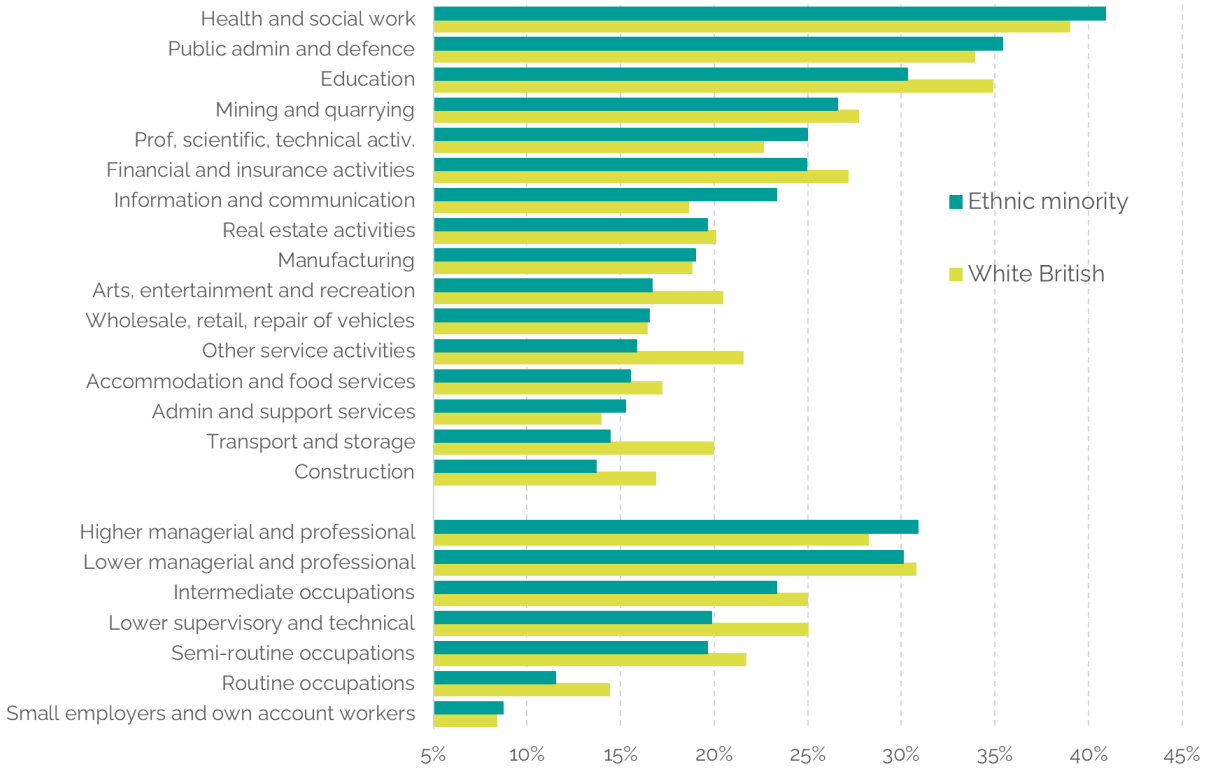
Source: L&W Adult Participation in Learning Survey, (Jones et al., 2021)

At the same time, Annual Population Survey data shows that White British workers are marginally more likely (24%) to have received in-work training in the last three months of asking, compared to workers from ethnic minorities (23%).

Across all industries, other than health and social work, and mining and quarrying, workers from ethnic minorities are less likely to receive in-work training than White workers (Figure 17). The greatest disparity occurs in ‘other service activities’, where White workers are 11% more likely to receive in-work training than workers from ethnic minorities.

In all occupation groups, other than higher managerial and professional, workers from ethnic minorities are less likely to receive in-work training than White workers.

Figure 17: Proportion of workers who received in-work training or training related to development in the last three months, across occupation group and industry, in Britain (2019)



Source: Annual Population Survey 2019. Industries with small sample sizes have been excluded.

Supporting people with certain protected characteristics to access upskilling and training

This chapter provides a broad understanding of the barriers to accessing upskilling and training opportunities faced by people with certain protected characteristics. Interviews with experts in the field explored how people with certain protected characteristics can be best supported to access training, in light of the specific barriers they may face. The onus is on governments, employers and training providers to eliminate barriers and to promote access to training for people with different protected characteristics and different needs.

Our research identified priority areas for further research and policy development, to support people with certain protected characteristics. They are explained below.

Policies and practices to support people with childcare responsibilities

The needs of people with certain protected characteristics vary and are compounded by intersections between protected characteristics: for example, age and gender. For instance, caring responsibilities are a barrier affecting women disproportionately, but this does not only affect women and it is also intersectional with other protected characteristics, such as age.

The experts interviewed for this research suggest that improvements to childcare services would help. For example, greater flexibility, affordability and availability of childcare, and better eligibility criteria for childcare services, would support people with caring responsibilities to do training.

The Welsh Government has announced that from September 2022, parents in education and training will be eligible for government-funded childcare (Welsh Government, 2022b). Scotland has recently expanded its universal childcare offer (Scottish Government, 2022).

Employees who need to take time out of work to train could particularly benefit from the promotion of available free childcare or financial support to gain new skills. Further research is required to explore how the greater availability of affordable, flexible childcare can support participation in training as well as the labour market more widely.

