

## ORIGINAL ARTICLE

# Is job quality better or worse? Insights from quiz data collected before and after the pandemic

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## Abstract

This article is based on data collected from almost 100,000 individuals who completed the [www.howgoodismyjob.com](http://www.howgoodismyjob.com) quiz either side of the pandemic. The results show that overall non-pecuniary job quality has improved, differences between occupations have shrunk and the growth of remote working is a factor behind these trends.

## 1 | INTRODUCTION

The vaccine roll-out, the booster campaign and the ending of lockdowns have sometimes been taken to signal that the impact of Covid-19 is at an end. However, the effects of the pandemic are likely to last for years ahead. The aim of this article is to examine what short-term effects the pandemic has had on non-pecuniary job quality in the United Kingdom. It is based on quiz data collected from almost 100,000 individuals. Around half completed the quiz 18 months before the pandemic began, with the other half taking the quiz in a 4-month period in the summer of 2022. Quiz takers were recruited through paid-for adverts on social media platforms, such as Facebook and Instagram, and through other promotion campaigns. All those who took part in the quiz ([www.howgoodismyjob.com](http://www.howgoodismyjob.com)) were asked the same questions and recruited using the same methods. On the basis of this evidence, the article compares job quality before and after the pandemic, assesses if it has got worse or better and for whom, and examines possible explanations for the patterns we find.

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The article is structured as follows. Section 2 outlines the thin and rather inconclusive evidence on the changing nature of job quality since the pandemic. Surveys, for example, either do not collect data on non-pecuniary features of work at all or, if they do, they are too small to examine the job quality fortunes of particular occupations such as cleaners, care workers and nurses (Findlay et al., 2021; Wheatley, 2022). Section 3 outlines how the job quality quiz was promoted, gives a profile of the type of individuals who completed it and shows how we correct for these nonresponse biases. Section 4 presents results which suggest that across a variety of dimensions, non-pecuniary job quality has improved since the pandemic. In terms of socio-demographic characteristics, the improvements in job quality have not disproportionately benefited or disadvantaged particular groups. However, those in occupational groups which reported relatively poor nonwage job quality before the pandemic often experienced the biggest postpandemic improvements. The ranking of occupations by job quality has therefore been subject to churn even over a relatively short period. Using occupation as a proxy for job quality may therefore generate misleading results (Elias et al., 2022). The spread of remote working to a wider range of occupations is shown to be associated with both the overall improvement in job quality and these occupational shifts. In light of this evidence, Section 5 concludes by arguing that job quality data need to be collected using random probability methods as part of large scale and regular surveys. Only that way can the UK government can honour its commitment to report ‘annually on the quality of work in the UK economy’ (HM Government, 2018, p. 13).

## 2 | EXISTING EVIDENCE

The focus of our new findings is on trends in the nonwage dimensions of job quality. However, given the recent focus on pay, it is appropriate that we start by examining what has happened to pay in the immediate postpandemic period since, when adjusted for rising prices, pay has plummeted. For example, while median weekly pay for full-time employees was up 6.7% in October to December 2022 on its level a year before, inflation meant that real pay fell by 2.5% (ONS, 2023). It has fallen even more sharply in the public sector. Trade unions have therefore been campaigning—sometimes backed up by industrial action—for pay rises which at least match inflation and protect workers’ living standards. Nevertheless, the proportion of low-paid workers—those who were paid less than two-thirds of median hourly pay has fallen to its lowest level on record; down from 21.8% in 1997 to 10.5% in 2022 (ONS, 2022).

The reduction in low-pay can be explained by two factors. First, the sharp increases in the UK’s statutory minimum wage since 2016. Second, the growing uptake of the higher, voluntary Real Living Wage set annually by the Living Wage Foundation. The number of employers paying the Real Living Wage reached to an all time high of over 12,000 in February 2023.<sup>1</sup> Even industries providing key services during the pandemic and those most adversely affected by Covid-19 restrictions recorded a net growth in the number of employers paying the Real Living Wage. This suggests that ‘there may be an employer constituency for attempts to “build back better” or “build back fairer” after the pandemic’ (Heery et al., 2021, p. 9).

However, over the longer term the number of both well-paid jobs and lowly paid jobs has grown, and therefore wages have become polarised. These are referred to as ‘lovely’ and ‘lousy’ jobs, respectively (Goos & Manning, 2003). Underpinning this finding is an analytical approach

<sup>1</sup>See real time count, <https://www.livingwage.org.uk/accredited-living-wage-employers>

which first ranks occupations according to their pay levels at the start of the study period and then measures whether these occupations have grown, declined or stayed the same by the end of period. Nevertheless, even the originators of this approach recognise that ranking ‘jobs according to the average level of wages in that job, so that “good” means well paid and “bad” means badly paid’ is ‘simplistic’ and ‘undeniably crude’ (Goos and Manning (2007, p. 71).

With this in mind, the approach has been extended to an examination of how non-pay dimensions of job quality have changed over time (Williams et al., 2020, chapter 5). Part of this analysis is based on pooling survey data from the Skills and Employment Survey (SES) series across several years. Occupations are ranked into quintiles based on their non-pay features—such as job security, learning opportunities, task discretion and employee involvement. An assessment is then made as to whether these occupations have become more or less prevalent over time and to what extent. The results paint ‘a picture of general occupational upgrading across the occupational quality structure’ (Williams et al., 2020, p. 113). This ‘rosy picture’ suggests that occupations which have high job quality attributes—measured in terms of, for example, learning opportunities, skill use, discretion and work intensity—have grown, while occupations with lower job quality have shrunk. This interpretation rests on two assumptions. First, that the job quality ranking of occupations remains unchanged throughout the period studied, in this case a period of over two decades. Second, it assumes that the job quality gaps between occupations remain the same. Our results suggest both these assumptions are questionable. Instead, they suggest that there is considerable churn in where occupations sit according to various dimensions of job quality.

