



CIPD

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APPENDIX 2 | 2019

UK Working Lives

The CIPD Job Quality Index

The CIPD is the professional body for HR and people development. The not-for-profit organisation champions better work and working lives and has been setting the benchmark for excellence in people and organisation development for more than 100 years. It has 150,000 members across the world, provides thought leadership through independent research on the world of work, and offers professional training and accreditation for those working in HR and learning and development.

UK Working Lives is an annual representative survey of UK workers first published in 2018. Reports and other resources are available at cipd.co.uk/workinglives

UK Working Lives survey 2019

Appendix 2: methods

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1 Introduction

This appendix accompanies the main report from the CIPD's second UK Working Lives (UKWL) survey. It contains methodological detail on the survey, including results of statistical tests conducted on the indices. The main survey report can be found at cipd.co.uk/workinglives

Dimensions of job quality and the CIPD Job Quality Index

The UKWL analysis presented focuses on seven dimensions of job quality based on research conducted for the CIPD – see Warhurst et al (2017) and Wright et al (2018). Extensive detail of the construction of the CIPD Job Quality Index is not included in this appendix but is available in Sarkar and Gifford (2018).

Analysis of occupational groups

The analysis of occupational groups uses the National Readership Survey (NRS) social grades (NRS 2016). This classification system groups a person's occupation into one of five categories based on the job itself, their qualifications and whether they supervise others. Pay is not included in the calculation of social grade, although it is highly correlated with it. Our sample is largely comparable with the overall structure of the NRS groups, with the exception of social grade A, where we have an over-representation, and social grade E, where our sample is under-representative because we exclude pensioners and those out of work (Table 2). We thus include the casual workers of group E with grade D for our analysis.

Table 1: Occupational groups (NRS Social Grade)

	NRS 2016 (%)	UKWL 2018 (%)	UKWL 2019 (%)
A – Higher managerial, administrative and professional	4.0	19.0	18.0
B – Intermediate managerial, administrative and professional	23.0	23.0	24.3
C1 – Supervisory, clerical and junior managerial, administrative and professional	28.0	30.0	28.9
C2 – Skilled manual workers	20.0	16.0	16.4
D – Semi-skilled and unskilled manual workers	15.0	11.0	11.6
E – State pensioners, casual and lowest-grade workers, unemployed with state benefits only	10.0	1.0	.8
n	not available	6,009	5,174

*NRS figures are for January–December 2016 and are latest available. Number of respondents not available, but is typically around 34,000 per wave (see NRS 2016).

Equality, diversity and inclusion characteristics

Consideration is given throughout the analysis of equality, diversity and inclusion characteristics as a method of exploring the distribution of job quality and providing greater insight into access to good work in the UK economy. Throughout the analysis, reflection is given to a range of characteristics of respondents including gender, age, presence of a disability, and ethnicity.

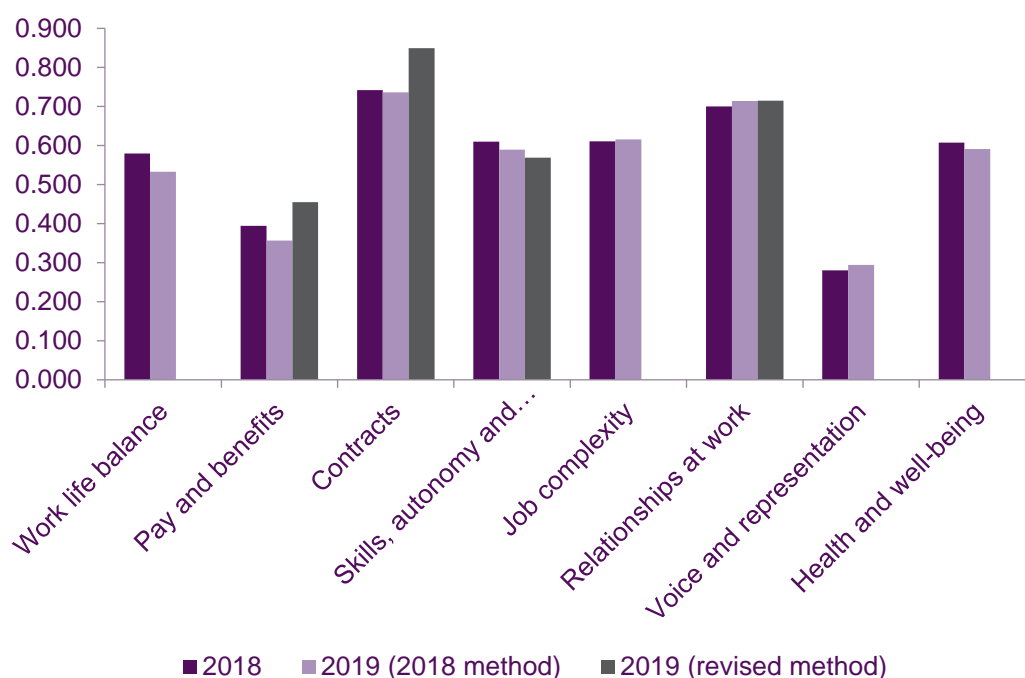
A note on statistical significance and reporting data

