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Conceiving, designing and trailing a short-form measure of job quality: a proof-of-concept study

Alan Felstead,*  Duncan Gallie, Francis Green  and Golo Henseke 

ABSTRACT

The government has accepted the *Taylor Review*'s recommendation that it should report annually on job quality in the UK. This article argues that three principles need to be followed in choosing the right measures and shows how these principles have been used to create a short job quality quiz (www.howgoodismyjob.com).

1 INTRODUCTION

It is commonly known and widely understood that some jobs are better than others. However, it is less clear in what ways are they better or worse than others and on what basis such ratings are made. Despite this lack of clarity, job quality—or the promotion of what is sometimes referred to as good or fair work—is an idea high on the agenda of politicians, policy makers and academics. For the last quarter of a century or more, both the ILO's and the EU's employment strategies have been based on the idea that having a job does not mean that workers' needs are automatically met because terms and conditions of jobs vary (ILO, 1999; European Commission, 2001). Support for this position comes from research that suggests that jobs characterised, for example, by high demands, low control over decision making and high levels of job insecurity can be as bad for worker well-being as being out of work (Green *et al.*, 2016a; Chandola and Zhang, 2018, *Financial Times*, 23 August 2016). Interest in how these terms and conditions of jobs vary—summed up in the phrase job quality—has grown even further over the last few years. In 2015, for example, the G20—the international forum of governments and central bankers from the 20 largest countries—committed its members to 'improving job quality along three dimensions, namely promoting the quality of earnings, reducing labour market insecurity, and promoting good working conditions and healthy workplaces' (G20, 2015: 2).

In the UK, job quality has also moved up the agenda. For example, the Labour Party's 2015 election manifesto stressed the importance of creating jobs that provide 'better work, better pay and better skills' (Labour Party, 2015: 23). Similarly, in 2017, the Labour Party's goal, if elected, was to 'make work more fulfilling by using public

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investment to upgrade our economy and create high-quality jobs' (Labour Party, 2017: 46). With unemployment at rates not seen since the mid-1970s, the Conservative government has also shifted some of its focus onto the quality of jobs. The Prime Minister, for example, commissioned the *Taylor Review of Modern Working Practices* with the ambition of making all work in the UK 'fair and decent with realistic scope for development and fulfilment' (Taylor, 2017: 6). The Industrial Strategy announced in 2017 went on to commit the government to create 'more good jobs and better pay ... high quality jobs for all UK citizens' (HM Government, 2017: 29).

In the devolved administrations (as well as in some local authorities), interest in job quality has also grown. In Wales, for example, the former First Minister announced that he wanted 'to make Wales a "fair work nation" ... in which more people can have access to good work and a secure income ... [thereby creating] more and better jobs closer to home' (First Minister's Speech to the Welsh Labour Conference, Llandudno, 25 March 2017). In Scotland, the Fair Work Convention was established in 2015, and fair work is a central part of the Scottish Government's economic strategy of making improvements to 'income levels, work security, levels of autonomy and control' as well as the 'opportunities for personal and workplace development' (Scottish Government, 2015: 60). Moreover, its vision is that 'by 2025, people in Scotland will have a world-leading working life where fair work drives success, wellbeing and prosperity for individuals, businesses, organisations and society' (Fair Work Convention, 2016: 4).

However, despite policy interest in the field, it is not always clear in this discourse what good or fair work actually means and how it can quickly and easily be measured. This is not helped by the lack of a widely agreed and commonly used short-form instrument. This is perhaps surprising given that the study of job quality has a long history with indicators suggested by the European Commission through its agency the European Foundation for Living and Working Conditions, the OECD and the United Nations (Eurofound, 2012; United Nations Economic Commission for Europe, 2015; OECD, 2017).

Off-the-shelf short-form measures of other concepts such as personality types and levels of affective well-being, however, have been developed, are widely used and have become influential (Gosling *et al.*, 2003; Warr, 1990). The Human Development Index, for example, puts the spotlight on life expectancy at birth, the number of years schooling and the average standard of living as constituting a summary measure of a country's development capability (Piasna *et al.*, 2017; Sehnbruch *et al.*, 2017). Yet no such short-form measure of job quality currently exists, prompting the *Taylor Review of Modern Working Practices* to argue that 'more effort has to be placed on measuring quality of work through agreed metrics and better data' (Taylor, 2017: 102). This recommendation has been accepted by government, and it is seeking to select 'the best measures to evaluate the level of good work', which will then be used to 'report annually on the quality of work in the UK economy and hold ourselves to account' (HM Government, 2018: 13). By devising a short 5-minute job quality quiz, which draws on tried-and-tested instruments used to collect data over the last 30 years from around 29,000 workers in Britain, we offer a contribution to this debate.

