Overview report

5th European Working Conditions Survey

Eurofound
Working Conditions
Survey


5th
European
Working
Conditions
Survey

When citing this report, please use the following wording:

Eurofound (2012), *Fifth European Working Conditions Survey*, Publications Office of the European Union, Luxembourg.

Authors: Agnès Parent-Thirion, Greet Vermeylen, Gijs van Houten, Maija Lyly-Yrjänäinen, Isabella Biletta, Jorge Cabrita, with the assistance of Isabelle Niedhammer

Eurofound project: Fifth European Working Conditions Survey

Project team: Agnès Parent Thirion, Greet Vermeylen, Maija Lyly-Yrjänäinen, Gijs van Houten, Isabella Biletta and Sophia MacGoris

The authors wish to thank peer reviewer Francis Green, as well as Antoine Valeyre for commenting on the draft and colleagues at the European Agency for Safety and Health at Work (EU-OSHA). They also acknowledge support received from Serge Volkoff and Anna-Maija Lehto for the development of the project.

Cataloguing data can be found at the end of this publication.

Luxembourg: Publications Office of the European Union, 2012

doi:10.2806/34660
ISBN 978-92-897-1062-6

The European Foundation for the Improvement of Living and Working Conditions (Eurofound) is an autonomous body of the European Union, created to assist in the formulation of future policy on social and work-related matters. Further information can be found on the Foundation website at www.eurofound.europa.eu

European Foundation for the Improvement of Living and Working Conditions
Wyattville Road
Loughlinstown
Dublin 18
Ireland
Telephone: (+353 1) 204 31 00
Fax: (+353 1) 282 42 09 / 282 64 56
Email: information@eurofound.europa.eu
www.eurofound.europa.eu

Printed in Luxembourg

Country codes

EU27

The order of countries follows the EU protocol based on the alphabetical order of the geographical names of countries in the original language.

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

Candidate countries

HR	Croatia
MK	Former Yugoslav Republic of Macedonia[1]
MO	Montenegro
TR	Turkey

Potential candidates

AL	Albania
XK	Kosovo[2]

Other

NO	Norway

[1] MK corresponds to ISO code 3166. This is a provisional code that does not prejudge 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 (http://www.iso.org/iso.country_codes/iso_3166_code_lists.htm).

[2] This code is used for practical purposes and is not an official ISO code.

Abbreviations used in the report

AAPOR	American Association for Public Opinion Research (AAPOR)
EU-OSHA	European Agency for Safety and Health and Work
EWCS	European Working Conditions Survey
GDP	gross domestic product
ICT	information and communication technology
ISCED	International Standard Classification of Education
ISCO	International Standard Classification of Occupations
LFS	Labour Force Survey (Eurostat)
NACE	Nomenclature générale des activités économiques dans les Communautés européennes (General industrial classification of economic activities within the European Communities)
NUTS	Nomenclature des unités territoriales statistiques (Nomenclature of territorial units for statistics)
ILO	International Labour Organization
OECD	Organisation for Economic Cooperation and Development
WHO	World Health Organization

Country groups

EC12	12 EU Member States prior to enlargement in 1995
EU15	15 EU Member States prior to enlargement in 2004
EU27	Current 27 EU Member States

Sectors of economic activity used in the fifth EWCS

The fifth EWCS carried out its sectoral analysis based on the NACE Rev. 2 classification; however, for simplicity 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
Wholesale, retail, food and accommodation	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 and defence	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; however, shortened forms of these categories have been used throughout the report.

Occupational group	Corresponding to ISCO-08 group
Managers	1. Legislators, senior officials and managers
Professionals	2. Professionals
Technicians and associate professionals	3. Technicians and associate professionals
Clerical support workers	4. Clerks
Service and sales workers	5. Service workers and shop and market sales workers
Agricultural workers	6. Skilled agricultural, forestry and fishery workers
Craft and related trades workers	7. Craft and related trades workers
Plant and machine operators	8. Plant and machine operators, and assemblers
Elementary occupations	9. Elementary occupations
Armed forces	10. Armed forces occupations

In this report, the most recent classification systems for NACE (Rev. 2) and ISCO (08) are used whenever results are presented for 2010. 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.

