



6th

European
Working
Conditions
Survey

When citing this report, please use the following wording:

Eurofound (2016), *Sixth European Working Conditions Survey – Overview report*, Publications Office of the European Union, Luxembourg.

Authors: Agnès Parent-Thirion, Isabella Biletta, Jorge Cabrita, Oscar Vargas, Greet Vermeylen, Aleksandra Wilczynska and Mathijn Wilkens

Project team: Agnès Parent-Thirion, Gijs Van Houten, Greet Vermeylen, Mathijn Wilkens, Sophia MacGoris, David Foden, Jorge Cabrita, Victoria Rahm.

The project was supported by a supervisory board consisting of Juan Menéndez-Valdés, Erika Mezger, Barbara Gerstenberger, David Foden and Agnès Parent-Thirion.

Research project: Sixth European Working Conditions Survey

The authors wish to thank Francis Green and Serge Volkoff for their advice in the drafting of this report.

Luxembourg: Publications Office of the European Union

Print	ISBN 978-92-897-1549-2	doi: 10.2806/436750	TJ-01-16-706-EN-C
PDF	ISBN 978-92-897-1548-5	doi: 10.2806/518312	TJ-01-16-706-EN-N

The European Foundation for the Improvement of Living and Working Conditions (Eurofound) is a tripartite European Union Agency, whose role is to provide knowledge in the area of social and work-related policies. Eurofound was established in 1975 by Council Regulation (EEC) No. 1365/75 to contribute to the planning and design of better living and working conditions in Europe.

© European Foundation for the Improvement of Living and Working Conditions, 2016

For rights of translation or reproduction, applications should be made to the Director, European Foundation for the Improvement of Living and Working Conditions, Wyattville Road, Loughlinstown, D18 KP65, Ireland.

European Foundation for the Improvement of Living and Working Conditions

Telephone: (+353 1) 204 31 00
Email: information@eurofound.europa.eu
Web: www.eurofound.europa.eu

Europe Direct is a service to help you find answers to your questions about the European Union.

Freephone number*: 00 800 6 7 8 9 10 11

*Certain mobile telephone operators do not allow access to 00 800 numbers or these calls may be billed.

Printed in Luxembourg

Cover Image: Shutterstock

Abbreviations used in the report

EU-OSHA	European Agency for Safety and Health at Work
EWCS	European Working Conditions Survey
GDP	gross domestic product
ICT	information and communication technologies
ISCED	International Standard Classification of Education
ISCO	International Standard Classification of Occupations
EU-LFS	European Union Labour Force Survey
NACE	Nomenclature statistique des activités économiques dans la Communauté européenne (Statistical classification of economic activities in the European Community)
ILO	International Labour Organization
OECD	Organisation for Economic Co-operation and Development
WHO	World Health Organization

Country codes

EU28

AT	Austria	FI	Finland	NL	Netherlands
BE	Belgium	FR	France	PL	Poland
BG	Bulgaria	HR	Croatia	PT	Portugal
CY	Cyprus	HU	Hungary	RO	Romania
CZ	Czech Republic	IE	Ireland	SE	Sweden
DE	Germany	IT	Italy	SI	Slovenia
DK	Denmark	LT	Lithuania	SK	Slovakia
EE	Estonia	LU	Luxembourg	UK	United Kingdom
EL	Greece	LV	Latvia		
ES	Spain	MT	Malta		

Candidate countries

AL	Albania	ME	Montenegro	TR	Turkey
MK	Macedonia (former Yugoslav Republic of) ¹	RS	Serbia		

EFTA (European Free Trade Association) countries

NO	Norway
CH	Switzerland

¹ Corresponds to ISO code 3166. This is a provisional code that does not prejudice in any way the definitive nomenclature for this country, which will be agreed following the conclusion of negotiations currently taking place under the auspices of the United Nations. For convenience, the former Yugoslav Republic of Macedonia is abbreviated as FYROM in this report.

Sectors of economic activity used in the sixth EWCS

Sectoral analysis of sixth EWCS data was carried out based on the NACE Rev. 2 classification. In this report, the 21 NACE sectors have been condensed into 10 categories.

Sector	Corresponding NACE Rev. 2 sectors
Agriculture	A Agriculture, forestry and fishing 01–03
Industry	B Mining and quarrying 05–09 C Manufacturing 10–33 D Electricity, gas, steam and air conditioning supply 35 E Water supply; sewerage, waste management and remediation activities 36–39
Construction	F Construction 41–43
Commerce and hospitality	G Wholesale and retail trade; repair of motor vehicles and motorcycles 45–47 I Accommodation and food service activities 55–56
Transport	H Transportation and storage 49–53
Financial services	K Financial and insurance activities 64–66 L Real estate activities 68
Public administration	O Public administration and defence; compulsory social security 84
Education	P Education 85
Health	Q Human health and social work activities 86–88
Other services	J Information and communication 58–63 M Professional, scientific and technical activities 69–75 N Administrative and support service activities 77–82 R Arts, entertainment and recreation 90–93 S Other service activities 94–96 T Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use 97–98 U Activities of extraterritorial organisations and bodies 99

Occupational groups cited in the report

The occupational groups mentioned in the report are based on the ISCO-08 categories; shortened forms of these categories have been used throughout the report. The ISCO group ‘armed forces occupations’ has been excluded when breaking down by ISCO group because of insufficient observations. The respondents in this group have been included when presenting a total for all occupations.

Occupational group	Corresponding ISCO-08 group
Managers	1. Managers
Professionals	2. Professionals
Technicians	3. Technicians and associate professionals
Clerks	4. Clerical support workers
Service and sales workers	5. Services and sales workers
Agricultural workers	6. Skilled agricultural, forestry and fishery workers
Craft workers	7. Craft and related trades workers
Plant and machine operators	8. Plant and machine operators and assemblers
Elementary occupations	9. Elementary occupations

In this report, the most recent classification systems for NACE (Rev. 2) and ISCO (08) are used whenever results are presented for 2010 and 2015. Because the new classifications are not available for the previous waves of the survey, the earlier versions of the classifications (NACE Rev. 1 and ISCO-88) are used when trends are shown.

Note on numerical data

Numerical data in this report are rounded to zero decimals and therefore percentages might not add up to 100%.

Contents

Executive summary	8
Introduction	12
1 Portrait of the workforce in Europe	18
1.1 Employment situation	18
1.2 Occupations and sectors	19
1.3 Employment status	19
1.4 Self-employment	21
1.5 Workplace and company size	25
1.6 Company ownership	26
1.7 Gender segregation	26
1.8 Multiple job-holders	27
1.9 Workers of foreign origin or background	27
1.10 Educational level	28
1.11 Seniority	29
1.12 Health status	29
1.13 Household characteristics	30
SUMMARY - PORTRAIT OF THE WORKFORCE IN EUROPE	33
2 The multiple dimensions of job quality	36
2.1 Job quality indices – Overview	37
2.2 Improving the physical environment	42
SUMMARY - PHYSICAL ENVIRONMENT	46
2.3 Addressing work demands	47
SUMMARY - WORK INTENSITY	51
2.4 Developing working time quality	52
SUMMARY - WORKING TIME QUALITY	62
2.5 Building a supportive social environment	64
SUMMARY - SOCIAL ENVIRONMENT	78
2.6 Favours skills use and discretion	79
SUMMARY - SKILLS AND DISCRETION	90
2.7 Guaranteeing prospects	91
SUMMARY - PROSPECTS	97
2.8 Ensuring fair pay	98
SUMMARY - ENSURING FAIR PAY	99

3	Perspectives on working life in Europe	102
3.1	Career and employment security	102
3.2	Developing skills and competences	107
3.3	Maintaining and promoting health and well-being	109
3.4	Reconciling working and non-working life	114
3.5	Work sustainability	120
	SUMMARY - PERSPECTIVES ON WORKING LIFE	124
4	Profiles of job quality	128
4.1	Five distinct profiles of job quality	128
4.2	Distribution of workers in job quality profiles	130
4.3	Job quality profiles and quality of working life	132
	SUMMARY - JOB QUALITY PROFILES	134
5	Conclusions	138
	Bibliography	143
	Annexes	148
	Annex 1: Survey methodology	148
	Annex 2: Coordination team and national partners	155
	Annex 3: Expert questionnaire development group	156
	Annex 4: Job quality clusters	159

Executive summary

Introduction

Since 1991, Eurofound has been monitoring working conditions in Europe through its European Working Conditions Survey (EWCS). The survey aims to measure working conditions across European countries, analyse the relationships between different aspects of these, identify groups at risk, highlight issues of concern and areas of progress and, ultimately, contribute to developing EU policy aimed at improving job quality.

In 2015, the sixth EWCS interviewed almost 44,000 workers (both employees and self-employed people) in 35 European countries: the 28 EU Member States, the five EU candidate countries, and Norway and Switzerland. Workers were asked a range of questions concerning employment status, work organisation, learning and training, working time duration and organisation, physical and psychosocial risk factors, health and safety, work-life balance, worker participation, earnings and financial security, as well as work and health.

Key findings

Overall, structural inequalities and differences in terms of gender, employment status and occupation are still significant. The research constructed seven job quality indices, representing different dimensions of job quality: *Physical environment*, *Work intensity*, *Working time quality*, *Social environment*, *Skills and discretion*, and *Prospects and Earnings*. These dimensions were selected on the basis of their proven impact (positive or negative) on the health and well-being of workers. In the last 10 years, there has been limited progress in some job quality indices.

Job quality indices

Physical environment

The Physical environment index assesses physical risks in the workplace.

- The exposure of men and women to physical risks differs markedly, pointing to sectoral and occupational segregation in the workplace.
- Over the last decade, there has been an uneven improvement: exposure to noise, for example, has decreased in the EU28 significantly while exposure to chemical and infectious products has increased.

Work intensity

This index measures the level of work demands in the job: for instance, working at high speed and under time pressure, and experiencing emotional demands, such as dealing with angry clients.

- One-third of workers in the EU work to tight deadlines and at high speed.
- Workers in the health sector are exposed to the greatest levels of work intensity.

Working time quality

This index measures the incidence of long working hours, scope to take a break, atypical working time, working time arrangements and flexibility. Overall, the working time quality index has improved in the EU28 since 2005.

- 43% of workers have very regular working schedules.
- One worker in five (22%) works in their free time to meet work demands several times a month.

Social environment

This index measures the extent to which workers experience supportive social relationships as well as adverse social behaviour, such as bullying and harassment.

- The social climate in work is generally positive, 89% of workers stating they enjoy good cooperation with their colleagues.
- Around 16% of workers – more women than men – report exposure to adverse social behaviour.

Skills and discretion

This index measures learning and training opportunities in the job.

- There has been a narrowing of the skills gender gap, with women catching up and younger age groups closing the gap with older groups.
- 30% of workers in elementary occupations are directly involved in decisions that affect their work; for managers the figure is almost 80%.

Prospects

This index combines a number of indicators, including prospects for career advancement and the likelihood of losing one's job.

- Part-time workers score less than full-time workers (58 points compared to 65).
- Job insecurity remains at the same level as in 2010: 16% of workers feel they could lose their job in the next six months.

Earnings

This index measures the monthly income of workers.

- Most workers are concentrated at the lower end of the income distribution, with very few at the upper end.

- The income of men is substantially higher than that of women, partly due to differences in working hours.

Profiles of job quality

Jobs that scored similarly in terms of the different dimensions of job quality were grouped together in five ‘job quality profiles’.

High flying

This profile scores highest in *Skills and discretion*, *Earnings* and *Prospects*. The downside of these well-earning, high-skilled jobs is greater *Work intensity* and lower *Working time quality*.

Smooth running

Jobs in this profile score low (hence favourably) in *Work intensity* and high in *Working time quality*. This profile has the strongest positive associations with most measures of well-being, with health problems being least prevalent.

Active manual

Jobs in this profile have poor scores for *Physical environment* and *Working time quality*. However, scores on the *Social environment* index are high. Jobs in this profile are characterised by a working environment with more physical risks – of all types.

Under pressure

This profile has the lowest score for *Social environment* and for *Work intensity*. However, it ranks second in *Earnings* and in *Skills and discretion* (behind the ‘high flying’ profile). The prevalence of health problems and absence is highest and work–life balance is very difficult to achieve.

Poor quality

This profile scores negatively on all job quality indices, with the lowest scores for *Skills and discretion*, *Earnings* and *Prospects*. However, it scores better than the ‘under pressure’ profile on the *Work intensity* and *Working time quality* indices.

(including against psychosocial risks), improving work–life balance, supporting career development, promoting skills use and development, managing workload and designing meaningful jobs.

Policy pointers

Looking at the findings through the lens of the job quality profiles, jobs in the ‘poor quality’ profile would benefit most from actions to support the various dimensions of job quality and labour market policies focused on moving workers into better-quality roles.

For ‘under pressure’ jobs, the focus should be on improving management quality, ensuring social support in the workplace, facilitating training and providing strategies for coping with emotional demands such as those arising from dealing with angry customers.

The level of physical demands at work in ‘active manual’ jobs calls for greater attention to workplace risks and health aspects. Better working time management and workload organisation could also improve job quality.

Actions to improve job quality in ‘high flying’ jobs should address working time organisation and work intensity. Introducing a shift in values to tackle the culture of working long hours could be one important improvement.

While ‘smooth running’ jobs score highly on most indices, workers earn less than in other jobs, and express a preference for working more hours. Addressing this (bearing in mind the relationship between earnings and working hours) would improve the quality of these jobs.

More generally, job quality can be supported by a wide-ranging set of policies and actions aimed at addressing the issues raised in the survey’s analysis of job quality indices and profiles and that support workers throughout their working lives. In addition to policy initiatives at EU level, by national authorities and social partners, progress can also be achieved through workplace practices and policies at company level.

Perspectives on working life in Europe

Going beyond the objective measures of job quality, the report also looks at workers’ own assessment of their working lives. It finds associations between the different dimensions of job quality and factors such as engagement, financial security, the development of skills and competences, health and well-being, the reconciliation of work and private life, and the sustainability of work. The findings underline the importance of company and workplace practices in safeguarding health and safety

Introduction

‘Making sure Europeans can fully participate in society and equipping them for modern working life is a key social concern, but it is also crucial for our productivity and ability to compete globally.’

Mission letter from Commission President Jean-Claude Juncker to Marianne Thyssen, Commissioner for Employment, Social Affairs, Skills and Labour Mobility, 1 November 2014

Policy context

Working conditions and job quality are high on the European policy agenda. Indeed, the Treaty on the Functioning of the European Union (TFEU) underlines as significant objectives the ‘promotion of employment, improved living and working conditions ... proper social protection, dialogue between management and labour, the development of human resources with a view to lasting employment and the combating of exclusion’ (Article 151 TFEU).

In the main slogan of the Europe 2020 strategy – ‘smart, sustainable and inclusive growth’ – the ideas of working conditions and job quality are implicit rather than explicit; however, ‘improving the quality of work and working conditions’ is a pivotal objective of the European Commission’s 2010 ‘Agenda for new skills and jobs’ initiative:

High quality of work goes hand in hand with high employment participation. This is because the working environment plays a crucial role in enhancing the potential of the workforce and is a leading competitiveness factor. In order to innovate and to deliver promptly and efficiently, EU companies depend for their survival and expansion on a committed workforce, thriving in a high-quality working environment, with safe and healthy working conditions.

Improving working conditions and job quality continues to be a significant goal in European policies, underpinning Europe’s capacity to compete. It is a cross-cutting issue that both influences and is influenced by many other European policies. For example, the Commission’s recent industrial renaissance and enterprise policies have implications for working conditions and job quality. And conversely, the improvement of working conditions is important for the implementation of other European policies – for example, innovation and gender equality.

The improvement of working conditions takes place in a context of subsidiarity. Governments and social partners, companies and workers all have a role to play. Yet experience has shown that the EU is also a key player and has contributed to improving working conditions through its various measures with regard to the improvement of health and safety at work and gender

equality, and its wider coordination of employment policies.

Current European policy concerns include work–life balance (in particular for working parents), fighting undeclared and fraudulent work, extending working life, addressing the challenge of segmented labour markets and ensuring a proper balance between flexibility and security, investing in human capital, preparing individuals for potential risks over their life course, and addressing the significant inequalities that people face in the labour market (European Commission, 2014a).

The current policy debates on new forms of employment (Eurofound, 2015b) and undeclared and fraudulent work (Eurofound, forthcoming) highlight the importance of monitoring working conditions and of providing data and analysis that can both enhance understanding of the common challenges faced by Europe and the Member States and support policymaking in these areas.

European Working Conditions Survey series

Since 1991, Eurofound has been monitoring progress on the improvement of working conditions in Europe through its European Working Conditions Survey (EWCS). The survey’s main objectives are to:

- measure working conditions across European countries on a harmonised basis;
- analyse relationships between different aspects of working conditions;
- identify groups at risk and issues of concern, as well as areas of progress;
- monitor trends over time;
- contribute to European policy development – in particular, on quality of work and employment issues.

A quarter of a century after the first survey, the EWCS is the authoritative source of cross-national data on working conditions in Europe and has been used to measure working conditions in countries outside Europe as well. The sixth wave was carried out in 2015 and covers 35 European countries: the 28 EU Member States plus the candidate countries for EU membership – Albania, the former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey (all supported by the EU Instrument for Pre-accession Assistance (IPA)) – as well as Norway and Switzerland. The sample size ranges from 1,000 to 3,300 people per country, with three Member States (Belgium, Slovenia and Spain) having subsidised a bigger sample size in their countries. In total, 43,850 employees and self-employed workers were interviewed between

February and September 2015 (see Annex 1: Survey methodology).

The survey questionnaire covers a wide-ranging set of topics: worker characteristics (including household situation), job design, employment conditions, working time, exposure to physical risks, work organisation, skills use and autonomy, work–life balance, worker participation and representation, the social environment at work, and health and well-being. For each wave of the survey, the questionnaire has been thoroughly reviewed by a group composed of users, experts of national working conditions surveys and representatives of the research community, along with representatives of Eurofound's Governing Board, the European Commission and international organisations (see Annex 3: Expert questionnaire development group).

The questionnaire has been reviewed at each survey wave in order to take into account issues prominent in policy debate and emerging concerns. This review also enables the EWCS team to build on the lessons learned from the previous waves. Many questions have been retained in their original form so that a picture of trends over time can be drawn.

Furthermore, a number of countries outside Europe (the US, South Korea and to a lesser extent some Latin American countries and China) have developed or are developing surveys using the framework of the EWCS. Cooperation with the International Labour Organisation will continue in this field. In 2017, the first comparative analysis building on results from these surveys will be carried out.

Structural drivers of change

Numerous changes – demographic, structural and technological – are affecting the composition of the workforce, employment levels, job content and how workers experience their working lives. These developments challenge the role that work plays in our societies, with working life actors responding in different ways, and have a knock-on effect on working conditions and job quality.

Demographic change

The ageing of the European working population calls for policy attention to two issues: ensuring that demanding working conditions can be undertaken by an older workforce and ensuring that working conditions are sustainable over the life course to allow people to remain in work longer (Eurofound, 2015d).

Related to this is the position of women in the workforce. While more women have entered the labour market in recent years, it appears that gender inequalities are still prevalent despite a strong commitment to gender equality, advances in the education of women – now accounting for the majority of graduates in Europe – and progress in closing the gender employment gap (European Commission, 2014a). Women are still the main

providers of care in the domestic sphere. Gender-mixed occupations are the exception more than the rule. There are many inequalities between men and women at work and these take many forms: the gender pay gap, the overrepresentation of women in part-time work, the glass ceiling, gender discrimination, and subtle differences in working conditions and their associated costs in terms of access to training and career progression (Eurofound 2013b).

The demographic challenge has drawn attention to the need for a life-course perspective on working conditions. The ability of individuals to reconcile, grow in and meet the expectations of different roles – such as worker, carer or volunteer – is a challenge that needs to be made more visible and supported by policies and practices. This is critical if Europe is to increase the participation of people in longer careers and improve gender equality at work and in life between men and women. The provision of care infrastructure, leave arrangements and other supports, and a job quality that helps people to navigate between changing needs over the life course, are all fundamental to addressing this challenge.

The European workforce is better qualified than ever before. A good skills match, designing jobs that make full use of workers' skills, lifelong learning and promoting learning organisations that support the development of competence (and prevention of skills obsolescence) are all related to job quality and working conditions. There are also challenges around the more knowledge-based content of work: in effect, it is harder to know when work has finished. In addition, new risks in working conditions need to be considered. At the other end of the spectrum, the low-skilled remain an important policy concern, particularly as inequalities are increasing and unemployment remains high.

Structural change

The economic and financial crisis that Europe and its workforce have grappled with since 2008 can be viewed as a wake-up call regarding the long-term structural challenges facing the Union. It is also, perhaps, a timely reminder of the contribution that working conditions and job quality make to the economy.

Through a long-term process of structural change, employment in agriculture and industry has decreased while employment in services has increased. Work in the service sector has become more industrialised while at the same time work in manufacturing is more customer-driven. Restructuring of companies and jobs can have an impact on the activities of companies and can at times drastically change the conditions under which work is performed. When decisions are taken in decision centres, away from and not including the local workplaces, the role of the local management is challenged. Furthermore, the implementation of decisions can lead to difficulties in understanding and achieving the organisation's objectives.

The boundaries of companies are blurring, and their perimeters seem to be constantly expanding and contracting. These changes have brought about what one expert calls ‘external competition inside companies’ (Cohen, 2012). Companies have at their disposal a wide range of options; they can choose from a multitude of commercial and labour contracts to organise their production, resulting in the coexistence at workplace level of workers hired under different labour and commercial arrangements.

The combination of unclear boundaries in companies and increased demographic diversity of the workforce highlights the critical importance of aspects such as fairness, trust, social climate, mentoring and collaboration in workplaces.

Technological change

Technological change affects working conditions in many ways: the type of jobs, skill needs, use and developments, task content and processes used to manage work. While the use of information and communication technologies (ICT) has led to huge gains in flexibility and agility and provided opportunities for greater autonomy, it has also increased work demands. Badly used, it can lead to unclear boundaries between work and non-work life, the depersonalisation of relationships at work and a lack of clarity in job roles. The use of ICT is radically changing the collective experience of work – from a group of people who interact physically to a dispersed community of contacts, whose interaction may be more ad hoc.

Recent progress in machine intelligence and the ‘rise of the robots’ has provoked both fears and hopes: fears that numerous jobs including knowledge ones will disappear and that the new jobs will give fewer opportunities to engage in meaningful activities; hopes that dirty, dangerous and monotonous work will be left to machines, allowing jobs necessitating human qualities to flourish and develop.

The digital economy is changing the contours of work, bringing activities that were previously unpaid or informal into the formal paid economy and enabling the outsourcing to clients of activities that were previously part of formal paid work.

Some commentators consider this trend to be extremely challenging, jeopardising the relevance and durability of the social model of paid employment and the very concept of a job. Others view it as a way to unleash creativity and individual initiative, free from the shackles of the traditional employment model.

Evolution of work

Work is a cornerstone in the cohesion of societies and plays a fundamental role in their capacity to integrate and grow. Hand in hand with family and care, other key aspects of people’s lives, work is a core around which other activities are organised. It is a determinant in creating collective time norms at societal level and frames time use at individual

level. Work has a huge influence on the design of welfare systems.

The changes in the world of work – in particular, questions around digitalisation – pose a challenge to the meaning of work. The purposes of work have been seen as threefold: first, work is a production factor – what matter most are the goods and services produced by work and their value; second, work is an instrument through which individuals grow, develop and become themselves – in this case, the conditions of work are crucial for achieving self-fulfilment; third, work is a system for redistributing income, rights and protection. The current changes in the economy and workforce are challenging the status quo on these three dimensions: digitalisation is redefining the products and services that are being produced; it is also reshaping the ways in which they are produced – offering new opportunities for individuals but perhaps circumscribing others; and new forms of employment are testing the systems of income distribution, rights and labour regulations.

Inequalities in working conditions

Analysis of the EWCS series highlights the diversity, richness and complexity of working life in Europe. It points to the existence of multiple and contradictory paths of change among the workforce. There are substantial variations across Member States in terms of job quality and working conditions, and it is clear that Member States are not converging upward on all dimensions of job quality over time (Eurofound, 2015a).

Tensions between security and flexibility, commitment and mobility, upskilling and knowledge transfer, cooperation and individualisation are addressed in different ways. The transformation of work has resulted in increasing and multiple sources of inequalities in working conditions. In some cases, unfavourable working conditions cluster and affect specific groups disproportionately. Yet many win-win arrangements have proved both possible and practicable.

Content of the report

Chapter 1 describes the main characteristics of the workforce in the 35 countries covered by the sixth EWCS. Apart from traditional aspects, such as employment levels broken down by occupation, sector or employment status, it also looks at indicators such as sex, age, educational attainment, country of origin, seniority, health status and household circumstances.

Chapter 2 focuses on developments in job quality in Europe. Its point of departure is the work Eurofound carried out in 2012, based on the fifth EWCS, in which indices were constructed to measure different aspects of job quality (Eurofound, 2012b). The current analysis is based on the following seven indices: physical environment; work intensity; working time quality; social environment; skills and discretion; prospects; and earnings. The indices cover extrinsic and intrinsic job features captured from

an objective perspective. They are based on positive and negative self-reported features of the job, which measure the concrete experiences of work and have been proven to have a causal effect – either positive or negative – on the health and well-being of workers. The analysis of each index's components is supplemented by other features of the job or the working environment, such as dealing with customers or place of work. Other organisational resources provided through employee representation at the workplace are also considered.

Chapter 3 examines work from the perspective of the individual job-holder: how their skills match their job, what their level of engagement is with their job, whether it provides them with financial security, what their work–life balance and time preferences are like, and how they juggle their different roles as worker, family member and citizen. Finally, issues around health and well-being, as well as workers' views on the sustainability of work, are explored.

Chapter 4 clusters workers into five groups based on jobs that share similar scores on the job quality indices: 'high flying', 'smooth running', 'active manual', 'under pressure' and 'poor quality' jobs. The characteristics of the workers

belonging to each group are analysed, as well as the association between clusters and work–life balance, skills match, worker engagement and financial security.

Finally, Chapter 5 summarises the findings and presents conclusions.

Technical information

This report covers the 28 EU Member States (EU28), the five candidate countries for EU membership – Albania, the former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey – as well as Norway and Switzerland. Sections on trends over time cover the EU28 in 2010 and 2015 and the EU27 in 2005. The different versions of the questionnaire are available on the Eurofound website.² In the current report, occupation is defined using the International Standard Classification of Occupations 2008 (ISCO-08), sector is defined using the Statistical Classification of Economic Activities in the European Community (NACE) Rev. 2, and educational attainment is defined using the International Standard Classification of Education (ISCED) 2011.

² Available at <http://www.eurofound.europa.eu/european-working-conditions-surveys-ewcs>

1 | Portrait of the workforce in Europe

This chapter sets out to describe the main characteristics of the workforce in the 35 countries covered by the sixth EWCS: the EU28 Member States, the five candidate countries for EU membership – Albania, the former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey – and Norway and Switzerland. It refers, whenever possible, to the period between 2005 and 2015.

Apart from standard features such as employment levels according to occupation, sector or type of employment status, this chapter will also address a number of additional elements based on individual sociodemographic traits (such as sex, age, level of education, national origin, seniority and health status), which will help to provide a comprehensive portrait of the workforce as captured by the EWCS in the year it was carried out – 2015.

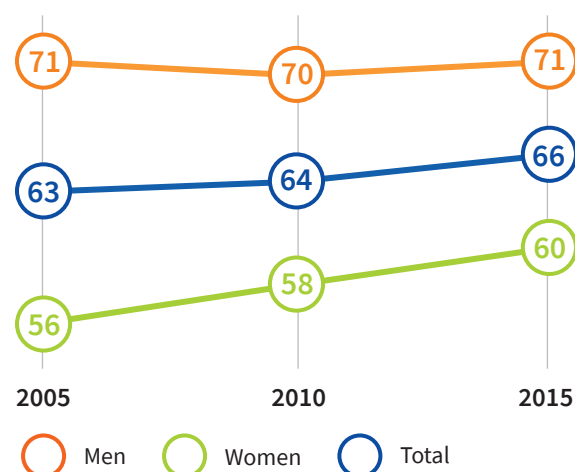
1.1 Employment situation

In 2015, the employed population in the 35 countries covered by the sixth EWCS stood at 259 million – this compares to about 150 million employed people (over 15 years of age) in the US at the end of 2015, and to 221 million employed people in the EU28, according to Eurostat's Labour Force Survey (EU-LFS, 2015).³

By comparison, total employment in the EU28 was around 216 million in 2010 (the time of the fifth EWCS) and 212 million in 2005 (the fourth EWCS).

The employment rate among people aged 15–64 in the EU28 also increased in this 10-year period – from 63% to 66%. As shown in Figure 1, the growth is mostly the result of the increased participation of women in the labour market, which rose from 56% in 2005 to 60% in 2015. Despite the reduction in the gender employment gap, the female employment rate is still 11 percentage points lower than that of men.

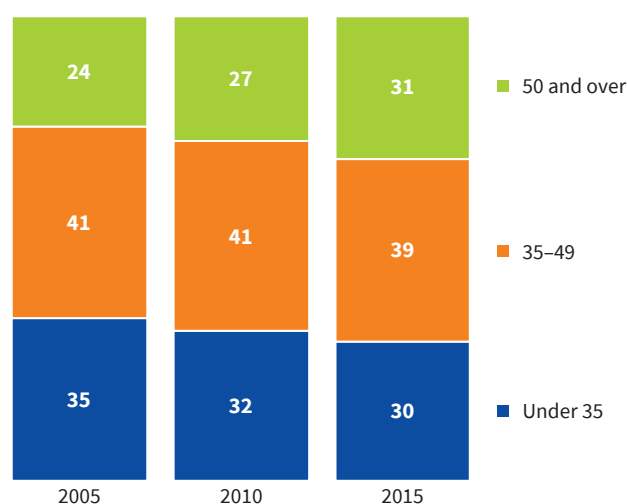
Figure 1: Employment rates in the EU28, by sex (%)



Source: EU-LFS 2005–2015; individuals aged 15 years or over.

The ageing of Europe's population can be seen in the changes in the size of each age group (Figure 2). The proportion of workers aged 50 or over in total employment has markedly increased, from 24% in 2005 to 31% in 2015. At the same time, there has been a continuous drop in the proportion of younger workers (aged under 35) – from 35% in 2005, to 32% in 2010 and 30% in 2015. For the first time in many years, the proportion of workers aged 50 or over (31%) has surpassed that of the younger cohort (30%), albeit marginally.

Figure 2: Workforce age structure in the EU28 (%)

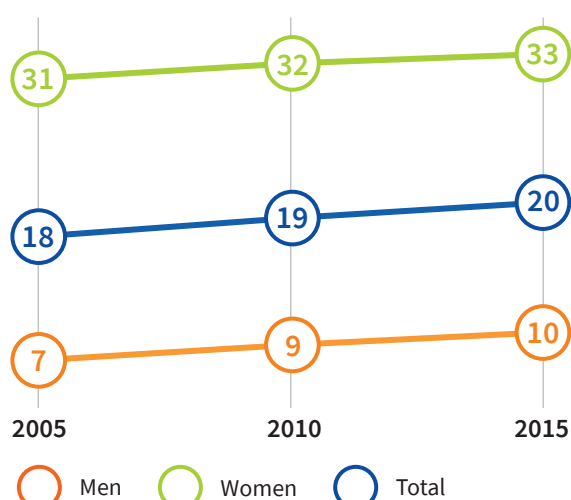


Source: EU-LFS 2005–2015.

³ For Albania, Montenegro, Serbia and Turkey, the source is the ILO database ILOSTAT (2014 data).

One important feature of employment in the EU is the proportion of part-time workers in total employment. This has been steadily growing, from 18% in 2005 to 20% in 2015 (Figure 3). This trend is observed both among men (from 7% to 10%) and women (from 31% to 33%). The proportion of women working part time continues to be much larger – three times that of men.

Figure 3: Part-time employment as a proportion of total employment in the EU28, by sex (%)



Source: EU-LFS 2005–2015; individuals aged 15 years or over.

1.2 Occupations and sectors

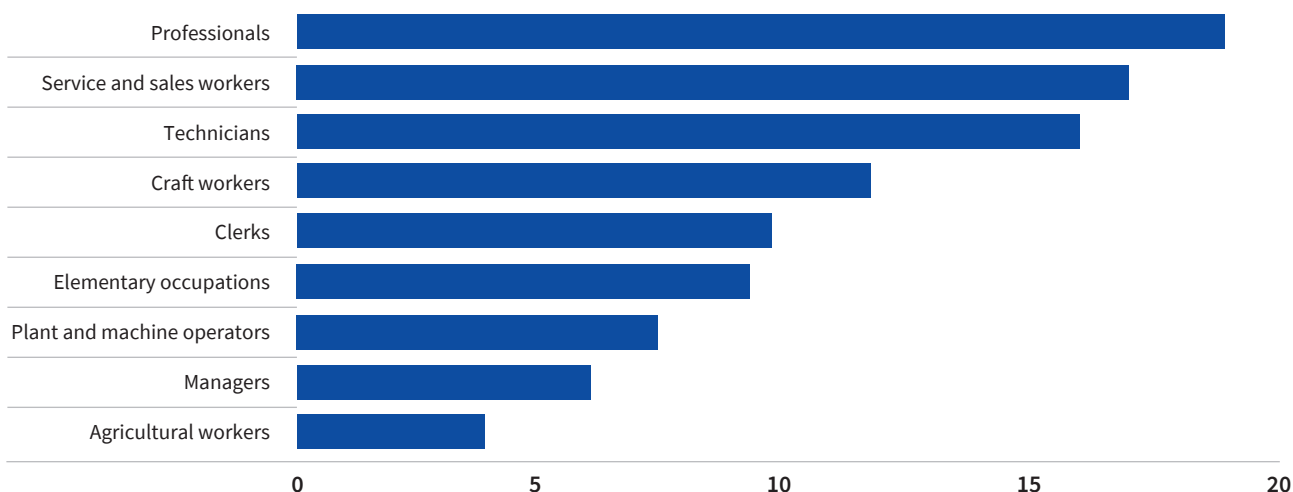
Figure 4 presents the distribution of employment in the EU28 by occupation in 2015. While the structure has remained relatively stable over several years, the 2011 break in the EU-LFS series of data on employment by occupation precludes any discussion of developments over time.

Figure 5 presents the distribution of employment in the EU28 by sector in 2008, 2010 and 2015.⁴ Overall, the three largest economic sectors are commerce and hospitality (19%), other services (18%) and industry (17%). Health, education and public administration constitute 11%, 8% and 7% of total employment, respectively. Transport comprises 5% of total employment, while financial services and agriculture both comprise 4%. In terms of trends over time, the data show that education, health and other services have been growing in relative terms, while industry and construction are in relative decline.

1.3 Employment status

In 2015, 15% of the European workforce are self-employed, 12% are temporary employees and the remainder (73%) are employees with a permanent contract or another arrangement. The EWCS shows that the latter group (with ‘other or no contract’⁶) comprises about 8% of the workforce. Globally, and apart from a small reduction in the proportion of self-employed workers, the picture has not changed markedly since 2000 (Figure 6).

Figure 4: Employment by occupation in the EU28, 2015 (%)

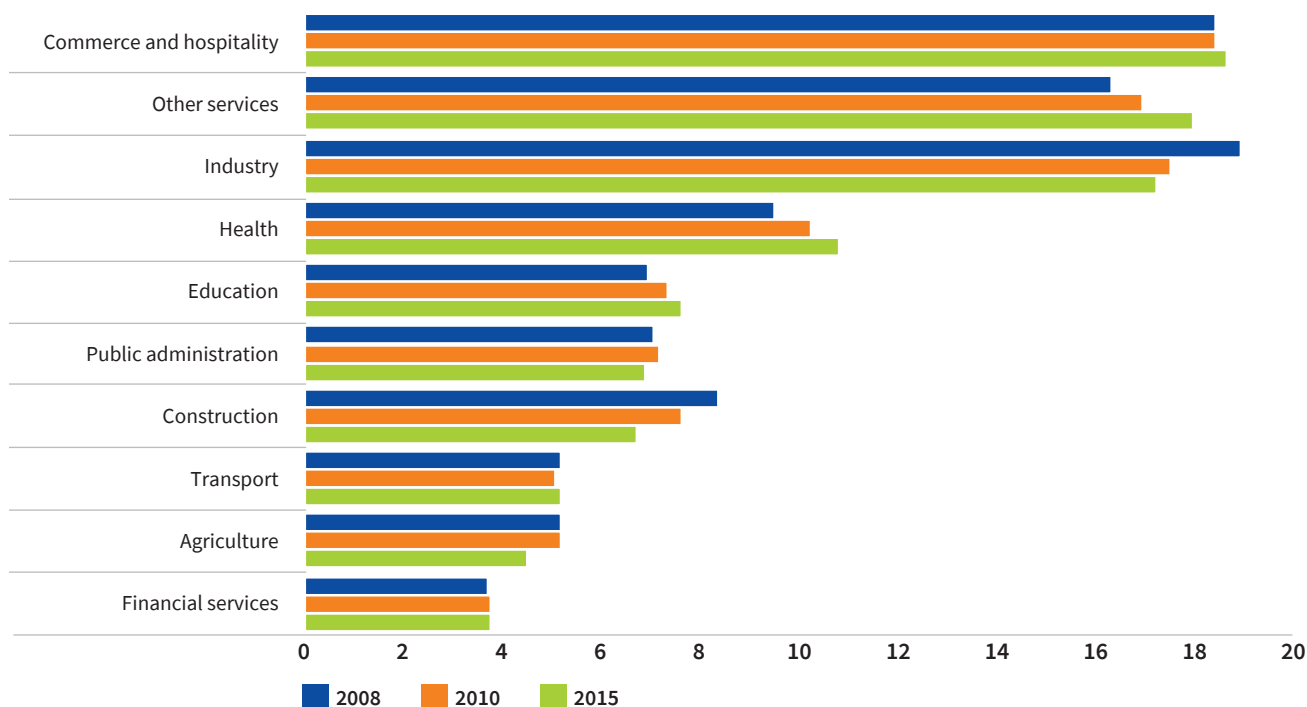


Source: EU-LFS 2015.

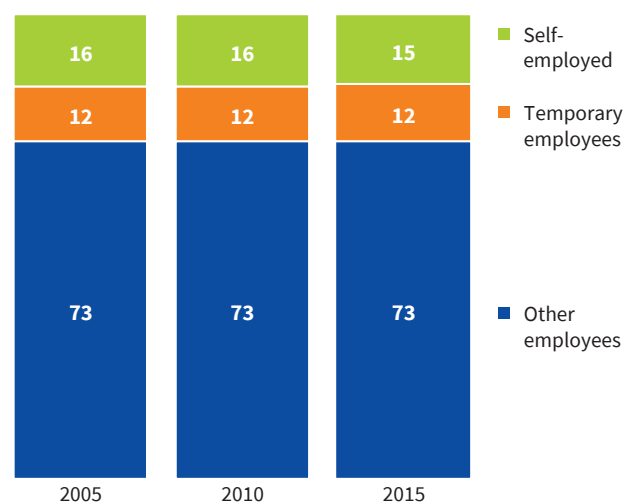
⁴ The EU-LFS implemented the new sectoral classification NACE Rev. 2 in 2008.

⁵ The term ‘workforce’ in the context of the EWCS refers to employees and self-employed workers, excluding unemployed workers.

⁶ ‘Other or no contract’ is a category that covers a wide variety of contractual arrangements.

Figure 5: Employment by sector, EU28, 2008–2015 (%)

Source: EU-LFS 2008–2015.

Figure 6: Employment status based on self-reported status, 2005–2015 (%)

Source: EU-LFS 2005, 2010 and 2015.

Despite the world of work and employment being in a state of transformation, working conditions and working rights are still based on the notion of ‘standard employment relations’, which assumes a long-term, full-time work relationship between a worker and a single employer. The benefits of this type of contract for the worker are summarised in the fifth EWCS overview report:

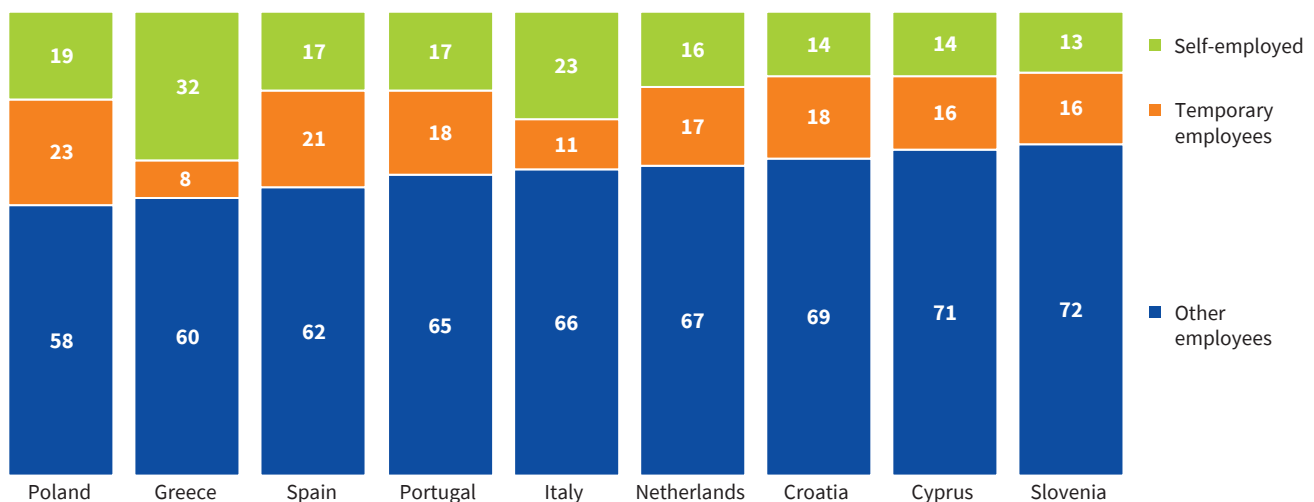
This type of contract in principle gives workers high security in the labour market (because of its open duration), social benefits (social protection, unemployment benefits) and rights (representation rights).

(Eurofound, 2012a)

When the core characteristics of standard employment relations are modified – in such matters as the duration of the contract, working hours, type of employer – there are consequences for the rights and benefits related to these characteristics.

The proportion of temporary employees remains low (12%). The various contractual forms are distributed differently across Member States, with nine Member States having a proportion of self-employed and temporary employees above the average (Figure 7). The EWCS shows (not in the figure) that in Cyprus, more than a third of workers have an ‘other or no contract’. This is one worker in four in Malta and nearly one in five in Greece, Ireland and Poland.

When the types of employment contracts are considered in relation to individual characteristics such as sex, age and educational level, the EWCS shows that different types of segmentation on the labour market are apparent. The proportion of younger workers in temporary contractual arrangements (20%) or in ‘other or no contract’ (13%) is twice that of the other age groups. A gender division is also evident in all age groups, with self-employment almost exclusively the preserve of men, while among female workers there is a higher proportion of indefinite, fixed-term and ‘other or no contract’ situations (with the exception, in the latter category, of the under-35 age bracket).

Figure 7: Employment status in selected Member States (%)

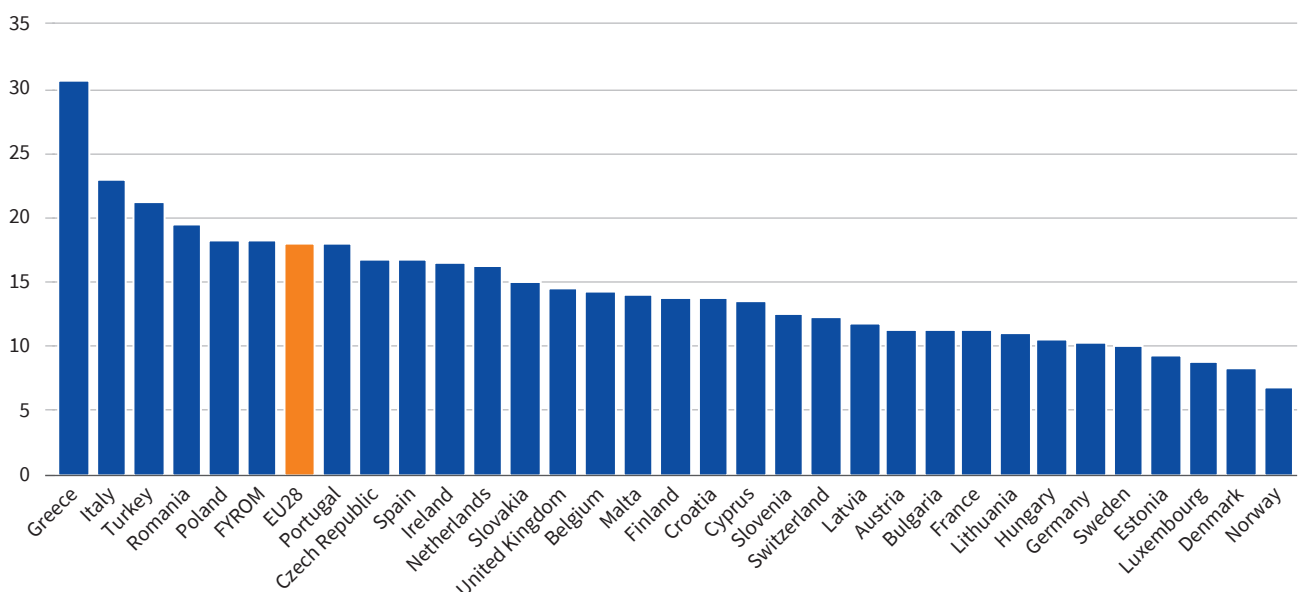
Source: EU-LFS 2015.

Indefinite contracts are predominant among workers with tertiary (72%) and secondary (67%) education levels while only about four in 10 (39%) of those with primary education have this status. Workers with a primary education are more likely to be found among the self-employed without employees (19%) or employees with ‘other or no contract’ (21%) and 16% of this category have a fixed-term contract.

The median duration of non-permanent contracts is one year for fixed-term contracts and six months for ‘other or no contract’, which is in line with the results of previous waves of the EWCS.

1.4 Self-employment

The extent of self-employment as a proportion of total employment of the 28 EU Member States has decreased only slightly since 2005. However, this relative stability masks great variations. First, the proportion varies considerably across countries – between 7% in Norway and 31% in Greece, according to EU-LFS data (Figure 8). Second, changes are not all in one direction. Between 2005 and 2015, the proportion of self-employed workers increased in 12 Member States but decreased in 10.

Figure 8: Self-employment as a proportion of total employment, by country (%)

Source: EU-LFS 2015; no comparable data were available for Albania, Montenegro or Serbia.

Third, it is difficult to get a full picture of the self-employed group, as the individuals themselves are not always clear about their status and its designation.

In the sixth EWCS, a series of questions were included in an effort to obtain a more accurate identification of the worker's status. Respondents were asked to select from a list of possible descriptions (or criteria) which would help classify them as either 'employees' or 'self-employed'. In cases where there was no response to this question, the interviewer would continue with a series of sub-questions – around income and decision-making capacity – to elicit the nature of the respondent's status.

The proportion of workers who say they do not know whether they fall into the category of employee or self-employed remains low (1.3% of respondents). In order to ascertain the status of these workers, the questionnaire asks those who reported that they did not know their status whether they are paid a salary or wage; answering 'Yes' to this places the respondent in the 'employees' group.

For the remaining workers – those who describe themselves as self-employed and those who do not know their status and are not paid a salary or wage – the questionnaire proposes a number of possible descriptions, such as: sole director of own business; partner in a business or professional practice; working for oneself; working as a subcontractor; and doing freelance work (the categories are not mutually exclusive).

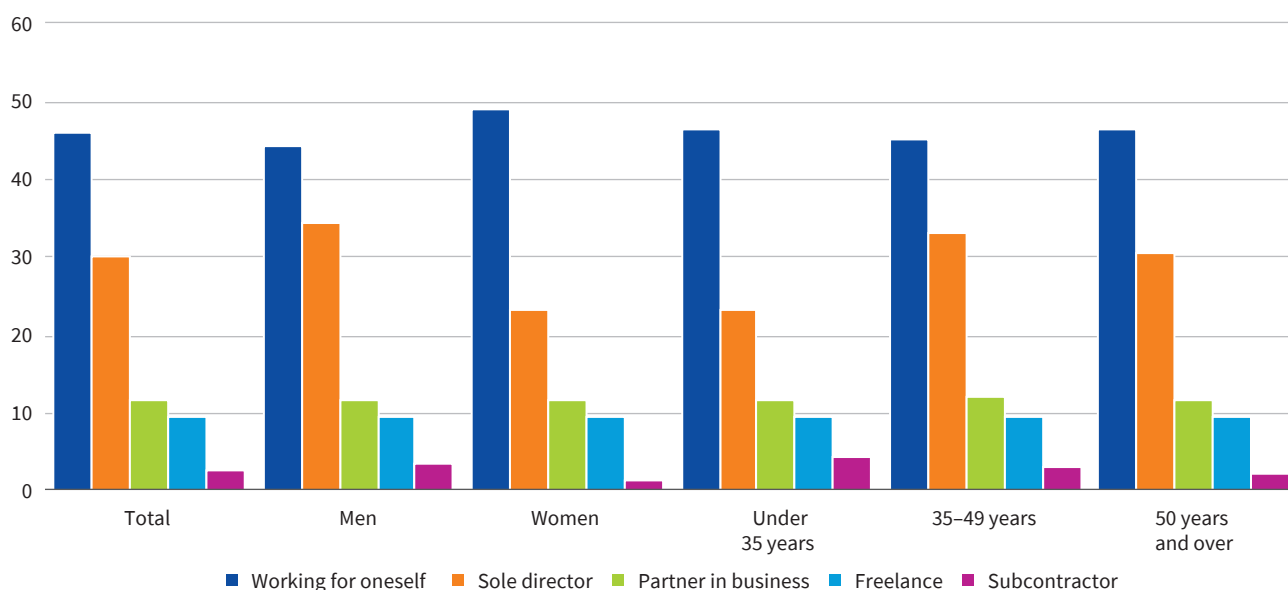
Almost half the self-employed (46%) indicate that they work for themselves (Figure 9). This is more often the case for women than for men; and, there is very little difference between age groups in this respect. There are more men than women among the 30% of self-employed who are

sole directors of their own business and the 3% who work as subcontractors. In terms of age, sole directors tend to be in the older age groups, while subcontractors are in the younger age group. The subcategory 'partner in a business or a professional practice' comprise 12% of the self-employed, while freelance workers comprise 9%; there are scarcely any differences in terms of age and sex for these two subcategories.

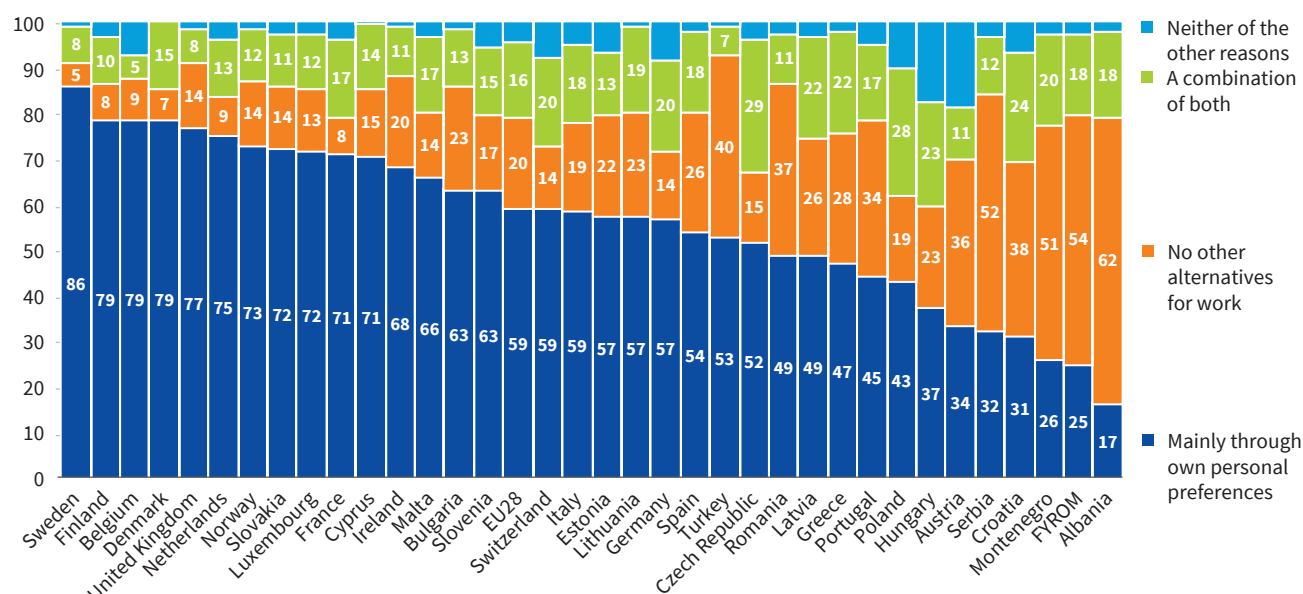
There are differences across sectors in the number of people working in one or other of the main forms of self-employment. In public administration and agriculture, 60% of the self-employed work for themselves. Sole directors are prevalent in commerce and hospitality, transport, and financial services, while partners in a business or a professional practice tend to be found in industry, commerce and hospitality, and health. Freelance workers tend to be prevalent in education, health and other services, while subcontractors are more often reported in the transport and construction sectors.

The reported reasons for becoming self-employed reflect both the overall economic situation in the country and the choices available to the worker. The sixth EWCS asked workers what was their main driver for self-employment (Figure 10). The results display a wide range of responses across countries: 86% of self-employed workers in Sweden said they opted for self-employment 'mainly through own personal preferences'. Equivalent figures are around one-third of workers in Austria (34%), Croatia (31%), Serbia (32%) and Montenegro (26%) and around one-quarter or fewer in the former Yugoslav Republic of Macedonia (25%) and Albania (17%). In the latter group of countries (Serbia, Montenegro, the former Yugoslav Republic of Macedonia and Albania), at least 50% of respondents give 'no other alternatives for work' as a reason.

Figure 9: Different types of self-employment, by sex and age, EU28 (% of total self-employed)



Note: Categories are not mutually exclusive.

Figure 10: Main reason for being self-employed, by country (%)

In another 12 countries, a relatively high proportion of respondents cite ‘no other alternatives for work’ as their reason: 35% or more in Austria, Croatia and Romania, 34% in Portugal, 28% in Greece, 26% in Latvia and Spain and around 20% in Ireland, Bulgaria, Lithuania, Italy, Estonia, Poland and Hungary.

Becoming self-employed is a more common personal preference for professionals (74%), managers (66%) and technicians (65%), as well as for workers in the health sector (74%), education (67%), other services (61%) and financial services (62%). In contrast, ‘no other alternatives for work’ is more likely to be cited as a reason by those in elementary occupations (42%) and agricultural workers (26%), and also by those in transport (24%) and construction (20%).

Turning to individual characteristics, such as sex, age and education, self-employment remains male-dominated and taken up mainly by people with only a secondary level of education and by older age cohorts.

The self-employed encompasses two subcategories: ‘self-employed with employees’ and ‘self-employed without employees’. However, this dichotomy conceals a great deal of variety – the self-employed form a very heterogeneous group.

In 2015, self-employed without employees formed a group twice as large as that of self-employed with employees – 10% and 5% of the workforce, respectively. Again, there are considerable variations across Member States, the self-employed without employees being particularly numerous in countries such as Greece (26%), Italy (18%) and Portugal (19%).

The heterogeneity of the self-employed group is particularly evident when the reasons for being self-employed are examined. While 60% of self-employed have opted for this employment status through personal preference, the figure is even higher for the self-employed with employees (71%) – Overall, the ‘no other alternatives’ choice is reported by one out of five (20%) self-employed workers; however, this proportion rises to nearly one in four for the self-employed without employees (24%) – compared to just 10% for the self-employed with employees.

Variations according to occupation and sector also exist. Almost half of all agricultural workers (47%) are self-employed without employees, compared with just 16% of managers, 15% of craft workers and 9% of professionals. The self-employed without employees are notably present in the agricultural sector (42%) and in construction and other services (17% and 15%, respectively).

Employment status and the economically dependent worker

Employment status has an impact on working conditions. Significant issues in this regard are, for example, labour rights and social protection benefits, and the financial stability and sustainability of the professional activity. The emergence of so-called 'new forms of work and employment', the blurring of boundaries between self-employment and dependent employment, and a growing recognition of the heterogeneity of self-employment have been acknowledged in national and European policy discussions. This has led to numerous initiatives clarifying the legal status of so-called 'economically dependent workers' through various routes: introduction of a new legal employment status, extension of labour protection by legislative intervention, case law, and introduction of soft regulation. The emergence of crowdwork makes these discussions even more relevant.

There is considerable variation in workers' descriptions of the way they perform their activity: only 57% of self-employed without employees and 33% of self-employed with employees describe themselves as 'working for themselves'. Another interesting aspect is the working hours reported: for example, while freelance workers are mainly self-employed without employees, they frequently report working part time as their main activity.

Several pieces of research have examined developments in employment relations and the increasingly unclear boundaries between the status of subordinated employee and that of independent self-employed person. Indeed, despite a 'formal qualification' of 'self-employment', some situations lack the key features that characterise independent and autonomous employment relations (European Commission, 2016). An analysis of data on the self-employed from the fifth EWCS explains:

In recent years, practices such as outsourcing and contracting-out have increasingly blurred the boundaries between dependent employment and self-employment. A new group of workers has emerged, which comprises workers who are formally 'self-employed', but present some characteristics of employees. These 'economically dependent workers' usually have a commercial contract (or 'service contract') rather than an employment contract; they are therefore registered as self-employed when in reality their working conditions have a lot in common with those of employees.

This development makes it difficult to distinguish (within those who are registered as self-employed), between people who are really self-employed and running their own business, and people who for example depend on a single employer for their income and thus have no real autonomy in running their 'business'.

(Eurofound, 2013a, p. 1)

The international classification ICSE-93 can be used to differentiate between self-employment situations. According to ICSE-93, the 'genuine' self-employment jobs are those jobs where:

the remuneration is directly dependent upon the profits (or the potential for profits) derived from the goods and services produced (where own consumption is considered to be part of profits). The incumbents make the operational decisions affecting the enterprise, or delegate such decisions while retaining responsibility for the welfare of the enterprise. (In this context 'enterprise' includes one-person operations.)⁷

The three main distinguishing features of self-employment are the economic aspects, the autonomy and authority to run the business. In an effort to scrutinise self-employment and learn more about economically dependent workers, three criteria were used in a secondary analysis of the fifth EWCS (Eurofound, 2013a) to assess the genuine character of the 'self-employed without employees' status. Self-employed without employees who have only one client and/or have no authority to hire staff and/or to make important strategic decisions are considered to be economically dependent workers. Nearly 1% in the EU27 was considered to be an economically dependent worker.

The sixth EWCS includes the same questions – number of clients, authority to hire and dismiss employees, and decision-making autonomy. The results for 2015 show that over half (56%) of the self-employed without employees are 'genuine' independent workers (fulfilling all three criteria), while 13% (1% of all workers in the EU28) cannot be considered independent workers (none or only one of the criteria were met). In between, there is a substantial grey zone, in view of the fact that around 30% of the formally designated 'self-employed without employees' meet two criteria.

⁷ ICSE-93: The International Conference of Labour Statisticians adopted in 1993 the International Classification of Status in Employment (ICSE-93), currently under revision. It includes employers, own-account workers, members of producers' cooperatives, contributing family workers, a residual category called 'workers non-classified by status' and, depending on the country, also owner-managers, contractors and outworkers.

1.5 Workplace and company size

One important determinant of the quality of working conditions is the size of both the workplace and the organisation. The workplace (the establishment where a worker performs the activity) and its size are important, for example, in relation to the quality and quantity of social interactions and contact, as well as work organisation. Furthermore, the size of the company or organisation where people work is usually associated with different types and levels of rights and benefits such as remuneration, representation and leave.

The majority of respondents in the EU28 (55%) work for companies and organisations that operate from a single site. Unsurprisingly, workers reporting that their company operates in multiple sites are mainly to be found in large companies. Most workers in large organisations (83%) report they have more than one site; this is the case for only 30% and 8% of those who work in small and medium-sized enterprises (SMEs) and micro companies, respectively.

Workers in the EU28 are almost equally distributed between micro companies (up to 9 workers), SMEs (between 10 and 249 workers) and large companies or organisations (250 or more workers) (Figure 11). However, 46% work in medium-sized workplaces (between 10 and 249 workers) and another 39% work in micro workplaces (up to 9 workers). This means that, in practice, only 15% work in sites with 250 workers or more (Figure 12). There are substantial differences between countries in terms of the size of each group.

Figure 13 presents data on the proportion of workers in different-sized organisations in various sectors. Most individuals in agriculture (78%) work in micro companies; only 3% work in large companies. Around half the workers in construction (51%) and in other services (49%) work in micro companies. By contrast, the majority of workers in public administration and financial services (57% in both) work in large organisations. In health, transport, industry, education and public administration, individuals tend to work either in SMEs or in large companies or organisations.

Figure 11: Company size, EU28 (%)

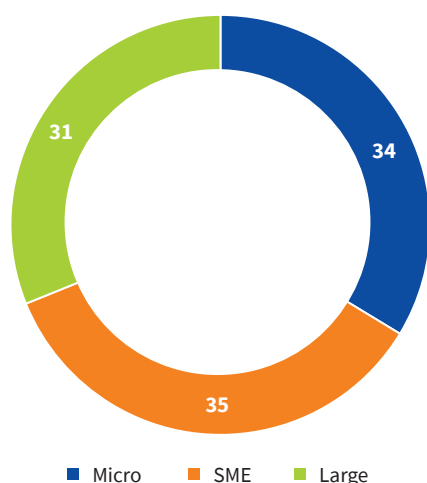


Figure 12: Workplace size, EU28 (%)

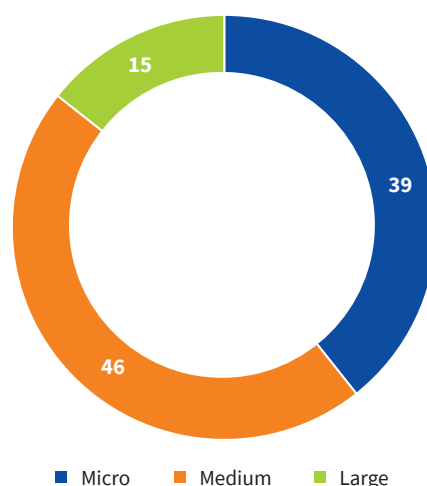
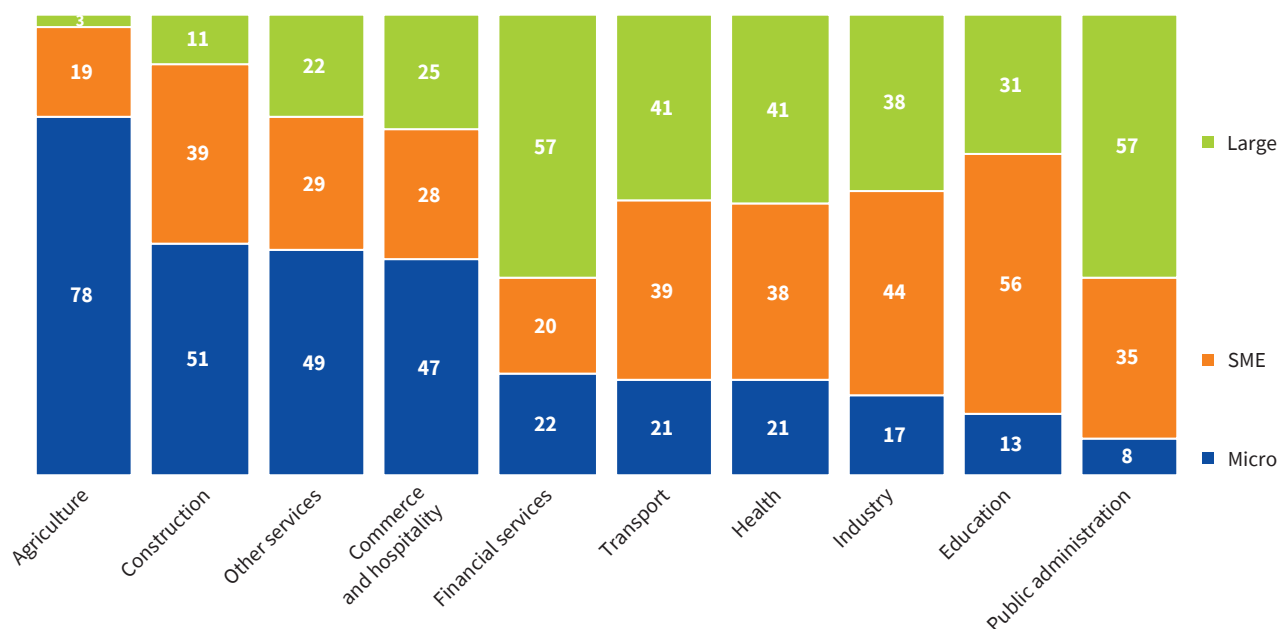


Figure 13: Distribution of workers across economic sectors, by company size, EU28 (%)



1.6 Company ownership

According to the sixth EWCS, some 71% of EU28 workers work in the private sector, 21% in the public sector and 7% in joint private–public organisations or companies, the non-profit sector or a non-governmental organisation (NGO) or ‘other’ sector. Since 2005, there has been a slight decrease in employment in the public sector matched by an increase in the private sector.

Countries differ considerably in the proportions of workers reporting the different ownership classification of the organisations they work for. The Nordic countries – Norway (37%), Denmark (34%), Sweden (36%) and Finland (34%) – as well as Slovenia (34%) and Luxembourg (33%), have the highest proportions of individuals working in the public sector. In contrast, the private sector is the most prominent type in Albania (81%), Turkey (77%), Spain (77%) and Cyprus (76%). The proportion of individuals working in joint private–public organisations, in the non-profit sector or an

NGO, or in ‘other’ sector is relatively high in countries such as the Netherlands (21%), Serbia (16%) and Greece (16%).

1.7 Gender segregation

While the participation of women in paid work is increasing across Europe, labour markets continue to be highly gender-segregated. Some occupations such as craft workers and plant and machine operators are intensely male-dominated (Figure 14). A predominant presence of male workers can also be seen in other occupations, such as managers or agricultural workers. By contrast, some occupations are predominantly female: clerks or service and sales workers. At the level of aggregation of occupations presented in the figure, there is no evidence of segregation among elementary occupations, professionals and technicians.

In terms of economic sector, there is also a high degree of gender segregation (Figure 15). Construction, transport

Figure 14: Employed people, by occupation and sex, EU28 (%)

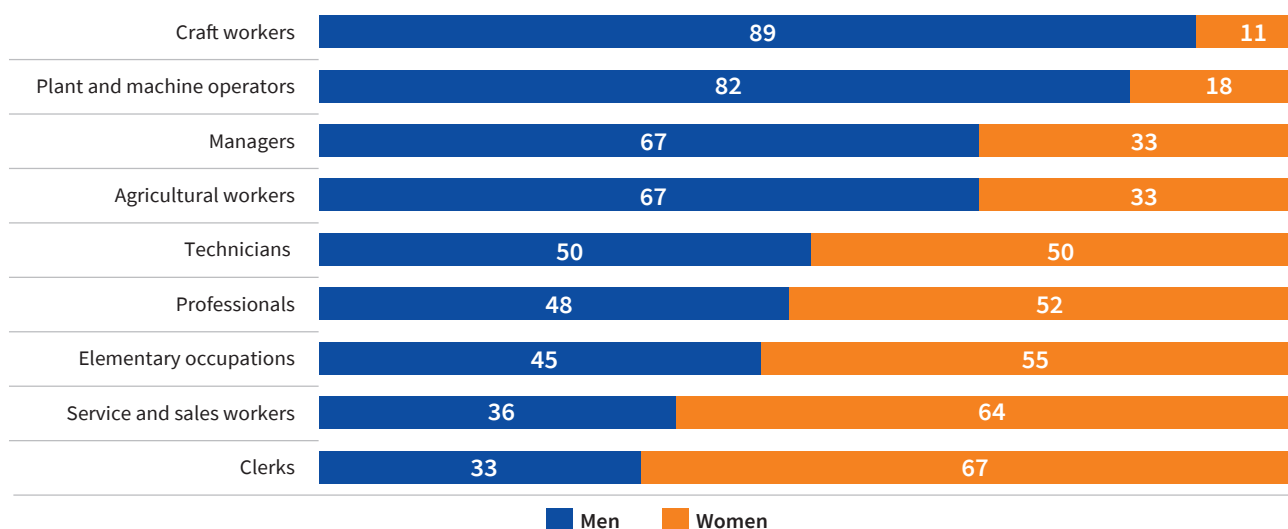
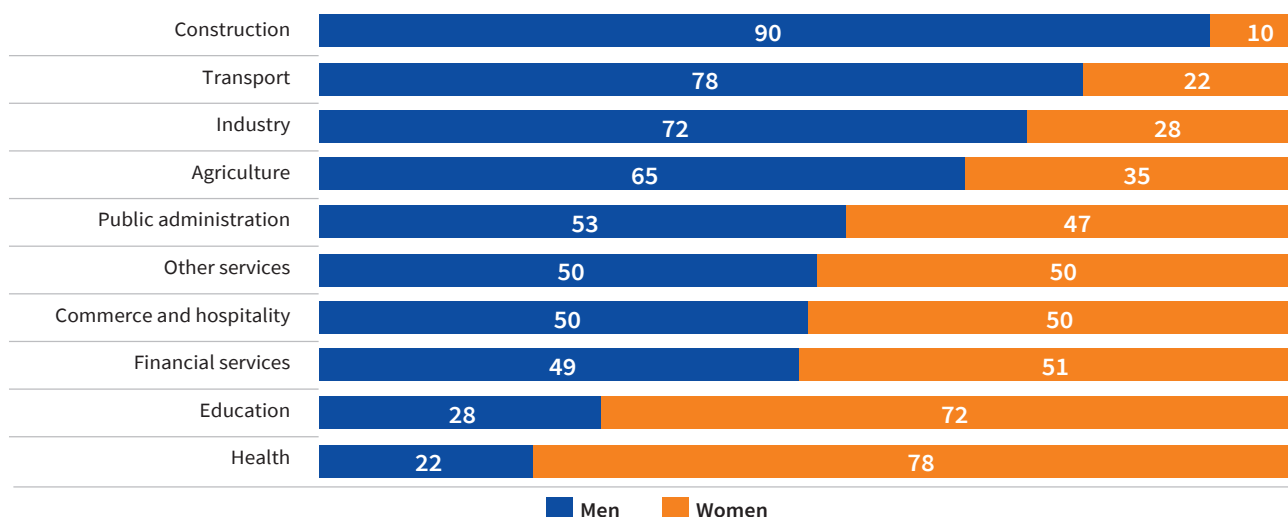


Figure 15: Employed people, by economic sector and sex, EU28 (%)

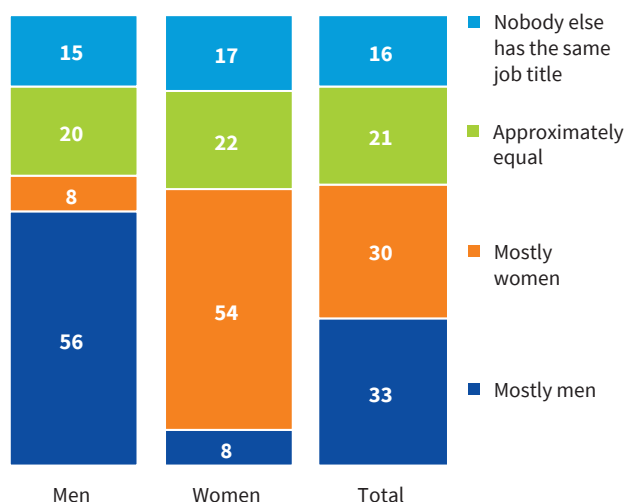


Source (Figures 14 and 15): EU-LFS 2015.

and industry remain highly male-dominated sectors, while health and education are female-dominated. On the other hand, commerce and hospitality, other services, financial services and public administration seem to have balanced proportions of women and men.

