A The job quality index

The job quality index used in this analysis has been compiled using data from the last two waves of the European Working Conditions Survey administered by Eurofound. The index consists of respondents' answers to questions concerning six dimensions of job quality: income and benefits, working time and work-life balance, social dialogue, skills development and training, and safety and ethics. The dimensions have been selected based on the framework outlined in UNECE (2015). Compared to the UN framework, we dropped two dimensions due to data availability, namely relationship and work motivation and security of employment. We did add a stress dimension, to capture mental well-being. Note that, while the choice of the dimension is inspired on the UN framework, the computation of individuals and aggregate indices had to be adapted to the information provided by the EWCS. Essentially, this has been done by assigning scores to mainly evaluative answers.

The index was built as follows. Firstly, we selected the questions conveying the relevant information to assess the six dimensions cited above. Then, we built individual scores, by summing the scores "earned" by respondents for each of the dimensions. The scores range from 0 to 2, from lowest satisfaction to highest satisfaction. As a result, the individual job quality index ranges between 0 and 12, where 0 indicates the lowest job quality and 12 the highest. Finally, the aggregate job quality index at industry-country level is compiled by averaging the individual scores.

What follows provide additional details on the construction of the scores for each component of the job quality index. (We refer to the questionnaire of the 2010 wave.)

- Income and benefits. This dimension provides information on overall earnings composition and satisfaction with salary/pay. Respondents indicate whether earnings from their main job include additional sources than their basic salary, and whether they are satisfied with their income by rating the statement "I am well paid for the work I do". Answers to the latter question range from 1 (strongly disagree) to 5 (strongly agree). Here, we assign a score of one to the payment of at least two types of the benefits indicated, and to a score of 5 in the question on income. Information on benefits and income are derived, respectively, from questions EF7 and 77.[16]

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[16]Here, we have considered as benefits both extra payments and benefits in kind as described in the

- Working time and work-life balance. Work-life balance is evaluated based on answers to questions on whether working hours fit family and social commitments, on the presence of flexible arrangements, and on whether workers work during their free time to meet demands. For this dimension, we use questions 41, 42, 43 to assess life-work balance, and 51F and 51G to assess quality of the working time. Each earns a score of one if respondents choose the two most favourable categories. (For example, 51F produces a score of one if respondents indicate that they can take a break if they wish so at all times or most of the time.) The overall scores obtained range from 0 and 5. These are converted in the 0-2 scale by assigning values of 1 and 2 to, respectively, final scores of 3, 4 and 5.

- Safety and ethics. This dimension summarises information on the following aspects: discrimination, safety, and health and safety. the discrimination score is based on question 65. Question 70 is used to assess safety, e.g. whether the respondent has been the subject of abuse and/or threatening or humiliating behaviour. Health and safety has been assessed using question 23, which enquiries about exposures to high temperatures, fumes, dangerous or infectious substances, etc., and question 67, which asks a self-evaluation of whether work affects health.

- Social dialogue. Scores are based on questions 63 and 64.

- Skills development and training. Scores are based on answers to questions 61A and 61C.

- Stress. Questions 45A and 45B provide an objective measure of stress. Question 51N is a subjective measure.

EWCS questionnaire, rather than the sick and paid leave payments described in the UN framework, to reflect the institutional context.

B   Additional regression results

Tables in this section presents results of the regressions of labour productivity (in levels and growth rates) on job quality and job satisfaction when control variables are incrementally introduced in the empirical model.

Table 7: Regression of labour productivity on job satisfaction (levels)