The quiz data can also shed new light on what the disruptions of the pandemic years—lockdowns, Covid-19 restrictions and enforced lay-offs—have had on nonwage aspects of job quality. There is little agreement on whether things have got better or worse. Some studies suggest that there have been improvements, some present a picture of deterioration and some fail to detect any change at all. For example, the Work Foundation’s ‘insecure work index’ actually fell during the pandemic as the self-employed became employees, and temporary working and zero-hours contracts fell (Florisson, 2022, p. 16). This suggests that job quality improved. Nevertheless, it is estimated that 6.2 million workers experienced severely insecure work in 2021 with women and young people disproportionately affected.

The insecure work index captures contractual, financial and rights-based insecurity in a single indicator and traces its trajectory over the last two decades (Work Foundation, 2022). It is therefore limited to one aspect of job quality and draws on official statistical data sources which collect limited data on other dimensions of job quality. It is claimed, for example, that an additional 32 questions need to be added to the Labour Force Survey (LFS) in order for the UK government to deliver on its commitment ‘on measuring quality of work through agreed metrics and better data’ (Irvine et al., 2018; Taylor, 2017, p. 102). However, only two new questions on career progression and employee involvement in decision-making have been added.

The Chartered Institute of Personnel and Development (CIPD)’s UK Working Lives Survey (WLS) addresses this neglect. It asks respondents around 100 questions with a particular focus on job quality. The survey has been carried out annually since 2018. Respondents are recruited using quotas with around 6000 workers taking part. The data are presented, in the main, using a series of domain indices which reduces the number of questions to a more manageable number of seven domains as well as an overall job quality measure. Despite the pandemic, both the 2022 and 2021 data fail to detect any major deterioration or improvements in these job quality indices. During the pandemic itself, job quality was ‘quite “sticky” in the face of shifting

economic conditions' (Findlay et al., 2021, p. 14) and even in 2022 little variation could be found in the pre- and postpandemic data (Wheatley, 2022).

However, other evidence suggests that employment conditions have deteriorated significantly since the pandemic. For example, more workers in the United States reported that aspects of their jobs—such control over working hours, job security and promotion opportunities—had deteriorated since the pandemic. This evidence has several drawbacks. First, it is based on self-assessment of change across a number of dimensions and not on cross-sectional 'before and after' comparisons of the type presented in this article. Second, it focuses on the United States (Rothwell & Crabtree, 2021). Herman et al. (2021) argue that the UK's weakly regulated labour market and patchy collective bargaining arrangements give employers even more scope to take advantage of economic disturbances, such as those unleashed by the pandemic, to drive job quality standards down. This is backed up by case studies carried out in a number of low-paid sectors. For example, before the pandemic one care home studied strove to be a good employer by meeting the training needs of all employees, increasing holiday entitlement in line with job tenure, giving all employees a week's compassionate leave on full pay and paying an overtime rate for any extra shifts worked. However, during the pandemic these decisions were reversed. Furthermore, to prevent the spread of infection, workers could only work within their rota team and not across units. This led to work intensification as staff could not move from overstaffed to understaffed units nor could they pick up shifts which were in line with their nonwork obligations.

While surveys and quizzes are not sensitive enough to pick up on specific changes, for example, to shift arrangements, one would expect that the outcomes for job quality to be reflected in responses to questions about work intensity, work-life balance and control over working time. However, existing data sources are not large enough to detect these outcomes for particular occupations such as care workers. The CIPD's annual survey, for example, is mainly analysed at broad occupational level—the limited number of observations in a single year prevents more detailed investigation. Each of the SESs are also typically analysed at a high level of occupational aggregation.

However, with data from around 50,000 quiz takers before the pandemic and 50,000 quiz takers after the pandemic, we are uniquely placed to offer more detailed insights into the fate of particular occupational groups. Provided we have a sufficient number of responses to the quiz before and after the pandemic, we can examine how the dimensions of job quality have changed at the most detailed 'Unit Group' level of the Standard Occupational Classification (SOC). Other surveys do not have sufficient sample sizes to offer this perspective. For example, pooling successive surveys, such as WLS or SES, across several years increases the number of respondents in each occupation. However, this approach masks any changes in job quality within and between occupations that may have occurred over time (Elias et al., 2022; Williams et al., 2020).

Different occupations may not experience macro-economic changes to the same extent with the result that trends in job quality may vary by occupation. The growth in remote working, for example, has not been evenly felt. For some jobs it is not possible, for some it is a completely new way of working and for others it has been an accepted way of working for many years (Felstead, 2022). As a result, the growth of remote working—ushered in by the pandemic—may have boosted some aspects of job quality for some occupations, but not for others. Those working remotely may, for example, have more control over their start and finish times, and find it easier to take time off to deal with personal and/or family matters.

### 3 | DATA COLLECTION METHODS

The random probability sample survey remains the gold standard means of assessing societal issues. By ensuring that participants have an equal chance of being selected to take part, it provides a sound statistical basis on which to estimate the quality of jobs across the population and between different socioeconomic groups such as sex, age, sector and place of residence. It also has other advantages. Face-to-face interviews, for example, tend to be longer than modes of data collection which do not rely on physical presence of an interviewer. Furthermore, when the same questions are asked as part of a repeated series, changes in the various dimensions of job quality can be tracked and hypotheses tested using other information provided by respondents. The SES series is an example of this approach (Felstead et al., 2015). However, these surveys are relatively: expensive to carry out; infrequent; slow to produce results; subject to declining response rates; and based on relatively small sample sizes.