In order to gauge the level of segregation at the level of the workplace, the sixth EWCS asked respondents to indicate the sex of the majority of their colleagues having a similar job title to theirs (Figure 16). The results clearly indicate that gender segregation continues to be a feature of EU workplaces: 56% of men and 54% of women declare that their 'co-workers with the same job title' are mostly of the same sex. Only 20% of men and 22% of women stated that there were an equal number of men and women working in a similar position at their place of work.

Figure 16: Sex of co-workers with the same job title, by sex, EU28 (%)



1.8 Multiple job-holders

According to the sixth EWCS, nearly 8% of workers in the EU28 report having more than one job. In most cases (58%), the second job is an 'occasional' job rather than a 'regular' one. The proportion of multiple job-holders is slightly larger for employees with a fixed-term contract (11%) or 'other or no contract' (13%); it is also larger among professionals (10%) and those working in elementary occupations (10%). It is noteworthy that the proportion of workers reporting a job other than their main one varies across countries, being considerably larger in northern countries such as Denmark and Norway (both 19%), Estonia (15%) or Sweden (16%) and smaller in Bulgaria, Greece, Montenegro and Turkey, where the proportion is under 5%.

On average, workers who have a second job are more likely to work very short hours (28%) than workers with only one job – 15% of whom work very short hours. More than half of multiple job-holders (53%) work full time (35 hours or more) in their main job.

Another important difference between those who have second jobs and those who do not concerns remuneration: the proportion of workers reporting that they consider

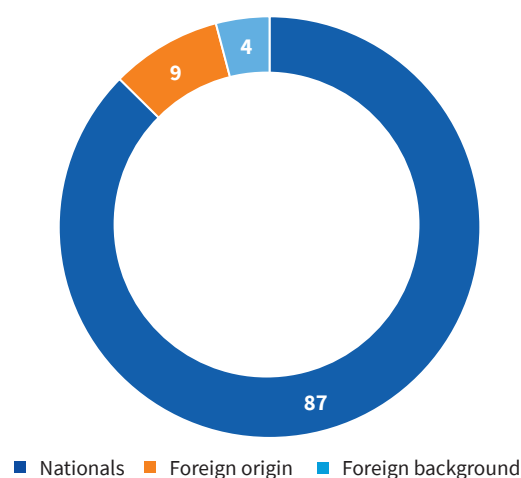
they are not well paid in their main job is higher among those who have a second job (38%) than among those with a single job (30%). In fact, controlling for the effects of country, sector and occupation, those with multiple jobs are nearly 1.5 times more likely to report not being well paid in their main job than those who report having only one job.

1.9 Workers of foreign origin or background

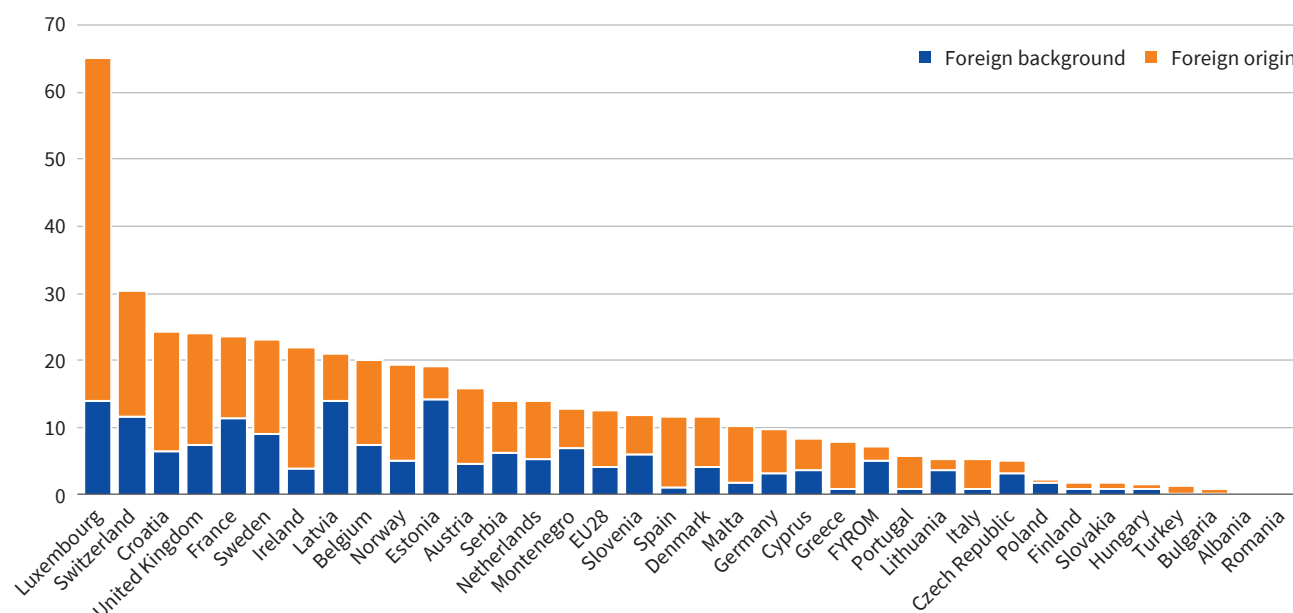
Eurofound research has shown that non-national workers and nationals of foreign background are frequently segregated into low-paid, unskilled and precarious employment (Eurofound, 2007a, 2009a and 2011b). Respondents in the sixth EWCS were asked whether they and their parents were born in the country of residence.

The results show that 13% of all workers in the EU28 are of foreign origin or foreign background (Figure 17). The majority of this group (65%) were born in a different country to their country of residence (foreign origin); the remaining 35% were born in the country of residence but their parents were born elsewhere, which means they are nationals with a foreign background.

Figure 17: Workers of foreign origin or with a foreign background, EU28 (%)



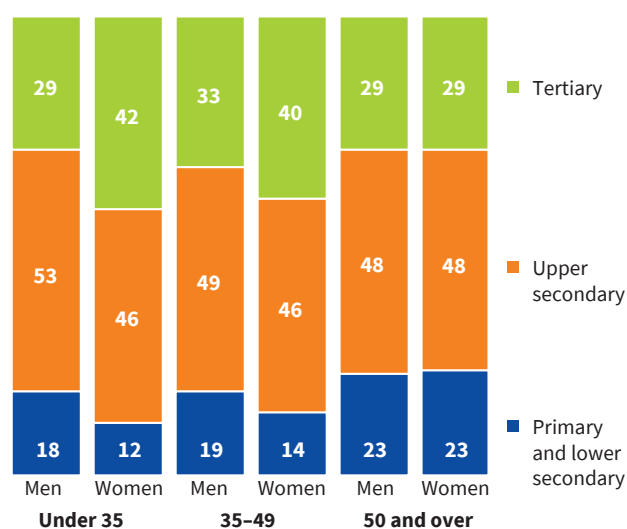
There are substantial differences between countries in the proportion of workers with foreign origin or foreign background (Figure 18). Luxembourg has by far the highest proportion of workers of foreign origin or background (65%) and almost 80% of them are of foreign origin. Other countries with high proportions of workers of foreign origin or background are Switzerland (30%), the United Kingdom (24%), France (24%), Sweden (23%) and Ireland (22%). In Croatia, a high number (24%) of interviewed workers stated that either they or their parents were born in a different country. However, there is not enough information to verify whether they were in fact referring to the former Socialist Federal Republic of Yugoslavia, from which Croatia declared independence in 1991.

Figure 18: Proportion of workers of foreign origin or background, by country (%)

In most countries, the proportion of workers of foreign origin (born abroad) surpasses that of foreign background. This is the case in the Mediterranean countries (Spain, Greece, Italy, Malta and Portugal) but also in Ireland, Sweden and the United Kingdom.

1.10 Educational level

The EU workforce is becoming increasingly educated. The proportion of workers with a tertiary level of education in the EU28 rose from 25% to 33% in the ten-year period from 2005 to 2015, while the proportion of those with a primary or lower secondary level of education decreased – from 25% to 18%. It is important to note the distribution of the levels of education by age and sex, in particular in the younger age cohort, as it gives an indication of how the distribution among older groups will look in the future. In 2015, 4 out of every 10 female workers (42%) in the under-35 cohort has a tertiary education, against 29% of their male counterparts (Figure 19). In the over-50 cohort, this percentage is the same for men and women.

Figure 19: Educational level, by age and sex, EU28 (%)

Source: EU-LFS 2015.

1.11 Seniority

Seniority – the number of years working in one's company or organisation – is an important dimension of a person's working experience, shaping expectations, ensuring working life stability and access to social protection rights. Figure 20 presents data over a 10-year period regarding the number of years worked by workers in their company or organisation. Overall, the largest group is that of workers with 10 years of tenure or more (41%). This proportion, as well as the proportion of individuals working for 5 to 9 years (20%) has remained fairly stable since 2005.

The EWCS data also show that the proportion of workers working less than a year in their jobs has shrunk: from 18% in 2005 to 16% in 2010, and 13% in 2015. The same evolution has taken place for men and women, which indicates that, on average, the job tenure of male and female workers is getting progressively longer.

1.12 Health status

The sixth EWCS contains information on the self-reported health and well-being of workers. The health status of individuals is a strong determinant of their participation in the labour market.

Nearly eight out of 10 workers in the EU28 report good or very good health (Figure 21). This is a higher proportion than that of the general EU28 population (aged 16 and over in 2014) and is in line with other comparable data.

Subjective well-being is measured through the World Health Organization's Well-Being Index (WHO-5), which assesses the following aspects: 'positive mood' (good spirit and relaxation), 'vitality' (being active and waking up fresh and rested) as well as 'general interest' (being interested in things). The index score ranges from 0 to 100. On average, the subjective well-being of workers in Europe is quite high – over 65 (out of 100 points). Across all countries, the score for men is the same as, or marginally higher than, the score for women (Figure 22).

Figure 20: Number of years worked in company or organisation, EU28 (%)

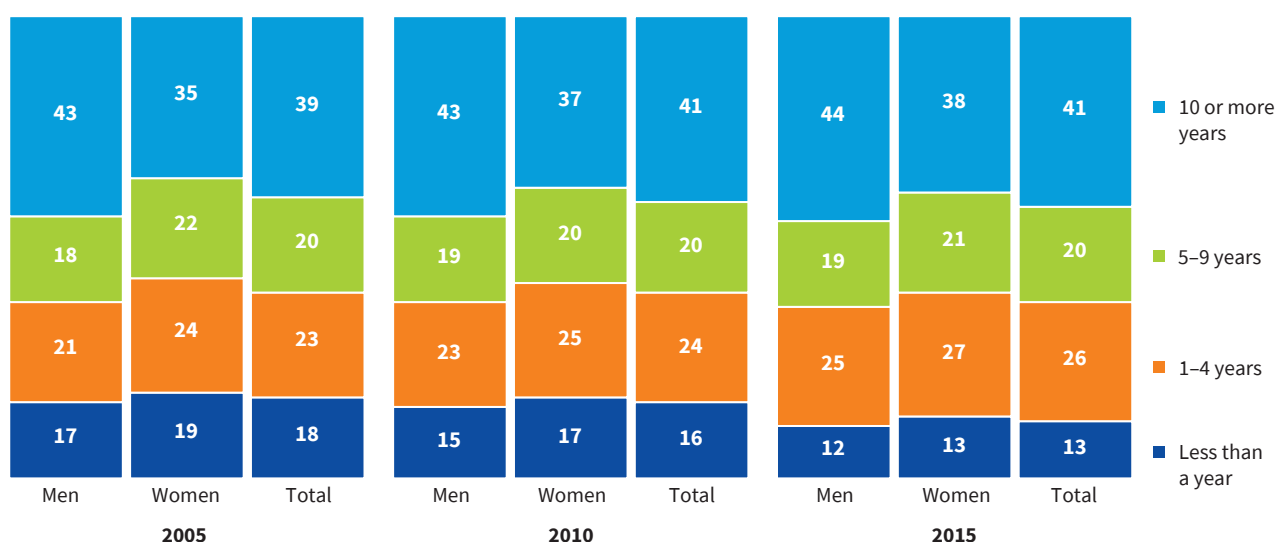


Figure 21: Reported good health, by country and sex (%)

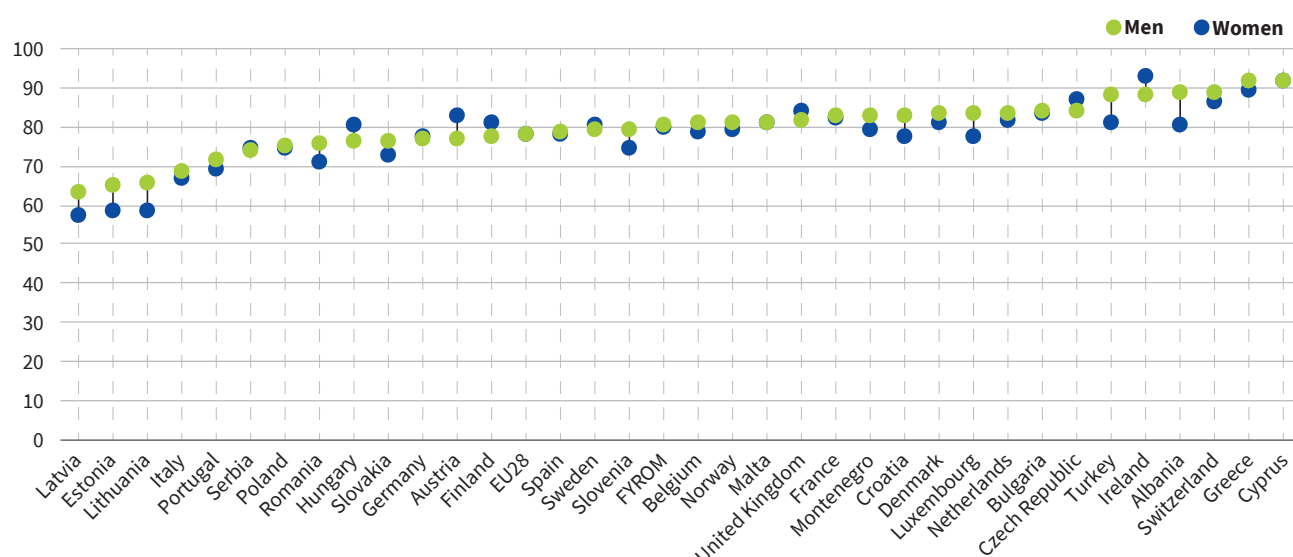
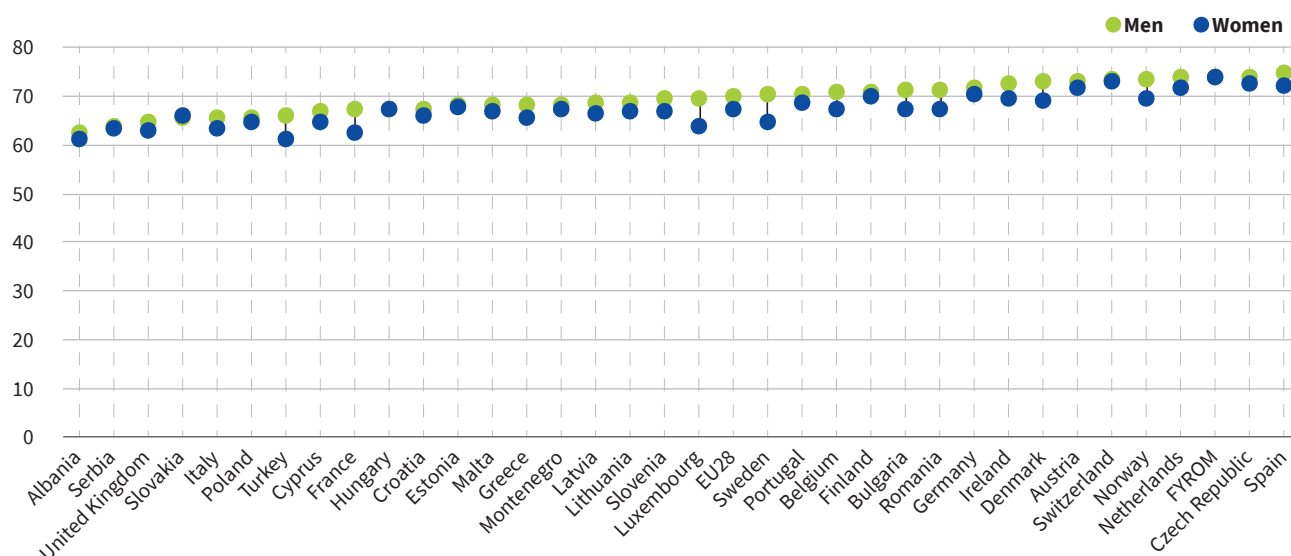


Figure 22: Scores on the Subjective well-being index, by country and sex

1.13 Household characteristics

Given that the preferences and choices of workers are shaped in part by household factors, it is important to know how many people in a household are working and if there are dependants. These factors influence how work, both paid and unpaid (carried out in the private domain), is organised and how it affects work–life balance – an important element of working conditions. In the EWCS, only households where at least one partner works are included.

Of the workers in the survey, more than half in the EU28 (56%) belong to a dual-earner household, where both partners work full time (Figure 23). Some 33% of workers belong to a household with a single earner: 21% are male single-earners and 11% are female. An additional 11% of workers live in a household where one partner works full time and the other works part time. In the vast majority of cases, the man works full time and the partner works part time, a model reported by 9% of all workers. As Figure 23 also illustrates, there are large differences between countries.

Dual-earner households more prevalent: The vast majority of workers (more than 70%) live in dual-earner households in Hungary, Czech Republic, Estonia, Finland and Lithuania.

Single-earner households more prevalent: Single-earner households comprise over 50% of households in Turkey (73%), Montenegro (58%), the former Yugoslav Republic of Macedonia (55%), Malta (54%), Albania (52%) and Serbia (51%). In Greece, the percentage is smaller: 48% of workers report living in a single-earner household; nevertheless, this proportion is still higher than that of country's dual-earners households (45%).

One full-time and one part-time worker: Workers living in households with one full-time and one part-time worker are more prevalent in the Netherlands (25%), Switzerland (22%) and Belgium (20%).

Some 41% of the male respondents living in multi-earner households say that they contribute most to the household income, compared with 19% of women. Only 7% of workers indicate that all earners contribute equally. Some 33% say that they are not the main contributor to the household income.

There are important differences between the main-earner models according to sex. Relatively more main earners in the higher income quintiles are male (Figure 24). There are also relatively more male full-time earners in the higher income quintiles, regardless of a second income in the household or not. The proportion of female single-earners and the proportion with a partner working part time in the lower income quintiles is higher than for their male counterparts.

People's needs, especially in terms of time for work and private life, vary throughout the life course, according to their household circumstances.

When the EWCS data are analysed according to a person's reported life stage, the following findings emerge (Figure 25).

- Some 9% of workers are 45 or under, single and living independently.
- A small proportion of workers (2%) are aged 18–35 and living with their parents.
- Around 11% of workers are living in a couple without children (where the female partner is aged 45 or under).
- The largest group of workers (40%) report that they are part of a couple with children: for 14% of this group, the youngest child is aged 6 or under, for 8% the youngest child is aged 7–11 and for 17% the youngest child is aged 12 or over.

Figure 23: Distribution of workers, by household type and country (%)

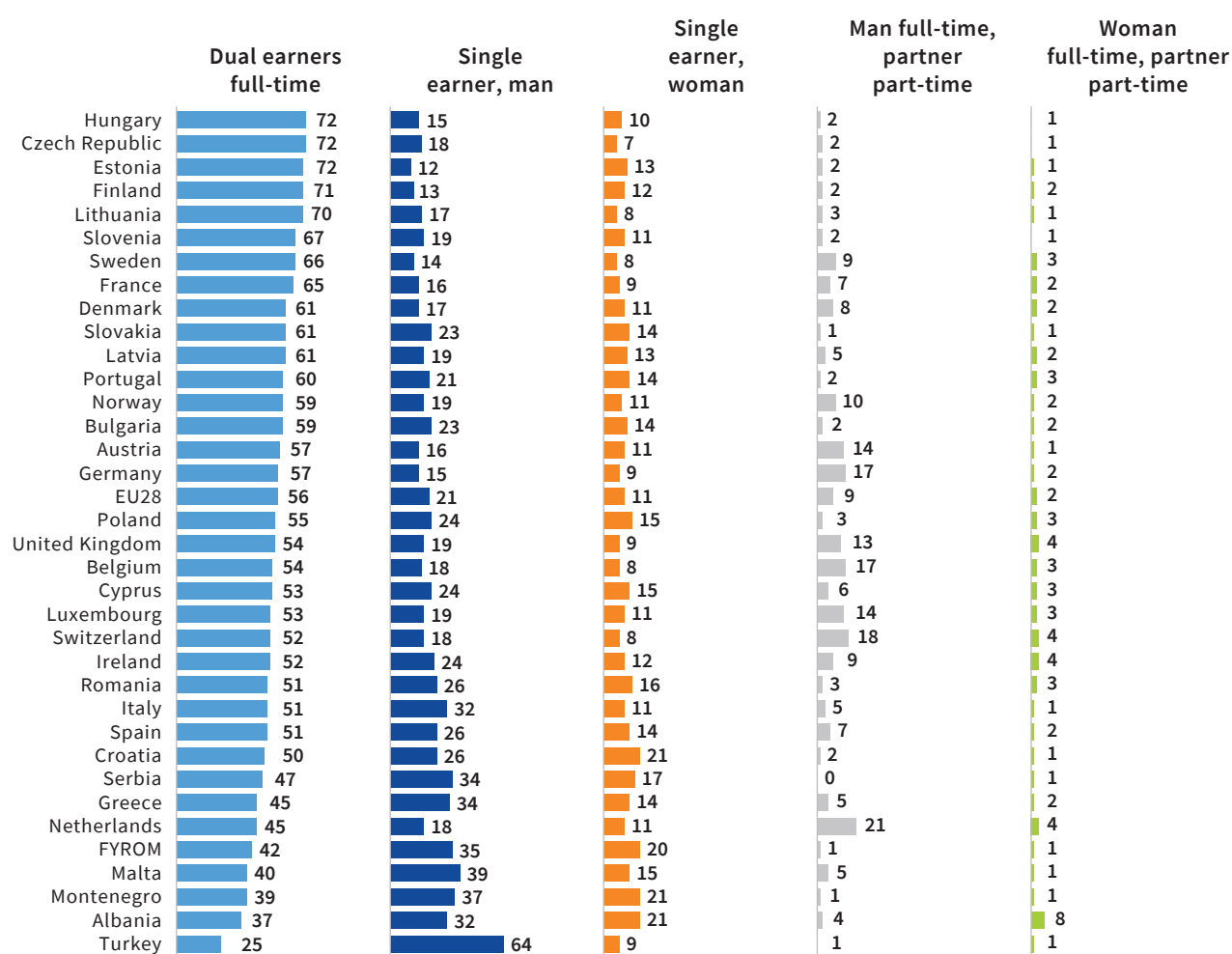


Figure 24: Main-earner models and household types by income quintile, EU28 (%)

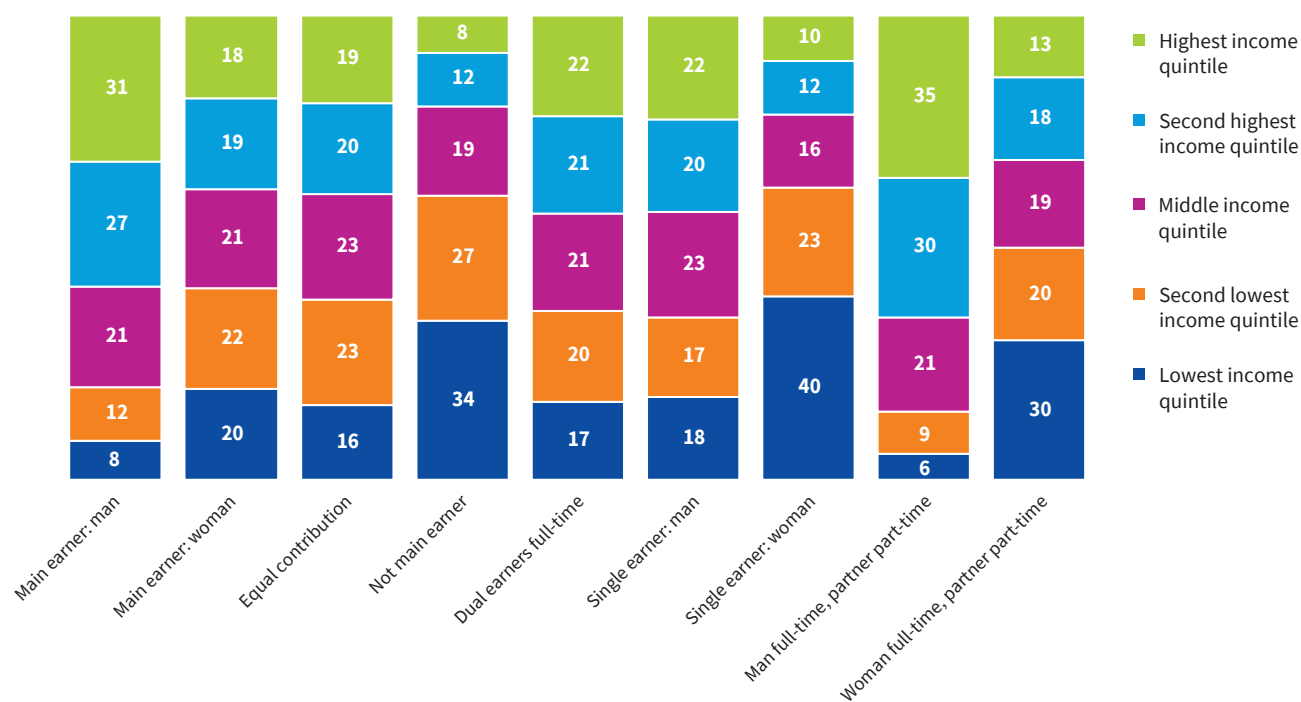
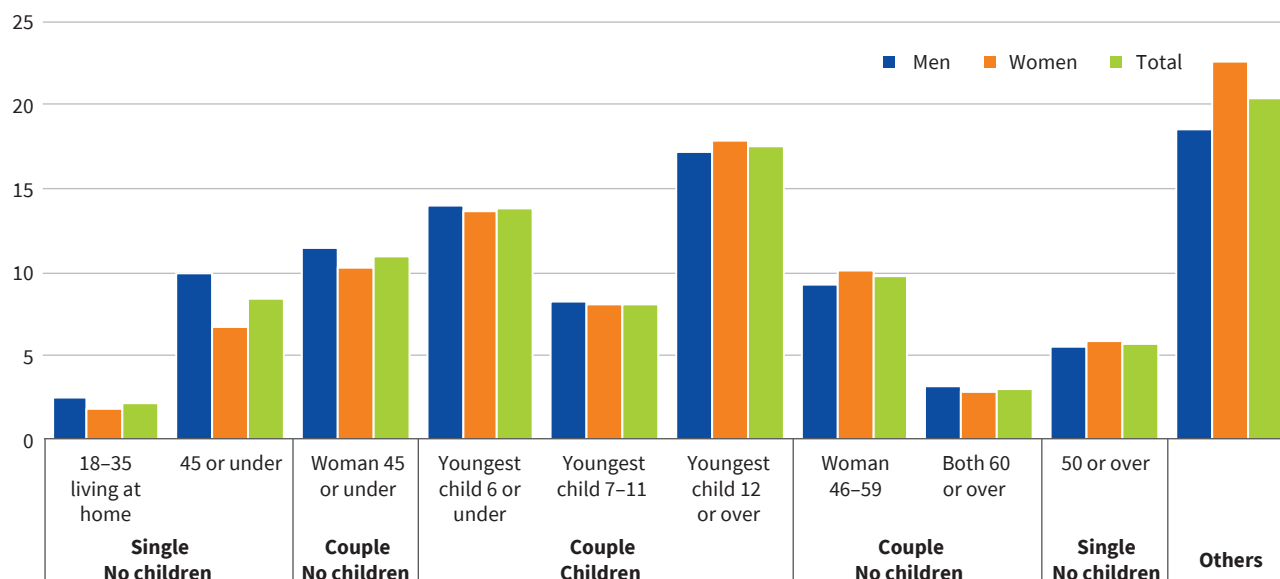


Figure 25: Distribution of workers according to life stage by sex, EU28 (%)

- Some 10% of workers are living in a couple without children and the female partner is aged 46–59 years.
- A small minority – 3% – of workers are living in a couple, without children, and are 60 years of age or older.
- Some 6% are older single people (over 50), without children.
- Around 20% are living in other household types.

Viewing the data by life stages helps to understand the concrete impact that aspects of working conditions – such as working hours, working time arrangements, time needed for work in the private sphere and work-life balance – can have on workers. Analysing how the impacts and needs may vary over the different stages of an individual's life can contribute to forming a holistic picture of a person's working conditions.

SUMMARY

Portrait of the workforce in Europe

Workforce becomes more female and gender segregation still common: Between 2005 and 2015, the employment rate of people aged 15–64 in the EU28 rose – from 63% to 66%. Largely, this is due to the increased participation of women in the labour market. However, the female employment rate is still 11 percentage points below that of men. Moreover, gender segregation remains very high and takes multiple forms.

Ageing of the workforce: As well as becoming more female, the workforce has got substantially older: the proportion of people in employment who are aged 50 years or over has increased markedly – from 24% to 31% over 10 years. At the same time, there has been a continuous decline in the proportion of younger workers (aged under 35): from 35% of the workforce in 2005 to 30% in 2015.

Rise in part-time employment: The proportion of part-time workers in the workforce rose from 18% in 2005 to 20% in 2015. Part-time working is much more common among women, 33% of women working part time as against 10% of men.

Sectoral growth and decline: The three largest sectors are commerce and hospitality (accounting for 19% of the workforce), other services (18%) and industry (17%). Health and education constitute 11% and 8%, respectively, of total employment; however, although smaller, these two sectors (along with other services) have been growing in relative terms, whereas industry and construction are in relative decline.

Employed on indefinite contract is still the norm: The majority (66%) of the EU28 workforce holds an indefinite contract, 11% have a fixed-term contract, and 8% have either another type of contract or hold none. Some 15% of the workforce is self-employed. This picture is little changed since 2000.

Self-employment a preference for many: A majority (59%) of self-employed workers in the EU28 report that they became self-employed out of preference; 20% said they had no other alternative for work; and 16% cited a combination of these two factors.

2 The multiple dimensions of job quality

Job quality is important to all citizens and is also central to policy concerns as Europe tries to boost economic growth and address the demographic challenge and the threats to the welfare systems. Making work sustainable and keeping people in work for longer are two key aspirations of many European countries. Maintaining and developing job quality is crucial for attaining these goals.

This chapter analyses the sixth EWCS data using the seven indices of job quality developed by Eurofound in its report on job quality (Eurofound, 2012b). The development of the seven indices reflects the multidimensional nature of the concept of job quality and the fact that each dimension – as captured in the respective index – has an independent influence (positive or negative) on the health and well-being of workers.⁸

In contrast to Eurofound's previous work (Eurofound, 2012b), the seven indices are presented independently. In particular, this study does not make use of the intrinsic job quality that was constructed as a combination – with equal weight – of the four indices: physical environment, social environment, work intensity and skills and discretion. The seven job quality indices included in this study are:

- Physical environment;
- Work intensity;
- Working time quality;
- Social environment;
- Skills and discretion;
- Prospects;
- Earnings.

The seven indices have a number of features in common.

First, they are developed at the level of the job. The objective is to capture how workers perform their work and under what conditions. The job level is of particular significance, as it is the level at which the contractual relationship between employers and employees is set; it is also the unit of design and implementation of many regulations devised by governments and social partners. In addition, a person's job determines their task set as well as their practical experience of work.

Women and men fare differently in relation to job quality: women report lower Earnings, but a higher score in Physical environment and Working time quality. Men score one index

point more in terms of Prospects and Skills and discretion but also one point more for Work intensity (higher scores on this index being less favourable for workers). Men and women report the same scores for Social environment.

Second, the indices are constructed with indicators of positive and negative job features. These indicators reflect the job resources (physical, psychological, social or organisational aspects) and job demands or the processes that influence these. For example, the training indicator reflects the ability of workers to develop job resources, while worker participation could reduce the level of job demands and, therefore, the associated physical and psychological costs.

Third, these indices cover job features captured from an objective perspective. This means that they refer to specific job quality features, which can be observed and are related to meeting people's needs from work. In particular, these features have been proven through epidemiological studies to have a causal effect – positive or negative – on the health and well-being of workers.⁹ Section 2.1 explores this in more detail.

Many job quality features that are beneficial for workers are also positively associated with company performance, productivity and innovation. Research indicates that improving job quality, for example, is associated with a reduced level of sickness absence and minimised loss of productivity due to working while sick (presenteeism) (EU-OSHA, 2014; Goetzel et al, 2004; Sainsbury, 2007). In addition, job quality contributes to developing organisational commitment and motivation among workers, as well as shaping a climate that is supportive of creativity and innovation.

Furthermore, job quality can play a central role in the development of the workforce. The indices capture characteristics of job quality that can result in sustainable work and hence extend working life, build and develop the workforce's competence, and result in productivity. Job quality is also a factor in balancing flexibility in working hours and employment with financial and job security. The indices also take into account the experience of working in a social environment, where the workforce is managed well and is not subject to adverse social behaviour. Such an experience of work is supportive of business competitiveness, as evidenced, for example, by findings from the third European Company Survey (Eurofound, 2015g).

⁸ It should be noted that the seven job quality indices relate to the EU28 Member States and not to the 35 countries in the sixth EWCS.

⁹ See, for example, Fishta and Backé, 2015; Theorell et al, 2015; Theorell et al, 2016; Harrington, 2001; Kivimäki et al 2012; Kivimäki et al, 2015; Bannai and Tamakoshi, 2014; Virtanen et al, 2015.

Before examining each index in detail, the next section provides an overview of the job quality indices, illustrating the variety of job quality combinations experienced, the independence of each index and the contribution of the dimensions they measure to a positive experience of working life.

Figure 26: Overview of job quality indices and their indicators



2.1 Job quality indices – Overview

This section introduces the job quality indices and looks at the distribution of occupations and sectors in relation to the indices. The validity of the indices is shown by testing their association with health and well-being, and hence corroborates the importance of job quality for a good working life. The section concludes by examining associations between the various job quality indices, further underlining the multidimensional perspective.

Job quality indices

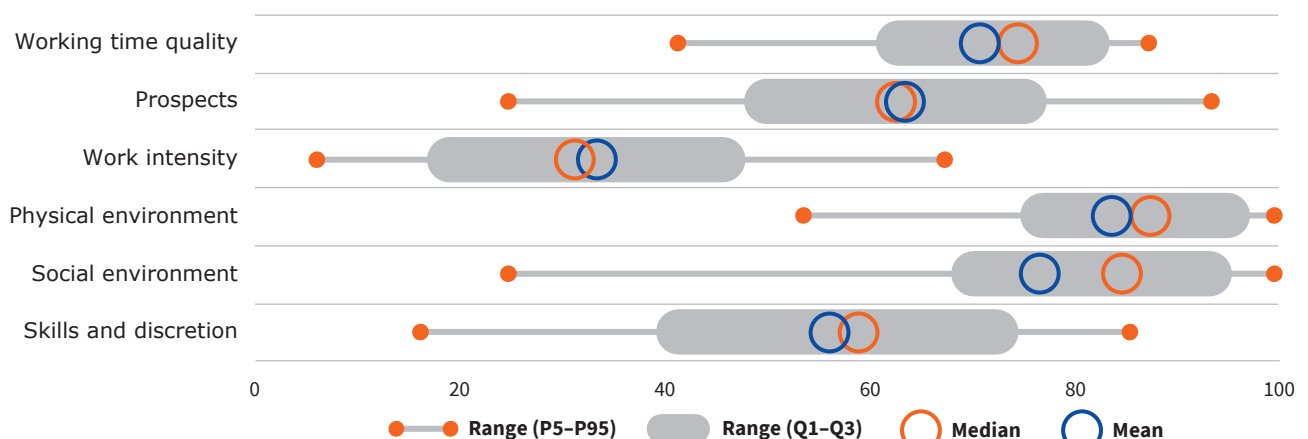
All the job quality indices are measured on a scale from 0 to 100, except for Earnings, which is measured in euros. With the exception of work intensity, the higher the index score, the better the job quality.

Job quality – as operationalised by seven indices – is not distributed equally. Although these indices share the same scale, their distribution is far from identical. Figure 27 illustrates the distribution of six of the job quality indices, while the seventh – Earnings – is illustrated in Figure 28.

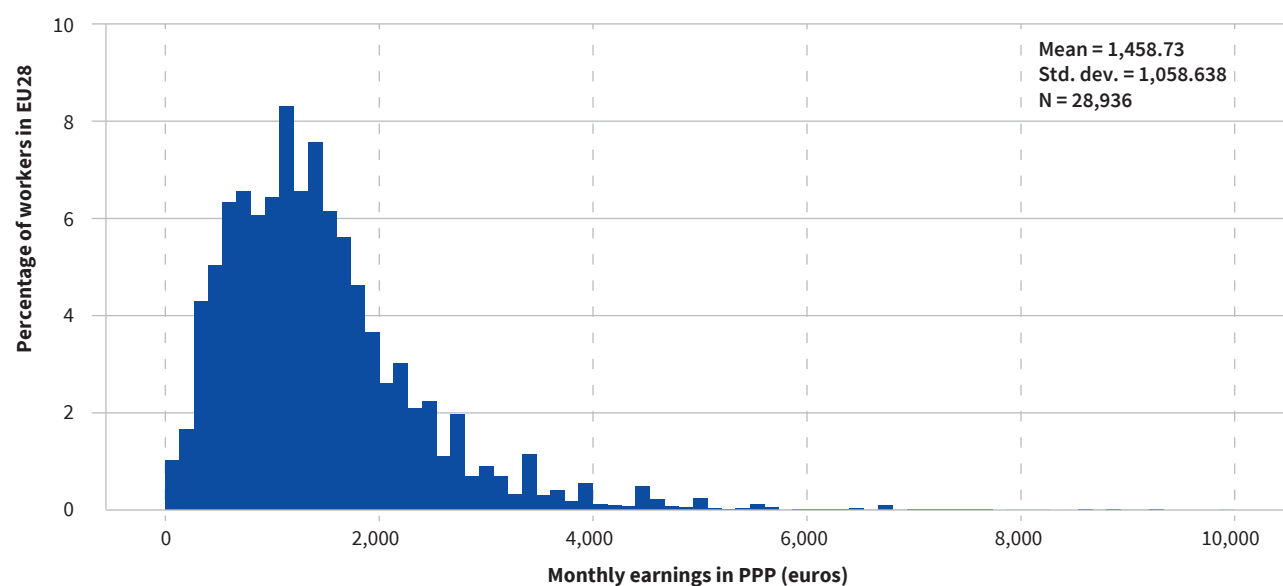
As Figure 27 demonstrates, the *Social environment* index has the largest variation for workers in the EU28. The distribution of the index shows a large concentration of workers with a high-quality social environment (right-hand side of scale), but also a large concentration of workers having a low-quality environment (left-hand side of scale). It is skewed, indicating that the range of values for the *Social environment* index is wider for those reporting less than the mean than those on the other side of the tail. Similarly, the *Physical environment* index is also left-skewed, although not to the same extent as the *Social environment* index. *Working time quality*, on the other hand, shows the least variation of all the indices: almost all workers score between 41 and 88 on this index, and 50% score between 63 and 81. *Prospects* and *Work intensity* – the latter being a negative job quality indicator – both follow a mainly normal distribution, with a similar variance. Finally, *Skills and discretion* shows some more variation and a slight left-hand skew.

The distribution of the *Earnings* index (Figure 28) is right-skewed, reflecting inequality in earnings. Most workers are concentrated at the lower end of the earnings distribution, with few concentrated in the high end of the distribution. It should be noted that these are monthly net earnings not corrected for working hours.

Figure 27: Distribution of six job quality indices in the EU28, 2015



Note: Range Q1-Q3 (the grey boxes) shows the range of the values of the index for the middle 50% of the respondents, when arranging them from lowest to highest. Range P5-P95 (between the orange dots) shows this range for the middle 90% of the respondents.

Figure 28: Distribution of monthly net earnings at PPP in the EU28

Note: PPP = purchasing power parity.

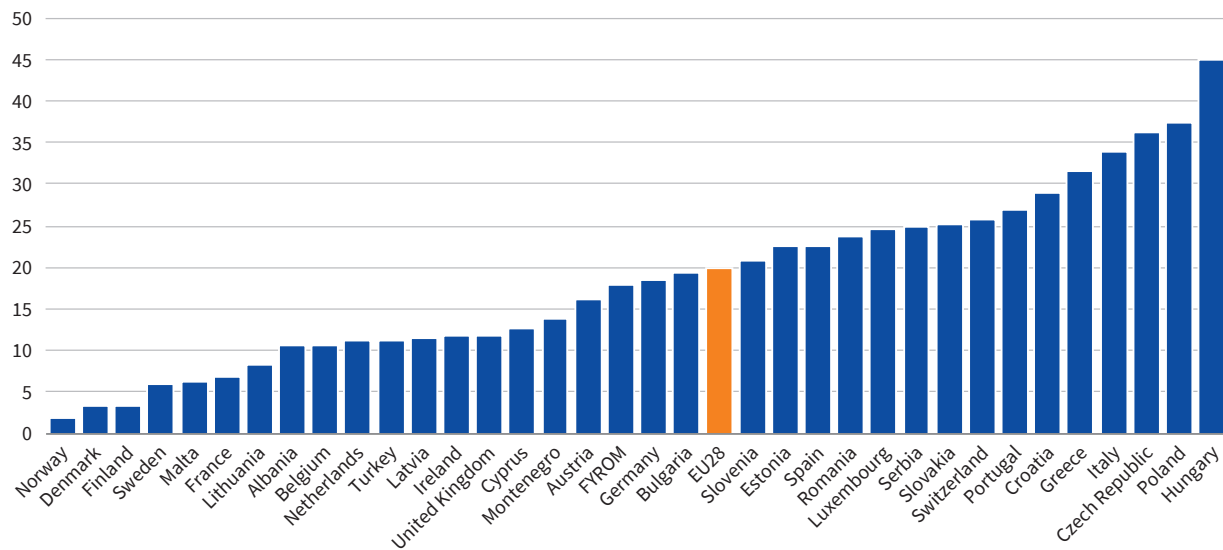
Measuring earnings

The EWCS survey includes a series of questions on earnings. The main question (Q104) is about the net monthly earnings from a person's main paid job, referring to the average earnings in recent months. These are earnings from the main job – minus tax and social security contributions – at an individual level. Because tax and social security contributions vary between countries, differences in net earnings not only reflect differences in rewards for the job, but also the effects of the welfare system in which the job and the individual are embedded.

Although the survey question corrects for taxes and social security contributions, it does not include any benefits accruing from these deductions. For example, contributions to occupational pension schemes will benefit the worker after retirement and could therefore be considered as suspended earnings. Moreover, in some countries, taxes could depend on household characteristics or are levied at household level. The survey question does not take these elements into account. Therefore, the inclusion of these elements is dependent on the respondent's interpretation of the question.

For respondents who are unable to give an exact figure of their monthly net earnings, a range of earnings bands are presented from which the respondent is asked to choose (Q105). The earnings bands are based on national income distributions and are presented in the national currency. The level of earnings that is presented in this report combines the two questions (Q104 and Q105) by taking the middle of the earnings band as a proxy for the exact income of respondents who were unable to give an exact amount of net earnings. For countries without the euro as a national currency, the figures are converted into euros. Finally, all figures are corrected for differences in purchasing power between countries.

As Figure 29 shows, a substantial proportion of EWCS respondents is reluctant to disclose information about the amount they earn (20% in the EU28). This proportion varies significantly across countries: from under 3% in Denmark and Finland to over 30% in Italy, the Czech Republic and Poland and reaching 45% in Hungary. However, even when the country effect is taken into account, the binary logistic regression shows that factors such as sex, age, employment status, occupation, sector of activity and capacity to make ends meet all help to explain the reluctance to disclose earnings.

Figure 29: Refusal to disclose net earnings, by country (%)

Men, older workers, the self-employed, managers, professionals, technicians, those working in the transport sector and those who find that it is 'easy' or 'relatively easy' to make ends meet are all less likely to report how much they earn than other groups. This would suggest that the level of net earnings in the EWCS is under-estimated.

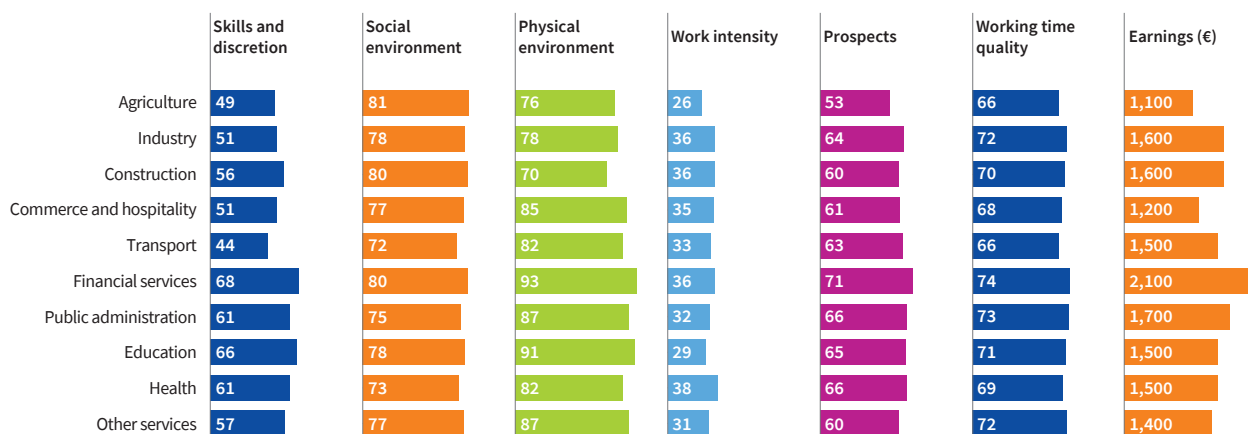
Distribution by sector and occupation

While the indices of job quality are developed at the level of the job, it is important to take into account the overall employment context, as this can influence the job's characteristics. In this regard, occupation and sector are key determinants.

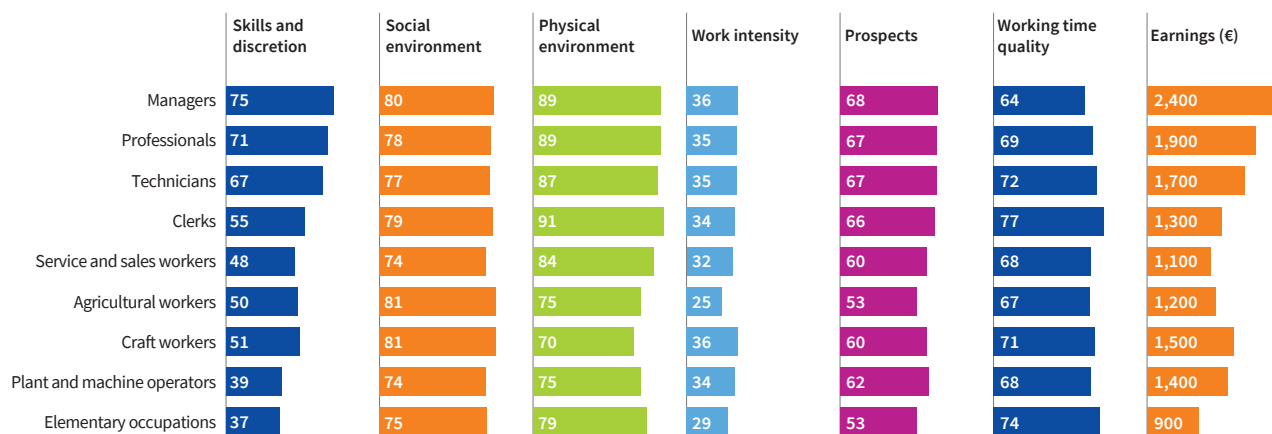
Figures 30 and 31 highlight the variety of possible combinations of job quality features. The very different portraits of sectors and occupations that emerge and the scores on the job quality indices indicate how specific sectoral policies could complement more general policies aimed at increasing job quality.

No sector or occupation scores consistently high across all job quality indicators. Figure 30 shows high scores for financial services across all indices, but this includes Work intensity, which is a negative aspect of job quality. Furthermore, sectors – such as transport and agriculture – that have lower scores for certain dimensions of the job quality indices also report more positive scores for other dimensions.

In terms of occupation, Figure 31 shows that technicians report above-average scores on all indices of job quality, including Work intensity, which has a negative, albeit small, effect. Managers score relatively high on several job quality indices, but also have a high score on Work intensity and score very low on working time quality.

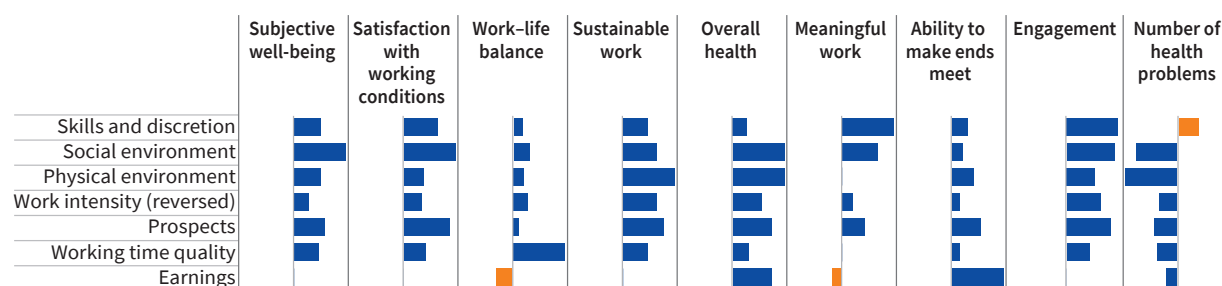
Figure 30: Mean scores on the job quality indices, by economic sector, EU28

Note: A higher score for work intensity means a less favourable situation for the worker.

Figure 31: Mean scores on the job quality indices, by occupation, EU28

Association between job quality indices and health and well-being

In order to validate the seven job quality indices used in this report, their association with health and well-being is tested using data from the sixth EWCS (Figure 32). These positive associations corroborate the value of job quality for workers and account for the policy emphasis placed on job quality. The dimension measured in each index contributes independently to a better experience of working life.

Figure 32: Association between job quality indices and well-being indicators

Note: The bars in the figure represent the relative association between each job quality index and a dependant variable (i.e. the standardised coefficients of the job quality indices), showing only significant coefficients ($p < 0.01$). Blue bars represent associations favourable to workers and orange bars represent unfavourable associations. See text below for more details on the methodology.

The well-being indicators used in the analysis are defined as follows:

- 'Subjective well-being' refers to the WHO-5 index (see section 1.12 *Health status* in Chapter 1).
- 'Number of health problems' is based on a calculation of workers' health issues.
- 'Work-life balance' is a subjective measure of the workers' own work-life balance.
- 'Meaningful work' is based on a scale made up of questions relating to workers' perceptions of 'doing useful work' and a 'job well done'.
- 'Sustainable work' is based on questions around workers' assessment of their ability to work until the age of 60 and beyond (in the current job or a similar one).
- 'Ability to make ends meet' is a measure of one's finances.
- 'Engagement' is based on a series of questions on workers' relationship with their work.

All these indicators, analysed in Chapter 3, combine to form a multidimensional picture of the worker's work experience.

As expected, the dimensions measured by the indices are positively related to the indicators (although not to the same extent) except in some instances. For example, Earnings are somewhat negatively associated with meaningful work, which suggests that higher earnings do not make a job more meaningful or that very meaningful work is not

necessarily a job with the highest level of earnings. Each job quality index is associated with a wide range of positive assessments of working life.

Separate regression models are estimated for each indicator, and all job quality indices are included simultaneously within each model in order to isolate the association between each job quality dimension and each individual indicator. As personal circumstances could determine the extent to which aspects of job quality fulfil personal needs, the estimates control for sex, age, country, sector, occupation and workplace size. Only respondents to the sixth wave of the EWCS in the EU28 are included.

The resulting coefficients show the relationship between each job quality index, in the context of the other job quality indices and control variables.

The logit specification is used to predict dichotomous variables, ordered logit for Likert-scale variables, poisson for count variables and OLS for variables that follow a normal distribution. Monthly earnings are converted into the logarithmic form, and the control variables are included in the model as dummy variables.

The job quality indices are simultaneously included in each model, given that the correlation between the indices is low. The control variables (sex, age, country, sector, occupation and workplace size) are included following a combined forward and backward stepwise procedure to avoid possible multicollinearity.

The bars in each figure in this chapter show the size and the direction of the x-standardised coefficients of the regressions and therefore the association between each job quality index and the relevant indicator, showing only significant effects ($p < 0.01$). X-standardisation implies that the coefficient represents the change in y for a standard deviation increase in x .

Despite standardisation of the coefficients of the job quality indices, each indicator is modelled separately and generally represents a different concept. Therefore, the coefficients should be compared vertically across the different job quality indices, rather than horizontally across the different indicators.

Associations between job quality indices

In order to further explore the issue of how various dimensions of job quality combine, an analysis of the correlation between the job quality indices was carried out. The results show some limited correlations between the indices. The strongest associations are between Earnings and Skills and discretion, between Work intensity and both Working time quality and Physical environment, and between Prospects and Skills and discretion (Figure 33).

Prospects, Skills and discretion and **Earnings** show positive correlations to each other, indicating that these indices are more likely to be similar within jobs.

Work intensity is strongly and negatively associated with **Working time quality**, **Physical environment** and **Social environment**, indicating that high job intensity does not usually coincide with good working time quality, a supportive social environment or a workplace low in physical risks.

Earnings is positively associated with **Skills and discretion** and **Prospects**. It shows no association at all with **Social environment**, a negative association with **Working time quality** (indicating a trade-off between the two dimensions) and a weak association with **Physical environment** and **Work intensity**. Using it alone as a measure of job quality would be problematic.

In Eurofound (2012b), four of the indices (**Physical environment**, **Social environment**, **Skills and discretion** and **Work intensity**, with equal weights for each index) were collapsed into an 'intrinsic job quality' index. This is not the approach pursued in this report, which aims rather at providing an in-depth analysis of working conditions through the prism of job quality and quality of working life, and is therefore interested in providing a detailed description of the features of job quality. Furthermore, as indicated, correlation between these four indices is weak. Reduction in the number of indices would also be at the price of obfuscation of significant European and national policies.

Figure 33: Correlations between the job quality indices

	Skills and discretion	Social environment	Physical environment	Work intensity	Prospects	Working time quality	Earnings
Skills and discretion							
Social environment	0.2						
Physical environment	0.2	0.1					
Work intensity	0.1	-0.2	-0.3				
Prospects	0.3	0.2	0.1	0.0			
Working time quality	0.0	0.2	0.2	-0.3	0.0		
Earnings	0.4	0.0	0.1	0.1	0.2	-0.2	

Aggregating further all indices into one single index would be for the same reasons more problematic. It would obscure variety, and perhaps draw attention away from the various dimensions of job quality. These grounds justify the decision to present the seven indices as independent dimensions and allow for a deeper analysis of the issues at stake.

2.2 Improving the physical environment

The absence of physical hazards that pose a risk to health and well-being is an acknowledged feature of job quality. Eliminating or minimising these risks is at the core of occupational health and safety policy in EU Member States and is a longstanding plank in European social policy. Article 153 of the Treaty of the Functioning of the European Union (TFEU) authorises the Council to adopt, by means of directives, ‘minimum requirements’ to encourage ‘improvement in particular of the working environment to protect workers’ health and safety’. Legislative requirements vary across Member States, as each country is free to adopt stricter rules for the protection of the workers when transposing the EU directives into national law. Directive 89/392/EEC places an explicit responsibility on the employer to adapt ‘... the work to the individual, especially as regards the design of the workplaces, the choice of equipment and the choice of production methods’.

Traditionally, physical risks have been the subject of numerous preventive actions across traditional manufacturing industries. However, although the economy is shifting to a more service-oriented economy, the level of exposure to physical risks is not declining significantly. Some risks are increasing: for example, use of chemicals or exposure to electromagnetic fields. The industrial application of new technologies could in fact generate new hazards –

nanomaterials are one example. Other emerging risks are linked to the development of biotechnologies and green technologies (European Commission, 2014b). In general, there could be increasing potential for the release of novel, difficult-to-identify and potentially hazardous materials all along the lifecycle of green technologies and products, and in particular during end-of-life processing (EU-OSHA, 2013).

Moreover, there are still some jobs that – due to the level of exposure to physical or psychosocial hazards – pose a serious risk to workers’ health. ‘Arduous’ jobs entail workers being exposed over a period of time to several risk factors, resulting in conditions that can have long-lasting and irreversible effects on health. There are some occupations that tend to combine certain conditions which make workers in those jobs more vulnerable in terms of their physical and mental health (Eurofound, 2014e). Musculoskeletal disorders are one of the most common work-related complaints, affecting millions of workers and costing billions of euros to employers. Several causes have been identified: physical and psychosocial risk factors such as repetitive movements, heavy lifting, frequent bending and twisting, exposure to cold and insufficient recovery time, as well as psychosocial risk factors (da Costa and Viera, 2010). Noise has been associated with cardiovascular disease. In particular, there seems to be ‘scientific evidence that employees, both men and women, who report specific occupational exposures, such as low decision latitude, job strain or noise, have an increased incidence of ischemic heart disease (IHD), a form of cardiovascular disease’ (Theorell et al, 2016).

This section will first describe the **Physical environment** index and its individual components, and will then examine the evolution of physical risks over time, highlighting exposure to different types of risks and the use of personal protective equipment.

Physical environment index

Monitoring the physical environment at work has been central to the EWCS since its inception. Several risks have been observed over the years. The **Physical environment** index comprises 13 indicators related to specific physical hazards (see Table 1).

The evolution of the index over a decade shows a small increase (of one point) at European level in the period 2005–2010 but stability over the next five years, indicating a small improvement in this dimension of job quality.

In 2015, men on average reported a lower physical environment score (81) than women (86). The Physical environment index has increased for men in the last 10 years and remained constant for women, thus slightly reducing the gender gap.

Nevertheless, the evolution of the index masks changes in several areas in terms of individual hazards (Table 1). Since 2005, there has been a reduction in the proportion of workers exposed to ‘breathing in smoke, fumes ... powder or dust’, and an especially substantial decline in tobacco exposure, probably due to the stringent legislation in relation to workplace smoking introduced in many European countries (European Commission, 2013a). Also important is the fall in exposure to noise. Exposure to other ambient risks – high temperatures, low temperatures and breathing in vapours – has remained constant over the period. However, there is a trend of growing exposure to other biological and chemical risks, such as ‘handling or being in skin contact with chemical products or substances’ and ‘handling or being in direct contact with materials which could be infectious, such as waste, bodily fluids, laboratory materials, etc.’ Another relevant change is in the percentage of workers exposed to ‘lifting or moving people’, which is the only posture-related risk among those included in the EWCS that is shown to be on the increase. One explanation could be the recent expansion of the care sector in Europe, where a number of occupations require these types of tasks (European Commission, 2013b).

Table 1: Physical environment index: proportion of workers in EU28 (%) and mean index scores (0–100), 2005–2015

	2005	2010	2015
<i>Proportion of workers in EU28 (%)</i>			
Vibrations from hand tools, machinery (a quarter of the time or more)	24	23	19
Noise so loud that you would have to raise your voice to talk to people (a quarter of the time or more)	30	29	27
High temperatures which make you perspire even when not working	25	22	24
Low temperatures whether indoors or outdoors	22	23	21
Breathing in smoke, fumes (such as welding or exhaust fumes), powder or dust (such as wood dust or mineral dust)	19	17	14
Breathing in vapours, such as solvents and thinners	11	10	11
Handling or being in skin contact with chemical products or substances (a quarter of the time or more)	14	15	18
Tobacco smoke from other people (a quarter of the time or more)	20	11	8
Handling or being in direct contact with materials which could be infectious, such as waste, bodily fluids, laboratory materials, etc. (a quarter of the time or more)	9	11	14
Tiring or painful positions	46	46	44
Lifting or moving people	8	9	10
Carrying or moving heavy loads	35	34	32
Repetitive hand or arm movements	62	63	62
<i>Mean index scores (0–100)</i>			
Physical environment index	82	83	83

Slight improvement in physical risks

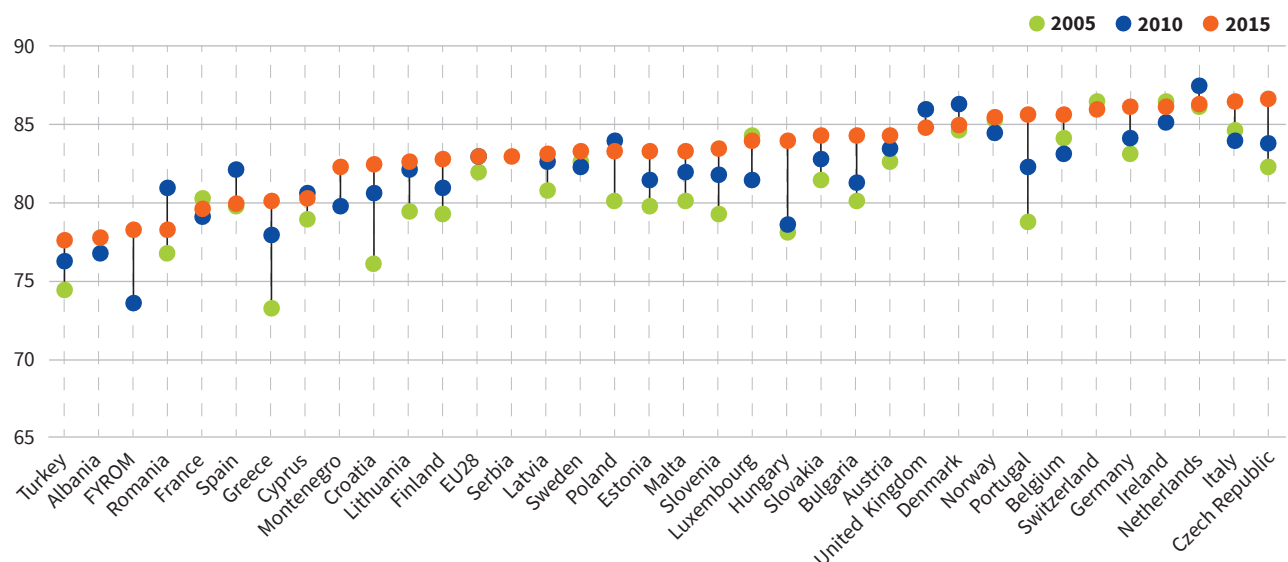
The evolution of the Physical environment index indicates improvements since 2005 in most European countries, with the exception of France (the second-lowest-scoring EU country) and the United Kingdom (Figure 34). The most notable improvements were reported in Greece, Portugal (both countries show a seven-point increase), Hungary and Croatia (both up six points).

In terms of sector, construction has by far the lowest score (70) on the Physical environment index, while financial services and education report the highest (93 and 91 respectively). Occupational differences are also important:

for example, there are 21 points of difference between craft workers (70) and clerks (91). Plant and machine operators (75), agricultural workers (75) and elementary occupations (79) are all lower than the European average (83), while service and sales workers are one point above the EU average.

Based on questions in the EWCS regarding exposure to physical risks, three combined indices were constructed.

Posture-related (ergonomic) risks: This index measures exposure to vibrations, tiring positions, lifting people, carrying heavy loads and repetitive movements. These are the most prevalent risks in Europe and include the risks

Figure 34: Physical environment index (0–100), by country, 2005–2015

that can play a role in the common workplace complaint, musculoskeletal disorders.¹⁰

Ambient risks: This index measures exposure to vibrations, noise, and high and low temperatures related to the experience of specific conditions in specific activities of the economy (mostly in industry, construction and agriculture), as well as generalised exposure to noise.

Biological and chemical risks: This index measures exposure to inhaling smoke and toxic vapours and handling chemical products and infectious materials. Biological and chemical risks can have lethal long-term effects. In 2008, according to the Commission's strategic framework on health and safety for 2014–2020, fatalities associated with chemical substances accounted for almost half of all work-related deaths (European Commission, 2014b). Emerging risks in this area include nanomaterials and other factors linked to the development of biotechnologies. From 2010 to 2015, this area of risk was the only one shown to be increasing.

Figure 35 illustrates levels of exposure to the three forms of risk by country, ordered by exposure to posture-related risks. In addition to the variation across countries, it can be seen that the country ranking is different for each risk category. The fact that posture-related risks are most prevalent does not mean that they necessarily represent the greatest risk to workers' health. The health consequences of exposure must also be considered and, as noted above, these can be especially serious in the case of biological and chemical risks.

In the EU28, Greece, Romania and Cyprus have the highest levels of exposure to posture-related risks, while the lowest levels are found in the Czech Republic, Ireland and Germany. In terms of ambient risks, the countries with the lowest levels of exposure are Italy, Portugal and Belgium, with the highest levels found in Romania, Spain, Greece, France and Cyprus. In relation to the third group of risks, biological and chemical

risks, the highest exposure levels are found in Romania, France and Hungary and the lowest in Portugal and the Netherlands. Some countries score high on all or at least two of these physical risks, such as France and Spain, while others – such as Italy – score consistently on the lower end.

Patterns across the workforce

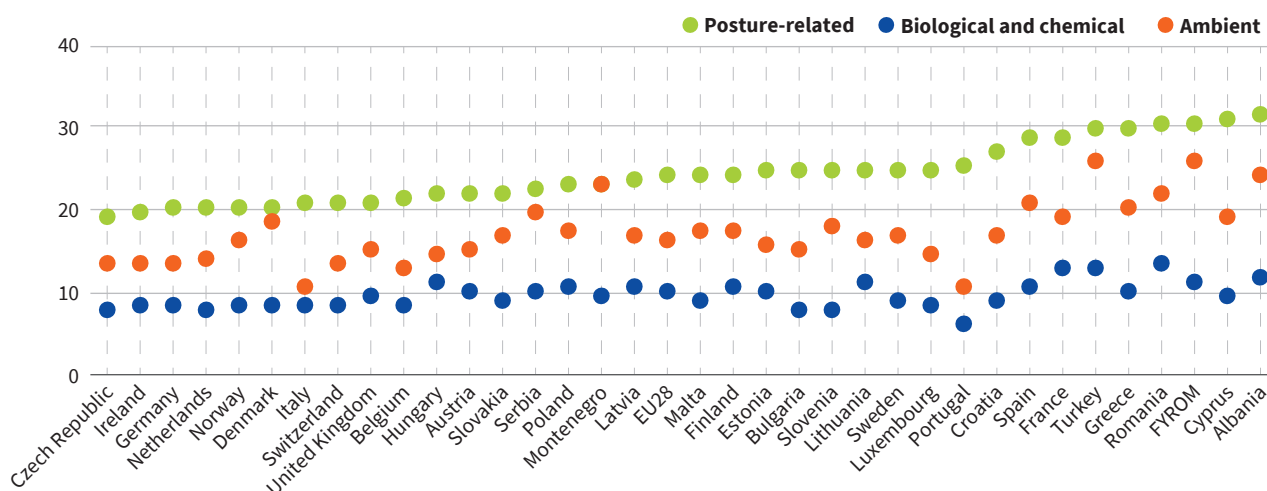
Although women have lower levels of exposure to all three types of physical risk (posture-related, biological and chemical, and ambient) than men, this is not the case for some specific risks (Figure 36). For example, the most prevalent posture-related risk – repetitive hand and arm movements – is reported almost equally by men and women (61% and 62%, respectively). Some 34% of women are exposed to such movements 'all or almost all of the time' – two percentage points more than men. Another posture-related risk, which affects more women (14%) than men (6%), is 'lifting or moving people' and the difference increases when focusing only on those exposed to this risk all or almost all of the time.

Finally, being involved in jobs with posture-related hazards affects more women than men, except in the case of 'carrying or moving heavy loads'.

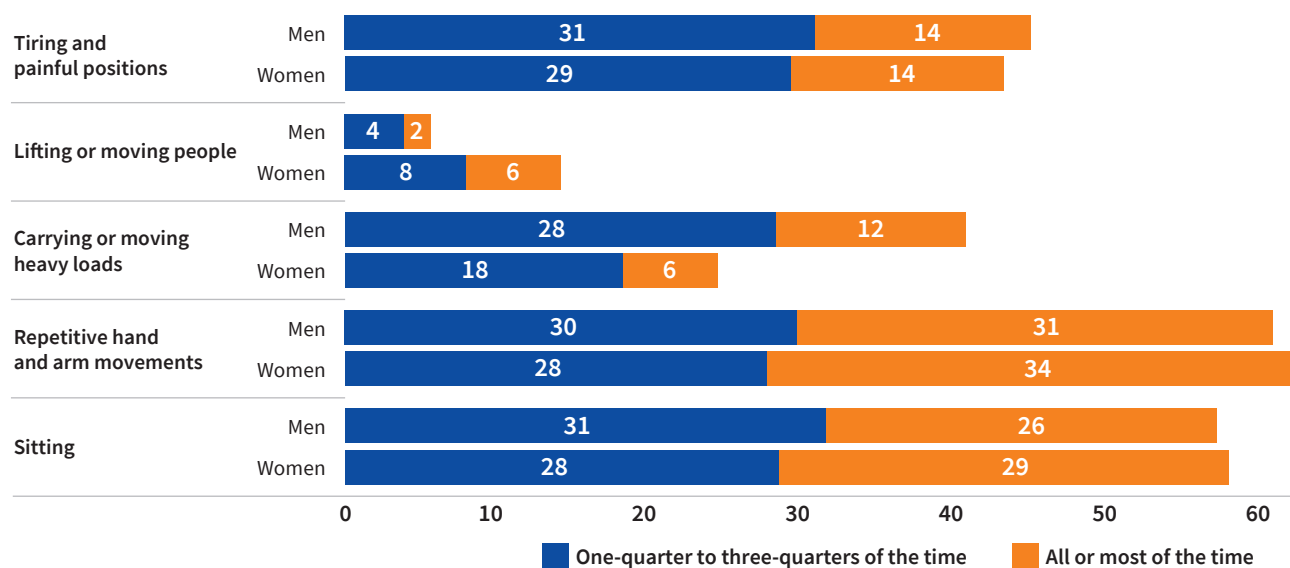
The opposite pattern is reported in relation to noise – with 34% of men and 19% of women being exposed to it. Men (20%) also report higher exposure to the most prevalent biochemical risk – handling or being in contact with chemicals (four percentage points more than women). Women, however, are more exposed than men to direct contact with materials which can be infectious – 16% and 12% respectively. This picture is a reflection of gender segregation across sectors and occupations.