	Dependent variable:							
	Labour productivity							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
job satisfaction	0.197***	0.198***	0.122***	0.131***	0.134***	0.057***	0.056***	0.053***
	(0.032)	(0.033)	(0.023)	(0.027)	(0.029)	(0.006)	(0.006)	(0.005)
age		0.003***	0.006***	0.006***	0.004***	0.001***	0.001***	0.002***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
education			0.345***	0.317***	0.281***	0.290***	0.287***	0.276***
			(0.032)	(0.030)	(0.026)	(0.032)	(0.032)	(0.029)
large firms				0.340***	0.293***	0.101***	0.100***	0.110***
				(0.051)	(0.053)	(0.014)	(0.014)	(0.017)
employment share					−4.300***	−2.363***	−2.356***	−2.488***
					(0.316)	(0.077)	(0.077)	(0.113)
investment p.w.						0.334***	0.334***	0.336***
						(0.007)	(0.007)	(0.006)
wage							0.000***	0.000***
							(0.000)	(0.000)
sector: construction								0.005
								(0.016)
sector: services								0.032***
								(0.009)
Country dummies	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Year dummy	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Constant	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Observations	2,188	2,188	2,188	2,188	2,188	2,188	2,188	2,188
R^2	0.576	0.577	0.600	0.609	0.624	0.830	0.830	0.831
Adjusted R^2	0.570	0.571	0.594	0.603	0.618	0.827	0.828	0.828

Note: *p<0.1; **p<0.05; ***p<0.01. Robust standard errors clustered by year. Standard errors are reported in brackets.

Table 8: Regression of labour productivity on job quality (levels)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
					Dependent variable:			
					Labour productivity			
job quality	0.116***	0.116***	0.092***	0.086***	0.082***	0.047***	0.047***	0.047***
	(0.006)	(0.006)	(0.004)	(0.005)	(0.003)	(0.000)	(0.000)	(0.000)
age		0.002***	0.005***	0.004***	0.003***	0.001***	0.000***	0.001***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
education			0.302***	0.284***	0.254***	0.269***	0.267***	0.259***
			(0.028)	(0.025)	(0.024)	(0.035)	(0.034)	(0.032)
large firms				0.291***	0.248***	0.079***	0.078***	0.087***
				(0.049)	(0.050)	(0.015)	(0.015)	(0.018)
employment share					-3.994***	-2.230***	-2.224***	-2.343***
					(0.263)	(0.036)	(0.034)	(0.078)
investment p.w.						0.329***	0.328***	0.330***
						(0.005)	(0.005)	(0.004)
wage							0.000***	0.000***
							(0.000)	(0.000)
sector: construction								0.027*
								(0.014)
sector: services								0.025***
								(0.009)
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165
R^2	0.599	0.599	0.616	0.623	0.636	0.834	0.834	0.835
Adjusted R^2	0.593	0.593	0.611	0.617	0.630	0.832	0.832	0.832

Note: *p<0.1; **p<0.05; ***p<0.01. Robust standard errors clustered by year. Standard errors are reported in brackets.

Table 9: Regression of labour productivity on job satisfaction (cumulative growth)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
						Dependent variable:				
						Labour productivity growth				
job satisfaction	0.051***	0.070***	0.070***	0.062***	0.061***	0.061***	0.062***	0.062***	0.061***	0.059***
	(0.000)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)
labour prod. (t_0)		-0.092***	-0.092***	-0.099***	-0.097***	-0.100***	-0.101***	-0.096***	-0.098***	-0.095***
		(0.018)	(0.018)	(0.017)	(0.015)	(0.015)	(0.015)	(0.017)	(0.017)	(0.015)
age		0.000	0.001**	0.001**	0.000*	0.000	0.000**	0.000*	0.001	
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	
education				0.044***	0.045***	0.044***	0.045***	0.045***	0.043***	0.032**
				(0.006)	(0.005)	(0.005)	(0.006)	(0.005)	(0.006)	(0.016)
large firms					-0.021	-0.023	-0.024	-0.026	-0.027	-0.016
					(0.025)	(0.024)	(0.025)	(0.025)	(0.025)	(0.015)
empl. share						-0.246***	-0.404***	-0.395***	-0.387***	-0.544***
						(0.016)	(0.059)	(0.052)	(0.045)	(0.201)
Δ empl. share							-2.835***	-2.915***	-2.874***	-3.204***
							(0.690)	(0.783)	(0.817)	(0.403)
Δ invest. p.w.								0.067***	0.066***	0.067***
								(0.009)	(0.009)	(0.010)
wage									0.010***	0.011***
									(0.003)	(0.004)
sector: construction										0.021***
										(0.001)
sector: services										0.031
										(0.029)
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,127	2,127	2,127	2,127	2,127	2,127	2,127	2,127	2,127	2,127
R^2	0.109	0.158	0.158	0.163	0.163	0.164	0.166	0.186	0.187	0.190
Adjusted R^2	0.096	0.146	0.145	0.150	0.150	0.150	0.152	0.172	0.172	0.174

Note: *p<0.1; **p<0.05; ***p<0.01. Robust standard errors clustered by year. Standard errors are reported in brackets.