Contents

5th European Working Conditions Survey

Executive summary

Introduction

Work plays a significant role in the lives of people, companies and society at large. Since its inception, the European Union has paid considerable attention to work, and improving working conditions is one of its key policy goals. As stipulated in Article 136 of the EC Treaty, Member States should actively work towards 'the promotion of employment' and 'improved living and working conditions', so as to 'make possible their harmonisation while the improvement is being maintained'.

The European Working Conditions Survey series (the 'EWCS') aims to:

- Measure working conditions across European countries on a harmonised basis;
- analyse relationships between different aspects of working conditions;
- identify groups at risks 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.

At the time the fifth edition of the survey was carried out, in 2010, about 216 million people were employed in the EU27 main reference area of the survey. A total of 44,000 workers from 34 European countries were interviewed in 2010 on their working and employment conditions.

Policy context

The policy thrust of the Europe 2020 Strategy towards 'Smart, inclusive and cohesive growth' requires attention to be given to work and working conditions, especially the impact of growth on the quality of work, the employment of workers and companies' performance. Findings from the EWCS series feed into various strands of the Europe 2020 strategy, such as the 'agenda for new skills for new jobs' and the 'innovation union'.

Work is an important dimension in many long-standing European policies and norms, covering aspects such as equal opportunities for men and women, active ageing, working time, lifelong learning, work organisation, work–life balance, health and safety, labour standards and the prevention of discrimination, work-related stress and in-work poverty. The EWCS can contribute to discussions on the importance of work in relation to well-being at individual and societal level.

By providing analysis and comparable information on working conditions in Europe, the EWCS is a useful tool for policy actors including employers, trade unions and governments and can underpin debate on quality of work and employment issues.

Key findings

- Reported levels of exposure to physical risks in the workplace have not diminished greatly since the first survey in 1991.
- Psychosocial risks that impact negatively on workers' health and well-being include high demands and work intensity, emotional demands, lack of autonomy, ethical conflicts, and poor social relationships, as well as job and work insecurity.
- Exposure to psychosocial risks tends to go hand in hand with exposure to physical risks.
- The majority of workers live in a household where both partners work, either both working full time (40%) or with one of the partners working part time (29%).
- Only a small proportion (22% of women and 17% of men) work in gender-mixed occupations.
- Plant and machine operators, craft and trades workers, workers in elementary occupations and clerical support workers report higher than average levels of work intensity as well as lower than average levels of autonomy.
- Workers in the education, health and financial services report above-average levels of workplace innovation practices.
- Most workers in the EU27 have a job which involves a degree of creativity: 82% report the ability to solve unforeseen problems and 75% can apply their own ideas at work.

- 55% of workers say that their present skills correspond well with their duties. 13% of workers report needing more training and 32% say they have the skills to cope with more demanding duties.
- 43% of the self-employed and 29% of employees say they would like to reduce their working hours; conversely, 11% of the self-employed and 14% of the employed would like to increase their working hours.
- Long working hours are associated with high levels of work intensity.
- 52% of workers report having an employee representative at the workplace.
- 18% of workers report having a poor work–life balance. Factors associated with a good work–life balance include part-time working, no long working hours, flexitime and having access to emergency leave at short notice, as well having regular working hours.
- 20% of workers report a poor mental well-being.

