

Article

Job quality indicators in the UK – hours, pay and contracts: 2018

Analysis of job quality in the UK using newly reweighted earnings data from the Annual Population Survey (APS) for 2018.

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Correction

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Correction in the labeling of figure 27 and accompanying tables, data was previously attributed to the wrong categories.

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1 . Main points

- Four in five employees work “satisfactory hours” (48 hours or fewer) and do not consider themselves underemployed.
- Employees in Northern Ireland are the most likely to be working “satisfactory hours”, at 84%, compared with 80% for the whole of the UK.
- Almost all employees (99%) have a “desired contract” (either a permanent contract or non-permanent contract for a reason other than “could not find a permanent job”).
- Using two-thirds of the UK median hourly pay as a measure for low pay, 7% of employees in the UK were in low-pay employment and, across the city regions, those living in the Greater London Authority were the least likely to be in low-pay employment (3%).
- When categorising low pay based on two-thirds of local median pay, employees living in Cambridgeshire and Peterborough Combined Authority; Aberdeen City Region; and the Greater London Authority were significantly more likely to be in low-pay employment than in other city regions.
- When creating a composite measure using two-thirds of the UK median pay, the city regions with the highest proportion of residents in “quality work” were the West of England Combined Authority (76%); Glasgow City Region (75%); West Midlands Combined Authority (74%); and Cambridgeshire and Peterborough Combined Authority (74%).

2 . Introduction

This article presents the first exploratory analysis of indicators of the quality of jobs (hours, earnings and contract information) in the UK using newly reweighted earnings data from the Annual Population Survey (APS) from 2018. These data is experimental, and changes to the methodology may yet be made. Data on quality of jobs were requested by representatives of city regions through the Office for National Statistics (ONS) Centre for Subnational Analysis during a user engagement exercise. This analysis is not a government definition of quality jobs.

With similar and low levels of unemployment across local authorities, it is important to look at various types of employment and what constitutes “quality work”. This article will look specifically at employee jobs on a resident basis that provide:

- good hours: employees working 48 or fewer hours a week and not wishing to work more hours in their current role or look for an additional job or a replacement job that offers more hours
- a desired contract type: employees either in a permanent contract or who did not accept a non-permanent contract because they could not find a permanent one
- a position not in low pay: employees who are earning above two-thirds of the hourly median pay; this analysis has been done both at UK level and in local areas of residence

More details on the definitions can be found in the [Quality and methodology section](#).

The [Analysis section](#) measures the percentage of employee jobs that are of “quality”: this is a composite measure created to include only employees who have good hours, a desired contract type, and are not in low pay. The composite is a useful indicator to monitor the direction of quality jobs by area. However, to understand the changes in the overall figures, you must look at the component parts and the factors. This definition is narrow and should not be thought of as definitive; we hope to introduce new questions about job satisfaction to the APS in the near future. More information on quality jobs, the components, and the composite measure can be found in the [Quality and methodology section](#).

This article presents some main findings from analysis available in the accompanying Excel sheets. These documents analyse good hours, desired contract type, employees not in low pay, and employees in quality employment by sex; age; ethnicity; country of birth; educational attainment; full-time and part-time employment; occupation; and industry. All demographic data are available at UK, devolved administrations and city region levels and provide confidence intervals for clarity.

Further research is welcomed, and suggestions on future research are highlighted in the [Quality and methodology section](#).

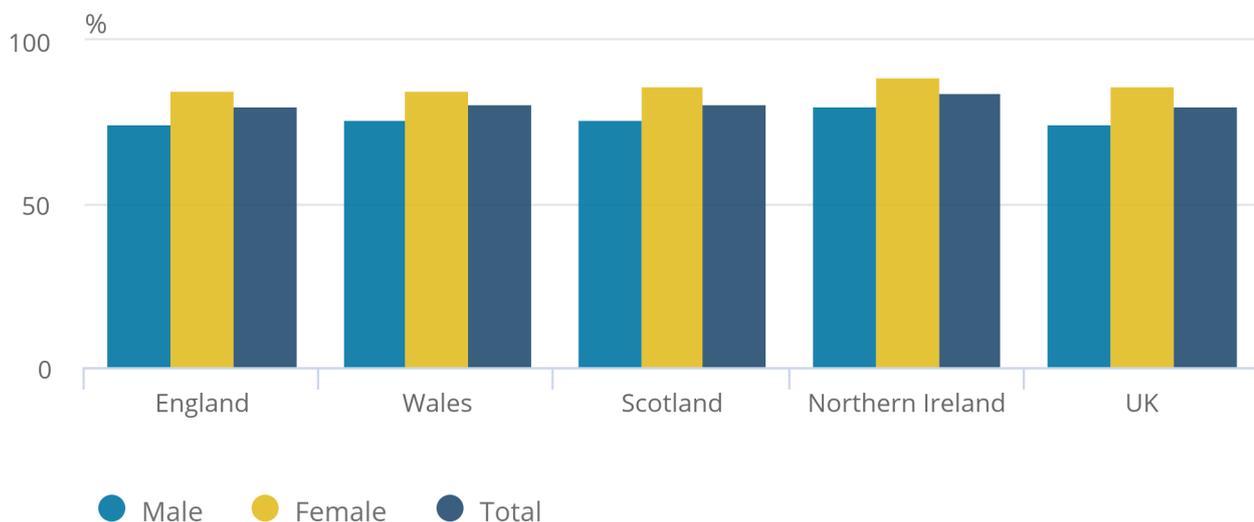
3 . Employees working satisfactory hours

Figure 1: Northern Ireland had the highest percentage of employees working satisfactory hours in the UK

Percentage of employees with satisfactory hours by country and sex, UK, 2018

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Percentage of employees with satisfactory hours by country and sex, UK, 2018



Source: Office for National Statistics – Annual Population Survey

At 84%, employees in Northern Ireland were most likely to work satisfactory hours. The rest of the UK had similar percentages of employees working satisfactory hours: 80% in England and 81% in both Scotland and Wales.

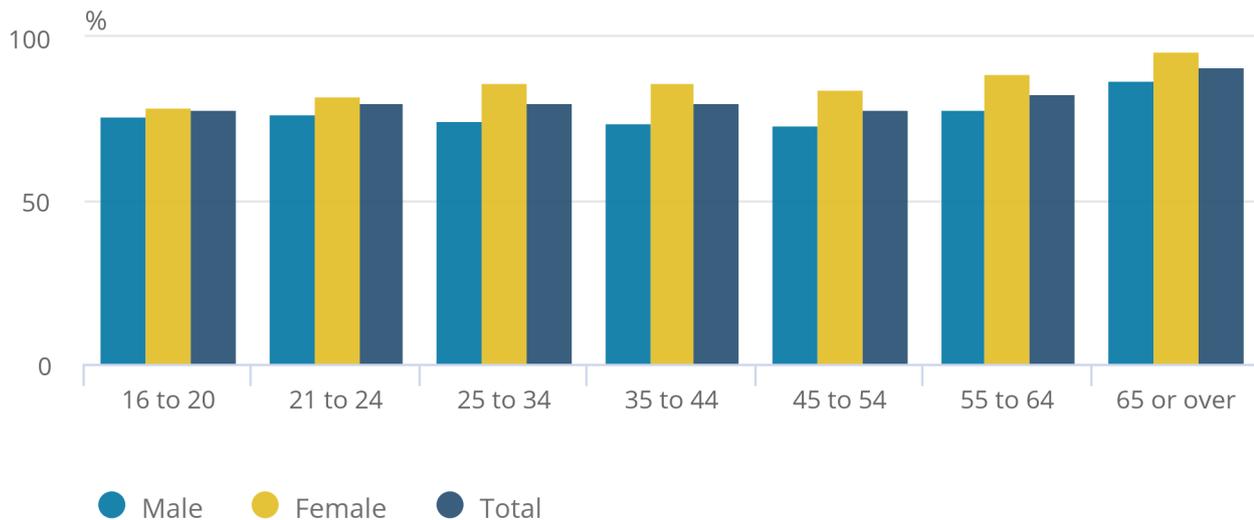
At the UK level, 7% of employees were underemployed and 13% were working over 48 hours. A breakdown at country level can be found in the [Analysis section](#).

Figure 2: Employees aged 65 years and over had the highest percentage working satisfactory hours

Percentage of employees working satisfactory hours by age and sex, UK, 2018

Figure 2: Employees aged 65 years and over had the highest percentage working satisfactory hours

Percentage of employees working satisfactory hours by age and sex, UK, 2018



Source: Office for National Statistics – Annual Population Survey

Men were more likely than women to be working unsatisfactory hours at every age group, and the difference increases substantially when looking at those aged between 25 and 64 years, where the difference is consistently around 11 percentage points.

Broken down by age, the percentage of employees working satisfactory hours remains consistent for men aged 16 to 64 years, before increasing for those aged 65 years and over. For women, the percentage of those working satisfactory hours increases with age.

Part of the difference may be explained by Office for National Statistics (ONS) research indicating that [women shoulder the responsibility of "unpaid work"](#). According to the article, which analysed data from the 2015 UK Harmonised European Time Use Survey, women undertake an average of 10 hours more unpaid work than men (26 hours compared with 16 hours) and women in the 26 to 35 years age group delivered more unpaid work than any other age range. In addition, women with children may pursue jobs with more flexible hours or work on a part-time basis. The larger degree of unpaid work and desire for more flexible hours mean female employees were less likely to be in paid employment working above the 48-hour threshold, which is the principal cause of employees working unsatisfactory hours.

Regardless of whether it is full- or part-time work, female employees were consistently around 10 percentage points more likely to be working satisfactory hours than male employees. This pattern persists across each country of the UK. At the UK level, this means that 86% of women in employment work satisfactory hours, compared with 75% of men. This correlates with the fact that there are more women working part-time jobs, compared with men, and women are therefore more likely to be working satisfactory hours.

Female and male part-time employees work an average (median) of 20 hours, full-time male employees work an average of 40 hours, and full-time female employees work an average of 39 hours. Because of the larger percentage of female part-time employees, for both full- and part-time work combined, female employees work an average of 35 hours and male employees work an average of 40 hours.

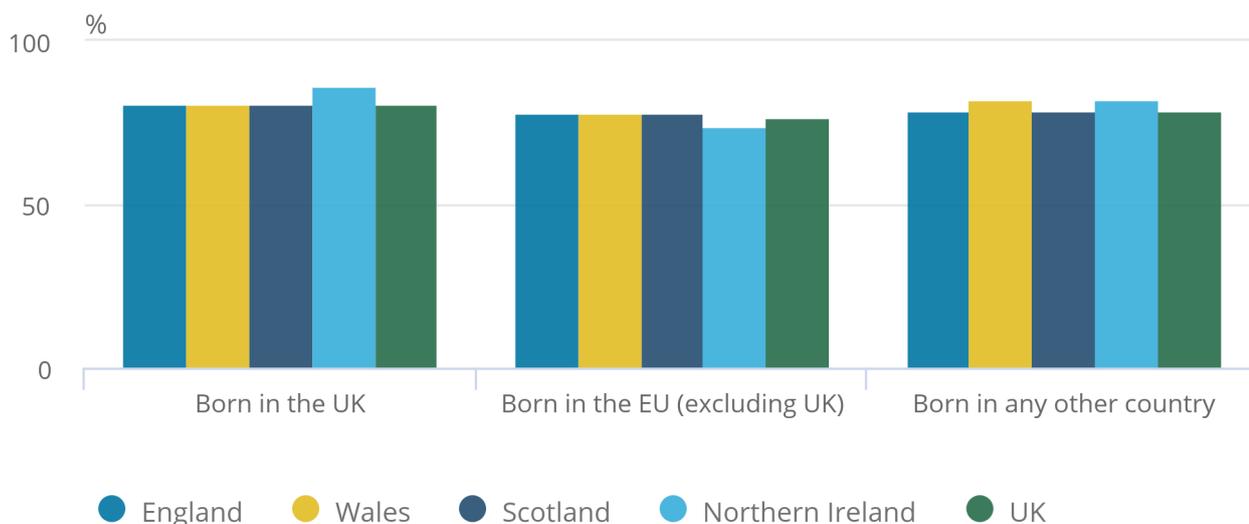
Around four in five employees born in the UK (81%) and born in a non-EU country (79%) work satisfactory hours. Employees born in the EU (excluding the UK) were the least likely to work satisfactory hours (77%).

Figure 3: UK-born employees working in Northern Ireland were significantly more likely to be working satisfactory hours

Percentage of employees working satisfactory hours by UK country and by country of birth, 2018

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Percentage of employees working satisfactory hours by UK country and by country of birth, 2018



Source: Office for National Statistics – Annual Population Survey

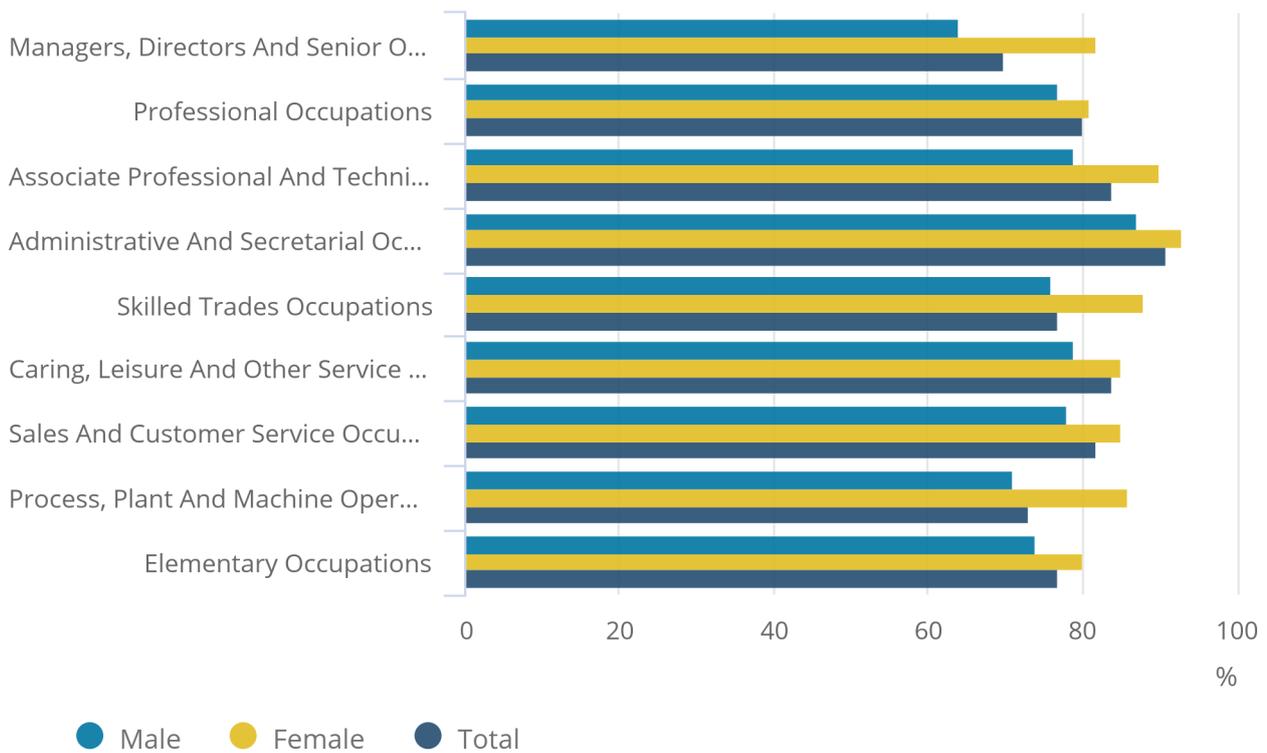
Almost 9 in 10 UK-born employees working in Northern Ireland work satisfactory hours, significantly higher than in England, Scotland and Wales. Less than three-quarters (74%) of EU-born employees in Northern Ireland work satisfactory hours, lower than England, Scotland, and Wales (all at 78% working satisfactory hours). However, owing to smaller sample sizes, these differences were not significant.