Table 10: Regression of labour productivity on job quality (cumulative growth)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
					Dependent variable:					
					Labour productivity growth					
job quality	−0.001	0.010***	0.010***	0.007**	0.007***	0.007***	0.007***	0.007***	0.007***	0.006*
	(0.004)	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)
labour prod. (t_0)		−0.090***	−0.090***	−0.097***	−0.095***	−0.097***	−0.099***	−0.094***	−0.096***	−0.093***
		(0.015)	(0.015)	(0.015)	(0.013)	(0.013)	(0.013)	(0.015)	(0.016)	(0.013)
age			−0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
education				0.050***	0.051***	0.050***	0.052***	0.052***	0.048***	0.037***
				(0.001)	(0.000)	(0.000)	(0.001)	(0.001)	(0.002)	(0.012)
large firms					−0.029	−0.031	−0.032	−0.034	−0.036	−0.023
					(0.026)	(0.026)	(0.026)	(0.026)	(0.027)	(0.017)
empl. share						−0.214***	−0.382***	−0.377***	−0.364***	−0.537**
						(0.029)	(0.081)	(0.077)	(0.065)	(0.216)
Δ empl. share							−3.013***	−3.100***	−3.035***	−3.394***
							(0.637)	(0.725)	(0.788)	(0.381)
Δ invest. p.w.								0.067***	0.066***	0.067***
								(0.008)	(0.008)	(0.009)
wage									0.015**	0.015**
									(0.006)	(0.007)
sector: construction										0.024***
										(0.002)
sector: services										0.035
										(0.029)
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,104	2,104	2,104	2,104	2,104	2,104	2,104	2,104	2,104	2,104
R²	0.104	0.150	0.150	0.156	0.157	0.158	0.160	0.181	0.182	0.186
Adjusted R²	0.092	0.138	0.137	0.143	0.144	0.144	0.146	0.167	0.167	0.170

Note: *p<0.1; **p<0.05; ***p<0.01. Robust standard errors clustered by year. Standard errors are reported in brackets.

Table 11: Regression of labour productivity on job satisfaction (average yearly growth)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
					Dependent variable:					
					Labour productivity growth					
job satisfaction	0.027***	0.034***	0.034***	0.030***	0.030***	0.030***	0.030***	0.030***	0.030***	0.029***
	(0.005)	(0.006)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.004)	(0.003)
labour prod. (t_0)		−0.037***	−0.037***	−0.041***	−0.041***	−0.043***	−0.043***	−0.042***	−0.043***	−0.042***
		(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)	(0.010)	(0.009)
age			−0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
education				0.022***	0.022***	0.021***	0.022***	0.022***	0.020***	0.015***
				(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.000)	(0.004)
large firms					0.001	−0.001	−0.001	−0.001	−0.003	0.002
					(0.006)	(0.007)	(0.007)	(0.007)	(0.008)	(0.004)
empl. share						−0.194***	−0.249***	−0.221***	−0.215***	−0.283**
						(0.045)	(0.069)	(0.066)	(0.059)	(0.116)
Δ empl. share							−3.087***	−3.133***	−3.030***	−3.488***
							(0.278)	(0.351)	(0.456)	(0.033)
Δ invest. p.w.								0.047***	0.047***	0.047***
								(0.004)	(0.004)	(0.004)
wage									0.009**	0.009*
									(0.004)	(0.005)
sector: construction										0.008***
										(0.002)
sector: services										0.014
										(0.011)
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,056	2,056	2,056	2,056	2,056	2,056	2,056	2,056	2,056	2,056
R²	0.084	0.131	0.131	0.138	0.138	0.140	0.142	0.156	0.157	0.161
Adjusted R²	0.070	0.118	0.117	0.124	0.124	0.126	0.127	0.141	0.142	0.144

Note: *p<0.1; **p<0.05; ***p<0.01. Robust standard errors clustered by year. Standard errors are reported in brackets.