The article is structured as follows. Section 2 critically examines the ways in which job quality can be conceived and the three principles that underpin our approach. These are as follows: putting the enhancement of workers' well-being centre stage, focusing on the features of the job and devising a set of multi-faceted measures. Section 3 reviews previous approaches to the measurement of job quality and highlights where they are in line or out of step with these guiding principles. Section 4

demonstrates how we put these principles into practice by developing a job quality quiz based on tried-and-tested questions used in the Skills and Employment Survey series (www.cardiff.ac.uk/ses2017). The series is made up of seven nationally representative sample surveys with the latest carried out in 2017 and comprising 3,306 respondents. Taken as a series, over 29,000 respondents have taken part since 1986 (Felstead *et al.*, 2015). To engage a wider audience with the 2017 results, we designed a quiz that offered those taking part the opportunity to benchmark themselves against others, hence its title—www.howgoodismyjob.com. As a result, the quiz was restricted to replicating questions carried in the Skills and Employment Survey, which, to a varying degree, are relevant to most jobs. For these reasons, questions on Zero Hours Contracts and the gig economy were not included. On the basis of our experience of developing the quiz, we conclude in Section 5 that it is possible to conceive, design and use a short-form instrument—lasting 5 minutes and consisting of around a dozen questions—to measure job quality. While the items used may vary, the article outlines guidelines to be followed in the spirit of a proof-of-concept study worthy of replication and possibly incorporation into the government's annual job quality report.

2 CONCEPTIONS OF JOB QUALITY

In picking the best measures of job quality, we argue that three principles need to be applied, consistent with best practice (Burchell *et al.*, 2014). The first principle is that job quality is constituted by a set of work features that have the capability of enhancing or diminishing worker well-being. Research evidence suggests that good jobs are also good for employers in that they are associated with increased productivity, lower absenteeism and longer job tenure (Preenen *et al.*, 2017). For example, greater employee involvement in decision making has been shown to deliver bottom-line benefits to business (Appelbaum *et al.*, 2000). That said, good jobs are those which are good for workers but not necessarily for those who employ them. To justify their inclusion as a measure of job quality, then, each feature needs to be empirically connected to worker well-being. In this article, data taken from four waves of the Skills and Employment Survey—a national survey of skills and job quality in Britain—provide the basis on which to provide some validation for these connections.

The second principle is that job quality needs to focus on the attributes of the job occupied by the worker and not the workers' personal circumstances and/or background. The distinction here is between the subjective and objective dimensions of job quality. The subjective approach is based on the idea that what is important is the 'utility' a worker derives from his or her job. This depends on two factors: the objective features of the job, such as the pay, the hours and the type of work, but also on each worker's preferences. What one worker feels about a job may differ from the feelings of another. What workers consider 'good', therefore, varies according to demographic differences such as gender, ethnicity, region and age. For example, research has shown that women are more satisfied with their jobs than men, lowly paid workers are just as satisfied with their jobs as those who are highly paid and job satisfaction falls and then rises with age (Clark, 1997; Brown *et al.*, 2007; Clark *et al.*, 1996).

Analysis of job satisfaction as a proxy for job quality—such as some of the work carried out under the Office of National Statistics's (ONS's) National Well-being Programme—is firmly rooted in this subjective tradition (e.g. Carter and Randall, 2017). The chief attraction of this approach is that it avoids having to specify in advance what really matters in a job—if workers are happy with their lot, however small or

large, then that is good enough. There may be good reasons for collecting data on workers' feelings, such as their job satisfaction, not least because job dissatisfaction leads to workers quitting jobs when it would be better to improve them. However, satisfaction measures are affected by individual differences in aspirations and have the shortcoming that workers may not be aware that certain aspects of the job may pose risks to their psychological and/or physical health. On this basis, we do *not* regard job satisfaction as 'a good starting point for measuring "good work"', nor do we agree that 'it is essential that we consider pay measures that capture how people value their earnings' (HM Government, 2018: 22). Both fail to maintain a job-only focus.

We favour an objective approach that is based on the idea that there is a set of human needs that may, or may not, be met by the jobs people do. On this basis, a good job is one which offers workers opportunities to do a range of things that promote self-development and are conducive to improving their psychological and physical health (Green, 2006). The capacity to enhance well-being, then, depends on how far, for example, jobs enable workers to exercise influence over work and to pursue work-related goals. The needs that workers prioritise will, of course, vary according to individual preferences and circumstances, but an objectively defined high-quality job is one that allows for a range of possible needs to be met.