Figure 4: Managers, directors and senior officials were the least likely to be working satisfactory hours

Percentage of employees working satisfactory hours by sex and occupation, UK, 2018

Figure 4: Managers, directors and senior officials were the least likely to be working satisfactory hours

Percentage of employees working satisfactory hours by sex and occupation, UK, 2018



Source: Office for National Statistics – Annual Population Survey

Across the UK, managers, directors and senior officials were significantly the least likely to be employed in a job with satisfactory hours (70%). Employees working in administrative and secretarial occupations, in contrast, were significantly the most likely to be employed in a job with satisfactory hours (91%). This finding is seen in all four countries.

Analysing this by sex, in every occupation, women were significantly more likely to work satisfactory hours. The greatest contrast was among managers, directors and senior officials, where more than four-fifths (82%) of women worked satisfactory hours, compared with less than two-thirds of men (64%). These occupations also had the least satisfactory hours for men.

People employed in administrative and secretarial occupations were the most likely to be in jobs with satisfactory hours: 93% for women and 87% for men. For women, the occupations with the lowest percentage of employees in satisfactory hours were elementary occupations.

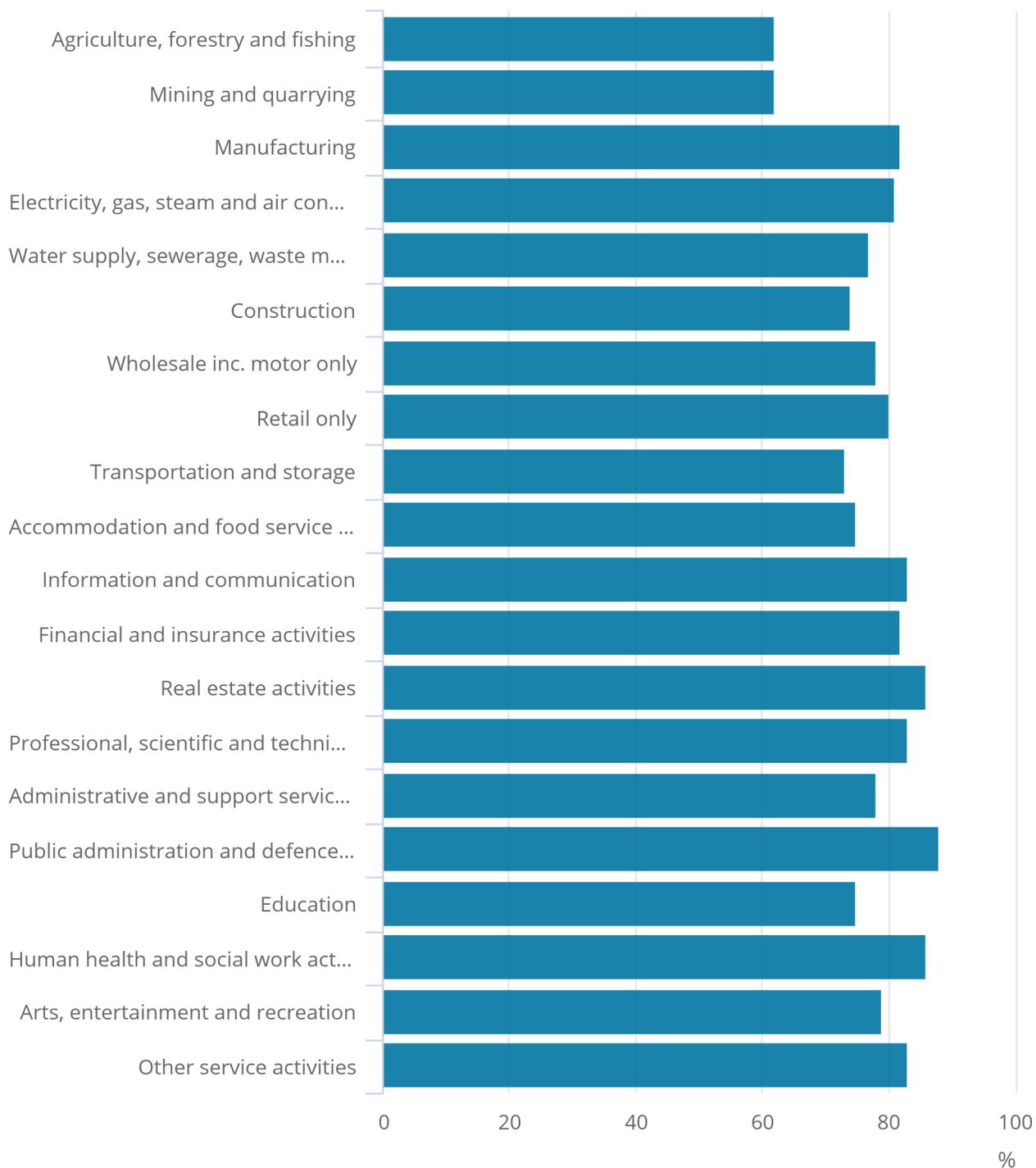
Employees working satisfactory hours by industry

Figure 5: Employees working in “mining and quarrying” and “agriculture, forestry and fishing” worked the least satisfactory hours

Percentage of employees working satisfactory hours by industry, UK, 2018

Figure 5: Employees working in “mining and quarrying” and “agriculture, forestry and fishing” worked the least satisfactory hours

Percentage of employees working satisfactory hours by industry, UK, 2018



When analysed by industry, the percentage of people employed with satisfactory hours in the UK ranged from 62% to almost 88%. Employees working in “mining and quarrying” and “agriculture, forestry and fishing” held the lowest percentage of jobs with satisfactory hours, at 62%. The highest percentage of jobs with satisfactory hours remained relatively consistent when broken down by country and city region, with the addition of finance and insurance activities, which showed the highest number of satisfactory hours in several city regions.

When broken down by sex, female employees had a higher percentage of satisfactory hours in every industry than male employees. “Public administration” came out at or near the top for both sexes: 84% for males and 91% for females. “Agriculture, forestry and fishing” showed the lowest percentage of satisfactory hours for males by seven percentage points (51%), while “education” and “mining and quarrying” showed the lowest percentage of satisfactory jobs for females (77.5%).

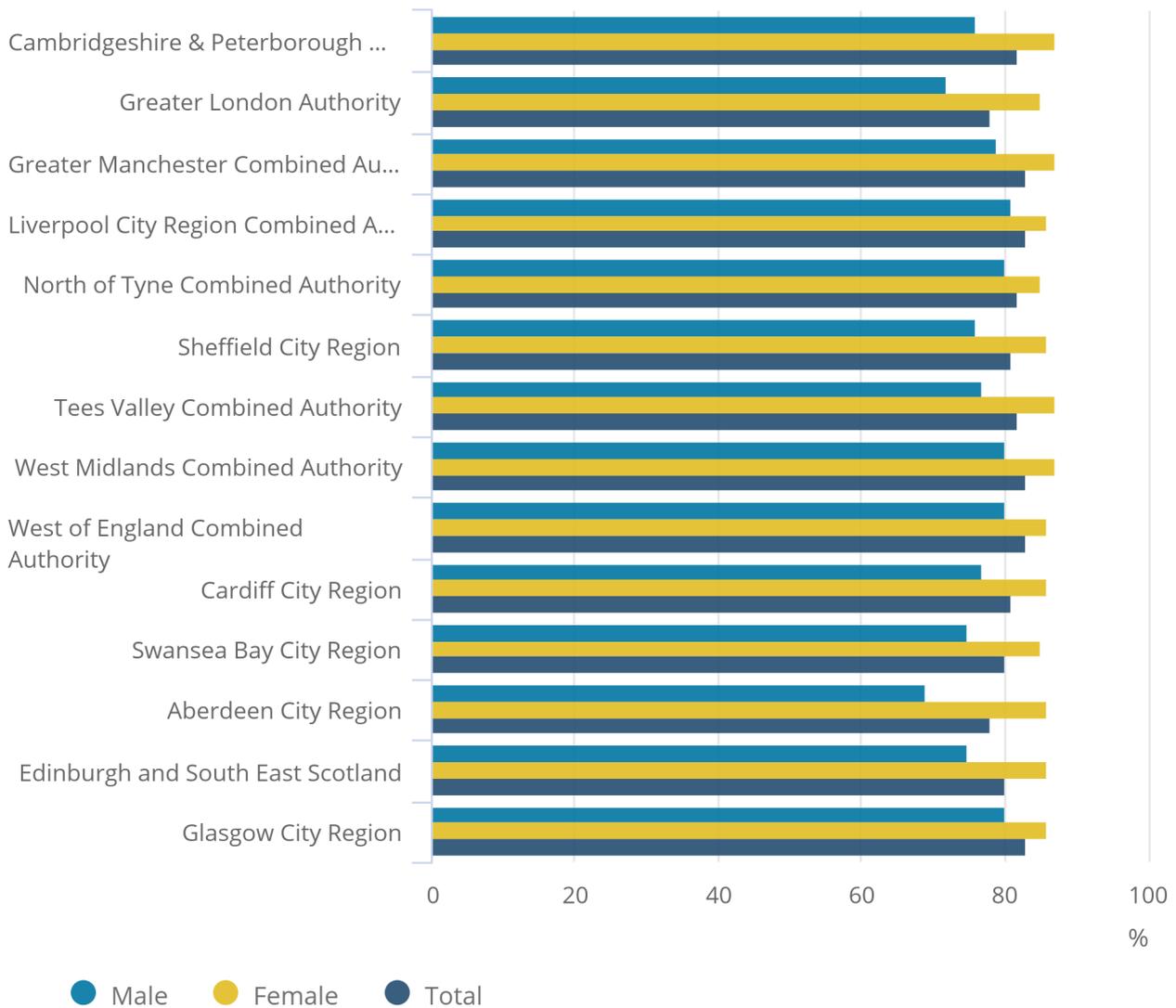
Employees working satisfactory hours by city regions

Figure 6: The Greater London Authority and Aberdeen City Region had a higher average number of hours worked by employees

Percentage of employees with satisfactory hours by city region and sex, 2018

Figure 6: The Greater London Authority and Aberdeen City Region had a higher average number of hours worked by employees

Percentage of employees with satisfactory hours by city region and sex, 2018



Source: Office for National Statistics – Annual Population Survey

Satisfaction in working hours across the city regions ranges from Aberdeen City Region and the Greater London Authority, where 78% of employees were working satisfactory hours, to 83% in each of Liverpool City Region Combined Authority, Glasgow City Region, West Midlands Combined Authority and Greater Manchester Combined Authority. According to results from the Annual Population Survey (APS), the Greater London Authority and Aberdeen City Region had a higher average (median) number of hours worked by employees (40 and 39, respectively), compared with Swansea Bay City Region, which had the lowest average number of hours at 37, and all other city regions, at 38 hours.

The variation in the percentage of employees in jobs with satisfactory hours is mainly down to male employees having larger differences in their percentage of satisfactory hours across the city regions; female employees are fairly consistent.

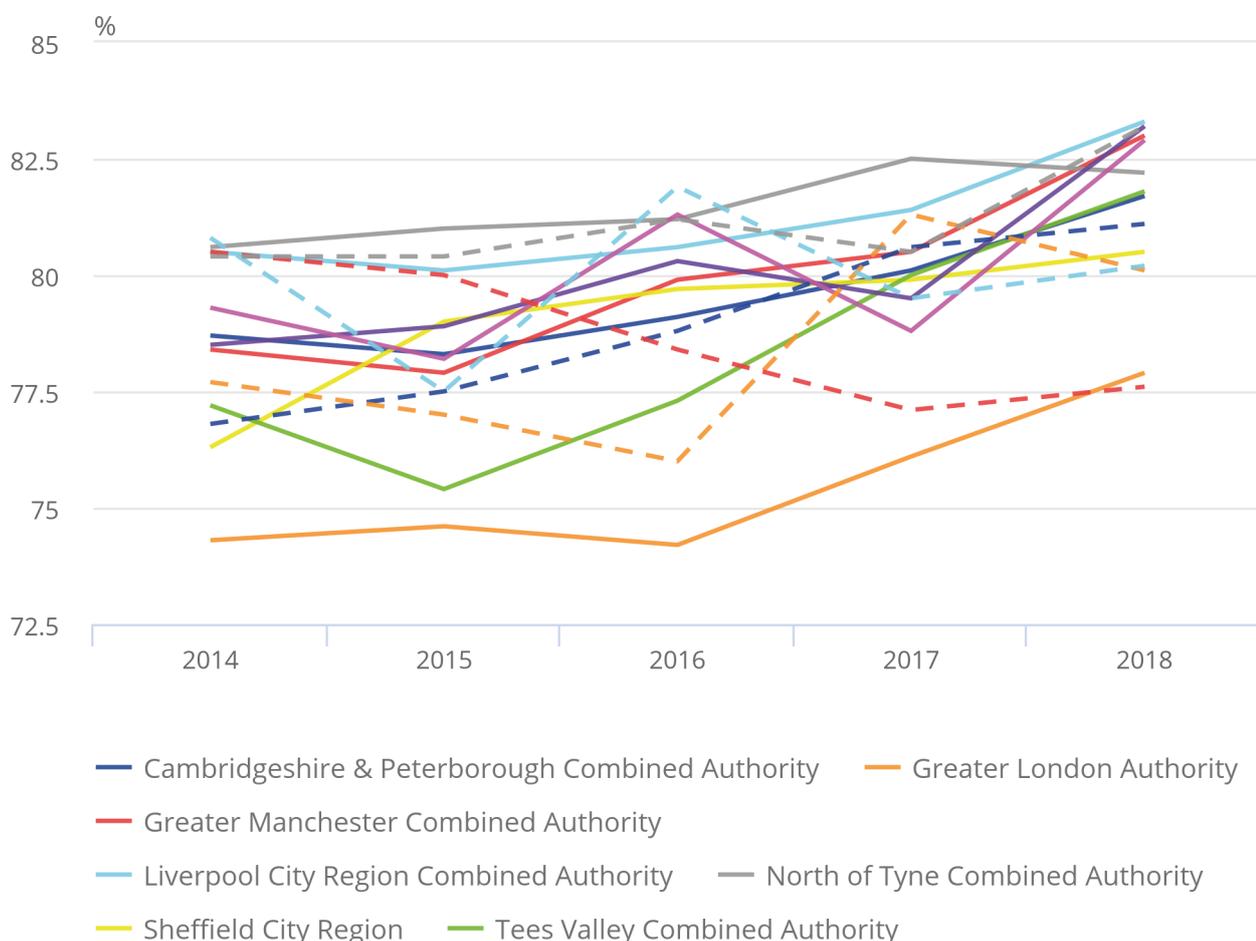
The greatest difference between male and female employees is in Aberdeen City Region, where there is a 17 percentage point difference (86% compared with 69%). The differences were also pronounced in the Greater London Authority and Cambridgeshire and Peterborough Combined Authority, where the differences were 13 percentage points and 12 percentage points, respectively.

Figure 7: The percentage of employees working satisfactory hours rose in almost every city region

Percentage of employees with satisfactory hours by city, UK, 2014 to 2018

Figure 7: The percentage of employees working satisfactory hours rose in almost every city region

Percentage of employees with satisfactory hours by city, UK, 2014 to 2018



Source: Office for National Statistics – Annual Population Survey

Between 2014 and 2018, employees' satisfaction with the number of hours they work improved slightly across city regions. The percentage of employees working satisfactory hours rose in almost every city region, with the exceptions of Aberdeen City Region and Edinburgh and South East Scotland. Those with significant improvements were the Greater London Authority, Greater Manchester Combined Authority, Tees Valley Combined Authority, West Midlands Combined Authority and the Cardiff City Region.