Exploring ways to address specific barriers to accessing training faced by older workers

Older workers are identified as a group that is disadvantaged by barriers to accessing training. It is important to explore further how to support them. This includes doing outreach and promoting upskilling opportunities to this group, opportunities to participate in upskilling alongside same-age groups, and targeted employability support programmes.

To address the bias of training opportunities mostly being for younger people, successful methods of outreach and promotion of upskilling opportunities to older workers should be evaluated.

Engaging employers in upskilling and training employees, particularly for people who are less likely to take part

The Skills White Paper for England identifies that employer involvement is key in supporting participation in upskilling and training for the overall population and also for people with certain protected characteristics (Department for Education, 2021). The UK Government's recent 'Levelling Up' paper highlights the importance of skills in driving prosperity and productivity, with employers at the heart of skills provision (HM Government, 2022).

However, as employer investment in training varies across groups, there are risks of some employees being left behind. This applies to older workers as well as workers in specific roles, such as lower-skilled jobs.

Research shows that small- and medium-size enterprises (SMEs) need more support to provide upskilling and training (FSB, 2017) and make up a significant proportion of employment (Department for Business, Energy and Industrial Strategy, 2021c). Support could be in the form of overall guidance or financial incentives.

The experts interviewed for this research also stated that employers are more likely to invest in training when it relates to firm-specific skills. Therefore, additional incentives are likely to be needed to engage employers in providing training which is focused on more transferable skills.

The need for equality of access to training opportunities should be seen in the wider context of the need for equality in job opportunities, career progression, work retention and pay. Eliminating discrimination is the first step in achieving an equal workplace and protecting human rights, whether it is about equal access to job opportunities, equal pay or upskilling and training.

Promoting the Equality Act 2010

Some experts interviewed for this research recommend that the Equality Act 2010 should be better promoted across society and argued that there is still uncertainty around what the Equality Act means for both employers and employees.

When the Equality Act was introduced in October 2010, it brought together over 116 separate pieces of legislation into one single Act. The Act provides a legal framework to protect the rights of individuals and advance equality of opportunity for all. It provides Britain with a discrimination law which protects individuals from

unfair treatment and promotes a fair and more equal society. Experts interviewed for this research reported that knowledge of the Equality Act and its implications among employers and training providers is still not comprehensive.

Section 4: Conclusions

This research was commissioned to understand the impact of long-term British labour market trends on people with certain protected characteristics. The first phase of the research explored the impact of the increasing uptake of flexible work, self-employment and the gig economy, and the use of artificial intelligence (AI) and automation on workers with particular protected characteristics. This included:

- disabled people
- some ethnic minorities
- younger and older people, and
- women.

These long-term labour market trends can lead to positive changes for workers. For example they can allow greater flexibility and open up access to the labour market for groups who previously would have been excluded. Our research highlighted that these changes in the labour market also bring challenges that are likely to have a disproportionate effect on people with certain protected characteristics.

Flexible working can affect career and earnings progression. There is a risk of a reduction in worker's rights and increasing precariousness associated with the growth of the gig economy. Technological advances and automation put some jobs at risk of disappearing.

As some people with certain protected characteristics are overrepresented in insecure jobs, the further expansion of alternative forms of employment or automation could exaggerate pre-existing inequalities in the labour market. Moreover, AI could perpetuate biases and discrimination on the basis of sex and ethnicity in workplace practices, resulting in risks of human rights being infringed.

Our findings

Our research looked into data on the changes in the labour market by protected characteristics.

Age

Since 2009, the increases in uptake of flexible working arrangements and self-employment have been sharpest for older workers (those aged 50 to 69 years old). Over the same time period, the increase in zero-hours contracted employment has been highest for youngest workers (those aged 16 to 24). Employment in jobs at high risk of automation has increased by 17% for 50 to 69-year-olds since 2009, while it fell among all other age groups.

Disability

Since 2013, flexible working, self-employment, zero-hours contracted employment and employment in jobs at risk of automation increased for disabled workers compared to non-disabled workers.

Race

Flexible working and self-employment has increased at a significantly faster rate for workers from ethnic minorities than White British workers since 2009. Zero-hours contracted employment has increased at a significantly faster rate among workers from ethnic minorities than White British workers since 2013. Employment in jobs at high risk of automation has increased sharply for ethnic minorities since 2009, while it fell for White British workers.

Sex

While women are more likely than men to use flexible working arrangements, since 2009 the uptake of flexible work has been increasing at a faster rate among men. Since 2009 and 2013, self-employment and zero-hours contracted employment increased at a much faster rate for women compared to men. Employment in jobs at high risk of automation has fallen for women since 2009, while it increased for men.

Upskilling opportunities for people with certain protected characteristics in the gig economy

The second phase of the research examined two topics: disabled workers in the gig economy and upskilling opportunities for people with certain protected characteristics.

On the one hand, this represents greater access to work for people who often face barriers accessing mainstream employment, enabling many to have the flexibility they need to work. At the same time, as gig workers often lack basic rights such as paid sick leave or annual leave, this increase could have detrimental consequences. Further research should be conducted with disabled people with lived experience of the gig economy to gain a better understanding of this trend.

Upskilling for the future world of work is relatively well evidenced in comparison to disabled workers in the gig economy. In recognition of the importance of training for the future of work for everyone, inequalities to accessing opportunities for upskilling and training were examined across groups of people with certain protected characteristics.

We found that older workers are disadvantaged from access to upskilling opportunities, including in-work training. Older people and disabled people are also more likely to require training in digital skills, which are essential for an increasing number of jobs, such as remote working and gig economy work. Areas for further research and policy development should include:

- exploring ways to support people with childcare responsibilities
- supporting older workers, and
- engaging employers in training people who may be left behind.