The third principle is that there are a variety of job attributes that have the capability of enhancing or reducing worker well-being. The most straightforward and easiest attribute to measure is pay. Some even suggest that one only needs to examine rates of pay to make an assessment of the sort of jobs created in particular towns, cities or countries or by particular employers (e.g. Goos and Manning, 2007; Jones and Green, 2009). By adopting such an approach, pay becomes the defining feature of job quality—'the be-all and end-all' (Osterman, 2013; Muñoz de Bustillo *et al.*, 2011). Yet if job quality is a set of features that impact on worker well-being, then focusing on pay alone is at odds with this principle. After all, it cannot be assumed that wages and other terms and conditions move synchronously up and down in step with one another. For example, it is quite possible for a worker to be given a pay rise, while the pace of work is quickening. Does this still mean that job quality is improving even though the job is deteriorating in other ways? In other words, can we read off from pay rates levels of job quality, regardless of what is happening to other terms and conditions? If we stick to the principle that a range of features of work need to be taken into account, then the answer is no because higher pay may not be sufficient to cancel out the downward pressure on well-being triggered by worsening non-pay conditions. Despite the theory of compensating wage differentials, pay may not adjust sufficiently—or even move in the right direction—to balance out 'the ease or hardship, the cleanliness or dirtiness, the honourableness or dishonourableness' of the job (Smith, 1776). Furthermore, the fact that some jobs are 'good' in some respects is no guarantee that they are 'good' in others (Green *et al.*, 2015: Figure 1; Osterman, 2013; Muñoz de Bustillo *et al.*, 2011).

Other features of jobs are therefore important. The way work is organised, for example, influences how well jobs enable workers to use their capabilities. This includes the role workers play in conceiving of the tasks to be done, what level of discretion they are able to exercise in carrying them out and what range of tasks their jobs involve (Braverman, 1974; Fox, 1974; Thompson and Smith, 2010). Similarly, more recent interest has focused on the security of work, the quality of training offered, the levels of work effort, the opportunities workers have to put their qualifications and skills to good use and the ability they have to combine work and family life (Gallie

et al., 2017; Green *et al.*, 2016b; Felstead and Green, 2013 and 2017; Gregory, 2016). Interest in job quality extends beyond economists and sociologists and includes others such as work psychologists. They have focused their enquiries on the interplay between the level of control exercised over aspects of work and the intensity of the work process with the suggestion that jobs that demand high effort levels but allow job holders limited control are jobs that are more likely to be stressful (Karasek, 1979).

A multi-faceted approach has, therefore, been widely adopted. The Eurofound concept of job quality, for example, focuses on four main job features: earnings, prospects, working time quality and intrinsic job quality. The OECD's job quality framework is similar and comprises measures of earnings, labour market security and the quality of the working environment. The wide-ranging and multi-dimensional nature of job quality, then, is the third principle, which underlies the construction of the online job quality quiz reported here.

Focusing on what is good for workers, maintaining a job-only focus and examining pay and non-pay issues are the three principles used to select and validate the survey items used in the online job quality quiz presented in this article. However, one should also note that most data on objective job quality draw on self-reported information given by those doing the job. This does not make the information subjective because it is not focused on collecting data on what employees feel about jobs but on features of jobs themselves. Even though reporting bias may creep in, perhaps arising from social desirability to respond in a particular way, the person doing the job on a day-to-day basis is best placed to answer questions on whether certain features are present or not and to what degree.

3 APPROACHES TO THE MEASUREMENT CHALLENGE

Translating concepts into survey questions that can be easily understood and answered by a wide variety of people doing a range of different jobs, while remaining aligned to the principles outline above, is not an easy undertaking. For this reason, many surveys consist of tried-and-tested questions used elsewhere. Given the increased appetite for robust data on job quality, several reports have offered guidance on the survey questions which produce reliable and consistent results (e.g. United Nations Economic Commission for Europe, 2015). Notably, the OECD has produced a set of guidelines that

are intended as a resource for both producers and data users interested in the measurement of the quality of the working environment ... [and] propose three prototype question modules ... that could be included in non-specialised general social surveys and implemented on a yearly basis. (OECD, 2017: 11–12)

They select questions from a review of a wide range of surveys that focus on what jobs demand of workers and what resources jobs provide workers in return. Despite this, they suggest some slight modifications to tried-and-tested questions, so as to focus unambiguously on job characteristics experienced by workers and improve the flow of the questionnaire. Hence, first-person personal or possessive pronouns are used throughout. In order to reduce the cognitive burden on respondents, they also recommend using two types of response scale and ordering questions to avoid switching too frequently between positive and negative items (OECD, 2017: Annex 6.A). Similar metric-seeking reports have been commissioned by other organisations such as the Chartered Institute of Personnel and Development to inform what they include in their employee surveys (Warhurst *et al.*, 2017; Gifford, 2018).