In response, we have been experimenting with cheaper and quicker methods of collecting data. One of these ways is an online quiz designed to attract large numbers of individuals to take part in quick easy to complete series of questions. In return, quiz takers' jobs are benchmarked against 10 dimensions using data taken from a national survey, hence the URL, [www.howgoodismyjob.com](http://www.howgoodismyjob.com). Our experimentation with this approach began before the pandemic. The intention was to engage large numbers of people in public debates, prompt action to improve working life and, importantly for this article, gather additional data. We have continued this approach in the postpandemic period, launching another publicity campaign in the middle of 2022 (Felstead, 2021; Felstead et al., 2019).

Others, too, have been experimenting with similar methods. Some of this has been prompted by the lockdowns which spread across the world and curtailed face-to-face data collection methods. For example, the European Foundation for the Improvement of Living and Working Conditions has carried out what it calls an 'e-survey' on five separate occasions to date. This started in April 2020 when face-to-face, random probability data collection was put on hold because of the pandemic. Like our quiz, this data collection exercise was based on non-probabilistic sampling. It was open to anyone aged 18 and above who had access to the internet and clicked on the invitation to take part. Respondents may have seen the invitation as a result of promotional campaigns undertaken by Eurofound's stakeholders, adverts placed by Eurofound on websites or through paid-for Facebook advertising (Eurofound, 2022). Participation in surveys or quizzes of this type is biased in two ways. First, by where the invitation or advert to complete the survey or quiz is placed and to whom it is directed. Second, who then decides to take part. Neither of these steps are random and hence the data collected are biased at the point of data collection. For example, around 70% of participants in the first two waves of the Eurofound e-survey were women and well over half were 50 years old and over (Sandor & Ahrendt, 2020; figure 1). Given the different modes of data collection, comparisons are not made between the results of the e-survey and data collected from random probability surveys run by Eurofound, such as the European Working Conditions Survey. This applies even when both samples are asked the same question. Instead, data from the latter are only provided 'as a source of information' and not as a point of comparison (Eurofound, 2020, p. 7).

Our data collection methods are also prone to biases which we cannot fully control. This applies to the method by which we recruit quiz takers. Throughout the period of data collection, we relied on a series of paid-for social media advertising campaigns. These were intended to prompt audience curiosity and trigger participation. Even the URL [www.howgoodismyjob.com](http://www.howgoodismyjob.com)

[howgoodismyjob.com](https://www.howgoodismyjob.com) was designed to make a direct appeal to people's inquisitive nature, especially in the context of few other means of comparing one's job with those of others. Our advertising one-liners emphasised this appeal—for example, 'is your job better or worse than others?' and 'ever wondered how your job compares to others'. We also experimented with visual imagery. The most successful advert—measured in terms of the cost per quiz completion—was an advert comprising stylised images of a variety of jobs and a university logo. We maintained this approach throughout the data collection period. For both social media campaigns, our target audience was those who were living and working in the UK and were aged between 20 and 65.

However, changes have occurred in who sees adverts on social media outlets such as Facebook and Instagram. In response to concerns over data privacy there have been changes to the way social media companies are able to use profiling data to customise what users see in their Feeds. For example, in 2020 Facebook launched a series of 'off-Facebook activity' tools. These allow users to prevent third-party applications and websites accessing browsing history which is then used to target users for particular adverts. In 2021, as part of an operating system update, Apple gave its users the ability to opt-out of advertising tracking, thereby cutting off another means by which Facebook personalises users' Feed. Over 95% of iPhone users have taken up this option. These changes mean that advertising has become less personalised with more people needing to see the advert for each quiz completion. In specific terms, to generate around 50,000 quiz completions at each data point, three times as many people had to see the advert in 2022 than in the months before the pandemic. The cost per quiz completion also reflected this change, rising from 13.5p to 33.3p. However, the cost per 1000 impressions (CPM)—that is, the cost for the advert appearing in users' Feeds—actually fell a little from 4.2p to 3.5p.

The resulting data set consists of around 100,000 quiz completions; around half (49,560) taken in the period July 2018–January 2020 and half (50,838) in May–August 2022. For brevity, we refer to these two data points as pre- and postpandemic. In line with the target audience for the quiz, we focus on those aged 20–64 years old and living in the United Kingdom, hence this article is based on 48,299 prepandemic and 48,234 postpandemic respondents.<sup>2</sup> Details of these responses are provided in Table 1.

Both before and after the pandemic women, those working in the public sector and those in professional occupations were disproportionately more likely to take the quiz. There were also differences in the profile of those taking the quiz either side of the pandemic. In 2018–2020 approaching 30% of quiz takers were in their 20s, but in 2022 this proportion fell dramatically. To some extent, we can correct for these nonresponse biases by creating a weight for the two sample points and applying these weights throughout the analysis. Our weights are derived from contemporaneous data from the Labour Force Survey (LFS), which is used to provide a nationally representative picture of the composition of employment around the times when the quiz was being promoted. For each of the observable groups, we calculate a weight which is inversely proportional to the LFS estimate for each of the groups. We then multiply each of these weights together to produce two quiz weights. When applied, the profile of the quiz moves closer to that of the LFS. However, some large gaps remain.

While the quiz does not collect a lot of demographic information, it does collect detailed information about the jobs people do. However, this information is collected without burdening

<sup>2</sup>The quiz asks the age of quiz takers with 65 and above an option. We focus on those aged 20–64, although the campaign targeted those aged 20–65.

TABLE 1 Patterns of response, pre- versus postpandemic quiz evidence.