Throughout the report the guidelines issued by YouGov have been followed regarding not reporting any patterns in the data calculated on bases fewer than 50 respondents to ensure reliability in the analysis of the data collected. Patterns observed have been tested for statistical significance using descriptive statistics, including Chi-squared tests, Analysis of Variance (ANOVA) and correlation coefficients (Pearson's R and Spearman's rho), as well as forms of regression analysis. Relevant tests and statistical output are provided in this appendix for reference.

2 The CIPD Job Quality Index

The analysis of the 2019 *UK Working Lives* survey includes calculation and exploration of the CIPD Job Quality Index. An index is produced for each of the seven dimensions of job quality. Each index is calculated using the method outlined in Sarkar and Gifford (2018), which is consistent with that reported on in the 2018 survey report (see Gifford 2018). In addition, the Pay and Benefits Index, Contracts Index, Skills, Autonomy and Development Index, and Relationships at Work Index have also been calculated using a revised method, details of which are given in the relevant section below. The mean scores for the 2019 index, and comparison with 2018 index values, are provided in Figure 1.

Figure 1: Mean scores for the Job Quality Index, 2018–19



Base: all employees (2018: n = 6,009, 2019: n=5,174)

Work–life balance and flexible working

The work–life balance index is constructed using the same method as reported in the 2018 survey and accompanying appendix and generates a similar mean value as in 2018.

Table 2: CIPD work–life balance index

Year	n	Mean	SD	Min	Max
2018	5,910	0.5794	0.2148	0	1
2019	5,174	0.5327	0.1896	0	1

Pay and benefits

The calculation of this index is revised in 2019 to incorporate a measure of subjective pay, that is, whether an individual feels they are paid appropriately in their job, rather than an objective measure of how much they earn. This is the result of reliability concerns over the objective pay measure.

The subjective measure is coded so that strongly agree = 100, agree = 75, neither agree nor disagree = 50, disagree = 25, and strongly disagree = 0. The subjective measure of pay is given a weighting of 75% in the calculation of the index as per the objective measure using the 2018 method.

For the benefit of comparison, we calculate the pay and benefits index using both the objective measure of pay (2018 method) and subjective measure of pay (2019 method). As we can see in Table 3, the index value using the objective measure of pay (0.357) is a little below that recorded in 2018 (0.395), while the subjective measure generates a somewhat higher value for the index (0.455).

Table 3: Pay and benefits index

Year	n	Mean	SD	Min	Max
2018	5,910	0.3945	0.2852	0	0.99
2019 (objective)	3,046	0.3567	0.2071	0	1
2019 (subjective)	5,174	0.4551	0.2322	0	1

Table 4: Pay and benefits sub-index correlations

		Subjective pay sub-index	Pensions sub-index	Benefits sub-index final†
Subjective pay sub-index	Pearson Correlation	1	0.101**	0.184**
	N	5,151	5,151	4,401
Pensions sub-index	Pearson Correlation	0.101**	1	0.348**
	N	5,151	5,174	4,417
Benefits sub-index final†	Pearson Correlation	0.184**	0.348**	1
	N	4,401	4,417	4,417

** Correlation is significant at the 0.01 level (2-tailed).

† 'Don't know' recoded as zero.

Table 5: Reliability statistics

Cronbach's Alpha	Cronbach's Alpha based on standardised items	No. of items
0.447	0.449	3

Contracts

The contract index is calculated using a revised method in 2019, which simply involves excluding the career development sub-index that was included in the 2018 method. Career development is instead included in the skills, autonomy and development index. We can observe that the index value using the revised 2019 method is higher than using the 2018 method.

Table 6: Contracts index

Year	n	Mean	SD	Min	Max
2018	5,910	0.7414	0.14335	0.0556	1
2019 (2018 method)*	5,174	0.7359	0.14598	0.03	1
2019**	5,174	0.8491	0.16133	0.04	1

*Includes development opportunities sub-index.

**Does not include development opportunities sub-index.

Table 7: Contracts sub-index correlations (2019 method)

		Job security sub-index	Underemployment index†
Job security sub-index	Pearson Correlation	1	0.186**
	N	5,173	
Underemployment index†	Pearson Correlation	0.186**	1
	N	5,173	

†Employees and running own business coded as permanent.