Other researchers have gone a step further by analysing in detail the data that these survey questions produce. This information has been used to produce country comparisons. The European Trade Union Institute (ETUI), for example, has derived an overall synthetic job quality index by drawing on a number of data sources such as the European Working Conditions Survey (EWCS) and the EU Labour Force Survey (Piasna, 2017: Table A1). The index provides a summary of the quality jobs in six domains: wages, forms of employment and job security, working time and work–life balance, working conditions, skills and career development, and collective representation. These domains are chosen on the basis of existing research that suggests that they have an effect on workers' well-being. Each domain is given a value ranging from 0 to 100 on the basis of the share of respondents reporting a certain work arrangement or characteristic. To arrive at a single job quality index, the scores for each of the six domains are standardised and then averaged so that each job domain contributes equally to the final score. This approach has been repeated by the ETUI on several occasions. The only difference is that each version of the index has been recalculated using the survey measures available at the time (Leschke *et al.*, 2008; Leschke and Watt, 2014; Piasna, 2017). These authors then analyse the data using both the single index score and, more recently, the six domain scores to reveal patterns and changes in job quality across Europe.

Nevertheless, a single-measure approach has great appeal to policy makers because it can be used to modify, challenge or confirm evidence on material well-being taken from other single-measure indicators such as the sum total of output produced (i.e. gross domestic product). However, the use of a single score has the effect of averaging out variation that might exist between job quality domains, so that a low score on one domain is compensated for by a high score on another. Such an approach to job quality therefore risks over-simplification and may be misleading.

The advantage of a dashboard approach, on the other hand, is that it allows for job quality domains to vary and move in ways that do not always coincide. Indeed, several models that seek to explain the risks to worker well-being are based on the extent to which different job quality domains inter-relate. Demand-control theory, for example, is based on the relationship between work intensity and discretion and its effect on worker well-being (Karasek, 1979). The job demands–resources model is based on similar principles, albeit with a broader conception of what constitutes job demands and resources (Demerouti *et al.*, 2001). Axiomatic to these theories is the proposition—well supported by evidence—that high job demands in a context of low resources leads to a deterioration in worker well-being (Theorell *et al.*, 2015). We argue, therefore, that the theoretical and empirical justification for using an overall score is lacking and could be misleading. Possibly in recognition of this drawback, more recent ETUI analyses have extended their approach of ‘putting a number on job quality’ (Leschke *et al.*, 2008) to one which analyses both the overall job quality score and its component parts (Leschke and Watt, 2014; Piasna, 2017).

Another approach—and one that is closest to the one adopted here—is to select questions that focus on objective features of the job and have a theoretical and empirical connection to worker well-being. Analyses of various waves of the EWCS, for example, have sought to validate the connection through the use of a variety of well-being indicators (Eurofound, 2012: 29–31; Eurofound, 2017: 40–41, 102–125). These have included self-reported measures of general health, specific health problems encountered at work, financial well-being, work commitment and the meaningfulness of work. Domain-specific analyses have, then, been carried out in line with a

dashboard approach to the measurement of job quality. This approach maintains the granularity of the data and enables each job quality domain to be connected, both theoretically and empirically, to worker well-being.

4 DEVISING AND TRAILING A SHORT-FORM MEASURE OF JOB QUALITY

While the approach adopted in this article has many similarities to the Eurofound approach outlined above, it differs in two crucial respects. First, because the aim was to design a short and easy-to-use online quiz, only a comparatively small number of questions could be used (see Figure 1). While previous EWCS-based job quality indices, for example, have drawn on 70–80 questions, we limited ourselves to a total of 14 job quality questions (21 when demographic indicators and filters are included). The resulting 21-question quiz was designed to take respondents, on average, 5 minutes to complete (15 seconds per question). Second, because an additional aim of the quiz