4 . Employees with a desired contract

Almost all employees (99%) across the UK had a contract they were satisfied with. The percentage of people who had a desired contract ranged from 97% in Northern Ireland, to 98% in Wales, to 99% in England and Scotland. Although the difference is only 2%, employees in England and Scotland (99%) were statistically significantly more likely to be in a desired contract than employees in Northern Ireland (97%).

Across the UK, men with full-time positions were more likely to have their desired contract type when compared with men who work part-time (99% compared with 97%). This was not the case for female employees, who had the same percentage of employees in desired contracts (99%) regardless of their full-time or part-time status. The high percentage of people who work part-time in their desired contract types implies that part-time work is more often an active choice and not simply the result of an inability to find full-time employment. [Women shoulder the responsibility of "unpaid work"](#), and female employees often choose part-time or more flexible work when they have children or are caring for parents.

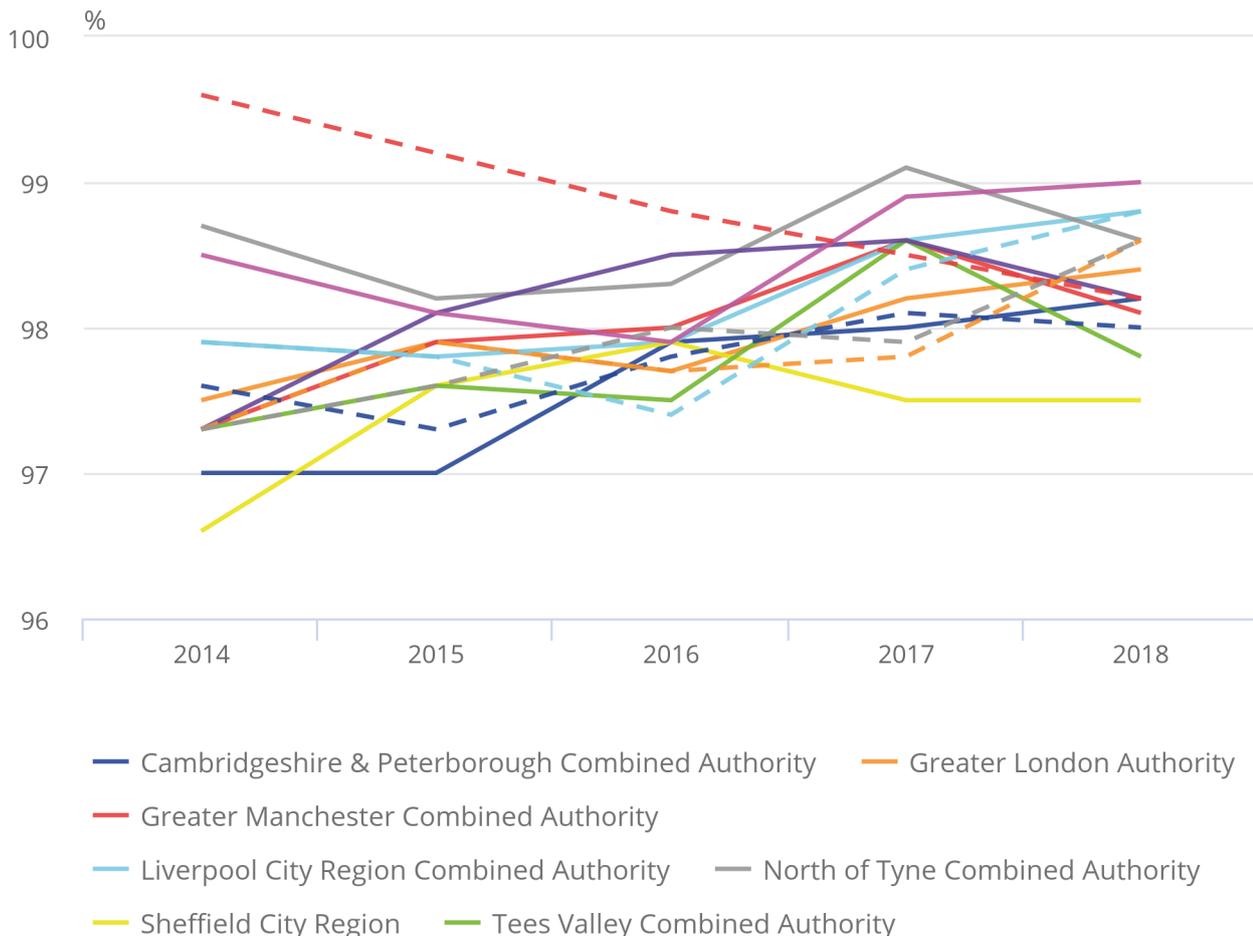
Employees with a desired contract by city regions

Figure 8: There were not significant differences between the city regions for employees with a desired contract

Percentage change of those in desired contracts by city region, UK, 2018

Figure 8: There were not significant differences between the city regions for employees with a desired contract

Percentage change of those in desired contracts by city region, UK, 2018



Source: Office for National Statistics – Annual Population Survey

Employees with a desired contract range from 98% to 99% across city regions, with no significant differences between the city regions. When looking at differences between male and female employees, the only significant difference is in Tees Valley Combined Authority where, at 99%, female employees were significantly more likely than male employees, at 97%, to be in the contract type they desire.

5 . Low pay: UK-wide measure

Low pay is measured in two distinct ways within this article and uses the Annual Population Survey (APS), rather than the Annual Survey for Hours and Earnings (ASHE), which is the usual survey used for both pay and hours.

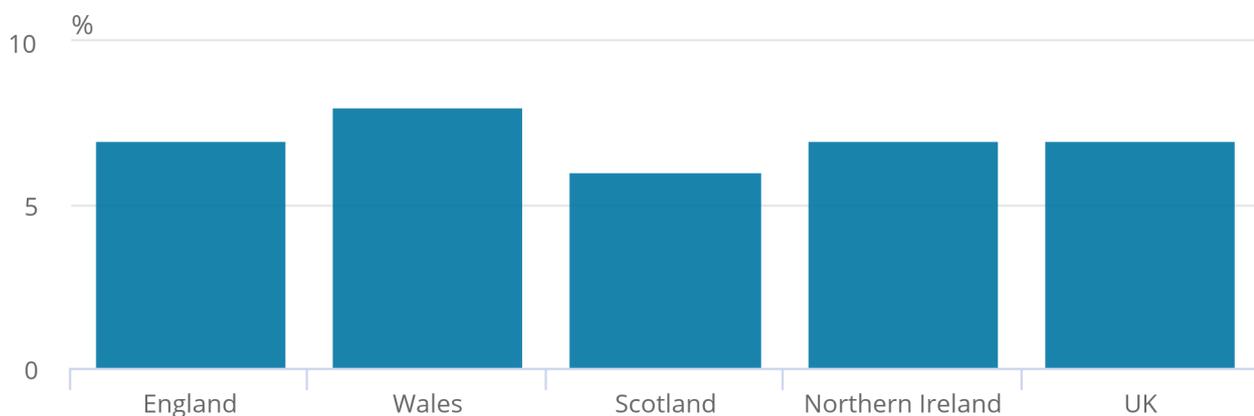
In this section, we investigate employees whose hourly pay is below two-thirds of the UK's average (median) pay. In the next section, [Low pay: local measure](#), we compare an employees' hourly pay against two-thirds of the average hourly pay of all residents living in the same subnational authority. More detail is given when looking at the local measure than the UK-wide measure because although it is imperfect, the more localised analysis takes into account whether a person's job can offer the relative standard of living in the local area where the employee resides.

Figure 9: Wales had the highest percentage of employees in low-pay employment

Percentage of employees in low-pay employment, UK, 2018

Figure 9: Wales had the highest percentage of employees in low-pay employment

Percentage of employees in low-pay employment, UK, 2018



Source: Office for National Statistics – Annual Population Survey

When using two-thirds of the average (median) hourly pay across the UK as a whole, 8% of employees living in Wales were in low-pay employment; this is more than the UK average (7%), employees in England (7%) and employees in Scotland (6%). Two-thirds of the average UK pay was £7.90 per hour in 2018 according to the Labour Force Survey (LFS). In January to March 2018, minimum wage for those aged 25 years and over was £7.50 and rose to £7.83 from April 2018 to March 2019. [Details on the National Minimum Wage can be found on the GOV.UK website.](#)

Broken down by sex, men were significantly less likely than women to be employed in low-pay jobs (6% compared with 8%) across the UK. Although Wales (7%) remained significantly above the UK and England average (6%) for male employees, there was no significant difference among female employees. This was in part because female employee statistics have wider confidence intervals.

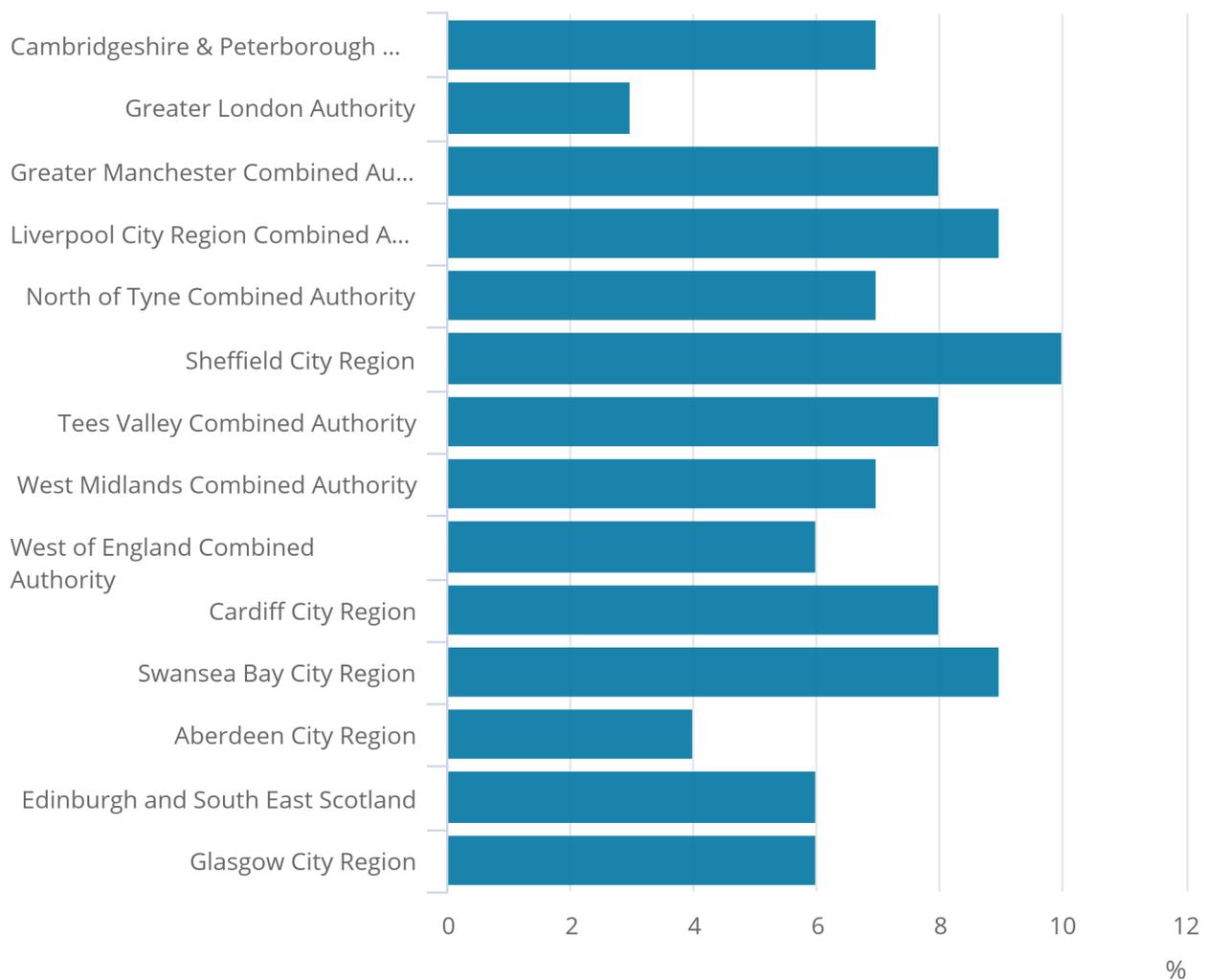
Low pay in the UK by city regions

Figure 10: Significantly fewer employees living in the Greater London Authority were earning low pay, compared with other city regions

Percentage of employees in low pay employment by city region, UK, 2018

Figure 10: Significantly fewer employees living in the Greater London Authority were earning low pay, compared with other city regions

Percentage of employees in low pay employment by city region, UK, 2018



Source: Office for National Statistics – Annual Population Survey

At only 3%, significantly fewer employees living in the Greater London Authority were earning low pay, compared with any other city region. 1 in 10 employees in the Sheffield City Region were earning low pay, and almost 1 in 10 in the Swansea Bay City Region and Liverpool City Region Combined Authority were earning low pay.

The picture is similar if we analyse the results by sex. Male employees working in the Greater London Authority were the least likely to be in low-pay jobs. However, male employees in the Aberdeen City Region (3%) and Edinburgh and South East Scotland (4%) were also not likely to be in low-pay jobs.

Of the city regions analysed, the male employees most likely to be in low-pay jobs were in the Sheffield City Region and Swansea Bay City Region, with both at 8%.

For female employees, the highest percentage of low-pay jobs was also in Sheffield City Region (12%) and the lowest percentage of low-pay jobs was in the Greater London Authority (4%). Highlighting the pay discrepancy between women and men, 1 in 10 female employees were in low-pay employment in four city regions: Liverpool City Region Combined Authority, Tees Valley Combined Authority, Greater Manchester Combined Authority and Swansea Bay City Region.

6 . Low pay: local measure

In this section, we analyse employee hourly pay against two-thirds of the average (median) hourly pay of all residents living in the same subnational authority. Subnational authority refers to the combination of unitary authority and county geographies, as is collected in the variable UALA by the Labour Force Survey (LFS).

Using a more local definition for low pay could allow combined authorities, devolved administrations and other stakeholders to consider local relative costs. [The amount spent by households would differ depending on the region of residence](#). We are therefore using two-thirds of the average hourly pay of all employees in each separate local area as a proxy for earning enough to avoid being in low-pay employment for their local area. The flip side of this argument is that a local area with a high proportion of employees earning with the National Minimum Wage could, under the local area definition, show nobody in low-pay employment because two-thirds of average pay for their local area may be below the National Minimum Wage threshold.