Policy pointers

- Policy attention to changing employment status over time as well as the structural change of jobs in the economy may have eclipsed attention from transforming the nature of work.
- In general, changes in working conditions over the last 20 years have been limited, but this masks changes in several respects for some groups of workers.
- Action to address social inequalities need to address inequalities at the place of work.
- Unfavourable working conditions tend to cluster disproportionally in some groups. Therefore policy solutions should be multidimensional, incorporating lifelong learning, working time and work–life balance, health and safety, pay and work organisation practices.
- The extent of differences between men and women reinforces the need to develop gendered analyses and policies in relation to working lives.
- Consultation and employee representation are central to the effectiveness of policies to improve working conditions.
- Win–win arrangements should be promoted: working conditions likely to be associated with higher well-being of workers are also associated with high motivation, commitment, and sustainable work.
- Current employment policy priorities to raise employment levels, prolong working life, increase the participation of women and increase flexibility and productivity depend for their success not just on changes in the external labour market but also of the successful management of life at work and at home, by all parties concerned, as well as on appropriate social support.
- Good work may well be one of the keys for smart, inclusive and sustainable growth.

Methodology

Every five years, Eurofound carries out the European Working Conditions Survey (EWCS), interviewing both employees and self-employed people on key issues related to their work and employment. Over time, the number of topics surveyed has been extended.

Fieldwork for the fifth EWCS took place from January to June 2010, with almost 44,000 workers interviewed in their homes in the EU27, Norway, Croatia, the former Yugoslav Republic of Macedonia, Turkey, Albania, Montenegro and Kosovo. Figures from the EWCS are estimates, based on a representative sample of European workers and not on the whole population. Differences over time and between countries need to be interpreted with caution. The report discusses only those differences that are likely to reflect true differences rather than being the result of sampling.

Introduction

Measuring work

Work plays a significant role in people's lives, in the functioning of companies and in society at large. But what is work? How can we describe it? Is it changing, and if so, is it for better or for worse? Is it fulfilling the numerous and at times conflicting expectations we have of it? How can we take steps to improve work for the well-being of all?

Measuring work and its conditions was one of the objectives of the first European Working Conditions Survey (EWCS) which was carried out over 20 years ago. Another objective was to identify which work situations and which groups of workers faced particular difficulties, so that action could be taken to address certain issues. The aim was to do this in a comparable way across Europe so as to be able to provide an input into European policymaking for everyone involved, but particularly for Eurofound stakeholders, employer organisations, trade unions, governments of Member States and European institutions. Over time, other objectives were added, such as contributing to monitoring the quality of work and employment in Europe, and learning lessons from 'good practice' in work situations and amongst different groups of workers.

The examination of work is particularly relevant for the European Union. Since its inception, the European project has paid considerable attention to work, and improving working conditions is one of the main goals of the EU. According to Article 136 of the EC Treaty, Member States should work towards the promotion of employment and improved living and working conditions, 'so as to make possible their harmonisation while the improvement is being maintained', EWCS data can contribute substantially to this endeavour.

The main challenge in measuring and assessing work and working conditions across Europe is to address the complexity of the situation (different definitions, levels and expectations) in a meaningful and relevant way.

Key concepts

It is important to first clarify some key concepts.

Work refers to the set of tasks carried out by workers in the performance of their jobs. It is difficult for workers to separate the description of 'work' from that of 'tasks undertaken', making it necessary to combine different approaches when defining and analysing work.

One work-related approach looks at key dimensions or factors (such as postures and movements, information, operations to be performed, and ambient factors) and relates them to well-being and performance. This approach is useful but has its limitations in that it does not take account of the diversity of work situations and the characteristics of workers. An alternative approach is to consider the activity, which is different to the tasks undertaken, as the subject of analysis. This allows an understanding of the factors affecting job instability and the conditions under which workers can achieve the optimum solution for protecting their health and well-being. This approach can lead to a better understanding of work and, in theory, allow us to devise ways to change and adapt work so that it can be carried out by a wide variety of workers who differ not only in their characteristics but also in the way they work (Gollac and Volkoff, 2007). These two approaches have been combined when devising the EWCS and analysing its results.

Various conceptualisations of work co-exist across different disciplines. It has been described in turn as 'a curse, freedom, a commodity, occupational citizenship, disutility, personal fulfilment, a social relation, identity, caring for others and service' (Budd and Spencer, 2011, p. 4). These different conceptualisations are important as they influence the assessment of individual well-being, determine the importance of well-being for society as a whole, and have an impact on how to measure work.