In the context of demographic ageing, it is important to ensure improvements of the physical work environment for all workers. In relation to age, when considering three groups (50+, 35–49 and under 35), the older groups are overall slightly less exposed to posture-related and

Figure 35: Exposure to posture-related, ambient and biological and chemical risk indices (0–100), by country



10 There is a growing body of literature on the association between psychosocial risks and MSDs.

Figure 36: Exposure to different posture-related risks, by sex, EU28 (%)

biological and chemical risks, but not to ambient risks (with the exception of exposure to tobacco smoke).

There are wide variations in sectors and occupations concerning exposure to risk levels. The occupations with the greatest exposure are craft workers, plant and machine operators, agricultural workers and elementary occupations.

Overall, construction displays the highest reported exposure to all types of risk, while financial services displays the lowest.

High exposure to posture-related risks is reported in the construction, agriculture, industry, transport and health sectors. Ambient risks, especially in relation to temperatures, are associated with working outdoors, and this is the situation of many workers in construction and

agriculture. In agriculture, 54% of workers are exposed to very low temperatures and to very high temperatures; the comparable figures for construction are 52% and 48%, respectively. Apart from construction, other sectors with a high level of biological and chemical risk are industry, health and agriculture. In the health sector, the main risk is handling or being in direct contact with infectious materials (50% of workers), while in industry both breathing in smoke, fumes, powder or dust and handling or in being in contact with chemical products are more prevalent risks, at 31% and 24% respectively.

In terms of occupation, craft workers, plant and machine operators and agricultural workers are the occupations with the highest levels of exposure to posture-related risks (Table 2).

Table 2: Scores on posture-related, biological and chemical and ambient risk indices, by occupation, EU28

	Posture-related risks	Biological and chemical risks	Ambient risks
Managers	17	6	11
Professionals	16	6	10
Technicians	18	9	11
Clerks	16	3	8
Service and sales workers	24	8	14
Agricultural workers	32	13	31
Craft workers	38	21	32
Plant and machine operators	35	14	28
Elementary occupations	30	13	20
EU28 average	24	10	16

Use of personal protective equipment

According to the EU Framework Directive 89/391/EEC of 12 June 1989 on the ‘introduction of measures to encourage improvements in the safety and health of workers at work’, it is an obligation for employers to give collective protective measures priority over individual protective measures (meaning protective personal equipment – PPE). However, sometimes it is not possible to address and eliminate all risks through collective measures – in cases, for example, where it is technologically impossible, interferes with the production process or is too expensive – and then wearing PPE becomes a requirement.

The EWCS asked respondents to the survey whether their jobs ever require them to wear PPE. About 38% of workers in the EU28 replied that their jobs do require this. However, of this group, 8% reported that they do not use it. There are many possible reasons for this: the equipment is uncomfortable, access to the equipment is lacking, work has to be carried out at speed, workers are not informed, and so on.

Unsurprisingly, the requirement for PPE is higher in sectors with greater exposure to physical risks (such as construction) and for occupations such as plant and machine operators, craft workers and agricultural workers. The situation regarding the non-wearing of equipment in sectors that require it is worrying, as these are sectors with high exposure to physical risks; in construction and agriculture, 11% and 13%, respectively, report that they do not use PPE.

Other groups in which a high proportion of workers do not always use PPE even though it is a requirement are self-employed workers without employees (13%), workers with non-permanent contracts (11%), and workers with a only primary level of education (15%).

The findings imply that there is still considerable scope for improving awareness about the need to use PPE as a prevention measure in some sectors with a high exposure to risks (such as agriculture and construction), especially for workers on temporary contracts, in low-skilled jobs, and with low education levels.

SUMMARY

Physical environment

The **Physical environment index** measures the physical risks people encounter in their workplace. They include: exposure to noise, dust, chemicals or infectious agents; lifting heavy loads; and repetitive hand movements.

Over the last 10 years, the EU28 as a whole has seen a slow but ongoing improvement on physical risks. On average, men report a lower physical environment score (81 out of 100) than women (86), indicating that they face somewhat greater physical risks. However, conditions have not improved uniformly. There has been a marked reduction since 2005 in the exposure of employees to tobacco smoke, doubtless due to legislation on smoking in workplaces in many countries. In contrast, exposure has increased to chemical products and potentially infectious materials. And with an expansion of the care sector in Europe, more work is being performed in lifting or moving people. Notably, the exposure of men and women to risks differs markedly in many cases, pointing to sectoral and occupational segregation.

Not surprisingly, workers in the construction sector are the most exposed to physical risk (the sector scoring 70 on the index), whereas workers in financial services and education are the least exposed (93 and 91, respectively). Occupational differences display a similar range, with 21 points of difference between craft workers (70) and clerical workers (91).

Turning from the index and looking at the indicators, it is clear that posture-related risks – in particular, repetitive hand and arm movements – are the most prevalent in Europe. Some 62% of workers report this, which plays a role in causing musculoskeletal disorders.

2.3 Addressing work demands

While work intensity can be presented as a way to maintain and develop workers' interest in their activity, high work intensity is associated with a negative impact on health and well-being. Moreover, work intensity is not necessarily linked to better performance for companies: indeed, in many cases, working too fast does not correspond to working in an effective way. Work intensity can lead to poor planning and preparation of tasks at hand, and to delays and defects in quality. High work intensity can be therefore considered to make a negative contribution to job quality.

Numerous epidemiological studies have demonstrated that a high level of demands in itself is associated with an

increased risk of cardiovascular disease, musculoskeletal disease and depression. This is especially the case when combined with limited decision latitude (a dimension included in the Skills and discretion index) and limited job support (a dimension covered in the Social environment index). Two models are particularly influential in this regard: the 'demand-control model' of occupational stress (Karasek, 1979; Karasek and Theorell 1992) and the 'effort-reward imbalance model' (Siegrist, 1996). Both models examine the level of demands in conjunction with other important dimensions of work. Demands that are too limited can also be problematic – in different ways.

This section presents the **Work intensity** index, and goes on to examine its individual components.

Work intensity index

This index measures the level of work demands in the job. If the workload is very high, if the job absorbs too much mental and physical energy, or if the job requires juggling various demands, it becomes difficult to perform tasks in the most effective way.

To measure work demands, the index includes the following: quantitative demands (working fast), time pressure (having tight deadlines, not having enough time to do the job), frequent disruptive interruptions, pace determinants and interdependency, and emotional demands. A total of 13 questions are included in the index (see Table 3).

Looking at the evolution of work intensity over time, there has been a slight re-intensification of work since 2010 – reflected in a one-point increase in the index – but a small decrease overall since 2005. The trend version of the Work intensity index includes a smaller set of indicators because not all questions are measured in previous waves of the EWCS.

In terms of sectors, the health sector has the greatest intensity, at 38 points. It is followed by construction (36), industry (36), financial services (36) and commerce and hospitality (35), which all report above-average levels of work intensity.

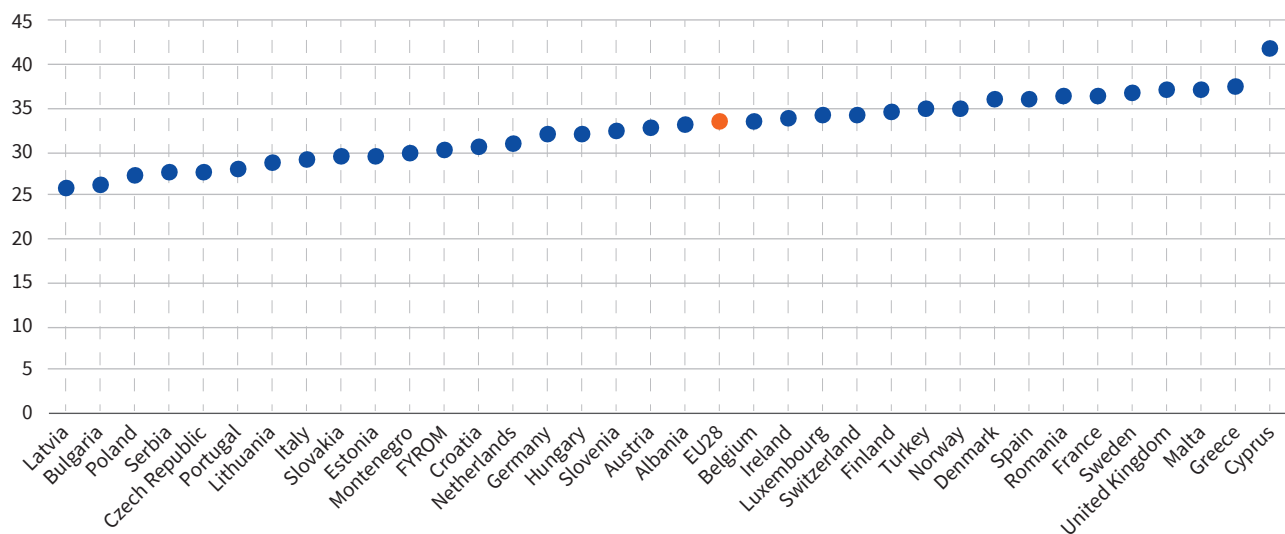
In terms of occupations, managers and craft workers have the highest work intensity (36 on the index). In addition, professionals and technicians (both 35) along with plant and machine operators and clerks (both 34) report above-average levels.

Employees on indefinite contracts and self-employed workers with employees have the highest levels of work intensity (both 35). Self-employed workers without employees have the lowest score on the index (27).

And in terms of company size, the Work intensity index score is highest in bigger companies (38), followed by SMEs (35) and micro companies (29).

Older workers report lower work intensity than younger and middle-aged workers. Traditionally, more intensive work is assigned to younger workers, as older workers find it particularly difficult.

Men and women report a very similar level of work intensity. The source and components of work intensity are different, however; men report more quantitative demands whereas women report more demands linked to meeting customer requests.

Figure 37: Work intensity index, by country, EU28**Table 3: Work intensity index: proportion of workers in EU28 (%) and mean index scores (0–100), 2005–2015**

			2005	2010	2015
			Proportion of workers in EU28 (%)		
		Included in trend version of the index			
Quantitative demands	Working at very high speed (three-quarters of the time or more)	Yes	35	32	34
	Working to tight deadlines (three-quarters of the time or more)	Yes	37	35	37
	Enough time to get the job done (never or rarely)	Yes	12	9	10
	Frequent disruptive interruptions	Yes	15	14	17
Pace determinants and interdependency	Interdependency: three or more pace determinants	Yes	34	32	33
	Work pace dependent on: the work done by colleagues	Yes	42	39	39
	Work pace dependent on: direct demands from people such as customers, passengers, pupils, patients, etc.	Yes	68	67	67
	Work pace dependent on: numerical production targets or performance targets	Yes	42	40	42
	Work pace dependent on: automatic speed of a machine or movement of a product	Yes	19	18	19
	Work pace dependent on: the direct control of your boss	Yes	36	37	36
Emotional demands	Hiding your feelings at work (most of the time or always)	No		25	31
	Handling angry clients, customers, patients, pupils, etc. (three-quarters of the time or more)	No		10	17
	Being in situations that are emotionally disturbing (a quarter of the time or more)	No			31
			Mean index scores (0–100)		
Work intensity index	Trend index score based on limited number of indicators		43	41	42
	Full index score				33

Qualitative demands

In the EWCS, four questions document the experience of work intensity from the workers' perspective: working at very high speed, working to tight deadlines, frequent disruptive interruptions, and not having enough time to do the job.

Intensive work is quite prevalent in Europe: 37% of workers in the EU report working to tight deadlines while 34% report working at high speed 'around three-quarters of the time'. One in 10 (10%) – men and women – reports 'never' or 'rarely' having time to do their job.

Men report greater work intensity than women in the case of working to tight deadlines three-quarters and more of the time (a seven percentage points difference) and working at high speed (two percentage points difference). Women, on the other hand, are slightly more subject to frequent disruptive interruptions than men (one percentage point difference).

Frequent disruptive interruptions in the performance of one's job are reported by 17% of all workers. Of all interruptions, 36% are judged to be disruptive, while the majority (56%) are assessed as being without consequence; 8% are assessed as positive. They are reported by 28% of managers in general and by 26% of workers in the health sector.

Pace determinants and interdependency

The number of pace-of-work determinants and their interdependency are considered an objective indicator of work intensity. These determinants include demands from clients, performance targets, the speed of an automated machine or system, or direct demands from a supervisor. Many studies have analysed the effects of having multiple pace determinants on work intensity; the clash of different determinants can result in the deterioration of other working conditions. The more determinants that come together, the higher the so-called 'interdependency rate'.

Survey findings show that 32% of workers (36% of men and 29% of women) are exposed to three or more pace determinants. Differences between countries are noteworthy: more than 40% of workers are exposed to

a high level of interdependency in Luxembourg (41%), France (41%), Romania (47%) and Cyprus (50%). Nearly half of craft workers and plant and machine operators (45% and 46%, respectively) report three or more pace determinants.

The survey confirms the importance of customers in dictating the rhythm of work: 67% of workers report that their pace of work is dependent on direct demands by customers. And this is the pace determinant showing the greatest variation across occupations: there are 48 percentage points' difference between service and sales workers (81%) and agricultural workers (33%). A large majority of service and sales workers (81%), managers (76%), professionals (76%) and technicians (72%) report direct demands as a key pace determinant.

Over 4 in 10 workers (42%) report that their pace of work is dependent on numerical production targets or performance targets (an increase of two percentage points since 2010). These targets are reported by around half of all managers (47%), plant and machine operators (52%) and craft workers (55%).

The work done by colleagues is an important determinant of the pace of work for many – 39% on average. It does not show much variation between occupations. Direct hierarchical control from one's supervisor remains a significant feature of work organisation for 36% of workers.

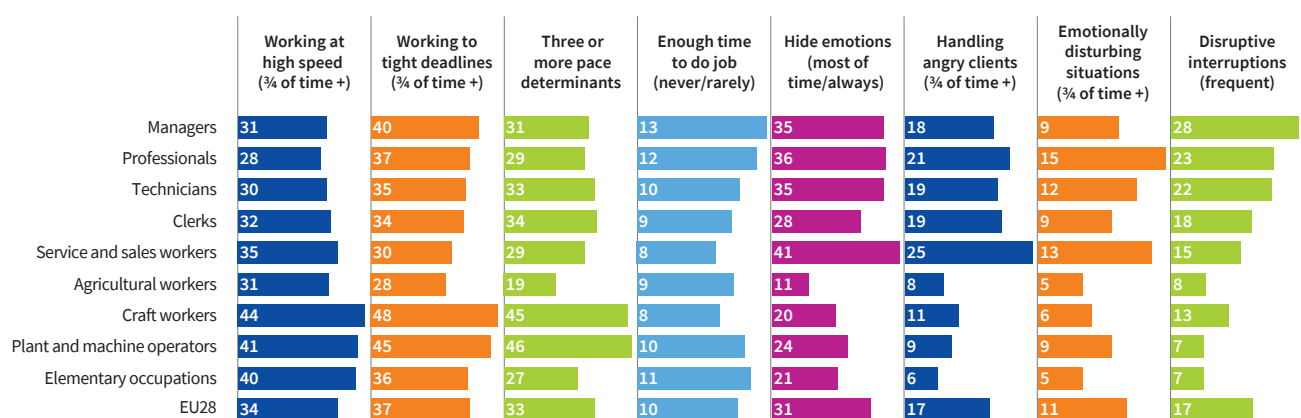
Production lines set the rhythm for 19% of workers (largely plant and machine operators and craft workers).

Emotional demands

Emotional demands captures the situation at work where workers are expected to manage their emotions. Workers may have to hide their emotions, deal with angry clients, or work in emotionally disturbing situations. It takes effort to manage emotions.

Emotional demands are more frequent in jobs that involve dealing with people (particularly those requiring care) and giving them support. High emotional demands have been found in studies to be a predictor of mental health issues, fatigue and burnout. In jobs where emotional demands represent a significant part of the activity,

Figure 38: Components of the Work intensity index, by occupation, EU28 (%)



recruitment and retention have been identified as significant issues. Support measures can be developed – for example, training to prepare for difficult situations – while supportive managers can help to reduce emotional strain, enabling work to be less exhausting mentally. Furthermore, research has shown how workers can develop individual and collective strategies to deal with the emotionally difficult aspects of their job.

Differences between countries with regard to levels of reported emotional demands are striking. While one in three workers in the EU28 hides their feeling ‘always’ or ‘most of the time’ (31%), this is reported by fewer than one in five workers in Denmark, the Netherlands and Norway (between 18% and 19%), but by almost half of all workers in France (46%), Bulgaria (47%) and Greece (50%).

In terms of the indicator ‘handling angry clients, customers, patients, pupils’, 17% on average report facing this situation three-quarters or more of the time: this ranges from 3% to 4% in Denmark, Finland and Norway to 37% in Albania and 30% in Spain. This indicator has been increasing since 2010; similarly, the proportion of workers handling angry clients all or almost of all the time doubled between 2010 and 2015. In terms of sector, the greatest increases in intensity in terms of dealing with angry clients are seen in education, followed by the health sector and to a lesser extent in commerce and hospitality. These are, of course, the sectors where workers have to deal considerably with third parties. This raises the question as to whether relationships between workers and third parties may have deteriorated during the last five years in Europe – an issue that merits further research.¹¹

Another indicator of emotional demands is being in situations that are emotionally disturbing: one in three workers (31%) on average in Europe reports being in such

situations one quarter or more of their time. This ranges from one in five in Portugal and Ireland to more than twice as frequently in Malta (40%), Montenegro (40%), Albania (46%) and Serbia (45%) – and nearly 6 out of 10 in Lithuania.

Women tend to report experiencing emotional demands more frequently than men: 35% of women report having to hide their feelings always or most of the time compared with 28% of men; 36% of women report being in emotionally disturbing situations (27% of men); and 19% of women report having to deal with angry clients three-quarters or more of the time (15% of men).

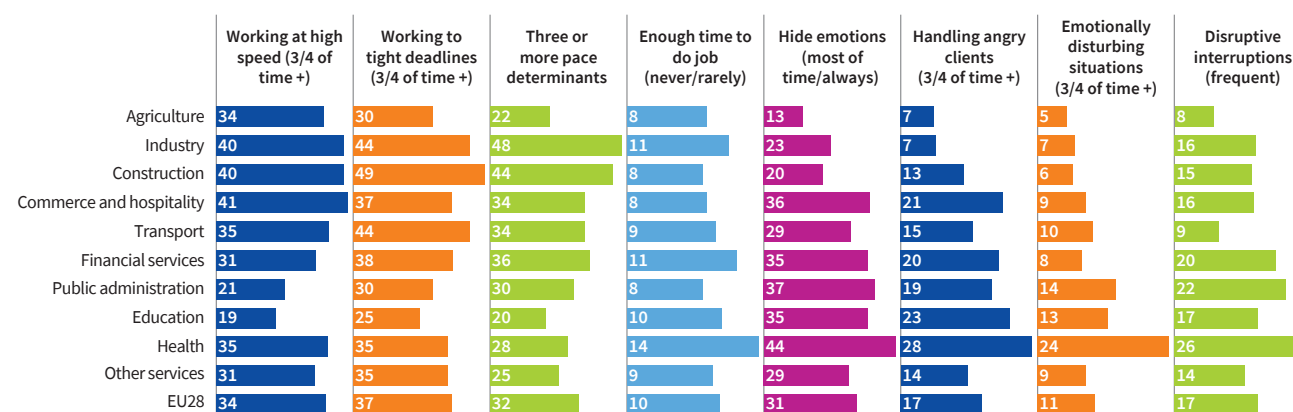
Work intensity and occupation

Looking more closely at occupations, it is interesting to study the various combinations of answers on the individual items constituting the index (Figure 38). Craft workers and plant and machine operators report the highest levels of interdependency (three or more pace-of-work determinants) and are most likely to report working to tight deadlines and working at speed; service and sales workers and professionals report the highest incidence of emotional demands. Frequent disruptive interruptions are more commonly reported by managers, professionals and technicians.

Work intensity and sectors

Sectors display differentiated combinations of work intensity features as Figure 39 illustrates. Workers in industry, construction and transport report a high level of quantitative demands; those in health and commerce and hospitality, too, but at a lower level. These two sectors, however, present high levels of emotional demands (health by far the highest).

Figure 39: Components of the Work intensity index, by sector, EU28 (%)



11 This is the most frequently reported risk factor in the Second European Survey of Enterprises on New and Emerging Risks (ESENER-2) (EU-OSHA, 2015).

SUMMARY

Work intensity

Research has found that demanding work, especially when combined with limited latitude for decision-making and limited support, is associated with an increased risk of serious ill-health. Moreover, from an organisation's perspective, work intensity can result in poor planning of tasks, to delays and to reduced quality of outputs.

The **Work intensity index** combines the following indicators: working at speed and to tight deadlines, not having enough time to do the job; frequent disruptive interruptions; pace determinants and interdependency; and emotional demands.

Work intensity is quite common in Europe. The index is similar for both men and women. Older workers report lower work intensity than younger and middle-aged workers, more intense work being traditionally allocated to younger workers.

Intensity is related to the pace of work – among other aspects – and different elements of a job play a role in determining this pace; these include demands from clients or colleagues, numerical production targets and the pace of an automatic production line. These determinants may act independently, or a number may act together. The more determinants, the greater the intensity. Some 32% of workers (36% of men and 29% of women) are exposed to three or more pace determinants.

Sectors: Industry, construction and transport report a high level of quantitative demands; health and commerce and hospitality too, but at a lower level. On the other hand, these two sectors present high level of emotional demands: workers in health reporting by far, the highest levels.

Occupations: Craft workers and plant and machine operators report the greatest interdependency (45% and 46%, respectively, reporting three or more pace determinants). They also report the highest levels of quantitative demands (working to tight deadlines and working at speed). Service and sales workers and professionals report the highest incidence of emotional work. Managers report exposure to all components of work intensity.

Emotional demands are more frequent in jobs that involve dealing with people – particularly those that require giving care or support. Research indicates that high levels of emotional demands predict mental health issues, fatigue and burnout. Workers may have to hide their emotions, deal with angry clients or work in emotionally disturbing situations. Differences between countries are striking. Fewer than 19% of workers in Denmark, the Netherlands and Norway feel they have to hide their feelings, but for workers in France, Bulgaria and Greece the figure is almost 50%. Having to deal with angry clients, customers or pupils is on the increase. since 2010 – most notably in the education sector, followed by the health sector and commerce and hospitality, the sectors where workers have to deal more with third parties. This is an indication that the relationship between workers and third parties might have deteriorated in recent years.

In part reflecting occupational segregation and the fact that women work more in the service sector, women more frequently face emotional demands than men: 35% have to hide their feelings always or nearly always, as against 28% of men. Meanwhile, 36% of women face emotionally disturbing situations (as against 27% of men), while 19% of women have to deal with angry clients compared with 15% of men.

2.4 Developing working time quality

Working time – its duration and organisation – is important for job quality in two ways. On the one hand, working time plays a role in workers' health and well-being. For example, the extent to which workers are exposed to workplace risks increases with the duration of work, while the availability of sufficient periods for rest is crucial for a proper recovery. On the other hand, a good fit between working time and

non-working time throughout the life course is essential for workers to be able to work and to continue working. A good fit can be promoted through adapting both the duration and the organisation of working time to the needs of organisations and individuals. Today, increasingly flexible and non-standard working time arrangements are being developed with regard to starting and finishing times, rest periods, on-call time, and so on; this is also a result of information and communication technologies (ICT) that allow work to be performed anytime and anywhere.

Working time quality index

This index comprises four dimensions: duration, atypical working time, working time arrangements and flexibility (see Table 4). The first dimension includes long working hours (48 hours or more a week), long working days (10 hours or more a day) and the lack of a recovery period between two working days. Long working hours have been associated with negative health and well-being outcomes such as cardiovascular disease (Kivimäki et al, 2015; Theorell et al, 2016), symptoms of depression (Theorell et al, 2015) and musculoskeletal disorders (Trinkoff et al, 2006).

The second dimension – atypical working time – includes weekend work, night work and shift work. Shift work and night work are associated with negative consequences for health and well-being, such as increased risk of cardiovascular disease, fatigue, reduction in the quantity and quality of sleep, anxiety, depression, gastrointestinal disorders, increased risk of miscarriage, low birth weight and premature birth, and cancer (Harrington, 2001).

The third dimension covers discretion over working time arrangements, based on answers to questions on who sets the working time arrangements and to what extent workers are informed in advance of changes in their work schedules or are requested to come to work at very short notice. In principle, more discretion by workers is a positive resource.

The last dimension – flexibility – includes the possibility to take an hour or two off during working hours to take care of personal or family matters, as well as the issue of working in one's free time to meet work demands.

The evolution of working time quality over time is presented in a reduced index (the trend index). This covers all indicators except for recovery period, requests to come to work at short notice, the possibility to take time off to take care of personal or family matters and working in one's free time. The index shows that working time quality has increased in the EU28 by two points since 2005, with an overall score of 84 points in 2015. It has increased or remained stable in most European countries in the same period.

The full Working time quality index results (an overall score of 70 points in 2015) show that differences in working time quality between men and women, age groups and countries are minimal. Women report a higher working time quality than men (+4 points) and older workers have a higher quality than workers in the middle age category – 35 to 49 years (+3 points).

There are moderate differences in working time quality by country, occupation and sector. The lowest value for working time quality is reported in Greece (66 points out of a possible 100), the former Yugoslav Republic of Macedonia and Spain (both 67 points) and the highest in Austria, Bulgaria, Germany, Italy, the Netherlands and Portugal (all 73).

In line with the results of the fifth wave of the EWCS, working time quality is lowest in transport (66) and agriculture (66) and highest in financial services (74) and public administration (73). In terms of occupations, clerks report the highest value on the index (77), while managers (64) and plant and machine operators (68) show a lower score.

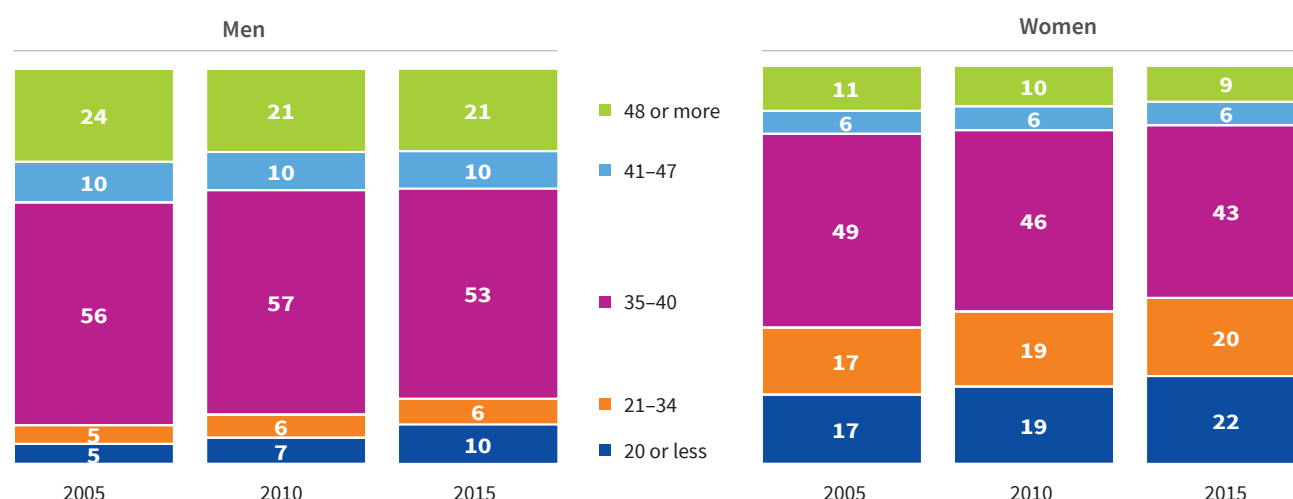
Differences are visible in terms of employment status: employees report a higher working time quality (71 points) than self-employed without employees (68) and self-employed with employees (60). These differences can in part be explained by existing regulations: the Working Time Directive limits long working hours, but this is not applicable to self-employed individuals.

Table 4: Working time quality index: proportion of workers in EU28 (%) and mean index scores (0–100), 2005–2015

			2005	2010	2015
<i>Proportion of workers in EU28 (%)</i>					
		Included in trend version of the index			
Duration	Long working hours (48 hours or more a week)	Yes	19	17	16
	No recovery period (less than 11 hours between two working days)	No			26
	Long working days (10 hours or more a day)	Yes	36	32	32
Atypical working time*	Night work	Yes	19	18	19
	Saturday work	Yes	53	51	52
	Sunday work	Yes	28	28	30
	Shift work	Yes	17	17	21
	• daily split shift	Yes	7	8	7
	• permanent shift	Yes	38	38	41
	• alternating/rotating shifts	Yes	50	50	48
	• other type of shift work	Yes	5	4	4
Working time arrangements**	<i>Control over working time arrangements</i>				
	Set by the company	Yes	56	59	56
	Can choose between different schedules	Yes	9	8	9
	Can adapt working hours	Yes	17	16	18
	Entirely determined by self	Yes	18	17	16
	<i>Change in working time arrangements</i>				
	No regular change	Yes	69	65	69
	Change the same day	Yes	8	8	5
	Change the day before	Yes	9	9	8
	Change several days in advance	Yes	11	13	12
	Change several weeks in advance	Yes	4	4	5
	Requested to come to work at short notice (at least several times a month)	No			12
Flexibility	Very easy to arrange to take an hour off during working hours to take care of personal or family matters	No			26
	Work in free time to meet work demands (several times a month)	No			22
<i>Mean index scores (0–100)</i>					
Working time quality index	Trend index score		82	84	84
	Full index score				70

Notes: * Contribution of shift work to index: no shift scores 100, permanent shifts scores 66, alternating shifts scores 33 and daily split shifts scores 0.

** Scores 100 if working time arrangement is not set by the company or set by the company but no changes in arrangements occur. Scores 75 if set by the company and changes occur several weeks in advance, 50 if several days in advance, 25 if the day before, 0 if on the same day.

Figure 40: Usual weekly working hours for men and women, EU28, 2005–2015 (%)

Working hours' duration

Overall, the trend towards a decline in the average usual weekly working hours continues. The EU28 average shows a decrease over time: from 38.6 hours in 2005 to 37.6 hours in 2010 and 36.1 hours in 2015 (following the same pattern as identified in the EU-LFS – from 38 hours in 2005 to 37.2 hours in 2014).

This decline is essentially due to the fact that more workers are working part time and fewer are working long working hours (48 hours per week or more), a trend equally prevalent among women and men. In 2015, some 16% of workers worked 20 hours per week or fewer, compared with just 11% of workers in 2005, while the proportion of those working 48 hours or more declined from 18% to 15%. On average, men continue to work more paid hours than women (Figure 40).

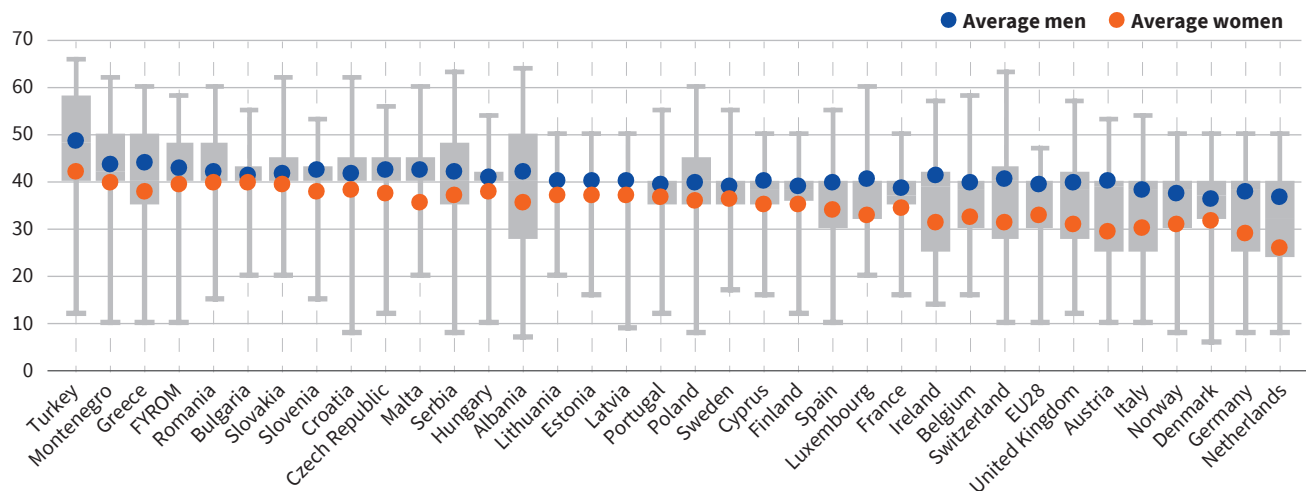
The decrease in weekly hours was experienced by all groups of workers defined by age, sex, employment status and contract, with the exception of self-employed workers with employees and part-time workers, who, on average, are working longer in 2015 than in 2005. Self-employed workers without employees, however, report the largest decline in average working hours (7 fewer hours per week on average than in 2005).

Recent Eurofound research on this topic has pointed to the variety of regimes for setting working time in the EU, in which regulation and collective bargaining interact in different ways and at different levels to define working time standards (Eurofound, 2016).

Part-time work continues to be extensively used in the Netherlands (by 42% of workers) and in Germany, Ireland and the United Kingdom (all above 30%). On the opposite end of the scale lies a group of countries where only 10% of respondents or fewer work short hours: Slovakia, Bulgaria, Malta, Turkey, Cyprus, Romania, Estonia, France and Croatia. Country differences in the distribution of working hours are important because they reflect both sectoral and occupational composition, national traditions and the influence of working time regulations (Figure 41).

While some countries, such as Lithuania, Luxembourg, Cyprus or Sweden, do not display a wide distribution of hours worked, in others, such as Greece, Poland and Spain, dispersion is much wider. The classic 40-hour week remains the standard reference period and is the mode in the vast majority of countries, with the exception of Belgium (38 hours), France (35 hours), Denmark (37), Norway (38), Switzerland (42) and Turkey (60). Nevertheless, 29% of all workers (42% of women and 16% of men) work 34 hours or fewer per week – this contrasts with the figure of 21% of workers in 2005.

Working hours vary also according to employment status, sector, occupation and the size of the workplace (Figure 42). Self-employed workers tend to work more hours than employees – in particular, those with employees. Short working hours (34 hours or fewer per week) are more frequent among employees with fixed-term contracts or with 'other or no contract'. Very short working hours (20 hours or less) were reported by over 20% of self-employed workers without employees.

Figure 41: Usual weekly working hours, by country and sex, 2015

Note: The grey box represents the interquartile range (i.e. 50% of workers fall within the box limits) and the lines (whiskers) represent the 5th and 95th percentiles.

Figure 42: Usual weekly working hours by employment status, occupation, sector and workplace size, EU28 (%)

Table 5: Working hours and association with aspects of working conditions, EU28

	Very short working hours (20 hours or fewer) (% of respondents)	Short working hours (34 hours or fewer) (% of respondents)	35 hours or more (% of respondents)	Odds ratio (very short working hours)	Odds ratio (short working hours)
Belongs to the 20% with the lowest income [40% with lowest income]	69 [83]	51 [73]	7.8 [26]	16.806	13.708
Would prefer to work more hours than currently	43	35	4.8	8.206	12.729
Good fit between working hours and family and social commitments	92	90	78	2.717	2.486
Very easy to take time off to take care of personal or family issues	34	30	23	1.851	1.536
Job offers good career prospects	28	31	41	0.658	0.672
Might lose job in the next six months (job insecurity)	20	19	15	1.396	1.444
Non-indefinite contracts and self-employed without employees	49	40	22	3.302	2.470
Engages in night work	11	12	22	0.542	0.498
Health or safety at risk because of work	14	17	25	0.566	0.688
Work affects health negatively	16	19	28	0.539	0.669

Note: The effect of working short or very short hours on the different variables is given by the odds ratio, which compares the probability of a phenomenon occurring between the presence and absence of a given situation. In this situation, an odds ratio of 1 means the phenomenon is equally likely for those working short or very short hours and those not working short or very short hours. If it is greater than 1, it means the phenomenon is more likely for those working short or very short hours; if it is less than 1, it means that the phenomenon is less likely for those working short or very short hours. The effects are controlled for variation between country, sectors and occupations. All odds ratio are statistically significant ($p < 0.05$).

Very short working hours

Working very short working hours (Table 5) is associated both with lower earnings and with a strong preference for working longer hours, suggesting that this type of schedule is not the preferred option for many. In addition, job insecurity is highest for those working very short working hours and this group is less likely to report having good career prospects.

On the positive side, those working very short hours are more likely to report a better work–life balance, as well as finding it easier to take time off to attend to family and personal issues. They are also less likely to report that their health and safety is at risk due to work, that work affects their health negatively or to engage in night work.

Long working hours

Long working hours have proved to be associated with such conditions as depression, anxiety, sleep disorders and coronary heart disease (Kivimäki et al, 2015; Bannai and Tamakoshi, 2014). They also make reconciling work with other parts of life more difficult.

About 15% of workers in the EU28 usually work long hours (48 hours or more per week): 21% of men and 9% of

women. Long working hours are reported by more than half of the self-employed with employees (54%), one-third of the self-employed without employees (34%) and about one in 10 employees. The proportion of individuals reporting long working hours varies greatly between countries. In the former Yugoslav Republic of Macedonia, Greece, Albania and Montenegro, more than one-third of workers report long hours. In Turkey, the proportion reaches 56%. At the opposite extreme are Luxembourg, Germany, Denmark and Norway where long working hours are reported by fewer than 10% of workers.

Workers reporting long working hours are more likely to have problems with work–life balance and health than workers with standard working hours: as Table 6 shows, they are almost four times less likely to report a good balance between working hours and social commitments. This group is more likely to report that their health and safety is at risk because of work, that work affects their health negatively and that they feel exhausted at the end of the working day. Moreover, they are twice as likely to report presenteeism – working when sick – than other workers.

Table 6: Long working hours and association with aspects of working conditions, EU28

	Working fewer than 48 hours (% of respondents)	Working 48 hours or more (% of respondents)	Odds ratio (working 48 hours or more)
Good balance between working hours and family and social commitments	86	62	0.267
Health and safety at risk because of work	22	31	1.633
Work affects health negatively	24	35	1.696
Working at high speed at least half the time	45	56	1.522
Not feeling well paid for the job	29	35	1.388
Consulted before work targets are set (always or most of the time)	45	56	1.363
Presenteeism	41	55	2.008
Feeling exhausted at the end of the working day	31	44	1.677

Note: The effect of working long hours on the different variables is given by the odds ratio, which compares the probability of a phenomenon occurring between the presence and absence of a given situation. In this situation, an odds ratio of 1 means the phenomenon is equally likely for those working fewer than 48 hours and those working long hours (48 hours or more); if it is greater than 1, it means the phenomenon is more likely for those working long hours; if it is less than 1, it means that the phenomenon is less likely for those working long hours. The effects are controlled for variation between country, sectors and occupations. All odds ratio are statistically significant ($p < 0.05$).

Long working days

About one-third of respondents (32%) in the EU28 worked more than 10 hours a day at least once in the month prior to the survey. On average, men worked 3.1 long days per month and women 1.6 long days. Workers aged 35–49 years – an age group typically having substantial care responsibilities (two-thirds being working parents) – also report a high incidence of long days. The average number of long working days varies significantly by country: it is very high in Turkey (4.6 days a month), Malta (4.2), the United Kingdom (3.6), Ireland (3.5), Sweden (3.1), Albania (3.1), Greece (3) and Finland (2.9).

Self-employed workers are much more likely to report long working days: 65% of the self-employed with employees and 45% of those without reported working at least one long working day a month. A higher proportion of employees with indefinite contracts work long days (30%) than those with fixed-term contracts (24%) or with ‘other or no contract’ (19%).

Managers, agricultural workers and professionals are the occupations with the largest proportions of individuals reporting long working days, while clerks and elementary occupations have the smallest.

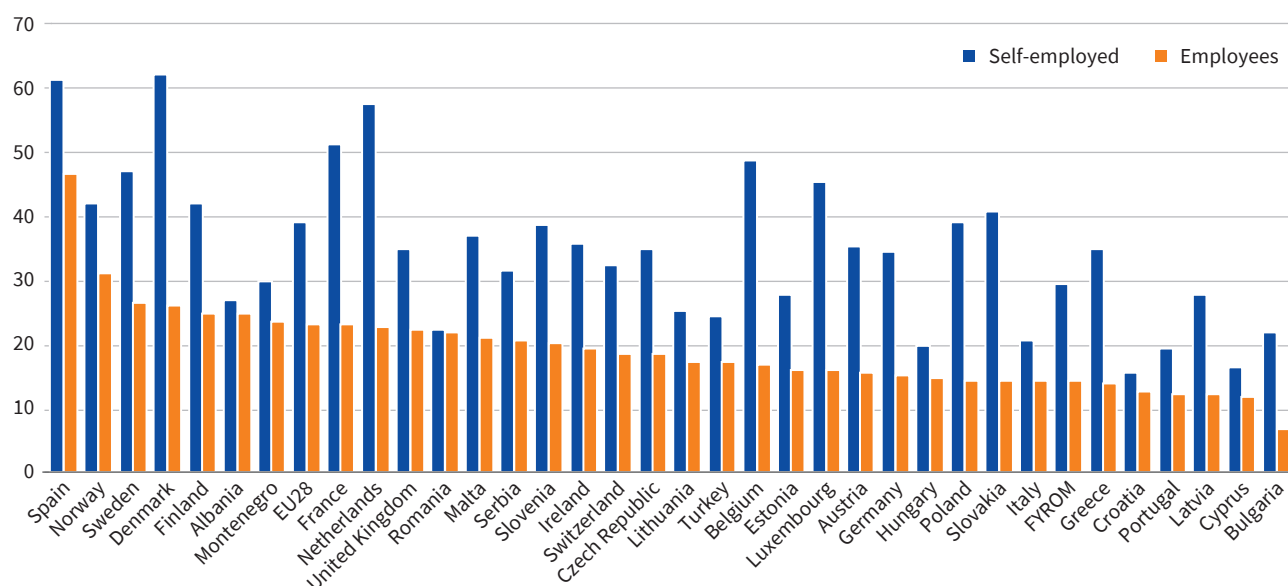
Time between work periods

According to the EU Working Time Directive, workers are entitled to a ‘minimum daily rest period of 11 consecutive hours per 24-hour period’ and to a rest break when the working day is longer than six hours. A new question in the sixth EWCS asks workers whether – at least once during the previous month – they had a break of fewer than 11 hours between the end of one working day and the start of the next. A quarter of all workers (26%) reported such an occurrence: 23% of employees but 36% of self-employed workers without employees and 46% of self-employed with employees (the latter two groups are not necessarily covered by the directive as they have ‘autonomous decision-making powers’).

Health, transport, construction and agriculture are the sectors with the largest proportions of workers reporting having fewer than 11 hours between two days of work; in terms of occupations, above-average proportions of managers and agricultural workers report this.

Proportions per country for employees range from 7% in Bulgaria to 26% in Sweden and 31% in Norway (Figure 43). Spain is exceptionally high with 49% of employees reporting such an occurrence. The reasons for such a high proportion will be further explored.

Figure 43: Workers reporting fewer than 11 hours between the end of one working day and the start of the next, by employment status and country (%)



Note: The reported incidence is at least once in the previous month.

The proportion of workers reporting having a period of less than 11 hours between two days of work increases with the level of income and with the number of hours worked. Workers who have multiple workplaces also more frequently report not having enough rest between two working days.

One group that is particularly at risk are those working 48 hours or more. Workers with long working weeks are not only twice as likely to feel exhausted at the end of the working day, but also twice as likely to have insufficient rest between days of work, making recovery from work more difficult (Table 6). Exhaustion might also be related to their high work intensity, which is confirmed by their intensity index score of 38 compared to 33 for other workers.

Atypical working time arrangements

In certain situations, work is performed at times that are usually reserved for other parts of life such as weekends, evenings and nights. These working hours are also known as 'atypical' and give workers fewer opportunities to interact socially.

More than half of the EU28 respondents (52%) report working at least one Saturday a month – the same proportion as in 2005. Almost one-quarter (24%) reports working at least three Saturdays a month, roughly the same as in 2010. Saturday work is more commonly reported by men (56%) than women (47%). Between 2010 and 2015, the extent of Saturday work decreased for agricultural workers (from 85% to 77%) and increased for managers (from 56% to 62%), for technicians (40% to 45%) and for craft workers (47% to 50%). Unsurprisingly,

Saturday work is extensively practised by the self-employed (over 75% doing so).

Three workers in every 10 report working at least one Sunday a month (an increase of two percentage points since 2010) and 11% at least three times a month. As with Saturday work, Sunday work is reported more by men (32%) than women (29%). Between 2010 and 2015, it increased for managers (from 31% to 40%), service and sales workers (from 43 to 47%), but decreased for agricultural workers (from 62% to 48%). Sunday work is particularly extensive in agriculture (decreasing from 56% to 50%), commerce and hospitality (increasing from 34% to 39%), and health (increasing from 46% to 50%). Sunday work is also frequently reported by the self-employed, especially if they have employees: 46% compared to 42% for the self-employed without employees.

Almost two workers in every 10 (19%) report working during the night (defined as working two or more hours between 22:00 and 05:00) at least once a month. This is more common among men (24%) – particularly if they are under 50 years of age (26%) – than among women (14%).

According to the EWCS, about 21% of all workers in the EU report working shifts, which represents a strong increase from the 17% recorded in both 2010 and 2005.¹² The most prevalent type of shift work is alternating or rotating shifts, followed by permanent shifts (mornings, afternoons or nights). Daily split shifts, which involve a break of at least four hours between working periods, are less common. This distribution has remained relatively steady since 2005.

Differences in the proportions of men and women doing shift work are small. In terms of occupation, shift work is

¹² The EU-LFS reports a lower level of shift work (18%) than the EWCS.

Table 7: Shift work and association with aspects of working conditions, EU28

	Shift work (% of respondents)	No shift work (% of respondents)	Odds ratio (shift work)
Good fit between working hours and family and social commitments	71	84	0.511
Health and safety at risk because of work	35	21	1.932
Work affects health negatively	35	24	1.628
Working at high speed at least half the time	58	44	1.792
Not feeling well paid for the job	37	29	1.301
Feeling exhausted at the end of the working day	41	32	1.381
Consulted before work objectives are set (always or most of the time)	37	48	0.722
Able to do job until 60	63	75	0.587

Note: The effect of shift work on the different variables is given by the odds ratio, which compares the probability of a phenomenon occurring between the presence and absence of a given situation. In this situation, an odds ratio of 1 means the phenomenon is equally likely for those working shifts and those not working shifts. If it is greater than 1, it means the phenomenon is more likely for those working shifts. If it is less than 1, it means that the phenomenon is less likely for those working shifts. The effects are controlled for variation between country, sectors and occupations. All odds ratio are statistically significant ($p < 0.05$).

most prevalent among service and sales workers (37%) and plant and machine operators (38%). By sector, shift work is most common in health (41%), transport (33%), industry, and commerce and hospitality (28% for both sectors). What is striking is the low proportion of the self-employed reporting shift work: 7% of those with employees and only 5% of those without employees.

As Table 7 shows, workers doing shift work – irrespective of the type of shift – are less likely to report a good fit between working hours and family and social commitments and are more likely to report that their health and safety is at risk because of work and that work affects their health negatively. They are also more likely to report working at high speed, feeling exhausted at the end of the working day and not feeling they are paid appropriately for their efforts and achievements in their job. In addition, they are less likely to report that they feel they will be able to do the same job when they are 60 years old.

Regularity of working hours

The regularity of working hours refers to the extent to which people work the same hours every day or every week and the same number of days every week. In general, this regularity facilitates the planning and combination of work with private or family life but – depending on a number of factors such as household composition, non-work activities or life stage – some workers may find irregular working hours more suitable for them and their families. They may also prefer some employee-orientated flexitime. Regular (or irregular) working can be the results of workers' choices in a context where companies do not require it of them.

The EWCS captured four aspects of regularity – working the same number of hours every day, the same number of hours every week, the same number of days every week and fixed starting and finishing times. The vast majority of workers works the same number of days every week (75% doing so) and the same number of hours every week (64%). Regular working hours (the same hours every day) are a pattern reported by 57% of respondents – more so by women aged 35–49 years (62%) and less so by men aged 50 and over (52%). Moreover, 62% of all workers report having fixed starting and finishing times, again a pattern more common among women (67%) than men (57%).

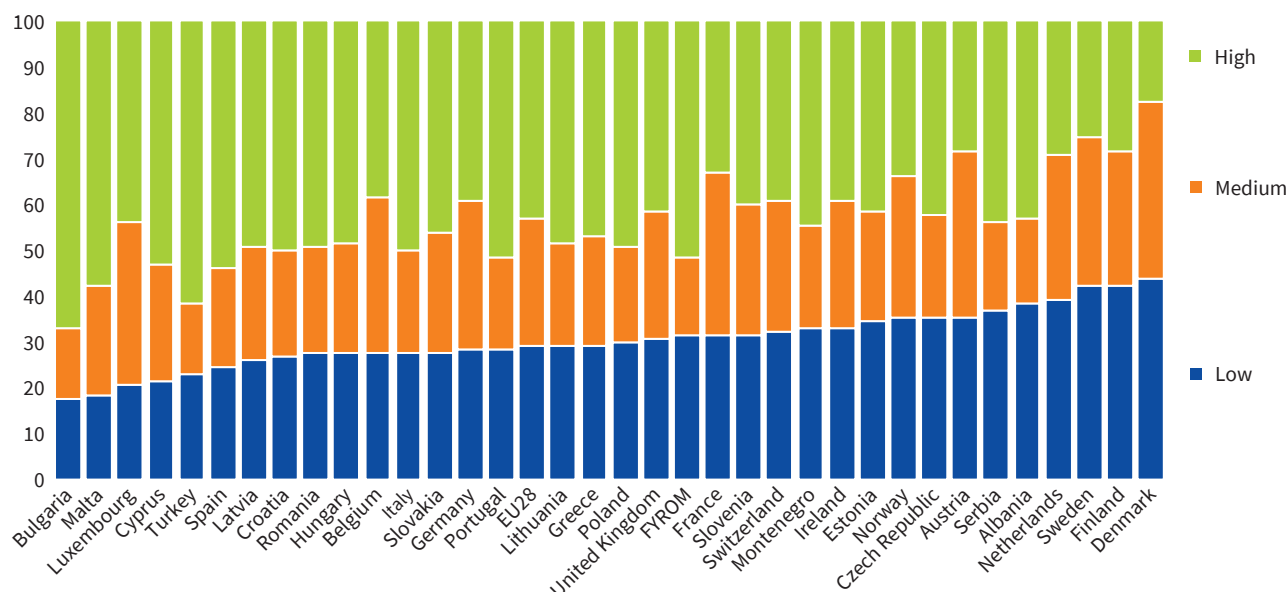
Working hours can be grouped into three categories according to their regularity.

High regularity: All four aspects of regularity: the same number of hours every day, the same number of days every week, the same number of hours every week, and fixed starting and finishing times; 44% of workers in 2015 report high regularity, one percentage point less than in 2005.

Medium regularity: Between two and three of the four aspects; the proportion of workers with medium regularity has increased – from 19% in 2005 to 27% in 2015.

Low regularity: One aspect only; the proportion of workers with low regularity has been decreasing: from 36% in 2005 to 29% in 2015.

Low regularity is reported more often by men (33%) than by women (25%), and by more self-employed workers than employees. Figure 44 shows the breakdown by country: Bulgaria, Malta and Luxembourg have the greatest regularity, and Denmark, Finland and Sweden have the least regular hours.

Figure 44: Regularity of working hours, by country (%)

In terms of occupation, agricultural workers (59%) and managers (43%) display the largest proportions of low regularity of working hours. By sector, agriculture has the largest proportion of workers reporting low regularity (58%), while industry has the smallest proportion of workers reporting high regularity (54%). Construction, commerce and public administration have a large proportion of workers with a high regularity of working hours (above 45%).

The regularity of working hours is strongly associated with a good fit between working hours and workers' family and social commitments: workers with a high regularity are almost 2.5 times more likely to report a good or very good fit.

Working time arrangements

For most workers in the EU (56%), working time arrangements are set by the company (or organisation) with no possibility for change. Almost 1 in 10 workers (9%) says they can choose between several fixed schedules, while 2 in 10 (18%) report they can adapt their working hours within certain limits. The remainder (around 16%) report that working hours are entirely determined by themselves. This is very similar to the situation in 2005.

By occupation, managers and agricultural workers are the least likely to have their working hours determined by the company or organisation. By sector, more than 60% of workers in transport, education and industry have their working hours set by their organisation.

Workers whose working time arrangements are set by the company or who can choose between several fixed schedules were also asked if there are regular changes to these arrangements and, if so, how long in advance are they informed about those changes. A majority of workers (69% in the EU28) report that changes to their working time arrangements do not happen regularly. However, if changes happen, notice can be short: 5% of workers are informed about changes in their working time arrangements the same day as they occur (9% in 2005), 7% are given a day's notice (the same figure as 2005), 12% are informed several days in advance (a two percentage point increase since 2005) and 5% are informed several weeks in advance (the same figure as 2005). Those who are informed of changes on the day or the day before are three times less likely to report a good work-life balance.

Blurring the boundaries between work and other aspects of life

Working in one's free time to meet work demands is carried out by one worker in five (22%) several times a month, with 7% reporting that they do this several times a week and 2% doing it every day. Conversely, 55% of respondents say they have never had to work in their free time to meet work demands. The differences between men and women in this respect are small, but indicate, nevertheless, that there are slightly more men than women working in their free time in the 35–49 years age group: 50% compared with 44%.

On average, 2% of all workers report working daily in their free time to meet work demands, and this is more common among managers (7%), agricultural workers (7%) and professionals (5%), as well as self-employed workers with employees (7%) and without employees (5%).

Working in one's free time is associated with a poor work–life balance. While only 14% of the group not working in their free time reported difficulties with work–life balance, the figure for those who work in their own time on a daily basis is 41%. This relationship with work–life balance is stronger for men.

Working in one's free time seems also to be related to income level and the usual number of working hours, as can be seen in Figures 45 and 46.

A large proportion of respondents – almost 40% – stated that over the previous 12 months they had been requested to come into work at short notice. As a daily occurrence this is rare, only 1% of respondents reporting it. It is more common several times a month (for 9%) and several times a week (3%). It most commonly happens occasionally, 27% saying it happens 'less often'.

Being requested to come into work at short notice at least several times a month is more common among certain occupations – service and sales workers (17%) and agricultural workers (16%) – and less common for clerks (5%). It is also prevalent among certain sectors of activity: agriculture, transport, construction (all 16%) and health (17%). Employment status is also relevant: self-employed workers (24% of those with employees and 20% of those without) and employees with 'other or no contract' (19%) present higher-than-average proportions of individuals reporting being requested to come into work at short notice.

Figure 45: Working in free time and at short notice, by income quintile, EU28 (%)

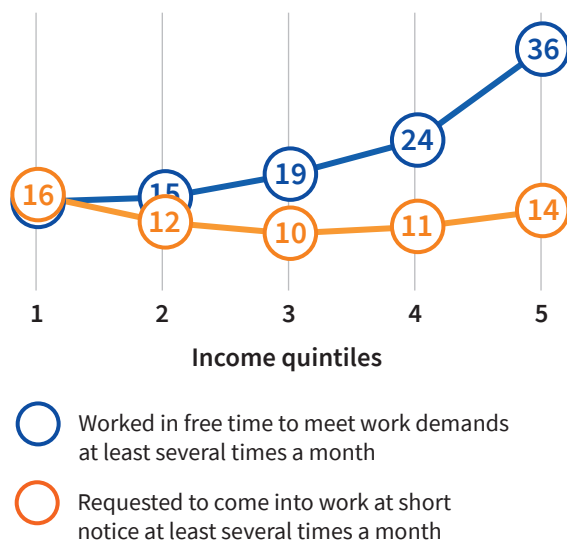
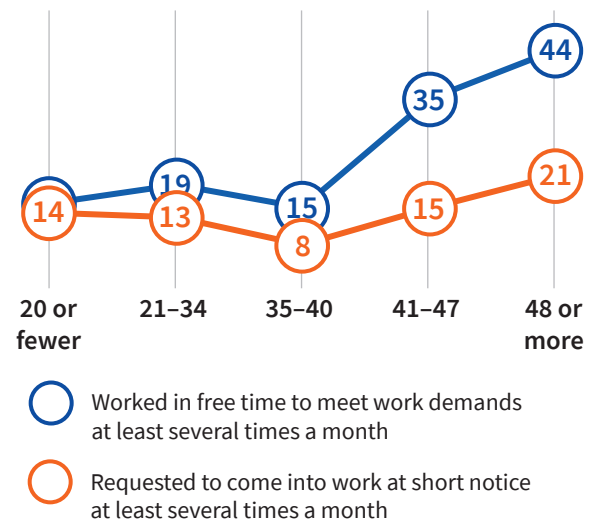


Figure 46: Working in free time and at short notice, by usual weekly hours in main paid job, EU28 (%)



Note: The income quintiles are numbered in ascending order; hence, '5' is the highest quintile.

Time off for personal matters

Overall, 66% of workers in the EU28 (68% of men and 63% of women) report that arranging to take an hour or two off during working time to take care of personal or family matters is fairly easy (40%) or very easy (26%). There is a wide variation regarding this dimension across countries, from 42% in the Czech Republic to 85% in the Netherlands.

The possibility of taking time off during working hours to take care of personal or family matters varies greatly according to the worker's occupation: it is fairly difficult or very difficult for 46% of plant and machine operators and for 43% of service and sale workers.

Place of work

Place of work is an important determinant of a person's work experience. Developments in ICT have facilitated working from places other than the employer's premises. Working outside the employer's premises – either working from home or from other places of work – is a feature of working life for a number of occupations. The diffusion of mobile ICT, combined with incentives to limit travel time due to traffic and CO₂ emissions, and an awareness of the benefits of work-life balance, have all triggered an increase in working away from the company's premises. (The issue of e-nomads is discussed in Section 2.6 below.)

The vast majority of workers in the EU (70%) have a single regular workplace (particularly employees), while 30% carry out their work in multiple locations. The proportion of workers with multiple workplaces varies substantially between countries: from a low of 17% in Turkey to over 40% in the Nordic countries.

The proportion of workers reporting working in multiple workplaces is larger for men than for women and increases with age. It is also larger for self-employed workers (with and without employees) agricultural workers and managers and is particularly prevalent in the construction, transport and agriculture sectors. Having multiple places of work seems to be associated with a slightly poorer work-life balance: 77% of those who have multiple places of work report that their working hours fit well or very well with family and social commitments, compared with 83% of those with a single main workplace.

Working in multiple workplaces is common among workers whose job consists either totally or in part of visiting customers, patients and clients. Some 56% of all individuals working in multiple workplaces are involved in this role. A majority of the self-employed with employees report working daily in their own premises (72% doing so) but are also more likely to work on a daily basis in the client's premises (13%), in a car or vehicle (14%), outdoors (13%) or from home (16%). Self-employed workers without employees are less likely to work in their own premises (only 48% doing so) but are more likely to work daily in the client's premises (18%) or from home (23%).

In general, a small proportion of workers report working in public spaces such as coffee shops and airports: 3% daily, 3% several times a week, and 4% several times a month.

Perhaps not surprisingly, working from home is most frequently practised by agricultural workers, then by self-employed individuals, professionals and managers. In terms of sectors, it is again most common in agriculture, then in education and other services. Working from home tends to be slightly more common for women than men; this difference is greater for older age groups.

SUMMARY

Working time quality

An overview of the **Working time quality index** indicates that working time quality has improved in the EU28 – rising by 2 points to 84 points since 2005; it has increased or remained stable in most Member States. The index is lowest in transport and agriculture; it is highest in financial services and public administration. Differences between sectors are moderate, ranging from 66 to 74 index points. They are similarly moderate in terms of occupations (from 64 to 77 points); clerks have the best working time quality, while managers and plant and machine operators have the lowest. Employees have a somewhat higher working time quality than self-employed workers, in part the result of the Working Time Directive, which limits long working hours – but not for self-employed workers.

Shorter working week: This is the outcome of more workers working part time and fewer workers working long working hours (48 hours or more). On average, men continue to work more paid hours than women. However, self-employed workers (with employees) and part-time workers on average are working longer now than 10 years ago. Interestingly, self-employed workers without employees report the largest decline in working hours – 7 fewer hours per week than in 2005.

Long working hours: Some 15% of workers in the EU28 habitually work 48 hours or more per week. Gender differences are stark: 21% of men work such long weeks as against 9% of women. Self-employed workers are much more likely to work long weeks: 54% of the self-employed with employees and 34% of those without employees. In contrast, only around 10% of employees do so. The proportions of individuals reporting long working hours vary

greatly between countries, reflecting the influence of working time regulations. In Turkey, 56% of workers work more than 48 hours per week. In contrast, only 10% in Luxembourg, Germany, Denmark and Norway do so.

Workers who work long hours are almost four times less likely than other workers to report a good fit between working hours and social commitments. They are also more likely to say that their health and safety is at risk because of work, work affects their health negatively, and they feel exhausted at the end of the working day. And they are twice as likely as other workers to say that they go to work when they are sick (so-called ‘presenteeism’).

Short working hours: Working very short hours (20 hours or fewer) is associated with earning less; it is also associated with a strong preference for working more, suggesting that many people are not working such short hours by choice. Moreover, for such workers, job insecurity is often high, and they are less likely to have good career prospects. However, they are more likely to report better work–life balance and find it easier to take time off for family and personal issues.

Daily rest periods: The Working Time Directive entitles workers to a daily rest period of 11 consecutive hours in every 24-hour period. Some 26% of workers reported that at least once in the month prior to the survey they had a break of less than 11 hours between the end of one working day and the start of the next. This is substantially more prevalent among self-employed workers (36% of self-employed workers without employees and 46% of self-employed with employees) than employees (23%). Working longer hours (48 or more per week) and having a higher income is associated with not having sufficient rest between working days.

Working long days: About one-third of the respondents in the EU28 have worked more than 10 hours in a day at least once in the month prior to the survey. On average, men worked 3.1 long days per month and women 1.6.

Working weekends: The proportion of the EU workforce who works Saturdays is largely unchanged since 2010: more than half work at least one Saturday per month. Around one-third of workers work at least one Sunday per month (a two percentage point increase since 2010) and 11% at least three times a month. Some 75% of self-employed workers work Saturdays, and almost 45% work Sundays.

Shift work: Shift work is more prevalent among service and sales workers and plant and machine operators, and in the sectors of health, transport, industry, and commerce and hospitality. Shift work is associated unfavourably with a number of outcomes. Shift workers find work–life balance more difficult, feel their health and safety is at risk because of work, and that work affects their health negatively. They are more likely to feel exhausted at the end of the day and to report that they are not appropriately paid and are less likely to feel they can work until 60 years of age.

Regularity of working hours: Greater regularity – working the same number of hours every day, and hours and days every week, along with fixed starting and finishing times – is associated with a good work–life balance: workers whose hours are regular are almost 2.5 times more likely to report a good fit between work and private life. Agriculture is the sector with the largest share of workers reporting irregular hours; in contrast, workers in industry work the most regular hours, along with workers in construction, commerce and hospitality, and public administration.

Flexibility in working time: For most workers in the EU (56%), working time arrangements are set by the organisation with no possibility for change. And for a majority (69%), changes to their working time arrangements do not happen regularly. However, almost 40% were asked to come to work at short notice in the 12 months prior to the survey. In terms of flexibility to suit a worker’s needs, for 66% of workers in the EU28, it is easy to take an hour or two off during working hours to take care of personal matters. But for some occupations, this is not the case: around 45% of plant and machine operators and service and sales workers find it difficult.

2.5 Building a supportive social environment

Work is a fundamental activity for individuals, providing opportunities for interacting with people and developing a social network, becoming integrated into the workplace or team, and developing their capacities and skills. The quality of the social environment at work is critical for personal growth and development but also facilitates workplace integration and the building of workers' self-esteem through receiving recognition from peers and superiors.

The place that workers give to the meaning and function of work plays an important role in shaping their expectations of work. The ability of companies and managers to meet these expectations is central to the company's performance. Regulations – legislation as well as company rules and organisational culture and practices – help develop and maintain a secure social environment. Human resource policies and practices deal extensively with this topic, as it is known to be linked to performance, organisational commitment and worker engagement. Being well integrated socially at work is also important in terms of performance and innovation, as good quality interaction can be associated with high worker engagement, better use of workers' tacit knowledge and enhanced collective intelligence at work.

In terms of health and well-being, the negative effects of adverse social behaviour such as violence and bullying/harassment at work are well known and documented: they

are strongly associated with increased staff turnover and increased absenteeism. At individual level, the impact on well-being can last for years, and it may be very hard for individuals to recover fully. Building on Karasek's demand-control model, research has recorded and assessed the positive effects of social support from managers and colleagues.

Furthermore, an important and influential model, that of organisational justice, focuses on the quality of social interaction at work and the rules governing decision-making and managerial behaviour. It is used to evaluate the extent to which people perceive that they are treated fairly by their supervisors; it takes as an assumption that that stress-related illness happens when the individual does not feel treated fairly in the organisation.

Various behaviours and practices at work can contribute to creating a good social environment: for example, the social support provided by colleagues and managers, good-quality management and the absence of physical, mental and sexual violence. The sixth EWCS assesses these practices, at job level, across Europe, supplementing the analysis with information on the social climate at the workplace and on employee representation. A further Eurofound initiative, the European Company Survey, provides extensive complementary information on workplace practices in terms of work organisation, human resource management, direct participation and social dialogue across Europe as reported by managers of companies and workplaces and employee representatives, where available (Eurofound, 2015g).

Social environment index

This index measures the extent to which workers experience (on the positive side) supportive social relationships and (on the negative side) adverse social behaviour such as bullying/harassment and violence at the workplace.

As with the other job quality indices, this index measures the specific properties of the job, excluding aspects related to the overall organisation or the individual. The index comprises two subdimensions: the incidence of adverse social behaviour and the presence of support (support being experienced as quality of leadership and social support from colleagues).

The index comprises 15 indicators (Table 8). Logically, the questions related to 'management quality' were addressed to employees only; consequently, the results reported on this index are for employees only. The other indicators include answers from both employees and self-employed.

Comparison over time is not possible on the full index, as the leadership questions were revised in 2015. The main results for this index can be summarised as follows.

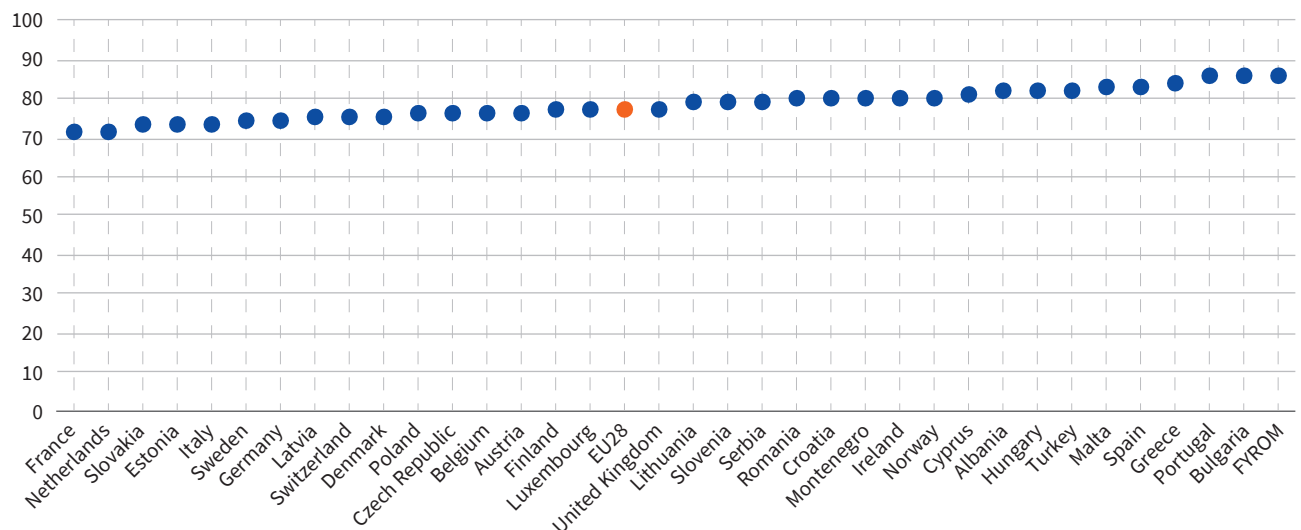
On the quality of the social environment, men score higher than women – by one point only. Women however report greater exposure to adverse social behaviour.

Differences by sector are moderate: the highest scores for the social environment are reported in agriculture (81) and financial services (80) while transport (72) and health (73) report the lowest. In terms of occupation, craft workers and agricultural workers report the highest quality social environment (both scoring 81), while service and sales workers and plant and machine operators report the lowest (both 74).

As Figure 47 shows, the range in scores between countries is somewhat bigger (14 points): at one extreme, the Netherlands and France (both 72) and Bulgaria, the former Yugoslav Republic of Macedonia and Portugal at the other (86). The overall picture is consistent with previous results, underlying the very high level of reported adverse social behaviour in the Netherlands and France.