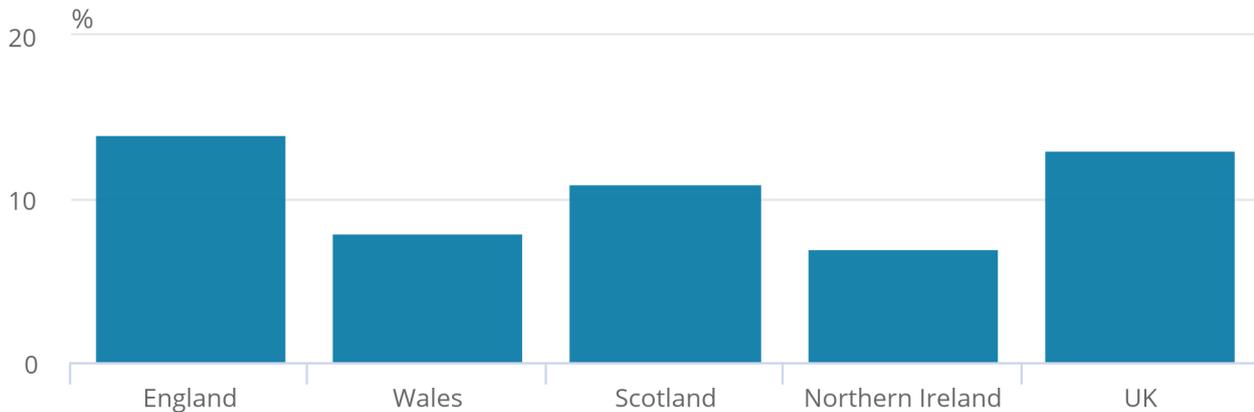
In reading this article, it is important to bear in mind that hourly pay from a single employee job is often not the same as household income, which is a measure of more than just pay and can include multiple income sources.

Figure 11: Employees in England were significantly more likely to be in low-pay employment

Percentage of employees in low-pay employment by country, UK, 2018

Figure 11: Employees in England were significantly more likely to be in low-pay employment

Percentage of employees in low-pay employment by country, UK, 2018



Source: Office for National Statistics – Annual Population Survey

When we use this local area measure of low pay, the areas with a wider earnings distribution are also more likely to have a higher proportion of people in low-pay employment. Consequently, employees living in England (14%) were significantly more likely than those living in Scotland (11%), Wales (8%), and Northern Ireland (7%) to be in low-pay employment.

Female employees in the UK were significantly more likely than male employees to be in low-pay employment (16% compared with 11%).

Employees working part-time were 14 percentage points more likely to be in low pay than those working full-time in the UK. The smallest difference is in Wales (11 percentage points) and the largest difference is in Northern Ireland (16 percentage points).

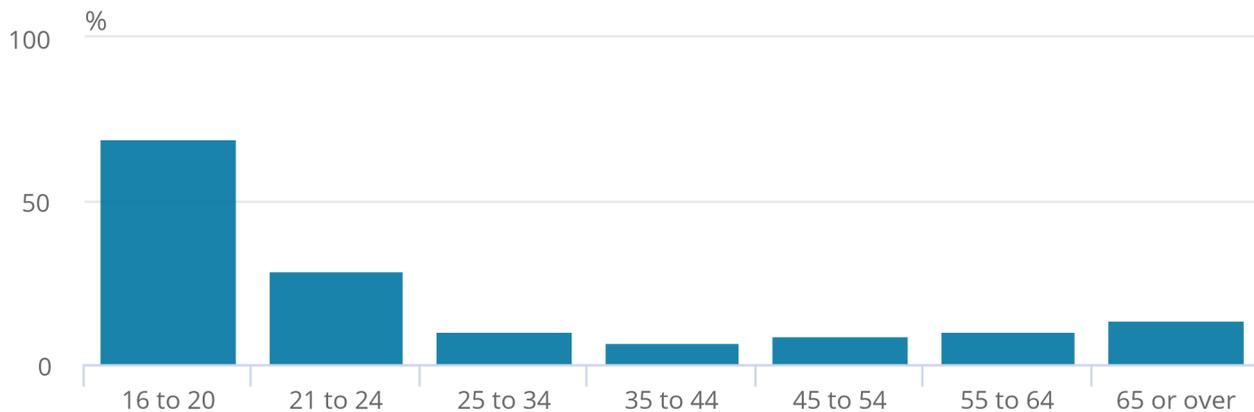
The difference between full- and part-time employees in low-pay employment is particularly stark for men. Male employees in the UK working part-time were 23 percentage points more likely to be receiving low pay compared with male employees working full-time in 2018, while women were 10 percentage points more likely to be receiving low pay when comparing full- and part-time employment.

Figure 12: Employees aged 16 to 20 years were significantly the most likely to be receiving low pay

Percentage of employees in low pay employment by age, UK, 2018

Figure 12: Employees aged 16 to 20 years were significantly the most likely to be receiving low pay

Percentage of employees in low pay employment by age, UK, 2018



Source: Office for National Statistics – Annual Population Survey

Employees aged 35 to 44 years were significantly less likely than any other age group to be in low-pay employment (7%), while those aged 16 to 24 years were the most likely. This holds true for both male employees and female employees.

The sharp drop in low-pay employment from 16- to 20-year-olds, to 21- to 24-year-olds and then again among 25- to 35-year-olds is significant. [National Minimum Wage](#) is lower for those aged under 25 years, and low pay may be more acceptable by those aged under 25 years as they are embarking on new careers with either no or very limited experience. This may include people undertaking apprenticeships to build specific skills and experience and students taking a part-time job to supplement their income while studying. This is supported by previous findings explained in [Young people's earnings progression and geographic mobility, England and Wales: tax year ending 2012 to tax year ending 2016](#), where we found that the cohort of young people who were aged 16 to 24 years in 2011 had an average of 16% annual earnings growth over the period 2012 to 2016.

The percentage of those earning above low pay peaked for those aged 35 to 44 years, where only 4% earned below this threshold. This is reflected in [results from the Annual Survey of Hours and Earnings \(ASHE\)](#), where median hourly earnings were highest for those aged 30 to 39 years and 40 to 49 years (£14.37 and £14.85 respectively), a stark contrast to employees aged 18 to 21 years (£8.03).

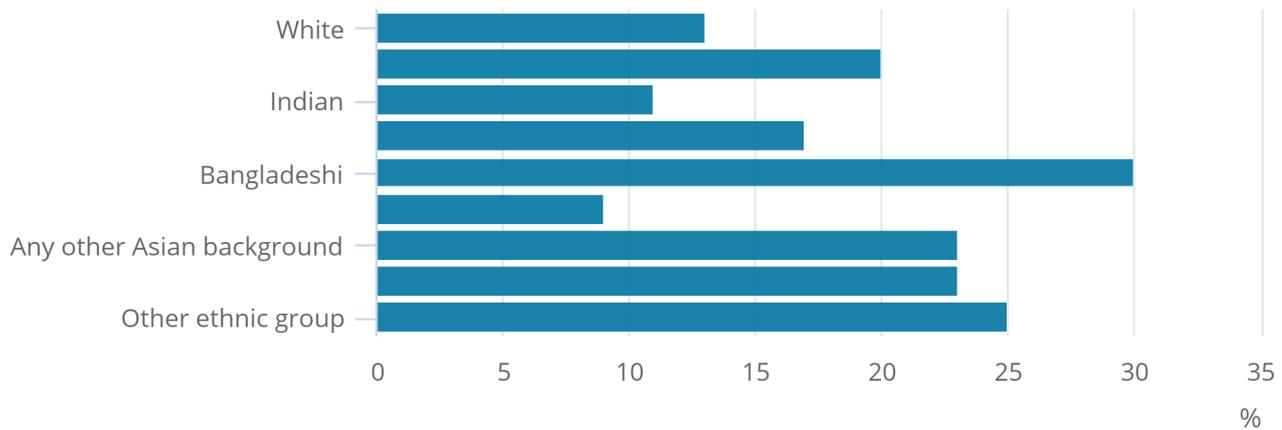
From the age of 25 years, employees living in England were more likely to be in low pay than those living in Wales, Scotland or Northern Ireland.

Figure 13: Employees who identify as ethnically Bangladeshi were the most likely to be in low-pay employment

Percentage of employees in low-pay employment by ethnicity, UK, 2018

Figure 13: Employees who identify as ethnically Bangladeshi were the most likely to be in low-pay employment

Percentage of employees in low-pay employment by ethnicity, UK, 2018



Source: Office for National Statistics – Annual Population Survey

3 in 10 employees who identify as ethnically Bangladeshi were working in low-pay employment. This ethnic group was the most likely to be in low-pay employment. In contrast, employees who identified as ethnically Chinese were the least likely to be in low-pay employment (9%), followed by those who identify as ethnically Indian (11%) and those who identify as ethnically White (13%). The same pattern held true for both male and female employees.

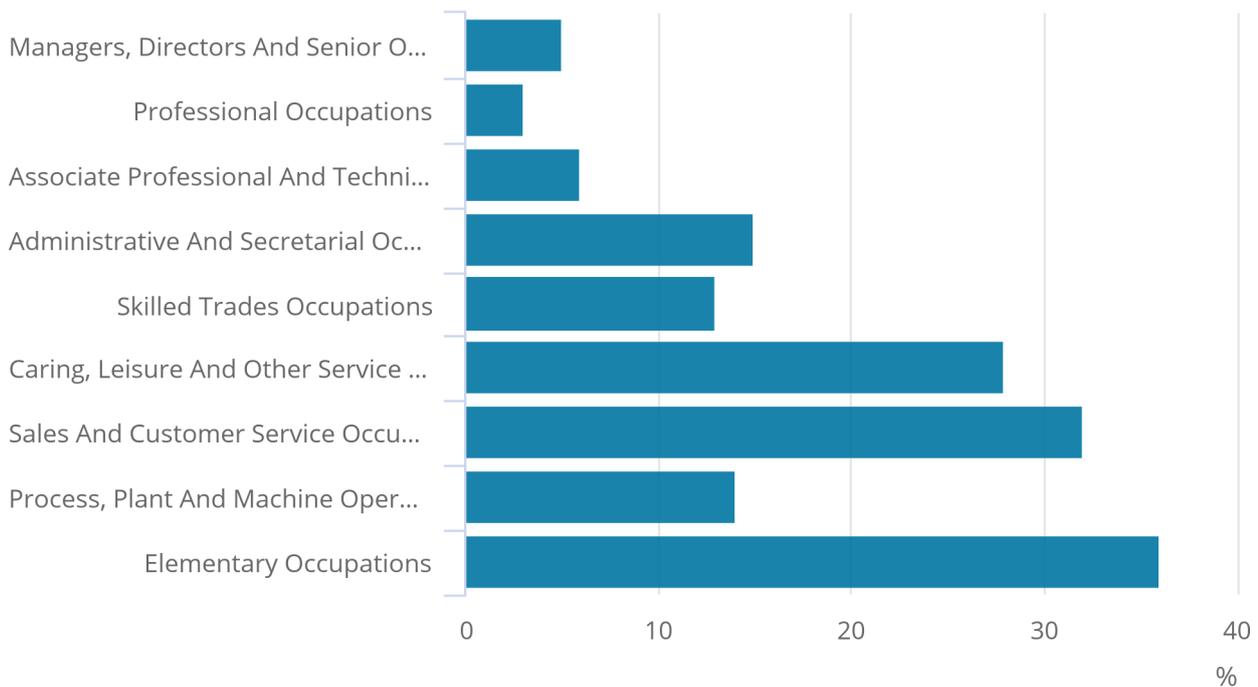
Although male employees were less likely than female employees to be in low-pay jobs for most ethnicities, this was not the case for those who identified as ethnically Bangladeshi and those who identified as ethnically mixed. In both instances, male employees were four percentage points more likely to be in low-pay employment than female employees.

Figure 14: Around one-third of those in elementary occupations and sales and customer service occupations were in low-pay employment

Percentage of employees in low-pay employment by major occupation group, UK, 2018

Figure 14: Around one-third of those in elementary occupations and sales and customer service occupations were in low-pay employment

Percentage of employees in low-pay employment by major occupation group, UK, 2018



Source: Office for National Statistics – Annual Population Survey

In terms of occupation groups, around one-third of employees in elementary occupations (36%) and sales and customer service occupations (32%) were in low-pay employment according to their hourly pay. Employees in professional occupations (3%); managers, directors and senior officials (5%); and associate professional and technical occupations (6%) were the least likely to be in low-pay jobs.

There were some differences between male and female employees when jobs were broken down by occupation. Among women, 23% employed in skilled trades occupations were in low-pay jobs, 11 percentage points higher than men employed in the same occupation. This difference was comparable to those working in elementary occupations, where 43% of women were in low-pay employment, 11 percentage points higher than men in the same occupation (32%).

According to the Annual Population Survey (APS) in 2018, 91% of respondents who said they worked in skilled trades occupations were male. Once weighting was applied, this increased to 92% of the UK population.

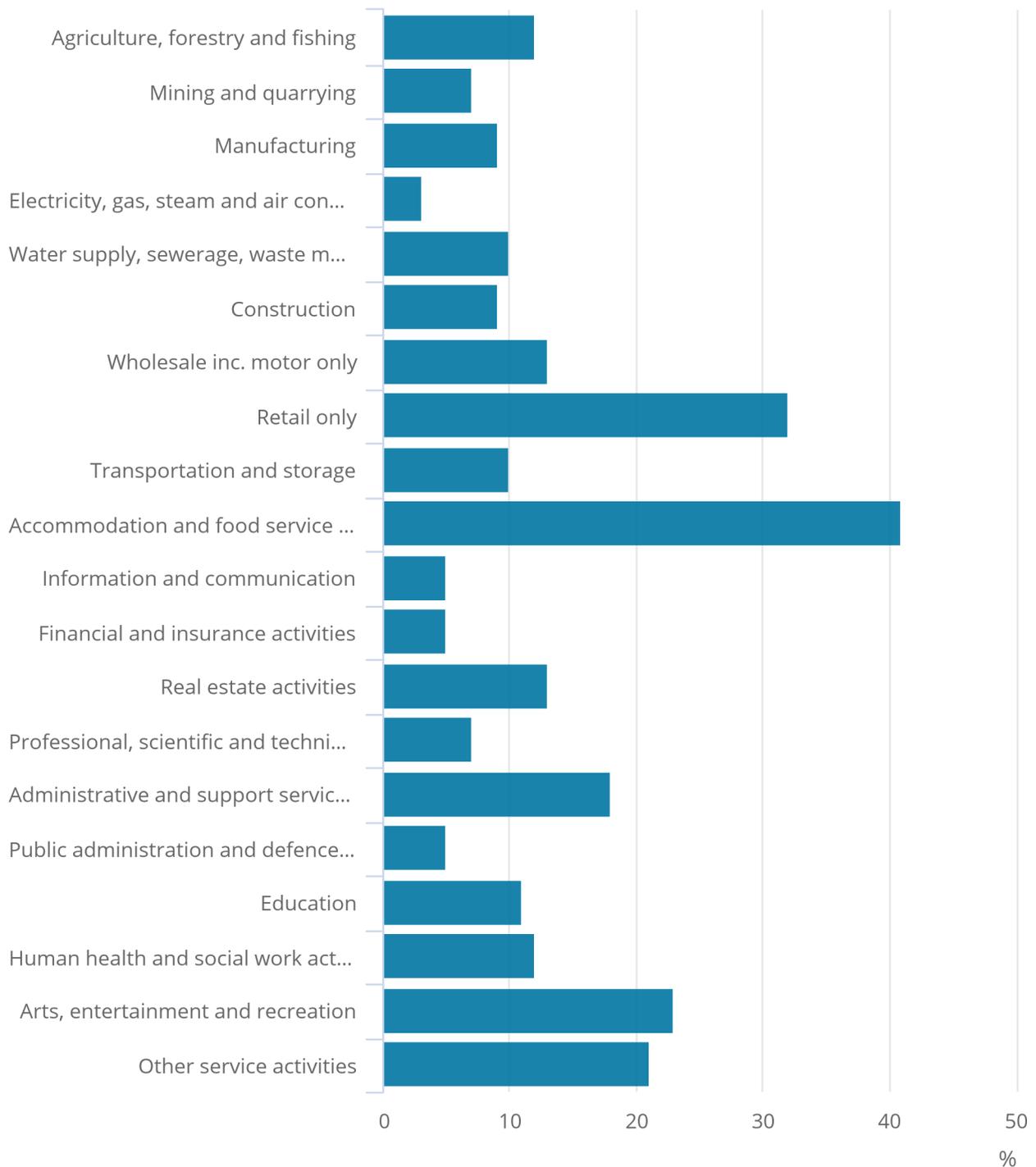
According to [Earnings and hours worked, occupation by four-digit SOC: ASHE Table 14](#), in 2018, gross median earnings for employee jobs in elementary occupations was £8.50 per hour and gross median earnings for those in sales and customer service occupations was £8.70 per hour, suggesting that a large portion of employees in these occupations earned the minimum wage.