	Prepandemic			Postpandemic		
	Unweighted (%)	Labour force survey <sup>a</sup> (%)	Weighted (%)	Unweighted (%)	Labour force survey <sup>b</sup> (%)	Weighted (%)
<b>Gender</b>						
Male	33.3	52.7	58.6	44.6	52.2	59.1
Female	66.2	47.3	41.0	54.2	47.9	39.8
Other	0.2	NA	0.1	0.4	NA	0.3
Prefer not to say	0.4	NA	0.3	0.9	NA	0.8
<b>Age</b>						
20–29	28.6	21.4	23.4	13.5	20.7	22.2
30–39	25.4	24.5	25.0	26.9	24.9	23.9
40–49	21.7	23.7	22.3	27.5	23.3	21.8
50–59	20.2	23.2	24.2	26.1	23.2	24.7
60–64	4.2	7.2	5.2	6.0	7.8	7.4
<b>Occupation</b>						
Managers, directors, and senior officials	12.9	11.1	12.4	14.6	10.2	10.4
Professionals	33.6	22.0	18.8	43.1	24.9	21.8
Associate professionals	17.3	14.8	14.8	18.4	16.0	16.1
Administrative & secretarial	11.0	9.9	8.1	7.6	9.9	8.6
Skilled trades	4.2	10.1	13.9	3.7	8.9	11.5
Caring and leisure	9.1	9.1	6.7	5.2	9.0	7.2
Sales and customer service	5.0	6.9	6.4	2.6	6.3	6.8
Plant & machine operatives	2.5	6.3	9.0	2.5	5.9	7.4
Elementary	4.3	9.6	9.8	2.6	8.8	10.3
<b>Region</b>						
North East	3.5	3.7	3.4	3.2	3.6	3.7
North West	10.7	10.8	9.9	3.3	10.7	10.6
Yorkshire and the Humber	10.4	8.0	10.0	10.8	8.0	8.2
East Midlands	7.5	7.1	8.5	9.5	7.1	7.6
West Midlands	8.0	8.5	8.0	6.5	8.7	8.7

(Continues)

TABLE 1 (Continued)

	Prepandemic			Postpandemic		
	Unweighted (%)	Labour force survey <sup>a</sup> (%)	Weighted (%)	Unweighted (%)	Labour force survey <sup>b</sup> (%)	Weighted (%)
East of England	10.1	9.5	11.5	7.9	9.6	9.9
London	8.1	14.7	10.3	9.9	14.9	14.3
South East	14.7	13.9	14.8	14.7	13.9	13.9
South West	10.8	8.4	8.4	11.2	8.3	8.5
Wales	5.5	4.6	3.9	5.7	4.4	4.2
Scotland	9.0	8.3	8.6	9.0	8.2	8.0
Northern Ireland	1.7	2.6	2.7	1.9	2.6	2.6
Sector						
Private sector	57.3	73.0	75.6	46.8	71.0	76.5
Public sector	35.3	22.6	17.7	45.5	24.4	19.8
Nonprofit organisation	7.5	4.5	3.7	7.6	4.5	3.7

Abbreviation: NA, not applicable.

<sup>a</sup>These data are based on three Labour Force Surveys (Q3 2018, Q4 2018, and Q1 2019) which cover the period when most of the quizzes were completed.

<sup>b</sup>These data are based on the Labour Force Survey for Q2 2022 which covers the period when the postpandemic quiz data collection process began.

quiz takers with a series of questions about what their job involves, what equipment/materials they use and what they do on a day-to-day basis. Instead, quiz takers are simply asked to type in their job title. As they type, a list of similar sounding titles appears and quiz takers are asked to select the most appropriate. The list comprises 20,545 job titles. It is taken from the coding index for SOC provided by Office for National Statistics (ONS), and suitably edited and modified for our use. This allows quiz takers to be allocated to one of the 369 Unit Groups (the 4-digit level) of SOC. Given the large number of quiz takers involved before and after the pandemic, we can therefore draw on this fine-grain occupational detail to present data on trends in job quality at a disaggregated level. We can therefore track the job quality fortunes of particular groups of workers which provides a unique perspective on patterns of change.

#### 4 | CHARTING TRENDS IN DIMENSIONS OF JOB QUALITY

The first step in our analysis is to compare the pre- and postpandemic pattern of responses to questions that focused on nine dimensions of non-pecuniary job quality. These cover job demands such job insecurity, the degree to which respondents are required to 'keep learning new things' and are expected to help colleagues to do likewise, and the frequency with which they are required to work at 'very high speed' and to 'tight deadlines'. Quiz takers are also asked



about features of work (or job resources) which mitigate these pressures. These include the degree of control they have over starting and finishing times; the ability they have to take time off at short notice to deal with personal matters; the level of social support given by line management; the discretion levels they are able to exercise over what tasks are to be done and how; the extent of influence they have over proposed changes to the way the job is done; and their promotion prospects (see Table 2). Quiz takers are asked to respond using a mixture of four and five-point response scales. We first present data on the distribution of responses to these questions. From this, we calculate the percentage point change in job quality. We also derive scores of job quality by allocating values to each point on these scales. By taking averages across variables, we can also derive summary scores for the nine non-pecuniary dimensions of job quality and show how these scores have changed since the pandemic.

The results suggest that improvements have been made in seven out of nine dimensions of job quality. Job insecurity, for example, fell—17.3% of quiz takers thought that they had an even or higher chance of losing their job in the next 12 months before the pandemic compared to 12.9% after the pandemic. There were also improvements in the proportion agreeing that they had the ability to decide when to start and finish work—this rose from 35.5% before the pandemic to 41.2% after the pandemic. Similarly, the ability to take time off work with little or no difficulty rose by 5.7 percentage points. Work intensity also lessened with the proportion reporting working at very high speed or to tight deadlines three-quarters or more of the time falling by 4.6 and 6.0 points, respectively. Furthermore, these all of these changes are statistically significant. However, the requirement to learn barely changed over the period and discretion levels, if anything, fell. Further analysis (not presented) suggests that the improvements in job quality have not disproportionately benefited or disadvantaged particular groups. We were unable to detect statistically significant differences between the genders, age groups, economic sectors and regions for three-quarters of the items listed in Table 2. Nevertheless, there were some cases to the contrary, particularly in relation to gender. Women reported improvements to their ability to decide their start and finish times which significantly exceeded the improvements reported by men. Similarly, women benefitted more than men from the increased ability to take time off work, if needed. They also reported a faster fall in the requirement to work at high speed.