Where more data is needed

There are significant gaps in available data – both quantitative and empirical – on how these long-term changes affect people with certain protected characteristics. In particular, more evidence is needed on differences by impairment types, ethnic groups and gig workers not on zero-hours contracts. Moreover, sample sizes do not allow analysis at a regional level for people with certain protected characteristics or how some of these characteristics overlap.

More qualitative research is needed on how experiences of the gig economy vary for people with different disabilities, including physical and learning disabilities. Research should also explore how self-employment and the gig economy are related to job quality by protected characteristic (see the Appendix for more details).

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Matt Creagh, Policy Officer, Trades Union Congress (TUC)
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Anna Thomas, Co-Founder and Director, Institute for the Future of Work
Hannah Slaughter, Senior Economist, Resolution Foundation
Adrian Wakeling, Senior Policy Advisor, The Advisory, Conciliation and Arbitration Service (ACAS)
Victoria Winkler, Director, Bevan Foundation

We would like to also thank our expert interviewees and workshop attendees for sharing their invaluable insights with us and for their time.

Interviewees:
Rachel Statham, Associate Director for Work and Welfare State, Institute for Public Policy Research (IPPR)
Humie Webbe, Strategic Equality and Diversity Lead, National Training Federation for Wales
Tera Allas, CBE, Director of Research and Economics, McKinsey & Company
Clare Gray, Organisational Lead for Disability Advocacy, Shaw Trust
Gemma Hope, Director of Policy, Leonard Cheshire Disability
Fazilet Hadi, Head of Policy, Disability Rights UK
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Workshop participants:

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Shavanah Taj, General Secretary, Wales TUC
James Taylor, Executive Director of Strategy, Impact and Social Change, Scope
Jane Watts, Research, development and project support in the lifelong learning sector
Jacqueline Winstanley, Founder and CEO, Universal Inclusion and The Inclusive Entrepreneur

Appendix: Areas for further research

Based on our findings, we recommend that further research is focused on the following areas:

1. reasons behind the long-term trends,
2. experiences of specific groups, and
3. possible policy responses.

Below are questions that could be explored further:

Reasons behind the trends:

1. What are the reasons behind the variable uptake in flexible working across British nations and regions, and what are the implications of this for people with certain protected characteristics?
2. Which of the changes in flexible working patterns and gig economy brought about by the COVID-19 pandemic are likely to be long term, and which are likely to be short term?
3. What are the reasons behind the increases in employment in jobs with high risk of automation among specific groups, in particular disabled people and ethnic minorities? How do these changes relate to the wider labour market trends?

Experiences of specific groups:

1. How do experiences of people with protected characteristics vary across different types of flexible working arrangements?
2. What is the impact of uptake of flexible working arrangements career and pay progression of people by certain protected characteristics, such as age, disability, or ethnic background?
3. How does intersectionality affect people's experiences of flexible work, self-employment or work in the gig economy? For example, how do experiences of ethnic minority self-employed people differ by sex?

4. How are self-employment and the gig economy related to job quality by protected characteristic?
5. How do the experiences of ethnic minority workers in self-employment compare with White British workers?
6. How do women's experiences of the gig economy differ from men's?
7. How do experiences of the gig economy vary by age, levels of qualifications and types of jobs?
8. How do disabled people's experiences of the gig economy vary by impairment type?
9. How do young people from ethnic minorities engage with the gig economy? Are there any particular ethnic minority groups that are more disadvantaged in the gig economy? How does their interaction differ from White British young people?
10. Are any specific groups of people more likely to experience changes in the nature of their jobs as a result of automation? How are these groups likely to experience these changes?

Considerations for governments:

1. What policy responses can address unequal affects of flexible working on different groups of people? For example, how can policies address the care gaps between men and women?
2. How can policies encourage workplace practices to best support groups that face specific challenges in remote working; for example, support training and development of young people?
3. What policy responses can help ensure that flexible working, self-employment, and the gig economy promote flexibilities that enable more people to access work that suits them, but avoid job insecurity and pay and career stagnation?
4. How could policies better ensure that the use of AI promotes equality across groups of workers with protected characteristics?
5. How could policies help prevent discrimination for people with protected characteristics as a result of the use of AI?
6. How can the disability benefits system best support disabled gig workers?
7. How can policies best support people with childcare and caring responsibilities to participate in the labour market and to access training?

Glossary

This report addresses issues and concepts, many of which have definitions that are debated. The data available on a number of issues is limited. Where relevant, we distinguish between the broad definitions of the concepts we analyse and the things that are measurable by available data.

AI refers to Artificial Intelligence: the problem-solving and decision-making capabilities of machines (IBM, 2020). AI is a sub-category of automation. When applied in the workplace, AI is trained to perform specific jobs involving information processing and decision making. The main applications of AI in workplaces are for tasks around employee recruitment, task allocation and monitoring workforce performance (Briône, 2020).

Automation refers to the use of machines or computers instead of people to do a job or a task in a workplace.

Equality Act 2010 provides a single legal framework to protect individuals and advance equality of opportunity for all in Britain. The Equality Act protects against discrimination and harassment on the basis of nine protected characteristics, which are age, disability, gender reassignment, marriage and civil partnership status, pregnancy and maternity, race, religion or belief, sex, and sexual orientation. The Act covers conduct relating to employment, services and public functions, education, and associations.