At individual and societal levels, **paid work** fulfils a series of objectives in the sense that it:

- provides a source of income;
- is a source of personal growth, training and learning opportunities;
- offers a framework to develop oneself and for personal fulfilment;
- provides social identity and social status;
- enables access to social networks;
- contributes to integration;

- is important for one's self-efficacy and self-esteem;
- provides access to several social rights.

A **job** is a group of homogeneous tasks having in common the similarity of their functions. It is summed up by a job title. A job description identifies the duties and responsibilities to be performed in a specific company.

Employment refers to the contractual relationship between the employer and the employee (when the worker is not self-employed). Employees contribute labour and expertise to their employer's endeavour and are usually hired to perform specific duties, which are packaged together to form their job. The contract of employment makes the employee subject to the employer's command or control as to the time, place and manner in which the job is to be performed. The contract also sets out the amount and frequency of pay, and the length of the employee's working week or day, together with information on paid leave and conditions of notice. The self-employed, by contrast, conclude commercial contracts with clients, establishing a price for the service or product delivered.

Working conditions are the result of the interaction between a job, the work, the company and an individual (see Gollac, 2004).

Relevance of the EWCS

The variety of perspectives on work and the diversity of expectations surrounding it highlight the need for tools and information on work and working conditions in Europe. The EWCS is important as it attempts to answer, on a European scale, this diverse need for information. It started with 12 Member States and now covers 34 countries. From a small ad hoc survey looking at risks, work organisation and working time, the EWCS has expanded over its five waves; it has added and revisited numerous topics, trying to map changes over time in working lives. Among other things, the EWCS now covers physical factors, psychosocial risks, leadership, change at the workplace, work–life balance, flexibility and flexicurity, and modern forms of work organisation. Nevertheless, it remains faithful to its original objectives to:

- assess and quantify 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.

The EWCS series is a unique source of information at European level. The survey contains a rich store of data and analysis on work, its conditions and development. It is a collaborative effort in which national, European and international policymakers and experts provide advice and expertise. Their contribution guides the selection and development of topics and questions. These seek to describe the most important, relevant and common dimensions of work and its conditions. The questionnaire is a synthesis of constructed representations of what work is, of ways to describe it and its impact on people. In the fifth wave (2010), the questionnaire was adapted to achieve the following aims:

- Integrate the economic context of the financial crisis. This has led to more emphasis on changes in employment relations, greater attention to financial security and vulnerability (at individual and household level), and reinforcement of the sections dealing with psychosocial risks and the mental health of workers.
- Provide more information on work organisation, with the dual objectives of addressing psychosocial risks and 'new' forms of work organisation. The latter are seen as possible ways to get more value and innovation from workers and companies (one way forward out of the crisis), as well as having the potential to improve the quality of working lives. For example, *sociale innovatie* (workplace innovation) is a concept developed in several countries (such as Belgium, Finland, Germany, the Netherlands, Sweden and the UK), in which the role of employee participation in the innovation process is highlighted.
- Strengthen gender mainstreaming. This is an ongoing concern as the conditions of men and women at work vary fundamentally. This has led to more indicators on household topics and more attention to the emotional dimension of work.
- Develop the collective dimension of work by exploring collective relations, the role of leadership and social relationships at work.
- Develop the topic of 'knowledge work' and the implications of workers' subjectivity in the workplace, as attention to well-being becomes more pertinent.

Work is an activity where players with different and often conflicting concerns interact: workers, colleagues, companies, communities, families, societies, countries. Points of view and the subjectivity of the answer matter greatly. Obtaining an objective representation of this activity (that is, work) is important as it will aid decision-making, help understanding and make it easier to reconcile differences in point of views.