One of the strengths of the quiz is the detailed data collected on quiz takers' occupations. Given the size of the pre- and postpandemic samples, we can examine the fortunes of detailed occupational groups as defined by the Unit Groups of SOC. But to increase the precision of our results, we exclude groups which do not include sufficient numbers of observations in either of the two samples. To test the sensitivity of our results, the cut-off point for exclusion is set at 30, 50, 75 and 100 responses to the quiz both before and after the pandemic. Rather than discard data, observations collected for Unit Groups that fail to meet these thresholds are aggregated to the next level of SOC (i.e., to Minor Group, Sub-major Group or Major group level) at which these thresholds are met. Despite this aggregation exercise, it remains the case that a large majority of our observations relate to the Unit Groups of SOC.

This occupational level analysis reveals that the gap between 'lovely' and 'lousy' jobs—in terms of nonwage job quality—has shrunk. In Table 3 we summarise a series of scatter plots using correlation coefficients. The size of the correlation coefficient indicates the steepness of the slope with a value of 0.5 suggesting a moderate to strong relationship with a movement of one percentage point on the *x*-axis associated with half a percentage point movement on the *y*-axis. Most of the correlations are negative and statistically significant, although their magnitude ranges from weak to moderate. In the context of general improvements in job quality (see Table 2), these summary coefficients show that for seven out of nine dimensions of job quality occupations which had relatively low job quality in the

**TABLE 2** Trends in Job quality, prepandemic versus postpandemic quiz evidence.

	Prepandemic	Postpandemic	Difference	Trend
<b>1. Job insecurity</b>				
Evens or higher chance of losing job in next 12 months	17.3%	12.9%	-4.4%***	Better
Job insecurity score	0.74	0.59	-0.15***	Better
<b>2. Working time autonomy</b>				
Strongly agree or agree that 'I can decide the time I start and finish work'	35.5%	41.2%	5.7%***	Better
Working time autonomy score	2.14	2.26	0.12***	Better
<b>3. Work life balance</b>				
Not difficult at all or not too difficult to take time off to take care of personal or family matters	57.6%	61.5%	3.9%***	Better
Work-life balance score	1.64	1.75	0.11***	Better
<b>4. Managerial support</b>				
Line manager is a great deal/quite a lot of help in recognising the extent of abilities	38.5%	40.5%	1.9%***	Better
Line manager is a great deal/quite a lot of help in enabling learning	48.8%	51.8%	3.0%***	Better
Managerial Support Score	2.16	2.23	0.07***	Better
<b>5. Required learning</b>				
Strongly agree that job requires keep learning new things	35.1%	34.8%	-0.3%	No change
Strongly agree that job requires helping others to learn new things	30.9%	30.7%	-0.2%	No change
Required learning score	3.06	3.05	0.00	No change
<b>6. Intensity</b>				
Working at very high-speed three-quarters or more of the time	48.8%	44.2%	-4.6%***	Better
Working to tight deadline three-quarters or more of the time	60.3%	54.3%	-6.0%***	Better
Intensity score	4.67	4.48	-0.19***	Better
<b>7. Discretion</b>				
A great deal of influence over what tasks are to be done	31.5%	29.5%	-2.0%***	Worse
A great deal of influence over how to do the tasks	47.4%	47.1%	-0.2%	No change
Discretion index score	2.04	2.03	-0.01*	Worse

TABLE 2 (Continued)

	Prepandemic	Postpandemic	Difference	Trend
8. Voice				
A great deal of say or quite a lot of say over decisions to change the way the job is done	28.5%	29.9%	1.5%***	Better
Voice score	1.07	1.12	0.04***	Better
9. Promotion prospects				
Definite or high chance of being promoted	26.7%	29.0%	2.3%***	Better
Promotion prospects score	2.59	2.68	0.09***	Better

\*, \*\*, \*\*\* indicate statistical significance between prepandemic and postpandemic values at the 10%, 5% and 1% level, respectively; these are shown in the difference column.

prepandemic period experienced the largest improvements postpandemic and that those with relatively good jobs experienced smaller improvements postpandemic. These results hold whether we focus on occupational groups which have 30, 50, 75 or 100 observations at the two point data points. The data do, nevertheless, suggest that the occupational job quality ranking has changed over a relatively short period. Figure 1 displays the scatter plots for the scores for all nine dimensions of nonwage job quality. Each dot represents an occupation which has at least 100 observations before and after the pandemic. The best-fit line for all dimensions is downward for all but two of the nine dimensions.

The growth of remote working is one possible explanation for the improvements in job quality suggested by the quiz data. To reflect this dramatic change in working patterns since the pandemic, a new question was added to the 2022 version of the quiz. It asked those taking part a simple yes/no question: 'do you regularly work remotely—at home or off site—for part of the week?' As expected, the results show that those who work remotely have better jobs (see Table 4). They are less likely to report: having a good chance of losing their job; or having to work at high speed or to tight deadlines. On the other hand, they are more likely to report: being able to decide when to start and finish their work; having greater ease about taking time off if needed; having more influence over what and how to do tasks; and having a helpful manager. Furthermore, these bivariate comparisons are statistically significant and remain so when a limited number of controls are added.

However, the remote working question was not asked before the pandemic. We, therefore, derive estimates of the change in remote working at the occupational level by examining comparable LFSs on either side of the pandemic.<sup>3</sup> We relate these changes to changes in the dimensions of job quality, also at the occupational level and examine the correlation between these two changes. As above, we produce a number of scatter plots that illustrate the relationship with correlation coefficients summarising the results. The LFS allows us to examine whether respondents mainly work remotely or whether they do so for least 1 day a week, hence the two columns of data. Across a number of dimensions the correlations are

<sup>3</sup>The question on where respondents worked at least 1 day a week was removed in from the LFS in 2015. Hence, our prepandemic data are taken from the 2014 second-quarter data. However, the question was reinstated in 2020. We use the 2022 second-quarter data as the postpandemic data point.