Flexible working involves variability in the place and time at which people work. Often, but not always, this variability comes with greater employee autonomy over the place and time of work. Flexible working is an umbrella term that covers a range of practices, such as remote working, working from home, teleworking or mobile working, hybrid working, flexitime, job-sharing, compressed hours, term-time working or part-time working (CIPD, 2019). In our data analysis in this report, flexible working includes working flexible hours, job sharing, annualised hours, on-call working, working nine-day fortnights or 4.5-day work weeks, but does not include zero-hours contracts or remote working (due to the limitations of the Labour Force Survey data).

Gig economy is a labour market of short-term contract work, where clients and workers are often connected via digital platforms.

Gig worker is a person who works on a short-term, project basis, in temporary positions or on short-term contracts as an independent contractor (Huws, 2021). Gig workers are paid solely for the pieces of work that they do and may lack the benefits of being an employee such as sick pay or annual leave. Gig workers can encompass a wide range of fields – from drivers to teaching assistants. A gig worker can be a freelancer, consultant, independent contractor, seasonal worker or a worker on a zero-hours contract. Gig workers are distinct from self-employed people, as gig workers do not have a contract that defines the work arrangement and are not paid by the day.

Learning in its broadest definition means practising or studying something, or being taught, instructed or coached, with a view to developing skills, knowledge, abilities or understanding of something. Learning can be regular or happen over a short period of time, be done full-time or part-time, at home, at work, or in an educational setting. In-work training is a type of learning that occurs in or alongside work, is related to workplace skills or development, and is usually provided or supported by employers. The analysis of Annual Population Survey (APS) data on access to in-work training for this research was based on individuals' self-declared experience of receiving in-work training in the three months prior to being asked the question.

Reasonable adjustments in a workplace are changes that an employer has to make where a disabled person would otherwise be placed at a substantial disadvantage compared with non-disabled people. Examples of reasonable adjustments are adjusting working hours or providing equipment to assist work tasks. Under the Equality Act, employers have a duty to make reasonable adjustments for disabled employees, job applicants, and disabled people expressing an interest in applying for a job with them.

Self-employment is defined as a worker running a business for themselves and taking responsibility for the success and failure of that business (GOV.UK 2022). Self-employed is an umbrella term including a wide group of workers from freelancers and independent contractors to small-business owners. Self-employed workers do not have the same benefits or employment rights as employees and are responsible for payment of income and other taxes (they are not deducted through PAYE).

Upskilling is a process of employees learning or being taught more advanced skills to improve performance or progression.

Zero-hours contract is an agreement between two parties that one may be asked to perform work for another, but there are no minimum set contracted hours (CIPD, 2021). Employers are not required to give zero-hours workers work, and workers on zero-hours contracts are not required to agree to work when asked. Zero-hours workers are entitled to statutory annual leave and the National Minimum Wage in the same way as people in traditional employment.

Bibliography

Aldridge, F., Jones, E. and Southgate, D. (2020), 'Learning through lockdown', London: Learning and Work Institute [accessed: 11 April 2022].

Atay, A., Vaid, L. and Clayton, N. (2021), 'Disability Employment: from pandemic to recovery', London: Learning and Work Institute [accessed: 7 April 2022].

Aviva (2021), 'Thriving in the Age of Ambiguity'. York: Aviva, pp. 1-38 (PDF) [accessed: 5 April 2022].

Balaram, B., Warden, J. and Wallace- Stephens, F. (2017), 'Good Gigs: A Fairer Future for the UK's gig economy'. London: The Royal Society for the encouragement of Arts, Manufactures and Commerce, pp. 1-65 (PDF) [accessed: 5 April 2022].

Bertolini, A., Cole, M., Graham, M., Katta, S., Arubayi, G and Ustek-Spilda, F. (2021), 'Fairwork UK Ratings 2021: Labour Standards in the Gig Economy'. Oxford: Oxford Internet Institute [accessed: 5 April 2022].

Bevan Foundation (2021), 'On the edge: low-income self-employment in Wales'. Merthyr Tydfil: Bevan Foundation, pp. 1-42 (PDF) [accessed: 5 April 2022].

Binder, M. and Blankenberg, A.K. (2021), 'GLO Discussion Paper: Self-employment and Subjective Well-Being'. Essen: Global Labor Organization (GLO), pp. 1-36 (PDF) [accessed: 5 April 2022].

Blundell, J. and Machin, S. (2020), 'Self-employment in the Covid-19 crisis'. London: Centre for Economic Performance, pp. 1-15 (PDF) [accessed: 5 April 2022].

Blundell, J. and Ventura, M. (2020), 'Self-employment eight months into the pandemic', London School of Economics, 1 December [accessed: 5 April 2022].

Briône, P. (2020), 'My boss the algorithm: an ethical look at algorithms in the workplace'. London: Acas [accessed: 5 April 2022].

Broughton, N. (2015), 'Self-employment and ethnicity: an escape from poverty?'. London: Social Market Foundation, pp. 1-24 (PDF) [accessed: 5 April 2022].

Brussevich, M., Dabla-Norris, E., Kamunge, C., Karnane, P., Khalid, S. and Kochhar, K. (2018), 'Gender, Technology, and the Future of Work', Washington DC: IMF [accessed: 5 April 2022].

Centre for Ageing Better (2020a), 'A mid-life employment crisis'. London: Centre for Ageing Better, pp. 1-36 (PDF) [accessed: 5 April 2022].