The EWCS is targeted at 'workers' as defined by the International Labour Organization (ILO): those who have worked for at least an hour in return for some form of compensation in the week preceding the interview. According to the Eurostat definition:[1]

'Employed persons are persons aged 15 years and over … who during the reference week performed work, even for just one hour a week, for pay, profit or family gain, or were not at work but had a job or business from which they were temporarily absent for example due to illness, holidays, industrial dispute or education and training.'

In the fifth EWCS, the survey respondents therefore include both employees and the self-employed. They were interviewed about their work, face-to-face in their homes, for about 40 minutes on average. Consequently, the information collected in the survey reflects workers' perspectives, the characteristics of the companies they work in, and the households in which they live. Although these questions are carefully constructed to tap into objective information as much as possible, given the unilateral perspective of the survey there are some limitations in this regard.

To ensure high-quality information, each stage of the survey was carried out according to strict guidelines that took into account the most up-to-date survey research methodology[2]. This is reflected in the external data quality assessment, which concluded that the fifth EWCS was implemented on the basis of a sound quality assurance framework, that it was meticulously planned, and that it made notable improvements compared with previous waves with regard to questionnaire development, translation and testing, sampling, data collection and data processing (Ieromnimon et al, 2011).

[1] http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_unemployment_lfs/methodology/definitions

[2] For more information on the survey methodology, see Annex 1 and also the EWCS webpage at http://www.eurofound.europa.eu/surveys/methodology/index.htm

Aim of the report

This report provides an initial overview of some key, yet fundamental, questions. What are the characteristics and attributes of European workers today? How is work organised and how is it taking place? What is the quality of work and employment of European workers?

Even basic questions often require complex answers, and interpretation can be manifold. Nevertheless, the report's focus is threefold.

Chapter 1 looks at paid work in the context of the European labour market as well as describing the population of workers.

Chapter 2 describes some of the workplace characteristics and policies that define the work environment as well as the constraints under which tasks and activities are performed. Through the use of mainly descriptive statistics, the chapter considers working time and working place, exposure to physical and psychosocial risks, and work organisation in the broad sense.

Chapter 3 discusses and analyses the current challenges for quality of work and employment and its four key dimensions:

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

This report is a first examination of the data and, by its nature, a limited exercise. Results are given in many cases as average values, despite the authors' recognition that the 'average worker' does not exist as such and that the distribution of values may matter more at times than just giving averages. The report combines descriptive sections with analytical sections, building on previous research as well as using more complex statistical models and addressing (European) policy questions.

This report is one step towards a broader analysis and understanding of work in Europe 2010. It complements the information already published on Eurofound' s website – the results from individual questions available through Eurofound's Survey Mapping Tool,[3] as well as the first results on the main changes in work and working conditions during the last 20 years.[4] The analysis will be completed and results will be expanded and discussed in more depth through further research in the years to come. Eight studies are already planned for completion in the next two years. These in-depth analyses will examine the following topics:

- quality of work and employment;
- health and well-being at work;
- work organisation;
- the ageing workforce and sustainable work;
- sectoral working conditions profiles;
- employability and security;
- working time and work–life balance;
- work and gender.

Eurofound is committed to developing and carrying out a survey with a high degree of comparability at all levels and the highest quality possible, given the resources available. For example, it has paid particular attention to ensuring a high degree of comparability between all language editions of the fifth EWCS. However, despite the best efforts, mistakes may remain. Nevertheless, a significant amount of work has been dedicated to improving the quality assessment of the survey method to ensure the best scientific quality for a European survey of this scale.

Future perspectives

What is needed now is to look at the findings in the light of existing knowledge on topical content, methods and debate and to analyse them against the backdrop of the experience of social actors, practitioners, researchers and workers. From this, an increased understanding of work and its conditions in Europe will emerge.

It is Eurofound's hope that the survey will prove useful in nurturing debate on future trends, in addition to necessary actions to improve working conditions, in line with its mandate. The objectives of Europe 2020 are smart, sustainable and inclusive growth (European Commission, 2010a). Is the work of European workers in 2010 'smart, sustainable and inclusive'? The EWCS does not give all the answers but it does provide some first important findings.