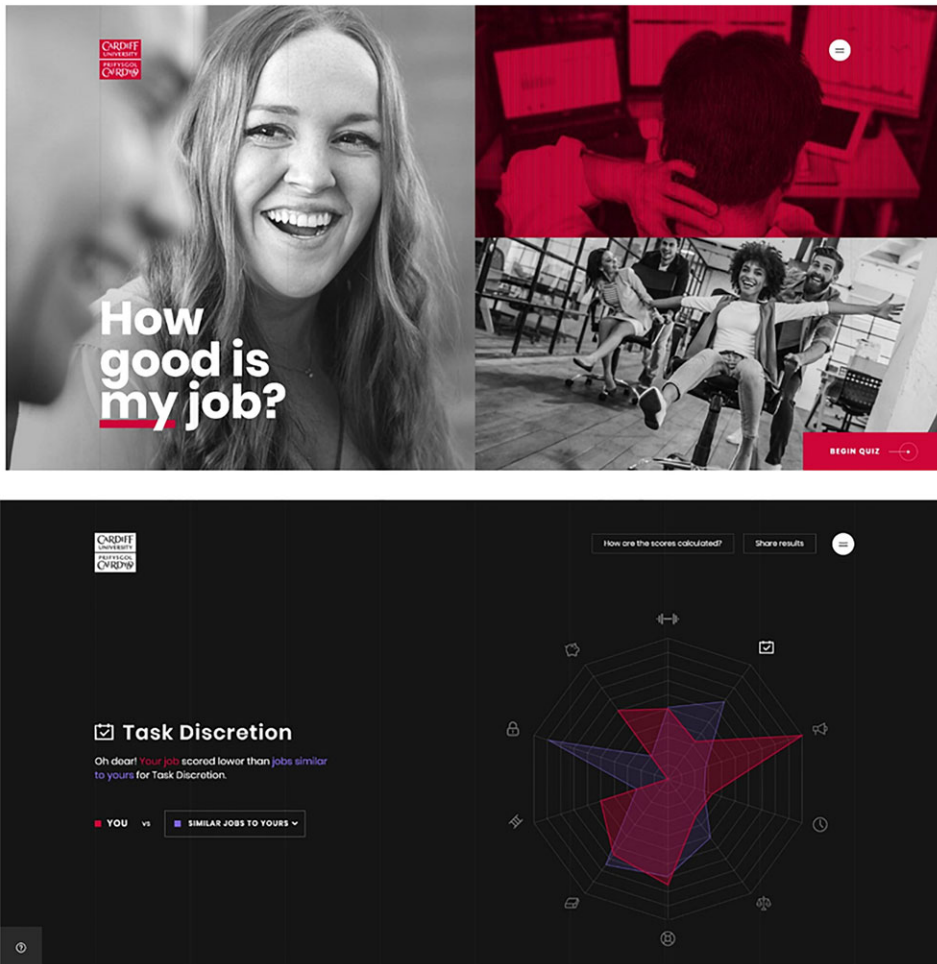


Figure 1: Opening and results pages of www.howgoodismyjob.com [Colour figure can be viewed at wileyonlinelibrary.com]

was to allow quiz takers the opportunity to benchmark their answers with the results generated from a representative national survey, we had to replicate (as far as possible) the questions and response scales used by this particular source. On this basis, our question choice was restricted to those asked in the 2017 and/or 2012 version of the Skills and Employment Survey (most often both). This meant that we had no scope to develop new questions (such as those suggested by the OECD, 2017: Annex 6.A) or amend existing ones. This decision was taken because the aim of the quiz was to engage the general public with one of the largest and most frequently carried out surveys of job quality in Britain (see Felstead *et al.*, 2015). Furthermore, as data owners, we could guarantee that quiz takers would be able to benchmark their jobs against others. User traffic was and continues to be generated by a digital marketing campaign, a traditional publicity campaign of press releases accompanying the national launches of the 2017 survey results, and signposting of the quiz on variety of institutional websites and social media platforms (<https://youtube/GG-ffEQnDeE>).

Ten job quality domains are covered by the quiz (see Table 1, column 1). Three can be classified as job demands because they focus on some of the pressures the work environment imposes on workers. The first focuses on the intensity of the work process as captured by the frequency with which workers report having to work at 'very high speed' and to 'tight deadlines'. The second measures the extent to which workers are required to 'keep learning new things' and are expected to help colleagues to do likewise. Job security is the third type of pressure imposed on workers. This is captured by asking quiz takers to rate their chances of job loss in the next 12 months. The remaining seven domains can be classified as job resources because they, potentially at least, are 'functional in achieving work goals; reduce job demands and the associated physiological and psychological costs; [and/or] stimulate personal growth, learning, and development' (Bakker and Demerouti, 2007: 312). Quiz takers are therefore asked about 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; 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; their promotion prospects; and the level of pay they receive (see Table 1, columns 2 and 3). The results are presented in a similar format so that quiz takers can see the connection between their answers and those given by those who took part in two national surveys. However, the limitation of this approach is that we do not identify jobs that require intensive work effort but offer little task discretion, or what have been called 'high strain' jobs (Green *et al.*, 2018).