Centre for Ageing Better (2020b), 'The State of Ageing in 2020'. London: Centre for Ageing Better, pp. 1-20 (PDF) [accessed: 5 April 2022].

Centre for Data Ethics and Innovation (2020), 'Online targeting: Final report and recommendations'. London: Centre for Data Ethics and Innovation [accessed: 5 April 2022].

Centre for Social Justice (2019), 'The Future of Work: Technology and Artificial Intelligence'. London: Centre for Social Justice, pp. 1-42 (PDF) [accessed: 5 April 2022].

Charity So White (n.d.), 'Area 3: Risk of Destitution'. Charity So White website [accessed: 5 April 2022].

Chartered Institute of Personnel and Development (CIPD) (2019), 'MEGATRENDS: The trends shaping work and working lives: Flexible working'. London: CIPD [accessed: 5 April 2022].

Chartered Institute of Personnel and Development (CIPD) (2021), 'Zero-hours contracts: understanding the law'. London: CIPD [accessed: 5 April 2022].

Chartered Institute of Personnel and Development (CIPD) (2022), 'UK regions ranked by flexible working uptake: Our analysis of ONS data ranks UK nations and regions by use of flexible working arrangements', CIPD Website [accessed: 8 April 2022].

Chung, H. (2020), 'Gender, Flexibility Stigma and the Perceived Negative Consequences of Flexible Working in the UK', Social Indicators Research, vol. 151, pp. 521–545.

CIPHR (2021), 'Working from home – Employer survey results'. Marlow: CIPHR [accessed: 5 April 2022].

Clark, K. (2015), 'Ethnic minority self-employment'. Bonn: IZA World of Labor [accessed: 5 April 2022].

Colleges Wales (2020), ‘Adult Learning and Lifelong Learning in Wales’, Cardiff: Colleges Wales, pp. 1-7 (PDF) [accessed: 11 April 2022].

Cominetti, N., McCurdy, C. and Slaughter, H. (2021), ‘Low Pay Britain 2021’. London: Resolution Foundation [accessed: 5 April 2022].

Confederation of British Industry (CBI) (2020), ‘Learning for life: funding world class adult education’, London: CBI [accessed: 5 April 2022].

Costa Dias, M., Joyce, R. and Parodi, F. (2018) ‘IFS Working Paper: The gender pay gap in the UK: children and experience in work’. London: Institute for Fiscal Studies [accessed: 5 April 2022].

Cribb, J., Delestre, I. and Johnson, P. (2021), ‘Who is excluded from the government's Self Employment Income Support Scheme and what could the government do about it?’. London: Institute for Fiscal Studies [accessed: 5 April 2022].

Dabhi, K., Crick, C., Douglas, J., McHugh, S., Zatterin, G., Donaldson, S., Procter, R. and Woods, R. (2021), ‘Understanding the UK AI labour market: 2020’. London: Ipsos MORI, Perspective Economics, Warwick University and Queen’s University Belfast, pp. 1-72 (PDF) [accessed: 5 April 2022].

Dellot, B. and Wallace-Stephens, F. (2017), ‘The Age of Automation, Artificial intelligence, robotics and the future of low-skilled work’. London: The Royal Society for the encouragement of Arts, Manufactures and Commerce, pp. 1-83 (PDF) [accessed: 5 April 2022].

Deloitte (2021), ‘7.5 million UK workers hoping to work from home permanently once lockdown restrictions have lifted’, London: Deloitte [accessed: 5 April 2022].

Department for Business, Energy & Industrial Strategy (Department for Business, Energy and Industrial Strategy) (2018), ‘The Characteristics of those in the Gig Economy’. London: Department for Business, Energy and Industrial Strategy, pp. 1-48 (PDF) [accessed: 5 April 2022].

Department for Business, Energy & Industrial Strategy (Department for Business, Energy and Industrial Strategy) (2021a), ‘Open consultation overview: Making flexible working the default’. London: Department for Business, Energy and Industrial Strategy [accessed: 5 April 2022].

Department for Business, Energy & Industrial Strategy (Department for Business, Energy and Industrial Strategy) (2021b), 'Net Zero Strategy: Build Back Greener'. London: Department for Business, Energy and Industrial Strategy [accessed: 5 April 2022].

Department for Business, Energy & Industrial Strategy (Department for Business, Energy and Industrial Strategy) (2021c), 'Business population estimates for the UK and regions 2021', London, Department for Business, Energy and Industrial Strategy, GOV.UK [accessed 14 June 2022]

Department for Business, Energy & Industrial Strategy (Department for Business, Energy and Industrial Strategy) and Low Pay Commission (2019), 'Good Work Plan: one-sided flexibility - addressing unfair flexible working practices', GOV.UK Website [accessed: 7 April 2022].

Department for Education (Department for Education) (2021), 'Skills for jobs: lifelong learning for opportunity and growth'. London: Department for Education [accessed: 5 April 2022].

Department for Work and Pensions (Department for Work and Pensions) (2020), 'Economic labour market status of individuals aged 50 and over, trends over time: September 2020', GOV.UK [accessed 7 April 2022].

Department for Work and Pensions (Department for Work and Pensions) (2022), 'Official Statistics: The employment of disabled people 2021'. London: Department for Work and Pensions [accessed: 5 April 2022].

Dromey, J. (2021), 'Disconnected? Exploring the digital skills gap', London: Learning and Work Institute [accessed: 7 April 2022].