**TABLE 3** Occupational level correlations between prepandemic levels of job quality and postpandemic changes.

	<b>Occupations with sample 30+</b>	<b>Occupations with sample 50+</b>	<b>Occupations with sample 75+</b>	<b>Occupations with sample 100+</b>
<b>1. Job insecurity</b>				
Good chance of losing job	-0.53***	-0.55***	-0.55***	-0.56***
Job insecurity score	-0.52***	-0.54***	-0.54***	-0.58***
<b>2. Working time autonomy</b>				
Decide start and finish time	0.00	0.03	0.07	0.09
Time autonomy score	0.00	0.03	0.08	0.11
<b>3. Work life balance</b>				
Not difficult to take time off	0.07	-0.09	-0.03	-0.03
Work-life balance score	-0.03	-0.03	0.01	0.04
<b>4. Managerial support</b>				
Helpful in recognising abilities	-0.53***	-0.51***	-0.48***	-0.45***
Helpful in enabling learning	-0.47***	-0.45***	-0.43***	-0.42***
Managerial support score	-0.43***	-0.41***	-0.36***	-0.32***
<b>5. Required learning</b>				
Job requires learning new things	-0.29***	-0.22***	-0.22***	-0.18**
Job requires helping others	-0.36***	-0.32***	-0.22***	-0.28***
Required learning score	-0.25***	-0.18***	-0.11	-0.10
<b>6. Intensity</b>				
Working at very high speed	-0.34***	-0.31***	-0.26***	-0.30***
Working to tight deadlines	-0.31***	-0.25***	-0.18**	-0.20**
Intensity score	-0.24***	-0.21***	-0.16**	-0.20**
<b>7. Discretion</b>				
Influence over tasks to be done	-0.25***	-0.28***	-0.22***	-0.26***
Influence over how to do tasks	-0.19***	-0.19***	-0.17**	-0.22***
Discretion index score	-0.18***	-0.20***	-0.15**	-0.18**

TABLE 3 (Continued)

	Occupations with sample 30+	Occupations with sample 50+	Occupations with sample 75+	Occupations with sample 100+
<b>8. Voice</b>				
Say over way job is done	-0.23***	-0.23***	-0.17**	-0.14*
Voice score	-0.22***	-0.18***	-0.13*	-0.13
<b>9. Promotion prospects</b>				
High chance of promotion	-0.36***	-0.35***	-0.29***	-0.23***
Promotion prospects score	-0.29***	-0.24***	-0.22***	-0.18**

Note: Sample 30+: 267 Occupation Groups, of which 229 are SOC Unit Groups.

Sample 50+: 232 Occupation Groups, of which 184 are SOC Unit Groups.

Sample 75+: 188 Occupation Groups, of which 135 are SOC Unit Groups.

Sample 100+: 161 Occupation Groups, of which 105 are SOC Unit Groups.

\*, \*\*, \*\*\* indicate statistical significance at the 10%, 5% and 1% level respectively.

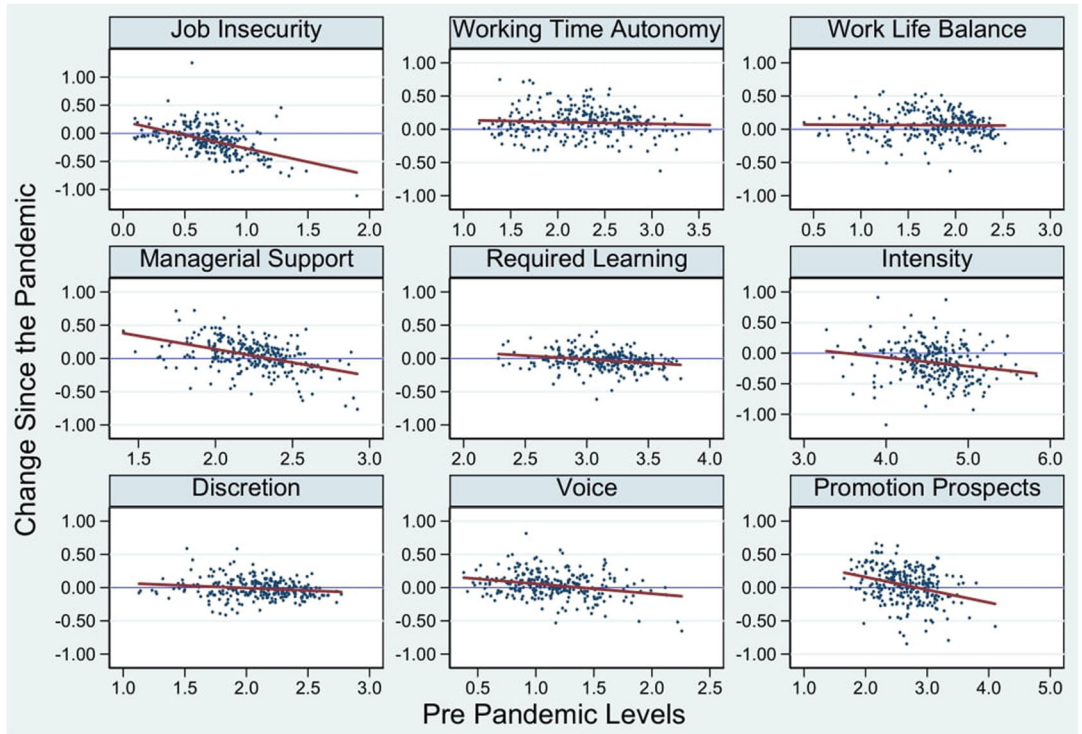


FIGURE 1 Prepandemic levels of job quality and postpandemic changes, scatter plots.