Figure 15: There was a 38 percentage point difference between the industries with the lowest and highest percentage of low-pay jobs

Percentage of employees in low-pay employment by industry group, UK, 2018

Figure 15: There was a 38 percentage point difference between the industries with the lowest and highest percentage of low-pay jobs

Percentage of employees in low-pay employment by industry group, UK, 2018



Source: Percentage of employees in low-pay employment by industry group, UK, 2018

When analysing industries by low pay, we see a different picture emerging. Among employees working in the “accommodation and food services industry”, 41% were receiving low pay, 9 percentage points lower than the next lowest industry, “retail” (32%), and 18 percentage points behind “arts, entertainment and recreation” (23%). Other industries falling below the national average include “other service activities” and “administrative and support service activities”.

The industries where employees were least likely to receive low pay were “electricity, gas, steam and air conditioning supply” (3%) and “public administration and defence” and “financial and insurance activities” (both with 5%). Data broken down by sex can be found in the accompanying tables to this article.

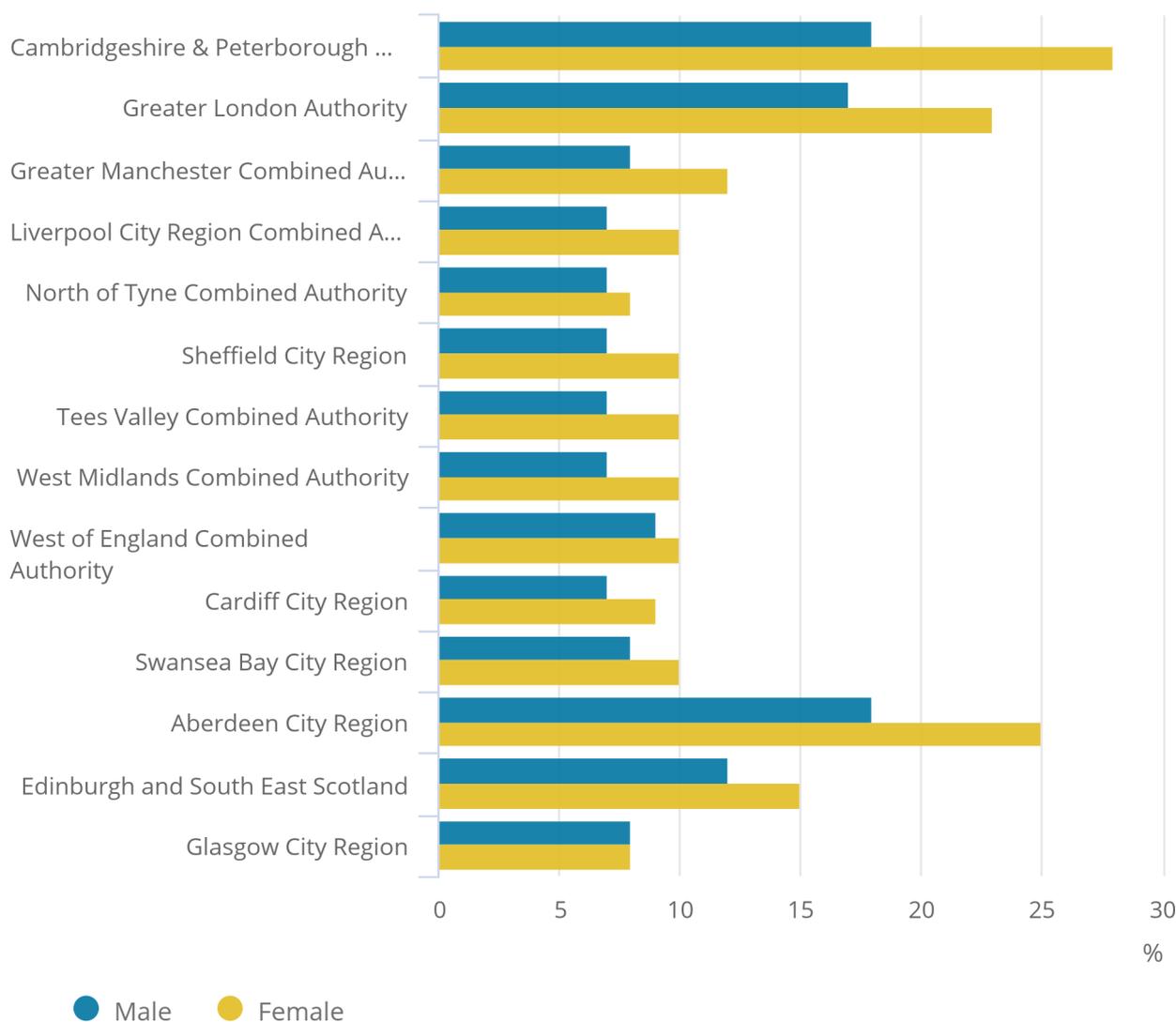
Low pay at a local level by city regions

Figure 16: Three city regions were significantly more likely to have employees in low pay and had the highest discrepancy between women and men

Percentage of employees in low-pay employment by sex by city region, UK, 2018

Figure 16: Three city regions were significantly more likely to have employees in low pay and had the highest discrepancy between women and men

Percentage of employees in low-pay employment by sex by city region, UK, 2018



Source: Office for National Statistics – Annual Population Survey

Across city regions, when categorising low pay based on two-thirds of local average (median) pay, employees living in the Cambridgeshire and Peterborough Combined Authority, Aberdeen City Region, and Greater London Authority were significantly more likely to be in low-pay employment than in other city regions.

These same three city regions had the highest discrepancy between the percentage of women and men in low-pay employment, with far more women in low-pay employment.

There is a nine percentage point difference between male and female employees receiving low pay in the Cambridgeshire and Peterborough Combined Authority (28% compared with 18%), seven percentage point difference in the Aberdeen City Region (25% compared with 18%), and six percentage point difference in the Greater London Authority (23% compared with 17%).

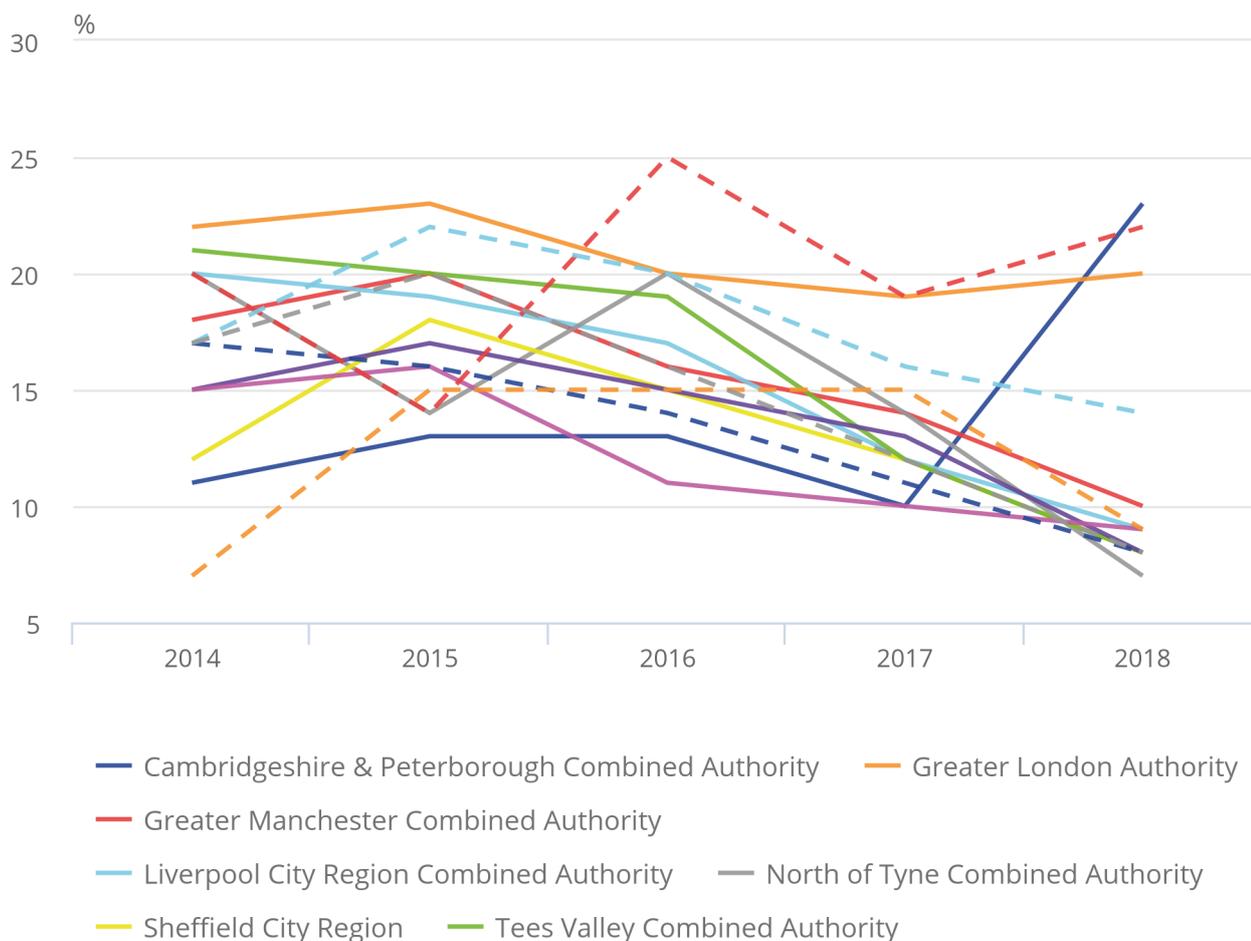
The smallest differences were in the Glasgow City Region (both male and female at 8%), West of England Combined Authority (10% compared with 9%) and North of Tyne Combined Authority (8% compared with 7%), all with less than one percentage point difference between the percentage of female and male employees in low-pay jobs.

Figure 17: Most city regions across the UK had a lower percentage of employees in low-pay jobs

Percentage of employees in low-pay employment by city region, UK, 2014 to 2018

Figure 17: Most city regions across the UK had a lower percentage of employees in low-pay jobs

Percentage of employees in low-pay employment by city region, UK, 2014 to 2018



Source: Office for National Statistics – Annual Population Survey

Except for the Greater London Authority, Cambridgeshire and Peterborough Combined Authority, and Aberdeen City Region, there appears to be a lower percentage of employees in low-pay jobs since 2016, as they all begin to converge.

The change in the Cambridgeshire and Peterborough Combined Authority between 2017 and 2018 [may be a result of changes to the industrial structure of the area](#). There has been an increase in the number of local business units in “construction” and in “food and beverage services”, which typically create jobs at lower rates of pay, and a reduction in the number of local business units in “human health”, “land transport and transport via pipelines”, and in “head offices and management consultancy”, which typically create jobs at higher rates of pay.

By 2018, most city regions had only 7% to 10% of employees in low-pay employment. This figure was higher for four city regions: 14% in Edinburgh and South East Scotland; 20% in Greater London Authority; 23% in Cambridgeshire and Peterborough Combined Authority; and 22% in Aberdeen City Region.

7 . What is quality work?

The International Labour Organization (ILO), which has set out labour standards and developed policies and programmes promoting decent work since 1919, suggests that [decent work](#) “delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organize and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men”. The ILO has produced conventions and policy guidance on pay, working time, employment security, collective bargaining, discrimination, and health and safety at work.

In addition, decent work is included in one of the Sustainable Development Goals (SDGs), Goal 8: Decent work and economic growth. Goal 8 aims to achieve productive employment and decent working conditions as well as equal pay for work of equal value by 2030.

In December 2018, the government produced the Good Work Plan policy paper laying out their “vision for the future of the UK labour market”: a commitment to improving work quality, improving access to decent work and strengthening workers’ rights. It was created on the back of the independent report, [Good work: the Taylor review of modern working practices](#) in the UK, conducted in 2017, and the consultations that followed, seeking views on the implementation of the recommendations.

The Good Work Plan, taking on board most of the recommendations of the Taylor review, states that equal emphasis should be placed on both the quantity and quality of jobs. The principles of quality work as laid out in the industrial strategy include:

- satisfaction (helping employers to retain staff)
- fair pay
- participation and progression (including training opportunities and development and fulfilment)
- well-being
- safety and security (increasing productivity and decreasing workplace stress)
- voice and autonomy (improving engagement and performance)

The Good Work Plan states that all work should be fair and decent; all workers should have the right to request a stable contract and more fixed working pattern; all workers should be entitled to a written statement outlining their rights; there should be transparency in agency workers' contracts and holiday pay entitlement; one-sided flexibility should be ended; employment status frameworks for purposes of employment rights and tax should be aligned; and there should be fairer enforcement of and changes to employment tribunals, including additional penalties for employers found to be breaching obligations.

Included within the recommendations of the Taylor review was that work quality must be defined, measured and understood, to enable improvements to be measured in the future. In response to the review, the Carnegie Trust and Royal Society of Arts, Manufactures and Commerce (RSA) set up the [Measuring Job Quality Working Group](#) to consider a set of metrics, drawing on and learning from previous research and considering regulations already in place. The working group recommended the adoption of a new set of job quality metrics and a robust, regular and reliable approach for measurement, preferably from a single data source such as the Labour Force Survey (LFS), which already captures six measures. As a result, 18 priority measures, a mixture of objective and subjective, were established. These priority measures were grouped into seven categories:

- terms of employment
- pay and benefits
- health, safety and psychological well-being
- job design and nature of work
- social support and cohesion
- voice and representation
- work–life balance

Work is ongoing across government to determine how best to measure quality of work.

The working group's recommendations also included government-supported tools and approaches to help engage employers and public availability of the data, displayed via a data dashboard to enable "economic and public policy debate". Data should be able to be broken down by region, demographics and industrial sector; self-employed and other atypical forms of employment should also be measured.

Given the complexity of job quality and its measurement, policy requirements, and practice interventions, the working group concluded that job quality could not be measured by a single metric. The working group stated that composite measures pose risks, are less transparent and can misrepresent trends within individual measures. They were also concerned about the "simplification effect": given the diverse policy that may be needed to tackle different aspects of job quality, it is important to understand how all aspects are contributing to the quality of work. However, a composite could be developed for each category as the metrics within each are closely related.

The group stated that "A single figure could be drawn up to represent overall performance across all indicators (as GDP27 is used for a measure of economic performance), or a number of composites could be used to summarise the performance across a range of related indicators (e.g. by establishing a composite measure for each of the seven job quality dimensions). Composite indices have been shown to be very successful at distilling a complex set of measures into a relatively simple 'direction of travel' message which can serve as an excellent communications tool sparking interest and debate. Given the importance in stimulating interest in the performance of job quality from the general public and in the media to build the political will to tackle the challenges highlighted by the data, this capacity for engagement is important."

8 . Analysis combining satisfactory hours, low pay and desired contract into one measure

Given that these three indicators combine to affect the quality of work an employee experiences in their job role, it is useful to consider these in combination to provide a composite measure of “job quality”. We recognise that these are only three of the measures recommended. For further details, please see the [Quality and methodology section](#).