Education and Skills Funding Agency (ESFA) (2021), 'Adult education budget (AEB) funding rules 2021 to 2022', GOV.UK Website [accessed: 11 April 2022].

EIGE (2022), Artificial intelligence, platform work and gender equality, Luxembourg: Publications Office of the European Union [accessed: 7 April 2022].

Egglestone, C., Melville, D., Dromey, J., Ahmed, J. and Aylward, N. (2021), 'Facing the future - employment prospects for young people after Coronavirus', London: Learning and Work Institute [accessed: 7 April 2022].

Equality and Human Rights Commission (EHRC) (2016), 'Pregnancy and Maternity – Related Discrimination and Disadvantage: Summary of Key Findings'. London: EHRC, pp. 1-3- (PDF) [accessed: 6 April 2022].

Equality and Human Rights Commission (EHRC) (2017), ‘Fair opportunities for all: a strategy to reduce pay gaps in Britain’. London: EHRC, pp. 1-39 (PDF) [accessed: 5 April 2022].

Equality and Human Rights Commission (EHRC) (2020), ‘How coronavirus has affected equality and human rights’. London: EHRC, pp. 1-57 (PDF) [accessed: 12 April 2022].

Ethnicity facts and figures (2018), ‘Age groups’ [accessed: 11 May 2022].

Evans, S. and Aldridge, F. (2021), ‘Fast forward? Where next for the labour market’. London: Learning and Work Institute [accessed: 5 April 2022].

Evans, S. and Clayton, N. (2021), ‘One year on: The labour market impacts of coronavirus and priorities for the years ahead’. London: Learning and Work Institute [accessed: 5 April 2022].

Federation of Small Businesses (FSB) (2017), ‘Learning the ropes: skills and training in small businesses’, London: FSB [accessed: 8 April 2022].

Felstead, A. and Henseke, G. (2017), ‘Assessing the growth of remote working and its consequences for effort, well-being and work-life balance’, New Technology, Work and Employment, vol. 32, issue 3, pp. 195-212.

Fletcher, E. (2021), ‘Gender inequality in the gig economy’, Autonomy Website [accessed: 7 April 2022].

Foster, D. and Hirst, N. (2020), ‘The impact of Covid-19 on the employment and training of disabled lawyers in England and Wales: opportunities for job-redesign and best practice’. Cardiff: Legally Disabled?, pp. 1-54 (PDF) [accessed: 7 April 2022].

Gandini, A. (2018), ‘Labour process theory and the gig economy’, Human Relations, September 2018 [accessed: 5 April 2022].

Giupponi, G. and Xu, X. (2020), ‘What does the rise of self-employment tell us about the UK labour market?’. London: Institute for Fiscal Studies [accessed: 5 April 2022].

Gilbert, A. and Thomas, A. (2021), ‘The Amazonian Era: The gigification of work’. London: Institute for the Future of Work [accessed: 5 April 2022].

Government Equalities Office, ‘The National LGBT Survey: Research Report’, London, GEO July 2018 [Accessed 20 June 2022]

GOV.UK (2022), ‘Employment status: Self-employed and contractor’, GOV.UK Website [accessed: 5 April 2022].

Hessels, J. Arampatzi, E. Van der Zwan, P. & Burger, M. (2018), ‘Life satisfaction and self-employment in different types of occupations’, Applied Economics Letters, vol. 25, no. 11, pp. 734-740.

HM Government (2022), ‘Levelling Up the United Kingdom’, London: HM Government, pp. 1-332 (PDF) [accessed: 11 April 2022].

House of Commons Work and Pensions Committee (2021), ‘Department for Work and Pensions’s preparations for changes in the world of work’, London: Department for Work and Pensions [accessed: 5 April 2022].

Huws, U., Spencer, N., Syrdal, D. and Holys, K. (2017), ‘Work in the European Gig Economy’. Brussels: Foundation for European Progressive Studies, Uni Europa and University of Hertfordshire, pp. 1-60 (PDF) [accessed: 7 April 2022].

Huws, U. (2021) ‘A fairer gig economy’. University of Hertfordshire. https://www.herts.ac.uk/research/impact-our-research/case-studies/a-fairer-gig-economy

IBM (2020), ‘What is Artificial Intelligence (AI)?’, IBM website [accessed: 19 November 2021].

Intahchomphoo, C. and Gundersen, O. (2020), ‘Artificial Intelligence and Race: a Systematic Review’, Cambridge: Cambridge University Press [accessed: 5 April 2022].

Irvine, S., Clark, H., Ward, M. and Francis-Devine, B. (2022), ‘Women and the UK economy’. London: House of Commons Library Research Briefing, pp. 1-31 (PDF) [accessed: 7 April 2022].

The Association of Independent Professionals and the Self-Employed (IPSE) (2019), ‘Making Self-employment Work for disabled people: An agenda to make it happen’, London: IPSE [accessed: 7 April 2022].

John, E., Thomas, G. and Touchet, A. (2019), ‘The Disability Price Tag 2019’, London: Scope [accessed: 7 April 2022].

Johnes, G. (2019), ‘The gig economy in the UK: A regional perspective’, Journal of Global Responsibility, vol. 10, no. 3, pp. 197-210.

Johnston, H. and Land-Kazlauskas, C. (2019), ‘Organizing On-Demand: Representation, Voice, and Collective Bargaining in the Gig Economy’, Geneva: International Labour Organization, pp. 1-54 (PDF) [accessed: 7 April 2022].