**TABLE 4** Job quality by remote working, postpandemic quiz evidence.

	Remote working (%)	Not remote working (%)
1. Good chance of losing job	12.2	13.7
2. Decide start and finish time	67.3	22.9
3. Not difficult to take time off	80.5	48.1
4a. Helpful in recognising abilities	65.3	52.8
4b. Helpful in enabling learning	52.4	44.6
5a. Job requires learning new things	40.7	30.8
5b. Job requires helping others	35.1	27.6
6a. Working at very high speed	37.6	48.5
6b. Working to tight deadlines	50.3	56.9
7a. Influence over what tasks are to be done	37.7	24.3
7b. Influence over how to do the tasks	58.2	39.8
8. Say over the way job is done	38.5	24.2
9. High chance of promotion	36.2	23.2

*Note:* The differences in job quality between those who regularly work remotely—at home or off site—for part of the week and those who do not are statistically significant ( $p < 0.001$ ) in all cases. Even when controls (gender, age, sector and 1-digit occupation) are included in multivariate regressions, the remote coefficient remains highly significant (in all but two cases  $p < 0.001$ ).

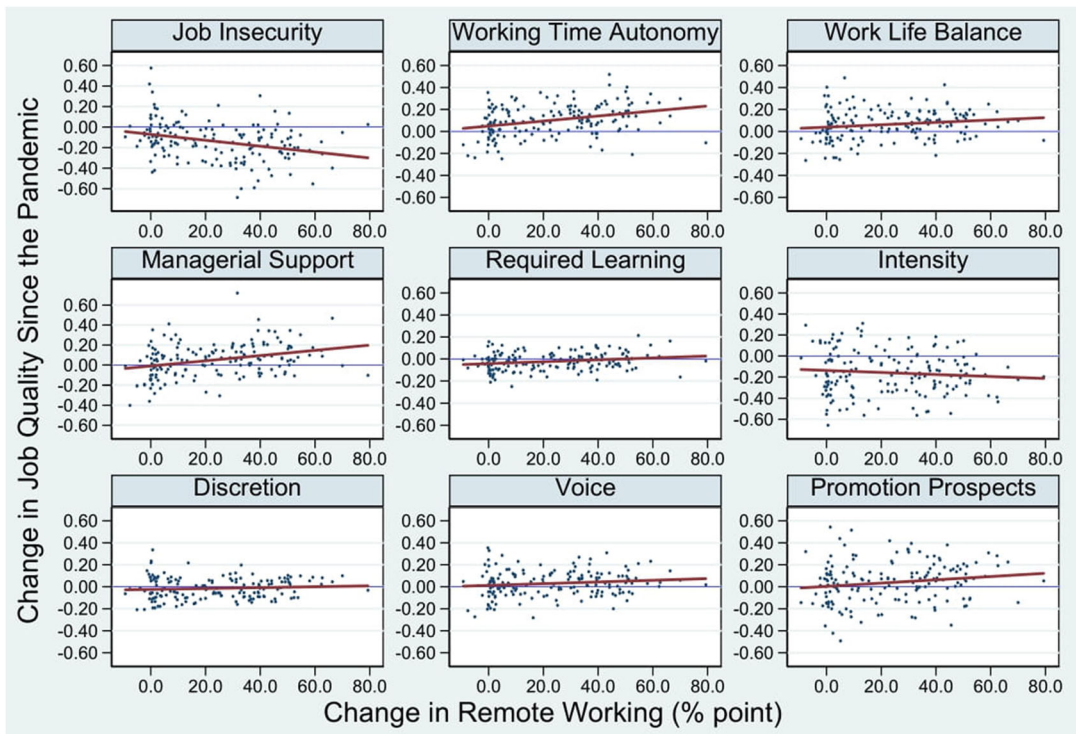
**FIGURE 2** Changes in the prevalence of remote working and changes in job quality, scatter plots.

TABLE 5 Occupational level correlations between changes in the prevalence of remote working and changes in job quality.

	Occupations with sample 30+		Occupations with sample 50+		Occupations with sample 75+		Occupations with sample 100+	
	Mainly remote working	Some remote working	Mainly remote working	Some remote working	Mainly remote working	Some remote working	Mainly remote working	Some remote working
1. Job insecurity								
Good chance of losing job	-0.23***	-0.22***	-0.26***	-0.25***	-0.30***	-0.31***	-0.34***	-0.32***
Job insecurity score	-0.22***	-0.21***	-0.26***	-0.24***	-0.29***	-0.30***	-0.33***	-0.31***
2. Working time autonomy								
Decide start and finish time	0.20***	0.20***	0.19***	0.20***	0.26***	0.28***	0.28***	0.31***
Time autonomy score	0.19***	0.20***	0.19***	0.21***	0.25***	0.28***	0.29***	0.32***
3. Work life balance								
Not difficult to take time off	0.11*	0.12**	0.11*	0.09	0.11	0.09	0.14*	0.13*
Work-life balance score	0.15**	0.17***	0.15**	0.15**	0.13*	0.14**	0.18**	0.20**
4. Managerial support								
Helpful in recognising abilities	0.03	0.04	0.02	0.03	0.04	0.05	0.11	0.12
Helpful in enabling learning	0.12*	0.12**	0.11*	0.10	0.09	0.09	0.15*	0.14*

(Continues)

TABLE 5 (Continued)