** Correlation is significant at the 0.01 level (2-tailed).

Table 8: Reliability statistics

Cronbach's Alpha	No. of items
0.313	2

Job design and the nature of work

This dimension covers work demands and resources (including autonomy), job complexity and how well this matches people's skills, development opportunities, and the meaningfulness of work. The index is calculated using the same method as in 2018, but with one exception: the career development sub-index is now included in the calculation of this index instead of the contracts index. The career development sub-index itself is calculated in the same way as in 2018, and it is given an equal weighting in this index, that is, each of the four sub-indexes (demand and resources sub-index, meaningfulness sub-index, skills sub-index, and career development sub-index) that are used to construct this index are weighted 25%.

The job complexity index is separated from the rest of this index and is calculated in a consistent way to the 2018 index.

We can see that the index value incorporating career development (revised 2019 method) is marginally lower (see Figure 1), reflecting overall lower scores from the career development sub-index.

Table 9: Nature of work index

Year	n	Mean	SD	Min	Max
2018	5,907	0.6102	0.2083	0	1
2019 (2018 method)*	5,167	0.5897	0.1868	0	1
2019**	5,170	0.5685	0.1803	0.01	0.96

*Does not include development sub-index.

**Includes development sub-index.

Table 10: Nature of work sub-index correlations

		Demand and resources sub-index	Meaningfulness sub-index	Skills sub-index	Development sub-index
Demand and resources sub-index	Pearson Correlation	1	0.250**	0.093**	0.252**
	N	5,164	5,032	5,012	5,110
Meaningfulness sub-index	Pearson Correlation	0.250**	1	0.189**	0.489**
	N	5,032	5,033	4,900	4,989
Skills sub-index	Pearson Correlation	0.093**	0.189**	1	0.283**
	N	5,012	4,900	5,014	4,964
Development sub-index	Pearson Correlation	0.252**	0.489**	0.283**	1
	N	5,110	4,989	4,964	5,114

** Correlation is significant at the 0.01 level (2-tailed).

Table 11: Reliability statistics

Cronbach's Alpha	Cronbach's Alpha based on standardised items	No. of Items
0.521	0.582	4

Relationships at work

The relationships at work index uses a revised method of calculation in 2019. The revised method involves two changes: (1) a measure of trust is added to the psychological safety sub-index (which is equally weighted at 25% with the other components), and (2) an additional sub-index that captures experiences of conflict at work is added to the index. This sub-index is scored so that those who do not experience conflict at work = 100, and those who report having experienced conflict at work = 0. The conflict at work sub-index is weighted equally with the other sub-indexes that are used to construct the relationships at work index, that is, each is weighted 25% of the total index.

Table 12: Relationships at work index

Year	n	Mean	SD	Min	Max
2018	5,110	0.7003	0.166638	0	1
2019 (2018 method)	5,140	0.714	0.17064	0	1
2019 (2019 method)*	5,174	0.7149	0.20679	0	1

*Includes trust in calculation of safety sub-index (equally weighted) and additional measure of whether experienced conflict at work (scored as no = 100, yes = 0, equally weighted with other sub-indexes – all 25% each).

Table 13: Relationships at work correlations (2019 method)

		Relationship sub-index	Psychological safety sub-index (2019 method with trust included)	Line management sub-index	Conflict sub-index (new for 2019)
Relationship sub-index	Pearson Correlation	1	0.538**	0.597**	0.223**
	N	5,106	4,298	4,246	5,106
Psychological safety sub-index (2019 method with trust included)	Pearson Correlation	0.538**	1	0.546**	0.352**
	N	4,298	4,307	4,115	4,307
Line management sub-index	Pearson Correlation	0.597**	0.546**	1	0.298**
	N	4,246	4,115	4,257	4,257
Conflict sub-index (new for 2019)	Pearson Correlation	0.223**	0.352**	0.298**	1
	N	5,106	4,307	4,257	5,174

** Correlation is significant at the 0.01 level (2-tailed).

Table 14: Reliability statistics

Cronbach's Alpha	Cronbach's Alpha based on standardised items	No. of items
0.617	0.75	4

Voice and representation

The voice and representation index is constructed using the same method as reported in the 2018 survey and accompanying appendix. We observe little change in the values of this index between the 2018 and 2019 surveys.

Table 15: Voice and representation index

Year	n	Mean	SD	Min	Max
2018	5,910	0.2802	0.2196	0	1
2019	5,714	0.2939	0.2098	0	1

Health and well-being

The health and well-being index is constructed using the same method as reported in the 2018 survey and accompanying appendix. As per the voice and representation index, we find little change between 2018 and 2019.