This analysis is not the percentage of quality employment in a local authority, it is the number of employees living in an authority who are employed in quality jobs based on the three measures used in this analysis. We recognise that the type of work people choose is dependent on personal circumstances, including household dynamics with high-earning partners, childcare responsibilities and instances such as enjoying working extensive hours or working for low pay in return for job satisfaction.

The total weighted sample used in this analysis represents 27 million employees across the UK. Of these, 11% cannot be categorised because of non-response to one or more of the components of what constitutes this definition of quality work. Throughout this section, we present results excluding the 11% who cannot be categorised. However, data on this unknown category can be found in the tables accompanying this release.

Further information about the methodology used and complications with the sample and analysis can be found in the [Quality and methodology section](#).

Differences by city regions

Quality work in local areas, using the UK-wide measure of low pay

Although using two-thirds of the UK median pay versus using two-thirds of the local area median pay to calculate the measure of low pay does not affect overall percentages at the country level to a large degree, there were larger differences when looking at smaller geographic areas. This is particularly the case for jobs belonging to employees living in the Greater London Authority.

We will look initially at the outcomes using two-thirds of the UK median hourly pay.

The local areas where the highest percentage of residents had quality work were Havering (85%), Harrow (83%) and Brent (83%), all located in the Greater London Authority. The authorities where the lowest percentage of residents had quality work were Kensington and Chelsea and Westminster and the City of London, each having 58% of resident employees with quality work. Despite low proportions of people living in Kensington and Chelsea receiving low pay, it was the number of hours employees work that most affected the likelihood of residents having quality work.

The interactive map (Figure 18) shows all local areas (unitary authorities and counties) across the UK and allows users to switch on and off the three different components of what constitutes quality work to see how their local area fares. This map uses two-thirds of the UK median hourly pay as the measure of low pay.

Figure 18: How does your local area fare for quality work, by UK median hourly pay as the measure of low pay?

Components of classifying quality work by local area using the UK-wide measure of low pay, UK, 2018

Source: Office for National Statistics – Annual Population Survey

[Data download](#)

Notes:

1. The interactive maps under the headings figures 18 and 19 were previously in the wrong order. This has now been corrected.

Quality work in local areas, using the local area measure of low pay

When using two-thirds of median pay calculated according to the local area where an employee lives, the local area with the highest percentage of quality work was Brent with 83% of resident employees in quality work. The local areas with the lowest percentage of resident employees in quality work were Kensington and Chelsea (42%) and Westminster and the City of London (44%), the only two authorities that had fewer than half of employees in quality work.

The following interactive map (Figure 19) shows all unitary authorities and counties across the UK and allows users to switch on and off the three different components of what constitutes quality work to see how their local area fares. This map uses two-thirds of the local area median pay and is therefore different to the map shown in Figure 18.

Figure 19: How does your local area fare for quality work, by local area median pay as the measure of low pay?

Components of classifying quality work by local area using the local area measure of low pay, UK, 2018

Source: Office for National Statistics – Annual Population Survey

[Data download](#)

Notes:

1. The interactive maps under the headings figures 18 and 19 were previously in the wrong order. This has now been corrected.

Quality work in city regions

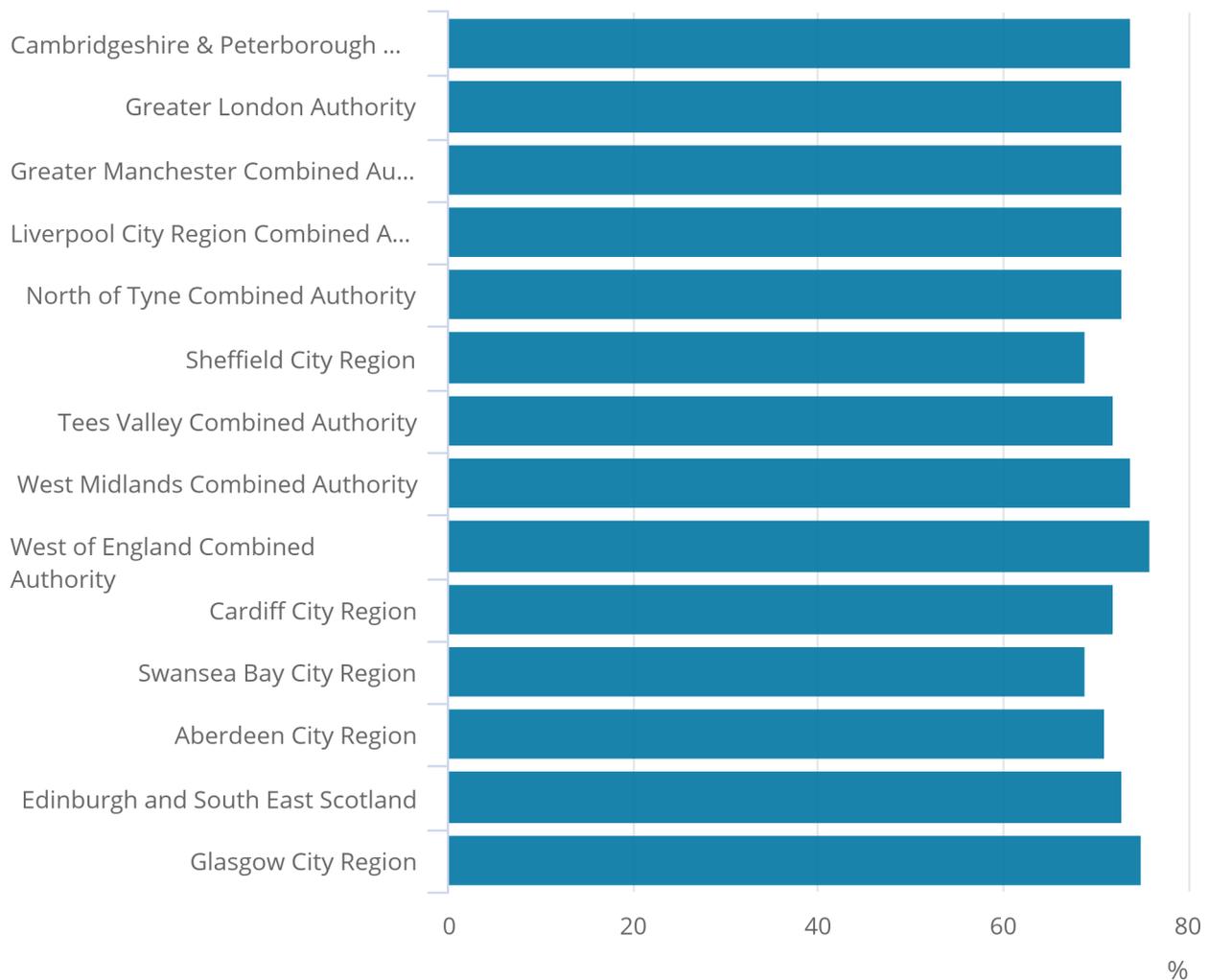
Using two-thirds of the UK median pay to define the threshold of “satisfactory pay”, the city regions with the highest proportion of residents in quality work were the West of England Combined Authority (76%), Glasgow City Region (75%), West Midlands Combined Authority, and Cambridgeshire and Peterborough Combined Authority (both 74%).

Figure 20: There were inequalities in earnings at a local level, using the UK-wide low-pay measure

Percentage of resident employees who had quality work using the UK-wide low-pay measure by city region, 2018

Figure 20: There were inequalities in earnings at a local level, using the UK-wide low-pay measure

Percentage of resident employees who had quality work using the UK-wide low-pay measure by city region, 2018



Source: Office for National Statistics – Annual Population Survey

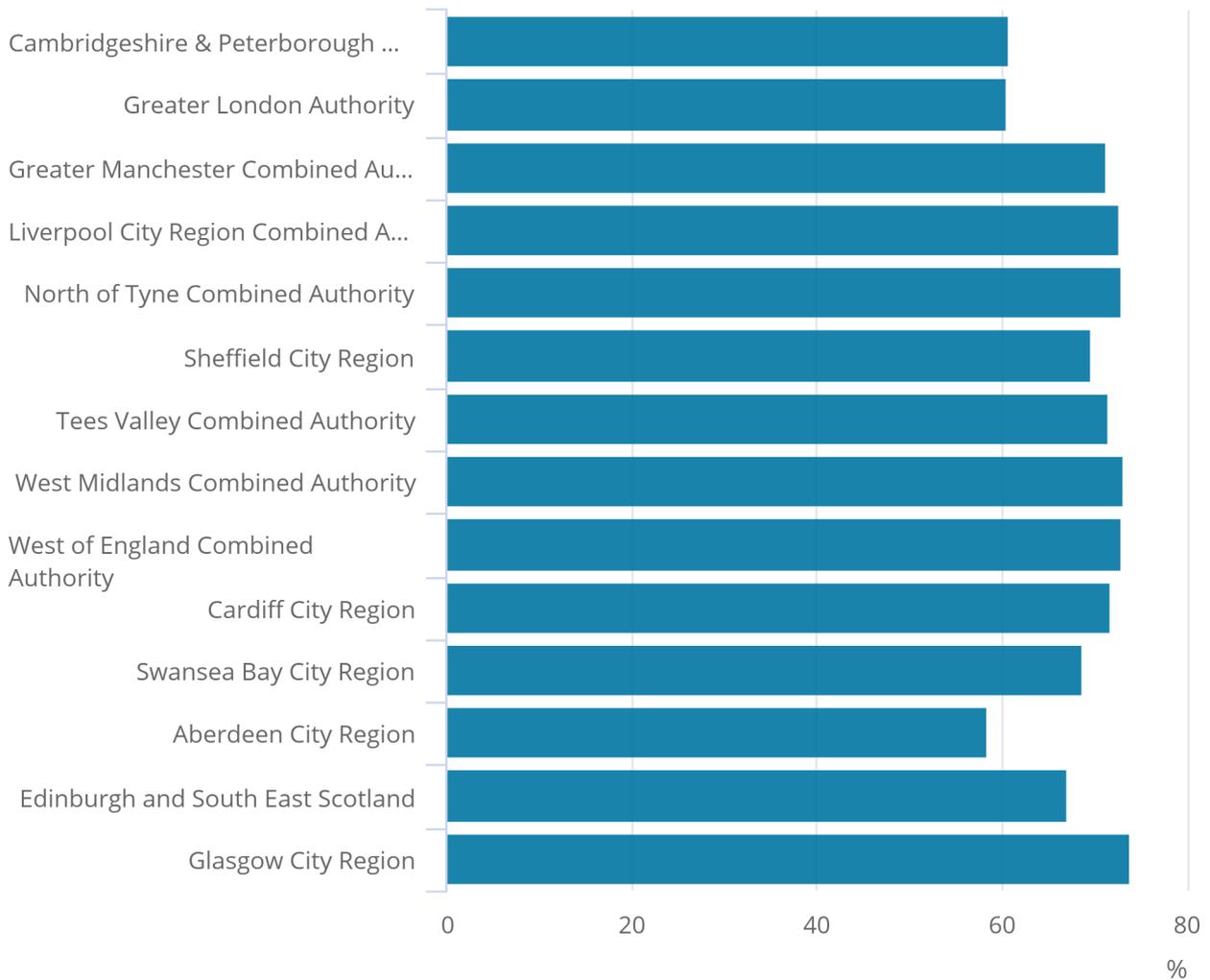
When using two-thirds of the local area median pay to define satisfactory pay, the picture is similar except for Greater London Authority. This definition highlights inequalities in earnings at a local level. The Greater London Authority had the second-lowest proportion of employees in quality work (61%), alongside Cambridge and Peterborough Combined Authority (61%) and slightly above Aberdeen City Region (58%). In contrast, almost three-quarters of employees residing in the Glasgow City Region, West Midlands Combined Authority, West of England Combined Authority, North of Tyne Combined Authority and Liverpool City Region Combined Authority were in quality work.

Figure 21: Employees who live in city regions were more likely to be in quality work than the average UK employee, using the local area low-pay measure

Percentage of resident employees in quality work using the local area low-pay measure by city region, UK, 2018

Figure 21: Employees who live in city regions were more likely to be in quality work than the average UK employee, using the local area low-pay measure

Percentage of resident employees in quality work using the local area low-pay measure by city region, UK, 2018



Source: Office for National Statistics – Annual Population Survey

Using this definition, employees who live in city regions were more likely to be in quality work than the average UK employee, with the exceptions of the Aberdeen City Region, Greater London Authority, and Cambridgeshire and Peterborough Combined Authority. If we look at the components of quality work, we see that although the percentage of desired contracts is similar throughout most of the UK, the differences in the amount of quality work can partly be accounted for by residents of the Aberdeen City Region and Greater London Authority not working satisfactory hours. For the Cambridgeshire and Peterborough Combined Authority, Greater London Authority, and Aberdeen City Region residents, the lower percentage of quality work was even more affected by employees' earnings falling below two-thirds of the median pay in the boroughs where they are residents.

The remainder of this section is a comparative analysis between different demographic and occupational breakdowns of employees in quality work. This analysis will continue by defining those in low-pay employment as employees having jobs with hourly pay higher than two-thirds of the median pay of employees in the local area of their residence. However, the tables published with this article include results using both definitions of low-pay employment.

Quality work by sex and age

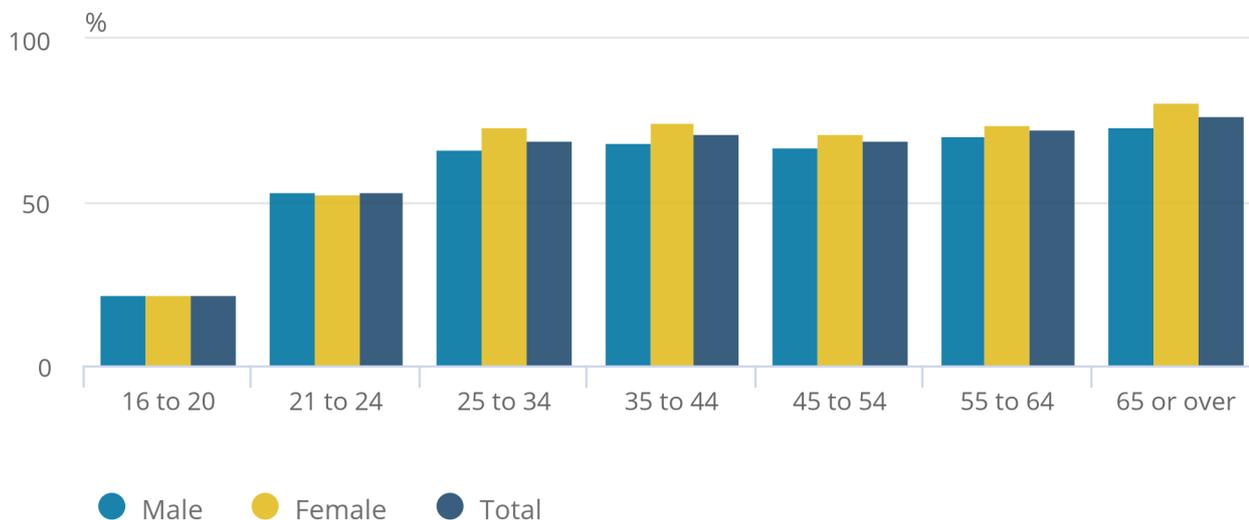
At 69%, women were four percentage points more likely to be in quality work than men (65%) across the UK. This difference generally increases with age (Figure 22).