Jones, P. and Bano, N. (2021), ‘The Right to Disconnect’, Autonomy Website [accessed: 7 April 2022].

Jones, E., Hall, S. and Evans, S. (2021), ‘Adult Participation in Learning Survey 2021’, London: Learning and Work Institute [accessed: 7 April 2022].

Leonard Cheshire (2019), ‘Reimagining the workplace: disability and inclusive employment’, London: Leonard Cheshire, pp. 1-36 (PDF) [accessed: 8 April 2022].

Lloyds Bank (2021), ‘Essential Digital Skills Report 2021’. London: Lloyds Bank, pp. 1-80 (PDF) [accessed: 7 April 2022].

Low Pay Commission (2021), ‘National Minimum Wage’. London: Low Pay Commission, pp. 1-294 (PDF) [accessed: 7 April 2022].

Martin, J. P. (2018), ‘Live Longer, Work Longer: The Changing Nature of the Labour Market for Older Workers in OECD Countries’. Bonn: IZA Institute of Labor Economics [accessed: 7 April 2022].

McKinsey & Company (2020), ‘Problems amid progress: Improving lives and livelihoods for ethnic minorities in the United Kingdom’, London: McKinsey [accessed: 7 April 2022].

Messenger, J., Vargas Llave, O., Gschwind, L., Boehmer, S., Vermeylen, G. and Wilkens, M. (2017), ‘Working anytime, anywhere: The effects on the world of work’, Luxembourg: Publications Office of the European Union and Geneva: International Labour Office [accessed: 7 April 2022].

Montgomery, T. and Baglioni, S. (2021), ‘Defining the gig economy: platform capitalism and the reinvention of precarious work’, International Journal of Sociology and Social Policy, vol. 41, no. 9/10, pp. 1012-1025.

New Economics Foundation (2019), ‘Beyond the Gig Economy: Empowering the Self-Employed Workforce’, London: New Economics Foundation, pp. 1-34 (PDF) [accessed: 7 April 2022].

Nicks, L., Gesiarz, F., Hardy, T. and Burd, H. (2021a), ‘How many days should we work from home? What works to improve gender equality’, London: The Behavioural Insights Team [accessed: 7 April 2022].

Nicks, L., Gesiarz, F. Likki, T., Baynham-Herd, Z. and Lohmann, J. (2021b), 'Impact of changes in flexible working during lockdown on gender equality in the workplace', London: The Behavioural Insights Team [accessed: 7 April 2022].

Organisation for Economic Co-operation and Development (OECD) (2019), 'OECD Employment Outlook 2019: The Future of Work', Paris: OECD [accessed: 7 April 2022].

Organisation for Economic Co-operation and Development (OECD) (2020), 'What are the impacts of COVID-19 on self-employment and what policies are needed?', Paris: OECD, pp. 1-4 (PDF) [accessed: 7 April 2022].

Office for National Statistics (2016), 'Trends in self-employment in the UK: 2001 to 2015'. Office for National Statistics Website [accessed: 7 April 2022].

Office for National Statistics (2017), 'Characteristics and benefits of training at work, UK: 2017'. Office for National Statistics Website [accessed: 7 April 2022].

Office for National Statistics (2018a), 'Contracts that do not guarantee a minimum number of hours: April 2018'. Office for National Statistics Website [accessed: 7 April 2022].

Office for National Statistics (2018b), 'Trends in self-employment in the UK'. Office for National Statistics Website [accessed: 7 April 2022].

Office for National Statistics (2019), 'Which occupations are at highest risk of being automated?'. Office for National Statistics Website [accessed: 7 April 2022].

Office for National Statistics (2020a), 'Ethnicity pay gaps: 2019'. Office for National Statistics Website [accessed: 7 April 2022].

Office for National Statistics (2020b), 'Coronavirus and homeworking in the UK: April 2020'. Office for National Statistics Website [accessed: 7 April 2022].

Office for National Statistics (2021a), 'Ethnicity Facts and Figures: Employment'. Ethnicity facts and figures website [accessed: 7 April 2022].

Office for National Statistics (2021b), 'Changes to how we estimate the number of people in employment on zero-hours contracts'. Office for National Statistics Website [accessed: 15 December 2022].Office for National Statistics (2022), 'Outcomes for disabled people in the UK: 2021'. Office for National Statistics Website [accessed: 7 April 2022].

Parry, J., Young, Z., Bevan, S., Veliziotis, M., Baruch, Y., Beigi, M., Bajorek, Z., Salter, E. and Tochia, C. (2021), 'Working from Home under COVID-19 lockdown: Transitions and tensions', Work after Lockdown website [accessed: 7 April 2022].

Powell, A. (2021), 'Disabled people in employment', House of Commons Library Briefing Paper Number 7540, 24 May 2021, pp. 1-22 (PDF) [accessed: 8 April 2022].

Powell, A., Francis-Devine, B. and Clark, H. (2022), 'Youth unemployment statistics'. London: House of Commons Library [accessed: 8 April 2022].

Richardson, N. and Klein, S. (2021), 'People at Work 2021: A Global Workforce View'. ADP Research Institute [accessed: 8 April 2022].

Richmond, K. and Slow, J. (2017), 'Self-employment in Scotland: trends and its implications for productivity'. Glasgow: Fraser of Allender Institute, pp. 1-13 (PDF) [accessed: 8 April 2022].

Roberts, C., Parkes, H., Statham, R. and Rankin, L. (2019), 'The Future Is Ours: Women, Automation and Equality in The Digital Age', London: Institute for Public Policy Research, pp. 1-56 (PDF) [accessed: 8 April 2022].