Table 12: Regression of labour productivity on job quality (average yearly growth)

					Dependent variable:					
					Labour productivity growth					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
job quality	0.001	0.005***	0.005***	0.003***	0.003***	0.003***	0.003***	0.004***	0.003***	0.003**
	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)
labour prod. (t_0)		−0.037***	−0.037***	−0.041***	−0.041***	−0.042***	−0.043***	−0.042***	−0.043***	−0.042***
		(0.008)	(0.008)	(0.009)	(0.008)	(0.009)	(0.009)	(0.010)	(0.010)	(0.009)
age			−0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
education				0.026***	0.026***	0.025***	0.026***	0.026***	0.024***	0.018***
				(0.004)	(0.004)	(0.004)	(0.003)	(0.004)	(0.003)	(0.001)
large firms					−0.003	−0.004	−0.005	−0.005	−0.007	−0.001
					(0.007)	(0.007)	(0.007)	(0.007)	(0.008)	(0.004)
empl. share						−0.177***	−0.236***	−0.211***	−0.203***	−0.278**
						(0.049)	(0.077)	(0.076)	(0.067)	(0.124)
Δ empl. share							−3.365***	−3.428***	−3.284***	−3.782***
							(0.143)	(0.207)	(0.360)	(0.128)
Δ invest. p.w.								0.046***	0.045***	0.045***
								(0.005)	(0.004)	(0.005)
wage									0.011*	0.011*
									(0.006)	(0.006)
sector: construction										0.009***
										(0.003)
sector: services										0.015
										(0.011)
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,035	2,035	2,035	2,035	2,035	2,035	2,035	2,035	2,035	2,035
R^2	0.076	0.121	0.121	0.131	0.131	0.133	0.134	0.148	0.150	0.154
Adjusted R^2	0.063	0.108	0.107	0.117	0.116	0.118	0.119	0.132	0.134	0.137

Note: *p<0.1; **p<0.05; ***p<0.01. Robust standard errors clustered by year. Standard errors are reported in brackets.

C   Regressions with standardized variables

Table 13: Regression of labour productivity on job quality and job satisfaction using standardized variables (levels).

	Dependent variable:		
	Labour productivity		
	(1)	(2)	(3)
job quality	0.079***		
	(0.000)		
job satisfaction		0.023***	
		(0.003)	
satisfied (share)			0.019***
			(0.001)
age	0.002	0.010***	0.010***
	(0.003)	(0.002)	(0.002)
education	0.129***	0.138***	0.140***
	(0.014)	(0.014)	(0.015)
large firms	0.024***	0.030***	0.030***
	(0.005)	(0.005)	(0.005)
employment share	−0.059***	−0.063***	−0.063***
	(0.002)	(0.003)	(0.003)
investment p.w.	0.496***	0.505***	0.506***
	(0.006)	(0.009)	(0.009)
wage	0.055***	0.056***	0.057***
	(0.009)	(0.002)	(0.002)
sector: construction	0.015	−0.009	−0.010
	(0.015)	(0.018)	(0.018)
sector: services	0.030***	0.039***	0.041***
	(0.011)	(0.012)	(0.012)
Country dummies	*Yes*	*Yes*	*Yes*
Year dummy	*Yes*	*Yes*	*Yes*
Constant	*Yes*	*Yes*	*Yes*
Observations	2,165	2,188	2,188
R^2	0.836	0.832	0.832
Adjusted R^2	0.833	0.829	0.829

Note: *p<0.1; **p<0.05; ***p<0.01. Robust standard errors clustered by year. Standard errors are reported in brackets. Variables have been standardized for comparability of the coefficients.

Table 14: Regression of labour productivity on job quality and job satisfaction using standardized variables (cumulative growth).