Table 16: Health and well-being index

Year	n	Mean	SD	Min	Max
2018	5,910	0.6070	0.1825	0	1
2019	5,135	0.5907	0.1874	0.021	1

The CIPD Job Quality Index

Table 17: Job Quality Index

Index	Year	n	Mean	SD	Min	Max
Work-life balance index	2018	5,910	0.579	0.215	0	1
	2019	5,174	0.533	0.190	0	1
Pay and benefits index	2018	5,910	0.395	0.285	0	0.99
	2019 (objective)	3,046	0.357	0.207	0	1
	2019 (subjective)	5,174	0.455	0.232	0	1
Contracts index	2018	5,910	0.741	0.143	0.06	1
	2019 (2018 method)*	5,174	0.736	0.146	0.03	1
	2019**	5,174	0.849	0.161	0.04	1
Nature of work index	2018	5,907	0.610	0.208	0	1
	2019 (2018 method)***	5,167	0.590	0.187	0	1
	2019****	5,170	0.569	0.180	0.01	0.96
Job complexity index	2018	5,910	0.611	0.188	0	1
	2019	5,174	0.615	0.190	0	1
Relationships at work index	2018	5,110	0.700	0.167	0	1
	2019 (2018 method)	5,140	0.714	0.171	0	1
	2019 (2019 method)*	5,174	0.715	0.207	0	1
Voice and representation index	2018	5,910	0.280	0.220	0	1
	2019	5,714	0.294	0.210	0	1
Health and well-being index	2018	5,910	0.607	0.183	0	1
	2019	5,135	0.591	0.187	0.02	1

*Includes development sub-index.

**Does not include development sub-index.

***Does not include development sub-index.

****Includes development sub-index.

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Table 18: CIPD Job Quality Index correlations (2019 method)

		1	2	3	4	5	6	7	8
1 Work-life balance index 2019	Pearson Correlation	1	0.191**	– 0.195**	0.219**	–0.002	0.343**	0.201**	0.461**
	N	5,174	5,174	5,174	5,170	5,174	5,174	4,417	5,135
2 Pay and benefits index final (subjective measure of pay method)	Pearson Correlation	0.191**	1	0.122**	0.400**	0.161**	0.281**	0.321**	0.335**
	N	5,174	5,174	5,174	5,170	5,174	5,174	4,417	5,135
3 Contracts index final 2019	Pearson Correlation	– 0.195**	0.122**	1	0.113**	0.036*	0.094**	0.127**	0.064**
	N	5,174	5,174	5,174	5,170	5,174	5,174	4,417	5,135
4 Nature of work index final (2019 method, includes development)	Pearson Correlation	0.219**	0.400**	0.113**	1	0.480**	0.424**	0.477**	0.393**
	N	5,170	5,170	5,170	5,170	5,170	5,170	4,415	5,134
5 Job complexity index	Pearson Correlation	–0.002	0.161**	0.036*	0.480**	1	0.200**	0.339**	0.144**
	N	5,174	5,174	5,174	5,170	5,174	5,174	4,417	5,135
6 Relationships at work index (2019 method – includes trust in safety index and conflict sub-index (equally weighted 4 measures))	Pearson Correlation	0.343**	0.281**	0.094**	0.424**	0.200**	1	0.378**	0.489**
	N	5,174	5,174	5,174	5,170	5,174	5,174	4,417	5,135
7 Employee voice index	Pearson Correlation	0.201**	0.321**	0.127**	0.477**	0.339**	0.378**	1	0.252**
	N	4,417	4,417	4,417	4,415	4,417	4,417	4,417	4,383
8 Health and well-being index	Pearson Correlation	0.461**	0.335**	0.064**	0.393**	0.144**	0.489**	0.252**	1
	N	5,135	5,135	5,135	5,134	5,135	5,135	4,383	5,135

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 19: Reliability statistics

Cronbach's Alpha	Cronbach's Alpha based on standardised items	No. of items
0.698	0.693	8

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Table 20: Difference in Job Quality Index according to whether work flexibly

Index	Works flexibly			Does not work flexibly			Total			Mean difference	Cohen's d
	Mean	N	Std. dev.	Mean	N	Std. Dev.	Mean	N	Std. Dev.		
Work-life balance	0.567	2,391	0.181	0.492	2,026	0.189	0.533	4,417	0.188	0.075***	0.407
Objective pay and benefits	0.414	1,645	0.211	0.290	1,401	0.181	0.357	3,046	0.207	0.124***	0.633
Pay and benefits (subjective)	0.491	2,391	0.234	0.424	2,026	0.226	0.460	4,417	0.233	0.068***	0.295
Contracts (2019 method)	0.866	2,391	0.150	0.852	2,026	0.163	0.859	4,417	0.156	0.014**	0.088
Nature of work (2019 method)	0.601	2,391	0.171	0.515	2,023	0.187	0.561	4,415	0.184	0.086***	0.481
Job complexity	0.653	2,391	0.177	0.553	2,026	0.192	0.607	4,417	0.191	0.101***	0.545
Relationships at work (2018 method)	0.725	2,384	0.155	0.665	2,012	0.174	0.698	4,396	0.167	0.060***	0.366
Relationships at work	0.723	2,391	0.191	0.667	2,026	0.206	0.697	4,417	0.200	0.056***	0.281
Employee voice	0.384	2,391	0.183	0.298	2,026	0.177	0.344	4,417	0.185	0.086***	0.479
Health and well-being	0.592	2,381	0.181	0.568	2,002	0.193	0.581	4,383	0.187	0.024***	0.130

p<0.01, * p<0.001.