Scottish Government (2020), 'Investing in skills to support recovery', GOV.SCOT Website [accessed: 11 April 2022].

Scottish Government (2021), 'Fair work action plan: Boosting productivity by developing Scotland as a world-leading Fair Work nation', Edinburgh: The Scottish Government, pp. 1-28 (PDF) [accessed: 11 April 2022].

Scottish Government (2022), 'Funded early learning and childcare', MYGOV.SCOT Website [accessed: 11 May 2022].

Skills Development Scotland (2017), 'SDS Individual Training Accounts'. Skills Development Scotland Website [accessed 11 May 2022].

Skills Development Scotland (2022), 'The Big Plus'. Skills Development Scotland Website [accessed 11 May 2022].

Sibieta, L. Tahir, I. Waltmann, B. 'Adult Education: the past, present and future'. London: Institute of Fiscal Studies, June 2022 [accessed 20 June 2022]

Spencer, N. and Huws, U. (2021), ‘Platformisation and the pandemic: changes in workers’ experiences of platform work in England and Wales, 2016-2021’, in TUC (2021), Seven ways platform workers are fighting back, London: TUC, pp. 9-24 (PDF) [accessed: 8 April 2022].

Stevenson, A., Cabral, D., Ahmed, J., Hall, S. and Evans, S. (2021), ‘Getting the basics right: The case for action on adult basic skills’, Leicester: Learning and Work Institute [accessed: 8 April 2022].

Stewart and Stanford (2017), ‘Regulating work in the gig economy: What are the options?’, The Economic and Labour Relations Review, vol. 28, issue 3, pp. 420-437.

Stonewall (2018), ‘LGBT in Britain: Work Report’, London: Stonewall, pp. 2-11 (PDF) [accessed: 8 April 2022].

Tassinari, A. and Maccarone, V. (2020), ‘Riders on the Storm: Workplace Solidarity among Gig Economy Couriers in Italy and the UK’, Work Employment and Society, vol. 34, issue 1, pp. 35-54.

Tomlinson, D. (2021), ‘Four of a kind: Analysis of trade union membership statistics’, London: Resolution Foundation [accessed: 8 April 2022].

Trades Union Congress (TUC) (2017), ‘Better jobs for mums and dads’, London: TUC [accessed: 8 April 2022].

Trades Union Congress (TUC) (2020), ‘Technology managing people: The worker experience’, London: TUC [accessed: 8 April 2022].

Trades Union Congress (TUC) (2021a), ‘Jobs and recovery monitor: disabled workers’, London: TUC [accessed: 8 April 2022].

Trades Union Congress (TUC) (2021b), ‘The future of flexible work’, London: TUC [accessed: 8 April 2022].

Valero, A., Riom, C. and Oliveira-Cunha, J. (2021), ‘The business response to Covid-19 one year on: findings from the second wave of the CEP-CBI survey on technology adoption’, London: London School of Economics, pp. 1-44 (PDF) [accessed: 8 April 2022].

Van der Lippe, T., Van Breeschoten, L., and Van Hek, M. (2018), ‘Organizational work–life policies and the gender wage gap in European workplaces’, Work and Occupations, vol. 46, issue 2, pp. 111-148.

Walker, T., Florisson, R. and Wilkes, M. (2020), ‘Learning to level up: The role of skills in tackling job insecurity through Brexit and Covid-19’, London: The Work Foundation [accessed: 8 April 2022].

Watson, E. and Pearson, R. (2016), ‘Here to Stay: Women’s self-employment in a (post) austerity era’, London: UK Women’s Budget Group, pp. 1-16 (PDF) [accessed: 8 April 2022].

Welsh Government (2017), ‘Adult Learning in Wales’, Caerphilly: Welsh Government, pp. 1-12 (PDF) [accessed: 11 April 2022].

Welsh Government (2022a), ‘Smarter working: a remote working strategy for Wales’, GOV.WALES Website [accessed: 11 April 2022].

Welsh Government (2022), ‘Childcare Offer extended as providers receive funding boost’, GOV.WALES Website [accessed: 11 April 2022].

World Economic Forum (2021), ‘Upskilling for Shared Prosperity’, Geneva: World Economic Forum, pp. 1-47 (PDF) [accessed: 8 April 2022].

Yerby, E. (2020), ‘Frayed Careers in the Gig Economy: Rhythms of Career Privilege and Disadvantage’ in Page-Tickell, R. and Yerby, E. (Ed.) ‘Conflict and Shifting Boundaries in the Gig Economy: An Interdisciplinary Analysis’ Bingley: Emerald Publishing Limited, pp. 161-181.

Yolanda, H, Arampatzi, E., Van der Zqan and Burger, M. (2017), ‘Life satisfaction and self-employment in different types of occupations’, Applied Economic Letters, vol. 25, issue 11, pp. 734-740.

Young, E., Wajcman, J. and Sprejer, L. (2021), ‘Where are the women? Mapping the gender job gap in AI’. London: The Alan Turing Institute, pp. 1-62 (PDF) [accessed: 8 April 2022].

Zahn, R. (2019), ‘Trade unions, the gig economy and the feminisation of work: lessons from the past?’ in Blackham, A., Kullmann, M. and Zbyszewska, A. (Eds.), ‘Theorising Labour Law in a Changing World: Towards Inclusive Labour Law’, pp. 107-123.

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