The statements used to capture job demands tend to be negative, while those that focus on job resources tend to be more positive. On this basis, the ordering of the items in the quiz reflects a compromise between the need to cluster themes that relate to similar aspects of workers' experience and the need to avoid frequent switches between positive and negative items. It should also be noted that four of the domains are measured using a single item, two are based one item with a filter to be used where appropriate and four domains are based on an average index of two items. The content validity of the latter four indices is reasonably high suggesting that an additive index of the items provides a reasonable reliable summative measure for the sample as well as for men and women taken separately (see Table 1, column 4). Furthermore, all questions used centre on features of the job, apart from the final question in the quiz, which is open-ended and asks respondents to write down in their own words how they rate their job and why.

Table 1: Quiz questions and validity tests

Job domain (1)	Question(s) (2)	Scale (3)	Content validity ¹ (4)	Construct validity ² (5)
Work intensity (JD)	How often does your work involve working at very high speed? How often does your work involve working to tight deadlines?	Never = 6; almost never = 5; around a quarter of the time = 4; around half the time = 3; around three-quarters of the time = 2; almost all the time = 1; and all the time = 0 (i.e. 0–6) for both questions. Scores added to give a raw score range of 0–12.	$\alpha = 0.63$ all $\alpha = 0.63$ men $\alpha = 0.66$ women	$r = 0.11^{***}$ all $r = 0.10^{***}$ men $r = 0.12^{***}$ women
Task discretion (JR)	How much influence do you personally have on deciding what tasks you are to do? How much influence do you personally have on deciding on how you are to do the task?	None = 0; not much = 1; a fair amount = 2; and a great deal = 3 (i.e. 0–3) for both questions. Scores added to give a raw score range of 0–6.	$\alpha = 0.77$ all $\alpha = 0.76$ men $\alpha = 0.79$ women	$r = 0.22^{***}$ all $r = 0.24^{***}$ men $r = 0.21^{***}$ women
Worker voice (JR)	Suppose there was going to be some decision made at your place of work that changed the way you do your job. Do you think that you personally would have any say in the decision about the change or not? [If yes] How much say or chance to influence the decision do you think that you personally would have?	No to the first question = 0; it depends to first question = 1; just a little to second follow-on question = 1; quite a lot to second follow-on question = 2; and a great deal to second follow-on question = 3 (i.e. 0–3).	NA—single item filtered	$r = 0.27^{***}$ all $r = 0.28^{***}$ men $r = 0.26^{***}$ women

(Continues)

Table 1. (Continued)

Job domain (1)	Question(s) (2)	Scale (3)	Content validity ¹ (4)	Construct validity ² (5)
Working time autonomy (JR)	How much do you agree or disagree with the statement 'I can decide the time I start and finish work'?	Strongly disagree = 0; disagree = 1; agree = 2; and strongly agree = 3 (i.e. 0–3).	NA—single item	$r = 0.11^{***}$ all $r = 0.16^{***}$ men $r = 0.08^{***}$ women
Work–life balance (JR)	Would you say that for you arranging to take an hour or two off during working hours to take care of personal or family matters is?	Very difficult = 0; somewhat difficult = 1; not too difficult = 2; and not at all difficult = 3 (i.e. 0–3).	NA—single item	$r = 0.16^{***}$ all $r = 0.17^{***}$ men $r = 0.17^{***}$ women
Managerial support (JR)	How helpful is your supervisor or manager in recognising the extent of your abilities? How helpful is your supervisor or manager in enabling you to learn how to do your job better?	Of no help at all = 0; a little help = 1; of some help = 2; quite a lot of help = 3; and a great deal of help = 4 (i.e. 0–4). Scores added to give a raw score range of 0–8.	$\alpha = 0.79$ all $\alpha = 0.76$ men $\alpha = 0.82$ women	$r = 0.34^{***}$ all $r = 0.30^{***}$ men $r = 0.38^{***}$ women
Required learning (JD)	How much do you agree or disagree that my job requires that I learn new things? How much do you agree or disagree that my job requires that I help my colleagues learn new things?	Strongly disagree = 0; disagree = 1; agree = 2; and strongly agree = 3 (i.e. 0–3). Scores added to give a raw score range of 0–6.	$\alpha = 0.65$ all $\alpha = 0.63$ men $\alpha = 0.67$ women	$r = 0.12^{***}$ all $r = 0.15^{***}$ men $r = 0.10^{***}$ women

(Continues)

Table 1. (Continued)