Figure 22: Employees aged 65 years and over were the most likely to be in quality work while employees aged 16 to 20 years were the least likely

Percentage of employees in quality work by sex and age, UK, 2018

Figure 22: Employees aged 65 years and over were the most likely to be in quality work while employees aged 16 to 20 years were the least likely

Percentage of employees in quality work by sex and age, UK, 2018



Source: Office for National Statistics – Annual Population Survey

The percentage of employees aged 16 to 20 years in quality work was low, at 22%. This figure nearly doubled to 53% for employees aged 21 to 24 years. Between the ages of 25 and 64 years, the percentage of employees in quality work remained fairly stable at around 70%, then increased significantly for employees aged 65 years or over, to 77%.

This difference can be attributed predominantly to a sharp decrease of employees in low-pay jobs between the ages of 16 to 20 years and 21 to 24 years and again to the next age groups. Younger people with less experience and in comparatively new entry-level jobs were more likely to be on lower pay or the minimum wage. These trends by age were similar across all city regions and countries of the UK, as can be seen in the [downloadable tables](#) in this publication.

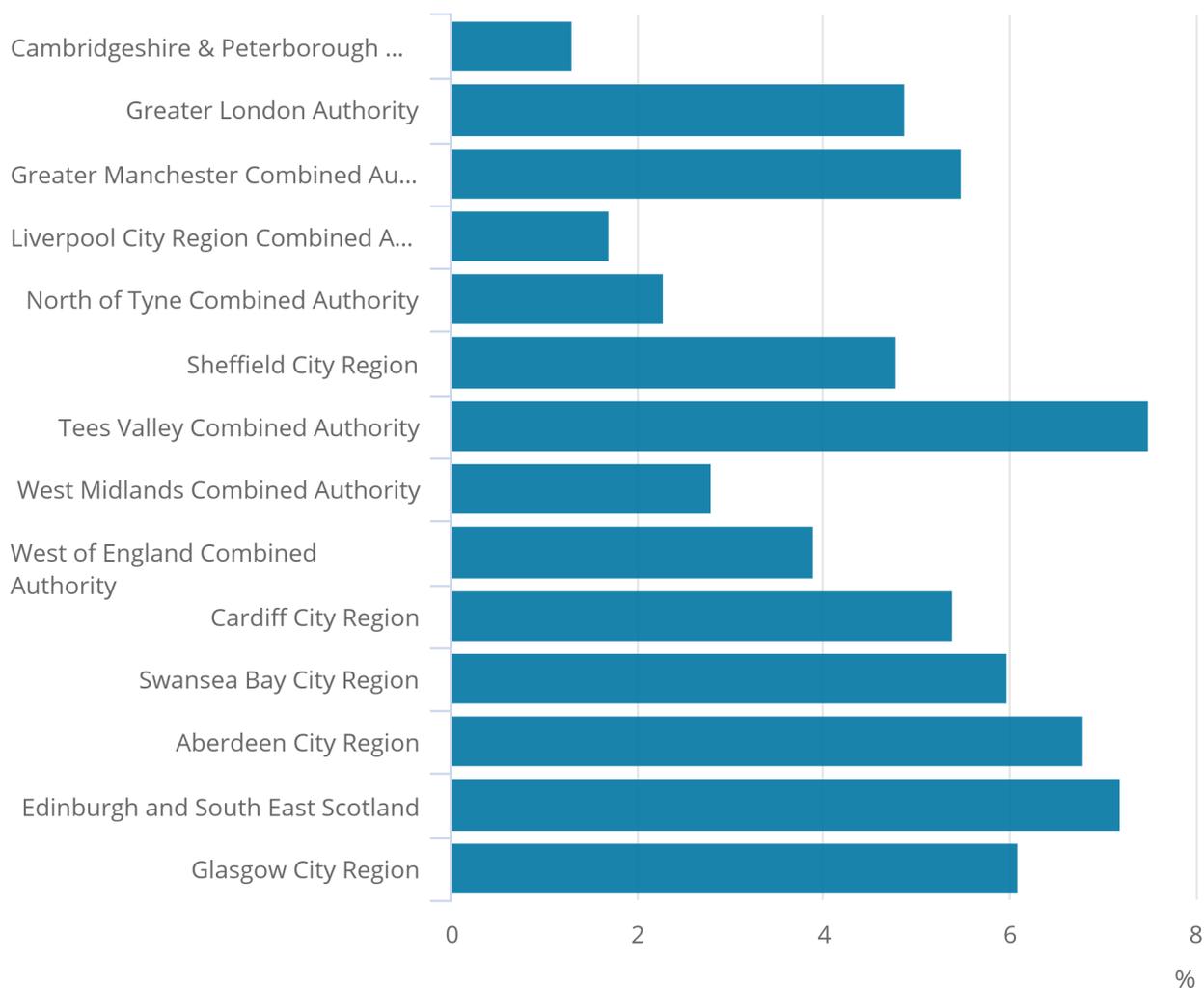
At younger ages, below 25 years, there was a negligible difference between the percentage of male and female employees in quality work. A difference emerges as some women leave the job market to look after their families. Consequently, more women than men have quality work, and this trend remains at older ages. This could be the result of self-selection, whereby more of those women who choose to remain in jobs are staying in jobs that offer them the type of contracts and hours they need and a sufficient level of pay. [Of the people who are economically inactive as a result of looking after family and home, 88% are women \(Table 17\)](#).

Figure 23: The smallest difference between the percentage of male and female residents with quality work was in Cambridgeshire and Peterborough Combined Authority

Percentage difference between male and female employees by city region, positive figures indicating higher percentage of female employees in quality work, 2018

Figure 23: The smallest difference between the percentage of male and female residents with quality work was in Cambridgeshire and Peterborough Combined Authority

Percentage difference between male and female employees by city region, positive figures indicating higher percentage of female employees in quality work, 2018



Source: Office for National Statistics – Annual Population Survey

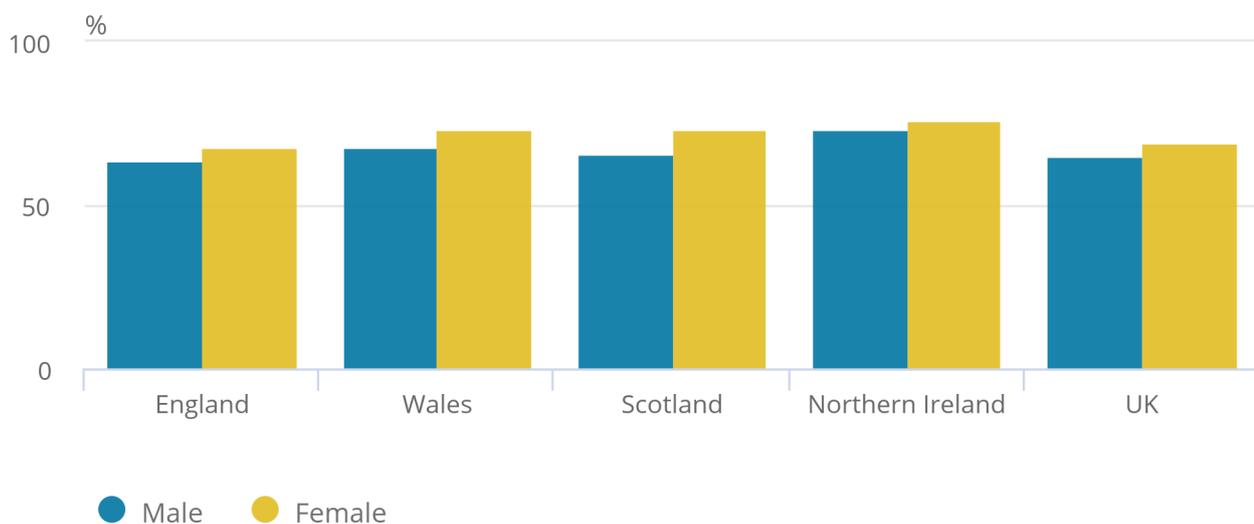
The national pattern is reflected in the city regions across Great Britain. The smallest difference between the percentage of male and female residents with quality work was in Cambridgeshire and Peterborough Combined Authority, with a one percentage point difference between male and female employees. The greatest difference was in the Tees Valley Combined Authority, where women were 18 percentage points more likely to be in quality work, followed by the three Scottish city regions in this analysis (Edinburgh and South East Scotland and Aberdeen City Region with a seven percentage point difference and Glasgow City Region with a six percentage point difference).

Figure 24: Northern Ireland had the smallest gap between men and women in quality work

Percentage of employees in quality work by sex in each country, UK, 2018

Figure 24: Northern Ireland had the smallest gap between men and women in quality work

Percentage of employees in quality work by sex in each country, UK, 2018



Source: Office for National Statistics – Annual Population Survey

The difference seen in the three Scottish city regions can also be seen when looking at Scotland as a whole, where 66% of male and 73% of female employees were categorised as having quality work. The smallest gap, of three percentage points, was in Northern Ireland (73% of men and 76% of women), which seems to be a result of the number of men in Northern Ireland having a significantly higher percentage of quality work compared with the UK average (73% in Northern Ireland compared with 65% in the UK).

As described in greater detail in earlier sections, the discrepancy between men and women can be largely accounted for by the number of hours they work. The [gender pay gap in the UK in 2018](#) was 8.6% for full-time employees and 17.9% for all employees. This discrepancy is in part a result of the higher proportion of women working part-time jobs, where part-time employee jobs were paid £9.35 per hour (gross) on average compared with £14.37 per hour (gross) for full-time employee jobs. Given that more women are working part-time jobs, they are more likely to be working 48 or fewer hours per week and therefore more likely to be working satisfactory hours.

Our analysis shows a smaller gap because we are only capturing those who are either employed in low-pay jobs or not employed in low-pay jobs, not the relative difference between pay received by men and women.

Quality work by ethnicity

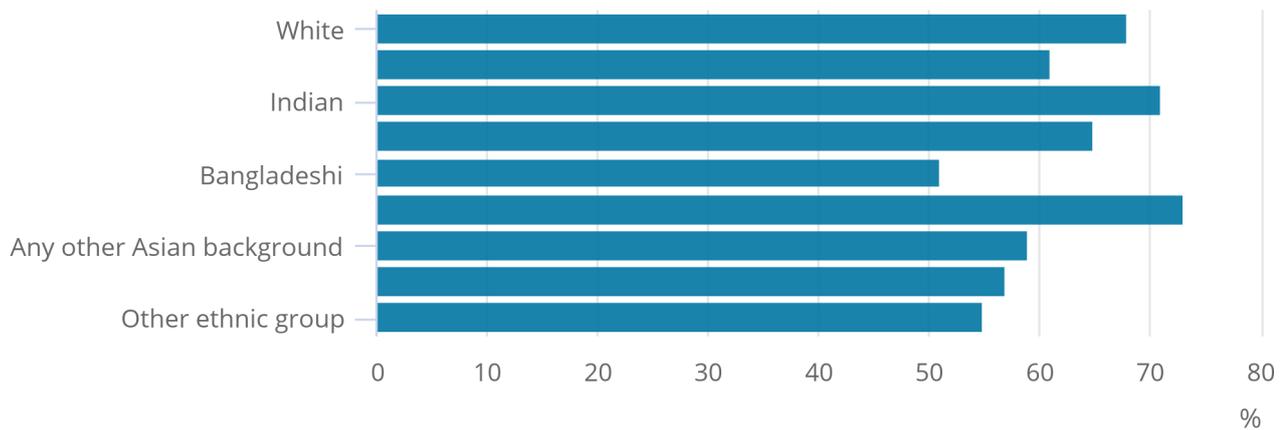
Employees who identified as ethnically Chinese and respondents who identified as ethnically Indian were the most likely ethnic groups to have quality work (73% and 71% respectively), followed by employees who self-identified as ethnically White (68%).

Figure 25: Ethnically Chinese, Indian and White employees were the most likely to have quality work

Percentage of employees in quality work by ethnicity, UK, 2018

Figure 25: Ethnically Chinese, Indian and White employees were the most likely to have quality work

Percentage of employees in quality work by ethnicity, UK, 2018



Source: Office for National Statistics – Annual Population Survey

If we break this down further by sex, employees who identified as Indian women (72%) and employees who identified as Chinese men (76%) were the groups with the highest percentage of quality work. Employees who identified as Bangladeshi men were the least likely to be in quality work (48%), followed by employees who identified as Black men (55%). Unfortunately, more disaggregated ethnicity data are not available for all ethnicities and therefore some groups have been aggregated into larger groups, even though they are not homogenous.

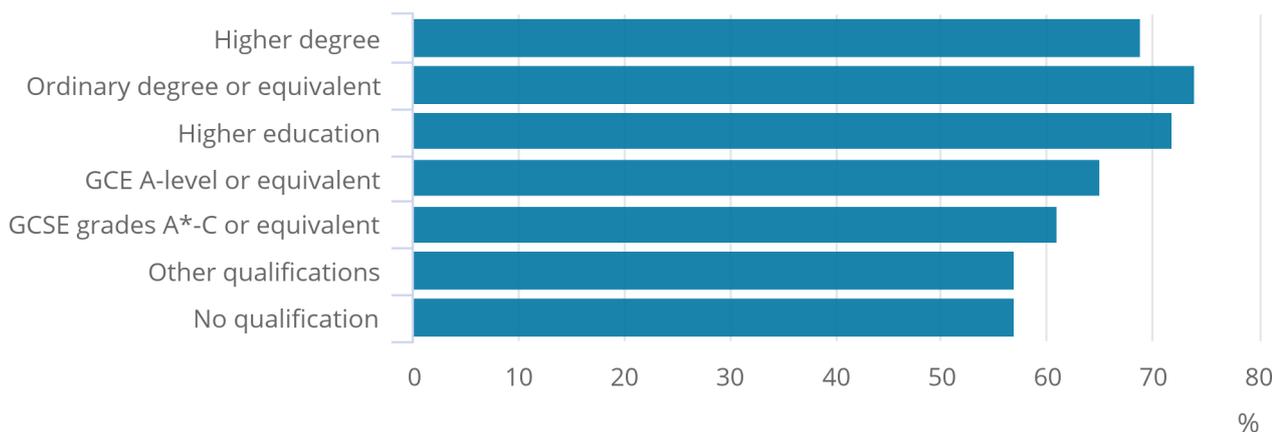
Quality work by qualification level

Figure 26: Educational attainment correlates with quality work up to the level of ordinary degrees or equivalent

Percentage of employees in quality work by highest qualification of the employee, UK, 2018

Figure 26: Educational attainment correlates with quality work up to the level of ordinary degrees or equivalent

Percentage of employees in quality work by highest qualification of the employee, UK, 2018



Source: Office for National Statistics – Annual Population Survey

The likelihood of being in quality work increases with educational attainment up to the level of ordinary degrees or equivalent (such as a bachelor's degree or an NVQ level 5), then drops slightly for people with higher degrees (including master's and doctorates). Employees with higher degrees were the most likely to work more than 48 hours. Of those with higher degrees, 21% worked more than 48 hours, compared with 11% on average for other educational levels. The likelihood of an employee being in low-pay employment decreases as highest educational attainment increases. The likelihood of being in a desirable contract remains constant at around 98%, and there is no clear relationship between qualifications and number of hours worked.

Other factors not included in our analysis can also affect job satisfaction. This includes overeducation or undereducation for specific roles arising from a mismatch of skills in the job market. As analysed in [Overeducation and hourly wages in the UK labour market: 2006 to 2017](#), around 16% of people aged 16 to 64 years in employment in 2017 were overeducated for their job, and this figure rose to 31% for graduates with an ordinary degree or equivalent.