Job quality outcomes

Here we summarise the analysis of the seven dimensions of the CIPD Job Quality Index in relation to four job quality outcomes: reported job satisfaction, enthusiasm, work effort and likelihood of quitting.

The analysis of job quality outcomes in the 2019 survey report involves the use of statistical techniques comprising both Ordinary Least Squares (OLS) and Binary Probit regression analysis. In the latter case this technique is employed where the dependent variable in the regression model is dichotomous in structure, that is, it has only two categories, for example whether workers have experienced conflict at work.

The regression analysis includes a set of controls that includes demographic information – age, gender, disability, ethnicity, sexuality, education level – as well controls focused on work which comprise occupational group (using NRS social grade), employment status, organisation sector and organisational size.

In the regression analysis below in Tables 21 to 24, OLS regression is employed. Coefficients show the percentage point increases in outcomes (job satisfaction, job enthusiasm, work effort and likelihood of quitting) associated with a 0 to 1 change in the dimension index. For example, we see in Table 21 that, controlling for other factors, a 0 to 1 increase in the work–life balance (WLB) index corresponds to a 38% increase in job satisfaction.

Table 21: Job satisfaction association with Job Quality Index: OLS regression

	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
wlb index final	0.384	0.084	4.590	0.000	0.220	0.549
pay index 2019	0.565	0.067	8.450	0.000	0.434	0.696
contracts 2019	0.407	0.108	3.760	0.000	0.195	0.619
nature index 2019	1.300	0.098	13.320	0.000	1.108	1.491
complexity index	0.753	0.086	8.730	0.000	0.584	0.922
relation index 2019	0.451	0.090	5.020	0.000	0.275	0.628
voice index	0.429	0.083	5.170	0.000	0.266	0.592
hwb index	1.617	0.092	17.600	0.000	1.437	1.797
gender male	-0.110	0.026	-4.280	0.000	-0.160	-0.059
age 25-34	0.020	0.087	0.230	0.820	-0.151	0.191
age 35-44	-0.001	0.087	-0.010	0.992	-0.171	0.169
age 45-54	-0.003	0.086	-0.030	0.976	-0.172	0.166
age55	0.079	0.086	0.920	0.357	-0.089	0.248
undergraduate degree	-0.086	0.032	-2.720	0.007	-0.148	-0.024
postgraduate degree	-0.025	0.031	-0.810	0.420	-0.086	0.036
ethnicity white	0.098	0.042	2.320	0.020	0.015	0.181
sexuality	-0.019	0.036	-0.520	0.605	-0.090	0.052
disabilities	0.099	0.033	2.980	0.003	0.034	0.163
temporary	0.090	0.061	1.460	0.143	-0.030	0.210
self-employed	0.173	0.061	2.820	0.005	0.053	0.294
nrsb	0.041	0.037	1.130	0.258	-0.030	0.113
nrsc1	0.022	0.036	0.610	0.544	-0.049	0.093
nrsc2	0.104	0.044	2.370	0.018	0.018	0.190
nrsde	0.146	0.050	2.910	0.004	0.048	0.245
public	-0.014	0.038	-0.370	0.714	-0.088	0.060
voluntary	-0.113	0.047	-2.430	0.015	-0.205	-0.022
size 1049	-0.063	0.051	-1.230	0.220	-0.164	0.038
size 50249	-0.079	0.051	-1.540	0.124	-0.180	0.022
size 250	-0.123	0.045	-2.720	0.007	-0.211	-0.034
_cons	0.298	0.158	1.880	0.060	-0.012	0.608