Table 8: Social environment index: proportion of workers in EU28 (%) and mean index scores (0–100)

			2015
Proportion of workers in EU28 (%)			
Adverse social behaviour	In the last month	Exposure to verbal abuse	11
		Exposure to unwanted sexual attention	2
		Exposure to threats	4
		Exposure to humiliating behaviours	6
	Over the last 12 months	Exposure to physical violence	2
		Exposure to sexual harassment	1
		Exposure to bullying /harassment	5
Social support	Management quality (employees only)	Your immediate boss respects you as a person: strongly agree and tend to agree	89
		Your immediate boss gives you praise and recognition when you do a good job: strongly agree and tend to agree	71
		Your immediate boss is successful in getting people to work together: strongly agree and tend to agree	73
		Your immediate boss is helpful in getting the job done: strongly agree and tend to agree	66
		Your immediate boss provides useful feedback in your work: strongly agree and tend to agree	70
		Your immediate boss encourages and supports your development: strongly agree and tend to agree	68
	Social support	Help and support from colleagues (most of the time/always)	72
		Help and support from your manager (most of the time/always)	59
Mean index scores (0–100)			
Social environment index			77

Figure 47: Scores on the Social environment index, by country (employees only)

Management quality

Managers play an important role in relation to job quality and employee commitment. Their mission is to ensure that the collective performance of work produces the expected outcomes. While they are in a position of authority, they may in certain instances misuse or, in extreme cases, abuse this authority. They have a leading role to play in determining the social climate at work. Their position in organisations and companies – even in matrix organisations where it is difficult to identify one's boss – remains very influential.

While managers can support the development of job quality practices, they can also be a source of risk – psychosocial, for example. They are in an intermediary position between the more abstract decision-making function at company level and the concrete experience of work by members of their team. They have to relay and balance 'top-down' decisions with 'bottom-up' contributions within the company. Managers may also be in situations where they have to oversee the implementation of job quality practices of lower quality.

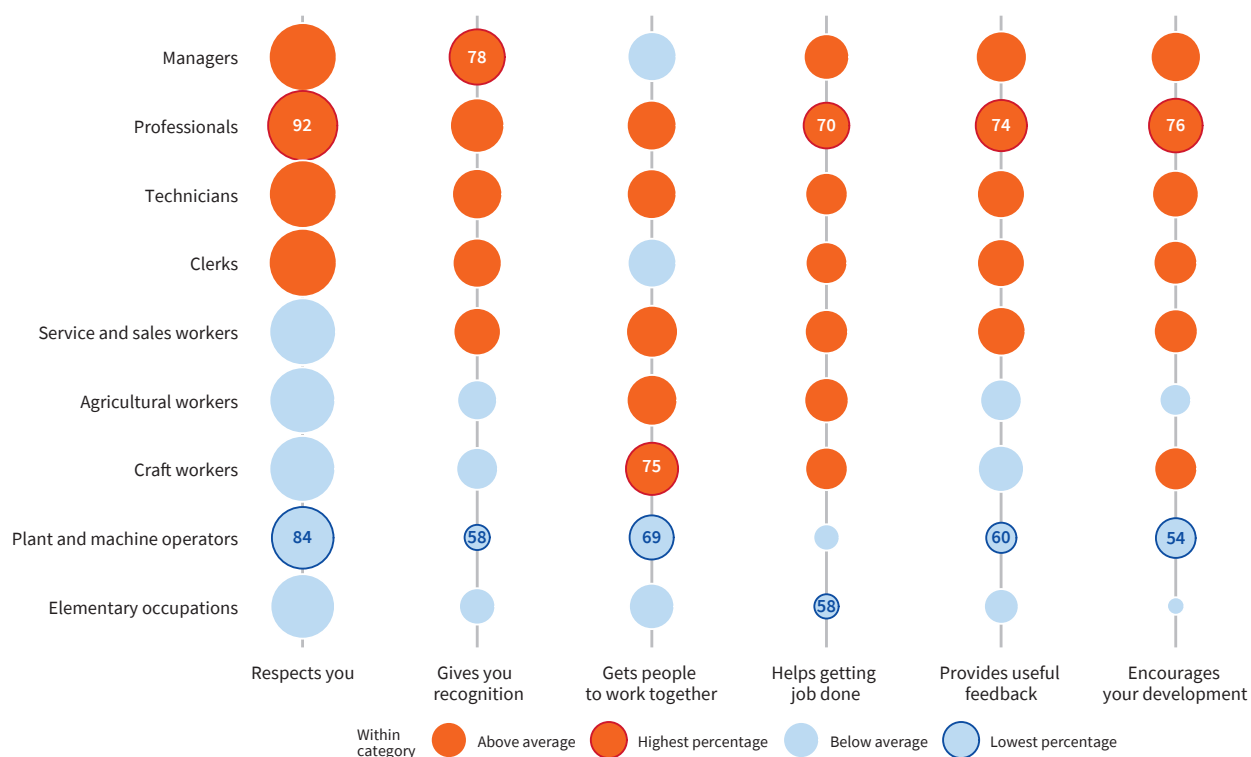
Over time, the role of managers has changed: the 'leader' figure has emerged as a new role model. As well as being managers, leaders are expected to inspire motivation, develop a vision that can be shared and accompany the development of individuals.

Good leaders show consideration and respect for their employees. In the EWCS, 89% of EU28 employees agree (32%) or strongly agree (57%) that their supervisors respect them as a person. In addition, 73% agree that their immediate boss is successful in getting people to work together, 70% that their boss provides useful feedback on their work and 66% that their boss is helpful in getting the job done. Equally large proportions report that their boss encourages and supports their development (68%) and agrees (strongly) that their boss gives them praise and recognition for doing a good job (71%).

There are substantial differences found regarding employees' views of their boss's performance across occupations (Figure 48), with professionals having the most positive views and plant and machine operators the least positive. Only 58% of plant and machine operators feel that their supervisor gives them recognition for doing a good job, while 78% of managers think that their immediate boss gives them praise and recognition. Just one in two plant and machine operators (54%) states that their supervisor encourages their development.

Cross-cultural studies on leadership examines whether the type of leader's behaviour that is accepted, enacted and proved effective is universal or varies between countries. The EWCS evidence indicates some country differences in the quality of management reported by employees in Europe, ranging from around 70% to 80%.

Figure 48: Proportion of workers rating their bosses' performance positively, EU28 (%)



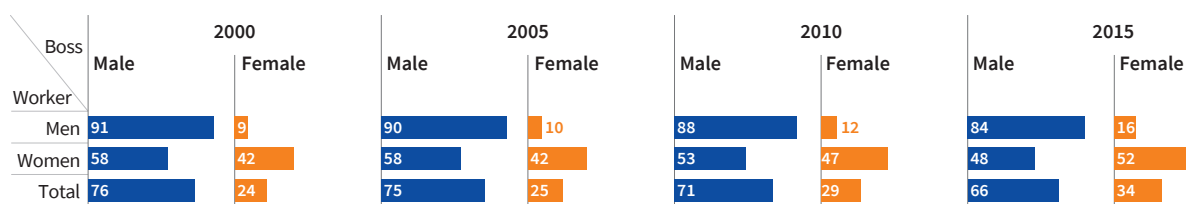
Women managers: the glass ceiling effect

Symptomatic of the segregation and discrimination women continue to face at the workplace, the ‘glass ceiling’ issue has been on the agenda for many years, both in Europe and at national level. Data from the sixth EWCS show that progress is being made, albeit slowly.

At managerial level, women are still not on an equal footing with men. The proportion of women with a supervisory role (12%) is just over half the proportion of men (21%), a figure that has remained constant since 2010. And while the proportion of men supervising ‘up to 10 people’ has been almost stable (16%) since 2000, the proportion of women in this situation decreased, by three percentage points: from 12% in 2000 to 9% in 2015.

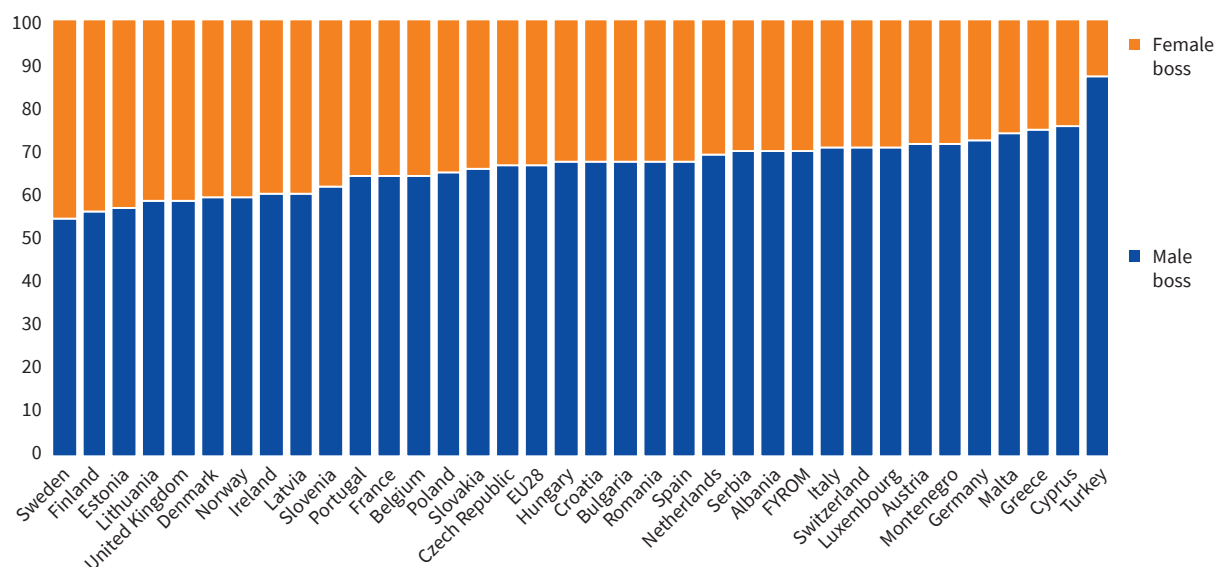
On the other hand, since 2000, the proportion of workers – men and women – having a female boss has been on the rise: from one-quarter to one-third of all workers. Indeed, workers increasingly report having a woman as a boss: 16% of men and 52% of women workers in 2015, up from 9% of men and 42% of women in 2000 (Figure 49).

Figure 49: Proportion of male and female bosses, by sex, EU28, 2000–2015



There are substantial differences by country regarding the proportion of supervisory roles held by men and women (Figure 50).

Figure 50: Proportion of male and female bosses, by country (%)



Despite the increase in women managers, the sixth EWCS finds that female managers continue to manage more female workers and younger people, and that older workers tend to be supervised by male managers. Looking at company size, the proportion of women managers is highest in large companies (250+ employees): some 36% of the workers in these companies report having a female manager. However, men constitute the bulk of managers across the board. In terms of occupations, service and sales workers form the occupation with the greatest proportions of female bosses (46% of bosses being women). This is followed by professionals (44%) and workers in elementary occupations (39%). Conversely, the great majority (over 70%) of managers, agricultural workers, plant and machine operators, and craft workers have male bosses.

Labour market segregation is evident also through the distribution of different types of employment status: workers with indefinite contracts (67%) more often report having a man as a boss compared to workers with other contracts – fixed-term (64%) and other and no contract (60%). The impact of sector and occupation plays a role in this distribution and the full-time/part-time divide also reinforces the segregation effects.

Social support

Social support from colleagues

Social support from colleagues is prevalent: in 2015, some 72% of workers in the EU28 reported that their colleagues help and support them always or most of the time; this is four points more than in 2005 but the same as in 2010. Over time, the proportion of workers who report never or rarely getting support from their colleagues has remained constant at 10%. However, despite improving since 2005 (falling from 15%), this figure still represents a substantial one in every 10 workers.

Social support from colleagues is highest for younger workers (those aged under 35 years), particularly women – 77% of women compared with 74% of men. It is lowest for workers aged 50 and over (69% for both men and women).

There are very substantial differences in terms of occupation: 21% of workers in elementary occupations and 18% of agricultural workers report rarely and never getting social support from colleagues – nearly three times the proportion of managers and professionals. Turning to sectors, social support from colleagues is highest in health (80%), education, construction and public administration (three-quarters in all three sectors) and lowest in transport (62%) as well as agriculture (66%). Part-time workers report more frequently than full-time workers that they never or rarely get social support from their colleagues (13% as against 9%).

Social support from managers

Social support from managers is reportedly high but less so than social support from colleagues: 59% of workers report getting social support from their managers (always and most of the time), and 18% report receiving it never or rarely. Its evolution is similar to that of social support from colleagues: three points more than in 2005 but the same level as in 2010. Again, the same pattern regarding age groups and sectors applies. Social support from managers is highest for younger workers (64% receiving it) and lowest for older workers (57%). Social support from managers is highest in education, public administration and financial services; it is lowest in transport and in industry. Workers in these sectors, however, even if they do have colleagues in their workplaces, may be in work situations where no support is available as part of their work takes place in different sites.

Social support from managers is highest for technicians and professionals and lowest for elementary occupations, plant and machine operators, and agricultural workers. In these three occupations, absence of social support by managers is experienced by more than one in four workers.

Adverse social behaviour

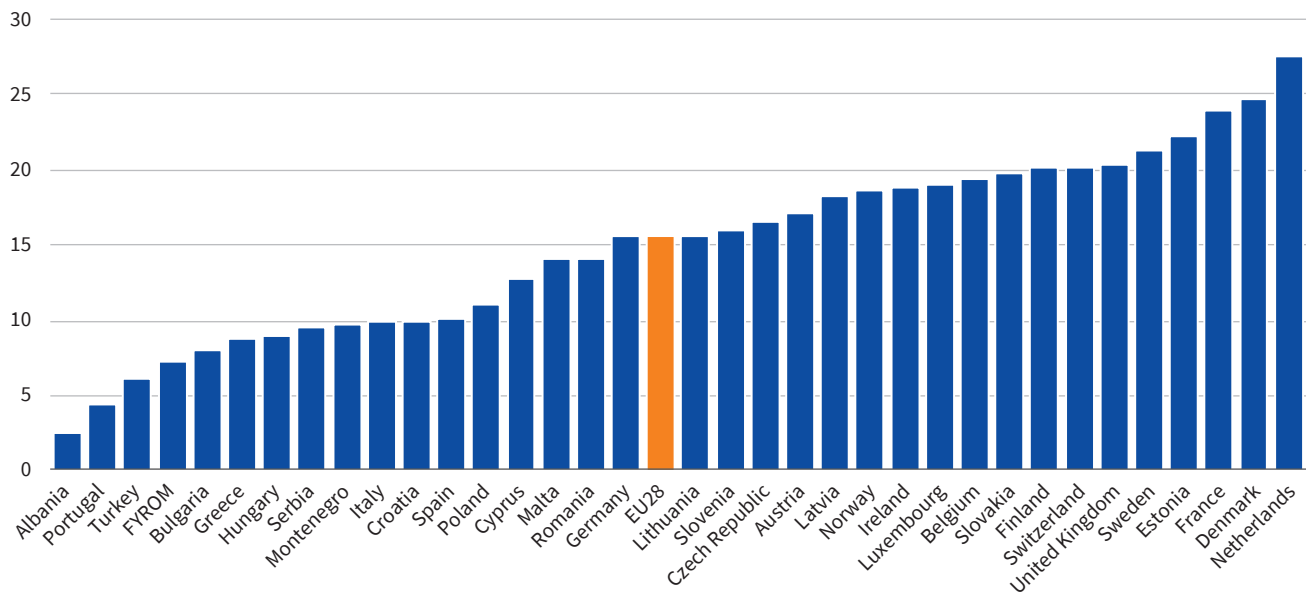
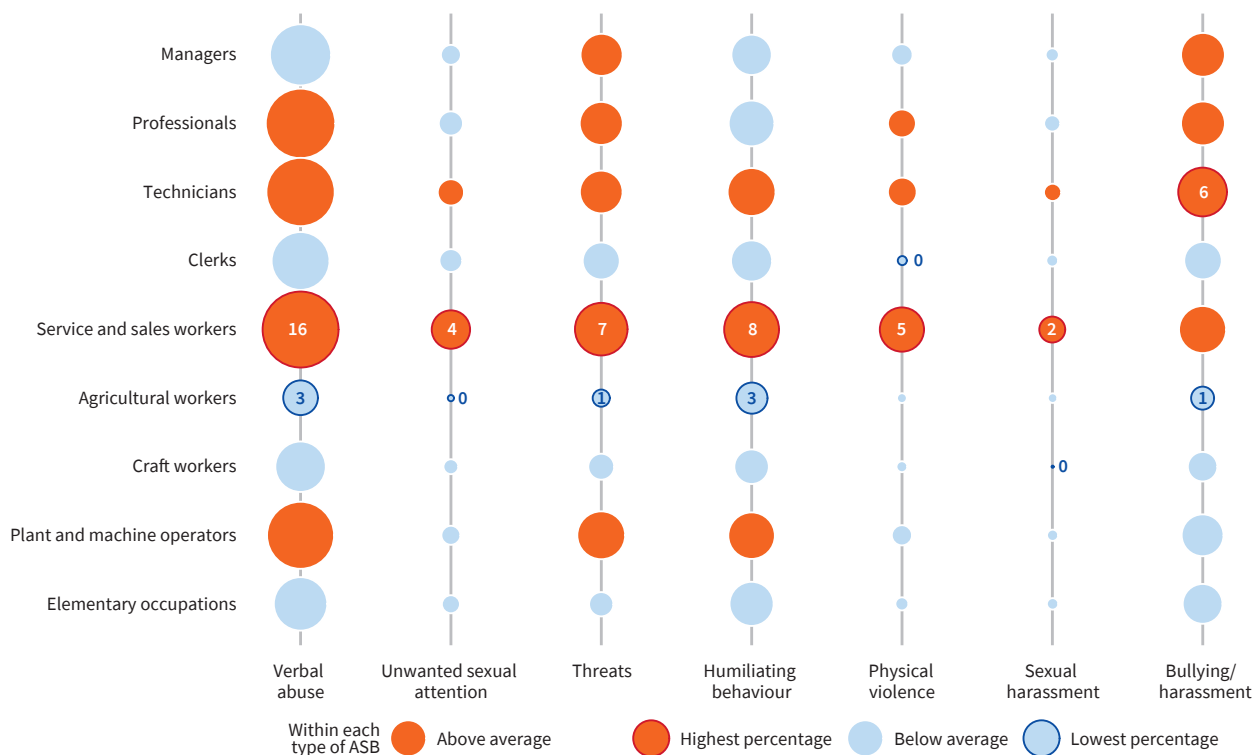
Respondents of the sixth EWCS were asked if they had been exposed to different forms of adverse social behaviour in the month prior to the study, such as verbal abuse (11% reporting this), unwanted sexual attention (2%), humiliating behaviour (6%) or threats (4%); or within 12 months prior to the study: physical violence (2%), sexual harassment (1%) and bullying/harassment (5%).

Although occurrence of such behaviours remains low, it is important to gain an insight into the groups bearing the highest risk of exposure to adverse social behaviours. Exposure to such behaviours might have a serious harmful effect on health and well-being and can also trigger early exit from the workforce. All adverse social behaviours are experienced by women to a much greater extent than by men, except for threats (about 60% of the people reporting having been threatened were men).

There are considerable differences in reporting adverse social behaviour between countries (Figure 51). These differences in the reported magnitude of the issue might be partly a result of cultural differences. Firstly, the tolerance of undesired behaviours may differ from country to country. Secondly, the problem of underreporting might be more prevalent in some countries than others. The victims of adverse social behaviours might often feel too ashamed or even guilty to report such issues, especially if public awareness and discourse on the subject is limited. Due to the sensitive and complex nature of the issue, victims of these behaviours might be reluctant to talk about them and incidence might be underestimated.

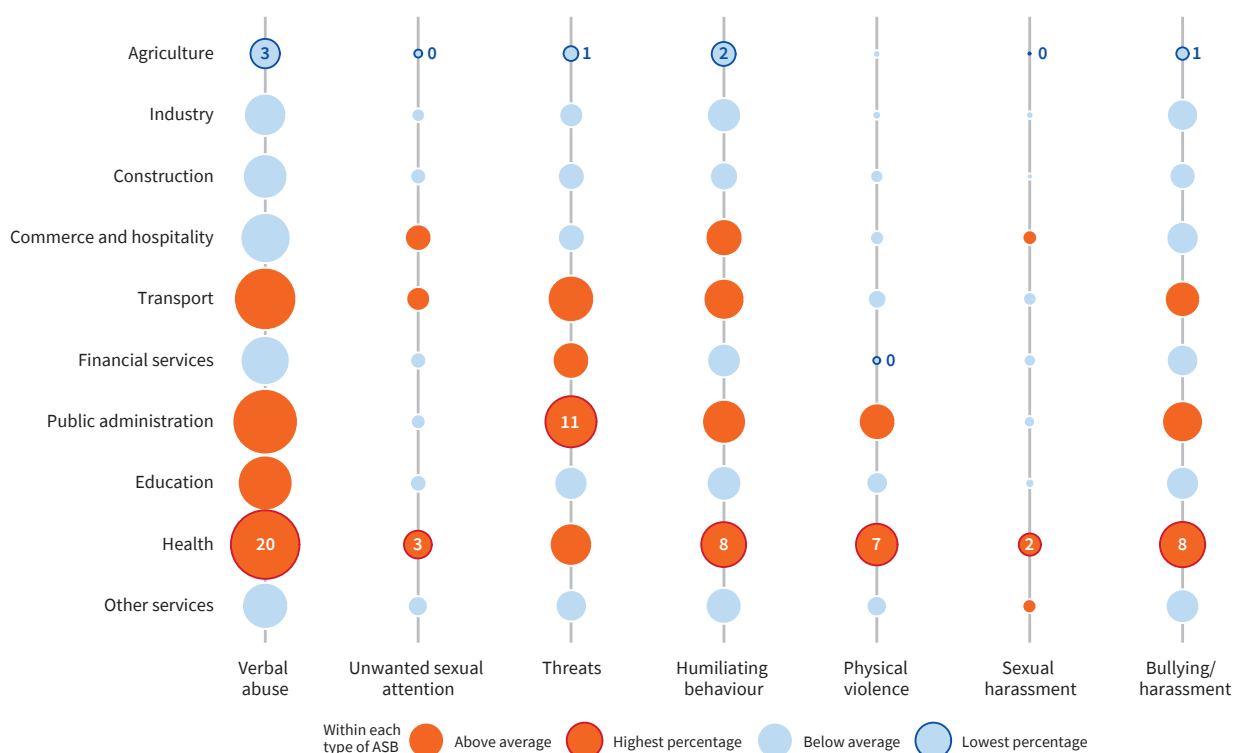
In terms of occupation, almost all adverse social behaviours are most commonly reported by service and sales workers (Figure 52). Workers from this occupational group report – considerably more often than the average – being subjected to unwanted sexual attention (4%) and sexual harassment (2%). This happens partly because the service and sales occupation is dominated by women, who, in general, tend to experience these behaviours more, and because there is relatively more exposure to third parties (such as clients). Service and sales workers are also considerably more often the victims of verbal abuse (16%), humiliating behaviour (8%) and threats (7%). As many as 5% of workers from this group report having been subjected to physical violence at work in the previous 12 months and around 6% to bullying/harassment.

Adverse social behaviours are particularly prevalent in some sectors (Figure 53). The health sector reported the highest percentage of workers subjected to all of the adverse social behaviour indicators, with the exception of workplace threats, which was found to be higher in public administration (11%).

Figure 51: Proportion of workers reporting at least one adverse social behaviour, by country (%)**Figure 52: Adverse social behaviour (ASB), by occupation, EU28 (%)**

One in 10 self-employed workers (10%) report having experienced one or more adverse social behaviours. This is less than for employees (17%). Aspects related to the nature of the work could explain this difference. First, when performing their economic activity, the self-employed are in a different position than employees: they

are usually perceived as being on an equal footing with their 'co-contractors' and not in a subordinate position. Second, their legal protection is of a different nature, with no entitlement to labour law coverage (nevertheless, the abuse is still a matter of civil and criminal regulation).

Figure 53: Adverse social behaviour (ASB), by sector, EU28 (%)

Discrimination

In the EU28, some 7% of workers felt they had been discriminated against in the 12 months prior to the survey on grounds of sex, race, religion, age, nationality, disability or sexual orientation. European legislation protects workers against all these types of discrimination, with Council Directive 2000/78/EC of 27 November 2000 establishing a general framework for equal treatment in employment and occupation. The consequences of discrimination can be very damaging for the individuals concerned, including negative effects for their health and well-being, and also for their career.

The consequences of discriminatory behaviour towards workers – for example, in terms of wages, promotion or access to other rewards at the workplace – cannot be studied through a cross-sectional questionnaire such as the EWCS. However, the EWCS does enable the identification of those groups that are most seriously affected.

Overall, the groups reporting higher levels of discrimination are younger workers, employees with non-permanent contracts, women in middle management (supervising fewer than 10 staff) and workers experiencing restructuring or a downsizing in their companies.

Discrimination based on age is the most prevalent form, followed by discrimination based on sex, nationality and race (including ethnic background and skin colour).

Age discrimination is reported by 3% of workers. Sex discrimination (2%) is reported by more women (3%) than men (1%). Discrimination linked to race, ethnic background, colour and nationality is reported by 2% of

workers. Finally, 1% of workers reports being discriminated against for reasons related to their religion, disability or sexual orientation.

Although these results involve relatively small proportions of workers, it should be highlighted that discrimination is a serious offence, with consequences not only for individuals but also for the entire organisation.

Social climate

Ensuring a good social climate and organisational justice, mutual trust between management and employees, recognition and good cooperation, is an important aspect of organisational management, as it results in positive outcomes both for the organisation and the workers. Failure to provide these aspects of the social climate may be harmful both for the organisation and the well-being of the workers, resulting in adverse outcomes such as poorer worker performance, lower organisational commitment and absenteeism.

In the sixth EWCS, employees were asked about different aspects of social climate at their workplaces; the key findings are summarised here.

- Almost three-quarters (73%) agree or strongly agree that employees are appreciated when they have done a good job.
- Some 73% agree or strongly agree that work is distributed fairly in their organisation.
- Some 71% agree or strongly agree that conflicts are resolved in a fair way.

- Around 83% agree or strongly agree that management trusts the employees to do their work well.
- Some 69% agree or strongly agree that, in general, employees trust management in their workplace.
- The vast majority of employees in the EU28 (89%) agrees or strongly agrees that there is a good cooperation between them and their colleagues.

As shown in Figure 54, on most of the indicators, the level of agreement differs considerably between workplaces of different sizes. Employees from smaller workplaces, especially micro companies, are more inclined to agree that their workplace is characterised by the different aspects of good social climate. Only the dimension ‘good cooperation between you and your colleagues’ seems to be similar across all sizes of workplace.

All of the seven job quality indices – apart from the earnings index – are positively associated with a better social climate (Figure 55).

Employee representation

Eurofound’s online European Industrial Relations Dictionary defines employee representation as ‘the right of employees to seek a union or individual to represent them for the purpose of negotiating with management on such

issues as wages, hours, benefits and working conditions’. This may encompass a range of issues concerning, for example, the terms and conditions of employment, working practices, conduct at work, disciplinary and grievance matters, as well as health and safety. Research shows that the existence of employee representation in the workplace can be a determining factor in improving working conditions (Eurofound, 2011c).

The EWCS analyses two types of employee representation in the respondent’s company or organisation: representation that is strictly related to health and safety matters – a health and safety delegate or committee – and other, broader, forms of representation such as trade unions, works councils or similar bodies. In addition, EWCS respondents are asked if there is a regular meeting in their workplace ‘in which employees can express their views about what is happening in the organisation’. It must be highlighted that these variables should be interpreted very carefully, as they only represent the possibility for respondents’ views to be considered and expressed collectively (through a health and safety committee and/or trade union or works council) or individually, through meetings. They do not provide any information on the nature, extent, impact or efficiency of the functioning of these entities.

Figure 54: Proportion of employees reporting good social climate, by workplace size, EU28 (%)

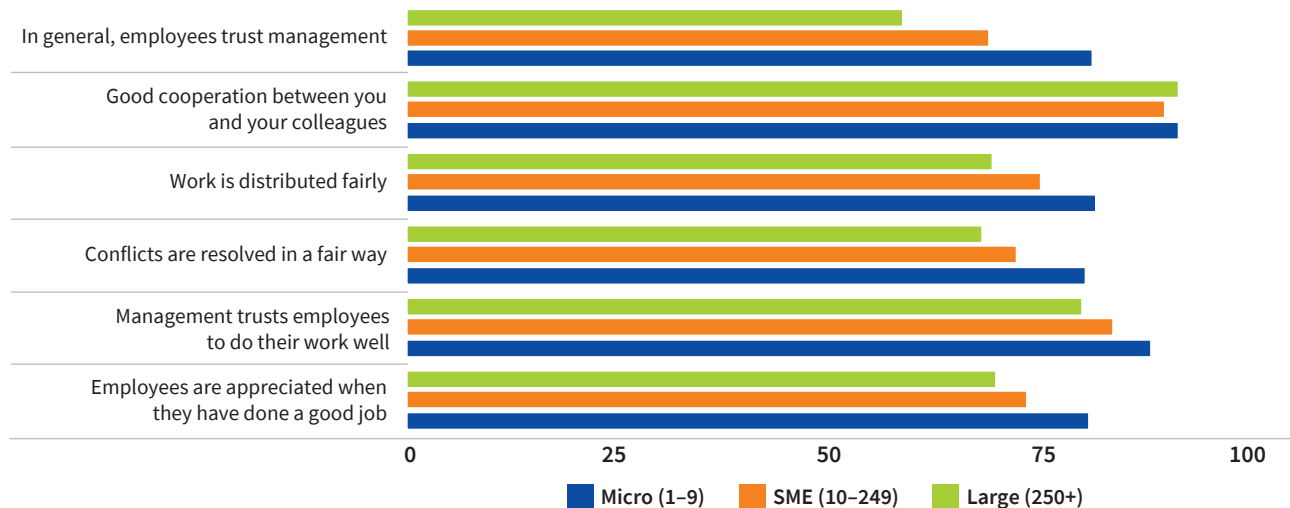
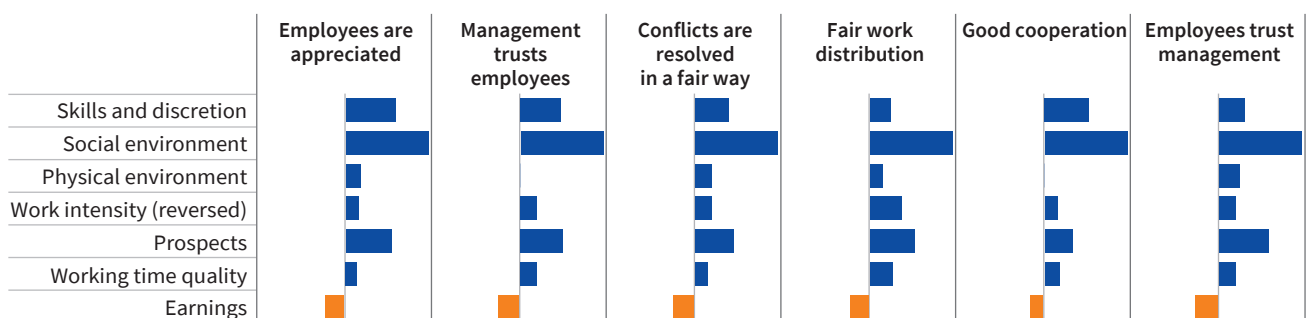


Figure 55: Association between job quality indices and social climate



Note: The blue bars represent associations favourable to workers and the orange bars represent unfavourable associations. See note to Figure 32 for more details on the methodology used.

The Framework Directive 89/391/EEC on the introduction of measures to encourage improvements in the safety and health of workers at work indicates that ‘the employer shall designate one or more workers to carry out activities related to the protection and prevention of occupational risk’ (Article 7). The Directive defines a workers’ representative with specific responsibility for the safety and health of workers as ‘any person elected, chosen or designated in accordance with national laws and/or practices to represent workers where problems arise relating to the safety and health protection of workers at work’.

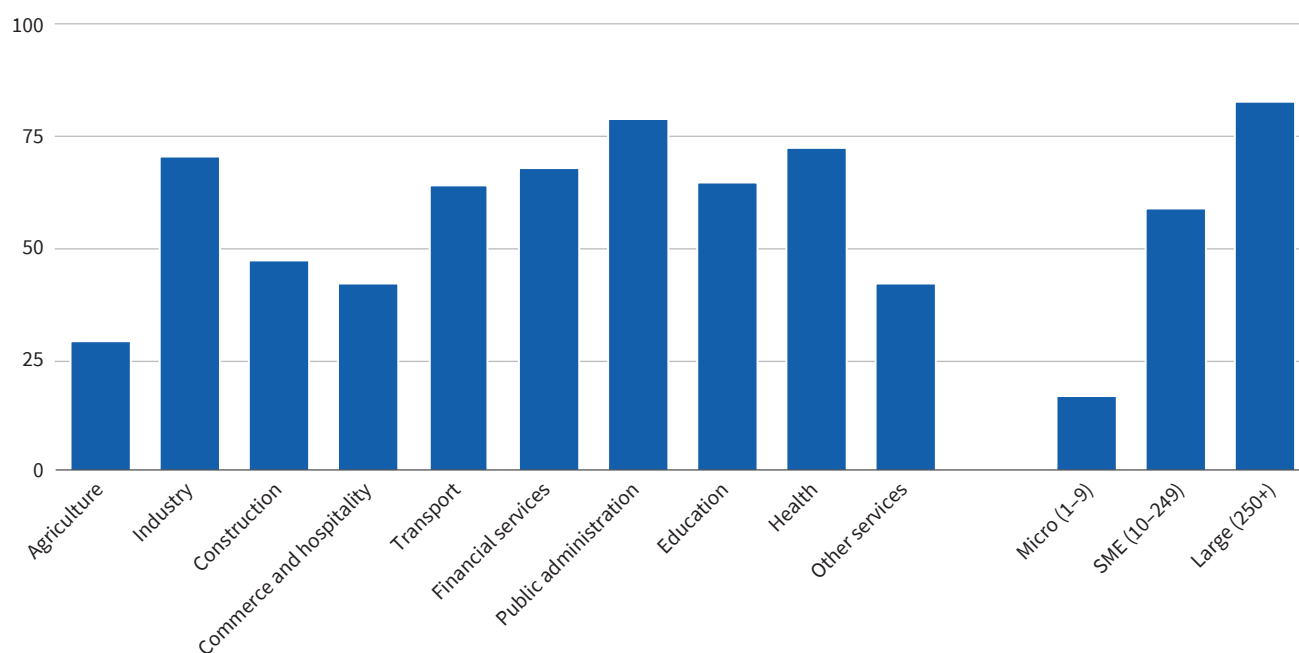
In the EU28, 58% of employees report the existence of a health and safety delegate or committee. The proportion is larger in large companies or organisations (83%). It varies with the sector of activity, ranging from 29% in agriculture to almost 80% in public administration (Figure 56).

In practice, the way this representation is organised varies significantly across the EU, ranging from individual delegates to committees composed either of employee representatives or jointly of representatives of employees and the employer. There are also different thresholds in terms of company or establishment size from which

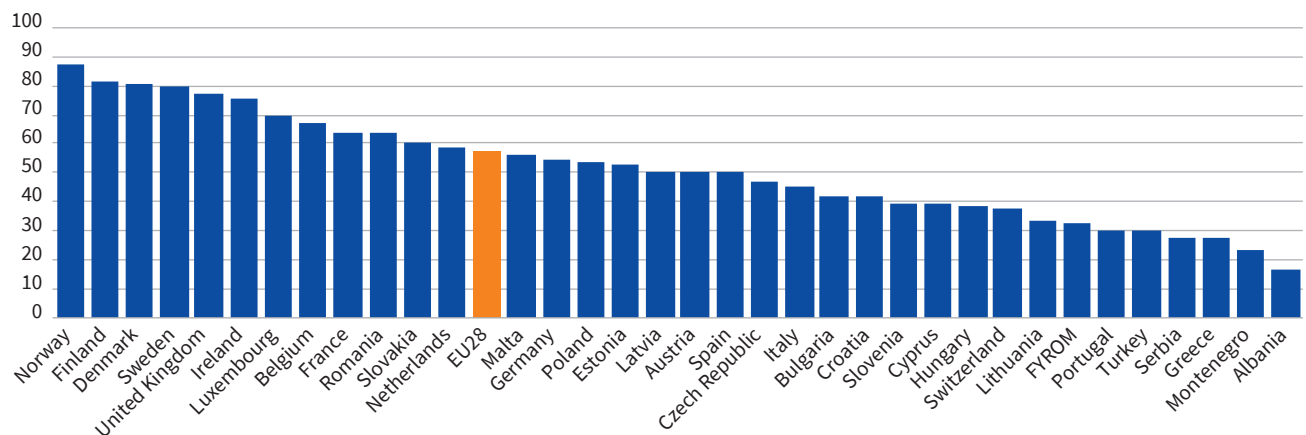
this representation can or must take place. According to information made available by the European Trade Union Institute, in some countries the minimum threshold from which a delegate should be elected is 5 employees (for example, Cyprus, Latvia, Sweden and Spain), while in others there is no minimum (Ireland, Portugal, Slovakia and the United Kingdom).¹³ In others, the threshold starts at 10 (Austria, Czech Republic, Denmark, Estonia, Malta and Romania), at 15 (Luxembourg and Italy), at 20 (Germany and Finland), or even at 50 (Belgium, Bulgaria, Croatia, France, Hungary, Lithuania and the Netherlands).

Figure 57 shows how diverse the European situation is in relation to the presence of health and safety representatives at the workplace. The proportion of the workforce covered varies from 16% in Albania to 88% in Norway. Differences in countries should be considered in the context of provisions included in the national legislation applicable to each company (there are exceptions for some sectors; the public sector, for example, is often subject to different rules) but also the economic structure of the Member States, where there are significant variations in the proportions of organisations of different sizes in terms of the number of employees.

Figure 56: Employees reporting the existence of a health and safety delegate or committee, by sector and organisation size, EU28 (%)



13 See <http://www.worker-participation.eu/>

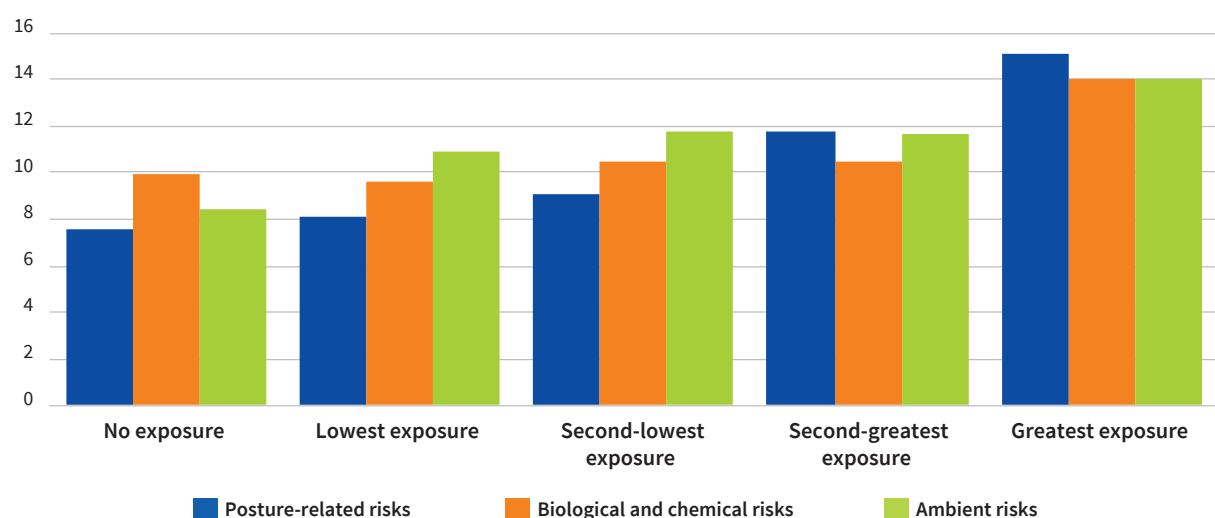
Figure 57: Employees reporting the existence of a health and safety delegate or committee, by country (%)

Information on health and safety risks

Under the EU Framework Directive 89/391/EEC on the introduction of measures to encourage improvements in the safety and health of workers at work, employers are obliged to inform and consult workers and to ensure that each worker receives adequate health and safety training. Information on health and safety is part of efficient risk prevention strategies – one of the three main challenges of the EU Occupational Safety and Health (OSH) Strategic Framework 2014–2020 (European Commission, 2014b).

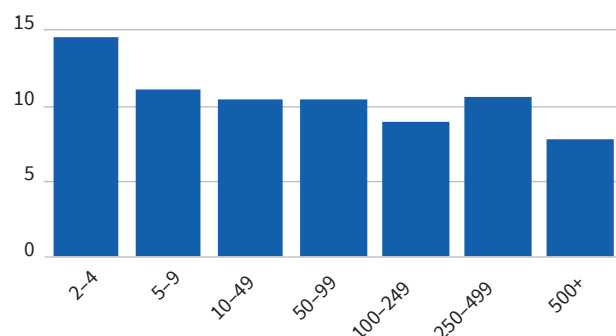
In 2015, 11% of workers in the EU report being ‘not very well informed’ or ‘not at all well informed’ informed about health and safety risks at work, the same proportion as in 2010 – this group is labelled ‘not informed’. Some groups of workers are comparatively less informed than others: for example, those in elementary occupations (18% report not being informed) and employees with ‘other or no contract’ (21%) or with fixed-term contracts (16%). Other groups with high proportions of workers not being informed include those with a low level of education (19%) and those working for a company for less than one year (16%).

Of particular importance is the fact that the proportion of workers reporting that they are not well informed about health and safety risks in their job varies with the level of exposure to the different types of risks. As Figure 58 shows, the categories of workers most exposed to each type of risk also display larger proportions of individuals reporting that they are not informed about health and safety risks at work. This implies that it is those who most need the information (because they are more exposed to work-related risks) who are least likely to be reached by information about health and safety.

Figure 58: Lack of information on health and safety risks, by exposure to physical risk, EU28 (%)

The percentage of workers not informed also varies according to the size of the workplace (Figure 59). While 14% of workers in very small establishments report not being well informed on their health and safety risks, this is reported by only 8% of workers in establishments with 500 employees or more. That difference might be partly explained by the fact that, in many Member States, small and micro companies are exempt from the obligation to set up a health and safety committee, or to have a delegate (Eurofound, 2010a).

Figure 59: Proportion of workers not informed about health and safety risks, by workplace size, EU28 (%)



This association should be considered in the light of the REFIT (European Commission's Regulatory Fitness and Performance Programme) debate, in which action is taken to make EU law simpler and easier to apply and to reduce regulatory costs – thereby contributing to a clear, stable and predictable regulatory framework supporting growth and jobs. REFIT foresees that some companies, under a certain size threshold, may be exempt from applying particular regulations. The findings reported here suggest possible negative consequences of exempting smaller companies from requirements to inform workers in relation to OSH.

Provision of information varies not only with company or workplace size: there is also a link to the presence of structures responsible for health and safety. Workers reporting the existence of an occupational safety and health delegate or committee in their organisation are almost two and a half times less likely to not be informed about the risks at the workplace: only 7% of workers in companies with a health and safety committee are not well informed, whereas for workers in companies without such a structure, the percentage of those are not well informed increases to 15%.

The data suggest that promoting the set-up and development of health and safety committees and/or having health and safety delegates in all companies might have a significant effect on the percentage of workers who are well informed about health and safety risks.

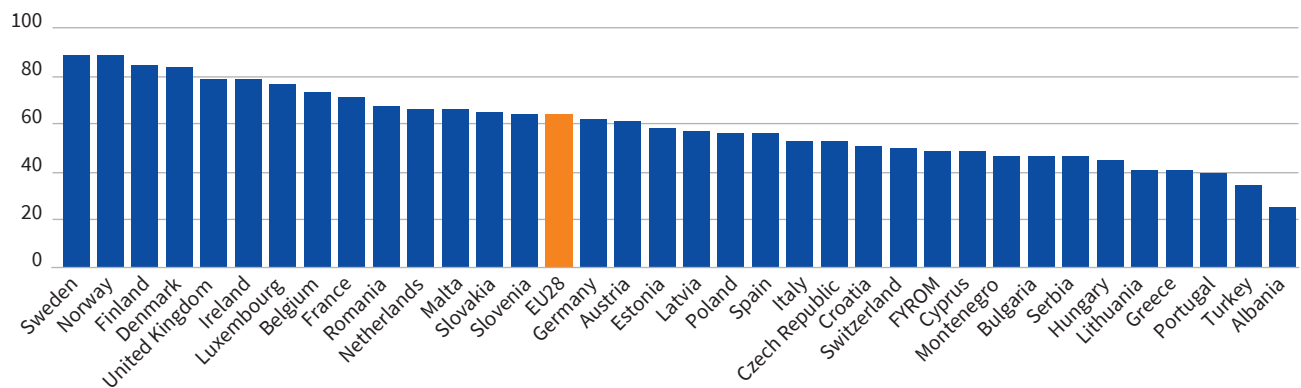
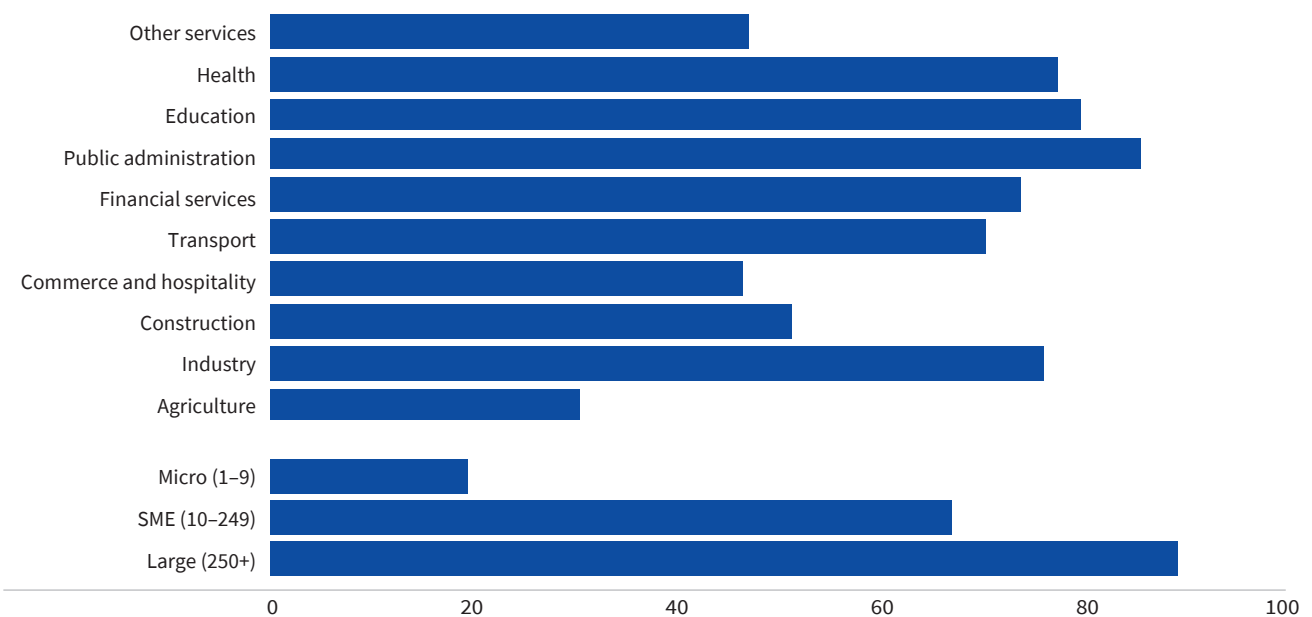
Apart from health and safety issues, there are many other issues about which workers may be represented by a person or group elected or designated for that purpose. These issues may include the terms and conditions of employment, working practices, conduct at work, health and safety, and many others.

In practice, representation takes many different forms across the EU Member States: employee representatives or delegates; trustees; works councils or local trade unions; shop stewards; or joint consultative committees. These entities may function differently in different systems, and different rules may be applicable according to circumstances such as the size of the company or establishment. The sixth edition of the EWCS asks – employees only – whether a trade union, works council or a similar committee representing employees exists in their company or organisation. In total, nearly two-thirds of all employees in the EU28 said that some such body existed (Figure 60).

The proportions of workers reporting the existence of some sort of employee representation (trade union, works council or similar committee and/or a health and safety committee or representative) at their companies are smaller in agriculture, commerce and hospitality, construction and other services, as well as among workers in (SMEs) – and much smaller in micro companies (Figure 61).

In total, around one third (35%) of the employees in the EU28 has no formal employee representation. Of this group:

- over 89% work in micro companies and SMEs;
- 85% are in the private sector;
- nearly 80% have achieved only a primary or secondary level of education;
- nearly half (45%) is in the three lowest income deciles;
- over half (52%) has a seniority of up to four years;

Figure 60: Employees reporting existence of trade union, works council or similar body, by country (%)**Figure 61: Employee representation, by sector and company size, EU28 (%)**

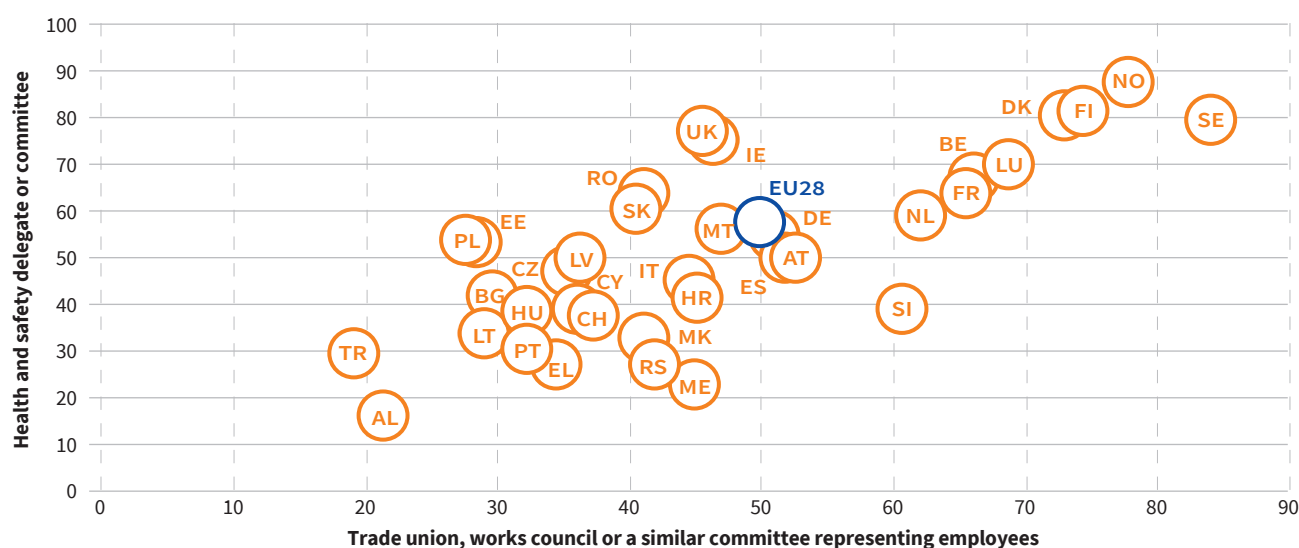
- over one-third (34%) is aged under 35;
- over one-third (34%) has a contract other than an indefinite one.

In some Member States, the employee representative bodies may also have responsibility for health and safety issues at the workplace. Despite this, data from the EWCS suggest that across the board there is a strong positive relationship between the proportion of employees reporting the existence of employee representation and the proportion of employees reporting the existence of a health and safety delegate or committee: 87% of employees reporting employee representation also report having a health and safety delegate or committee. Plotting the affirmative responses to both questions by country highlights this relationship (Figure 62).

Respondents to the sixth EWCS were also asked whether regular meetings take place in which employees can express their views about what is happening in the organisation.

In the EU28, a total of 54% said that such meetings did take place; the proportions vary by country from 26% in Hungary to 78% in Sweden.

Figure 63 presents a breakdown of employee representation and voice by company size. Approximately one-third of employees report the existence of both forms of collective representation and the possibility to express their individual voice in regular meetings; conversely, one-quarter report the existence of neither.

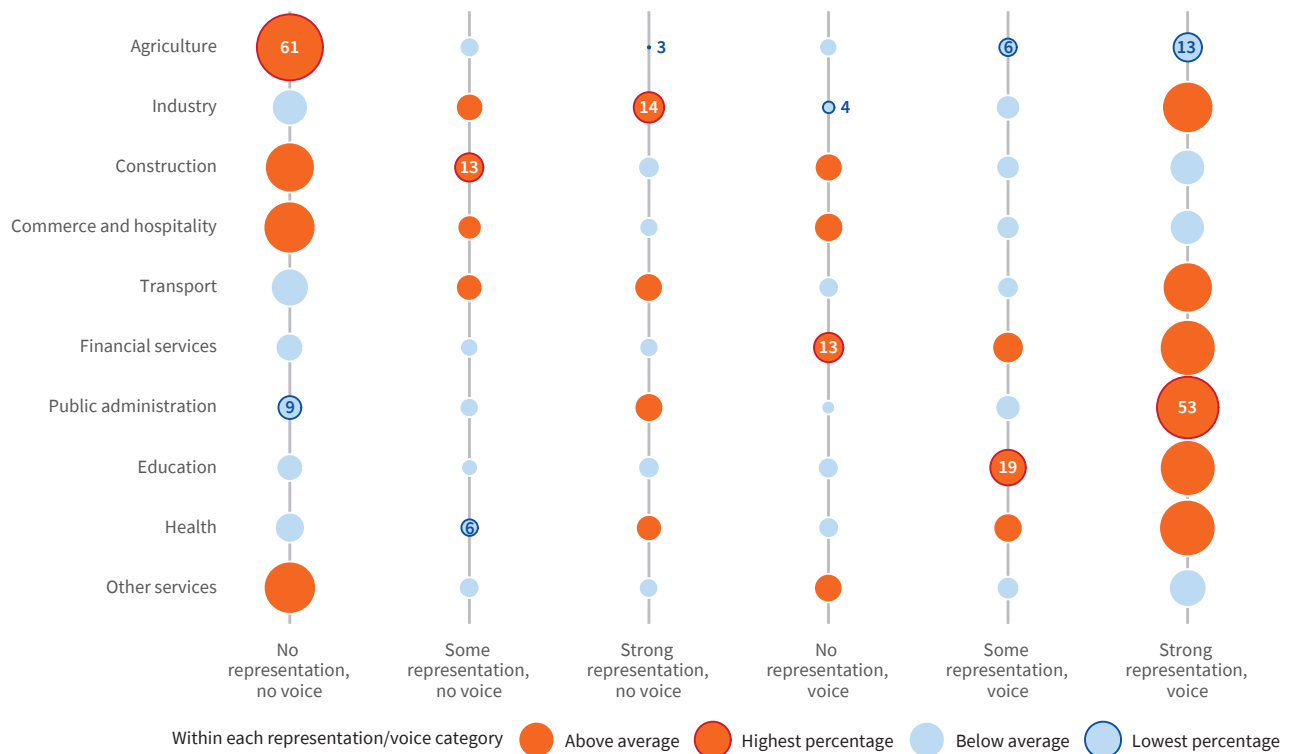
Figure 62: Existence of health and safety delegate committee and employee representation body, by country (%)**Figure 63: Representation and voice at the workplace, by company size, EU28 (%)**

Representation	Voice	Regular meetings		
		Micro (1-9)	SME (10-249)	Large (250+)
No health and safety committee, trade union or works council	Regular meetings	16	9	2
	No regular meetings	55	17	5
Health and safety committee or trade union or works council	Regular meetings	8	15	8
	No regular meetings	7	11	7
Health and safety committee and trade unions or works council	Regular meetings	10	38	60
	No regular meetings	4	11	18

The proportions also vary extensively according to the size of the organisation in which individuals work (Figure 63). Representation and voice are much less available if individuals work in micro organisations. In contrast, if they work in large organisations (with 250+ employees) or even SMEs (with 10-249 employees), it is much more likely that there is collective representation or the possibility to express views in a meeting, or both.

Not surprisingly, in light of different structures in terms of company or organisation size, the extent of representation and voice also vary significantly across sectors (Figure 64).

Sectors with larger proportions of individuals working in larger organisations – such as public administration, health, education, financial services, industry and transport – display relatively larger proportions of workers reporting strong employee representation and the possibility to express views in regular meetings. In contrast, in sectors with a large prevalence of micro organisations – agriculture, other services, construction, and commerce and hospitality – more workers report the absence of representation and of the possibility to express their views.

Figure 64: Representation and voice at the workplace, by sector, EU28 (%)

SUMMARY

Social environment

While the social aspect of work is important for individuals – enabling them to meet other people, develop a network of colleagues and be integrated into a workplace – it can also bring risks due to adverse social behaviour, such as bullying/harassment.

In terms of the **Social environment index** (calculated for employees only), sectoral differences are moderate: the best quality social environment is reported in agriculture (a score of 81 out of 100) and financial services (80). Transport and health report the poorest environments (72 and 73, respectively). The range between countries is somewhat bigger (14 points): the Netherlands and France have the lowest scores (both 72), consistent with the high levels of adverse social behaviour reported in these countries. The social environment is best in Bulgaria, the former Yugoslav Republic of Macedonia and Portugal (all at 86).

Positive view of management: Employees in the EU28 seem to hold their managers in high regard. Some 89% feel that their supervisors respect them as a person. In addition, around 70% agree that their boss gets people to work together, provides useful feedback, helps get the job done, encourages and supports their development, and recognises their good work.

Sex of managers: Since 2000, the proportion of workers having a female boss has risen from one-quarter to one-third. However, female managers continue to have a different profile of subordinates: they manage more female workers and younger people. Notably, countries differ. In Cyprus, 25% of workers have a female boss, while the figure in Sweden is 46%.

Differences are also stark in terms of occupations: professionals and service and sales workers more frequently have a female boss (around 45%). Conversely, the great majority (over 70%) of managers, agricultural workers, plant and machine operators, and craft workers have male bosses.

Help and support from colleagues: This is very widespread: 72% of workers in the EU28 state that their colleagues nearly always help and support them. On the other hand, 10% say they never or rarely get support from their colleagues. Part-time workers are more likely to say they rarely or never enjoy support than full-time workers. Workers at lower occupational levels receive substantially less support than those at higher levels. In terms of sectors, colleagues appear to deliver the greatest support in health, education, construction and public administration.

Help and support from managers: The extent reported is high, but less than that reported from colleagues: some 59% of workers say that their manager helps and supports them – with just 18% stating that this is the case only rarely or even never.

Adverse social behaviour: Small, but still notable proportions of workers were on the receiving end of abusive behaviour in the workplace in the month prior to the survey: verbal abuse (11%), unwanted sexual attention (2%), humiliating behaviour (6%) and being threatened (4%). Women are much more likely to experience all of these than are men (with the exception of being threatened).

There are considerable differences in the citing of adverse social behaviour between the countries: the rate of citing of instances of such behaviour in the Netherlands is seven times that of Portugal (perhaps, in part due to cultural differences). Service and sales workers, largely a female occupation, are much more vulnerable to adverse social behaviour. And by sectors, workers in health are most vulnerable.

Discrimination: Younger workers, employees with non-permanent contracts, women in middle management, and workers having experienced restructuring or downsizing are most likely to experience discrimination. Age discrimination – against younger workers – is the most prevalent form.

Social climate: Failure to provide a beneficial social climate may be harmful both for the organisation and workers' well-being. Findings from the survey are broadly positive: 83% feel their management trusts employees to do their work well, 73% of workers state that they feel they are appreciated when they have done a good job, while 69% feel that employees trust management in their workplace. And the vast majority (89%) feels there is good cooperation between them and their colleagues. Employees from the smallest workplaces (at most nine staff) give the best report of their social climate. With the exception of earnings, all the job quality indices are positively associated with a better social climate.

Provision of health and safety information: In some 58% of workplaces, there is a health and safety delegate or committee. However, in smaller organisations, it is much less likely that such a body exists: employees in only 25% of micro companies report that one exists, as against 87% in large organisations. And the picture also varies for sectors – only 29% in agriculture, as against almost 80% in public administration.

In 2015, some 11% of workers in the EU report being ‘not very well informed’ or ‘not at all well informed’ about health and safety risks at work. The findings show that the workers who are least informed are the most likely to be exposed to physical risks.

Employee representation body: Around two-thirds of employees in the EU28 say there is a trade union, works council or a similar committee in their workplace representing employees. This is less frequently the case in SMEs – considerably less in micro companies.

The corollary of this is that around half the employees in the EU28 do not have any formal system of employee representation. Of this group, the vast majority (89%) work in micro companies and SMEs; 85% are in the private sector; almost 80% have achieved only a primary or secondary level of education; nearly half (45%) are in the three lowest income deciles; more than half (52%) has a seniority of less than four years; more than one-third (34%) is aged under 35; and more than one-third (34%) has a contract other than an indefinite one.

Around one-third of employees say that in their workplace there is a health and safety delegate/committee and a trade union/works council or similar employee representation committee, and there are regular meetings in which one can express one’s views. However, one-quarter of all employees say that none of these elements exists in their workplace.

2.6 Favours skills use and discretion

‘Skills use and discretion’ is a dimension of work allowing workers to develop and grow through the experience of work; the concept comprises the skills required in the job as well as the autonomy given to the workers to apply them. The level of discretion (or ‘decision latitude’), is an important component of Karasek’s demand–control model (Karasek, 1979). A low level of decision latitude has

been associated with an increased risk of cardiovascular disease, musculoskeletal disorders and mental health issues, for both men and women.

This section analyses the job quality index on skills, before examining its different components. This section also looks in more detail at the use of ICT at work and examines forms of work organisation such as team work and task rotation – all aspects that can contribute to the development of skills in the workplace.

Skills and discretion index

This index – which ranges from 0 to 100 – measures the skills required in the job. It also studies the opportunities workers may have to understand and influence the way work is performed, as well as the possibilities available to develop their job-related skills through training.

Building on 14 indicators, the index comprises the following dimensions: the skill content of the job (cognitive dimension), decision latitude, worker participation in the organisation, and training (Table 10). The level of education, as measured by the International Standard Classification of Education (ISCED) and the occupational group according to the International Standard Classification of Occupations (ISCO) are also integrated into the index as external measures of the skill content of jobs.

The trend index – using the indicators that have been included in all previous waves of the EWCS – allows for an analysis over time. The **Skills and discretion** job quality index shows that skills levels have been increasing in the EU28 since 2005. At the same time, there has been a reduction of the skills gender gap, with women catching up (Figure 65). Younger age groups are also progressively closing the gap with older groups.

When comparing changes over time, it is important to note that the questions on organisational participation were introduced only in 2010 and are thus not included in the trend index.

When the full index is taken into account by including the organisational participation variables, the difference between the two countries at either end of the index amounts to 20 points (Figure 66).

As expected, skills use and discretion is higher for self-employed workers (71 for those with employees and 62 for those without employees) than for employees. It is 56 for those with an indefinite contract, 48 for those with a fixed-term contract and 43 for workers with ‘no or other contract’. Full-time workers display higher skills use (58) and discretion than part-time workers (51). The index score increases with seniority. The range of differences is larger when occupations are examined: the score for managers (75) is twice as high as that for elementary occupations (37) and plant and machine operators (39).

Table 9: Skills and discretion index: proportion of workers in EU28 (%) and mean index scores (0–100), 2005–2015

			2005	2010	2015
<i>Proportion of workers in EU28 (%)</i>					
		Included in trend version of the index			
Cognitive dimension	Solving unforeseen problems	Yes	81	82	84
	Carrying out complex tasks	Yes	60	58	61
	Learning new things	Yes	69	68	71
	Working with computers, smartphones and laptops, etc. (at least a quarter of the time)	Yes	36	44	56
	Ability to apply your own ideas in work ('sometimes', 'most of the time' and 'always')	Yes	77	75	78
Decision latitude	Ability to choose or change order of tasks	Yes	63	66	68
	Ability to choose or change speed or rate of work	Yes	69	70	71
	Ability to choose or change methods of work	Yes	67	67	69
	Having a say in choice of work colleagues ('always' or 'most of the time')	Yes	24	27	30
Organisational participation	Consulted before objectives are set for own work ('always' or 'most of the time')	No		47	46
	Involved in improving the work organisation or work processes of own department or organisation ('always' or 'most of the time')	No		47	50
	Ability to influence decisions that are important for your work ('always' or 'most of the time')	No		40	47
Training	Training paid for or provided by employer over the past 12 months (or paid by oneself if self-employed) (%)	Yes	26	34	37
	On-the-job training over the past 12 months (%)	Yes	26	32	33
<i>Mean index scores (0–100)</i>					
Skills and discretion index	Trend index score (maximum 100)		62	63	66
	Full index score (maximum 100)			54	56

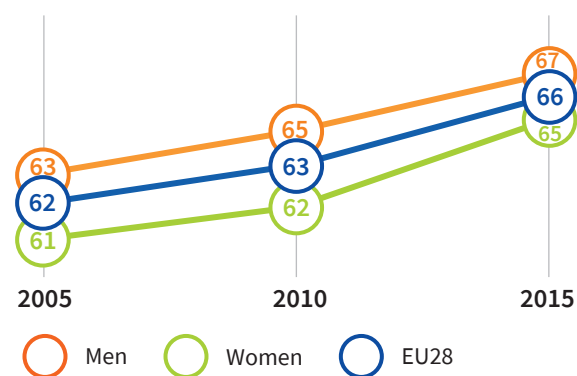
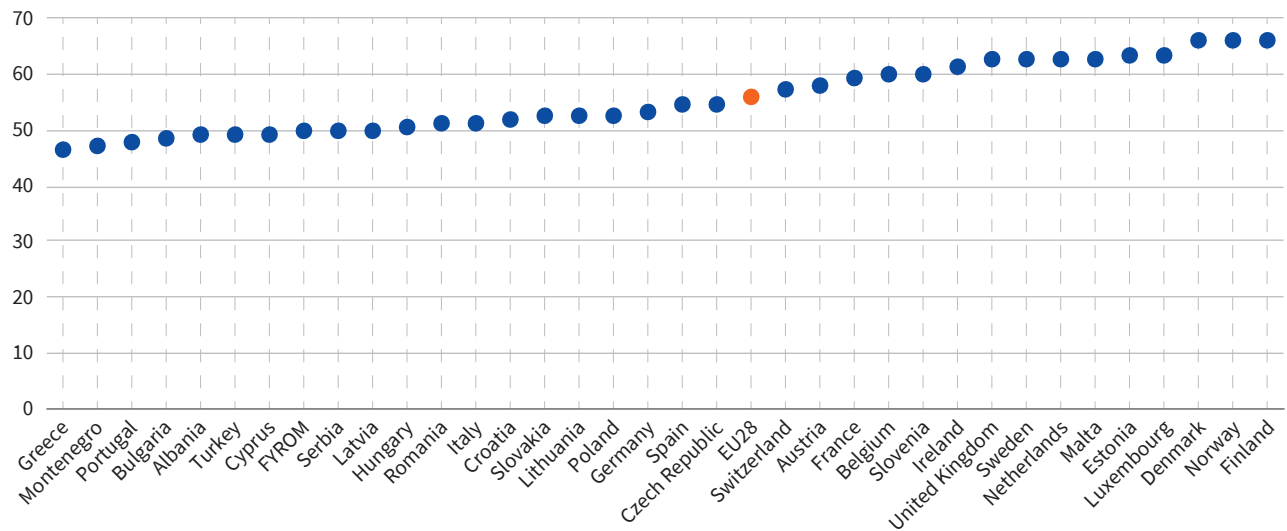
Figure 65: Skills and discretion index (trend), EU28

Figure 66: Skills and discretion index, by country, EU28



Cognitive dimension of work

Creative work and task variation can contribute to self-development at work; they are also key drivers of work motivation. In general, there is a high level of creativity and task variety associated with work in the EU28. This is indicated by the large proportion of workers reporting that their job involves solving unforeseen problems on their own or applying their own ideas in their work (Figure 67). Moreover, a considerable proportion of workers say that their job involves learning new things and that they carry out complex tasks. However, the data also show that almost half of all workers report that their job involves monotonous and/or repetitive tasks – in other words, their jobs have little task variation. The changes over time in all these indicators are limited.

The lowest levels of creativity at work and task variety are reported by workers in elementary occupations and plant and machine operators, by workers in a part-time or fixed-term contract and by younger workers.

Decision latitude

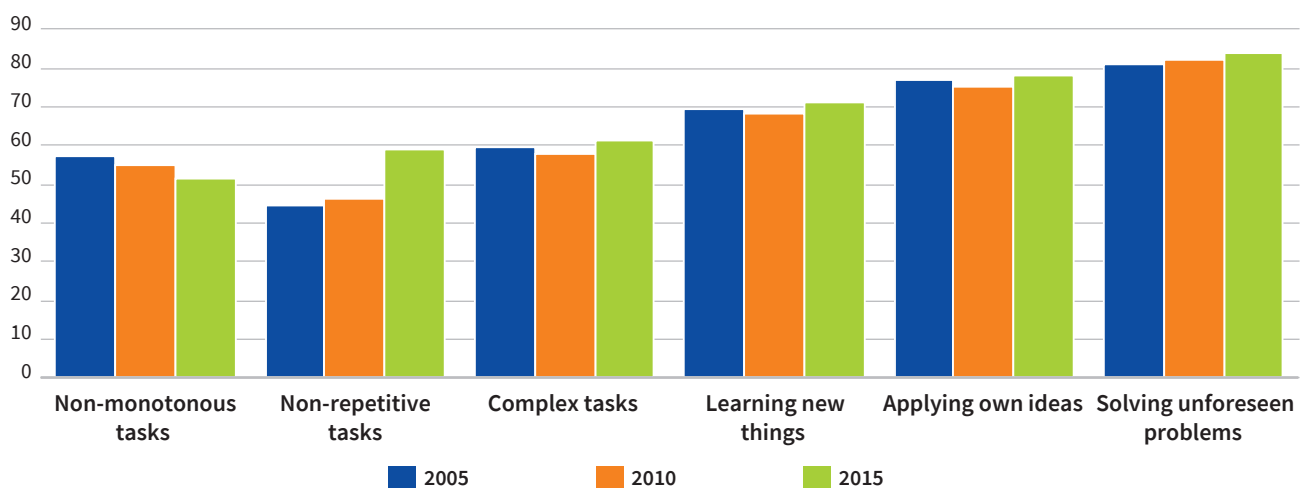
Decision latitude, or discretion, is fundamental for workers, allowing them to deal with the demands of their job – particularly when those demands are considerable. Decision latitude allows workers to work in the way that best suits them and is safest for them. Lack of such latitude can put a strain on workers' health and well-being.

Between 2005 and 2015, the proportion of workers experiencing decision latitude increased, as the following details show.

The ability to change the order of tasks has increased by four percentage points, the figure for being three percentage points higher than for men.

Having a say in the choice of working colleagues: ('always' or 'most of the time') has increased from 25% to 30%, but has increased more for women (seven percentage points more to 26%) than for men (five percentage points more to 33%), hence resulting in a narrower gender gap.

Figure 67: Selected indicators for use of creativity and task variety, EU28 (%)



The ability to choose or change the speed or rate of work as well as **the ability to change or choose methods of work** have increased by two points in the 10-year period (from 69% to 71% and 67% to 69%, respectively).