	Dependent variable:		
	Labour productivity growth		
	(1)	(2)	(3)
job quality	0.033*		
	(0.019)		
job satisfaction		0.090***	
		(0.004)	
satisfied (share)			0.068***
			(0.007)
labour prod. (t_0)	−0.285***	−0.291***	−0.289***
	(0.041)	(0.045)	(0.048)
age	0.012	0.013	0.013
	(0.012)	(0.009)	(0.010)
education	0.061***	0.053**	0.059**
	(0.019)	(0.026)	(0.028)
large firms	−0.022	−0.015	−0.017
	(0.016)	(0.014)	(0.014)
empl. share	−0.043**	−0.044***	−0.044***
	(0.017)	(0.016)	(0.017)
Δ empl. share	−0.040***	−0.038***	−0.038***
	(0.005)	(0.005)	(0.004)
Δ invest. p.w.	0.146***	0.146***	0.146***
	(0.019)	(0.022)	(0.023)
wage	0.032**	0.022***	0.026***
	(0.015)	(0.008)	(0.009)
sector: construction	0.081***	0.073***	0.069***
	(0.008)	(0.003)	(0.003)
sector: services	0.118	0.107	0.113
	(0.098)	(0.100)	(0.099)
Country dummies	*Yes*	*Yes*	*Yes*
Year dummy	*Yes*	*Yes*	*Yes*
Constant	*Yes*	*Yes*	*Yes*
Observations	2,104	2,127	2,127
R^2	0.186	0.190	0.187
Adjusted R^2	0.170	0.174	0.172

Note: *p<0.1; **p<0.05; ***p<0.01. Robust standard errors clustered by year. Standard errors are reported in brackets. Variables have been standardized for comparability of the coefficients.

Table 15: Regression of labour productivity on job quality and job satisfaction using standardized variables (average yearly growth).

| | *Dependent variable:* | | |
| | Labour productivity growth | | |
	(1)	(2)	(3)
job quality	0.036**		
	(0.014)		
job satisfaction		0.099***	
		(0.011)	
satisfied (share)			0.062***
			(0.010)
labour prod. (t_0)	−0.291***	−0.292***	−0.288***
	(0.063)	(0.065)	(0.067)
age	0.009	0.012	0.012
	(0.017)	(0.016)	(0.017)
education	0.069***	0.057***	0.065***
	(0.004)	(0.014)	(0.013)
large firms	−0.002	0.004	0.002
	(0.009)	(0.009)	(0.009)
empl. share	−0.051**	−0.052**	−0.052**
	(0.023)	(0.021)	(0.022)
Δ empl. share	−0.034***	−0.031***	−0.032***
	(0.001)	(0.000)	(0.001)
Δ invest. p.w.	0.098***	0.101***	0.100***
	(0.010)	(0.009)	(0.009)
wage	0.054*	0.043*	0.049*
	(0.030)	(0.023)	(0.025)
sector: construction	0.070***	0.062***	0.058***
	(0.025)	(0.017)	(0.018)
sector: services	0.118	0.107	0.115
	(0.084)	(0.082)	(0.083)
Country dummies	*Yes*	*Yes*	*Yes*
Year dummy	*Yes*	*Yes*	*Yes*
Constant	*Yes*	*Yes*	*Yes*
Observations	2,035	2,056	2,056
R^2	0.154	0.161	0.155
Adjusted R^2	0.137	0.144	0.139

Note: *p<0.1; **p<0.05; ***p<0.01. Robust standard errors clustered by year. Standard errors are reported in brackets. Variables have been standardized for comparability of the coefficients.

D   Country and country codes

CODE	COUNTRY
AT	Austria
BE	Belgium
BG	Bulgaria
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
EL	Greece
ES	Spain
FI	Finland
FR	France
HR	Croatia
HU	Hungary
IE	Ireland
IT	Italy
LT	Lithuania
LU	Luxembourg
LV	Latvia
MK	FYROM-Macedonia
MT	Malta
NL	Netherlands
NO	Norway
PL	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovakia
UK	United Kingdom