Job domain (1)	Question(s) (2)	Scale (3)	Content validity ¹ (4)	Construct validity ² (5)
Promotion prospects (JR)	Assuming that you wanted promotion, how high do you think your chances are of being given a significant promotion with your present organisation in the next 5 years?	No chance at all = 0; 25%/low chance = 1; 50%/fifty-fifty = 2; 75%/high chance = 3; and a 100%/definite = 4 (i.e. 0–4).	NA—single item	$r = 0.14^{***}$ all $r = 0.17^{***}$ men $r = 0.12^{***}$ women
Job security (JD)	Do you think there is any chance at all of you losing your job and becoming unemployed in the next 12 months? [If yes] How would you rate the likelihood of this happening?	If no to first question = 5; very unlikely to second follow-on question = 4; quite unlikely to second follow-on question = 3; evens to second follow-on question = 2; quite likely to immediate second follow-on question = 1; and very likely to second follow-on question = 0. There are two questions, but one filtered as a follow-on, so the raw score ranges from 0 to 5.	NA—single item filtered	$r = 0.18^{***}$ all $r = 0.19^{***}$ men $r = 0.16^{***}$ women
Pay (JR)	What is your usual pay including overtime, bonuses or tips (but	0–5 from lowest paid to highest paid (with 2012 figures from source data	Banding of pay data in SES with the bottom	$r = 0.03^{**}$ all $r = 0.10^{***}$ men

(Continues)

Table 1. (Continued)

Job domain (1)	Question(s) (2)	Scale (3)	Content validity ¹ (4)	Construct validity ² (5)
	before tax and other deductions are taken out?	inflated by 9% in accordance with official figures on earnings growth).	corresponding with National Living Wage set in 2017, band two including Real Living Wage set in the same year and band three including the annual average wage of £27,500	<i>r</i> not significant for women

Note: JD, job demands; JR, job resources.

¹ Cronbach's alphas are based on all the available data for each of the items in the seven surveys, which make up the Skills and Employment Survey (SES). This ranges from 24,605 for task discretion (that is, the 1992, 1997, 2001, 2006, 2012 and 2017 surveys) to 2,793 for managerial support (the 2017 survey only).

² To capture job-related enthusiasm, respondents to the 2001, 2006, 2012 and 2017 Skills and Employment Surveys were asked: 'Thinking of the past few weeks, how much of the time has your job made you feel each of the following ...?'. Respondents were asked about a series of adjectives, each describing a different feeling. To construct an enthusiasm scale, we use responses given to the following adjectives: 'depressed', 'gloomy', 'miserable', 'cheerful', 'enthusiastic' and 'optimistic'. The response set comprised six points ranging from 'never' to 'all of the time'. We construct a scale by averaging the responses given (after reversing the three negative items) and using a 1–6 scoring system. These questions were only asked from 2001 onwards, so the results in this column are restricted accordingly.

*** Statistically significant at the 99% level.

** Statistically significant at the 95% level.

It is also important to point out that two important dimensions of job quality are not covered by the quiz. First, the quiz does not ask about threats to health and safety at work such as those posed by exposure to chemicals and hazardous substances or the physical rigours of the job such as the need to move heavy loads, carry out repetitive physical activities and/or work in painful or tiring positions. The EWCS has a particularly good set of measures on such environmental and posture related risks to physical health. However, the Skills and Employment Survey series does not, and so this dimension of job quality is not covered by the quiz. Second, it does not directly collect data on the skill level of jobs but collects proxy data instead. Quiz takers are asked: 'What is your job title? Please use words which describe your job, e.g., account manager, office cleaner, web technician and delivery driver'. On typing in their response, a pull-down list of similar sounding job titles appears with quiz takers selecting the most appropriate. The pull-down menu comprises over 20,000 job titles provided by ONS and suitably edited and modified for quiz use (ONS, 2015). This information is used to allocate quiz takers to one-digit occupational groups that are grouped according to their skill level as defined by either the level of formal qualifications required for a person to get a particular job or the duration of training and/or work experience normally required for occupational competence (ONS, 2010: ix).

Another limitation of our approach is that two out of the 21 questions are more speculative than others. Promotion prospects and the risk of job loss are both based on respondents' probability estimates of certain events occurring rather than reports on past experiences. Previous studies have shown, however, that workers' expectations of job loss are good predictors of subsequent events (Dickerson and Green, 2012). That said, we intentionally do not include questions that ask about respondents' anxieties over issues such as variations in pay and/or hours of work because such questions capture subjective feelings about aspects of work (cf. Felstead *et al.*, 2018). In addition, questions on Zero Hours Contracts and issues surrounding the gig economy are not included in the Skills and Employment Survey and are likewise not covered by the quiz.

To substantiate the empirical link between each of the ten domains and job-related well-being, we pool the last four waves of the Skills and Employment Survey in order to examine the pairwise correlations between these domains and job-related well-being. The latter is measured here using the Warr (1990) scales, which are designed to measure the extent to which jobs prompt arousal and pleasure, or enthusiasm for short. High scores are, therefore, interpreted as indicating that job holders take great pleasure from their work and are stimulated by it, while conversely a low score is interpreted as indicating that the job is not pleasurable and fails to energise the job holder. A total of 18,720 respondents provided such data.