Workers' discretion to change some aspects of work is increasing, but not for all workers. Underlying the employment relationship is the exchange of subordination in return for a wage, and this is visible in the data on discretion: latitude is greater among the self-employed, particularly those with employees (Figure 68). Decision latitude is also higher in micro and small companies. Managers, professionals and agricultural workers report higher levels of discretion at work.

Participation in the organisation

Participation means the possibilities that workers may have to take part in organisational decisions that affect their work – specifically, the capacity of workers to influence decisions as *individuals* rather than through

their representatives. The involvement of workers in decisions about their immediate tasks has been discussed in the previous section ('Decision latitude'); this section focuses on the involvement of workers in changes affecting work organisation. About half of all workers in the EU are involved in decisions that directly affect their work: 46% in the EU28 are consulted (always or most of the time) before objectives are set for their work while 50% are involved (always or most of the time) in improving the work organisation or work processes of their department or organisation. In addition, some 47% report they can influence decisions that are important for their work – always or most of the time.

Differences between occupations are very substantial: just one-third of plant and machine operators and elementary occupations are involved ('always' or 'most of the time') in decisions that affect their work while this is the case for eight out of 10 managers (Figure 69).

Figure 68: Discretion at work, by company size, employment status and occupation (%)

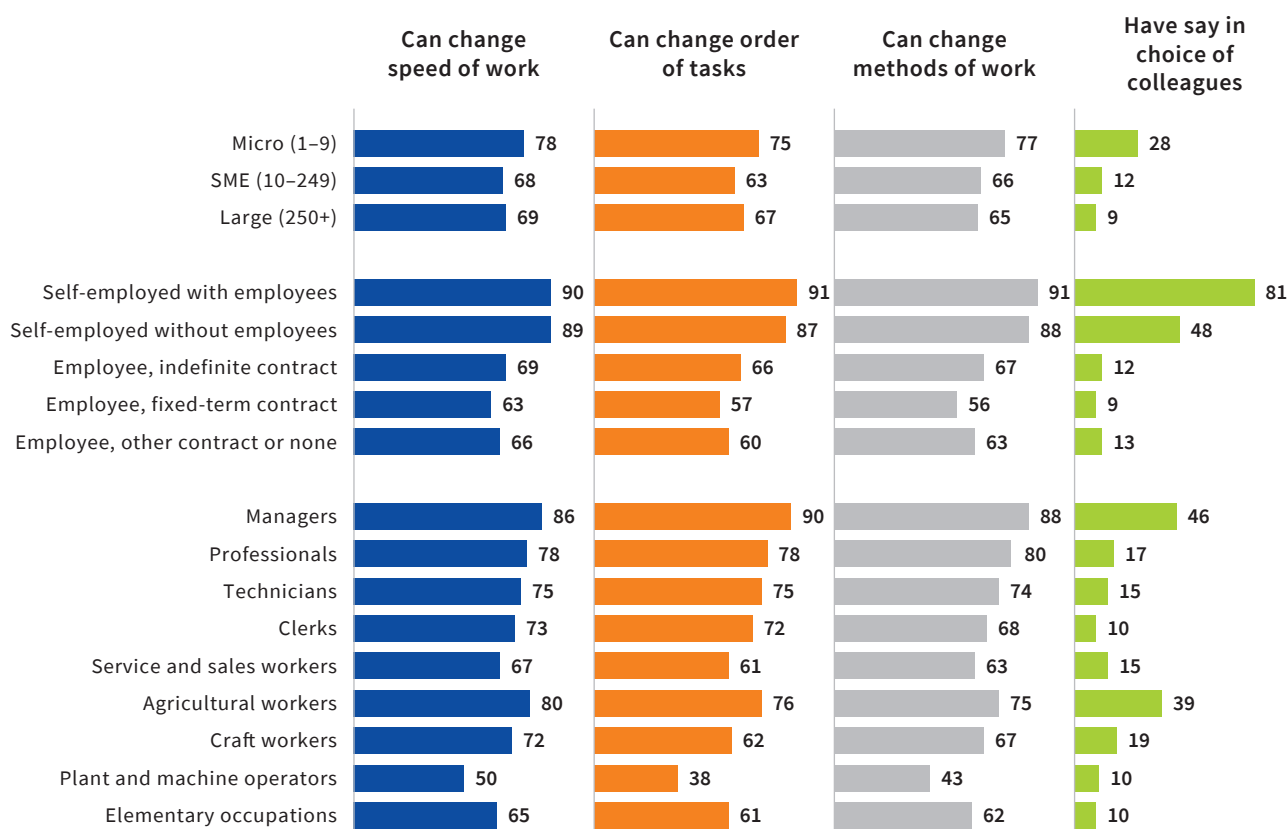
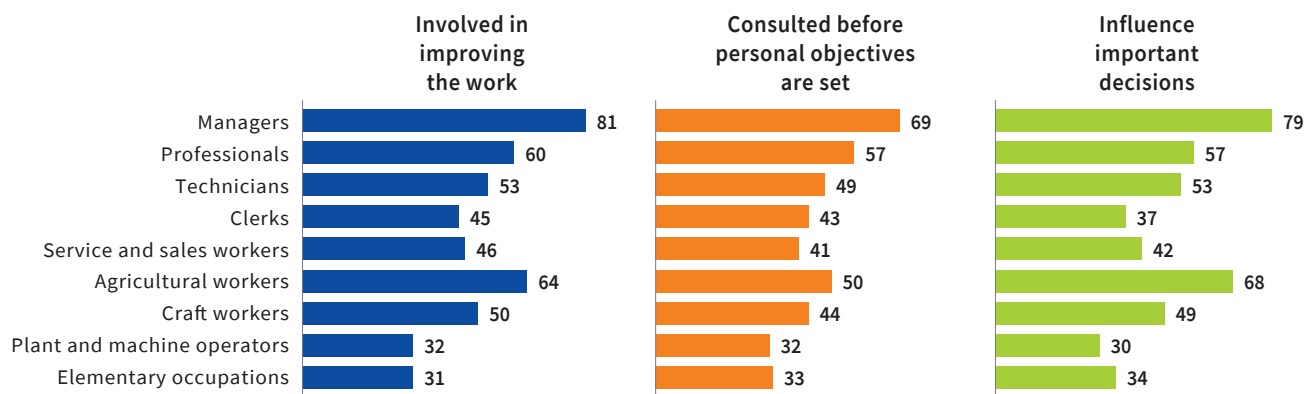


Figure 69: Involvement in decisions affecting work, by occupation (%)

Access to training

Lifelong learning has been an objective of European policy since the 1990s. The Commission's 1993 White Paper on 'Growth, competitiveness, and employment' highlighted the importance of continuous training, calling it a 'catalyst for a changing society' (European Commission, 1993). The EWCS data confirm that access to training has been increasing over time: for example, the proportion of workers who report having received training paid for by their employer (or by themselves if self-employed) rose from 26% in 2005 to 37% in 2015.

The sixth edition of the EWCS provides more detailed information than past editions on the different forms of training in which workers have participated to improve their skills.

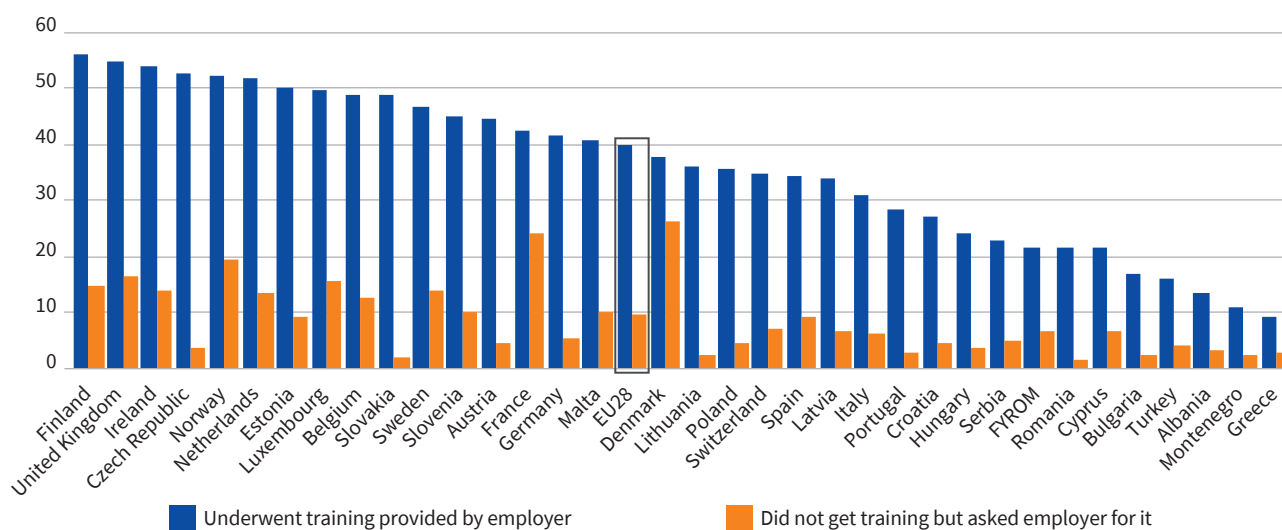
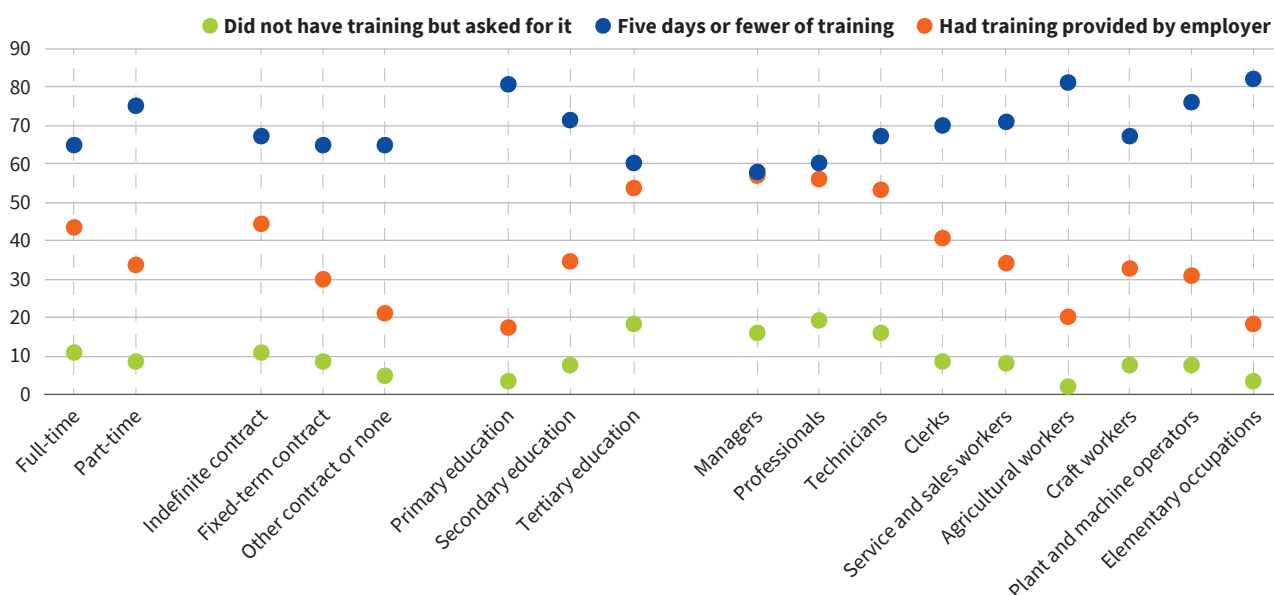
- 40% of employees report that their employer paid for or provided training. In the majority of cases, the duration was less than five working days: 14% of those who received training reported one day of training in the previous 12 months, 30% reported between two and three days and 23% reported between four and five days.
- 33% of all workers in the EU28 have participated in on-the-job training (training given by co-workers or supervisors).
- A small minority – 9% – of all workers paid for training themselves (6% of employees and 22% of the self-employed).

- 14% report having received some other training.
- 10% of employees report not having been granted the training they requested.

Workers appreciate training for its direct benefit in improving their job, and for its potential benefits for job security and employability. Focusing on workers whose employer paid for or provided training, the following findings emerge.

- 44% strongly agree that training has helped improve the way they work; a further 39% agree with this statement.
- Just under one-third (31%) strongly agree that their job is more secure because of their training; a further 30% report agree with the statement.
- 30% strongly agree that their prospects for future employment are better because of the training; 31% agree that this is the case.

The picture of access to training varies substantially across the surveyed countries (Figure 70). What is also evident is the variation in the extent to which workers requested training, and the pattern between the two: in countries with high levels of provided training, the proportion of workers who requested training but were not provided with it is higher than in countries with a limited provision of training. Although not a consistent pattern, it does show that in countries where training is more common, it is also more common for a worker to ask their employer if they can pursue training.

Figure 70: Access to employer-provided training, by country (% of employees)**Figure 71: Access to training by type of contract, education level and occupation – employees, EU28 (%)**

The data highlights substantial inequalities in the access to training. Of particular concern is the fact that workers who might need training the most have the least access to it: workers in lower-level occupations and with lower levels of education, and those on non-indefinite contracts or part-time contracts.

In general, groups who report less access to training also report a shorter duration of training. This is the case for people holding part-time contracts, workers with low levels of education and in occupations requiring fewer qualifications (Figure 71).

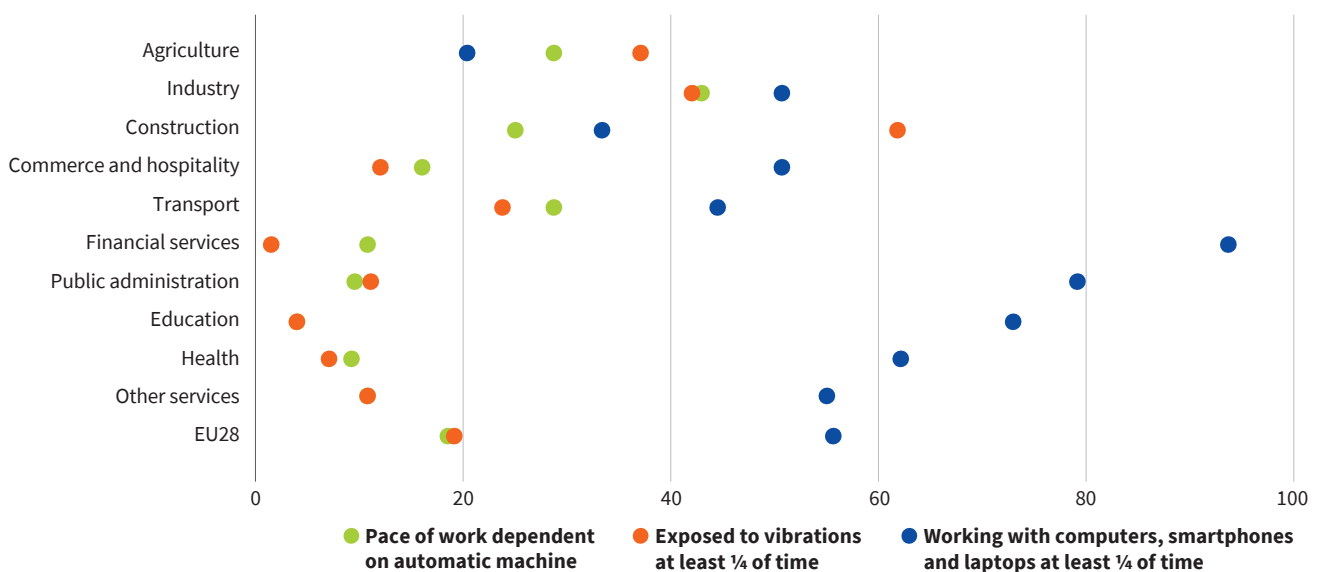
Use of machinery and ICT at work

The EWCS includes some questions that can be used as proxies for the use of specific technologies by workers. The first indicator is being 'exposed to vibrations from hand-tools or machinery'; this refers to workers using standard tools or machinery – for example, a pneumatic drill.

The second indicator is 'pace of work dependent on the automatic speed of a machine or movement of a product', which is typical of assembly lines in industry, for example. These indicators can be considered as proxies for workers working with more traditional technologies. The third indicator refers to newer technologies, more specifically to information and communication technologies (ICT). It is based on responses to the question: 'Does your main paid job involve working with computers, laptops, smartphones, etc.?'

The overall trend from 2000 to 2015 is of a slow but continuous decline in using hand tools or machinery. Also visible is a long trend of a decreasing proportion of respondents working in assembly lines or other autonomic systems (between 2005 and 2010, however, this proportion rose again).

By sector, the highest proportions of workers use hand tools or machinery in construction, industry and

Figure 72: Use of selected types of technologies, by sector, EU28 (%)

agriculture (Figure 72). Industry is the sector with the most workers for whom their pace of work is dependent on the speed of an automatic system. The use of ICT is most widespread in the service sectors – and of these, most widespread in financial services.

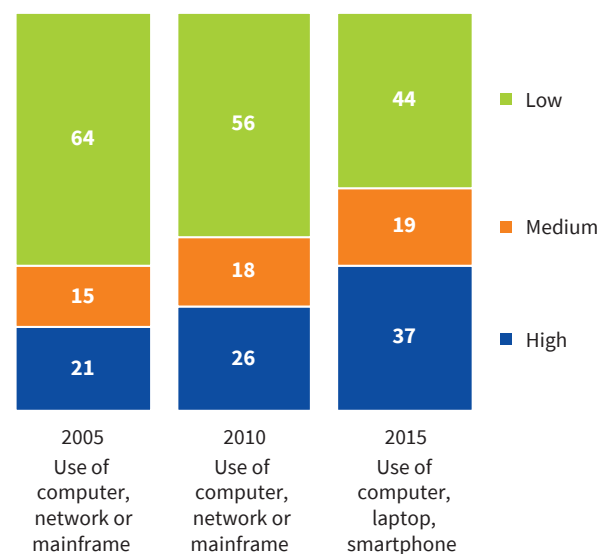
In terms of occupations, agricultural workers, those in elementary occupations, plant and machine operators and craft workers make higher-than-average use of automatic systems that determine the pace of work, and of hand tools and machinery. However, tools and machines are used more by craft workers, while the use of automatic machines determining the pace of work is more common among plant and machine operators. Managers, professionals and technicians are most likely to use ICT.

Digital technology is characterised by its greater potential for storing, transmitting and manipulating information. ICT increases the speed and ease with which information can be gathered, processed, analysed, and shared, fostering a greater volume of mediated communications. These changes may bring about a blurring of boundaries between different dimensions of work and between work and life.

The penetration of digital technology is spreading, the number of workers using ICT devices increasing between 2005 and 2015.¹⁴

In 2010, some 26 % of workers reported a high intensity of ICT use at work; in 2015, that figure had risen to 37 %.¹⁵ Conversely, over the same period, the proportion reporting a low intensity of ICT use, or none, declined from 56% to 44%. The extent of a medium intensity has remained fairly stable over time (Figure 73). It should be noted that there was a break introduced in the trend in 2015, new devices like smartphones being added to address technological changes in recent years. Nevertheless, the figures show

a similar trend over 2005–2010 and 2010–2015, although with a larger increase more recently.

Figure 73: Use of ICT at work – proportion of workers, by intensity of use, EU28, 2005–2015 (%)

The intensity of workers' use of these technologies varies. Figure 74 shows the proportion of each occupational group that uses ICT with a high intensity, a medium intensity or a low intensity. In addition, it shows the trend in these figures from 2010 to 2015. Most agricultural workers, craft workers, plant and machine operators, service and sales workers and those in elementary occupations either never or almost never use ICT – resulting in a substantial absolute number of workers who make little use of ICT (low intensity). Managers, professionals, technicians and clerks largely use ICT at a high level of intensity. Figure 74 also

14 The question in the sixth EWCS was slightly changed to reflect the increasing use of ICT devices such as laptops and smartphones, as well as computers.

15 'High intensity' = using ICT at least three-quarters of the time; 'medium intensity' = half or one-quarter of the time; 'low intensity' = almost never, or never).

shows that between 2010 and 2015 there was an increase in the use of ICT by those occupations that were already using ICT more intensely and a decrease for those who were not using it intensely.

These figures suggest that, in the near future, a large proportion of workers who rarely or never use ICT will coexist with an increasing number of workers using ICT at high intensity. These two groups will have very different experiences of work with potentially profound impacts on career development, occupational mobility and working life.

New forms ICT, like smartphones and tablet computers, promise historic change in the way we work, as they provide new possibilities for working at any time in any place. This new spatial independence changes the role of technology in the work environment, bringing both new opportunities and new challenges (Messenger and Lutz, 2015).

Drawing from analysis of the previous EWCS (Eurofound 2012a), a group of workers has been identified who work using ICT outside the employer's premises (at home, in

their car, in a client's premises or in a public space). The group is defined as those using ICT at least three-quarters of the time outside the employer's premises – either daily or several times a week. Referred to here as ICT-mobile workers, the group is highly heterogeneous: it is therefore important to differentiate between the genuine mobile workers from those who in reality work mainly from home (and are referred to here as teleworkers). Self-employed workers who always work at home are excluded from this analysis.

Around 11% of workers in the EU use ICT outside of the employer's premises: 3% telework mainly from home and 8% are exclusively ICT-mobile workers (Figure 75). The proportion of both is highest in the financial services sector; these are mainly at higher occupational levels (managers, professionals and technicians). Denmark, Netherlands, Sweden and Luxembourg have the highest proportions of ICT-mobile workers and teleworkers.

The working conditions of these workers may differ from those of other workers. For example, some types of working time flexibility (for example, the choice of fixed

Figure 74: Percentage of workers working with ICT, by occupation and intensity of use, 2010–2015

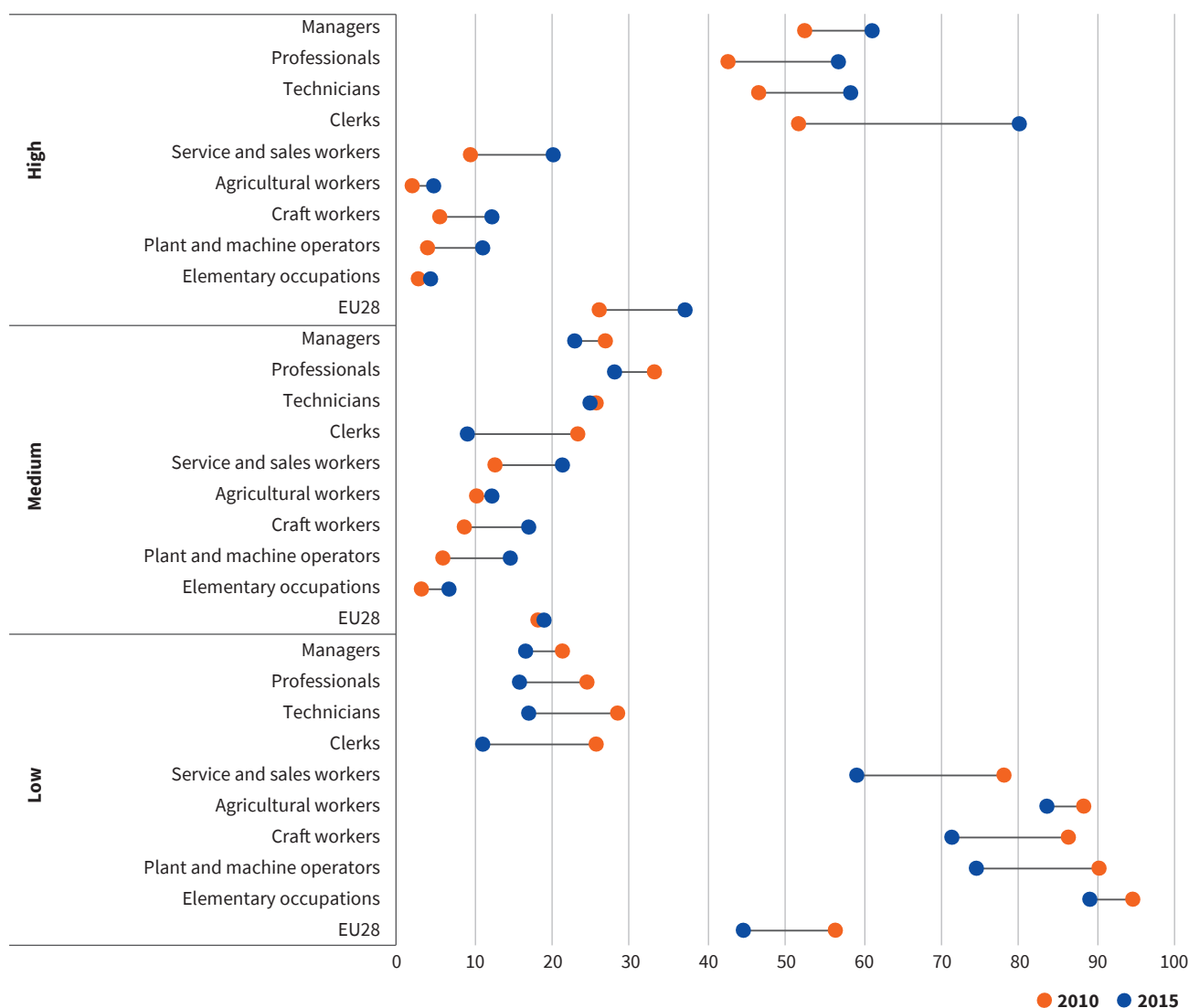
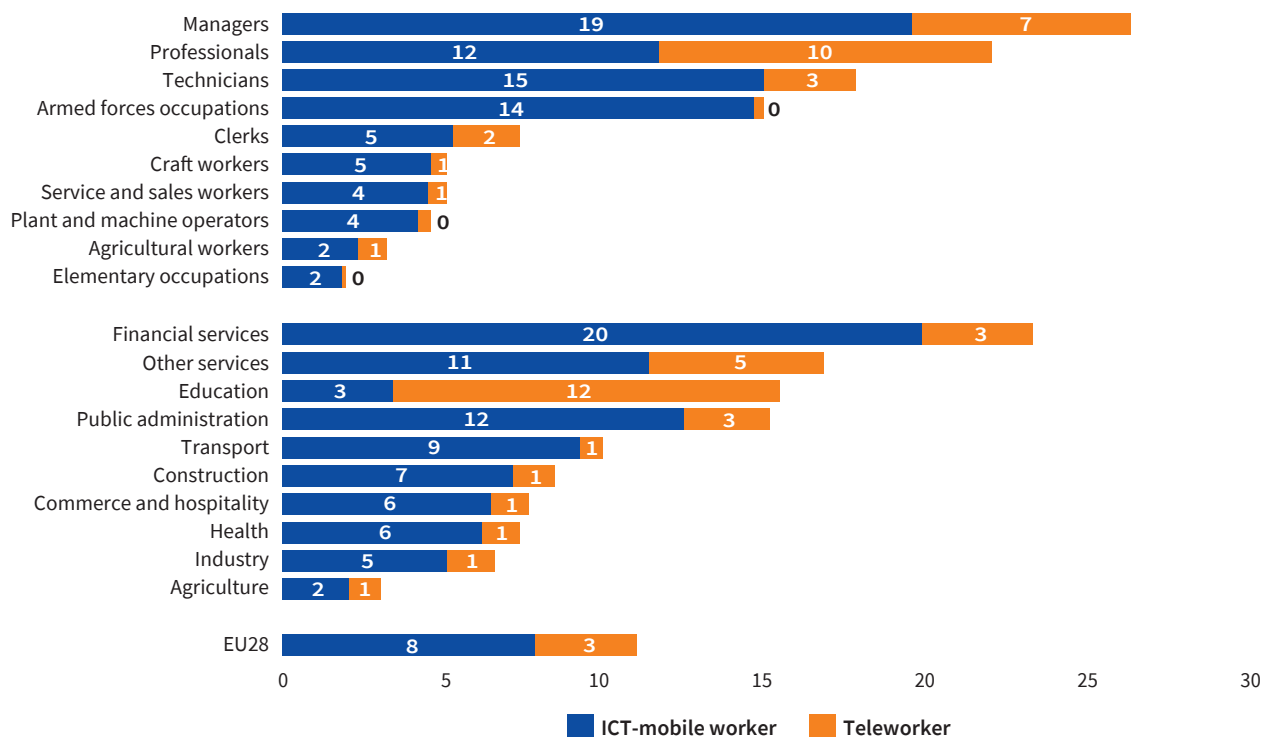


Figure 75: ICT-mobile workers and teleworkers by sector and occupation, employees only (EU28)

schedules, flexitime and total working time autonomy) are more frequently available for ICT-mobile workers (66% of whom have this sort of flexibility) and teleworkers (72%); for other workers, the figure is 41%. However, discussion about the effects of telework and ICT-mobile work mainly concerns work–life balance. The EWCS shows that 26% of ICT-mobile workers reporting having a poor work–life balance, as against only 18% of the rest of the workforce. This could be partially explained by the fact that a larger proportion of ICT-mobile workers work more than 48 hours per week (28% as against 14%). Overall, according to the job quality indices, ICT-mobile workers and teleworkers experiencing greater work intensity but more autonomy at work and better career prospects.

Teamwork

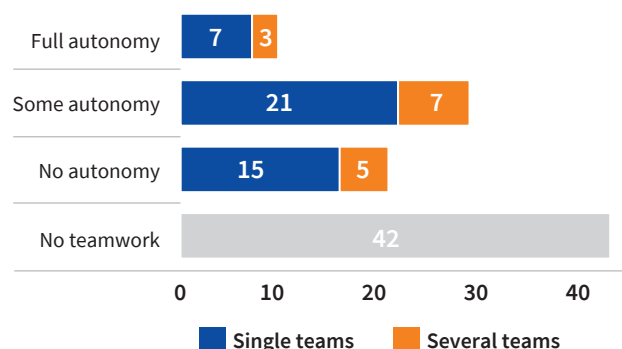
Apart from the indicators contained in the job quality index on Skills and discretion, there are other ways in which workers can be involved in decisions affecting their work: for example, through teamwork. This section looks at incidence of teamwork, examines some of the forms it can take, and describes workers' experience of it.

More than half of all employees in the EU28 work in a team that has common tasks and can plan its work. The incidence of teamwork varies considerably across countries, from less than 40% in Albania, Turkey and Italy to around 70% in the Sweden and the United Kingdom. Men and women work in teams to an equal extent; however, older workers are less likely to do so

than younger workers. In terms of occupation, managers, professionals and agricultural workers practise it the most (roughly 70% working in teams); workers in elementary occupations and plant and machine operators practise it the least. By sector, workers in health sector report it the most (72%).

Three-quarters of workers practising team work in the EU28 do so always in the same team or group. The remaining individuals belong to several teams or groups, characteristic of the 'matrix' type of organisational structure – in which individuals may have more than one reporting line. The matrix is practiced more in Norway (where 51% of employees report working in such a structure), Finland, Sweden, the Netherlands and Denmark; it is least practised in Albania and Bulgaria (15% or fewer). By occupation, one-third of professionals work in a matrix structure, and by sector, over one-third of employees in health practice do so.

Teams can be autonomous, deciding on the division of tasks, who will head the team and its timetable. Such autonomous types of teams have been recognised for their potential in improving organisational performance, using better the tacit knowledge of employees, and improving employees' communication with actors outside their group. This way of organising work gives employees a lot of autonomy and wide access to resources in their work. Figure 76 presents an overview of the incidence of teamwork and teamwork autonomy.

Figure 76: Teamwork and teamwork autonomy in the EU28 (employees only, %)

Members of the team decide on the division of tasks in only a small majority (56%) of cases. There are substantial country differences, the figure being 70% or more in Denmark, Finland, Sweden, Norway and the Netherlands. By occupation, this freedom to decide is greatest for professionals (64% being able to do so) and agricultural workers (62%). By sector, it is greatest in education (66%), followed by health (64%) and agriculture (63%); it is lowest in transport (42%).

Team members decide the head of the team in 28% of the teams – over 40% in Sweden, Norway, Finland, Romania and Switzerland. Differences in terms of occupation and sector are minimal.

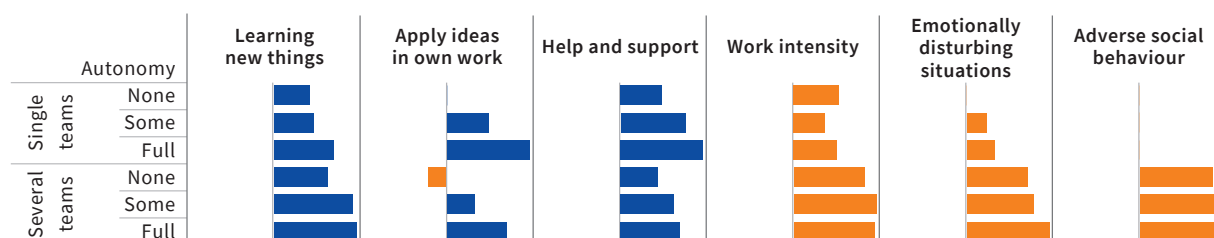
Members can decide the timetable of the work in 41% of cases in Europe; more than half of the workforce involved in single team can decide on the timetable in Denmark, Serbia, Montenegro, Finland, Austria, Norway, Switzerland, and the Netherlands.

Teamwork: double-edged sword

For employees, teamwork is associated with both positive and negative aspects of work. Figure 77 shows that teamwork is associated with an increased likelihood of being able to learn new things and apply one's own ideas in work, as well as obtain more help and support from colleagues.

Workers in autonomous teams are more likely to be learning new things; moreover, workers in matrix-type organisations are more likely to be learning new things than workers in single teams. Workers are more likely to be applying their own ideas in work when they work in teams, except in cases where teams have no autonomy. (Working in several teams or in a single team is not relevant in this respect.) Another positive association of teamwork is with support from colleagues. As employees need to rely on each other more if teams are more autonomous, support increases with team autonomy. Employees in single teams report they have more support from colleagues than employees working in matrix organisations.

The downside of teamwork is more intense work, as well as an increased likelihood of being in emotionally disturbing situations or being confronted with adverse social behaviour. The association is stronger for employees working in several teams than for workers in single teams. Encountering adverse social behaviour is no more likely for employees in single teams than for employees in multiple teams. There is no association between autonomy and work intensity, but workers in more autonomous teams are more likely to be in emotionally disturbing situations or be confronted with adverse social behaviour.

Figure 77: Positive and negative associations with teamwork, EU28 (employees only)

Note: The figure shows the coefficients of teamwork variables from regressions controlled for gender, country, age, sector, workplace size and occupation, compared with employees who do not work in teams. Blue bars represent associations favourable to workers and orange bars represent unfavourable associations.

Task rotation

The original motivation for introducing task rotation was to permit workers a faster recovery from demanding tasks and reduce the risk of errors or injury (and hence enable higher productivity). Originally begun in manual work settings, this practice has now spread to other types of work. In service work situations, it is argued that a workforce trained to carry out different tasks can be more easily – flexibly – allocated where customer needs dictate.

Task rotation is practiced by nearly half of all employees (43%) in the EU28, a proportion not much changed since 2005. However, there is considerable country variation. Task rotation is most widely practised in Denmark, 77% of employees reporting it. High percentages are also reported in Slovenia (71%) and the Netherlands (64%). This contrasts with Hungary, where only 25% of employees report practising task rotation, followed by Italy and Turkey (both 28%) and Latvia (30%).

Task rotation is most frequently practised by younger employees: 51% of those aged under 35 do it, compared to only 38% of those aged 50 or over. By occupation, service and sales employees practice it the most (50%), and employees in elementary occupations the least (34%). By sector, employees in health report the highest incidence (61%).

Task rotation can be organised in different ways: the tasks to be rotated may or may not require different skills from workers and the level of centralisation may be different.

Task rotation requires different skills in 78% of cases. For two-thirds of the employees who do practise task rotation, management decides on the division of the tasks. For the remaining one-third, those practising it decide on the task division. The combination of these dimensions allows the identification of four types of task rotation (Table 10). This then enables a picture to be drawn of the incidence of these four types (Figure 78).

Figure 78: Task rotation types, EU28 (%)

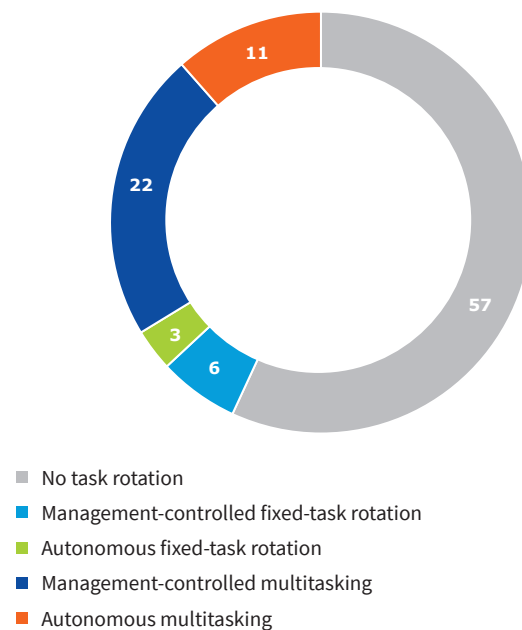


Table 10: Types of task rotation

	Management decides on task division	Division of tasks is decided by the people who are rotating task
Tasks rotated do not require different skills	Management controlled fixed task rotation	Autonomous fixed tasks rotation
Tasks rotated require different skills	Management controlled multitasked	Autonomous multitasked

SUMMARY

Skills and discretion

The **Skills and discretion index** score has been increasing in the EU28 since 2005, rising more for women (and hence reducing the gender gap). Similarly, younger age groups are closing the gap with older groups. The difference in the index scores for the countries surveyed is large. Between the two ends of the scale, it is 20 points.

The index is higher for self-employed workers than for employees and full-time workers have a somewhat higher score than those working part-time. The differences between occupations are larger, the score for managers being twice that for elementary occupations and plant and machine operators.

Cognitive dimension of work

For almost 80% of workers, their job involves solving unforeseen problems on their own and applying their own ideas. A smaller though considerable proportion of workers learn new things on the job and carry out complex tasks. However, almost half the workforce performs monotonous or repetitive tasks, and there has been little change in these indicators over time. The lowest levels of creativity at work and task variety are reported by elementary workers and plant and machine operators, workers in a part-time or fixed-term contract, and younger workers.

Decision latitude

Between 2005 and 2015, the proportion of workers experiencing decision latitude increased. There is greater scope for decision latitude among the self-employed, particularly those with employees, among workers in micro and small companies and – in terms of occupations – among managers, professionals and agricultural workers.

Organisational participation

Employees may have scope to take part in organisational decisions that affect their work – as individuals rather than through their representatives. About half the workers in the EU are involved in decisions that directly affect their work. Differences between occupations are substantial: 30% of workers in elementary occupations are involved in decisions that affect their work, while for managers the figure is almost 80%.

Access to training

Access to training has been increasing over time: the proportion of workers who had training paid for by their employer rose from 26% to 40% in the period 2005–2015. Training brings a sense of personal benefit: over 80% of employees feel that training has improved the way they work and around 60% believe that their prospects for future employment are better because of the training. However, the workers who need training the most have the least access to it: these are workers with low levels of skills and level of education, as well as those in non-permanent or part-time contracts.

Use of technology at work

The number of workers using ICT has increased. For instance, the extent of its use at a high level of intensity rose from 26% to 37% between 2010 and 2015. However, a large minority of the workforce rarely or never uses ICT. The use of ICT is more widespread in the service sectors, mainly in financial services, and in terms of occupation among managers, professionals and technicians.

Around 3% of employees telework mainly from home, while 8% are exclusively so-called 'ICT-mobile workers': they work in a range of external locations. More ICT-mobile workers and teleworkers are found in the financial and services sectors – mainly managers, professionals and technicians. The countries with the highest proportions of ICT-mobile workers and teleworkers are Denmark, Netherlands, Sweden and Luxembourg.

Poor work–life balance is reported by 26% of ICT mobile workers, as against 18% for other workers; in part due to the longer hours they work. As a group, ICT-mobile workers and teleworkers have greater autonomy at work and better career prospects.

Teamwork

Teamwork is another way in which people can be involved in decisions affecting their work. Managers, professionals and agricultural workers practice it the most (roughly 70% work in teams); elementary occupations and plant and machine operators, the least. Workers in the health sector report it the most (72% doing so).

2.7 Guaranteeing prospects

‘Prospects’ relates to those aspects of the job that contribute to a person’s need for employment – both the material necessity for an income and the psychological need associated with a person’s self-esteem and identity. The concept of prospects includes job security and the prospect of career advancement. The inverse of job security – job insecurity – is recognised as a significant cause of stress (see, for example, Green, 2015); when prolonged, it can have damaging effects on people’s career paths and health and well-being.

At the same time, change is a permanent feature of today’s workplaces as organisations respond to changed economic circumstances, explore new markets and clients and

adopt new technologies or production models. Hence, the sixth EWCS includes questions that address workers’ experiences of restructuring or reorganisation (in terms of how it has affected their work), changes in the volume of employment at the workplace, changes in the number of hours worked, changes in personal income, and change regarding workers’ influence over the work.

Downsizing, for example, has been associated with negative effects on health and is a risk factor for those who retain their jobs (Westgaard and Winkel, 2011). A recent systematic review of longitudinal studies on the impact of restructuring on employee well-being concluded that restructuring events (whether with staff reductions or not) have a negative impact on the well-being of employees (de Jong et al., 2016).

Prospects index

The Prospects index measures the continuity of employment as assessed through a person’s employment status and type of contract, job security, and career prospects (Table 12). Job prospects are different from employment security, the latter dependent not only on the features of the current job, but on the individual’s own qualities and on the labour market environment.

The different employment statuses – such as indefinite contract, fixed-term contract and self-employment – that form part of the index are examined in more detail in Chapter 1.

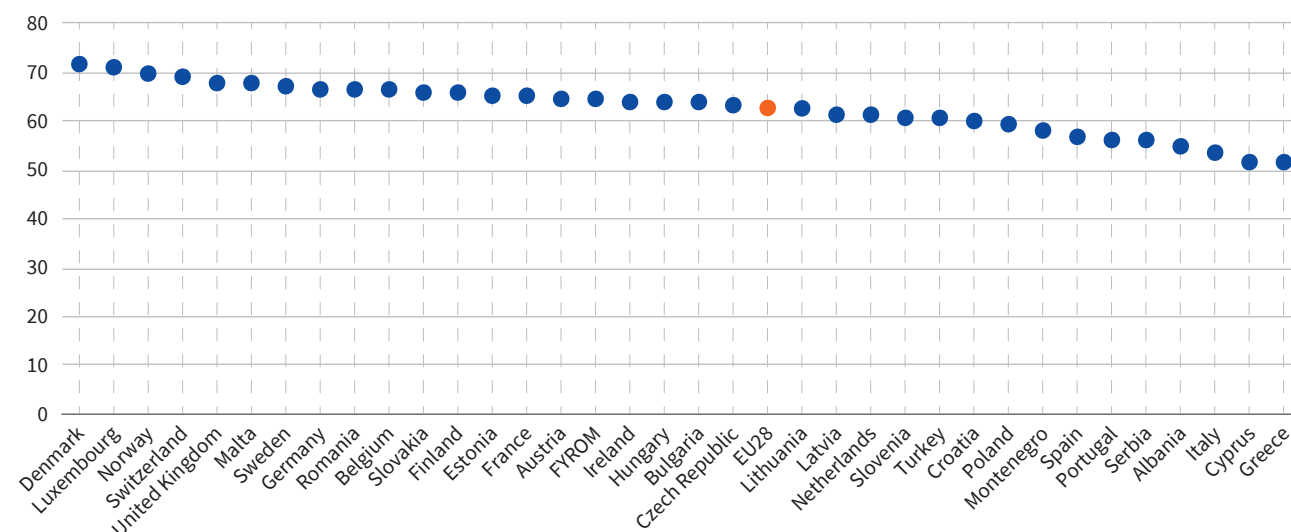
Figure 79 shows the Prospects index score across countries. Denmark, Luxembourg and the United Kingdom are the EU Member States with the highest score for Prospects; Greece, Cyprus and Italy have the lowest scores.

In terms of occupations, agricultural workers and elementary occupations score lowest on the index (53 points) while technicians, professionals (both 67) and managers (68) score highest. By sector, the highest score is in financial services (71 points) and the lowest is in agriculture (53).

One noteworthy detail is that part-time workers score seven points below full-time workers in the prospects index: 58 as against 65.

Table 11: Prospects index: proportion of workers in EU28 (%) and mean index scores (0–100), 2005–2015

			2005	2010	2015
Proportion of workers in EU28 (%)					
Employment status	(Question on employment status was modified in 2015)	Self-employed with employees	5	4	5
		Self-employed without employees	12	11	10
	What kind of employment contract do you have in your main job?	Employee, indefinite contract	64	67	66
		Employee, fixed-term and temporary employment agency contract	10	10	11
		Employee, other or no contract	9	7	7
Career prospects	My job offers good prospects for career advancement (strongly agree and tend to agree)		31	32	38
Job security	I might lose my job in the next six months (strongly agree and tend to agree)		14	16	17
Downsizing	During the last three years (or last year according to seniority in the company), has the number of employees at your workplace increased, stayed the same or decreased: decrease in employment				23
Mean index scores (0–100)					
Prospects index					63

Figure 79: Prospects index, by country

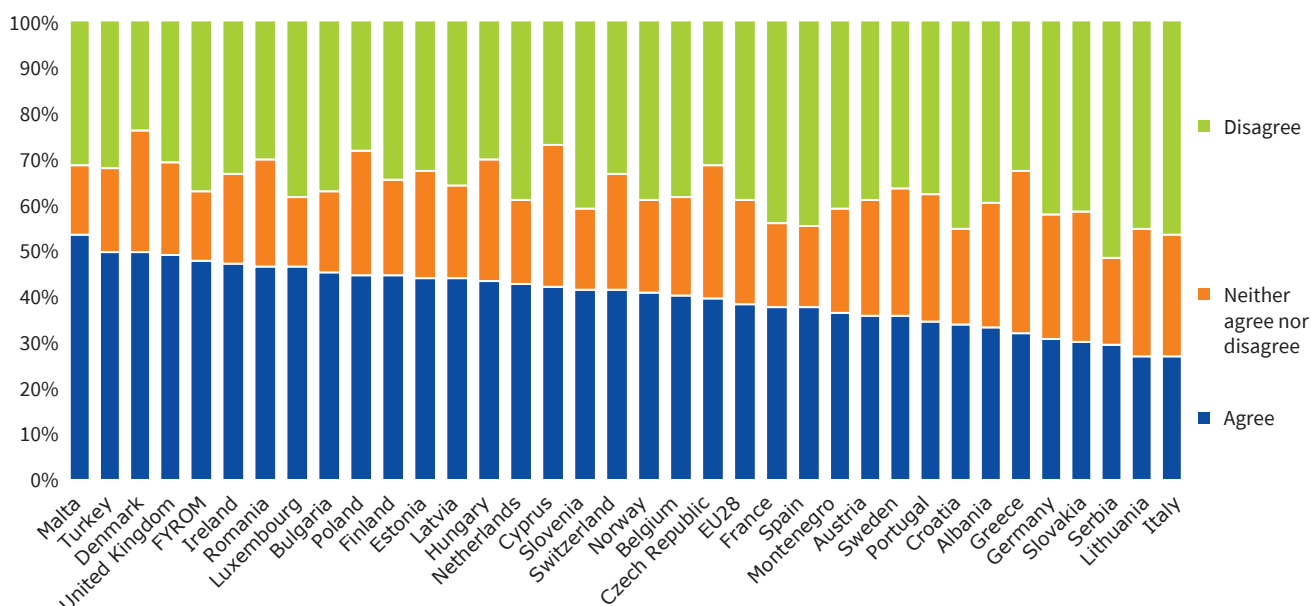
Career prospects

Almost four out of 10 workers (38%) agree with the statement that their job offers good prospects for career advancement – six percentage points more than in 2010 (32%) and seven more than in 2005 (31%). In contrast, 39% of workers disagree with this statement in 2015.

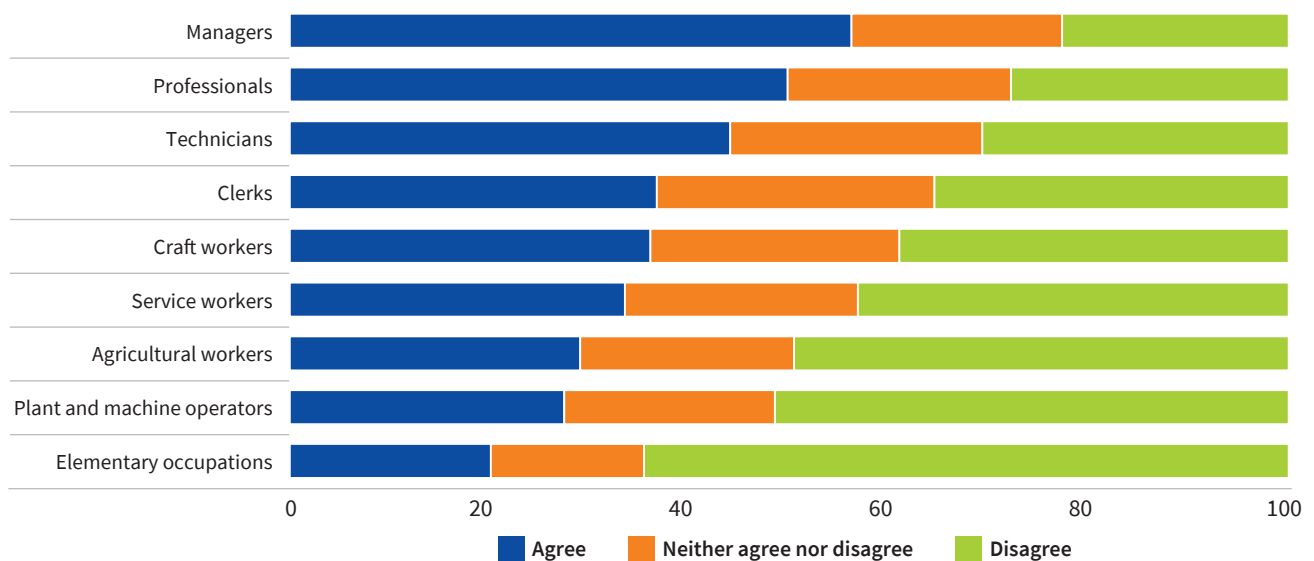
As Figure 80 illustrates, the proportion of workers who feel their job offers good prospects for career advancement is over 45% in Malta, Turkey, Denmark, the United Kingdom, the former Yugoslav Republic of Macedonia, Ireland, Romania and Luxembourg. In contrast, only one-third or fewer feel this in Albania, Greece, Germany, Slovakia, Serbia, Lithuania and Italy.

The gender differences are small; still, however, more men than women agree that their job offers good prospects (40% as against 36%). Conversely, more women than men disagree that their job offers good prospects: 42% compared with 36%. These differences are more pronounced among older cohorts; the higher proportion of older workers – particularly older women – reporting poor prospects (51% of those aged 50 and over) is of concern in the context of very high unemployment levels for older and younger workers and also at a time when policymakers are looking for ways to extend working life.

There are important differences in terms of sectors. Financial services has the largest proportion of workers stating they have good career prospects (55%) while transport (33%) and agriculture (29%) have the smallest

Figure 80: Good prospects for career advancement, by country (%)

Note: The 'Agree' category combines 'strongly agree' and 'tend to agree'. The 'Disagree' category, similarly, combines 'strongly disagree' and 'tend to disagree'.

Figure 81: Good prospects for career advancement, by occupation, EU28 (%)

Note: The 'Agree' category combines 'strongly agree' and 'tend to agree'. The 'Disagree' category, similarly, combines 'strongly disagree' and 'tend to disagree'.

proportions. Public administration and other services are above average on this dimension (43% and 39% respectively) but industry (37%), and commerce and hospitality (35%) are below average.

In terms of occupations, a majority of managers agree with the statement that their job offers good prospects for career development. However, most elementary workers and plant and machine operators disagree (Figure 81).

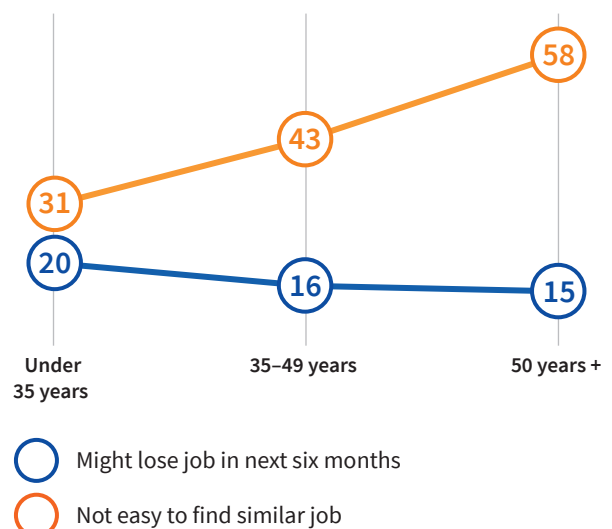
Job security and employability

Self-reported job insecurity has been interpreted as a good predictor of future unemployment (Campbell et al, 2007, Stephens, 2004, Dickerson and Green, 2009, Green, 2015). The survey asked respondents whether they felt they might lose their job in the coming six months; the replies 'tend to agree' and 'strongly agree' were considered to indicate perceived job insecurity.

The level of job security in the EU28, according to this measure, remained unchanged between 2010 and 2015: some 68% of workers disagreed with the statement that they might lose their job in the next six months. Conversely, 17% in 2015 and 16% in 2010 feel they might lose their job in the next six months.

However, when asked if it would be easy to find a job with a similar salary if they were to quit their current job (indicating their perceived employability), 36% of respondents agree with this statement in 2015. This represents an increase of four percentage points between 2010 and 2015.

While older workers report less job insecurity than younger workers, their perceived level of employability is far lower (Figure 82).

Figure 82: Job security and employability, by age group, EU28 (%)

Note: 'I might lose my job in the next 6 months' (in blue) combines strongly agree and tend to agree. 'If I were to lose or quit my current job, it would be easy for me to find a job of similar salary' (in orange) combines strongly disagree and tend to disagree.

In terms of occupations, workers in elementary occupations report the highest level of job insecurity and also relatively low employability. At the other end of the spectrum, professionals, managers and technicians feel themselves to be more secure and more employable.

Workers who feel insecure in their jobs tend to display low scores across several aspects of working conditions. In general, they are less likely to have a good work–life balance, have the opportunity to learn new things in the job or to have undergone training provided by their employer. As Table 12 shows, they are much less likely to feel they will be able to continue their job to the age of 60 than other workers. In addition, they are much more likely to

feel that work affects their health negatively and to have experienced adverse social behaviour. They are more than twice as likely to report 'poor well-being' than other workers (see section 3.3 'Maintaining and promoting health and well-being' in Chapter 3). It is important to underline that 29% of those reporting job insecurity are part-time workers.

Associations also exist between low employability and poor scores for some aspects of working conditions; however, as Table 13 shows, the associations generally are not as strong as for job insecurity. Disagreeing with the statement that it would be easy to find a job with a similar salary seems to be linked to feeling that health and safety is at risk because of work, reporting that work affects health negatively and reporting poor well-being. Employability does not seem to be strongly linked to having a good balance between working hours and family and social commitments, being able to learn new things in the job, or being subject to adverse social behaviour.

Overall, what is disturbing is the fact that 44% of the workers who feel they might lose their job also do not believe it would be easy to find a job of a similar salary; this group represents 7% of all workers in the EU.

Change at the workplace

Measuring and understanding change is not straightforward. In order to gain a better picture of the changes experienced by workers, the EWCS examines

changes in three spheres: the volume of employment change in the company, the worker's experience of restructuring or reorganisation at the workplace, and changes in individual dimensions of work such as working hours, salary, influence and tasks and duties. Answers to these questions reflect the variety of change experienced.

Change in volume of employment

A new question in the sixth EWCS measures whether the number of employees at the worker's workplace has increased, stayed the same or decreased in the three years prior to the survey (or, for workers with less seniority, since starting their job).

Most workers in the EU28 (57%) report no change in the volume of employment at their workplace. The rest is split between those reporting an increase in employment levels (3% 'a lot' and 17% 'a little') and those reporting a decrease (18% 'a little' and 5% 'a lot'). This helps to identify the proportion of workers who were not laid off following a downsizing in their organisation.

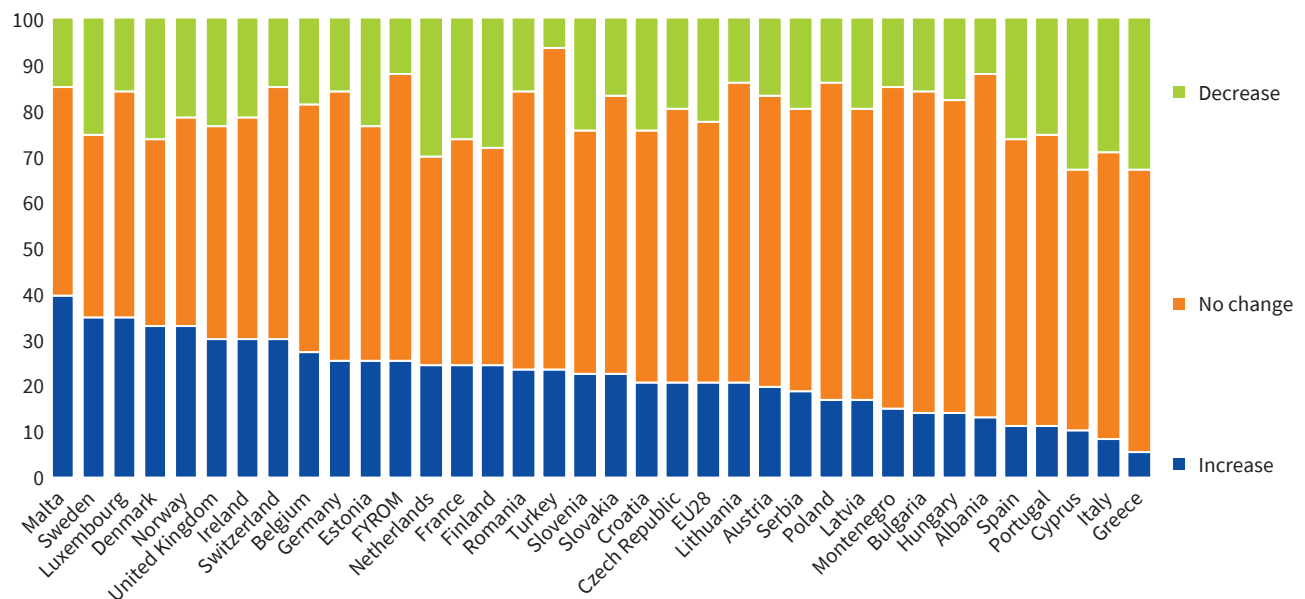
Figure 83 shows wide variations by country. Sweden and Denmark report the highest incidence of change: 60% and 59% report a change in the volume of employment (the combined 'increase' and 'decrease' indicators).

Workers who remain in the company after a downsizing exercise account for 30% or more of respondents in Greece (33%), Cyprus (33%), the Netherlands (30%) and Italy (30%).

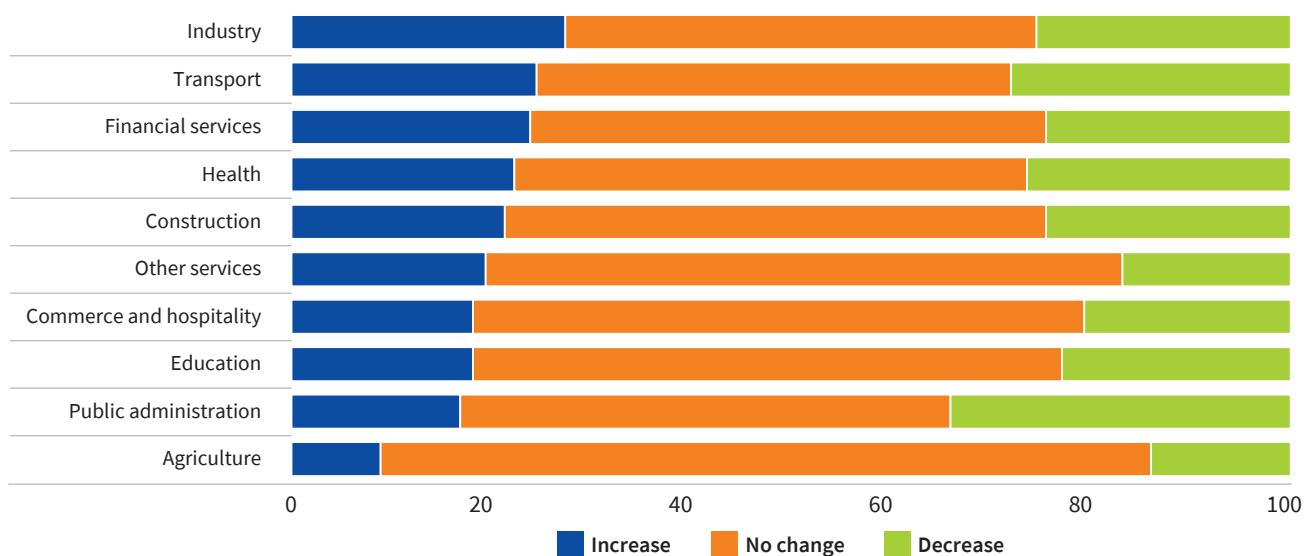
Table 12: Job insecurity and low employability, by aspects of working conditions, EU28

	Job insecurity	No job insecurity	Low employability	Medium-to-high employability	Odds ratio job insecurity	Odds ratio low employability
Good balance between working hours and family and social commitments	77	82	80	82	0.731	0.882
Health or safety at risk because of work	29	23	27	22	1.249	1.338
Work affects health negatively	34	25	31	24	1.431	1.307
Learning new things	67	73	69	73	0.851	0.901
Not feeling well paid for the job	40	29	35	28	1.535	1.324
Being among the 40% with lowest incomes (one of the two lowest income quintiles)	51	36	38	40	1.859	0.884
Part-time contract	29	22	23	23	1.658	ns*
Able to do the job until 60	62	75	70	74	0.570	0.854
Undergone training paid for by the employer	33	43	38	42	0.769	0.868
Poor well-being (WHO-5)	10	5	7	5	2.199	1.505
Exposed to adverse social behaviour	20	15	16	16	1.682	1.113

Note: * ns = not significant. The effect of job insecurity (low employability) on the different variables is given by the odds ratio, which compares the probability of a phenomenon occurring between the presence and absence of a given situation. In this situation, an odds ratio of 1 means the phenomenon is equally likely for those with job insecurity (low employability) and the other workers. If it is greater than 1, it means the phenomenon is more likely for those with job insecurity (low employability). If it is less than 1, it means that the phenomenon is less likely for those with job insecurity (low employability). The effects are controlled for variation between country, sectors and occupations. All odds ratio are statistically significant ($p < 0.01$).

Figure 83: Employment change at workplace in previous three years, by country (%)

Note: The question was adapted to take into account workers who had started in their role less than three years before the survey: ‘Since you started in your main job, has the number of employees at your workplace increased, stayed the same or decreased?’

Figure 84: Employment change in previous three years, by sector, EU28 (%)

In terms of sectors, the largest proportion of workers reporting downsizing in their workplace is in public administration, followed by transport, health and industry (Figure 84). Workers in industry and transport (alongside those in financial services) also have the highest proportions reporting an increase in employment levels.

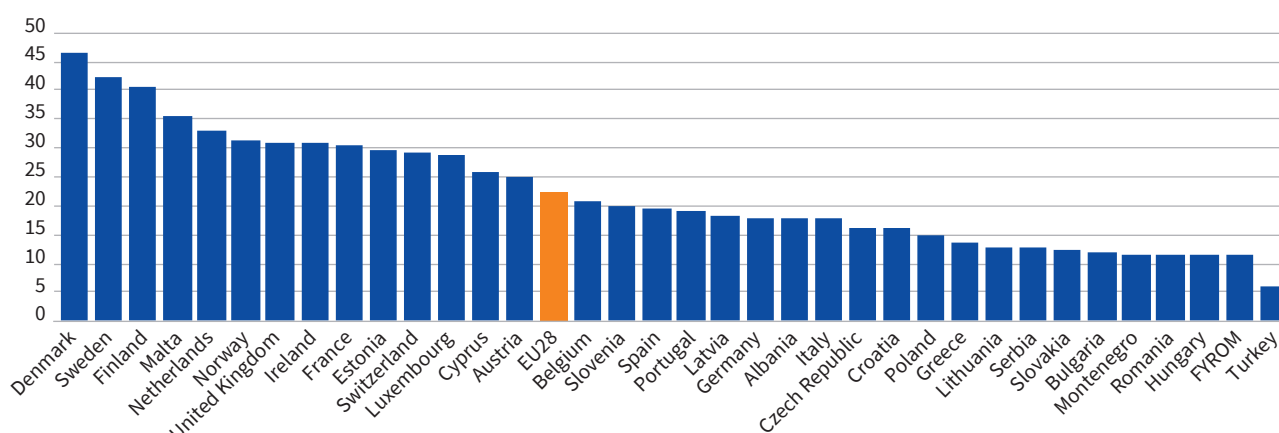
Impact of restructuring

According to Eurofound’s online European Industrial Relations Dictionary:

Restructuring is a term used to describe a wide range of different activities which lead to the reorganisation of an enterprise. Restructuring can have serious consequences for the workforce regarding levels of employment and the terms and conditions of employment offered to workers.

According to the sixth EWCS, restructuring or reorganisation at the workplace that substantially affected a person’s work is reported by 22% of workers in the EU (24% of employees). Downsizing is not exclusively and necessarily linked to restructuring but it has been reported by 44% of the workers reporting restructuring. One quarter (27%) of those reporting restructuring also reported an increase in employment at their workplace.

Restructuring is most frequently reported by employees in the Nordic countries, Malta, Netherlands, the United Kingdom and Ireland, while it is reported least by workers in Turkey, the former Yugoslav Republic of Macedonia, Hungary, Romania, Montenegro and Bulgaria (Figure 85).

Figure 85: Proportion of employees reporting restructuring that substantially affected their work, by country (%)

In terms of occupations, managers (30%), professionals (30%) and technicians (29%) report an above-average incidence of substantial restructuring at their workplace while agricultural workers (9%) and elementary occupations (13%) show a low incidence. In terms of sectors, public administration (35%), financial services (33%) and health (31%) report the highest incidence of substantial restructuring.

About 77% of workers who experienced a substantial restructuring were informed about the forthcoming change before it took place, while 36% were asked to give their opinion prior to the restructuring or reorganisation taking place.

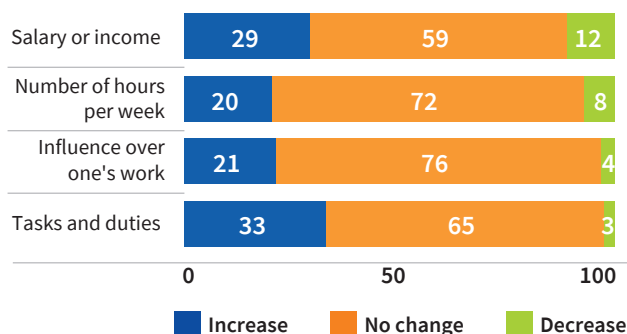
Associations emerge between the cases of restructuring and employment change and selected aspects of working conditions. Workers who have experienced a substantial restructuring or reorganisation at their workplace are more likely to report presenteeism, sickness absence, greater work intensity and being exposed to adverse social behaviour than other workers. At the same time, they are less likely to report having felt engaged, being treated fairly at work, and having enough time to do the job. Workers who experienced a reduction in employment at their workplace display similar associations with the same aspects of working conditions aspects except for autonomy and working hours (the association being non-significant) and enough time to do the job.

Changes in salary, working hours and influence

The questionnaire for the sixth EWCS contains new questions that address changes that the worker may have experienced – in the year prior to the survey – in the following areas: salary or income, number of working hours per week, amount of influence over their work, and tasks and duties.

More than one third of workers (38%) in the EU28 report no changes in their salary, working hours, amount of influence over their work or tasks and duties. Some 29% of workers report an increase in their salary and 12% a decrease.

Some 20% report an increase in their working hours, and 21% report an increase in the influence they have over their own work. In addition, one-third report an increase in their tasks and duties – which can be interpreted as an indication of an increase in workload during the year prior to the survey (Figure 86).

Figure 86: Changes in salary, working hours, influence over work and tasks and duties, EU28 (%)

There are differences between occupations in terms of these changes. Managers, professionals and technicians report a salary increase more than other workers while agricultural workers report an above-average decrease in their salary. Also noteworthy is the fact that 11% of managers report that their working hours have changed and 18% that their tasks and duties have increased a lot.

There are also substantial differences regarding the different dimensions of change by country. Sweden (29%), Ireland (29%), France (26%) and Denmark (26%) have the largest proportions of workers whose working hours increased while Sweden (67%) Norway (50%), Estonia (45%) and Germany (43%) have the largest proportions of workers who had an increase in their salary or income. Again, Sweden (40%) leads the field for the largest proportion of workers reporting that their influence over their own work increased, followed by Denmark (34%). Finally, Denmark (49%), Sweden (48%) and Romania (46%) have the largest proportions of workers reporting an increase in their tasks and duties.

SUMMARY

Prospects

The **Prospects index** combines the indicators of employment status (self-employed or employee), type of contract, the prospects for career advancement as perceived by the worker, perceived likelihood of losing one's job and experience of downsizing in the organisation. By country, Denmark, Luxembourg and the United Kingdom rank highest on the index and Italy, Cyprus and Greece the lowest. By occupation, managers, technicians and professionals rank highest, with agricultural workers and elementary occupations lowest. By sector, financial services has the highest ranking and agriculture the lowest.

Career prospects: 38% of workers believe that their job offers good prospects for career advancement, a rise of six percentage points since 2010. By contrast, 39% of workers feel they do not have good career prospects. Men rate their prospects better than women. A high proportion of older workers (women in particular) feel that their prospects are poor: 46% of those 50 aged or over.

Job security and employability: 68% of workers have no fears about losing their job in the next six months while 17% of workers do feel at risk. And just over one-third of workers feel they could find a job at a similar salary if they were to lose their current job.

Older workers feel less insecure about their job than younger workers; however, they feel far less employable. In terms of occupation, elementary workers feel the most insecure, and also consider themselves less employable.

Job insecurity and poor working conditions: Workers who feel insecure in their jobs are less likely to feel they have a good work-life balance. They are also less likely to be able to learn new things in the job or receive paid training. They are less likely to feel their job to be sustainable. They are more likely to feel a negative impact from work on their health and to have experienced adverse social behaviour. They are more than twice as likely to report poor mental well-being (as measured by the World Health Organization's Well-Being Index – WHO-5) as other workers. It is important to underline that 29% of those reporting job insecurity are part-time workers.