	Occupations with sample 30+		Occupations with sample 50+		Occupations with sample 75+		Occupations with sample 100+	
	Mainly remote working	Some remote working	Mainly remote working	Some remote working	Mainly remote working	Some remote working	Mainly remote working	Some remote working
Managerial support score	0.19***	0.22***	0.23***	0.25***	0.24***	0.27***	0.30***	0.33***
5. Required learning								
Job requires learning new things	0.01	0.05	0.05	0.08	0.06	0.07	0.09	0.09
Job requires helping others	0.10	0.13**	0.10	0.14**	0.09	0.12	0.11	0.14*
Required learning score	0.09	0.12**	0.16**	0.18***	0.19***	0.19***	0.20***	0.21***
6. Intensity								
Working at very high speed	-0.11*	-0.10	-0.06	-0.05	-0.05	-0.04	-0.09	-0.07
Working to tight deadlines	-0.14**	-0.12**	-0.10	-0.09	-0.14*	-0.12*	-0.19**	-0.16**
Intensity score	-0.08	-0.07	-0.06	-0.05	-0.06	-0.05	-0.10	-0.07
7. Discretion								
Influence over tasks to be done	-0.03	0.00	0.00	0.04	0.02	0.06	0.06	0.08
Influence over how to do tasks	-0.04	0.00	0.00	0.02	-0.01	0.02	0.00	0.04



TABLE 5 (Continued)

	Occupations with sample 30+		Occupations with sample 50+		Occupations with sample 75+		Occupations with sample 100+	
	Mainly remote working	Some remote working	Mainly remote working	Some remote working	Mainly remote working	Some remote working	Mainly remote working	Some remote working
Discretion index score	-0.03	0.01	-0.01	0.04	-0.03	0.04	0.03	0.08
8. Voice								
Say over way job is done	-0.02	-0.01	0.00	0.02	0.01	0.01	0.05	0.04
Voice score	0.06	0.08	0.11	0.12	0.10	0.11	0.15*	0.12
9. Promotion prospects								
High chance of promotion	0.07	0.08	0.10	0.10	0.08	0.11	0.11	0.15*
Promotion prospects score	0.09	0.10	0.11*	0.12*	0.10	0.14*	0.16**	0.19**

\*, \*\*, \*\*\* indicate statistical significance at the 10%, 5% and 1% level respectively.

significant, albeit weak to moderate in terms of magnitude. These results suggest a relationship between an increased prevalence of remote working and improvements in job quality within occupational groups. The spread of remote working to new occupational groups—those who were not previously trusted to work remotely—may also help to explain some of the equalising tendency between occupational groups identified earlier. Figure 2 presents the scatter plots for the summary scores of the nine dimensions. This is based on the data presented in the last column of Table 5.

## 5 | CONCLUSION

This article makes three contributions to the literature. First, it adds to the debate about what effect the pandemic has had on non-pecuniary aspects of job quality. Based on a large sample of almost 100,000 quiz takers, it shows that workers have: more ability to decide when to start and stop work; greater scope to take time off; more supportive managers; less work pressure; exercise more say in job-related decisions; better promotion prospects; and increased job security. However, levels of task discretion have fallen and the requirement to learn on-the-job has barely changed. On the whole, the evidence suggests that job quality has got better since the pandemic. However, these improvements have not benefitted everyone and, of course, wages have failed to keep up with the cost of living.

Second, the job quality ranking of occupational groups has changed significantly since the pandemic. Those who were in a relatively lowly position before the pandemic have benefited most from improvements in job quality, while those in relatively highly ranked positions have benefited least. As a result, the gap between ‘lovely’ and ‘lousy’ jobs has shrunk and the ranking of occupations by job quality has changed. While this churn has taken place during a short albeit very turbulent period, it suggests that an occupation’s job quality ranking may be subject to change. Pooling successive surveys may therefore mask any changes in job quality within and between occupations. Furthermore, using occupation as a proxy variable for job quality may be misleading (Elias et al., 2022, p. 8). At the very least, such an approach would need to test the robustness of occupation as a proxy on several occasions—in multiple quarters of the LFS, for example.

Third, by merging in data from the LFS we provide one evidence-backed explanation for the findings. This suggests that the spread of remote working to a wider range of occupations has prompted improvements to some elements of job quality. Remote working allows workers more autonomy over their working time, both in terms of when to start and stop work as well as the ability to take time off. It is also associated with increased levels of managerial support as employers put more effort into making remote working work. In addition, we find that the increased prevalence of remote working is associated with increased job security. This reflects other evidence which demonstrates that employers are increasingly offering jobs on a remote working basis to attract and retain workers (Darby et al., 2022; Felstead, 2022, p. 105).

In addition, the general uplift in job quality may be explained by the increased emphasis placed on maintaining and improving employee well-being during the pandemic. As a result, the ‘human’ aspect of HRM has come to the fore (The Economist, 2020). The postpandemic improvements in job quality may reflect this shift. They might also reflect compositional changes in the types of jobs which have survived the pandemic with the poorest jobs being furloughed and then disappearing altogether. Both are plausible explanations for the overall

uplift in job quality we find, although we do not have empirical evidence within the quiz to back them up.

The article has other limitations. Most notably, the data source is based on two self-selected samples of quiz takers. The resulting data are therefore skewed towards women, those working in the public sector and those categorised in higher occupational groups. Even after weighting, some of these observable biases remain. There may also be unobservable biases in the data—for example, only the most optimistic evaluators may have chosen to take part. Nevertheless, quiz takers were recruited using the same methods and were asked an almost identical set of questions. Over 100,000 individuals took part. This exceeds the sample sizes of dedicated job quality surveys, such as the WLS or SES, which cannot offer the occupational level insights that the quiz data provide. It also exceeds the sample sizes of general surveys, such as the LFS, which are much larger, but collect a narrow range of job quality data. Despite its flaws, the quiz data therefore fill a gap in our knowledge. That said, the ideal situation would be for job-quality data to be collected using random probability methods. These need to be large and regular undertakings, so that the UK government can honour its commitment to report ‘annually on the quality of work in the UK economy’ (HM Government, 2018, p. 13).

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