Table 22: Job enthusiasm association with Job Quality Index: OLS regression

	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
wlb index final	-0.023	0.078	-0.290	0.774	-0.176	0.131
pay index 2019	0.100	0.063	1.590	0.112	-0.023	0.222
contracts 2019	-0.137	0.103	-1.330	0.184	-0.339	0.065
nature index 2019	1.101	0.095	11.640	0.000	0.915	1.286
complexity index	1.401	0.081	17.380	0.000	1.243	1.559
relation index 2019	0.306	0.078	3.920	0.000	0.153	0.460
voice index	0.253	0.078	3.230	0.001	0.100	0.406
hwb index	1.582	0.085	18.580	0.000	1.415	1.749
gender male	-0.149	0.024	-6.100	0.000	-0.197	-0.101
age 25-34	0.066	0.080	0.820	0.413	-0.091	0.223
age 35-44	0.063	0.079	0.790	0.427	-0.093	0.219
age 45-54	0.080	0.080	1.010	0.313	-0.076	0.236
age 55	0.181	0.079	2.280	0.023	0.025	0.336
undergraduate degree	-0.053	0.029	-1.820	0.069	-0.111	0.004
postgraduate degree	-0.019	0.031	-0.610	0.541	-0.080	0.042
ethnicity white	0.044	0.039	1.150	0.251	-0.031	0.120
sexuality	-0.059	0.039	-1.500	0.134	-0.136	0.018
disabilities	0.172	0.032	5.430	0.000	0.110	0.234
temporary	0.175	0.061	2.870	0.004	0.056	0.295
self-employed	0.226	0.058	3.900	0.000	0.112	0.339
nrsb	0.003	0.037	0.090	0.925	-0.069	0.075
nrsc1	-0.066	0.037	-1.790	0.074	-0.138	0.006
nrsc2	0.031	0.044	0.710	0.476	-0.055	0.117
nrsde	0.097	0.049	2.000	0.046	0.002	0.192
public	-0.002	0.036	-0.060	0.949	-0.074	0.069
voluntary	-0.051	0.043	-1.160	0.244	-0.136	0.035
size 1049	0.098	0.050	1.940	0.052	-0.001	0.197
size 50249	0.042	0.050	0.840	0.402	-0.057	0.141
size 250	0.009	0.043	0.200	0.845	-0.077	0.094
_cons	0.823	0.148	5.540	0.000	0.532	1.114

Table 23: Work effort association with Job Quality Index: OLS regression

	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
wlb index final	0.005	0.094	0.050	0.961	-0.180	0.189
pay index 2019	0.283	0.079	3.590	0.000	0.128	0.437
contracts 2019	-0.487	0.116	-4.200	0.000	-0.714	-0.260
nature index 2019	0.726	0.114	6.390	0.000	0.503	0.949
complexity index	1.071	0.098	10.940	0.000	0.879	1.263
relation index 2019	0.151	0.101	1.500	0.133	-0.046	0.348
voice index	0.442	0.100	4.420	0.000	0.246	0.639
hwb index	0.382	0.106	3.590	0.000	0.173	0.590
gender male	-0.100	0.030	-3.370	0.001	-0.158	-0.042
age 25-34	0.033	0.115	0.290	0.772	-0.192	0.259
age 35-44	0.092	0.114	0.810	0.418	-0.131	0.315
age 45-54	0.033	0.113	0.290	0.773	-0.190	0.255
age 55	-0.038	0.114	-0.330	0.741	-0.261	0.186
undergraduate degree	0.026	0.036	0.720	0.469	-0.045	0.097
postgraduate degree	0.024	0.037	0.630	0.528	-0.050	0.097
ethnicity white	0.041	0.049	0.830	0.405	-0.055	0.136
sexuality	0.133	0.048	2.760	0.006	0.038	0.227
disabilities	0.155	0.037	4.230	0.000	0.083	0.227
temporary	0.001	0.077	0.010	0.992	-0.151	0.153
self-employed	0.243	0.070	3.470	0.001	0.106	0.380
nrsb	0.006	0.042	0.140	0.891	-0.077	0.089
nrsc1	-0.047	0.042	-1.120	0.263	-0.130	0.036
nrsc2	-0.042	0.052	-0.800	0.425	-0.144	0.061
nrsde	0.008	0.059	0.130	0.898	-0.109	0.124
public	-0.101	0.044	-2.300	0.021	-0.186	-0.015
voluntary	0.002	0.054	0.030	0.977	-0.104	0.107
size 1049	0.000	0.062	-0.010	0.994	-0.121	0.120
size 50249	-0.120	0.061	-1.960	0.050	-0.240	0.000
size 250	-0.255	0.055	-4.660	0.000	-0.362	-0.148
_cons	2.211	0.188	11.780	0.000	1.843	2.579

Table 24: Likelihood of quitting association with Job Quality Index: OLS regression