Poor employability and working conditions: Workers who feel themselves to be less employable are more likely to feel that their health and safety is at risk because of their work, that work affects their health negatively and to report poor mental well-being. Notably, almost half those workers who do fear they may lose their job also do not feel they could readily find a job of a similar salary – this group represents 7% of all workers in the EU.

Change in employment: Public administration is the sector in which the largest proportion of workers reporting downsizing; this is followed by transport, health and industry. Workers in industry, transport and financial services also most frequently report increases in employment.

Restructuring: Restructuring or reorganisation at the workplace (that substantially affected one's work) is reported by 22% of employees in the EU and over 30% in the sectors of public administration, financial services and health. About 77% of workers who experienced substantial restructuring were informed about the forthcoming change before it took place, while 36% were asked to give their opinion prior to the restructuring or reorganisation taking place.

Impact of restructuring: Workers who have experienced a substantial restructuring are more likely to report presenteeism, absenteeism, greater work intensity and being at the receiving end of adverse social behaviour. They are less likely to report feeling engaged, being treated fairly at the workplace and having enough time to do the job. Workers who report a decrease in employment at their workplace (but do not report restructuring), report some of the same associations.

Other job changes: Almost one-third of workers (29%) reports an increase in salary, and one in five (20%) an increase in working hours, with a similar proportion saying they have more influence over their own work. In addition, one-third report an increase in their tasks and duties.

Managers, professionals and technicians report a salary increase in the 12 months prior to the survey more than other workers; agricultural workers report an above-average decrease in their salary.

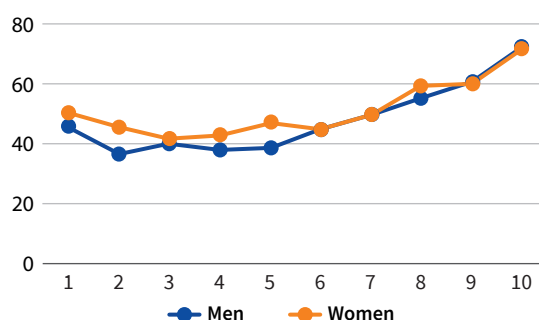
Meanwhile, 11% of managers report that their working hours have increased a lot and 18% that their tasks and duties have increased a lot is worthy of note.

2.8 Ensuring fair pay

Most job quality indices in this report focus on the non-material features of the job. Monetary rewards, however, are a crucial element of working life. Earnings – salary for employees and profit for the self-employed – provide a means to make a livelihood and support a person's lifestyle and family, as well as also potentially being a motivation to work. Earnings, therefore, are a core element of job quality.

Not only is the absolute level of earnings important, but also the extent to which monetary rewards are fairly determined. If the worker does not perceive that the level of rewards (including earnings) is in proportion to the effort they expend (this situation is termed an 'effort–reward imbalance'), stress and adverse health effects can result (Siegrist, 1996). The EWCS asks respondents to state whether they feel they get paid appropriately, given their efforts and achievements. About half of all workers tend to agree or strongly agree with this statement, although there are considerable differences in terms of within-country monthly real income deciles and gender (Figure 87). The relationship between being the perception of being paid appropriately and monthly income seems to be slightly u-shaped: middle-income workers are least likely to feel they are paid appropriately. In the lowest half of the income distribution, a considerably higher proportion of women than men feel they are paid appropriately – almost ten percentage points more.

Figure 87: Perception of being paid appropriately, by within-country monthly real earnings deciles (%)



Employee payment system

Nearly all workers in the EU (98%) receive a basic fixed salary or wage in exchange for their work. Many also receive one or more additional components that might be of a variable nature.

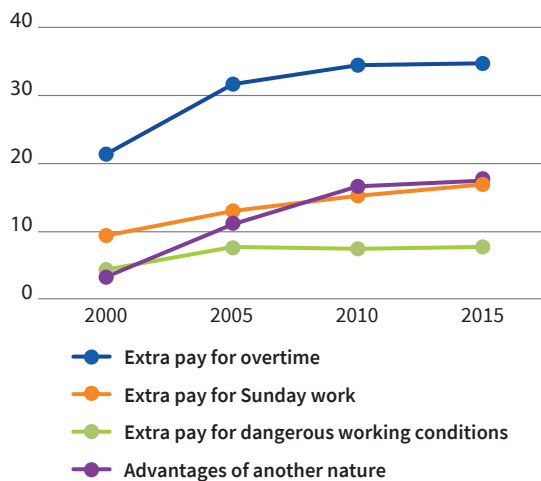
The most common additional components are extra pay for overtime and extra pay for Sunday work, both of which have been increasing in importance since 2000 (Figure 88). Extra pay for dangerous working conditions has been reported by around 8% of workers since 2005. Of the workers who work at least one Sunday per month, 41% receive extra pay for this.

Earnings index

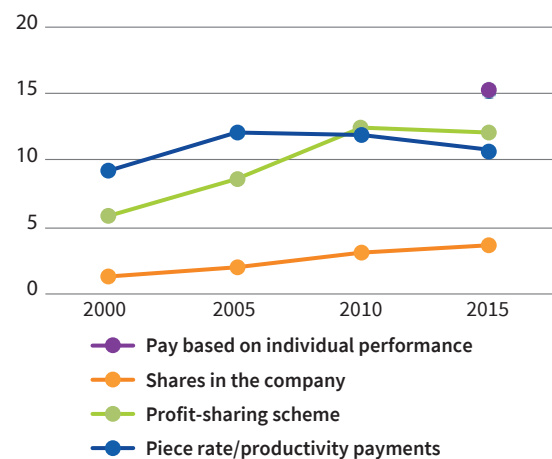
This index measures the monthly earnings of workers. In contrast to the other job quality indices, this index is based on only one indicator.

This indicator takes monthly real earnings after tax (see box 'Measuring earnings' in section 2.1) to capture the part of earnings that workers actually have available to use every month. Income will consequently be higher for workers with more working hours. An alternative to correct for this would be to examine hourly wages, but this would not reflect the objective of the job quality index, which is to analyse the extent to which the job is meeting the worker's needs – in this case, the need to make a living.

The distribution of earnings is skewed. Most workers are concentrated at the lower end of the income distribution, with very few in the upper end. When comparing occupational groups, the highest median monthly income is earned by managers, professionals and technicians. In contrast, workers in elementary occupations, service and sales workers and agricultural workers earn the lowest. In terms of sector, workers in financial services earn the most, followed by those in public administration and construction. The median income of men is substantially higher than that of women – which can partly be explained by differences in working hours.

Figure 88: Extra components of pay (employees only), EU28 (%)

A question on pay based on individual performance was introduced for the first time in the sixth EWCS questionnaire; it is reported by 15% of all employees. Profit-sharing schemes and shares in the company have

Figure 89: Performance-related components of pay (employees only), EU28 (%)

been slowly increasing in importance since 2000, involving 12% and 4%, respectively, of workers in 2015. Piece rate or productivity payments are reported by 11% of employees in 2015 (Figure 89).

SUMMARY

Ensuring fair pay

The **Earnings index** measures the monthly earnings of workers. In contrast to the other job quality indices, this index is only based on one indicator.

The distribution of earnings is skewed, with most workers concentrated at the lower end of the income distribution.

In terms of occupation, managers, professionals and technicians earn the most – workers in elementary occupations, service and sales workers and agricultural workers, the lowest. By sector, workers in financial services earn the most, followed by public administration and construction. Men's earnings are substantially higher than those of women, partly due to differences in working hours.

About half of all workers in the EU feel that they are paid fairly for the work they do. However, middle income workers are less likely to feel that they get paid appropriately.

Nearly all workers in the EU (98%) receive a basic fixed salary or wage in exchange for their work. The most common additional components are extra pay for overtime (37%), advantages of another nature (19%) and extra pay for Sunday work (18%), which have been increasing in importance since 2000.

Pay based on individual performance is reported by 15% of all employees. Profit sharing schemes and shares in the company have been increasing in importance since 2000, reaching 12% and 4%, respectively, in 2015.

Piece rate or productivity payments are reported by 11% of employees in 2015.

3 Perspectives on working life in Europe

There are multiple factors at play that determine whether workers assess their experience of working life positively or negatively: these include the division of domestic duties between members of a household and the worker's social infrastructure, as well as social and employment policies, including the availability of social and employment services. The workplace itself is pivotal to this, as it shapes working life and individual experiences of work. The workplace is also where individuals pool their actions to achieve a collective output.

This chapter looks at workers' subjective experience of their working life and analyses the role of job quality in contributing to a positive experience of work. In the framework developed in 2001 in its research into job quality indicators, Eurofound identified four key objectives that would ensure quality of work and employment for workers (Eurofound, 2002). These four objectives are:

- ensuring career and employment security
- developing skills and competences
- maintaining and promoting the health and well-being of workers
- reconciling working and non-working life

This framework is used to examine issues around quality of work and employment in this chapter and to inform the selection of topics to be addressed.

Ensuring career and employment security: The issue of employability has already been dealt in chapter 2. The analysis in this section covers workers' motivation – in the EWCS linked to the current job – as well as factors such as meaningful work and the terms of employment and financial security.

Developing skills and competences: This looks into the issue of skills, especially skills match and mismatch and the question of workers being underskilled or overskilled. (The topic of skills development and training has already been dealt with in Chapter 2.)

Maintaining and promoting the health and well-being of workers: This deals with health in the broad sense, encompassing both physical and mental health, looking in particular at the phenomena of sickness absence and presenteeism (working while sick). The issue of including people with chronic diseases in the workplace will also be considered.

Reconciling working and non-working life: Facilitating a balance between working and non-working life is an essential precondition to encourage entry into the labour market and to enable people to remain at work. This

objective will be examined through an analysis of work–life balance and working time arrangements and preferences, as well as the areas of work–family conflict and work–family enrichment.

One additional aspect that will be examined at the end of the chapter is the sustainability of work: enabling workers to continue working over the life course by safeguarding the quality of their jobs and work environment and ensuring that their personal and domestic needs (such as their health situation or care requirements) are adequately taken into account (Eurofound, 2015d).

3.1 Career and employment security

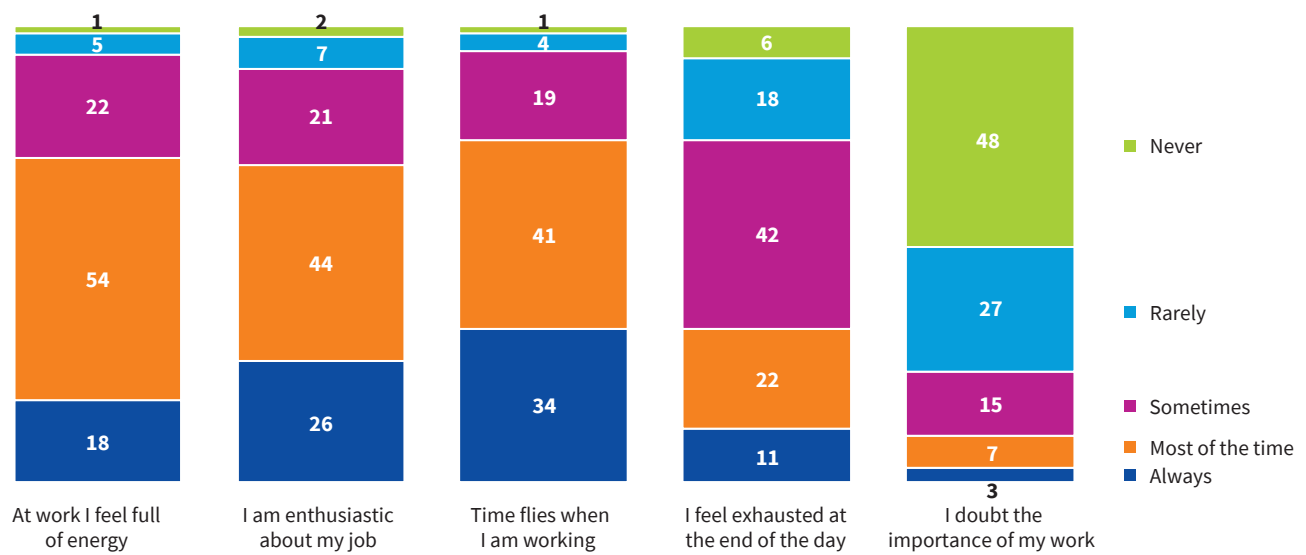
This section looks at two dimensions: a person's engagement with their work – including work as a motivating factor and a meaningful activity – and the financial security that work brings to the worker and their household. The job quality indices on earnings and prospects as well as the issue of employability (in chapter 2) complement this theme. It should be noted that this section only briefly touches on the broad topic of ensuring career and employment security. The EWCS does not cover the topic of transitions between jobs, for example.

Engagement at the workplace

Previous research has confirmed the importance of worker engagement in contributing to workers' well-being and sense of personal fulfilment, as well as its being a factor in company performance. Building worker engagement is a central goal of human resource policies and work organisation practices. Moreover, good leadership is also crucial in creating, developing and sustaining worker engagement.

Work in modern societies is assigned substantial value (Méda and Vendramin, 2013). Equally, workers' expectations of what work should deliver to them are both high and diverse. Some workers emphasise the financial benefits associated with the performance of work (remuneration and the social status that work brings); others underline the social value of work (as an opportunity to be engaged in a community); while a third group values the expressive dimension of work: work as an opportunity for self-development and fulfilment. It is widely acknowledged that being frustrated in meeting these expectations can have a negative impact on mental health.

The data from the EWCS shed some light on the nature of workers' commitment – both to their work and the organisation in which they work – and factors

Figure 90: Dimensions of engagement, EU28 (%)

that motivate them to perform well. Four aspects are examined: the various dimensions of engagement (and the association with positive or negative aspects of job quality); meaningful work and its role in worker motivation; the role of the organisation in motivating workers to perform their best; and, finally, satisfaction with working conditions – a prerequisite for worker motivation.

Dimensions of engagement

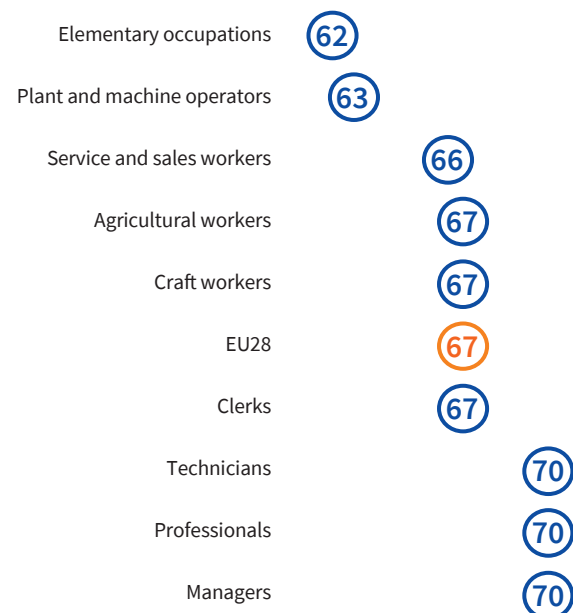
Work engagement has been described as a 'positive, fulfilling, work-related state of mind that is characterized by vigor, dedication and absorption' (Schaufeli and Salanova, 2007) – the opposite, according to Maslach and Jackson (1981), of the core dimensions of burnout: exhaustion and cynicism.

Engagement is positively related to job performance at an individual level, a factor that can boost performance, creativity, income, and health and well-being, while preventing absence from work. It also has positive implications at a collective level: commitment to the organisation, client satisfaction, good safety record, and employee retention.

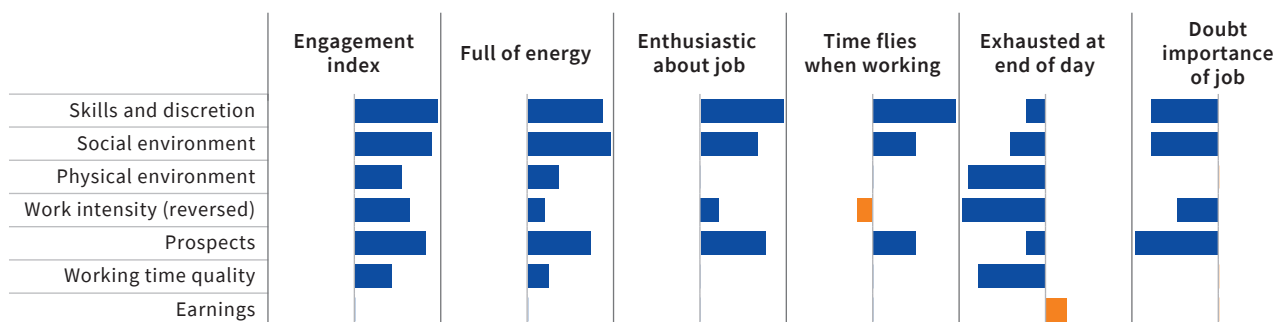
This section first examines the various components of work engagement. It then combines them into an 'engagement index' and explores associations between this and a number of aspects of working conditions.

Findings from the EWCS paint a generally positive picture across the EU28 (Figure 90). The majority of workers (72%) report feeling full of energy 'always' or 'most of the time'. A similarly high proportion (70%) of workers are enthusiastic about their job, while 75% feel that time flies at work. Moreover, some 75% say they either 'never' or 'rarely' doubt the importance of their job. The only aspect of engagement generating a mixed picture is feeling exhausted at the end of the day: similar proportions of workers feel this way 'most of the time' and 'always' (33%) as experience it 'rarely' and 'never' (24%).

Based on the answers to these questions (the mean score of all dimensions), an engagement index ranging from 0 to 100 was constructed. Differences by sex, sector and employment status are very small, but there is a more nuanced picture in the analysis regarding occupations (Figure 91). Managers, professionals and technicians have the highest scores for engagement (70 points), while workers in elementary occupations and plant and machine operators have the lowest scores (62 and 63 respectively).

Figure 91: Engagement by occupation, EU28

Workers in higher-quality jobs are more engaged. All job quality indices apart from Earnings (detailed in Chapter 2) are positively associated with the engagement scale and its components – in particular, skills and discretion, social environment, and prospects (Figure 92 – overleaf). Conversely, workers in low quality jobs are likely to be less engaged as all the job quality indices are in turn associated

Figure 92: Association between job quality indices and engagement

Note: The blue bars represent associations favourable to workers and the orange bars represent unfavourable associations. See note to Figure 32 for more details on the methodology used.

with negative aspects of motivation or disengagement, which have the potential to lead to burnout.

Multivariate analysis confirms, in particular, the strong role that management quality, organisational participation and social climate can play in promoting engagement; other important factors are being fairly paid for the work done, being able to easily take time off to deal with personal issues, and social support from one's manager. Finally, engagement is also associated with higher levels of presenteeism and lower levels of sickness absence.

Meaningful work

Performing work that is meaningful – that a worker feels is worthwhile and is done well – is another factor that encourages motivation. It is important for a worker's health and well-being to feel that their work is meaningful, as feeling the reverse could constitute a psychosocial risk.

The great majority of workers (82%) feel that their work has been well done 'always' or 'most of the time'. Notably, 5% of workers 'never' or 'rarely' have this feeling. These percentages were similar in 2010 and 2005.

However, in a majority of countries there has been a fall in the proportion of workers who report 'always' feeling that their work has been well done. This is counterbalanced by a group of eight countries where this proportion increased by five percentage points or more; in two of these, the increases are especially high – 12 percentage points in Turkey and 11 in the Czech Republic since 2010.

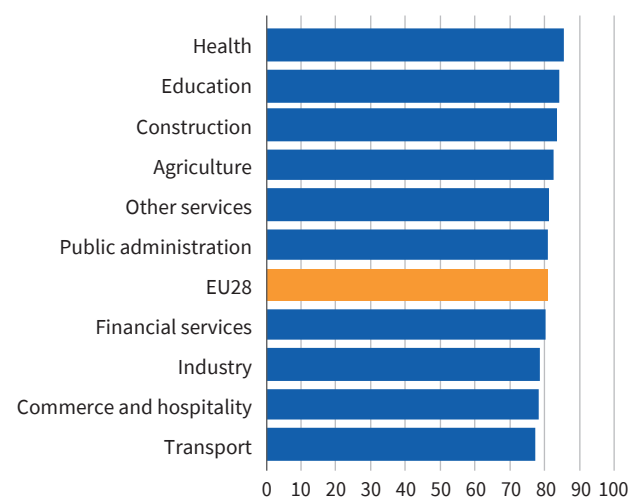
In addition, there has been a decrease since 2010 in several occupational groups 'always' feeling that their work has been done well: for managers, for example, this was a decline of eight percentage points; for the other occupations, a decline of up to four points.

Being able to perform useful work is also important for workers as it gives meaning to the job and offers the possibility for self-development and personal fulfilment. Just over half (53%) of all workers in the EU28 report that they always feel that the work they are doing is useful. Since 2005, this proportion is more or less the same.

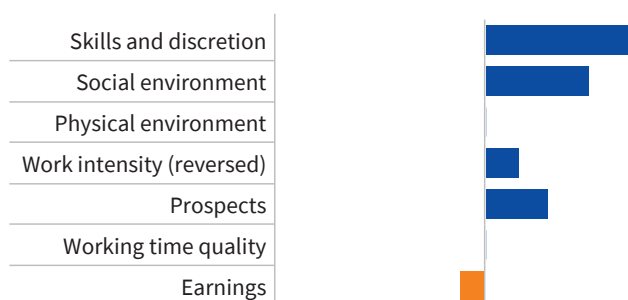
Women and older workers are more likely to feel that their work is useful. And there are striking differences between sectors: more than 60% of those in the health, education

and agricultural sectors always feel their work is useful, as against slightly more than 40% of those in financial services, transport and industry.

Both of these elements – feeling that work is well done and that it is useful – demonstrate a very strong association with engagement (the association is confirmed by multivariate analysis). Workers score highest on the engagement index when they answer 'always' and 'most of the time' regarding these two items. The two items are combined to construct a meaningful work scale. Analysing the EWCS data on this scale, it is clear that workers in the health, education and construction sectors are most likely to see their jobs as meaningful while those working in transport, commerce and hospitality, and industry are least likely to take this view (Figure 93).

Figure 93: Meaningful work, by sector

Workers are more likely to view their jobs as meaningful if their work involves tasks at higher skills levels and offers greater scope for autonomy or discretion. This is demonstrated by the association of the Skills and discretion index with meaningful work (Figure 94). A good Social environment also contributes to work being considered meaningful, as do Prospects (albeit to a lesser extent). Other indicators – Physical environment, Work intensity, Working time quality and Earnings – are either unrelated to meaningful work, or are related only to a very limited extent.

Figure 94: Association between job quality indices and meaningful work

Note: The blue bars represent associations favourable to workers and the orange bars represent unfavourable associations. See note to Figure 32 for more details on the methodology used.

Role of organisation in motivating workers

Finally, one question in the EWCS – regarding workers' perceptions about whether their organisation motivates them to give their best job performance – aims to elicit workers' commitment to the organisation in which they work. The share of workers agreeing with this statement is highest in Norway and lowest in Albania. The share in the EU28 is 63%.

From an occupational perspective, there is little variation: across all occupations, at least half of all workers report that the organisation they work for motivates them to give their best performance. This is particularly the case for managers, of whom 77% agree that that this is the case. In terms of sectors, workers in transport, industry and public administration are the least likely to feel themselves motivated by their organisation. However, the majority of workers in these sectors still feel motivated.

There is a positive association between the Social environment, Skills and discretion, and Prospects indices, and workers' assessment of their organisation as

motivating them (Figure 95). The Physical environment, intensity, Working time quality and Earnings indices are not associated – or are only slightly associated – with motivation.

Figure 95: Association between job quality indices and motivating organisation

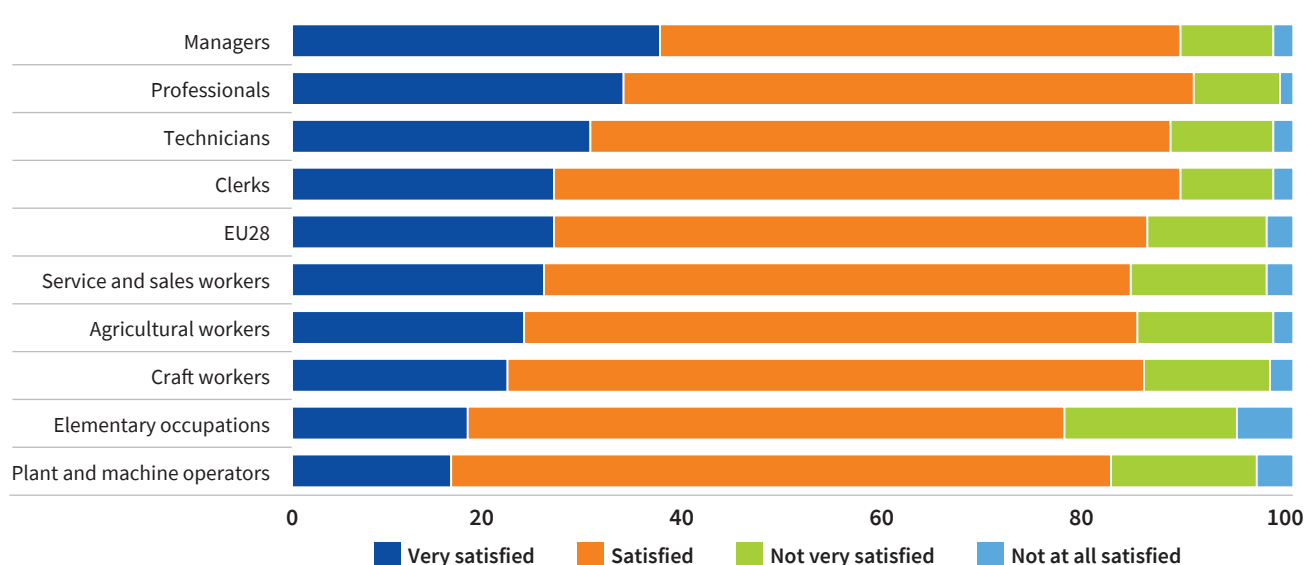
Note: The blue bars represent associations favourable to workers and the orange bars represent unfavourable associations. See note to Figure 32 for more details on the methodology used.

Satisfaction with working conditions

The degree of satisfaction of workers with their working conditions is a key element of motivation.

The great majority (85%) of respondents in the EU28 report being either 'satisfied' or 'very satisfied' with their working conditions. This percentage has increased slightly since 2000, when 82% gave this positive rating of their working conditions.

When the results are looked at in terms of occupation, notable differences are evident. The level of satisfaction increases according to the respondent's occupational level in the ISCO classification. Workers in elementary occupations express the greatest dissatisfaction: 23% being either 'not very satisfied' or 'not at all satisfied' with their working conditions. In contrast, only 11% of managers express this level of dissatisfaction (Figure 96).

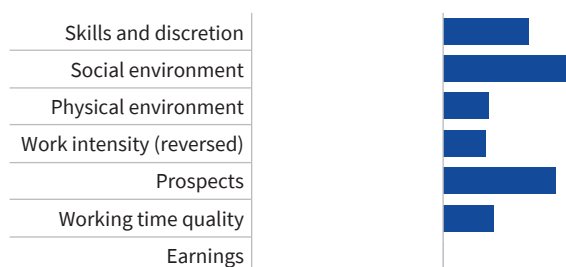
Figure 96: Satisfaction with working conditions, by occupation, EU28 (%)

Multivariate analysis identified aspects of working conditions that are positively associated with workers' satisfaction with their working conditions. These include having a good quality of management, a good work–life balance, and having career prospects. Workers with a supervisory role (supervising more than 10 staff) are also more likely to say they are satisfied with their working conditions.

On the other hand, aspects of working conditions that are likely to lead to workers' not being satisfied with their working conditions are adverse social behaviour, feeling that one's health is at risk because of work, holding a temporary contract and having experienced restructuring in the company.

In terms of association with job quality indices, satisfaction with working conditions is most strongly related to Social environment, Prospects, and Skills and discretion (Figure 97). This reflects the results of the multivariate analysis regarding the strong effects of management quality, adverse social behaviour, being a supervisor with autonomy and career prospects, as well as contract type. Furthermore, satisfaction with working conditions is also associated with the other indices – except for Earnings.

Figure 97: Association between job quality indices and satisfaction with working conditions



Note: The blue bars represent associations favourable to workers and the orange bars represent unfavourable associations. See note to Figure 32 for more details on the methodology used.

Financial security

This dimension, part of career and employment security, covers three main aspects: the level of earnings; the terms of employment; and the social protection afforded by work. The level and fairness of the income are important determinants of job quality (see Chapter 2, section 2.8 *Ensuring fair pay*).

This section will examine financial security of the household and analyse the differences in findings for employees and self-employed workers.

Household level

Since 2010, the EWCS has assessed workers' financial vulnerability by asking to what extent the respondent's household is able to 'make ends meet' – in other words, is able to pay for all the basic household expenses.

Respondents were asked to assess their household ability to make ends meet on a six-point scale – from 'very easily' to 'with great difficulty'. This indicator is a well-established indicator of poverty.

Between 2010 and 2015, the ability of households to make ends meet increased somewhat. While in 2010, some 62% of respondents said their households could make ends meet fairly easily, the equivalent figure in 2015 was 64%. However, more than one-third of workers reported that their household experienced 'some' or 'great' difficulty in making ends meet. Some countries show a very positive development between 2010 and 2015, in terms of a dramatic reduction in the proportion of workers reporting difficulties: in Hungary, Latvia, Lithuania, Malta and Romania, for instance, there was a drop of between 20 and 28 percentage points. One of the contributing factors for this development may be the significant increases in the statutory minimum wages, in real terms, in these countries. In contrast, some countries show increasing shares of households with difficulty in making ends meet, up to an increase in 16% in Greece since 2010.

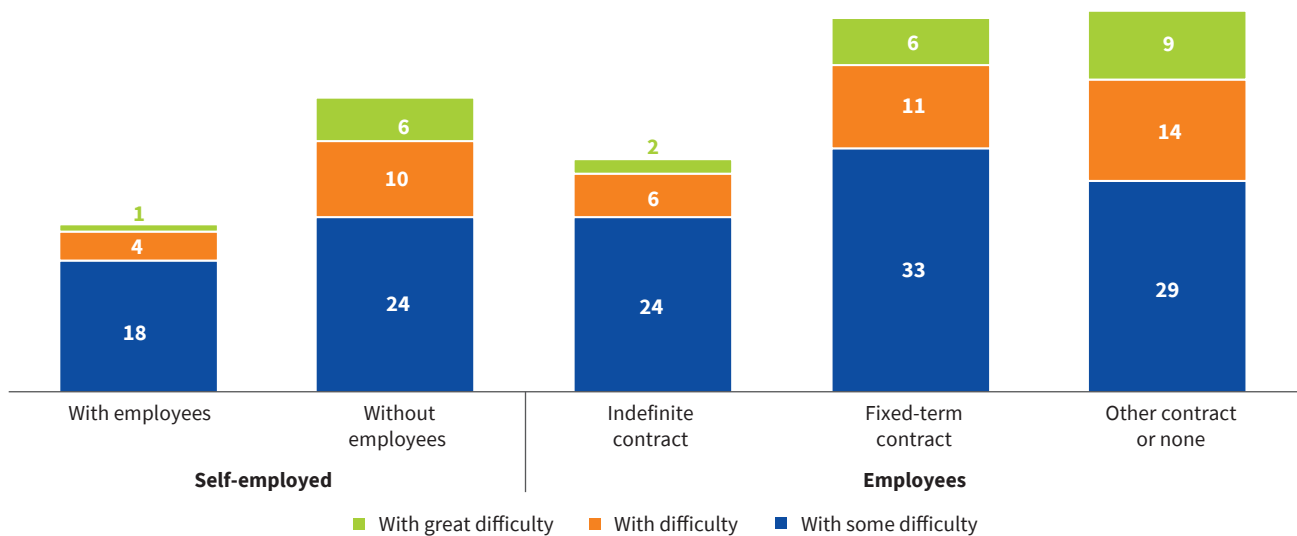
In line with previous findings, the characteristics of the workers' households are closely associated with their level of financial vulnerability. Women who are the main earners in a household are much more likely to say they have difficulty in making ends meet than the EU28 average and any other group (46% saying this). Single parents are more likely to have difficulties – 57% state they have some or great difficulty in making ends meet – and especially single mothers, 61% reporting great difficulty.

Employment status

A person's employment status and the terms of their employment determine the level and components of pay as well as future security of earnings, and protection rights.

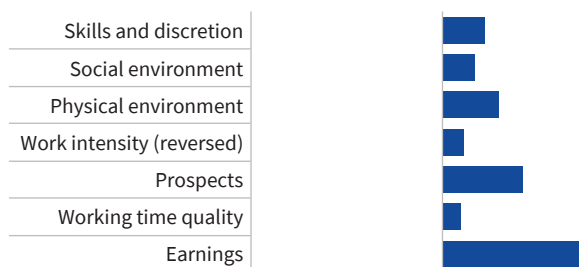
Self-employed workers who have employees and employees on indefinite contracts have the greatest financial security (Figure 98). In contrast, self-employed workers without employees, employees on fixed-term contracts and employees with no contract (or another type) are the most vulnerable financially.

Another aspect of financial insecurity for self-employed workers is their exposure to loss of income if they were not

Figure 98: Financial insecurity, by employment status, EU28 (%)

able to work. Self-employed workers were asked if they felt they would be financially secure if they had a long-term illness. Almost half of the self-employed (48%) stated they would not be financially secure in this situation, particularly the self-employed without employees (53%).

Looking at the job quality indices, it is not surprising that Earnings are positively related to being able to make ends meet (Figure 99). Prospects are also associated with financial security, indicating that the prospect of career advancement is likely to boost a respondent's confidence of being able to make ends meet. The other job quality indices are also positively associated with financial security, though less strongly (except for Working time quality, which shows no association).

Figure 99: Association between job quality indices and financial security

Note: The blue bars represent associations favourable to workers and the orange bars represent unfavourable associations. See note to Figure 32 for more details on the methodology used.

3.2 Developing skills and competences

Developing skills and competences is an important dimension of quality of work and employment, and the benefits for workers, companies and society are widely acknowledged. The development of skills and lifelong learning have long been a priority on the policy agenda, both at EU and national level.

While the scope of this area is wide, the EWCS analysis focuses on a limited number of items. This section will briefly look at the issue of skills match and the related question of under-skilling and over-skilling. The resulting findings will supplement the job quality index on Skills and discretion.

'Skills match' is viewed as a highly efficient way to use workers' potential, while 'skills mismatch' is linked to an ineffectual use of people's capabilities. Workers performing tasks below their level of ability could be better employed and contribute more if they took on more challenging tasks. And conversely, when workers need greater skills to do their job, increasing their skills level can help them become more productive. In economic terms, a better matching of skills means a more efficient allocation of labour. This is beneficial for employers, employees and governments, as it contributes to greater labour productivity, better incomes and higher economic growth. For the worker, skills mismatch is related to lower wages and to less job satisfaction and greater job insecurity (Cedefop, 2015). Workers with skill deficits are also more likely to worry about their skills becoming redundant or obsolescent.

In the EWCS questionnaire, workers were asked to indicate:

- if their present skills corresponded well with their duties;
- if they felt they needed further training to cope well with their duties (indicative of being under-skilled);
- if they had the skills to cope with more demanding duties (indicative of being over-skilled).

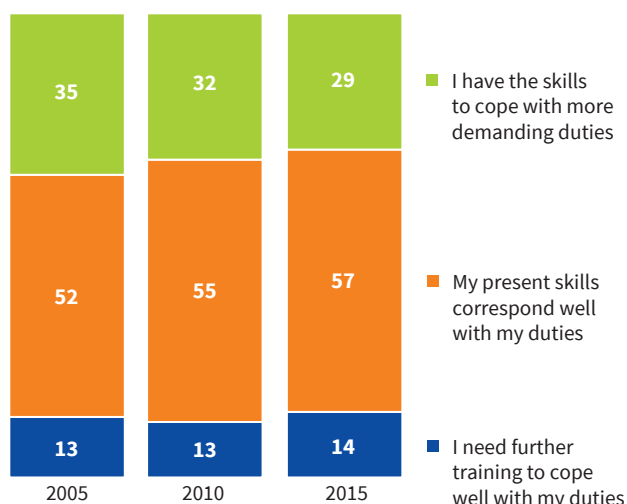
(It should be noted that the answers correspond to a subjective assessment on the part of the worker, which might not match the employer's assessment.)

Nearly half (43%) of workers in the EU28 are either under-skilled or over-skilled. About 14% need further training to perform their duties well (and hence are under-skilled).

Meanwhile, 29% have the skills to cope with more demanding duties (and hence are over-skilled).

Fortunately, skills mismatch in general is decreasing in the EU28 (Figure 100). Between 2010 and 2015, there was an increase in the proportion of workers whose skills corresponded with their duties: from 52% to 57%. The extent of under-skilling remained almost constant in this period, while there was a fall in the proportion of over-skilled workers. Generally, the proportion of over-skilled workers is higher than the proportion of under-skilled workers.

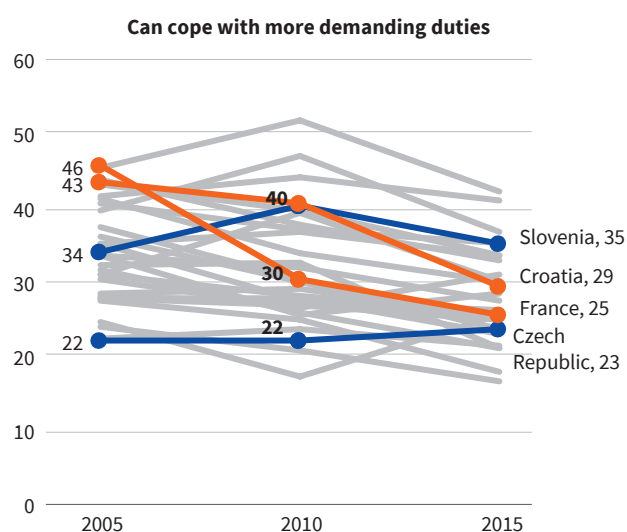
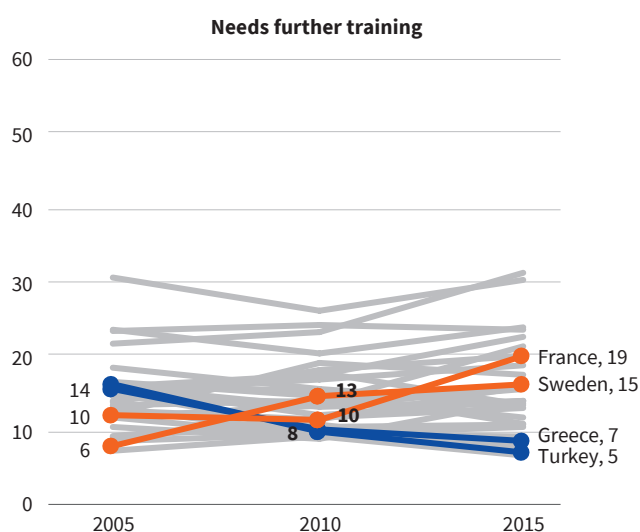
Figure 100: Development in skills matching, 2005–2015, EU28 (%)



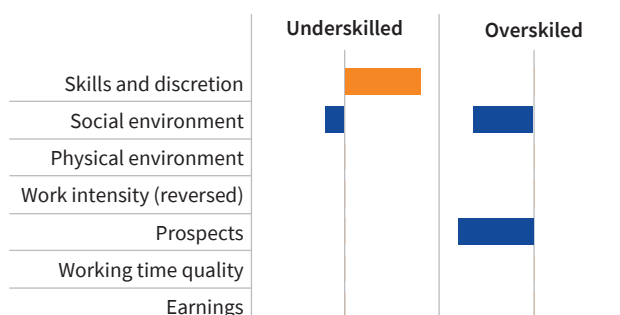
Skills matching, and its development over time, differs markedly between countries (Figure 101): between 2005 and 2015, the proportion of under-skilled ranged from 6% to almost 30%, while the proportion of over-skilled ranged from 16% to just over 50%. France and Sweden were the countries showing the greatest increase in the proportion of under-skilled workers in the period between 2005 and 2015: from 10% to 19% in France and from 6% to 15% in Sweden. In contrast, Greece and Turkey had the largest decline. Turning to the issue of workers being over-skilled – that is, having the skills to cope with more demanding duties – France shows the greatest decrease in the proportion of overskilled workers over the period (from 46% to 25%), with a similar sharp decline in Croatia (from 43% to 29%). In very few countries was there an increase in the proportion of over-skilled workers.

Job quality shows an ambiguous association with skills match. Figure 102 shows that the Skills and discretion index is positively related to the odds of being under-skilled or over-skilled. As skills requirements in organisations are constantly changing, skills mismatch is more likely in jobs with greater use of skills. Prospects are negatively associated with being over-skilled, because being able to cope with more demanding duties than in the current job is an indication of poor prospects within the job and therefore possibly within the organisation. Workers who enjoy a better Social environment are less likely to be over-skilled. This might indicate that good management prevents over-skilling by providing opportunities for job tailoring to ensure that the job will match the worker's skills; it may, however, be that workers rate the quality of management more highly when their tasks correspond well to their skills.

Figure 101: Skills mismatch 2005–2015, by country (%)



Note: These figures highlight the two countries with the highest increase and the two countries with the highest decrease between 2005 and 2015.

Figure 102: Association between job quality indices and skills match

Note: The blue bars represent associations favourable to workers and the orange bars represent unfavourable associations. See note to Figure 32 for more details on the methodology used.

3.3 Maintaining and promoting health and well-being

Promoting health and well-being is a key goal of European policy. The EU Framework Directive on Safety and Health at work (89/391/EEC) made a strong commitment to that goal, its stated objective being to ‘encourage improvements in the safety and health of workers’.

The relationships between work and health are numerous and bidirectional. Work has specific impacts on health while health is a determinant of the ability to work and remain in work. Direct and indirect impacts can have immediate or delayed effects on health outcomes.

The literature on health and safety and public health has shown how exposure to specific risk factors in a job, as well as organisational factors, may lead to injuries, work-related illnesses or other long-term health consequences.

Conversely, several aspects of work contribute positively to health and well-being, such as income and the security it provides, the quality of interpersonal relationships, and opportunities for personal development, fulfilment and self-expression. Moreover, work also plays a key role in shaping the socioeconomic status of the individual which, in turn, has been identified as one of the main determinants of health and health inequalities.

General health and subjective well-being

As already mentioned in Chapter 1, the health of workers is good and better – on average – than that of the general population. Some 78% of workers report being in good or very good health (53% and 25% respectively). It can be assumed that workers who are unable to work because of poor health exit the labour market and healthy workers remain. There are hardly any gender differences reported in terms of health. However, the proportion of workers reporting poor health increases with age.

Substantial differences can be seen between the occupations. Agricultural workers, plant and machine operators and elementary occupations report a greater incidence of poor health – as do those with a lower level of education. Employment status also appears to be

important: for instance, self-employed workers without employees, and employees without a contract, are less likely to report that they are in good health.

Subjective well-being was measured through the World Health Organization’s well-being index – WHO-5. In a series of five questions, interviewees were asked to indicate if over the previous two weeks they: 1) felt cheerful and in good spirits, 2) felt calm and relaxed, 3) felt active and vigorous, 4) woke up feeling fresh and rested, and 5) their daily life was filled with things that interest them. For each item, a range of 0 to five points was given, with a potential maximum score of 100 overall. A high score is associated with a good level of psychological well-being while a low score indicates that the person is at risk of mental health problems, including depression. The overall average score for workers in the EU28 is 69 – three points higher than in 2010. Men score slightly higher than women (70 compared to 68). And younger workers (those aged under 35) score higher than older workers (aged 35 and over) – 70 compared to 68 (for both older age groups).

Overall, 6% of workers have a score that indicates they are at risk of mental health problems (below 28), with more women than men being at risk (7% compared to 5%). While there are no differences between age groups, there are differences across sectors and occupations: for example, the proportion of workers at risk of being above the EU average is greater for elementary occupations (9%) and service and sales workers (7%).

As indicated in Chapter 2, the association between all job quality indices and general health and subjective well-being is positive – the only exception being the association between Skills and discretion and general health, which is weak (one explanation could be that the physical health capacity of a worker is less important for performing a job with high skills content).

It is not possible to provide a definite answer on the direction of causality, for a number of reasons. Good job quality could lead to a high level of subjective well-being. However, the reverse causation is also possible, whereby workers with high subjective well-being are more successful in securing jobs that have a higher level of job quality – what is termed a ‘selection effect’. It is even possible that the causation operates in both directions simultaneously. The results might also reflect the operation of labour markets: they may be inclusive, and succeed in facilitating the participation of individuals with poor health; or they may be selective, and over time retain only the healthiest individuals.

Reported health problems

Respondents were asked to indicate any health problems they may have experienced in the 12 months prior to the survey, from a list of 10 types of problems (it is important to underline that the question does not link these problems to the job).

The most reported health problem is backache (reported by 44%), followed by muscular pains in the arms (42%), headache and eyestrain, and overall fatigue (both 36%), muscular pains in the legs (30%), anxiety (16%), injuries (7%), skin problems (8%) and hearing problems (6%).

More women than men report problems with most of the health issues, except for injuries and hearing problems, which are more often reported by men.

The reported health problems vary according to occupation. Figure 103 shows that agricultural workers report the highest incidence of backache, and muscular pains in the arms and legs (55% reporting backache, for instance). They are followed by workers in elementary occupations, craft workers and plant and machine

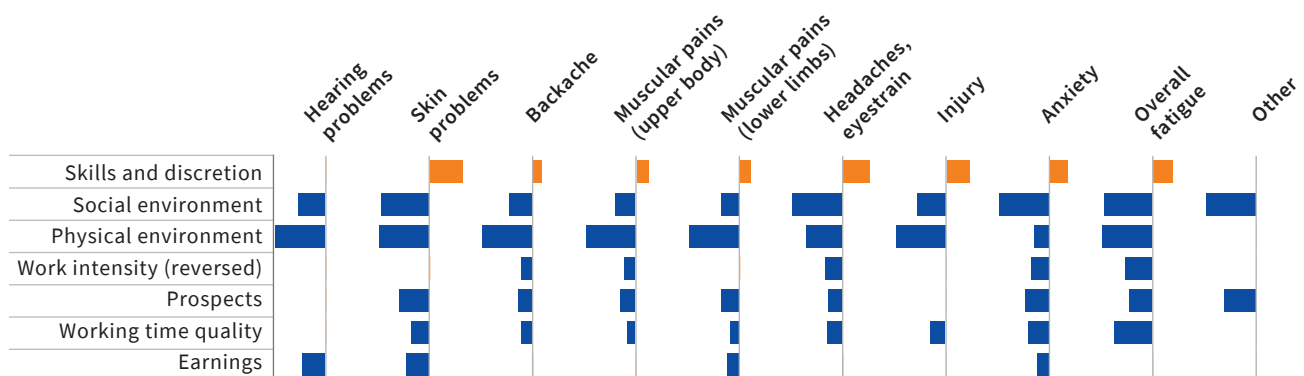
operators. In addition, more workers in these four occupational groups have hearing problems and injuries. Clerks are most likely to report headaches (40%), followed by technicians, managers and professionals. Meanwhile, workers in elementary occupations are most likely to report fatigue (39%), followed by managers, professionals and agricultural workers.

Almost all health problems are strongly associated with the Physical and Social environment (Figure 104). Higher Work intensity, lower Working time quality and Prospects are all job features negatively associated with overall fatigue and anxiety and, to a lesser extent, with backache and headache.

Figure 103: Health problems, by occupation, EU28 (%)



Figure 104: Association between job quality indices and health problems



Note: The blue bars represent associations favourable to workers and the orange bars represent unfavourable associations. See note to Figure 32 for more details on the methodology used.

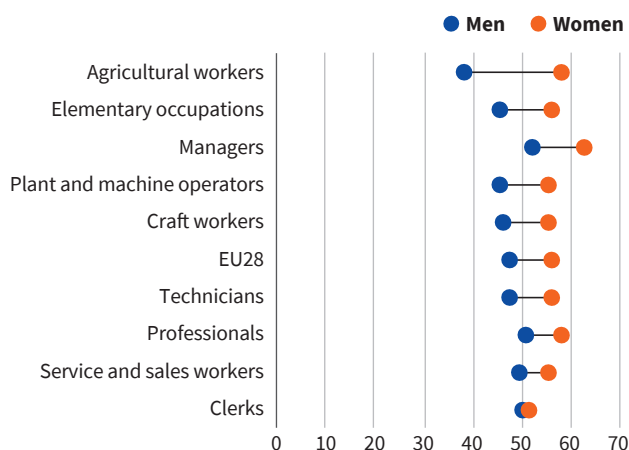
Sleeping problems

Sleeping problems are another health concern, having the potential to affect both safety and workers' performance. Over a prolonged period, they can result in sickness absence and in presenteeism and – in extreme cases – lead to mental and physical health issues.

Sleep problems are tracked through three questions in the EWCS: difficulty falling asleep (reported by 12% of workers at least several times a week), waking up repeatedly (17%), and waking up feeling tired (14%).

What is apparent from the graph is the gender gap, with women having greater difficulty in terms of sleep than men: in particular, 63% of female managers report problems sleeping (Figure 105). Figures are almost as high for female agricultural workers and professionals. Male agricultural workers, in contrast, experience the least problems in sleeping while managers, professionals, clerks and service workers are the occupations most likely to report sleep problems.

Figure 105: Sleep problems, by occupation and sex (%)



Most job quality indices are negatively related to sleeping problems (Figure 106), suggesting that increasing job quality could enhance the quality of sleep. This is in line with research showing that negative work-related psychosocial factors can be a predictor of decreasing well-being – in particular, sleeping problems (Elovainio et

al, 2015). At the same time, people experiencing sleeping difficulties may find it hard to meet their job demands, and so perceive the work environment as being more difficult.

Better social and physical environments are associated with fewer sleeping problems. Skills and discretion shows the opposite association – greater use of skills and discretion is associated with greater difficulty in falling asleep and a tendency to wake up repeatedly during the night.

Impact of work on health (subjective assessment)

The EWCS asks workers whether work affects their health and to indicate if it does so in a positive or a negative way – clearly a subjective assessment. Since 2010, the proportion of workers declaring that work does not affect their health has fallen slightly – from 68% to 62%. Over the same period, the proportion declaring that work affects their health positively has risen from 7% to 11%, while there has been almost no change in the proportion who think their health is negatively affected (25 to 26%).

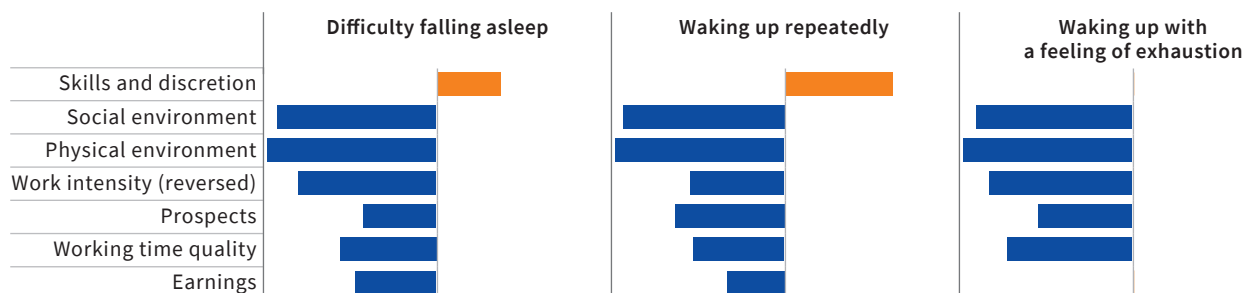
More men than women say that work affects their health negatively, but there is no gender difference evident in the assessment of work affecting health positively.

There are considerable differences between occupations. Plant and machine operators are most likely to feel that work affects their health negatively, 40% reporting this. They are followed by craft workers (38%) and agricultural workers (32%). Conversely, agricultural workers, professionals and managers are the groups reporting most frequently that work affects their health positively (between 14% and 15%).

In term of sectors, workers in industry, agriculture, health and transport report more than other sectors that work affects their health negatively. Simultaneously, in a number of the same sectors, workers also report more often that work affects their health positively: the agricultural sector, education, and health.

Workers are more likely to feel that work benefits their health when job quality indices are high. Physical environment and Social environment demonstrate the strongest association. The association for all job quality

Figure 106: Association between job quality indices and sleeping problems



Note: The blue bars represent associations favourable to workers and the orange bars represent unfavourable associations. See note to Figure 32 for more details on the methodology used.

indices is positive, with the exception of earnings – for which there is a negative association.

Health-related work absence

Some 27% of workers said they were absent for health reasons for five or more days in the 12 months prior to the survey: this was the case for 28% of women and 25% of men. There are considerable differences between age groups: 22% of workers aged under 35 years report this level of absence, as against 26% of workers aged 35–49 years and 30% of workers aged over 50. Among occupations, sickness absence is reported more often by plant and machine operators, clerks and technicians.

Presenteeism

Presenteeism is the phenomenon whereby a worker, although contending with a physical or psychological health problem, still comes to work. There is increasing awareness of the costs of presenteeism; not least, it is associated with lower productivity (Sainsbury Centre for Mental Health, 2007).

Women report more often than men that they work while they are sick (44% of women reporting this compared

to 41% of men), although they also report more absence because of sickness. In terms of age groups, older workers – those aged 50 and over – are the least likely to report presenteeism (40%) while reporting more sickness absence. In contrast, 44% of 35–49 year-olds report presenteeism and 43% of workers aged under 35. Presenteeism is highest among managers, professionals and technicians.

When the relationship between sickness absence and presenteeism is examined, a strong association is apparent between low levels of sickness absence and high levels of presenteeism for both men and women in most countries (Figure 107).

Both sickness absence and presenteeism are undesirable for both employers and employees. An analysis of the association between the two phenomena and the job quality indices finds that good physical and social environments are strongly associated with less general absence from work, absence due to accidents, absence for more than five days and absence due to a (self-reported) work-related illness. Additionally, better job quality is associated with less presenteeism, with the exception of Skills and discretion.

Figure 107: Sickness absence and presenteeism, by country and sex

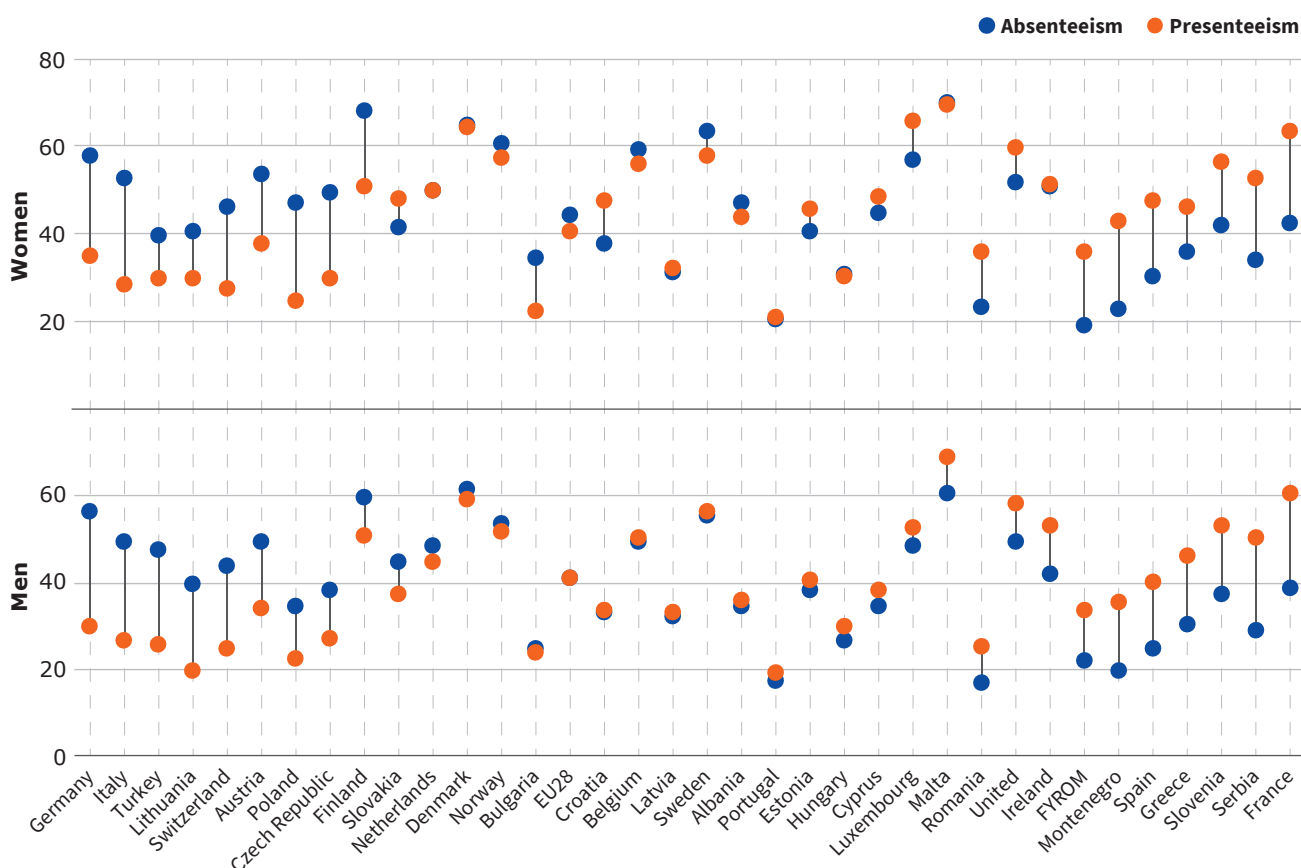
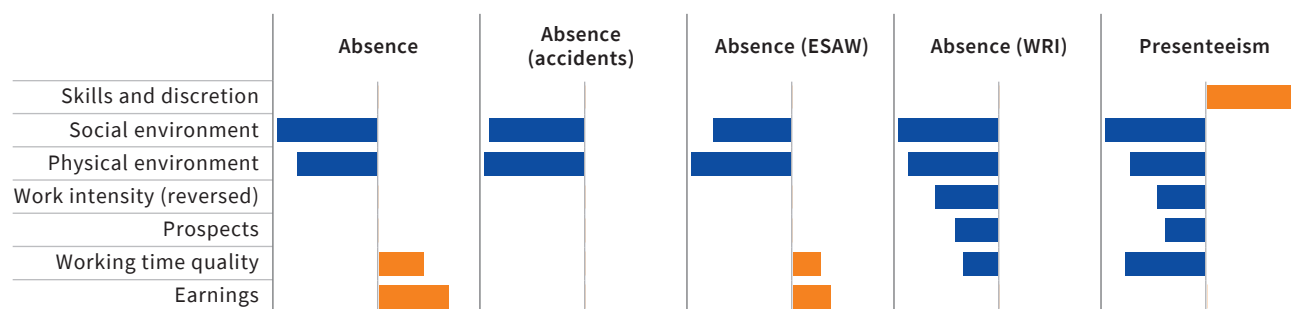


Figure 108: Association between job quality indices and sickness absence/presenteeism

Note: The blue bars represent associations favourable to workers and the orange bars represent unfavourable associations. See note to Figure 32 for more details on the methodology used.

WRI = work-related injury; ESAW = European Statistics on Accidents at Work

Workers with a chronic disease: Workplace adaptation needed

The inclusion of workers with a chronic disease – or long-standing health issue – is increasingly recognised as an important policy concern. It is made more urgent by ongoing improvements in healthcare and the ageing of the workforce, which means that increasing numbers of workers are likely to be dealing with a chronic disease in the future.

Eurofound research underlines the importance of chronic disease in the context of work and employment: ‘Chronically ill employees often experience great difficulties either staying in work or returning to work after a long period of absence’ (Eurofound, 2014a).

In the sixth EWCS, almost one in every five workers in the EU28 (18%) reported having an illness or health problem lasting, or expected to last, for more than six months. (This is a self-reported indicator).

In line with similar trends, for example shown in Eurostat data on self-perceived health, a slightly higher proportion of female workers report chronic disease – 18% of women compared to 17% of men. The proportion increases with age: just 12% of workers aged under 35 years reported having a chronic disease, compared to 16% of 35–49 year-olds but 25% of those aged 50 or over. The proportion of workers with a chronic disease varies substantially between countries – from 5% in Romania to 36% in Finland. This can be related to a number of factors: it may mean that more workers have health issues; but it may also be the case that specific policies and measures result in workplaces being more open to retaining these employees – through workplace adaptation, for instance, or more flexible working time arrangements.

In terms of employment status, self-employed workers without employees are more likely to report chronic disease. From a sectoral perspective, it is more widely reported in public administration and in health.

Chronic disease can have an impact beyond work, affecting a worker’s normal daily activities. More than half (54%) of those who reported having chronic disease also stated that their daily activities are limited because of their health problem, 57% of women stating this compared to 51% of men. Almost one in ten workers who reported having a chronic health problem (9%) said that their daily activities are severely limited because of this.

To accommodate workers with a chronic disease, organisations can adapt various aspects of work or of the workplace. Respondents with a chronic disease were asked whether their workplace or work activity had been changed to accommodate their health condition: only 21% said that it had been changed. The picture was slightly better for those with more severe conditions: 29% of those whose daily activities are limited because of their condition said that their workplace or work activity had been changed to accommodate it. Of these, 43% still felt that their workplace or work activity needed to be further adapted – either because the current arrangement is inadequate or because their condition could worsen. Among those whose workplace or work activity had not been changed to accommodate their condition, only 26% declared that future changes would be necessary.

3.4 Reconciling working and non-working life

To encourage people to enter the labour market, and to enable those already working to stay doing so, it is essential that workers are facilitated in balancing their working and non-working lives. Work–life balance becomes a particularly urgent issue against the background of an ageing population – given the associated care needs. A good balance between working life and private life can reap benefits not only for the worker and their family but for the company and society as a whole. More accommodating working time arrangements and a good social infrastructure can help workers to balance the dual demands of work and non-work and to participate more fully in the workforce.

Work–life balance

In 2015, four workers in five (or 81%) reported a good fit between their work and their family or social commitments, with just 19% reporting that the fit was poor. The proportion of workers reporting a good ‘fit’ has remained largely unchanged since 2005.

There are considerable differences between countries regarding this aspect, ranging from 92% in Romania to 73% in Greece (Figure 109).

Men are more likely to say that their working hours do not fit with their private commitments than women: 20% of men declare this compared to 16% of women. However, interpreting this finding is not a straightforward matter. As it is generally acknowledged that women continue to carry out the majority of domestic tasks at home, it may seem surprising that this finding reflects a slightly higher work–

life balance among women than men. It may be indicative of women making choices that adapt to their situation – assessing if and how they will be able to combine their professional and private life and choosing a pattern of working life on the basis of that assessment. Men, in contrast, are more likely to make choices that conform to the dominant model of a full-time, long-term employee – and adapt as necessary when they need to accommodate private commitments.

Women without any caring responsibilities (for example, care of children, disabled or elderly dependants) more frequently report a good fit than women with care responsibilities. The same goes for workers in general, with workers having the care of young children reporting the poorest fit of all.

Employees in indefinite contracts, self-employed without employees and part-time workers fare better in this regard, reporting more often a good fit than the EU average.

Working time arrangements

Workers are more likely to say they can readily balance working hours with other commitments outside work if one or more of the following conditions are present: they work shorter working hours, can take an hour off for their own needs, have regular and predictable working hours, and can work from home.

On the other hand, workers are more likely to say that the balance between their work and private life is poor if they work long hours (over 48 per week), work at home outside working hours to get work done, and perform night work, shift work (particularly daily split shifts) and weekend work (Figure 110).

Figure 109: Fit between work and commitments outside work, by country (%)

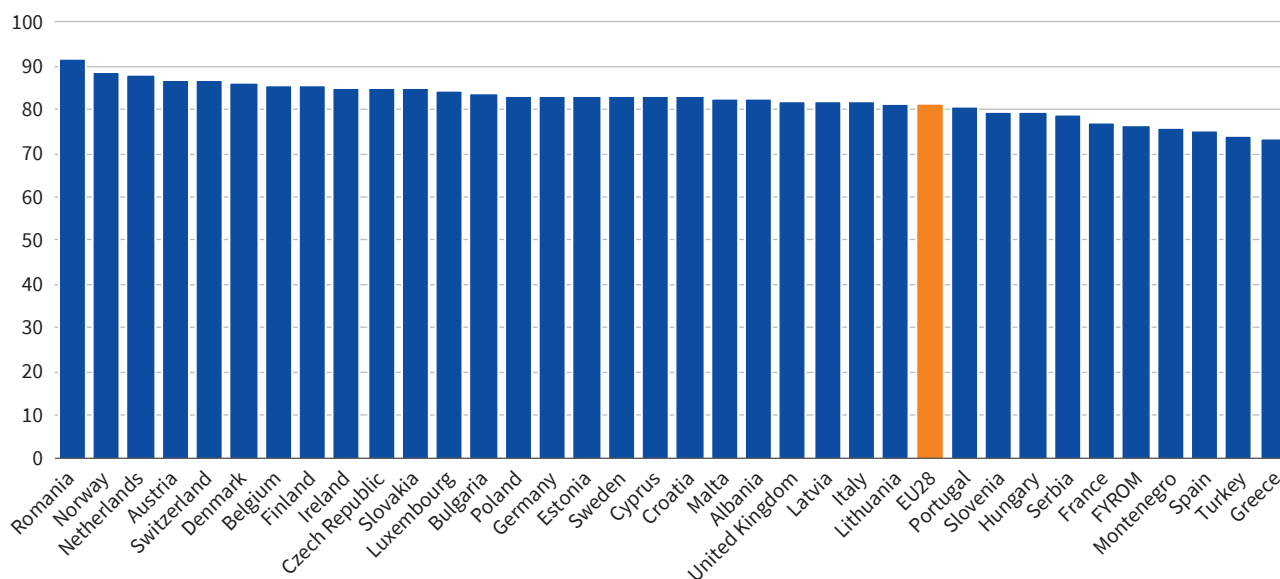
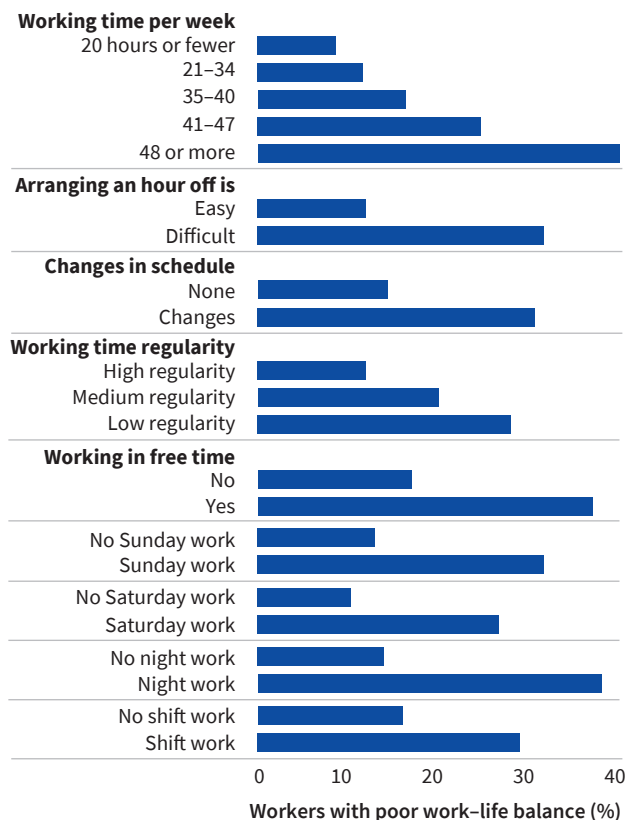


Figure 110: Working time arrangements and fit between work and commitments outside work (%)



Having a say over one's working hours has only a limited effect on having a good work-life balance. Indeed, workers who have complete autonomy over their working time are more likely to indicate problems with their work-life balance. This may be related to the fact that this group is often self-employed and/or works long hours.

Working time quality

Of the seven job quality indices, working time quality has the greatest effect in boosting workers' assessment of their work-life balance (Figure 111). With the exception of Earnings, all other job indices are also positively associated with a better work-life balance (though to a much lesser extent). Not surprisingly, perhaps, having a job with less work intensity gives a worker more space to deal with their private life. And a positive association with the Social environment index may reflect workers' appreciation of their managers' or colleagues' consideration for their private life.

Figure 111: Association between job quality indices and work-life balance



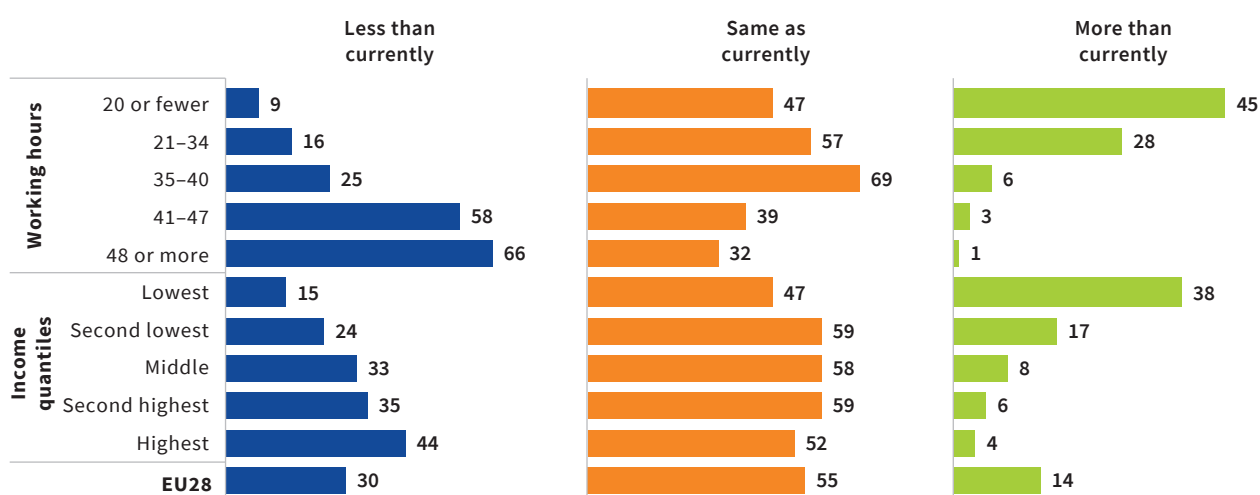
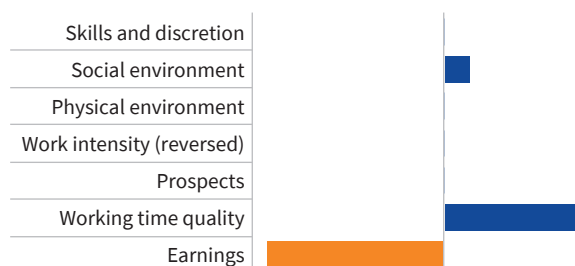
Note: The blue bars represent associations favourable to workers and the orange bars represent unfavourable associations. See note to Figure 32 for more details on the methodology used.