On the whole, work pressures such as those triggered by the intensity of effort and the threat of job loss are considered to be disutility or something 'bad' given the consequential health problems with which they are associated (e.g. Cottini and Lucifora, 2013). The reverse also follows with well-paced work and high levels of job security significantly correlated with high levels of enthusiasm for the job (see Table 1, column 5). Similarly, the idea that challenging work makes for happier workers also receives support in our data with stimulating work environments, which require high levels of on-the-job learning and knowledge exchange being significantly and positively associated with levels of job-related enthusiasm.

Access to job resources—such as task discretion, influence over proposed changes to the way the job is done, line management support, employee-controlled flexibility

over start and finish times, support for life outside of work and promotion prospects —is also positively and significantly related to enhanced levels of job arousal and pleasure. These findings are in line with the predicted consequences of high-involvement practices and sociological theories of trust and its outcomes (Boxall and Macky, 2014; Fox, 1974).

The selection of survey questions to include in the www.howgoodismyjob.com quiz is therefore based on the application of three important decision-making principles. These are focused on: features of the job that have the capability of enhancing (or diminishing) worker well-being; attributes of the job and not the personal circumstances or background of the job holder; and a variety of job attributes, including but going beyond pay.

5 CONCLUSION

The motivation for this article, and the development of the job quality quiz that underpins it, comes from three sources. The first is the absence of a short-form set of measures of job quality such as those developed by psychologists for personality and affective well-being. Even though the study of job quality has a long history, it is only recently that international agreement among experts has begun to emerge about what job quality means and how its various dimensions are best measured (Eurofound, 2012; United Nations Economic Commission for Europe, 2015; OECD, 2017). These indicators appear in worker surveys that have been carried out on multiple occasions. In Britain, these include the Skills and Employment Survey (Felstead *et al.*, 2015 and 2016) and the Workplace Employment Relations Survey (van Wanrooy *et al.*, 2014), while internationally the EWCS is the most highly regarded data source (Eurofound, 2017). However, an agreed short-form battery of job quality questions does not exist.

This relative vacuum presents a challenge for UK policy makers who are now charged with using the ‘the best measures to evaluate the level of good work’, which will be used to ‘report annually on the quality of work in the UK economy’ (HM Government, 2018: 13, 23). The second motivation for this article, then, is to provide policy makers with three principles to be applied when choosing which measures to adopt. Given the financial and timing constraints on the scope of any new data collection exercise, the adoption of large number of measures is unlikely; a shorter set of measures is likely to have more appeal.

The third motivation behind this article is the observation that periodic national (even international) surveys of job quality are of little help to individual workers who wish to benchmark their job quality against their peers. That said, there is no shortage of online tools that allow them to compare their pay with others (Lakin, 2015). There are, for example, a number of websites that allow users to compare their pay against that of others working in a similar position and locality and therefore better assess what their labour is worth (e.g. www.glassdoor.co.uk and www.totaljobs.com). Yet non-pay comparisons of job quality are much rarer. The job quality quiz reported in this article is an exception and therefore makes an original and distinctive contribution by engaging with workers beyond those questioned for the national survey using a short-form set of empirically validated survey questions. In exchange, all quiz takers are presented with a ‘job quality results dashboard’, which benchmarks their job against those in a similar occupation as well as against the average job in Britain across ten domains. The comparator data for this aspect of the quiz are taken

from hour-long face-to-face interviews conducted with around 6,500 randomly selected workers interviewed for the last two Skills and Employment Surveys carried out in 2012 and 2017 (cf. Figure 1). The quiz, then, helps to meet a previously unmet demand for this kind of information. Within the space of one month of its launch, for example, over 14,000 people had completed the quiz, and after six months, over 25,500 people had taken part.

While we agree with the UK government's view that job quality is multi-faceted, we caution against collecting data that reflect both the objective conditions of the job and the subjective circumstances of the worker such as data on job satisfaction (HM Government, 2018). In our view, job quality measures need to be about the job, despite the fact that these are based on self-reported data given by workers themselves. Connections also need to be made with worker well-being because this is, after all, what is behind the desire to increase job quality, thereby ensuring that what is being measured is linked with the outcomes sought. A high priority should be given to selecting measures that have been well-tested by rigorous research and that have been shown to have a strong relationship to worker well-being. We offer our job quality quiz (www.howgoodismyjob.com) as an example of how these three principles can be put into practice. It is hoped that readers will see merit in our approach and that appropriate job quality measures are adopted and reported by government in response to the *Taylor Review*.

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