	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
wlb index final	-0.540	0.131	-4.120	0.000	-0.797	-0.283
pay index 2019	-0.169	0.102	-1.670	0.096	-0.369	0.030
contracts 2019	-1.224	0.157	-7.800	0.000	-1.532	-0.916
nature index 2019	-0.723	0.150	-4.820	0.000	-1.017	-0.429
complexity index	-0.295	0.129	-2.290	0.022	-0.547	-0.043
relation index 2019	-0.587	0.130	-4.530	0.000	-0.841	-0.333
voice index	-0.153	0.129	-1.180	0.237	-0.406	0.101
hwb index	-0.842	0.143	-5.910	0.000	-1.122	-0.563
gender male	0.061	0.039	1.560	0.119	-0.016	0.137
age 25-34	-0.342	0.163	-2.100	0.036	-0.662	-0.022
age 35-44	-0.675	0.161	-4.190	0.000	-0.991	-0.359
age 45-54	-0.760	0.160	-4.740	0.000	-1.074	-0.445
age 55	-0.550	0.161	-3.410	0.001	-0.866	-0.234
undergraduate degree	0.128	0.048	2.690	0.007	0.035	0.221
postgraduate degree	0.104	0.051	2.070	0.039	0.005	0.204
ethnicity white	-0.166	0.066	-2.520	0.012	-0.296	-0.037
sexuality	0.017	0.060	0.290	0.771	-0.099	0.134
disabilities	-0.028	0.051	-0.550	0.582	-0.129	0.072
temporary	-0.006	0.119	-0.050	0.960	-0.239	0.227
self-employed	-0.211	0.090	-2.330	0.020	-0.387	-0.034
nrsb	-0.227	0.058	-3.890	0.000	-0.342	-0.113
npsc1	-0.141	0.057	-2.480	0.013	-0.252	-0.029
npsc2	-0.239	0.071	-3.380	0.001	-0.378	-0.100
npscde	-0.427	0.075	-5.660	0.000	-0.575	-0.279
public	-0.109	0.056	-1.950	0.052	-0.220	0.001
voluntary	0.054	0.074	0.730	0.466	-0.091	0.200
size 1049	-0.020	0.080	-0.250	0.805	-0.177	0.137
size 50249	0.087	0.082	1.060	0.291	-0.074	0.248
size 250	-0.038	0.071	-0.530	0.595	-0.178	0.102
_cons	6.050	0.255	23.730	0.000	5.551	6.550

3 International ranking of work quality

The international ranking of work quality compares the UK's position with a group of 25 comparator economies using as a framework the seven dimensions of quality work used in the UKWL survey.

Coverage

In many cases there is simply no data to work with and so the final list contains a focused group of 25 countries. However, there is a good spread of key international comparators, including the US, France, Germany and Japan. When data was not available for a country (14 instances in 300 datapoints), the mean figure for all countries was imputed to maintain the integrity of the ranking methodology.

Fit with concepts

To be consistent with the UKWL data we had to use data that matched the seven concepts of quality work. We considered a wide range of publicly available data sources from reputable international agencies, often combining data to triangulate around a concept. A full mapping of sources is provided in Table 17.

One concept that was particularly difficult to find international data for was employee voice. This may be an opportunity for international agencies in future. We have settled on trade union density data from the International Labour Organization (ILO). Although trade union membership is but one way that employees can have their voice heard, and trade union membership has been in long-term decline, a tolerance for unionised workforces is a reasonable proxy for a country's openness to employee voice.

Timeframe

We have used the latest available data in all instances.

Methodology

All data has been standardised so that it can be compared on the same scale. When one of the seven dimensions of good work is made up of multiple metrics/questions, each metric/question has been weighted equally for the final score of that metric. In last year's UKWL report we conducted analysis of which of the factors had the biggest effect on a worker's job satisfaction. We have used these scores to weight the data. For example, health and well-being makes up 30% of the weighting, while pay and benefits makes up 11%.

Table 25: Weighting within the overall good work index

Sub-index	weight
Work-life balance	4.4%
Pay and benefits	10.7%
contracts	18.2%
Skills, autonomy and development	15.7%
Relationships at work	15.1%
Voice and representation	5.7%
Health and well-being	30.2%

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Table 26: International index of work quality – rankings

Country	Work-life balance	Pay and benefits	Contracts	Skills, autonomy and development	Relationships at work	Voice and representation	Health and well-being	RANK
Switzerland	11	1	15	1	2	15	2	1
Norway	12	2	3	3	17	6	14	2
Denmark	17	3	16	4	19	2	5	3
Israel	6	20	*10	16	3	7	1	4
Latvia	4	*12	4	20	6	18	*8	5
Iceland	10	7	*14	10	7	1	*18	6
Austria	3	6	11	14	1	8	17	7
United States	16	14	*7	2	11	21	13	8
Finland	15	9	18	5	15	4	9	9
New Zealand	21	16	*19	11	8	12	3	10
Estonia	2	23	1	17	14	25	6	11
Germany	19	5	13	12	4	14	19	12
United Kingdom	24	15	8	7	12	10	16	13
Lithuania	5	*12	*6	18	18	24	*10	14
Belgium	23	4	5	8	22	5	21	15
Australia	25	8	*22	9	16	16	12	16
Hungary	1	22	2	24	13	22	15	17
Mexico	14	25	*23	23	5	19	4	18
Chile	7	24	*21	25	10	11	*7	19
Czech Republic	13	21	17	19	20	20	11	20
Sweden	22	11	20	6	21	3	20	21
Slovenia	9	19	9	13	23	8	24	22
Spain	18	17	25	22	9	17	22	23
Japan	8	18	12	21	25	13	25	24
France	20	10	24	15	24	23	23	25