Working time preferences

The majority of workers (56%) report that they would like to work the same number of hours that they currently work (men and women reporting this equally). Some 30% would like to work fewer hours – and here a gender difference does emerge: 32% of men wish to work less, as against 28% of women. An age difference is also apparent: 32% of workers in the older age groups (35–49 years and 50 years and over) would like to work less while this is the case for only 26% of workers aged under 35. And only a very small minority (12%) of workers over 35 would like to work more hours. There are substantial differences for this dimension between countries, and differences between men and women within some countries: generally, men are more likely to want to work less, and women more.

Unsurprisingly, people who work very long hours are more likely to say they want to work less: compared to the EU average of 30% who want to work less, some 66% of people working 48 hours or more per week want to work fewer hours (Figure 112 – overleaf). And while on average only 13% of workers want to work more hours per week, this figure rises to 47% among those whose working week is 20 hours or less. Again, predictably, people at the lowest end of the income scale are more likely to want to work more hours, while those at the highest end are more likely to say they either wish to work the same hours or reduce the length of their working week.

There is almost no association between the job quality index and working time preferences. Preferences for working more or less hours, however, are clearly linked with earnings – more earnings are likely to be associated with a wish to decrease working hours and vice versa. Those with a preference for more hours are usually not exposed to several aspects of poor working time quality, such as working 48 hours or more, working long days, atypical hours and working in one's free time.

Figure 112: Working time preferences, working hours and income, EU28 (%)**Figure 113: Association between job quality indices and preference for working more hours**

Note: The blue bars represent associations favourable to workers and the orange bars represent unfavourable associations. See note to Figure 32 for more details on the methodology used.

Reconciling roles in work and private life

People have different roles in life – citizen, worker, member of a household, parent, carer, volunteer and so on. Ensuring that people can fulfil their various roles is important for social cohesion. Being able to reconcile the different roles would involve examining the time needs linked to the performance of these roles and also the spillovers between roles – that is, the benefits and possible pressures arising from performing different roles.

In this regard, work and working conditions play an important role, as well as the social infrastructure and social protection provisions.

This section looks at the following aspects: the overall time spent by men and women on paid and unpaid work, the spill-over effect from work to family and from family to work (resulting either in work–family conflict or work–family enrichment) and the associations with the job quality indices.

Paid and unpaid working time

A person's overall working time consists of the length of time spent in the main paying job (and if relevant the second job) and the amount of time spent on unpaid domestic tasks and care responsibilities.¹⁶

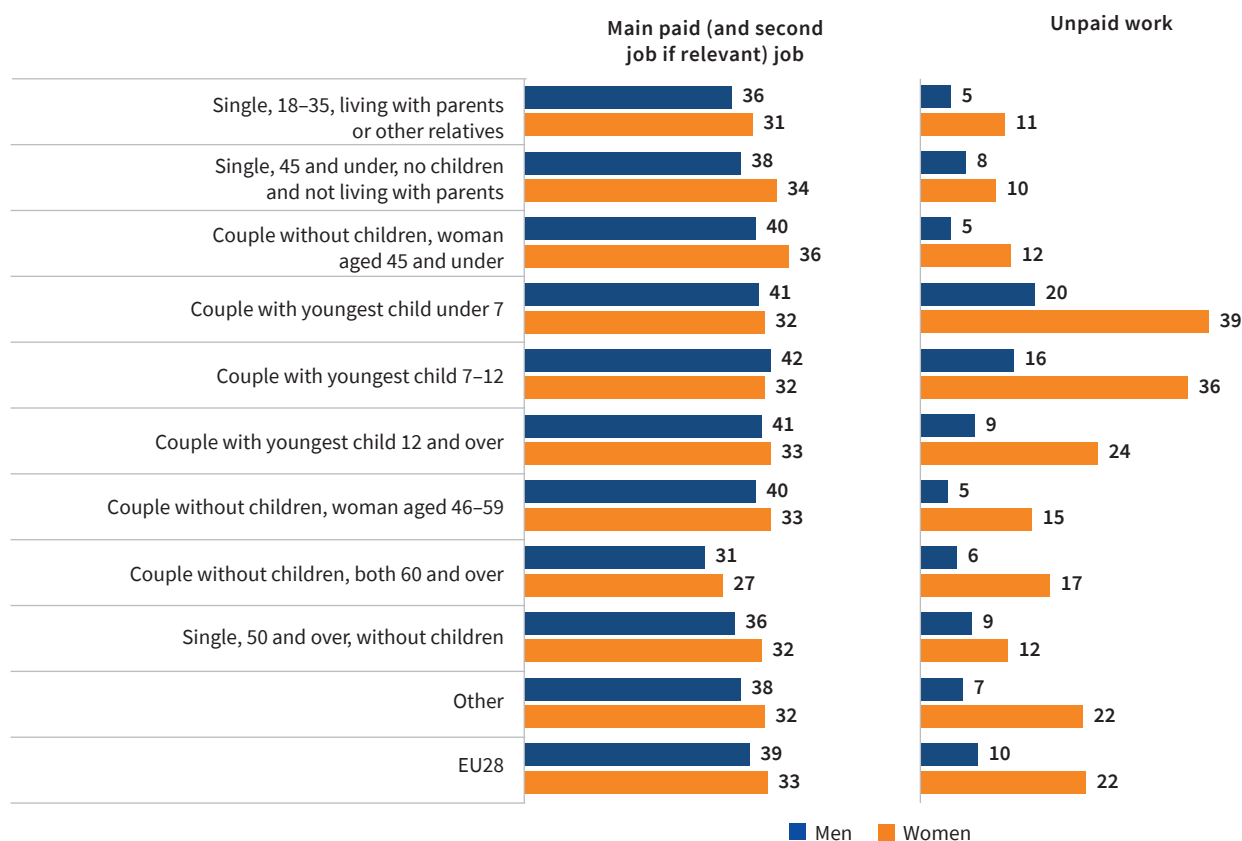
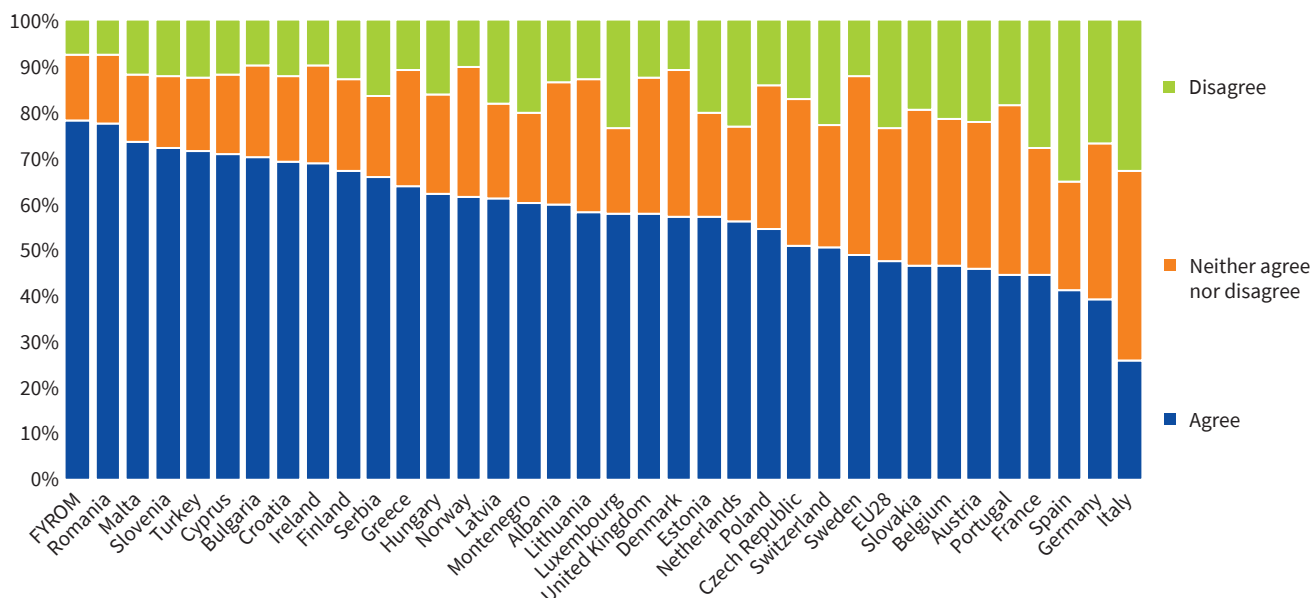
The division of time over the different phases of life depends very much on decisions made at household level, as well as on the labour market, social infrastructure and organisation of society (Eurofound, 1999). Throughout a person's working life, time needs in the private sphere can vary considerably. For example, care responsibilities for children, grandchildren, disabled and elderly dependents can be more intensive at particular times of life.

When paid and unpaid working hours are combined, women continue to work more hours than men: 55 hours per week compared to 49 (Figure 114). While men on average work more hours in their paying job, women carry out the most unpaid working hours. Both men and women spend more time on unpaid work when there are children in the household, but this expansion of unpaid work is greater for women, hence further widening the divide between the different time use of men and women. In addition, as the figure shows, the characteristics of the household – young single earner living with parents, couple with young children, etc. – affects the pattern of time use.

Spill-overs between work and private life

Working life and private life inevitably impact on each another. Working life can infringe on a person's private life in a negative way, in the form of work–family conflicts. However, working life can also benefit a person's private life – leading to work–family enrichment. Previous research has shown that work–family conflicts are associated with individual health problems, as well as having

¹⁶ In addition, the EWCS looked at the length of time spent in a second job. Because the incidence of holding a second job is low, this average figure is very low – less than one hour per week, on average. See also Chapter 1 – section 1.8: *Multiple job-holders*.

Figure 114: Paid and unpaid working time, by household composition and gender (hours per week), EU28**Figure 115: Work-family enrichment, by country (%)**

broader consequences for workers, their families and the organisations they work in.

In the sixth EWCS, a new question set out to measure ‘work-family enrichment’. Almost half of the respondents (48%) state that they get on better with their children because they have a job. A quarter (24%) feels they get on worse, while 29% has no strong opinions either way. There is hardly any difference between men and women on the

issue; workers on higher incomes are more likely to feel that having a job benefits their private and family life.

The results indicate wide differences between countries, as Figure 115 illustrates. In the former Yugoslav Republic of Macedonia and Romania, over 75% of workers feel that having a job improves their relationship with their children. In Italy, by contrast, the equivalent figure is just 26%.

Work–family conflicts

When working life spills over into a person's private life in a negative way, this results in work–family conflicts – leading either to problems in work or in family life.

Either type of conflict simultaneously affects both the worker and the organisation they work in. Work–family conflicts can have work-related outcomes, impacting on job satisfaction, organisational commitment and engagement. They may have also non-work related outcomes, affecting overall life satisfaction, satisfaction with family life and marriage. Or they may induce health-related outcomes – particularly psychological strain, mental health problems and sickness absence (Allen et al, 2000; Amstad et al, 2011). According to research findings, workers point to issues with health, social relations and concentration when work–family conflicts arise, while organisations allude to a lack of focus on the part of workers and insufficient time spent on delivering good quality outputs.

The sixth EWCS included questions addressing both work–family conflicts and family–work conflicts. Some 21% of workers state that they are too tired after work to carry out necessary household tasks. Meanwhile, 15% worry about work when they are not working. And for 12% of workers,

their job prevents them from giving the time they would like to their family.

In line with other research (Gallie, 2013), work being adversely affected by family concerns is reported dramatically less often than family life suffering because of work. Only some 4% of workers have difficulty concentrating on their job because of their family responsibilities. A similar proportion (3%) state that their family responsibilities have prevented them from giving the time they should to their job.

In terms of occupations, there are some noticeable differences (Figure 116). Managers, followed by agricultural workers, most often report work–family conflicts: for instance, 33% of managers worry about work outside of working hours. In contrast, only 9% of plant and machine operators report this.

Certain work situations make it more likely that work–family conflicts will arise: for instance, where people work asocial hours, or in a supervisory position. In addition, the configuration of the household is important: single parents and workers in households with children experience more pressure in this respect.

Figure 116: Extent of work–family conflict, by occupation (%)



Working conditions and work–family conflicts and spillovers

There is a better balance between work and family life when certain working conditions are present, for example, when work is considered meaningful, workers get recognition for their work and there are flexible time arrangements in place (allowing workers to take time off for family reasons when necessary).

Table 15 summarises the results of six regression analyses on the variables shown in the columns as dependent variables. The regressions control for sex, age, country, sector, occupation, employment status, workplace size, household composition, being a supervisor and having a second job. The plus signs indicate statistically positive significant associations and minus signs indicate statistically significant negative associations (blank cells indicate no significant association present).

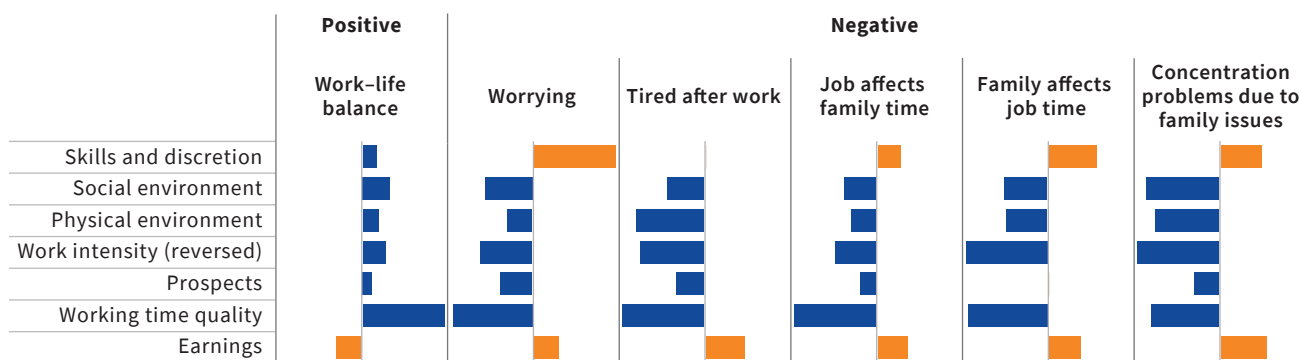
Table 15: Working conditions, work–family conflict and work–family enrichment

	Worrying	Tired	Job affects family time	Can't concentrate on job because of family	Family affects job time
Working more hours	+	+	+	+	+
Night work		+	+		
Weekend work	+	+	+		
Able to take an hour off	-	-	-	-	-
Flexibility in working schedules	+	+	+	+	+
Regularity in working time	-	-	-	-	-
More intense work	+	+	+	+	+
Frequent disruptive interruptions	+	+	+	+	+
Three or more determinants of work pace	+	+	+	+	+
Meaningful work	-	-	-	-	-
Support from colleagues			-	-	-
Receive recognition for my work	-	-	-	-	-
Organisational participation	+	+	+	+	+
Adverse social behaviour	+	+	+	+	+
Job insecurity	+	+	+	+	+
Restructuring in the last three years	+	+	+		

The different job quality indices reveal some associations with work–family conflict. Work–family conflicts are negatively related – most notably – to Working time quality; they are also negatively related to the Social and Physical environment, Work intensity and Prospects. (This holds true as well for family–work conflicts – at the right of Figure 117 (overleaf) – where family life affects both time and the level of concentration given to the job.)

The different indices have varying impacts depending on the particular aspect of the work–family spillovers being investigated. The Physical environment has a relatively bigger impact on tiredness. Workers who have a good

score on Skills and discretion are more likely to worry about work. High levels of Earnings are associated with higher levels of work–family conflict. And these jobs often require greater use of skills which – as mentioned above – is associated with worry. It is common knowledge that in these kind of jobs workers frequently continue to think about their job outside of working hours. This calls for attention to be paid to devising measures to assist individuals draw a boundary between working life and personal life. It also points to the need or right to disconnect from ICT devices – the use of which is included in the Skills and discretion job quality index.

Figure 117: Association between job quality indices, work-life balance and work-family conflict

Note: The blue bars represent associations favourable to workers and the orange bars represent unfavourable associations. See note to Figure 32 for more details on the methodology used.

3.5 Work sustainability

The idea behind sustainable work is that how we work today will have an impact on how we work in the future (Eurofound, 2015d). Faced with the diversity and flexibility of working life, and given its potential to address the demographic challenge of an ageing population and the increased individualisation of society, the concept of sustainability of work is gaining increasing public and political recognition.

Sustainability of work comprises two elements:

- ensuring that people are able and willing to work until retirement age – in particular, by paying attention to the quality of their jobs and their working environment over the life course;
- guaranteeing that workers' personal circumstances and needs, in relation to such issues as care, are accommodated, hence enabling them to continue working over the life course.

Research shows that working conditions and work organisation are of crucial importance in ensuring that workers can build up and regenerate their personal resources in terms of capacities, health and well-being, and skills rather than depleting them (Dochterty et al, 2009; Volkoff and Gaudart, 2015; de Wind et al, 2016). Furthermore, previous research findings (Wahrendorf et al, 2012) also underline that improving working conditions may help keep older workers in employment – particularly those at lower occupational levels.

Sustainable work takes both a preventive and a proactive approach: managing the work over the life course to enable longer, good-quality working lives and, where it is needed, facilitating workers with more limited abilities, in order to ensure their participation in paid employment.

Findings from the sixth EWCS can inform the discussions on making work sustainable by providing evidence regarding workers' preferences in terms of their working lives, as well as bringing understanding to the role that job quality and working conditions play in fostering sustainability.

Self-reported preferred age for stopping work

Respondents were asked to state their preferred age for stopping work: 'Until what age do you want to work?' They could either cite an ideal age or answer simply 'as late as possible'. Some 70% of workers mentioned a specific age, while 18% said they would like to work as long as possible.

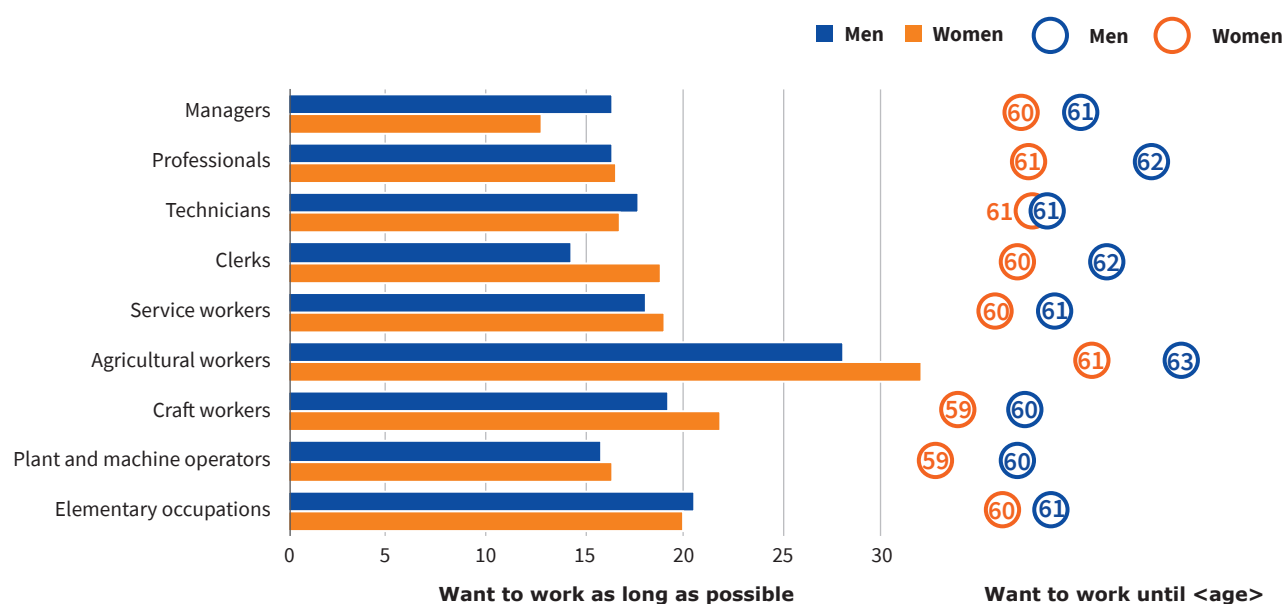
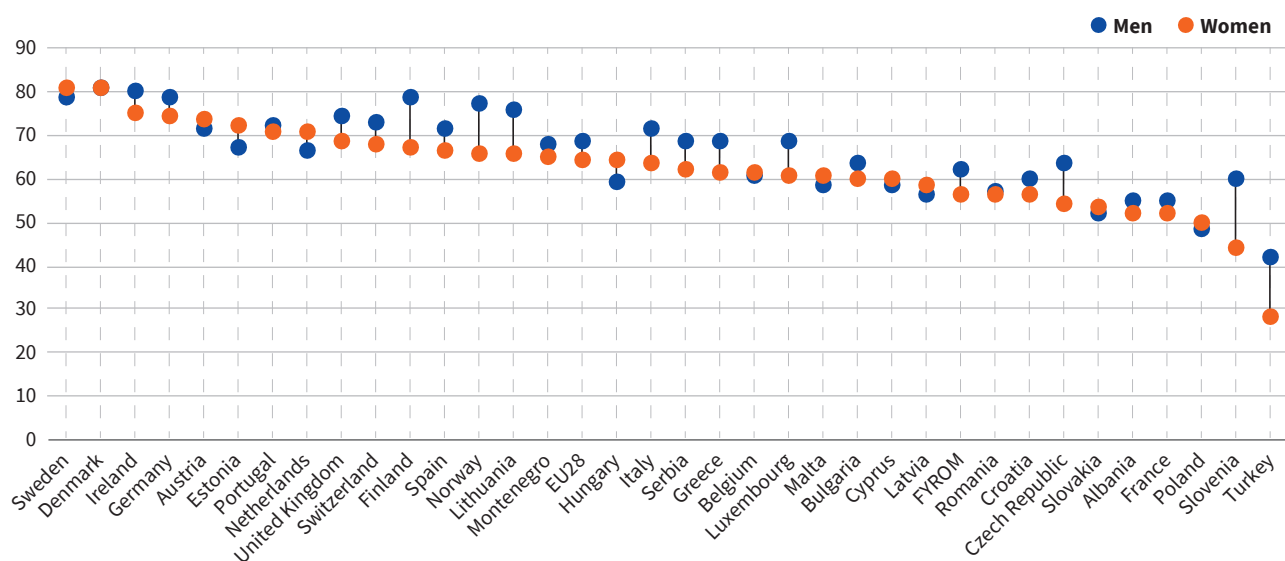
Expectations regarding the length of one's career appear to be determined in part by the age profile of the respondent's occupation: workers in occupations with the highest average age of worker are more likely to indicate that they want to work as long as possible. Agricultural workers (both men and women) state a wish to work the longest: around 30% want to work as late as possible, and the average stated age is 63 for men and 61 for women (Figure 118). Plant and machine operators are most likely to stop working early: only 16% want to work as late as possible and the average age is 60 for men and 59 for women.

The average age indicated by workers is highest in the Scandinavian countries (Norway 65 years, Denmark 64, Sweden, 63). It is lowest in Turkey (53), Cyprus and Slovenia (57) and the former Yugoslav Republic of Macedonia, Poland and Malta (58).

Perceived ability to work until the age of 60

The EWCS asked respondents whether they felt they would still be able to do their job when they reached an older age. The question was nuanced according to the respondents' age. Workers aged 55 or younger were asked whether they felt they could do their current job until they reached the age of 60. Those aged 56 or over were asked whether they felt they could do their current job in five years' time. It should be noted that many respondents were unable to answer this question, with 9% of those aged 55 or under and 13% of those aged 56 and over answering 'Do not know' (these responses were excluded from further analysis).

Some 73% of the under-55 cohort of workers in the EU28 said they felt they would be able to do their current job until the age of 60, with 27% saying they felt they could

Figure 118: Age at which workers wish to stop working, by occupation and sex, EU28 (%)**Figure 119: Self-reported ability to work until the age of 60 by respondents aged 55 and under, by country and sex (%)**

not. Men were slightly more optimistic than women in this respect: 75% of men answering in the affirmative compared to 71% of women.

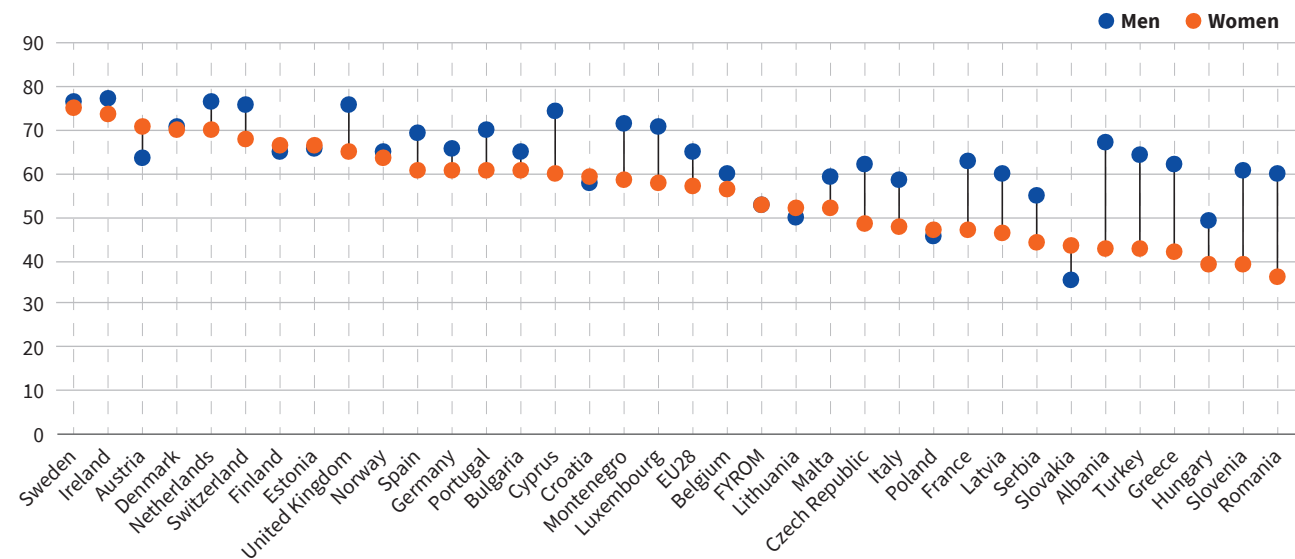
There are notable differences in terms of employment status: 80% of the self-employed workers without employees (83% with employees) stated that they felt they could work until the age of 60, compared with 74% of workers on an indefinite contract, and around 62% of workers with a fixed-term or other contract.

Differences also exist between the different occupations. More than 75% of clerks, professionals and managers indicated they would be able to work until 60, compared with less than 60% of elementary workers and service and sales workers.

There are also considerable country differences in terms of workers' expectations of their work capacity. In Germany, Portugal, Denmark, Sweden, Italy and Ireland, more than 80% of workers (men and women) aged under 55 felt they could work up to the age of 60. This contrasts sharply with 60% or less – for some countries, markedly less – in Poland, Slovenia, France and Turkey. In most countries, differences between men and women are slight; however, in Turkey and Slovenia, there is a gap of around 15 percentage points, women being markedly less optimistic regarding their future work capacity.

For the second cohort – workers aged 56 or over – the findings show substantial differences between men and women across countries. In most countries, more men than women believe they will still be able to do their jobs in five years' time; however, differences between sexes are

Figure 120: Self-reported ability to work in five years' time by respondents aged 56 and over, by country and sex (%)



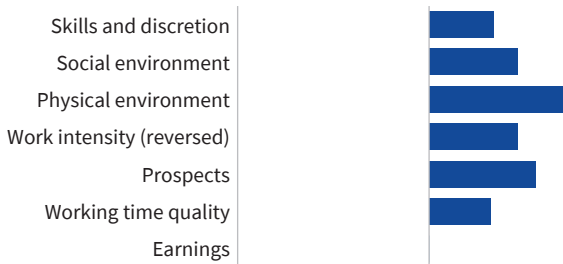
greater than for the younger age cohort – particularly in Slovenia, Albania, Turkey, Romania and Cyprus where the difference ranges from 20 to 24 percentage points. The gap is reversed in a few countries, with a higher percentage of women declaring they would be able to do the same job as currently in five years' time: Austria, Finland, Estonia, Croatia, Lithuania, Norway, Poland and Slovakia.

Job quality and sustainable work

It should be noted that in this section, the focus is specifically on the younger cohort of workers (aged 55 or younger) being able to work until the age of 60.

Being able to do one's current job until the age of 60 is associated with all the job quality indices, except for earnings (Figure 121). Although earning more money might be an incentive to work longer, it does not seem to be associated with the perceived ability to work longer. The physical environment shows the strongest relation to sustainability of work. In addition, good job prospects, lower work intensity and a good social environment are all contributory factors. Skills and discretion, and working time quality are also conducive to sustainable work, albeit to a lesser extent than the other indices.

Figure 121: Association between job quality indices and sustainability of work



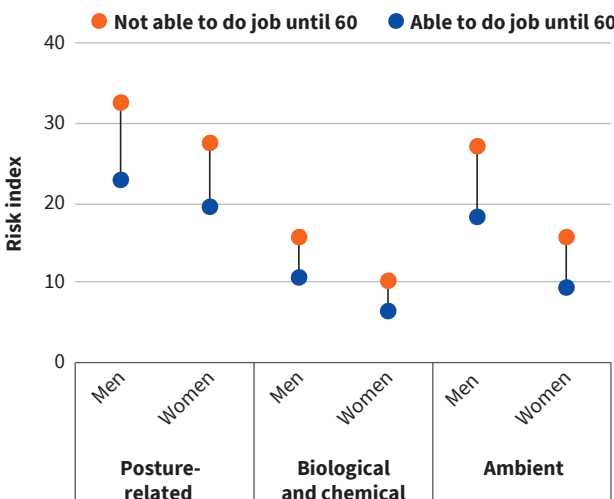
Note: The blue bars represent associations favourable to workers. See note to Figure 32 for more details on the methodology used.

Working conditions

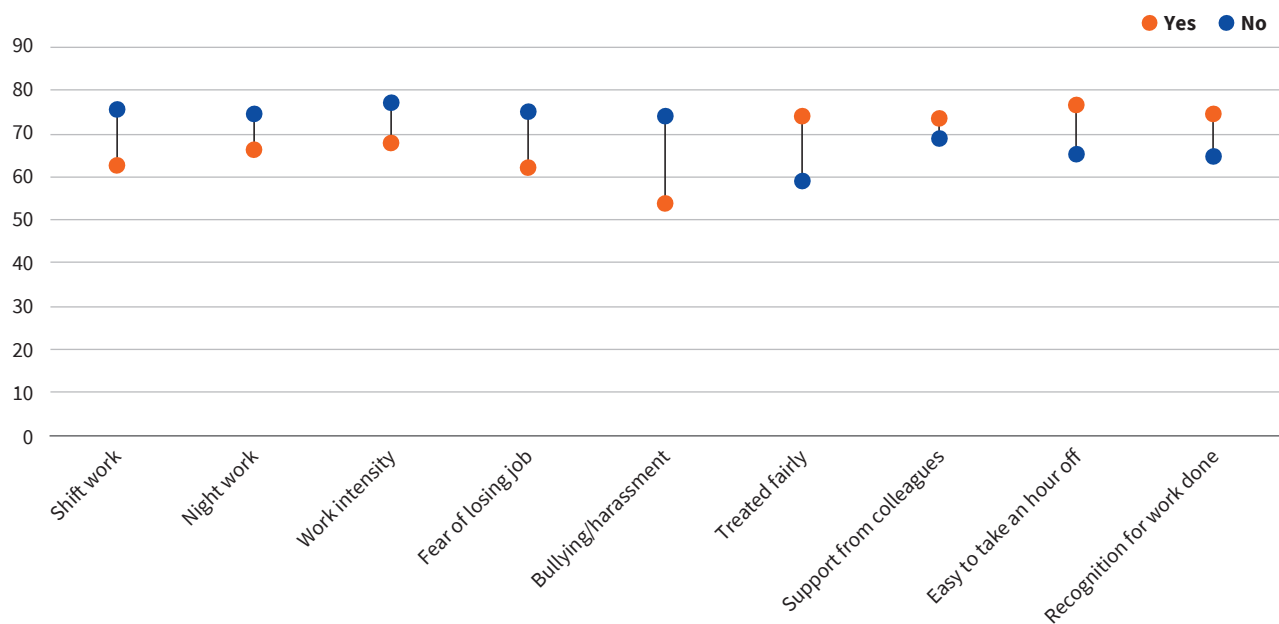
Looking in greater detail at particular factors that make up the indices, shows that certain aspects of working conditions are very strongly associated with being able to work until 60.

The more that workers are exposed to physical risks – especially posture-related risks – the more likely it is that they will not envisage being able to do the same job at 60 (Figure 122).

Figure 122: Mean exposure to physical risks and sustainability of work, EU28 (scale)



In line with the findings from the analysis of the job quality indices, multivariate analysis shows that workers are likely to be less optimistic regarding the sustainability of their work if they are exposed to any of the following adverse working conditions: work intensity, shiftwork (particularly daily split shifts), night work, fear of losing their job, unfair treatment, and bullying or harassment (Figure 123). (These

Figure 123: Ability to do the job until the age of 60 and exposure to working conditions, EU28 (%)

same factors also apply equally to the older age cohort (aged 56 or over) who were asked about their perceived ability to be doing their current job in five years' time).

Conversely, workers are likely to be more positive about the sustainability of their work if the following conditions were present: able to take an hour off work when needed, good support from colleagues at work, perception that the work they are doing is useful, and praise and recognition when they do a good job.

Likely age to finish working

Respondents who answered that they could continue working until the age of 60 (or if they felt they could continue in their job for the next five years) were given

a second question: this asked them to state the age up to which they felt they could continue working. The average age given by respondents was 64 years, and the gender differences in this respect were minimal: men 65 and women 64 years. Nor was there any marked difference between the two age cohorts, with their answers ranging from 64 to 65 years. Self-employed workers envisage being able to work a little later than employees (66 years compared to 64 years).

There are somewhat larger differences between countries in terms of anticipated age to finish working. In Denmark, Latvia, the Netherlands, Norway and Sweden, workers on average feel they can work until 67 years of age. However, in Albania, Greece, Hungary, Malta, Slovakia and Turkey, the age given was 62 years.

SUMMARY

Perspectives on working life

Career and employment security**Engagement at the workplace**

EU28: Over 70% of workers feel engaged in their job. The majority of workers (82%) feel that their work has been well done 'always' or 'most of the time' and just over half (53%) report that they always feel that the work they are doing is useful.

Occupation: Managers and professionals score highest in terms of engagement, while workers in health, education and construction are most likely to see their jobs as meaningful.

Job quality: Greater engagement is associated with greater use of skills and discretion, a better social environment, and good prospects. Workers find their jobs meaningful if they make greater use of skills and discretion, and if the social environment prospects are good.

Satisfaction with working conditions

EU28: 85% of respondents are satisfied or very satisfied with their working conditions – a slight increase since 2000.

Occupation: Twice as many workers in elementary occupations as managers are not satisfied with their working conditions.

Job quality: Having a good quality of management, a good work–life balance, and having career prospects are positively associated with satisfaction with working conditions.

Financial security

EU28: 64% of respondents said their households could make ends meet fairly easily – a slight rise since 2010 (62%).

Gender: Women who are the main earner in the household are much more likely to say they have difficulty in making ends meet than the EU28 average. Single parents, in particular single mothers, are even more likely to have difficulties.

Developing skills and competences

Nearly half (43%) of workers in the EU28 are either under-skilled or over-skilled. About 14% need further training to perform their duties well (and hence are under-skilled). Meanwhile, 29% have the skills to cope with more demanding duties (being over-skilled). Overall, the extent of skills mismatch is decreasing in the EU28.

Maintaining and promoting health and well-being

EU28: 78% of workers report being in good or very good health. The proportion of workers in poor health increases with age.

Occupation: Workers at a lower level on the ISCO classification report a greater incidence of poor health – as do those with a lower level of education.

Mental well-being: Men score slightly higher than women and workers aged under 35 higher than older workers.

Health problems

The most widely reported health problem by workers is backache (reported by 44%), followed by muscular pains in the arms (42%), headache and eyestrain, and overall fatigue (both 36%).

Job quality indices: Issues in the physical and social environments are strongly associated with almost all health problems.

Sleeping difficulties: Women have greater difficulty than men in terms of sleep: in particular, 63% of female managers report problems sleeping. While a better social and physical environment is associated with fewer sleeping problems, greater use of skills and discretion is associated with sleeping difficulties.

Occupation: Plant and machine operators are most likely to feel that work affects their health negatively, 40% reporting this. Conversely, agricultural workers, professionals and managers indicate more often that work affects their health positively – between 14% and 15%.

Job quality: Workers are more likely to feel that work benefits their health when the physical environment and social environment are good.

Sickness absence

Over one-quarter of workers (27%) said they were absent for health reasons for five or more days in the course of a year – more often, older workers.

Job quality indices: A good physical environment and social environment are strongly associated with less sickness absence overall.

Reconciling working and non-working life

Work-life balance

EU28: Some 81% of workers feel there is a good fit between their work and family or social commitments.

Gender: Men are more likely to say that their working hours do not fit with their private commitments, 20% of men indicating this compared to 16% of women. Workers with care responsibilities more often report a poor fit.

Employment status: Employees in indefinite contracts, self-employed without employees and part-time workers report more often a good fit than the EU average.

Working more and working less

A small majority of workers (56%) would like to work the same hours as they do currently and 30% would like to work fewer hours.

People who work long hours (over 48 hours per week) are twice as likely as the average to want to work less. Conversely, nearly three times as many people working short hours (20 hours per week or fewer) want to work more hours than the average.

Paid and unpaid working time

When paid and unpaid work are looked at together, women continue to work more hours than men – 55 hours per week, as against 49 for men. Men work more hours in their paying job, but women do the most unpaid working hours.

Work-family spillovers

Some 21% of workers state that they are too tired after work to do necessary household tasks.

Some 33% of managers worry about work outside working hours – compared to just 9% of plant and machine operators.

Working asocial hours or in a supervisory position makes it more likely that work-family conflict will arise. And single parents and workers in households with children experience greater difficulty.

Work sustainability

Some 73% of workers in the EU28 aged under 55 years said they would be able to do their current job until the age of 60. Men were slightly more optimistic than women in this regard. Some 70% of workers in the EU28 aged 56 and over report being able to do their current job in five years' time.

4 Profiles of job quality

Job quality, as underlined in Chapter 2, is a multifaceted concept; to capture the different dimensions, Eurofound developed seven job quality indices. The analysis shows that all seven, independently, have an impact on health and well-being. Moreover, they are important in terms of productivity (Eurofound, 2012b). The seven indices were examined separately in order to allow policymakers to consider which particular dimensions of job quality are more relevant for certain groups of workers or for certain aspects of health, well-being or productivity. Chapter 2 also demonstrated that jobs show different combinations of levels of each job quality index and that associations between job quality dimensions are not clearcut: some dimensions correlate with each other, others do not correlate at all while others are related only marginally to each other. The indices focus on objective job features and exclude items relating to the personal circumstances and qualities of the workers, even though personal circumstances may affect certain features of a job.

Chapter 3 moved away from the job quality perspective to focus on workers' own assessments of their experience in terms of the following aspects: career and employment security; developing skills and competences; maintaining and developing health and well-being; and reconciling working and non-working life. The chapter also examined the association between the job quality indices and workers' experiences in their working life.

This chapter explores to what extent patterns can be seen across jobs, by clustering jobs that have similar scores on the seven job quality indices. Although the job quality indices are not systematically correlated with each other, certain jobs display higher or lower levels of some indices. Some jobs are characterised by high levels of job quality indices in some areas but low levels in others; other jobs score well on all job quality indices. These patterns should provide policymakers with a comprehensive input for targeted policies aimed at addressing and improving job quality.

Clustering job quality using latent class analysis

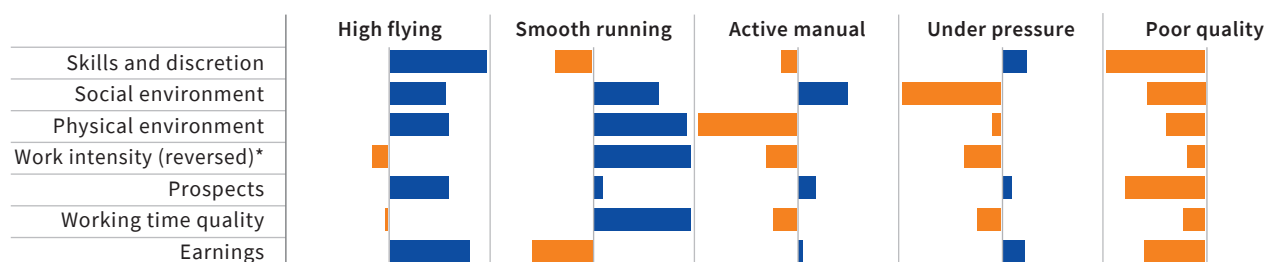
In order to identify groups of workers with similar job quality features, a statistical technique called 'latent class analysis' (LCA) is used. Using the 2015 EWCS data from the EU28, this technique classifies workers into a number of groups of different sizes based on similarities in the patterns of job quality, with similar jobs being assigned to the same type and substantially different jobs assigned to different types. For more information on the methodology, see Annex 4: Job quality clusters.

4.1 Five distinct profiles of job quality

Patterns in job quality suggest that the picture is more nuanced than a straightforward polarisation between high and low quality jobs. The analysis groups workers into five job quality profiles: 'high flying' jobs (comprising 22%

of workers); 'smooth running' jobs (25%); 'active manual' jobs (22%); 'under pressure' jobs (13%); and 'poor quality' jobs (19%). The pattern of the job quality scores between the profiles is dissimilar, reinforcing the premise that job quality comprises different dimensions. Figure 124 shows how the profiles differ from each other in relative terms. Within these profiles, workers are more similar in terms of how they score on the job quality indices.

Figure 124: Five job quality profiles, by job quality indices



Note: * In contrast to the other job quality indices, a higher level of work intensity lowers job quality. The bars in the figure show the z-scores of each cluster (columns) for each of the job quality indices (rows).

High flying jobs

The job quality profile with the highest scores on most of the indicators is the ‘high flying’ profile. In the EU 28 in 2015, about one in five workers (22%) holds a job in this profile. This profile scores higher in **skills and discretion**, **earnings** and **prospects** than the other four. Workers in this profile indicate that their job is complex, that they often learn new things and that they receive more on-the-job training. They can apply their own ideas in the work and decide on the order of tasks, methods and speed. They are also more involved in work organisation and management decisions. The high job prospects in these jobs point to opportunities for career progression and job security. The downside of these high-earning, high-skilled jobs is their higher **work intensity** and their lower **working time quality**.

Smooth running jobs

Unlike the ‘high flying’ profile, the ‘smooth running’ profile (the largest group, comprising one quarter of workers – 25%) stands out in terms of its low **work intensity** and high **working time quality**. Workers in this profile more often have part-time jobs and work less than 48 hours per week. Working time flexibility is high – but not higher than in the ‘high flying’ profile – as is the low prevalence of atypical or shift work. Levels of work intensity are low: the job less often entails working at high speed or tight deadlines, there is enough time to get the job done and there are few disruptive interruptions. At the workplace, the **social environment** is good: support from colleagues and managers is valued and there is very little abuse. However, the level of **earnings** and **skills and discretion** is somewhat lower than for the jobs in the other profiles and the **prospects** are average.

Active manual jobs

The jobs in the ‘active manual’ profile (comprising 22% of workers) are characterised by more risks in the **physical environment**. This is in stark contrast to the jobs in the ‘high flying’ and the ‘smooth running’ profiles, which are subject to few or no physical risks. Workers in the ‘active manual’ profile are more exposed to all types of physical risk: ambient risks (noise, temperature), biological and chemical risks (smoke, infectious materials), and posture-related risks (carrying heavy loads, tiring or painful positions). **Working time quality** in ‘active manual’ jobs is lower than average, mostly because of the greater incidence of atypical and shift work. The **social environment** is good as a result of low levels of abuse and an above-average level of help and support from colleagues and management quality. The scores for the other job quality indices are more or less at the average level.

Under pressure jobs

The ‘under pressure’ group of jobs is the smallest, comprising 13% of workers. The job quality dimension that stands out in negative terms is **social environment**: this

dimension is the lowest of all the profiles, due to having the highest incidence of abuse at work. For example, 69% of the workers in the ‘under pressure’ profile report having been subjected to verbal abuse in the month prior to the survey, 29% to threats, 30% to humiliating behaviour and 29% to bullying or harassment. Incidences of other types of abuse are lower, but still high: 14% are subject to physical violence, 8% to unwanted sexual attention and 4% to sexual harassment. In addition, little support is received from managers or colleagues.

Other job quality indices are also quite unfavourable. **Work intensity** is highest in this profile. Most striking is the level of emotional demands in these jobs: more than 7% of workers in the profile are always in situations that are emotionally disturbing – about three times the average. In addition, they have to deal with angry clients, customers or pupils more frequently while their job requires them to hide their feelings. These extensive emotional demands are combined with working at high speed, working to tight deadlines, and not having enough time to get the job done. Moreover, **working time quality** is very low for workers in this profile: their jobs are characterised by extensive atypical work (nights, weekends, shifts) and limited flexibility. Weekly working hours are longer than average (but lower than for the ‘high flying’ or the ‘active manual’ profiles). Despite all this, job quality is not bad across all dimensions. **Earnings** and the use of **skills and discretion** in these jobs are high – surpassed only by the ‘high flying’ profile.

Poor quality jobs

Jobs in the ‘poor quality’ profile, comprising 19% of workers, have the lowest job quality of all the profiles. Jobs rank lowest in terms of **skills and discretion** as well as in **earnings** and **prospects**. Monthly earnings are about a third of those in the ‘high flying’ profile. About a third of the workers in this profile fear they may lose their jobs within six months and 45% strongly disagree that their job offers good prospects for career advancement – about twice the proportion of workers on average for both dimensions. Many of the workers in the ‘poor quality’ profile have fixed-term contracts (27%); a similar proportion have temporary-agency contracts or no contracts at all (23%). The use of **skills and discretion** is very low in this profile. Learning new things is uncommon and the proportion of workers who have received training is low – 17%, less than half of the average (37%).

However, **work intensity** is slightly better than in the ‘under pressure’ profile, mostly because of less time pressure, and fewer deadlines and disruptive interruptions. Jobs in the ‘poor quality’ profile are more often part time, with an average working week of 33 hours, compared to an average of 36 hours. **Working time quality** is close to the average: workers in this profile are less likely than the average to work in their free time to meet work demands; they are also less likely to work more than 10 hours a day.

4.2 Distribution of workers in job quality profiles

The five job quality profiles represent groups of jobs that share similar job features. This does not necessarily mean that the workers holding these jobs also share the same characteristics. Exploring the composition of the workers in each profile will help to identify groups of workers that are more likely to have a certain job quality profile and to reveal groups that are more vulnerable.

A gender analysis shows that in terms of sex, men are more likely to have ‘active manual’ jobs and women to have ‘smooth running’ jobs (Figure 125). In the other profiles, gender differences are much less evident, with men being slightly overrepresented in the ‘high flying’ profile and women overrepresented in the ‘poor quality’ profile. Men and women are equally likely to hold an ‘under pressure’ job. The same type of distribution applies to the job profile by age. The higher proportion of workers aged under 35 in the ‘poor quality’ profile (24%) underlines the vulnerable position of young workers in the EU – this is reinforced by their more limited representation in the ‘high flying’ profile (17%).

Striking differences are also evident in terms of the distribution of workers according to level of education. For instance, workers with only a primary level of education are very strongly overrepresented (47%) in the ‘poor quality’ profile; conversely, a similar proportion of workers (47%) in the ‘high flying’ profile have a tertiary level of education.

The association of job quality and workplace size is less striking. The majority of workers in micro companies have

‘smooth running’ or ‘poor quality’ jobs, while the majority of workers in large companies have ‘high flying’ or ‘active manual’ jobs.

One type of job quality profile predominates in certain sectors. More than half of all workers in the financial services have a ‘high flying’ job; and a similar proportion of those in the construction sector have an ‘active manual’ job. Meanwhile, almost half of workers in the agricultural sector have ‘poor quality’ jobs.

The public sector – public administration, education, and health – mainly consists of ‘smooth running’ jobs, ‘under pressure’ jobs and ‘high flying’ jobs. A quarter of workers in health and nearly a quarter in public administration have ‘under pressure’ jobs – the highest shares of all sectors.

Certain profiles are concentrated in certain occupations: the majority of managers (and professionals) have ‘high-flying’ jobs. Meanwhile, most clerks fall into the ‘smooth running’ profile. Craft workers are overrepresented by ‘active manual’ jobs, while more than half of the elementary occupations are ‘poor quality’ jobs.

Finally, job quality is not equally distributed between each country. Workers in Denmark, Finland, Luxembourg, Sweden and the United Kingdom fare better in terms of job quality. Between 36% and 40% of workers in these countries have ‘high flying’ jobs. Meanwhile, more than one in five workers in Denmark, Finland, France and the Netherlands belong to the ‘under pressure’ profile. However, Romania, Greece, Hungary and Latvia stand out with a high proportion of workers in ‘poor quality’ jobs.

Figure 125: Job quality profiles, by sociodemographic characteristics, EU28 (% of workers in each category)

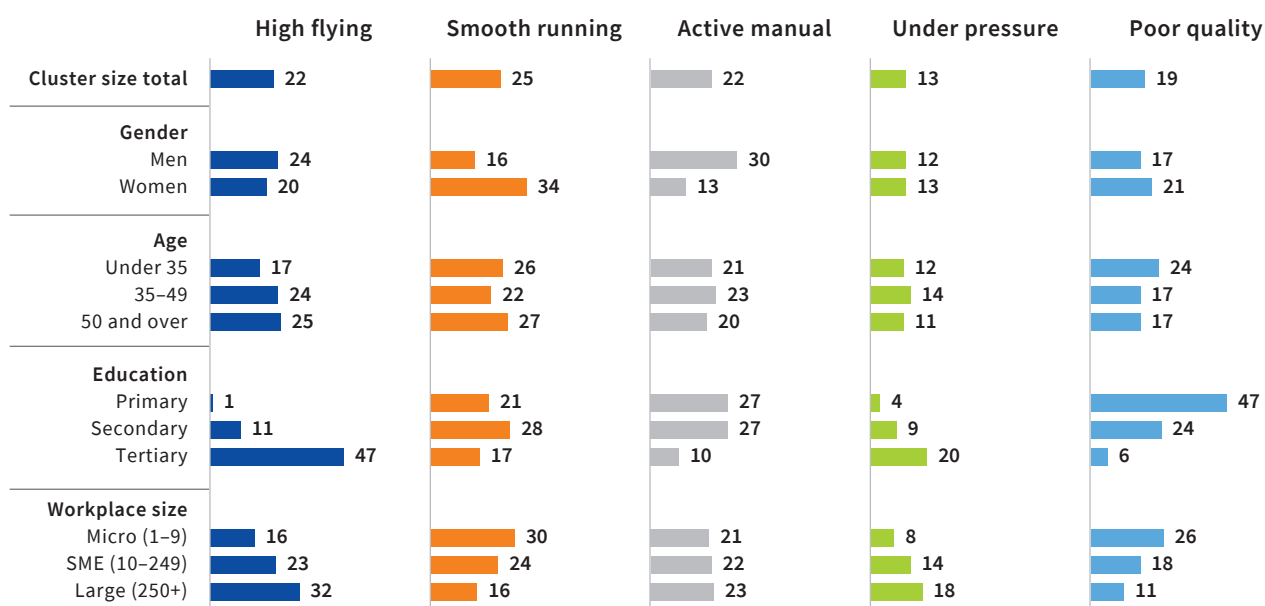


Figure 126: Job quality profiles, by sector and occupation, EU28 (% of workers in each category)

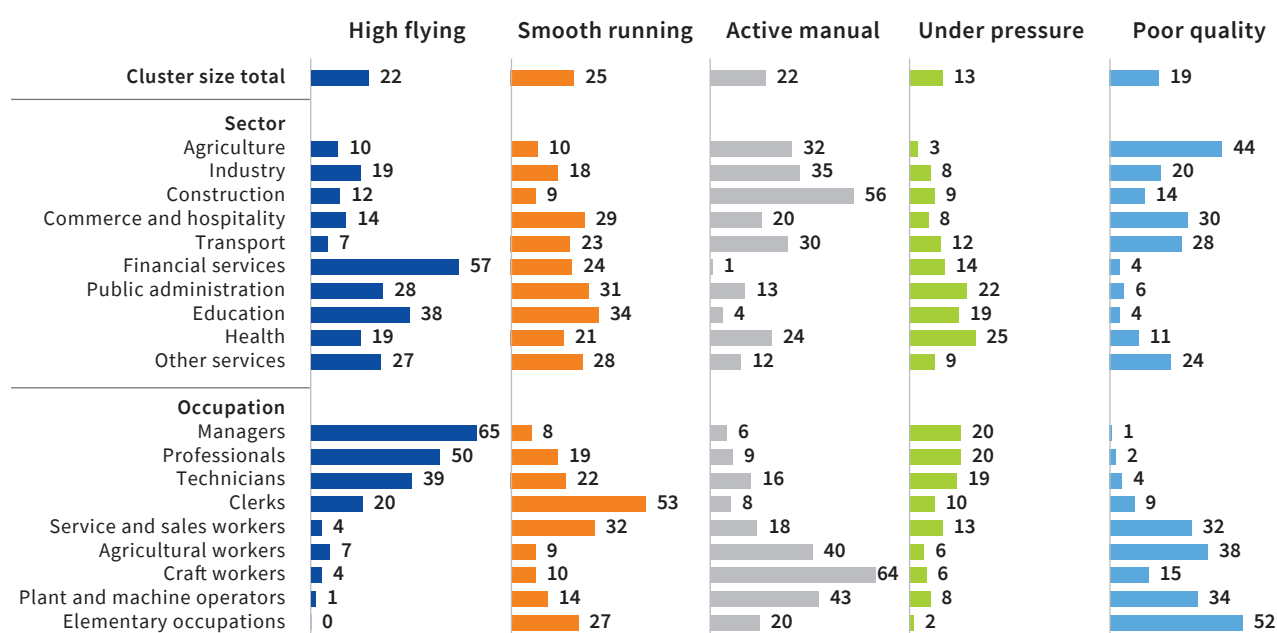
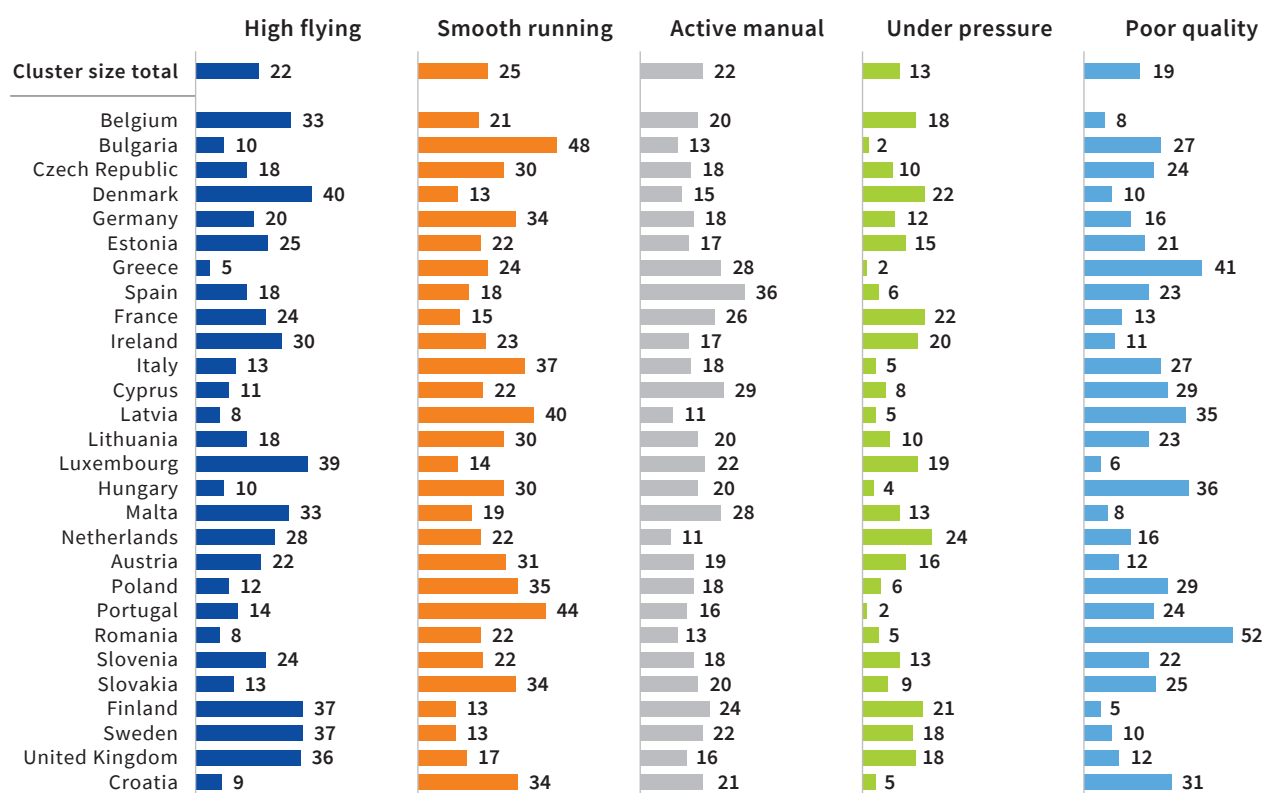


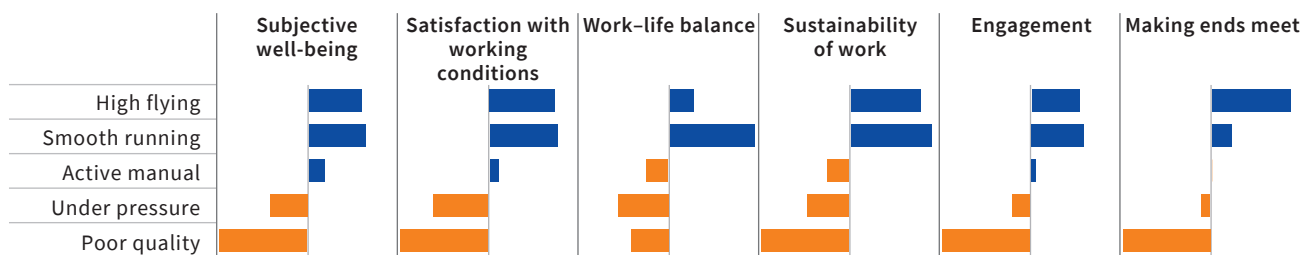
Figure 127: Job quality profiles by country, EU28 (% of workers in each country)



Job quality profiles and working life indicators

The analysis in this section explores the association of cluster membership with a number of indicators. The analysis is, by means of an extension to latent class analysis, known as ‘Step 3 analysis’; this relates the posterior class membership probabilities to external variables, controlling for covariates. Despite the control for a series of covariates, the effects are not necessarily causal, mainly because the direction of causality might be ambiguous. For more information on the statistical analysis, see Annex 4: Job quality clusters.

Figure 128: Association between job quality profiles and well-being



Note: The bars in the figure represent the relative association between each job quality cluster and a dependant variable (i.e. the standardised coefficients of the latent class step 3 analysis), showing only significant coefficients ($p < 0.01$). Blue bars represent associations favourable to workers and orange bars represent unfavourable associations. See box ‘Job quality profiles and working life indicators’ above.

4.3 Job quality profiles and quality of working life

This section examines the association between the job quality profiles and three sets of indicators: well-being, sickness absence and work-life balance. The analysis shows that certain groups of workers are likely to be more at risk because of lower job quality. This underscores the fundamental importance of job quality in working life and supports the premise that effective policies to improve the job quality of these groups are likely to improve the health and well-being of workers concerned. In addition, the results could act as a validation of the way the job quality indices are constructed, as well as the analysis of the job quality clusters.

Job quality profiles and well-being

The ‘high flying’ and the ‘smooth running’ profile show the most favorable associations with well-being indicators, while the ‘under pressure’ and ‘poor quality’ profiles show the least. Figure 128 shows the association between the job quality profiles and six indicators of well-being: subjective well-being, satisfaction with working conditions, work-life balance, sustainability of work, engagement, and ability to make ends meet.

Generally, the ‘smooth running’ profile shows the strongest positive association with most measures, followed by the ‘high flying’ cluster. Workers with jobs in either profile have a higher level of subjective well-being, are more satisfied with their working conditions, consider their jobs to be very sustainable and are also more engaged in working life. However, the workers in the ‘smooth running’ profile generally consider their work-life balance to be very good,

which is not the case for the ‘high flying’ profile. Workers in the ‘high flying’ profile find it considerably easier to make ends meet – explained by the high level of earnings in this cluster.

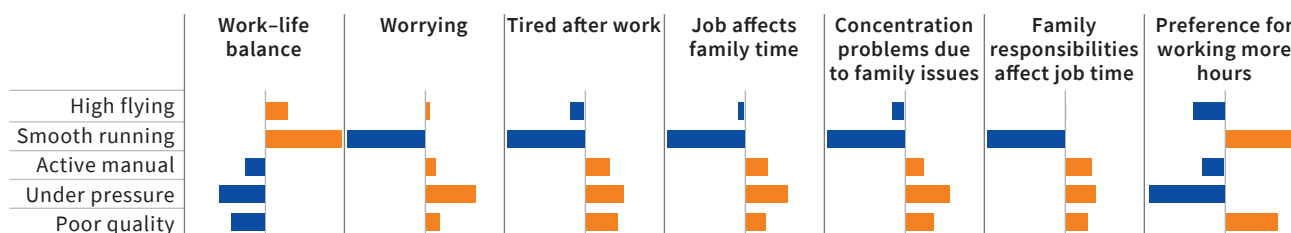
On the other side of the spectrum, the ‘poor quality’ profile scores very low across all indicators. Worker’s subjective well-being is lower, as is satisfaction with working conditions, sustainability of work, level of engagement and ability to make ends meet. Workers in the profile rate their work-life balance more unfavourably than do workers in the other profiles – apart from the ‘under pressure’ profile. In this case, the slightly higher work-life balance of the poor quality profile could be explained by the low number of working hours of this group (albeit not voluntary as their stated preference to work more hours is very strong).

The ‘under pressure’ profile also scores below average on all indicators (although not as low as the ‘poor quality’ profile). Subjective well-being is very low, workers are not satisfied with their working conditions and are more likely to consider their jobs as being unsustainable. Work-life balance is exceptionally difficult to achieve for this group of workers. However, on the positive side, engagement is higher and ability to make ends meet is substantially better, albeit less so than the average.

The picture is more mixed for the ‘active manual’ profile. Workers in these jobs generally fall between the other clusters in terms of the six indicators.

Figure 129: Association between job quality profiles and health issues and absence

Note: See note to figure 128.

Figure 130: Association between job quality profiles and work-life balance

Note: See note to figure 128.

Job quality and sickness absence

Job quality is also important in terms of promoting health and minimising absence from work. This set of indicators is made up of four items: health problems, absence (due to a work-related illness), absence (due to a work-related injury – WRI), and presenteeism.

The prevalence of health problems and absence is highest for the ‘under pressure’ profile and lowest for the ‘smooth running’ profile. The health problems of the ‘under pressure’ profile are of a diverse nature, though the highest incidences are for anxiety and overall fatigue. Health issues are also relatively high for the ‘poor quality’ profile. Absence – measured in the number of days a worker was absent from work due to sick leave or health-related leave – is quite low in the ‘poor quality’ profile, possibly due to the higher incidence of part-time work in this group, which would reduce the probability of illness during working time, and other factors not covered by this research.

The ‘smooth running’ profile scores low for health problems (and has the lowest levels of overall fatigue and anxiety), and has lower than average levels of absence due to a work-related illness as well as low levels of presenteeism. Despite very high levels of well-being, satisfaction with working conditions and sustainable work, the health and absence-related indicators in the ‘high flying’ profile do not differ greatly from the other clusters apart from the ‘smooth running’ cluster.

As was the case in the previous section, the ‘active manual’ profile occupies the middle ground and shows a more mixed picture. Health problems are of a more physical nature, with a lower incidence of anxiety but higher incidence of backache and muscular pain.

The ‘under pressure’ and the ‘poor quality’ profiles both score considerably higher than the other profiles for the absence and presenteeism indicators.

Job quality profiles and work-life balance

Workers in the job quality profiles differ in terms of their work-life balance and the work-family fit they experience. Whereas a headline indicator for work-life balance has already been introduced (above), the following aspects relating to work fit and working time preferences are examined in greater detail in Figure 130:

- worrying about work outside working hours;
- being tired after work;
- demands of the job affecting family time;
- family responsibilities affecting work time;
- problems concentrating at work due to family issues;
- preferences for working more – or fewer – hours.

Workers in ‘smooth running’ jobs have the strongest positive association with work-life balance (as already shown in Figure 128). In addition, these workers are shown to be the least affected by work-family conflict and have a preference for working more hours. These favourable associations could be explained by the prevalence of part-time work within this job profile and some difficulties in making ends meet.

Workers with ‘high flying’ jobs are more likely to have a preference for working fewer hours, and work-family conflict is less prevalent than in the other profiles except for the ‘smooth running’ cluster. The other three job profiles show a negative association with work-family conflict – particularly the ‘under pressure’ cluster. Related to the poor working time quality and poor quality social environment for this profile, work-family conflicts in both directions are common. Unsurprisingly, workers in this profile are most likely to want a reduction in their working hours.

SUMMARY

Job quality profiles

High flying

Prevalence: 22% of workers in the EU28

Job quality indices: Highest scores for most of the indices; this cluster scores higher in **Skills and discretion**, **Earnings** and **Prospects**. The downside is higher **Work intensity** and lower **Working time quality**.

Smooth running

Prevalence: 25% of workers in the EU28

Job quality indices: Low **Work intensity** and high **Working time quality**. Overall, job quality indices score quite high though **Earnings** and **Skills and discretion** are somewhat lower than the other profiles; the score for **Prospects** is average.

Survey indicators: More often part-time jobs and jobs with working weeks of less than 48 hours. Working time flexibility is high, but not higher than in the 'high flying' group, as is the low prevalence of atypical or shift work. There is enough time to get the job done and there are few disruptions. At the workplace, the social climate is good as the support from colleagues and managers is valued and there is very little abuse.

Active manual

Prevalence: 22% of workers in the EU28

Job quality indices: There is a poor score for **Physical environment**. Working time quality is lower than average and scores on **Social environment** are high. Scores for the other job quality indices are more-or-less average.

Survey indicators: Jobs are characterised by environments with more physical risks – of all types: ambient, biological and chemical, and posture-related. Working time quality is lower than average because of a higher prevalence of atypical and shift work. The social environment is good due to little abuse, more help and support and good-quality management.

Under pressure

Prevalence: 13% of the workforce.

Job quality indices: The **Social environment** job quality index is the lowest for all the profiles because the incidence of abuse on the job is at the highest, and support from managers or colleagues is very low. **Work intensity** has the poorest score of all the profiles. However, **Earnings** and **Skills and discretion** are second only to the scores in the 'high flying' profile.

Survey indicators: Workers are exposed to emotionally disturbing situations, three times more than on average. Work is done at high speed, to tight deadlines and there is insufficient time to get the job done. The profile is characterised by a atypical work and low levels of flexibility. The working week is longer than average (but shorter than in the 'high flying' or 'active manual' profiles).

Poor quality

Prevalence: 19% of the workforce.

Job quality indices: The profile scores negatively on all job quality indices, with the lowest scores for **Skills and discretion**, **Earnings** and **Prospects**. However, **Work intensity** and **Working time quality** score better than the 'under pressure' profile.

Survey indicators: Monthly earnings are about one-third of those in the 'high flying' profile. About one-third of workers fear they will lose their job within six months, while 45% do not believe their job offers good prospects – about twice the average figure. Half the workers in the profile have either fixed-term contracts, temporary agency contracts, or none. In addition, only 17% have received training – less than half the average (37%).

Job quality profiles and quality of working life

Well-being

‘Smooth running’: This shows the strongest positive associations with most measures of well-being. Workers have greater subjective well-being, are more satisfied with their working conditions, have good work–life balance, consider their jobs sustainable and are also more engaged in working life. And workers in the ‘high flying’ profile find it considerably easier to make ends meet.

‘High flying’: This comes close to the ‘smooth running’ profile in terms of workers’ well-being. In fact, workers in the ‘high flying’ profile find it considerably easier to make ends meet. However, work–life balance is not as good.

‘Poor quality’: This profile scores very low in all indicators. Work–life balance is worse than in almost all other profiles (apart from the ‘under pressure’ profile).

‘Under pressure’: This profile scores below average on all indicators (though not as low as the ‘poor quality’ profile). Work–life balance is particularly difficult.

‘Active manual’: Workers in these jobs generally fall between the other clusters in terms of the six indicators.

Health issues and sickness absence

‘Under pressure’: The prevalence of health problems and absence is highest for the under pressure cluster. The health problems of this cluster are of a diverse nature, though the highest incidences are for anxiety and overall fatigue.

‘Active manual’: This profile shows a more mixed picture. Health problems are more physical: there is a higher incidence of backache and muscular pain, but a lower incidence of anxiety.

‘High flying’: Despite its high scores in terms of, this profile does not differ markedly from the others in terms of health and sickness absence (apart from the smooth running profile).

‘Poor quality’: Health issues are relatively problematic. Sickness absence however is relatively limited.

‘Smooth running’: The prevalence of health problems and absence is lowest in this profile. It also has the lowest levels of overall fatigue and anxiety, less sickness absence and limited presenteeism.

Job quality and work–life balance

‘Smooth running’: this profile has the strongest positive association with work–life balance.

‘High flying’: the positive association is not as strong as for the ‘smooth running’ profile.

‘Under pressure’: This profile has the most negative association with work–life balance. Work–family time conflicts in both directions are common. workers in this profile are likely to want to reduce their working hours.

‘Active manual’: A negative association with work–life balance.

‘Poor quality’: A negative association with work–life balance.

5 | Conclusions

‘The future of work is what we will make it. The challenge is to make it the one that we want.’

Guy Ryder, Director-General of the ILO

This report has presented the results of the sixth European Working Conditions Survey (EWCS) through a focus on job quality, which is at the heart of the European project and its strategies. How optimistic can Europe be when considering developments in working conditions and job quality? Several important positive elements prove that many channels are contributing effectively to good working conditions, job quality and working life, which also lead to benefits for companies. Nevertheless, several issues continue to be a cause for concern and progress is slow. There are still structural inequalities and differences in job quality in European workplaces. In fact, there is ample scope to propose and design policies relating to each job quality index. Policies and actions to support workers over the course of their working lives should also be addressed. This should involve efforts from all stakeholders, as everyone can make a distinctive contribution to making sure that workplaces are good places to work.