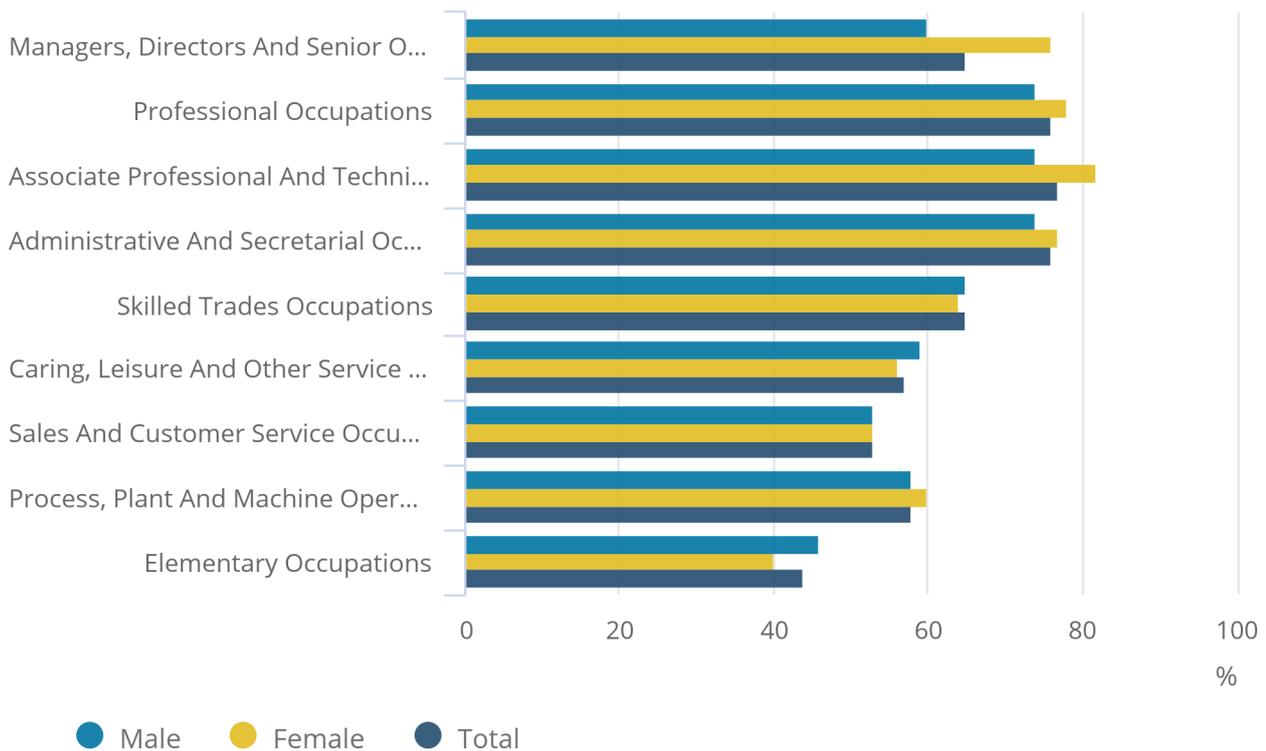
Quality work by occupation

Figure 27: Pay and hours were the biggest contributing factors affecting whether people's' jobs were of quality within each occupation

Percentage of employees in quality work by major occupation and sex, UK, 2018

Figure 27: Pay and hours were the biggest contributing factors affecting whether people's' jobs were of quality within each occupation

Percentage of employees in quality work by major occupation and sex, UK, 2018



Source: Office for National Statistics – Annual Population Survey

More than three-quarters of employees working in skilled trades occupations (76%), associate professional and technical occupations (76%), and administrative and secretarial occupations (77%) were in quality work.

In contrast, those employed in “elementary occupations” (44%) and “sales and customer service occupations” (53%) had the lowest percentage of employees in quality work. The biggest contributing factors affecting whether people's' jobs were of quality within each occupation were their pay and hours.

Employees in “elementary occupations” were the most likely to be in a low-pay job based on the median pay in their local areas, closely followed by employees in “sales and customer service occupations”.

Women were more likely than men to be employed in quality work in most occupations. However, this is not the case for those in “elementary occupations”, “caring, leisure and other service occupations”, and “skilled trade occupations”. The largest difference was for those who were employed as “managers, directors and senior officials”, where women were 16 percentage points more likely to be in quality work than men. This finding should not be confused with the gender pay gap, which focuses on the discrepancy in average pay amongst the working population. This finding examines only those in the occupation and does not consider the percentage of each sex working in the occupational groups, any personal characteristics of the people in those jobs (such as experience, qualification level or responsibilities) or their exact level of pay (only whether it is considered low-pay employment).

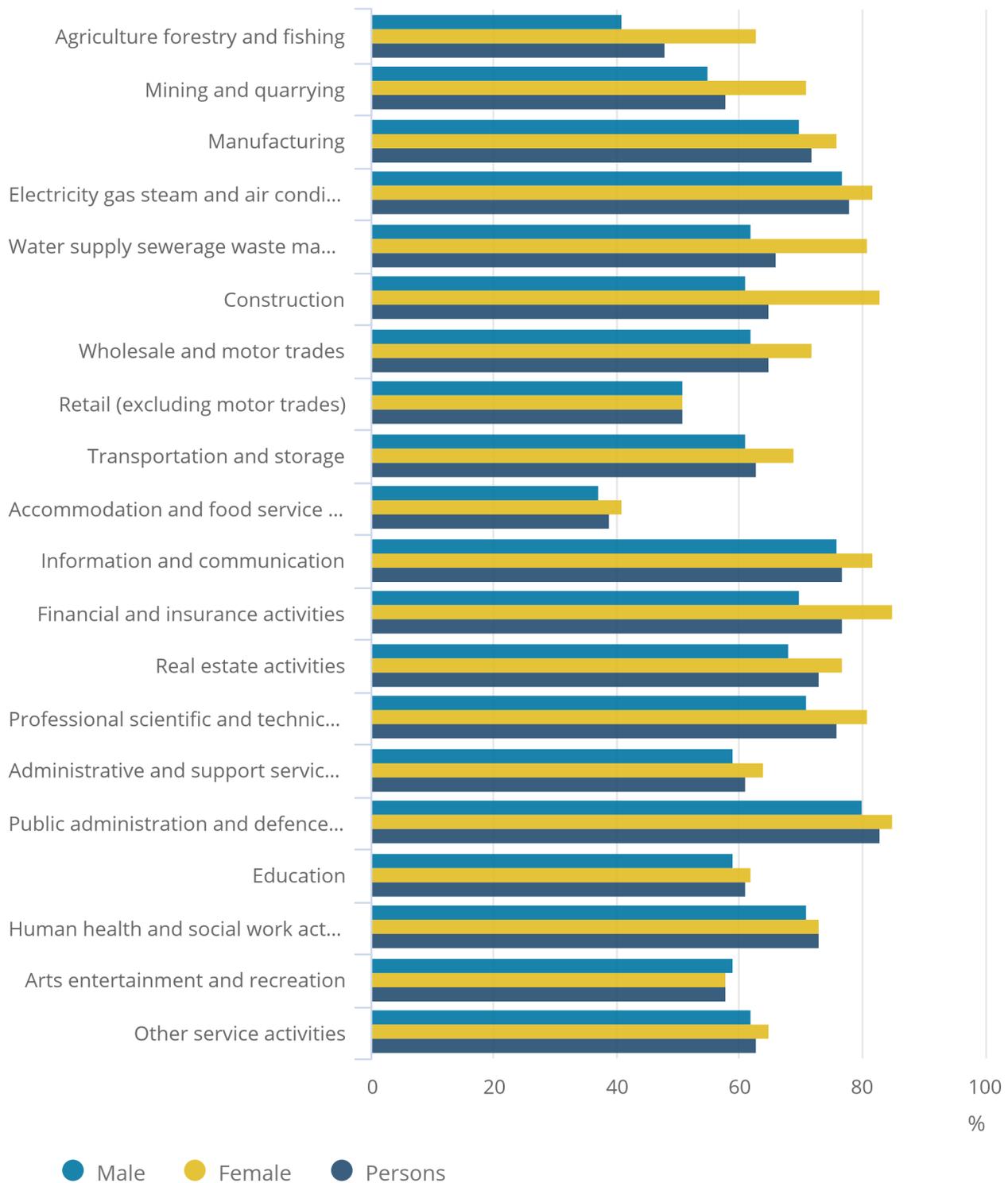
Quality work by industry

Figure 28: The percentage of employed people with quality work ranged from 39% to 83%, based upon the industry in which they work

Percentage of employees in quality work by industry section and sex, UK, 2018

Figure 28: The percentage of employed people with quality work ranged from 39% to 83%, based upon the industry in which they work

Percentage of employees in quality work by industry section and sex, UK, 2018



According to our analysis, the percentage of employed people with quality work ranged from 39% to 83%, based upon the industry in which they work. People working in “public administration and defence; compulsory social security” were more likely to be in quality work at 83%, whereas employees in “accommodation and food service activities” did not fare as well, with only 39% of employees in quality work, the lowest percentage of any industry. This was driven mainly by the higher percentage of employees in low pay. The next lowest was “agriculture, forestry and fishing activities”, with 48% of employees in quality work.

The low percentage of quality work in these industries was largely consistent when looking at smaller geographic breakdowns. The most homogenous industry seemed to be “education”, where employees in almost every city region were within six percentage points of the national average of having quality work. All other industries showed greater disparities between regions. Further breakdowns by city regions were not possible because of the small sample sizes and limited reliability.

Women had a higher percentage of quality work than men in all industries except “arts, entertainment and recreation”, where men were only one percentage point higher, at 59%. The most marked differences were in “construction”, where 83% of female employees had quality work compared with 61% of male employees, and “agriculture, forestry and fishing”, where 63% of female employees had quality work compared with 41% of male employees.

We must consider that the occupations and job roles each person undertakes within each industry can vary widely, so it is possible that different groups of people were likely to experience different likelihoods of having quality work within each industry, depending upon the job roles they were more likely to hold.

The “accommodation and food service activities” industry showed a low percentage of quality work for both male and female employees, where fewer than 45% of employees of either sex had quality work. In Scotland, men working in the “real estate activities” industry were most likely to be in quality work, at 96%, and women were more likely to be in quality work in the “financial and insurance activities” industry, at 90%.

9 . Quality and methodology

Data source

This analysis uses the Annual Population Survey (APS). Although the Annual Survey of Hours and Earnings (ASHE) is the primary source of data for earnings analysis and hours worked in the UK, the APS provides vital employment indicators and more demographic information that are crucial for this detailed analysis (such as ethnicity and education).

The APS collects self-reported data from respondents. Although data validation and imputation are used, collected responses may not be fully accurate, may be missing information and may not fully match responses given by businesses.

Following the publication of [Ethnicity pay gaps in Great Britain: 2018](#) in July 2019, this analysis uses the same income weights, which is appropriate for analyses that rely heavily on income data. This ensures weighting is applied most appropriately to workers and that it aligns sufficiently with results from the ASHE. To ensure consistency of datasets across the article, unless stated otherwise, all calculations and statistics including underemployment and overemployment (as defined in this article) are also calculated using the APS and not the ASHE.

10 . Glossary

Desired contract

Employees on a desired contract have either a permanent contract or a non-permanent contract for a reason other than “Could not find a permanent job”.

- JOBTYP = 1 or (JOBTYP = 2 and WHYTMP6 in (1,2,4,5))

Not in low pay

Employees not in low pay is calculated in two ways, where those not in low pay were either:

- earning at least two-thirds of the median pay (HOURPAY) of their subnational authority of residence (UALA); subnational authority refers to the combination of unitary authority and county geographies, as is collected in the variable UALA by the Labour Force Survey (LFS) (note that Northern Ireland is composed of only one UALA)
- earning at least two-thirds of the median pay (HOURPAY) of the UK

Time series analysis has been done only at city level for the years 2014 to 2018 for all three breakdowns (pay at local area level).

Satisfactory hours

Employees who work satisfactory hours work fewer than 48 hours (TTUSHR) a week, do not wish to work more hours in their current role and are not looking for an additional or replacement job that offers more hours.

Table 1 shows the breakdown of employees working more than 48 hours and those underemployed, by country.

Table 1: Underemployment and overemployment by country, UK, 2018

	Underemployed	Working over 48 hours	Neither underemployed nor working over 48 hours
UK	7%	13%	80%
England	7%	13%	80%
Wales	8%	11%	81%
Scotland	8%	11%	81%
Northern Ireland	6%	9%	84%

Source: Office for National Statistics – Annual Population Survey

11 . Composite analysis: defining quality work

Using the six measures available on the Annual Population Survey (APS), which were part of the recommended approach by [Measuring Good Work: The final report of the Measuring Job Quality Working Group](#) in 2018, our definition of what constitutes an employee with “quality work” was someone with all of the following characteristics:

- earning at or above low pay of the unitary authority or county in which they live, calculated using all known responses to the pay variable from each authority and the median thereof
- usually working less than 48 hours (including overtime) per week
- not being underemployed, meaning that a worker does not want to work more hours than their job allows them to
- having either a permanent contract or some other contract with a reason they do not want a permanent contract

Employees who are not in quality work had at least one of the following characteristics:

- receiving low pay
- working more than 48 hours (including overtime) in a typical week
- underemployed
- did not have a permanent contract, because they could not find permanent employment

The composite has no hierarchy and was created as a measure for easy engagement with the subject matter and to allow users of the data and this analysis to compare quality work by location with ease. However, this composite is not a conclusive definition for quality work and should not be treated as such. It is crucial that the underlying components are used to understand what is happening across the country and by city region over time.

The variables from the APS used for the definition were:

- AGE
- APPRCURR
- APPSAM
- HOURPAY
- JOBTYP
- WHYTMP6
- TTUSHR
- underemployment derived using the following variables: ADDJOB, AGE, LESPAY, LESPAY2, LESPAY3, LOOKM11, PREFHR, SUMHRS, TTUSHR, UNDEMP, UNDST and YLESS6

Selected other variables for analysis may have been available in the Labour Force Survey (LFS). However, those variables could not be used in combination with the full range of other measures, and the sample size would have been far smaller leading to less detailed analysis. The authors are not aware of other sources that provided a sufficient cross-section of variables for analysis.

Sample for composite measure

The sample consisted of employees who had answered enough questions to be categorised into either having “quality work” or not having “quality work”. Those who fell outside these definitions (for missing data) were classified as “unknown”. Although this analysis excludes unknowns, the accompanying tables offer both options.

Differences between the full APS sample and the useable sub-sample for this analysis were minimal.

Sample sizes are small at local authority level, and results in this analysis should be used as indicative only. Confidence Intervals have been added to the data tables.

Table 2: Comparison of the demographic breakdown of total sample available versus sample used, UK, 2018

	Total sample	Sample used
Age: 16 to 20	5%	5%
Age: 21 to 24	8%	8%
Age: 25 to 34	24%	24%
Age: 35 to 44	22%	22%
Age: 45 to 54	23%	24%
Age: 55 to 64	15%	15%
Age: 65+	3%	2%
Male	51%	53%
Female	49%	47%
White	88%	89%
Mixed/Multiple ethnic groups	1%	1%
Indian	3%	3%
Pakistani	1%	1%
Bangladeshi	1%	0%
Chinese	1%	1%
Any other Asian background	1%	1%
Black/African/Caribbean/Black British	3%	3%
Other ethnic group	1%	1%

Source: Office for National Statistics – Annual Population Survey

12 . Future research

This analysis is limited to focus only on employees and misses a portion of the labour force who are self-employed or in alternative types of employment. There is potential for future analysis of quality work as defined in this analysis using the Annual Population Survey (APS), specifically using multinomial modelling to analyse the entire dataset rather than the employee subsection and to look at the effects of ethnicity, age and employment in isolation.

Two further questions will be added to the Labour Force Survey (LFS) and APS in 2020 on subjective measures of job quality, which can be used in future job quality analysis.