*imputed population means for absent data. This maintains the ability to produce an overall ranking but makes the ranking of the country on this metric unreliable.

Table 17: Mapping between concepts and metrics used

Seven concepts	Source	Metric/question
Work-life balance	International Social Survey Programme (ISSP) – Work orientations 2015	Q19a: How often demands of job interfere with family life
Pay and benefits	Organisation for Economic Co-operation and Development (OECD) – Job Quality database 2016	Earnings quality refers to the extent to which the earnings received by workers in their jobs contribute to their well-being. While the level of earnings provides a key benchmark for assessing their contribution to material living standards, the way earnings are distributed across the workforce also matters for well-being. Therefore, the OECD measures earnings quality by an index that accounts for both the level of earnings and their distribution across the workforce.
Contracts/ Terms of employment	Organisation for Economic Co-operation and Development (OECD) – Share of involuntary part-timers in total employment – 2017	Shares of involuntary part-time work among part-time workers
	Share of temporary employees (%) – 2018 or latest available	This indicator represents temporary employment as a percentage of employees. Temporary employment, whereby workers are engaged only for a specific period of time, includes fixed-term, project- or task-based contracts, as well as seasonal or casual work, including day labour. There are wide differences in definitions used across countries, which should be kept in mind when making cross-country comparisons.
Skills, autonomy and development	International Labour Organization (ILO) – ILO modelled estimates November 2018	SOC 1–3 – Standard Occupational Codes (SOC) is an international standard for categorising occupations. SOC codes 1–3 are considered professional jobs. This is therefore a measure of the proportion of professional roles in the economy. These roles are the most highly skilled and well remunerated.

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Seven concepts	Source	Metric/question
	World Economic Forum (WEF) – Global Competitiveness Report 2018	Executive Opinion Survey – Extent of staff training – Response to the survey question, ‘In your country, to what extent do companies invest in training and employee development?’ [1 = not at all; 7 = to a great extent] 2017–2018 weighted average or most recent period available
	International Social Survey Programme (ISSP) – Work orientations 2015	Q21 Training to improve job skills over past 12 months
	International Social Survey Programme (ISSP) – Work orientations 2015	Q12e Apply to R’s job: can work independently
Relationships at work	International Social Survey Programme (ISSP) – Work orientations 2015	Q22a Relations: between management and employees
Voice and representation	International Labour Organization (ILO)	Trade union density (latest available, 2015 and 2016)
Health and well-being	International Social Survey Programme (ISSP) – Work orientations 2015	Q13b How often applies: find work stressful
	Organisation for Economic Co-operation and Development (OECD) – Job Quality database 2016	Job strain – Quality of the working environment captures non-economic aspects of job quality and includes factors that relate to the nature and content of work performed, working-time arrangements and workplace relationships. Jobs that are characterised by a high level of job demands such as time pressure or physical health risk factors, combined with insufficient job resources to accomplish the required job duties, such as work autonomy and social support at work, constitute a major health risk factor for workers. Therefore, the quality of the working environment is measured by the incidence of job strain, which is a combination of high job demands and limited job resources.

References

Gifford, J. (2018) *UK working lives 2018: survey report*. London: Chartered Institute of Personnel and Development. Available at: www.cipd.co.uk/knowledge/work/trends/uk-working-lives.

National Readership Survey. (2016) *Social grade*. Available at: www.nrs.co.uk/nrs-print/lifestyle-and-classification-data/social-grade/.

Sarkar, S. and Gifford, J. (2018) *UK working lives: appendix 2 methodology*. London: Chartered Institute of Personnel and Development. Available at: www.cipd.co.uk/knowledge/work/trends/uk-working-lives.

Warhurst, C., Wright, S. and Lyonette, C. (2017) *Understanding and measuring job quality: part 1 – thematic literature review*. London: Chartered Institute of Personnel and Development. Available at: www.cipd.co.uk/jobquality.

Wright, S., Warhurst, C., Lyonette, C. and Sarkar, S. (2018) *Understanding and measuring job quality: part 2 – indicators of job quality*. London: Chartered Institute of Personnel and Development. Available at: www.cipd.co.uk/jobquality.

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