From its inception in 1990 to the current sixth wave, the EWCS has undergone extensive transformation. Created initially as an ad-hoc module to a Eurobarometer survey – addressing traditional occupational safety and health issues, as well as questions on job control and demand – it has emerged as a significant standalone survey, covering a wide range of aspects of working life. Guided both by Eurofound stakeholders – in particular, the tripartite actors at European level as well as national and sectoral actors – and by developments in research, the EWCS uses an interdisciplinary approach to gather information on the experience of work in Europe, charting a range of changes in jobs and people’s working life and company practices to be documented and examined.

Some progress in job quality – but not across the board

Building on previous Eurofound research (2012b), this first analysis of the sixth EWCS documents developments across seven job quality indices: physical environment, work intensity, working time quality, social environment, skills and discretion, prospects and earnings.

The **Physical environment index**, which captures exposure to a wide variety of physical risks (environmental, biological and chemical, and posture-related), shows very limited progress in the last 10 years: a one-point increase between 2005 and 2010 but no change between 2010 and 2015. The Physical environment index for men increased (indicating an improvement), narrowing the gap between men and women slightly. The limited improvement in the index highlights changes in different directions on

exposure to certain risks. National situations and changes over time are quite diverse. The gap between countries has decreased, indicating a possible convergence. One in 10 workers in the EU reports being ‘not very well’ or ‘not at all well’ informed about health and safety risks at work, the same proportion as in 2010.

The **Work intensity index** measures exposure to work demands, and while comparability over time is limited, it does show a small decrease, indicating a positive trend, between 2005 and 2015, but a slight reintensification since 2010. Analysis of the index in 2015 shows a high level of variety in the combinations of the index’s components according to occupation and sector. The trend shows considerable heterogeneity and changes in different directions, which will be explored in future EWCS analysis.

The **Working time quality index** shows that average working time quality increased between 2005 and 2015, with working hours falling, on average, continuously over time. This is the result of the combined trends of an increase in short working hours and a decrease in long working hours: both these patterns are of concern when other job quality features are considered. The findings indicate that Sunday work and shift work are on the increase. In the majority of cases, companies set the working time arrangements. Nearly one quarter (22%) of workers work in their free time to meet work demands several times a month, and almost four in 10 have been requested to come into work at short notice. Arranging to take an hour off during working hours, for personal or family matters is ‘fairly’ or ‘very’ easy for slightly more men (68%) than women (63%). Of all seven indices, this index shows the least variation across the workforce.

The **Social environment index** has the largest variation between workers, indicating very different experiences in management quality, social support and the incidence of adverse social behaviour (which is negative in the index). While 16% of workers report having been exposed to adverse social behaviour in the 12 months prior to the survey, 7% of workers report having been discriminated against on the basis of gender, age, race, religion, nationality, disability or sexual orientation. Employees from smaller workplaces are more inclined to report that their workplace is characterised by different aspects of a good social climate.

The **Skills and discretion index** shows progress over time, resulting from an increase in the cognitive dimensions of work, wider access to training, more decision latitude and increased use of ICT. This positive development highlights important differences between groups of workers. Involvement in decisions affecting one’s work is limited and varies substantially across occupational groups. There are substantial inequalities in access to training. Of particular

and persistent concern is the lesser access to training of those who might need it most. In general, groups reporting less access to training also report a shorter duration of training.

On the **Prospects index**, considerable differences between groups of workers are apparent. Nearly four in 10 report good prospects for career advancement – clear progress since 2005. Part-time workers report less positive prospects, however, than full-time workers. The picture of change experienced by workers is quite dynamic: 22% report a restructuring event substantially affecting their work; 20% report some increase in employment in the company for which they work; and 23% report some downsizing. Changes in working hours, earnings, influence or workload have been experienced by 60% of workers. The experience of change is challenging for workers, as it involves a number of risks for their working life as well as for companies, and needs to be managed

While limited, the **Earnings index** confirms clear differences among workers. Other European datasets indicate that inequalities in relation to earnings have increased over time. Elementary workers and service workers report the lowest level of the Earnings index and managers the highest. Sectoral differences are also important between agriculture and commerce and financial services. Just over half (51%) of respondents to the EWCS agree that they are paid appropriately for the work they do, while one-third experiences ‘some’ or ‘great’ difficulties in making ends meet.

The mapping of job quality indices by occupation and sector shows a high variety of combinations of job quality features. No sectors or occupations score consistently high on all the indices.

Areas where gaps and inequalities need to be tackled

Employment status makes a difference to working conditions and job quality. Both the self-employed with employees and employees on indefinite contracts report more favourable job quality, in general, than the self-employed without employees and workers on temporary contracts. The self-employed without employees and employees without a contract also report a lower incidence of good or very good health.

Occupation and, to a lesser extent, sector are determinants of inequalities between workers. Workers in less-skilled occupations report significant differences in motivation, well-being, engagement and satisfaction with their working conditions; they also report higher levels of time pressure at work (quantitative demands), a higher number of health problems and less propensity to stay in the job until an older age (indicating low sustainability). Similarly, there are important differences in job quality within sectors. While the job quality indices include characteristics of work and employment that are prevalent in most occupations, it is important to highlight the particular job characteristics conducive to job quality in specific sectors and occupations.

The findings confirm that gender inequalities are still present in the workplace: occupational and sectoral segregation exists along with different gender roles at home, related to care particularly, as well as different welfare and tax systems. The results reflect multiple gaps and disparities between women and men that can accumulate to the disadvantage of both. There are signs of slow progress, however: for example, the proportion of women managers has increased, the exposure of men to physically demanding work has fallen, and there are signs of a less imbalanced sharing of care responsibilities between household members. But this is not the case for all indicators, and in some cases, gender gaps have narrowed due to the drop in the more favourable position of one gender (usually male). Efforts towards greater gender equality in the workplace still need to be supported.

Differences between Member States on these factors are substantial. Changes over time do not illustrate upward convergence on all dimensions of job quality.

There are still wide disparities on a number of fronts: for example, between working hours and working time preferences, or between workers’ skill levels and the jobs they have. While the majority of workers – nearly six in 10 – report that their working hours are in line with their preferences, 30% would like to work fewer hours and 14% would like to work more hours. When considering job and skill matches, 43% of workers report being overskilled or underskilled. These divergences are problematic in relation to workers’ well-being, the use and development of human capital, and social cohesion.

The participation of workers with care responsibilities (vis à vis children – but also for dependent adults) would benefit from being supported, as they report a poorer work–life balance and constitute a group likely to increase in the future

Unclear boundaries accentuate workplace risks

Many boundaries in the world of work are blurring: between employment statuses, between working and non-working time, paid and unpaid work, and between places and time of work – even the border demarcating what is inside and what is outside the organisation is less distinct. For example, some workers find it difficult to define their employment status. A small proportion of the self-employed report a very high level of subordination, which makes their experience of work closer to that of dependent employees than that of self-employed workers. Nowadays multiple work situations abound, and what was once considered exceptional and rare has become more frequent. Digitalisation and the transformation of work is resulting in new challenges and casting a different light on the traditional challenges. Understanding the effects of all these changes is difficult. A minority of workers (8%) are multiple job-holders, and they tend to work more hours in total than those with one job only. A significant proportion of workers are working in their free time to meet the

demands of work while the phenomenon of e-nomads has added a new twist to the old issues regarding mobile workers.

It is important to acknowledge the risks and also the benefits of these work situations and to assess whether these changes are different in kind or in nature. There needs to be a debate about whether they are contributing to new ways of work – ways that we wish to promote. This will help to address the emerging needs associated with such developments, as well as ensuring that suitable prevention frameworks and working life and job quality actions are developed to support workers, companies and governments in the design of the working life of the future.

Challenges in all job profiles: some jobs are more equal than others

A clustering exercise was conducted as part of the EWCS analysis to group workers according to jobs that score similarly on the job quality indices. This exercise resulted in five job profiles: ‘high flying’, ‘smooth running’, ‘active manual’, ‘poor quality’ and ‘under pressure’. These sum up the diversity and richness of people’s jobs and the current variety of jobs in Europe and propose policy orientations for continuing to improve job quality in Europe. The results suggest that there is more than polarisation at stake between higher job quality and lower job quality clusters. Social environment, working time quality, physical environment and work intensity are issues that need to be addressed, as well as earnings, prospects and skills use. Policies at European, national, sectoral and company levels need to tackle all these dimensions in a complementary and mutually reinforcing way.

One out of five workers holds a **poor quality job**, one that scores low on each job quality dimension. Most of these jobs are held by workers with a low level of education and more women than men hold these kinds of jobs. There are few differences by age, but one quarter of younger workers is in a poor quality job. A higher proportion of these jobs are in microfirms. These jobs are likely to result in an unsatisfactory experience of working life and may also add to the vulnerability of individuals on the labour market – putting job-holders in an even more challenging situation when they take the next step of their working life. Jobs in the poor quality cluster would benefit most from actions to support the various dimensions of job quality at all levels including the sectoral level – as shown, for example, in Eurofound’s research into occupations with multiple disadvantages (Eurofound 2014e and Eurofound 2015f). They would also benefit from labour market policies aimed at boosting opportunities to move from these jobs into better-quality positions and policies to support microfirms in meeting their challenges.

Under pressure jobs are held by 13% of workers. These jobs score positively on skills and discretion, prospects and earnings, but very negatively in relation to social environment, work intensity and working time quality. As this group also scores negatively on all indicators related to quality of working life, it is clear that these workers

should be given next priority after the poor quality cluster. The focus should be on improving management quality, providing social support in the workplace, facilitating training and policies on dealing with emotional demands and addressing the prevalence of having to deal with angry customers. It is critical to strive to eliminate adverse social behaviour through appropriate and effective measures. Measures are needed to support harmony in workplaces, not only in interactions between colleagues, but also with clients and users. Specific discussion at sector level in the public administration and health and education sectors on work organisation and psychosocial risks could help to tackle the multiple issues likely to arise from a poor social environment, high work intensity and poor working time quality and lead to improving job quality in these types of jobs.

A quarter of workers holds a **smooth running job**. These jobs are satisfactory in most dimensions of job quality but less so in terms of skills and discretion and earnings. While scoring positively on all working life indicators, workers in this job profile express a wish to work more hours. Making tasks more challenging and developing individuals on the job are likely to improve the skills of workers as well as reinforcing their motivation and quality of work. Addressing working time preferences and earnings, bearing in mind the relationship between the two, would also improve the quality of these jobs.

One out of five workers works in an **active manual job**. These jobs are positive in relation to social environment, prospects and earnings. However, they are more negative in relation to the level of physical demands, work intensity and working time quality, which in combination are problematic and can have synergetic effects. Workers holding these jobs show a relatively positive experience of working life except in relation to the sustainability of the job. These jobs primarily call for the level of physical demands at work to be addressed and effective prevention policies to be instated. Better working time management and workload organisation could also improve job quality.

Another one out of five workers holds a **high flying job**. These jobs are positive on all dimensions – apart from work intensity and working time quality – demonstrating the ambivalent nature of many working experiences. Actions to improve job quality in these jobs should address working time organisation and work intensity. In practical terms, these jobs entail a high workload, frequent disruptive interruptions and a high level of emotional demands. A high degree of availability is often expected of these workers: working and being contactable during one’s free time are often features of these jobs. This suggests a need for actions to manage, control and decrease workload, by organising work differently to provide more individual and collective autonomy, as well as support in the case of temporary high workloads. Workers would also benefit from training and actions on dealing with emotional demands, regulating communication at the workplace and managing requests for availability, as well as the ability to assert the ‘right to disconnect’. Cultural changes tackling the long-hours culture, addressing certain entry paths

into some professions (such as jobs where, for example, young workers are expected to put in unpaid long hours to demonstrate their ability to hold a better job in the future), developing more efficient and reliable ways to allocate fair and manageable workloads, and ensuring that employers of their own accord address the high workload of workers are all important avenues to explore, as well as being areas in which to advance and disseminate good practices.

Towards a good quality of work and more labour market participation

Each job quality index is associated with a positive assessment of one's working life and all are associated independently with subjective well-being, work-life balance, worker engagement, making ends meet, sustainability of work, the impact of work on health, and satisfaction with working conditions.

The experience of meaningful work is associated with four job quality indices: skills and discretion, social environment, prospects and intensity. For intensity, the association is negative.

Strong policy attention is given at European level to the extension of working life and increasing the participation of workers in paid employment, with particular emphasis on creating an inclusive labour market to incorporate those who are less active. From a supply perspective, supporting job quality and its individual dimensions is likely to contribute to a successful experience of working life and hence the effectiveness and efficiency of these policies. This calls for a wide-ranging mix of policies and company practices covering all dimensions of job quality. A better understanding of what facilitates the participation of people in the labour market and what drives them will enable Europe and the Member States to create the supports necessary to fulfil the objectives in terms of the quantitative and qualitative dimensions of participation in the labour market.

Better workplace policies and high employee involvement

Each dimension of job quality can be improved through workplace practices and policies. Awareness among companies and workers of the mutual benefits of realising this potential should be promoted and likewise the acquisition of skills and organisational competence should be better supported. To ensure that policies to improve job quality can work and be best adapted to workplaces, the involvement of workers in the decisions that affect their work and their representation needs to be supported.

Employee representation of some sort is available for nearly two-thirds of workers. This means a third of the workforce does not have a representation structure. One-third (34%) of employees work in low-involvement organisations that are low on task discretion, meaning that employees have little say over their work, as well as low on organisational participation. Working in high-involvement organisations is beneficial for employees' well-being and their motivation, and, as other research shows, the

benefits extend to the companies themselves. Changes aimed at developing this type of work organisation should be supported.

Policies to shape the working life of the future

Policies improving job quality and working life

Improving job quality in Europe calls for more, rather than fewer, policies and coordinated responses. Progress can be achieved on each dimension of job quality. And the different policies and actions that can support workers over the course of their working lives should be considered together to ensure coordination and mutually reinforcement along the path to success.

Given that job quality is crucial for safety at work, productivity, creativity, innovation and public health, it needs to be underpinned by a wide-ranging set of policies and actions that:

- safeguard general health and safety at work, including psychosocial risks and violence in the workplace;
- improve working time quality;
- support career development and make work pay;
- promote the use of skills and their development;
- support a better allocation and management of workload;
- advance the design of meaningful jobs.

The results show that differences across countries are striking and should be noted. Over time, trajectories have diverged, highlighting both the role of labour market institutions in supporting job quality and the diverse experience of working life (as well, perhaps, as the increasing difficulty of finding common positions). As upward convergence in job quality does not seem to occur 'naturally', this could be supported: potentially leading to numerous positive benefits for workers and their households, the companies in which they work and the countries in which these companies operate.

To ensure that these policies can work and can best be adapted to workers and the companies that employ them requires actions that support the involvement of workers in decision-making that affects both their work and the organisation of the company. The wide range of actions likely to contribute to increasing job quality, and the evidence provided by this survey of some success, indicate that there are many opportunities to succeed.

Support for evidence-based policymaking

The future of working life is under scrutiny in Europe. More and high-quality data on working life, along with greater exchange of knowledge on challenges, opportunities and instruments, will support the EU's discussions and policy aspirations around the future of working life.

Over the next couple of years, Eurofound intends to carry out thematic analyses of the sixth EWCS, building on the

analyses already conducted on the basis of previous waves of the EWCS (these are listed in the bibliography).

Monitoring job quality in a global world

A number of countries outside Europe – the USA, South Korea and, to a lesser extent, Latin America and China – have already developed surveys using the framework of the EWCS.

The first comparative analysis will be carried out in 2017 and should contribute to a better understanding of globalisation and quality of working lives. The dataset will be made available through the UK Data Archive in 2017 to the wide community of researchers. It is planned to undertake fieldwork for the seventh round of the EWCS in 2020.

The European Commission, the International Labour Office and the OECD have developed monitoring systems on job quality and quality of working life to which the EWCS is contributing data.

All these actions could indeed help to develop the type of working life that working life actors – workers and companies and their representatives, governments – want in the future.

Bibliography

All Eurofound publications are available at www.eurofound.europa.eu

- Åkerstedt, T., Knutsson, A., Westerholm, P., Theorell, T., Alfredsson, L. and Kecklund, G. (2002), 'Sleep disturbances, work stress and work hours: A cross-sectional study', *Journal of Psychosomatic Research*, Vol. 53, No. 3, pp. 741–748.
- Allen, T. D., Herst, D. E. L., Bruck, C. S. and Sutton, M. (2000), 'Consequences associated with work-to-family conflict: A review and agenda for future research', *Journal of Occupational Health Psychology*, Vol. 5, No. 2, pp. 278–308.
- Amsted, F. T., Meier, L., Fasel, U., Elfering, A. and Semmer, N. K. (2011), 'A meta-analysis of work–family conflict and various outcomes with a special emphasis on cross-domain versus matching-domain relations', *Journal of Occupational Health Psychology*, Vol. 16, No. 2, pp. 151–169.
- Annink, A., den Dulk, L. and Steijn, B. (2016), 'Work–family conflict among employees and the self-employed across Europe', *Social Indicators Research*, Vol. 126, No. 2, pp. 571–593.
- Artazcoz, L., Cortès, I., Escribà-Agüir, V., Bartoll, X., Basart, H. and Borrell, C. (2013), 'Long working hours and health status among employees in Europe: Between-country differences', *Scandinavian Journal of Work, Environment and Health*, Vol. 39, No. 4, pp. 369–378.
- Bakhuys Roozeboom, M., Houtman, I. and Schaufeli, W. B. (2014), *Concepts related to engagement – EWCS 2015*, (working paper), unpublished, TNO contribution, available on request from Eurofound, Dublin.
- Bakker, A. B. and Demerouti, E. (2008), 'Towards a model of work engagement', *Career Development International*, Vol. 13, No. 3, pp. 209–223.
- Bakker, A. B., Albrecht, S. L. and Leiter, M. P. (2011), 'Key questions regarding work engagement', *European Journal of Work and Organizational Psychology*, Vol. 20, No. 1, pp. 4–28.
- Balliu, Q. (2007), *National profile of occupational safety and health in Albania*, International Labour Organisation, Tirana.
- Bambra, C. (2011), 'Health inequalities and welfare state regimes: Theoretical insights on a public health “puzzle”', *Journal of Epidemiology and Community Health*, Vol. 65, No. 9, pp. 740–745.
- Bannai, A. and Tamakoshi, A. (2014), 'The association between long working hours and health: A systematic review of epidemiological evidence', *Scandinavian Journal of Work, Environment and Health*, Vol. 40, No. 1, pp. 5–18.
- Bevort, A., Lallement, M., Jobert, A. and Mias A. (2012), *Dictionnaire du travail*, Presses universitaires de France, Paris.
- Bonde, J. P. (2008), 'Psychosocial factors at work and risk of depression: A systematic review of the epidemiological evidence', *Occupational and Environment Medicine*, Vol. 65, No. 7, pp. 438–445.
- Budd, J. W. and Spencer, D. A. (2014), 'Worker well-being and the importance of work: Bridging the gap', *European Journal of Industrial Relations*, Vol. 21, No. 2, pp. 181–196.
- Campbell, D., Carruth, A., Dickerson, A. and Green, F. (2007), 'Job insecurity and wages', *Economic Journal*, Vol. 117, No. 518, pp. 544–566.
- Carlson, D., Kacmar, M., Zivnuska, S., Ferguson, M. and Whitten, D. (2011), 'Work-family enrichment and job performance: A constructive replication of affective events theory', *Journal of Occupational Health Psychology*, Vol. 16, No. 3, pp. 297–312.
- Cedefop (2015), 'Skills, qualifications and jobs in the EU: The making of a perfect match? Evidence from Cedefop's European skills and jobs survey', *Publications Office of the European Union, Luxembourg*.
- Cohen, D. (2012), *Homo economicus, prophète (égaré) des temps nouveaux*, Albin Michel, Paris.
- da Costa, B. R. and Vieira, E. R. (2010), 'Risk factors for work-related musculoskeletal disorders: A systematic review of recent longitudinal studies', *American Journal of Industrial Medicine*, Vol. 53, No. 3, pp. 285–323.
- Dickerson, A. and Green, F. (2009), 'Fears and realisations of employment insecurity', *Labour Economics*, Vol. 19, No. 2, pp. 198–210.
- Diener, E. and Eunkook, S. (1997), 'Measuring the relation between job quality and individual indicators', *Social Indicators Research*, Vol. 40, No. 1, pp. 189–216.
- Docherty, P., Forslin, J. and Shani A. B. (2002), *Creating sustainable work systems: Emerging perspectives and practice*, Routledge, London and New York.
- Docherty, P., Kira, M., and Shani, A. B. (eds.) (2009), *Creating sustainable work systems*, Routledge, London and New York.
- Elovainio, M., Heponiemi, T., Jokela, M. and Kivimäki, M. (2015), 'Stressful work environment and well-being: What comes first?' *Journal of Occupational Health Psychology*, Vol. 20, No. 3, pp. 289–300.

EU-OSHA (2013), *Green jobs and occupational safety and health: Foresight on new and emerging risks associated with new technologies by 2020*, Publications Office of the European Union, Luxembourg.

EU-OSHA (2014), *Estimating the cost of accidents and ill-health at work: A review of methodologies*, Publications Office of the European Union, Luxembourg.

EU-OSHA (2015), *Second European survey of enterprises on new and emerging risks (ESENER-2) – Overview report: Managing safety and health at work*, Publications Office of the European Union, Luxembourg.

Eurofound (1992), *First European Survey on the Work Environment 1991-1992*, Publications Office of the European Union, Luxembourg.

Eurofound (1996), *Second European Survey on Working Conditions 1995*, Publications Office of the European Union, Luxembourg.

Eurofound (1999), *Times in the city and quality of life, BEST No. 1/1999*, Publications Office of the European Union, Luxembourg.

Eurofound (2001), *Third European Survey on Working Conditions 2000*, Publications Office of the European Union, Luxembourg.

Eurofound (2002), *Quality of work and employment in Europe: issues and challenges*, Foundation Paper No. 1, Publications Office of the European Union, Luxembourg.

Eurofound (2003), *Working conditions in the acceding and candidate countries*, Publications Office of the European Union, Luxembourg.

Eurofound (2007a), *Employment and working conditions of migrant workers*, Dublin.

Eurofound (2007b), *Fourth European Working Conditions Survey 2005*, Publications Office of the European Union, Luxembourg.

Eurofound (2009a), *Occupational promotion of migrant workers*, Dublin.

Eurofound (2009b), *Self-employed workers: industrial relations and working conditions*, Dublin.

Eurofound (2010a), *Health and safety at work in SMEs: Strategies for employee information and consultation*, Dublin.

Eurofound (2010b), *Self-employed workers: industrial relations and working conditions*, Dublin.

Eurofound (2011a), *Social dialogue and working conditions*, Dublin.

Eurofound (2011b), *Working conditions of nationals with a foreign background*, Dublin.

Eurofound (2011c), *Working conditions and social dialogue*, Publications Office of the European Union, Luxembourg.

Eurofound (2012a), *Fifth European Working Conditions Survey*, Publications Office of the European Union, Luxembourg.

Eurofound (2012b), *Trends in job quality in Europe*, Publications Office of the European Union, Luxembourg.

Eurofound (2012c), *Sustainable work and the ageing workforce*, Publications Office of the European Union, Luxembourg.

Eurofound, (2012d), *Organisation of working time: Implications for productivity and working conditions*, Dublin.

Eurofound (2012e), *Working time and work-life balance in a life course perspective: A report based on the fifth European Working Conditions Survey*, Dublin.

Eurofound, (2012f), *Wages and working conditions in the crisis*, Dublin.

Eurofound (2012g), *Health and well-being at work: A report based on the fifth European Working Conditions Survey*, Dublin.

Eurofound (2012h), *After restructuring: Labour markets, working conditions and life satisfaction – ERM Report 2012*, Publications Office of the European Union, Luxembourg.

Eurofound (2013a), *Self-employed or not self-employed? Working conditions of 'economically dependent workers' (Background paper)*, Dublin.

Eurofound (2013b), *Women, men and working conditions in Europe*, Publications Office of the European Union, Luxembourg.

Eurofound (2013c), *Work organisation and employee involvement in Europe*, Publications Office of the European Union, Luxembourg.

Eurofound (2014a), *Employment opportunities for people with chronic diseases*, Dublin.

Eurofound (2014b), *Quality of employment conditions and employment relations in Europe*, Dublin.

Eurofound (2014c), *Working conditions and job quality: Comparing sectors in Europe*, Dublin.

Eurofound (2014d), *National working conditions surveys in Europe: A compilation*, Publications Office of the European Union, Luxembourg.

Eurofound (2014e), *Occupational profiles in working conditions: Identification of groups with multiple disadvantages*, Dublin.

Eurofound (2015a), *Convergence and divergence of job quality in Europe 1995–2010*, Publications Office of the European Union, Luxembourg.

Eurofound (2015b), *New forms of employment*, Publications Office of the European Union, Luxembourg.

Eurofound (2015c), *Violence and harassment in European workplaces: Extent, impacts and policies*, Dublin.

- Eurofound (2015d), *Sustainable work over the life course: Concept paper*, Publications Office of the European Union, Luxembourg.
- Eurofound (2015e), *Foundation Focus – Sustainable work: Toward better and longer working lives*, Dublin.
- Eurofound (2015f), *Improving working conditions in occupations with multiple disadvantages*, Publications Office of the European Union, Luxembourg.
- Eurofound (2015g), *Third European Company Survey – Overview report: Workplace practices – Patterns, performance and well-being*, Publications Office of the European Union, Luxembourg.
- Eurofound (2016), *Working time developments in the 21st century: Work duration and its regulation in the EU*, Publications Office of the European Union, Luxembourg.
- Eurofound (2016) forthcoming, *Fraudulent forms of contracting work and self-employment*.
- European Commission (1993), *Growth, competitiveness, employment: The challenges and ways forward into the 21st century*, White paper parts A and B, COM(93) 700 final, Brussels.
- European Commission (2013a), 'Tobacco in the EU: Exposure to second hand smoke reduced, but still too high, says Commission report', Press release, 22 February.
- European Commission (2013b), 'Employment: European Vacancy Monitor highlights growing job opportunities in healthcare sector', Press release, 9 September.
- European Commission (2014a), *Draft joint employment report from the Commission and the Council accompanying the communication from the Commission on the Annual Growth Survey 2015*, COM(2014) 906 final, Brussels.
- European Commission (2014b), *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on an EU Strategic Framework on health and safety at work 2014–2020*, COM(2014) 332 final, Brussels.
- European Commission (2014c), *Commission staff working document Regulatory Fitness and Performance Programme (REFIT): State of play and outlook accompanying the document Better Regulation for better results – An EU Agenda*, SWD(2015) 110 final, Strasbourg.
- European Commission (2016), *Employment and social developments in Europe 2015*, Publications Office of the European Union, Luxembourg.
- Eurostat (2011), *Labour force survey ad hoc module on employment of disabled people*, Publications Office of the European Union, Luxembourg.
- Fagan, C., Lyonette, C., Smith, M. and Saldaña-Tejada A. (2011), 'The influence of working time arrangements on work-life integration or "balance": A review of the international evidence', *ILO, Conditions of Work and Employment Series*, No. 32.
- Fagan, C., Norman, H., Smith, M. and González Menéndez, M. C. (2014), 'In search of good part-time employment', *ILO, Conditions of Work and Employment Series*, No. 43.
- Felstead, A., Gallie, D. and Green, F. (2015), *Unequal Britain at work*, Oxford University Press, Oxford.
- Fishta, A. and Backé, E. M. (2015), 'Psychosocial stress at work and cardiovascular diseases: An overview of systematic reviews', *International Archives of Occupational and Environmental Health*, Vol. 88, No. 8, pp. 997–1014.
- Gallie, D. (ed) (2013), *Economic crisis, quality of work and social integration: The European experience*, Oxford University Press, Oxford.
- Gallie, D. (2013), 'Direct participation and the quality of work', *Human Relations*, Vol. 66, No. 4, pp. 453–473.
- Goetzel, R. Z., Long, S. R., Ozminkowski, R. J., Hawkins, K., Wang, S. and Lynch, W. (2004), 'Health, absence, disability, and presenteeism cost estimates of certain physical and mental health conditions affecting U.S. employers', *Journal of Occupational and Environmental Medicine*, Vol. 46, No. 4, pp. 398–412.
- Gollac, M. and Bordier, M. (eds.) (2011), *Mesurer les facteurs psychosociaux de risque au travail pour les maîtriser*, Report of the Expert Board on monitoring psychosocial risks at work on the request of the French Minister of Labour, Employment and Health, La Documentation française, Paris.
- Green, F. (2015), 'Health effects of job insecurity', *IZA World of Labor*, izawol:212.
- Greenan, N. and Lorenz, N. (2010), *Innovative workplaces: Making better use of skills within organisations*, OECD Publishing, Paris.
- Greenhaus, J. H. and Powell, G. N. (2006), 'When work and families are allies: A theory of work-family enrichment', *The Academy of Management Review*, Vol. 31, No. 1, pp. 72–92.
- Harrington, J. M. (2001), 'Health effects of shift work and extended hours of work', *Occupational and Environmental Medicine*, Vol. 58, No. 1, pp. 68–72.
- Hobson, B. (ed) (2013), *Worklife balance: The agency and capabilities gap*, pp. 153–173, Oxford University Press, Oxford.
- Holman, D. (2013), 'Job types and job quality in Europe', *Human Relations*, Vol. 66, No. 4, pp. 475–502.
- Hoven, H. and Siegrist, J. (2013), 'Work characteristics, socioeconomic position and health: A systematic review of mediation and moderation effects in prospective studies', *Occupational and Environmental Medicine*, Vol. 70, No. 9, pp. 663–669.
- de Jong, T., Wiezer, N., de Weerd, M., Nielsen, K., Mattila-Holappa, P., Mockało, Z. (2016), 'The impact of restructuring on employee well-being: A systematic review of longitudinal studies', *Work and Stress*, Vol. 30, No.1, pp. 91–114.

- Karasek, R. A. (1979), 'Job demands, job decision latitude, and mental strain: Implications for job redesign', *Administrative Science Quarterly*, Vol. 24, No. 2, pp. 285.
- Karasek, R. and Theorell, T. (1992), *Healthy work: Stress, productivity, and the reconstruction of working life*, Basic Books, New York.
- Khallash, S. and Kruse, M. (2012), The future of work and work-life balance 2025, *Futures*, Vol. 44, No. 7, pp. 678–686.
- Kim, T. J. and von dem Knesebeck, O. (2015), 'Is an insecure job better for health than having no job at all? A systematic review of studies investigating the health-related risks of both job insecurity and unemployment', *BMC Public Health*, Vol. 15, No. 1, pp. 985.
- Kivimäki, M. et al (2012), 'Job strain as a risk factor for coronary heart disease: A collaborative meta-analysis of individual participant data', *The Lancet*, Vol. 380, No. 9852, pp. 1491–1497.
- Kivimäki, M., Jokela, M., Nyberg, S. T. et al (2015), 'Long working hours and risk of coronary heart disease and stroke: A systematic review and meta-analysis of published and unpublished data for 603 838 individuals', *The Lancet*, Vol. 386, No. 10005, pp. 1739–1746.
- Kivimäki, M., Virtanen, M., Elovainio, M., Kouvonen, A., Väänänen, A. and Vahtera, J. (2006), 'Work stress in the etiology of coronary heart disease – a meta-analysis', *Scandinavian Journal of Work, Environment and Health*, Vol. 32, No. 6, pp. 431–442.
- László, K. D., Pikhart, H., Kopp, M. S., Bobak, M., Pajak, A., Malyutina, S. et al (2010), 'Job insecurity and health: A study of 16 European countries', *Social Science and Medicine*, Vol. 70, No. 6, pp. 867–874.
- Magidson, J. and Vermunt, J. K. (2002), 'Latent class models for clustering: A comparison with K-means', *Canadian Journal of Marketing Research*, Vol. 20, pp. 36–43.
- Mäkikangas, A., Kinnunen, U., Feldt, T. and Schaufeli, W. (2016), 'The longitudinal development of employee well-being: A systematic review', *Work and Stress*, Vol. 30, No. 1, pp. 46–70.
- Maslach, C. and Jackson, S. E. (1981), 'The measurement of experienced burn-out', *Journal of Organizational Behavior*, Vol. 2, No. 2, pp. 99–113.
- Méda, D. and Vendramin, P. (2013), *Réinventer le travail*, Presses universitaires de France, Paris.
- Messenger, J. and Lutz, G. (2015), 'Three generations of telework', conference paper, *New ICTs and the (R)evolution from Home Office to Virtual Office*, 17th ILERA World Congress, 7–11 September, Cape Town, South Africa.
- Molinier, P. (2008), *Les enjeux psychiques du travail: Introduction à la psychodynamique du travail*, Petite Bibliothèque Payot, Paris.
- Montano, D. (2014), 'Chemical and biological work-related risks across occupations in Europe: A review', *Journal of Occupational Medicine and Toxicology*, Vol. 9, No. 1, pp. 28.
- Niedhammer, I., Tek, M. L., Starke, D. and Siegrist, J. (2004), 'Effort-reward imbalance model and self-reported health: Cross-sectional and prospective findings from the GAZEL cohort', *Social Science and Medicine*, Vol. 58, No. 8, pp. 1531–1541.
- Nyberg, A., Alfredsson, L., Theorell, T., Westerlund, H., Vahtera, J. and Kivimäki, M. (2009), 'Managerial leadership and ischaemic heart disease among employees: The Swedish WOLF study', *Occupational and Environmental Medicine*, Vol. 66, No. 1, pp. 51–55.
- Nyberg, A., Bernin, P. and Theorell, T. (2005). *The impact of leadership on the health of subordinates*, National Institute for Working Life, Stockholm.
- Nyberg, A., Westerlund, H., Magnusson Hanson, L.L. and Theorell, T. (2008), 'Managerial leadership is associated with self-reported sickness absence and sickness presenteeism among Swedish men and women', *Scandinavian Journal of Work, Environment and Health*, Vol. 36, No. 8, pp. 803–811.
- Odle-Dusseau H. N., Britt, T. W. and Greene-Shortridge, T. M. (2012), 'Organizational work-family resources as predictors of job performance and attitudes: The process of work-family conflict and enrichment', *Journal of Occupational Health*, Vol. 17, No.1, pp. 28–40.
- Popma, J. (2013), *The Janus face of the 'New Ways of Work': Rise, risks and regulation of nomadic work*, European Trade Union Institute (ETUI), Brussels.
- Pot, F. D. (2011), 'Workplace innovation for better jobs and performance', *International Journal of Productivity and Performance Management*, Vol. 60, No. 4, pp. 404–415.
- Ramstad, E. (2009), 'Promoting performance and the quality of working life simultaneously', *International Journal of Productivity and Performance Management*, Vol. 58, No. 5, pp. 423–436.
- Reichl, C., Leiter, M. P. and Spinath, F. M. (2014), 'Work-nonwork conflict and burnout: A meta-analysis', *Human Relations*, Vol. 67, No. 8, pp. 979–1005.
- Schulte, P. and Vainio, H. (2010), 'Well-being at work: Overview and perspective', *Scandinavian Journal of Work, Environment and Health*, Vol. 36, No. 5, pp. 422–429.
- Sainsbury Centre for Mental Health (2007), *Mental health at work: Developing the business case*, Policy Paper 8, Sainsbury Institute for Mental Health, London.
- Salo, P., Oksanen, T., Sivertsen, B., Hall, M., Pentti, J., Virtanen, M. et al (2010), 'Sleep disturbances as predictor of cause-specific work disability and delayed return to work', *Sleep*, Vol. 33, No. 10, 1323–1331.
- Schaufeli, W. and Salanova, M. (2007), 'Work engagement: An emerging psychological concept and its implications for organisations', *Managing Social and Ethical Issues in Organizations*, pp. 135–177, Information Age Publishing, Charlotte, NC.

- Siegrist, J. (1996), 'Adverse health effects of high-effort/low-reward conditions', *Journal of Occupational Health Psychology*, Vol. 1, No. 1, pp. 27–41.
- Siu, O. -L., Lu, J. -F., Brough, P., Lu, C. -Q., Bakker, A. B., Kalliath, T. et al (2010), 'Role resources and work-family enrichment: The role of work engagement', *Journal of Vocational Behaviour*, Vol. 77, No. 3, pp. 470–480.
- Stephens, M. (Jr.) (2004), 'Job loss expectations, realizations, and household consumption', *MIT Press Journals*, Vol. 86, No. 1, pp. 253–269.
- Stoddard, M. and Madsen, S. (2007), 'Towards an understanding of the link between work-family enrichment and individual health', *Journal of Behavioural and Applied Management*, Vol. 9, No. 1, pp. 2–15.
- Theorell, T., Jood, K., Järvholm, L. S., Vingård, E., Perk, J., Östergren, P. O. et al (2016), 'A systematic review of studies in the contributions of the work environment to ischaemic heart disease development', *The European Journal of Public Health*, Vol. 26, No. 3, pp. 470–477.
- Theorell, T., Hammarström, A., Aronsson, G., Träskman Bendz, L., Grape, T., Hogstedt, C. et al (2015), 'A systematic review including meta-analysis of work environment and depressive symptoms', *BMC Public Health*, Vol. 15, No. 1, pp. 738.
- Topp, C. W., Østergaard, S. D., Søndergaard, S., Bech, P. (2015), 'The WHO-5 well-being index: A systematic review of the literature', *Psychotherapy and Psychosomatics*, Vol. 84, No. 3, pp. 167–176.
- Trinkoff, A. M., Le, R., Geiger-Brown, J., Lipscomb, J. and Lang, G. (2006), 'Longitudinal relationship of work hours, mandatory overtime, and on-call to musculoskeletal problems in nurses', *American Journal of Industrial Medicine*, Vol. 49, No. 11, pp. 964–971.
- Vermunt, J. K., and Magidson, J. (2002), 'Latent class cluster analysis', in J. Hagenaars and McCutcheon, A. (eds.), *Applied latent class analysis* (pp. 89–106), Cambridge, Cambridge University Press.
- Vermunt, J. K. and Magidson, J. (2016), *Technical guide for Latent GOLD 5.1: Basic, advanced, and syntax*, Statistical Innovations Inc., Belmont, MA.
- Virtanen, M. et al (2013), 'Perceived job insecurity as a risk factor for incident coronary heart disease: Systematic review and meta-analysis', *British Medical Journal (Clinical Research Ed.)*, Vol. 347, f. 4746.
- Vitols, S. and Kluge, N. (2011), *The sustainable company: A new approach to corporate governance*, European Trade Union Institute (ETUI), Brussels.
- Vogel, L. (2003), *La santé des femmes au travail en Europe: Des inégalités non reconnues*, European Trade Union Institute (ETUI), Brussels.
- Volkoff, S. (ed) (2005), *L'ergonomie et les chiffres de la santé au travail: Ressources, tensions et pièges*, Octarès, Toulouse.
- Volkoff S. and Gaudart C. (2015), *Working conditions and 'sustainability': Converting knowledge into action*, Centre d'études de l'emploi (CEE), *Rapports de recherche du CEE*, n°92, Noisy-le-Grand, France..
- Wahrendorf, M., Dragano, N. and Siegrist, J. (2012), 'Social position, work stress, and retirement intentions: A study with older employees from 11 European countries', *European Sociological Review*, Vol. 29, No. 4, pp. 792–802.
- Warr, P. (2007), *Work, happiness and unhappiness*, Lawrence Erlbaum Associates, Mahwah, New Jersey (USA).
- Westgaard, R. H., and Winkel, J. (2011), 'Occupational musculoskeletal and mental health: Significance of rationalisation and opportunities to create sustainable production systems – A systematic review', *Applied Ergonomics*, Vol. 42, No. 2, pp. 261–296.
- de Wind, A., van der Pas, S., Blatter, B. M. and van der Beek, A. J. (2016), 'A life course perspective on working beyond retirement-results from a longitudinal study in the Netherlands', *BMC Public Health*, Vol. 16, No. 1, pp. 499.
- de Wind, A., Geuskens, G. A., Ybema, J. F., Bongers, P. M. and van der Beek, A. J. (2014), 'The role of ability, motivation, and opportunity to work in the transition from work to early retirement: Testing and optimizing the Early Retirement Model', *Scandinavian Journal of Work, Environment & Health*, Vol. 41, No. 1, pp. 24–35.
- de Witte, H. (2016), 'On the scarring effects of job insecurity (and how they can be explained)', *Scandinavian Journal of Work, Environment and Health*, Vol. 42, No. 2, pp. 99–102.
- Wolff, L., Mardon, C., Gaudart, C., Molinié, A.-F. and Volkoff, S. (2015), *Les changements dans le travail vécus au fil de la vie professionnelle, et leurs enjeux de santé. Une analyse à partir de l'enquête SIP*, Rapport de recherche No. 94, CEE, Noisy-Le-Grand, France.
- Zawieja, P. and Guarnieri, F. (2014), *Dictionnaire des risques psychosociaux*, Seuil, Paris.

Annexes

Annex 1: Survey methodology

The European Working Conditions Survey (EWCS) assesses and quantifies the working conditions of employees and the self-employed, analyses relationships between different aspects of working conditions, identifies groups at risk and issues of concern, and monitors progress and trends. The survey aims to contribute to European policy development, particularly regarding quality of work and employment issues. The EWCS has been carried out by Eurofound every five years since 1991.

Eurofound contracted independent market research company Ipsos to undertake fieldwork for the sixth EWCS, which was carried out between February and December 2015. Ipsos interviewed 43,850 workers in 35 European countries: the EU28, the five candidate countries for EU membership – Albania, the former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey – as well as Norway and Switzerland. For more information on methodology, see the sixth EWCS methodology webpage.

Questionnaire development

Building on previous surveys, Eurofound develops a revised questionnaire for each wave. The work starts well in advance of the fieldwork, as several important steps need to be followed to ensure that the questionnaire is of high quality. Particular attention is paid to lessons learnt from the previous waves, such as emerging policy issues, comparability over time, adherence to internationally validated questions and adapting the questionnaire to the way work is performed.

Eurofound, in the revision of its questionnaires, closely involves its tripartite stakeholders, representatives of international and European organisations and agencies, as well as using expert knowledge from survey institutes and researchers working with these themes throughout Europe and users' feedback (see Annex 3: Expert questionnaire development group).

The process includes lessons learnt from the analyses of the fifth EWCS survey, a user survey among those researchers who have obtained the dataset from the UK Data Archive at the University of Essex on which the EWCS datasets have been posted, and consultation with key Eurofound stakeholders (members of its Advisory Committee on Working Conditions) at key moments of revision of the questionnaire.

Stakeholders and users highlighted time comparability as the main priority for the revision of the sixth EWCS in order to better capture the impact of the recession on job quality and working lives.

Preparatory work included the analysis of European policy documents with a view to identifying emerging policy issues to which the EWCS could contribute, an analysis of national and other important working conditions surveys, as well as two specific literature reviews on self-employment and engagement.

A number of new questions were developed to address the experience of change in the job, the varieties of self-employment, company size (to complement workplace size), social climate and organisational justice at the workplace, work–family conflicts and enrichment, employee representation, engagement, chronic diseases and sleeping issues. Revised questions include place of work, leadership, employment status, and sustainability of work.

The process of questionnaire revision was based on a comprehensive number of sources in order to integrate concerns arising from the social debate and emerging issues, as well as building on lessons learnt from previous editions of the survey. Prior to finalisation, cognitive interviews were carried out to test the questionnaire and to propose new questions.

Translation

Comparability across countries is a key dimension of the quality of the EWCS. In relation to translation of the source questionnaire (in English) to all other languages (49 language versions have been developed), a series of actions have been implemented to ensure the highest level of equivalence between the language versions of the questionnaire vis à vis finalisation of the source questionnaire. These include training of interviewers, and selecting and implementing the translation procedures which follow the good practice highlighted in multinational, multicultural survey methods.

Table A1: Language versions for each country

Country/territory	Language (version)	Separate translation process required	Adapted from (if country/territory shares a language(s) with another)
EU Member States			
Austria	German	Yes	
Belgium	Dutch	Yes	
	French	Yes	
Bulgaria	Bulgarian	Yes	
Croatia	Croatian	Yes	
Cyprus	Greek	Yes	
Czech Republic	Czech	Yes	
Denmark	Danish	Yes	
Estonia	Estonian	Yes	
	Russian	Yes	
Finland	Finnish	Yes	
	Swedish	No	Sweden
France	French	Yes	
Germany	German	Yes	
Greece	Greek	Yes	
Hungary	Hungarian	Yes	
Ireland	English	No	Source
Italy	Italian	Yes	
Latvia	Latvian	Yes	
	Russian	No	Estonia
Lithuania	Lithuanian	Yes	
	Russian	No	Estonia
Luxembourg	French	Yes	
	German	Yes	
	Luxembourgish	Yes	
Malta	Maltese	Yes	
	English	No	Source
Netherlands	Dutch	Yes	
Poland	Polish	Yes	
Portugal	Portuguese	Yes	
Romania	Romanian	Yes	
Slovenia	Slovene	Yes	
Slovakia	Slovak	Yes	
Spain	Spanish (Castilian)	Yes	
	Catalan	Yes	
	Basque	Yes	
Sweden	Swedish	Yes	
United Kingdom	English	No	Source
Candidate countries			
Albania	Albanian	No	FYROM
Former Yugoslav Republic of Macedonia (FYROM)	Macedonian	Yes	
	Albanian	Yes	
Montenegro	Montenegrin	Yes	
	Serbian	Yes	

Country/territory	Language (version)	Separate translation process required	Adapted from (if country/territory shares a language(s) with another)
Serbia	Serbian	No	Montenegro
	Hungarian	No	Hungary
Turkey	Turkish	Yes	
Other countries			
Norway	Norwegian	Yes	
Switzerland	German	Yes	
	French	Yes	
	Italian	No	Italy

Before finalisation of the source questionnaire, advance translation was carried out in German and Polish with a view to identifying any cultural and translation problems at this early stage, thus assisting in the finalisation of the source questionnaire. Following the revision of the questionnaire, a translatability assessment into French, Croatian, Hungarian, Lithuanian and Swedish was carried out by Ipsos to ensure the suitability of the source questionnaire for translation, and to prepare templates and guidelines for the translation of the questionnaire. This process preceded the appointment and training of experienced translators in this field.

The main translation approach relied on the TRAPD model (Translation, Review, Adjudication, Pretesting and Documentation) whereby two independent translations are produced which are then combined into one merged adjudicated third version with the support of a third party. This method relies on the development of comparable and comprehensive documentation.

For languages spoken in two or more countries, such as French (spoken in France, Belgium, Luxembourg and Switzerland), a process of harmonisation took place where the different translations were shared and discussed between the teams responsible for the various versions, prior to the finalisation of the merged and adjudicated version. The aim of this process is to ensure the best possible translation while ensuring it is suited for the country in which it is being used.

For languages spoken in multiple countries but where there are no major differences in the languages, such as Swedish (in Sweden and Finland), the translation developed using TRAPD in the country where there is the greater number of speakers of the language residing in the country was adapted by the other countries.

To maintain the consistency of the data over time, the translations of trend questions (some dating back as far as 1991) were changed only in the case of serious discrepancies between the English master and the translation.

At the end of 2014, a pilot test of the full survey as well as the translated versions of the questionnaire was carried in all countries covered by the sixth EWCS. Its findings helped to finalise the preparation of the main fieldwork.

The questionnaire has been published separately and is available on the sixth EWCS webpage at <http://www.eurofound.europa.eu/surveys/european-working-conditions-surveys/sixth-european-working-conditions-survey-2015>.

Sampling design

The sample used in the EWCS is representative of those aged 15 and over (16 and over in Bulgaria, Norway, Spain and the UK) living in private households and in employment who did at least one hour of work for pay or profit during the week preceding the interview.

In each country, a multistage stratified random sampling design was used. At the first stage, Primary Sampling Units (PSUs) with probability proportional to size were randomly selected (based on regions – NUTS2 in 18 countries or equivalent and the degree of urbanization using Eurostat's indicator DEGURBA where available). The number of PSUs in each country was at least 50, with a maximum of 20 achieved interviews per PSU. Subsequently, households within each PSU were sampled. Finally, a screening procedure was applied to select the eligible respondent within each household (for some countries, individuals were sampled directly).

A sampling frame was used in countries where an updated, high-quality address or population register was available. Individual registers were used in five countries (Denmark, Finland, Norway, Portugal and Switzerland) and address registers in 11 countries (Belgium, Bulgaria, Croatia, Greece, Ireland, Lithuania, Luxembourg, Montenegro, the Netherlands, Turkey and United Kingdom). For the 19 remaining countries, registers were not available and addresses were enumerated following a random procedure that was separated from the interviewing stage.

For more information on sampling, see the Sampling Implementation Report on the sixth EWCS webpage.

Fieldwork

The sixth edition of the EWCS covers the 28 EU Member States, Norway and Switzerland in a first fieldwork period (February to September 2015), and Albania, the former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey (between September and December 2015).

The minimum reference sample size per country was 1,000, except in Poland (1,200); Spain (1,300); Italy (1,400); France (1,500); UK (1,600); Germany and Turkey (2,000 each). Belgium, Slovenia and Spain opted to top up their sample sizes, resulting in target sample sizes of 2,500, 1,600 and 3,300 respectively. The achieved sample sizes are shown in Table A2.

The survey interviews were carried out face to face using computer-assisted personal interviewing (CAPI) at respondents' homes¹⁷. The average duration of the interview was 45 minutes; no proxy interview was authorised.

The overall response rate was 42.5% and has decreased by 1.7% for the group of countries that were also in the last edition of the survey, increasing in 23 of the 33 comparable countries. The pattern of response rate is similar to that of the previous wave. An important reason for the low response rate in Sweden was the disappointing contact rates during pre-recruitment of respondents by phone, prior to the face to face interviews. Furthermore, response rates in Sweden have been decreasing in the last three editions of the EWCS. Declining response rates have been an important concern for many years.

The contacting rate overall declined by 10.8% since 2010, down to 65.5%. In addition to the abovementioned reasons for Sweden, other reasons include difficulty of access to apartments and houses due to security codes and the specialisation of some sampling points, such as holiday homes. Although contacting respondents was more challenging in 2015, cooperation after establishing contact has improved. The cooperation rate for the sixth EWCS increased by eight percentage points when compared with the previous survey – to 67.6%. Likewise, the overall refusal rate was 20.4%, down from 29.9% in 2010. Fieldwork outcomes are calculated using the American Association for Public Opinion Research standards (AAPOR).

The external assessment report (on the sixth EWCS webpage) indicates that the sampling error is similar to that of previous editions and other surveys using stratified multi-stage random sampling.

Table A2: Achieved sample size and response rate per country

Country/territory	Net sample size	Survey languages	Response rates RR3 in % (10 = 100%)
All EWCS	43,850		0.425
Austria	1,028	German	0.473
Belgium	2,587	French, Dutch	0.363
Bulgaria	1,064	Bulgarian	0.643
Croatia	1,012	Croatian	0.502
Cyprus	1,003	Greek	0.694
Czech Republic	1,002	Czech	0.629
Denmark	1,002	Danish	0.260
Estonia	1,015	Estonian, Russian	0.589
Finland	1,001	Finnish, Swedish	0.333
France	1,527	French	0.374
Germany	2,093	German	0.510
Greece	1,007	Greek	0.637
Hungary	1,023	Hungarian	0.576
Ireland	1,057	English	0.543
Italy	1,402	Italian	0.605
Latvia	1,004	Latvian, Russian	0.619
Lithuania	1,004	Lithuanian, Russian	0.615
Luxembourg	1,003	French, Luxembourgish, German	0.428
Malta	1,004	Maltese, English	0.462
Netherlands	1,028	Dutch	0.366
Poland	1,203	Polish	0.557

17 Some interviews were conducted in other places at the request of self-employed respondents. This occurred in a limited number of cases.

Country/territory	Net sample size	Survey languages	Response rates RR3 in % (10 = 100%)
Portugal	1,037	Portuguese	0.548
Romania	1,063	Romanian	0.551
Slovakia	1,000	Slovak	0.654
Slovenia	1,607	Slovene	0.465
Spain	3,364	Spanish (Castilian), Catalan, Basque	0.314
Sweden	1,002	Swedish	0.109
United Kingdom	1,623	English	0.412
Candidate countries			
Albania	1,002	Albanian	0.780
Former Yugoslav Republic of Macedonia	1,011	Macedonian, Albanian	0.751
Montenegro	1,005	Montenegrin, Serbian	0.711
Serbia	1,033	Serbian, Hungarian	0.538
Turkey	2,000	Turkish	0.361
EFTA countries			
Switzerland	1,006	French, Italian, German	0.327
Norway	1,028	Norwegian	0.512

For more information on fieldwork, see the Technical report, Sampling implementation report and Valuation and weighting report, which are all available on the sixth EWCS webpage.

Coding

The sixth EWCS included three open-ended questions in order to record the respondents' occupation and the economic activity of the organisation or company they work for. Following data collection, the answers were coded according to the international classification systems for occupation (ISCO-88 and ISCO-08) and the activity of companies and organisations (NACE Rev. 1.1 and 2.0).

The income scales were constructed using the fifth EWCS and the Eurostat Structure of Earnings Survey (SES). The exchange rates used for the conversion into euros were those valid at the median date of fieldwork for each country.

For more information on coding, see the Coding report on the sixth EWCS webpage.

Weighting

Three types of weights were applied to ensure that results based on the sixth EWCS data can be considered representative for workers in Europe:

- **Design weights** adjust for differences in the probabilities of selection associated with individual country sampling design.
- **Poststratification weights** adjust for differences between the sample and the population distribution on selected variables (age and sex, NUTS2, industry (NACE) and occupation (ISCO)) and adjust for non-response.
- **Cross-national or population weights** adjust for the different sizes per countries of their at-work population.

Reference statistics for the poststratification are largely Eurostat's 2015 Labour Force Survey (LFS).¹⁸ For some countries, national LFS statistics were used as poststratification weighting targets. For more details, see the sixth EWCS Sampling implementation report and Valuation and weighting report.

Quality assurance

Like all Eurofound surveys, a high number of quality checks prior to, during and after fieldwork were carried out, with 146 quality control targets monitored covering all stages of the survey and the dimensions of quality as identified by the European statistical system: relevance, accuracy, timeliness and punctuality, accessibility, coherence and comparability. For more information, see the sixth EWCS Quality control report.

¹⁸ The technical report (available on the sixth EWCS webpage) presents poststratification weighting to LFS 2014, because LFS 2015 was not available to Ipsos within the contract period. Eurofound updated the poststratification weighting with LFS 2015 without changing the methodology. There was no update for countries where LFS 2015 from Eurostat was not available.

In addition, an External quality assessment report was commissioned by Eurofound, the results of which are available on the sixth EWCS webpage (under ‘Quality assurance’).

Limitations and strengths of the survey

Eurofound acknowledges both the limitations and strengths of this periodic exercise. Reflecting on the limitations and trying to curb them – while increasingly reinforcing the strengths – are among the key objectives of the quality assurance developed through the years.

Limitations

- The EWCS covers a broad set of topics that are measured with a narrower set of indicators than in highly specialised surveys.
- The cross-cultural cross-country setting is particularly challenging and there may be differences in measurement, sampling and non-response, which can affect comparability. The dimension of violence at work, for example, illustrates this difficulty, as respondents may have varying inclinations to report and different concepts of what ‘violence’ means for them.
- Non-response items were low on average, but highest for earnings and absence-related questions, in line with the sensitivity of the questions and the results in similar surveys.
- The survey is cross-sectional and even if the survey allowed for investigation of the relationships between the different working conditions indicators, causal relations cannot be drawn based on the data. The EWCS can point out relationships between work and health, but it does not include workers who have exited the labour market for health reasons.
- While the national samples allow for a general population profile to be drawn for each country, they are invariably too small to enable detailed analysis of specific subgroups.
- Differences between countries, over time, can occur as a result of sampling rather than reflect real differences. This needs to be considered when viewing the figures.
- Not all differences presented in the report have been statistically tested.

Strengths

- The EWCS is a unique tool for portraying the working life of workers and as the most comprehensive source of information on working conditions in Europe has become a source of inspiration outside Europe. The questionnaire is currently being used in South Korea and the USA, and questions from the EWCS have been included in surveys in Latin America and China.
- The survey development has benefited from rich feedback from research and policy users.
- The survey builds on good practice and collaboration with others, in particular the developers of national working conditions surveys.
- It is widely used to monitor job quality and analyse developments in working life, not only at European level but also by the OECD.
- The survey relies on the knowledge of the respondents – namely the workers – to gather a description of real work. It does that by means of specific and concrete questions about work, working conditions and companies assessed through different dimensions, validated by research as relevant and useful for the monitoring of working lives and job quality. The survey aims to select questions relevant to all types of work (different occupations and work situations) and is easy to understand.
- The survey is based on an interdisciplinary approach; whenever possible, a validated measurement for a concept is used.
- The cross-cultural dimension of the survey is embedded into the design and implementation of the overall project.
- The EWCS strives to address precise questions to respondents: for example, the survey asks whether respondents are exposed to ‘noise so loud that you have to raise your voice to talk to people’, rather than to ‘a noisy environment’ which would leave room for an individual interpretation by the respondent of what is ‘noisy’.
- The survey allows for a comparison over time, as a core set of trend questions has been retained.
- The analysis relies on multiple indicators to construct more complex concepts, as clearly exemplified by the measurement of work, intensity of work, and the issue of violence at work.

Gender mainstreaming

Gender mainstreaming is a guiding source for reviewing the questionnaire and designing the analysis. This has been done by developing indicators to include the demands of gender-segregated jobs and adding new questions. The wording of some questions have been revised in order to ensure that they address both men's and women's concerns in a valid way: for example, the indicator on 'lifting or moving people' was included when it became obvious that (female) nurses and teachers would not answer positively to the question regarding exposure to heavy lifting, as the care of patients and children clearly might involve lifting 'heavy loads'. The survey captures the

household composition, work intensity, time use outside work, work–family conflicts and work–life balance, in order to reflect the different roles of men and women in different life spheres. Capturing unpaid work in the survey allows for a better assessment of its influence on preferences regarding paid work and working time. It also includes indicators on specific gender issues, such as gender discrimination and sexual harassment.

More information

More information on the sixth EWCS survey and its methodology is available on Eurofound's website (sixth EWCS webpage). It is planned to carry out in-depth thematic analysis of the EWCS findings in 2017.

Annex 2: Coordination team and national partners

Through its Ipsos Central Coordination team (ICC), Ipsos Belgium was in overall charge of the central coordination and management of the sixth EWCS. The ICC itself was made up of professionals from the Ipsos Social Research Institute (ISRI) and took the lead in all national partner agency liaison and data quality issues to ensure the sixth EWCS was delivered with maximum consistency and quality standards across the surveyed countries.

Ipsos Central Coordination team

Project Director: Andrew Johnson

Deputy Project Director: Jean-Michel Lebrun

Sampling Directors: Patten Smith, Femke De Keulenaer, Hayk Gyuzalyan, Sally Widdop

Project Managers: Jean-Michel Lebrun, Allan Simpson, Emilie Rey-Coquais, Ahu Alanya

Project Coordination: Françoise Schuster, Elena Lucica, Sylvia Vandenbroucke

National partners and local teams

Country/territory	Company/organisation name	Name of national team leader
EU Member States		
Austria	Spectra Marktforschungs GesmbH	Christian Baumann
Belgium	Ipsos	Corinne Descamps
Bulgaria	Ipsos	Iva Dimova
Croatia	Ipsos	Mirna Cvitan
Cyprus	CMR – <i>Cypronetwork Marketing Research Ltd.</i>	Christos Michaelides
Czech Republic	MEDIAN s.r.o	Miloš Staněk
Denmark	DMA Research A/S	Vibeke Tuborgh
Estonia	Faktum & Ariko OÜ	Kalev Petti
Finland	Taloustutkimus Oy	Tuomo Turja
France	Ipsos	Robin Pillot
Germany	Ipsos	Martin Dankert
Greece	Ipsos	Emmanouela Costopoulou
Hungary	Ipsos	Tímea Korok
Ireland	Ipsos	Aisling Corcoran
Italy	Ipsos	Guido Rambaldi
Latvia	SKDS	Ieva Strobe
Lithuania	RAIT Ltd	Lina Juodkienė
Luxembourg	TNS Ilres	Luc Biever
Malta	MISCO International	Vanessa Bajada
Netherlands	PMR	Fons de Rijk
Poland	Ipsos	Krzysztof Chmielewski
Portugal	Ipsos	Isabel Rebelo da Silva
Romania	Ipsos	Lorena Cristea
Slovakia	MEDIAN s.r.o	Miloš Staněk
Slovenia	Ipsos	Lenka Hrastar
Spain	Ipsos	Álvaro Calvo Romero
Sweden	Ipsos	Eva Ohlsson
United Kingdom	Ipsos	Rebecca Klahr
Candidate countries		
Albania	Ipsos	Alban Bilali
Former Yugoslav Republic of Macedonia	Ipsos	Gjorgji Mitrevski
Montenegro	Ipsos	Vladimir Raičević
Serbia	Ipsos	Hana Baronijan
Turkey	Ipsos	Akın Şahin
Other countries		
Norway	Ipsos	Nina Berg
Switzerland	gfs-zürich Markt- & Sozialforschung	Martin Abele

Annex 3: Expert questionnaire development group

An expert questionnaire development group was set up in order to discuss the questionnaire of the sixth EWCS. The group was composed of national experts and representatives of the European Commission and of international organisations.

Advisory Committee

Governments

Petra Pencs
Bundesministerium für Arbeit, Soziales und Konsumentenschutz
Austria

Antti Närhinen
Ministry of Employment and the Economy
Finland

Andreas Horst
Bundesministerium für Arbeit und Soziales
Germany

Vladka Komel
Ministry of Labour, Family, Social Affairs and Equal Opportunities
Slovenia

Employers

Emmanuel Jahan
Air France
Belgium

Kris De Meester
Federation of Enterprises in Belgium
Belgium

Lutz Mühl
Bundesarbeitgeberverband Chemie
Germany

Mario Van Mierlo
Confederation of Netherlands Industry and Employers
Netherlands

Trade unions

Fabienne Scandella
European Trade Union Institute
Belgium

Herman Fonck
Confederation of Christian Trade Unions
Belgium

Erik Pentenga
Dutch Federation of Trade Unions
Netherlands

European Commission

Catherine Blair
Directorate General for Employment, Social Affairs and Inclusion

Dimitrios Dimitriou
Directorate General for Employment, Social Affairs and Inclusion

Guido Schwarz
Directorate General for Employment, Social Affairs and Inclusion

Experts

Jouko Nätti
University of Tampere
Finland

Michel Gollac
Center for Research in Economics and Statistics
France

Colette Fagan
University of Manchester
United Kingdom

National experts

Austria	Bernhard Mader, Arbeitsklima
Belgium	Patricia Vendramin, Fondation Travail-Université Alain Piette, SPF Emploi, Travail et Concertation sociale Aline Hoffmann, ETUI John Morley Monique Ramioul, KU Leuven
Bulgaria	Vassil Kirov, Institute for the Study of Societies and Knowledge, Bulgarian Academy of Sciences (ISSK-BAS) and Centre Pierre Naville, University of Evry
Cyprus	Pavlos Kalosinatos, Cyprus Labour Institute (INEK-PEO)
Czech Republic	Jiří Vinopal, Institute of Sociology of the Czech Academy of Sciences
Denmark	Anne Illemann Christensen, National Institute of Public Health
Estonia	Meelis Naaber, Statistics Estonia
Finland	Anna Pärnänen, Statistics Finland Hanna Sutela, Statistics Finland
France	Marilyne Beque, Dares Elisabeth Algava, Dares
Germany	Hermann Burr, BAuA
Greece	Sofia Lampousaki, INE/GSEE
Hungary	Éva Berde, Corvinus University of Budapest
Ireland	Philip O'Connell, UCD
Italy	Valentina Gualtieri, ISFOL
Latvia	Zaiga Priede, Central Statistical Bureau
Luxembourg	David Buechel, Chamber of Commerce
Malta	Saviour Rizzo, Centre for Labour Studies
Netherlands	Wilmar Schaufeli, Utrecht University Irene Houtman, TNO
Norway	Cecilie Aagestad, STAMI Steinar Aasnæss, STAMI
Portugal	Heloísa Perista, CESIS - Centro de Estudos para a Intervenção Social
Spain	Javier Pinilla, INSHT
Sweden	Linda Magnusson Hanson, Stockholm University
United Kingdom	Brendan Burchell, University of Cambridge Duncan Gallie, University of Oxford Francis Green, LLAKES

European Commission

Jadwiga Tudek
Directorate General for Employment, Social Affairs and Inclusion

European and international institutions

Anne Humbert
EIGE

Xabier Irastorza
European Agency for Safety and Health at Work

Johan van der Valk
Eurostat

Sangheon Lee
International Labour Office

Alexander Hijzen
OECD

Annex 4: Job quality clusters

In order to identify groups of workers with similar quality jobs (Chapter 4), a statistical technique called latent class analysis (LCA) is used.

LCA postulates a categorical variable that is not observed in order to explain associations between a number of observed variables. An important difference of LCA from standard cluster analysis, such as K-means clustering, is that LCA is model-based (Vermunt and Magidson, 2002). This has several advantages: one is that the choice in the number of clusters is less arbitrary because relying on statistical modelling allows the use of statistical information criteria, and another is that LCA allows for the inclusion of variables without any rescaling, as the models can take on different functional forms. Therefore, continuous variables (with different distributions) as well as (bi)nominal (including ordinal data) can be included.

The latent class five cluster model used in this report consists of several equations that are estimated simultaneously. Figure A1 shows the structure of the LCA cluster model used for the clustering of the job quality indices. The postulated categorical cluster variable is modelled as a variable to explain the associations between the indicator variables. In this case, the seven job quality indices are predicted by the five clusters, meaning that the clusters are formed by finding an optimal solution for estimating cluster membership on the job quality indices.

The latent class analysis is based on the 2015 EU28 data, using the cross-national EU28 sampling weights.

Because LCA is a joint analysis of the job quality indices and covariates, missing values were excluded on a casewise basis. Most missing values were found in the

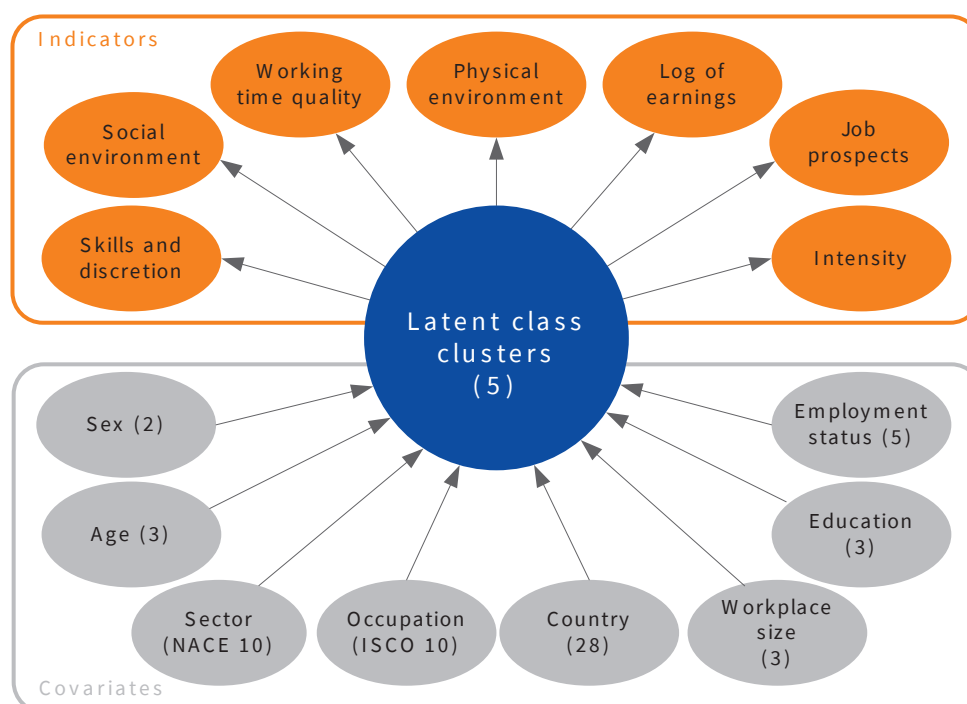
Earnings index – about 17% of all respondents in the EU28. The number of observations included in the LCA is 26,648.

Each of the job quality indices comprise a number of indicators (or their subdimensions). Chapter 2 presents an overview of the indicators that were included in each index. Some indices, such as the Physical environment index, represent the mean of the each indicator rescaled to 0–100. Others, such as the Work intensity index, reflect different subdimensions such as quantitative demands or emotional demands and represent the rescaled mean of the subdimensions. All indicators and subdimensions were given the same weight when calculating the job quality indices. The Earnings index is based only on one indicator (monthly earnings; see ‘Measuring earnings’ in Chapter 2). For the purpose of the clustering exercise, the monthly earnings are transformed using the natural logarithm. The latent class clustering therefore reduces six job quality indices ranging from 0–100 (plus the natural logarithm of monthly earnings) into a set of – in this case – five distinct clusters.

Covariates enter the model as predictors of the cluster variable. The actual construction of the clusters is based only on the indicator variables (the job quality indices), but the size of the clusters is also dependent on the covariates. Figure A1 shows the included covariates and the number of categories of each variable. The covariates in this model are all categorical.

LCA makes it possible to classify a large group of heterogeneous workers into a few groups with distinct job quality profiles. Workers are clustered into a number of groups of different sizes because the job quality indices of the workers within these groups are associated with each other in a similar way. Similar jobs are assigned to the

Figure A1: Latent class cluster model for the job quality indices



same class and substantially different jobs are classified in different classes.

The statistically optimal number of clusters can be determined by selecting the solution that provides the best model fit using the Bayesian Information Criterion (BIC). Increasing the number of clusters for this model specification further than five would still lead to an improvement of the BIC, as well as other information criteria. This indicates that although the clusters are substantially and significantly different from each other, the jobs within each cluster still observe a certain degree of heterogeneity. In other words, clustering jobs into five groups is a generalisation. Although increasing the number of clusters beyond five will improve the model fit from a statistical point of view, it does not refute the validity and meaning of the five cluster solution, but merely adds more detail.

The LCA results allow for the examination of the incidence of different types of jobs across the covariates included in the model. All covariates in Figure A1 have a significant effect on the clusters, indicating that the clusters are not

distributed proportionally over the different categories of the covariates.

In addition, estimating the effect of belonging to a certain cluster on subjective indicators provides insight into differences in variables that indicate, for example, subjective well-being and health. The analysis is, by means of an extension to latent class analysis, known as ‘Step 3 analysis’ which relates the posterior class membership probabilities to external variables. In doing this, the maximum likelihood correction was applied (Vermunt and Magidson, 2016). Because certain personal characteristics, such as age, might be correlated with class membership probabilities as well as the external variables of interest, covariates are introduced to the model to control for this potential bias. The reported effects are controlled for the covariates that were also included in the estimation of cluster membership: sex, age, education, employment status, sector, workplace size, occupation and country. Despite the control for a series of covariates, the effects are not necessarily causal, mainly because the direction of causality might be ambiguous.