[3] http://www.eurofound.europa.eu/surveys/smt/ewcs/results.htm

[4] *Changes over time – First findings from the fifth European Working Conditions Survey* available at http://www.eurofound.europa.eu/publications/htmlfiles/ef1074.htm

5th
European
Working
Conditions
Survey

CHAPTER 1

WorkinginEurope

Working in Europe

The fifth EWCS was conducted in the first half of 2010 in the following 34 countries:

- the EU27 Member States;
- Norway – a member of the European Free Trade Association (EFTA);
- Croatia, the former Yugoslav Republic of Macedonia, Montenegro and Turkey (candidate countries);
- Albania and Kosovo (potential candidate countries).

The annual Labour Force Survey (LFS) for 2010 found that about 216 million people were employed in the EU27, the main reference area for this overview. The employed population in the EU27, Croatia, the Former Yugoslav Republic of Macedonia and Norway in 2010 was around 242 million compared with around 232 million in 2005 when the fourth EWCS was carried out. The latter covered 30 countries plus Switzerland.

Employment rates

Table 1 gives key indicators of the labour market in Europe in 2010 and shows some persistent differences between countries – see for comparison the fourth EWCS (Parent-Thirion et al, 2007).

The unemployment rate in 2010 for the 15–64 age group is 9.6% for the EU27, ranging from 20.1% in Spain to 4.4% in Austria, and even less in Norway (3.5%).

Countries persistently display significant differences in the participation rate of women in the workforce. In three EU countries (Greece, Italy and Malta), the gap between the participation rate of male and female workers is over 20 percentage points and even as high as 33.1 percentage points in Malta. At the other end of the spectrum, nine countries (Bulgaria, Denmark, Estonia, Finland, France, Ireland, Norway, Slovenia and Sweden) show a difference of less than 9 percentage points, with Estonia the nearest to closing the gap at only 0.9 percentage points. In the other two Baltic states, the gender gap is reversed, with the female participation rate being slightly above the male participation rate (0.2 and 1.9 percentage points in Latvia and Lithuania respectively).

Part-time working continues to vary considerably in the EU27. In the Netherlands, almost half the workforce (48.9%) works part time. Around a quarter of the workforce works part time in eight countries (Austria, Belgium, Denmark, Germany, Ireland, Norway, Sweden and the UK). Again there is a clear division between the female and the male workforce. In six of the countries where a high proportion of the workforce works part time (Austria, Belgium, Germany, Norway, Sweden and the UK), 40% or more of women work part time – a proportion that is often more than three times that for men. Even in the Netherlands, where 25.4% of men works part time, this proportion is still a third that of women (76.5%). These labour market characteristics are likely to impact on both the nature and the description of working conditions.

Profile of workers

The greater part (82%)[5] of the workforce in Europe in 2010 consists of employees (that is, workers with a contract characterised by a relationship of subordination) and up to 15% of the workforce is self-employed (that is, they are their own bosses).

Type of employment contract

The majority of employees (80%) in 2010 in the EU27 are employed on an 'indefinite contract' (Table 2). 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).

The other forms of contractual employment arrangements tend to lack one or more of these benefits, putting at risk the long-term security of workers in the labour market

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

Table 1: Key labour market indicators in Europe (%)

	Employment rate (15–64 years)			Unemployment rate (15–64 years)			Percentage of workers working part-time			Percentage of employees on temporary contracts		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
Belgium	62.0	67.4	56.5	8.3	8.1	8.5	24.0	9.0	42.3	8.1	6.8	9.6
Bulgaria	59.7	63.0	56.4	10.2	10.9	9.5	2.4	2.2	2.6	4.5	5.0	4.0
Czech Republic	65.0	73.5	56.3	7.3	6.4	8.5	5.9	2.9	9.9	8.9	7.5	10.6
Denmark	73.4	75.8	71.1	7.4	8.2	6.6	26.5	15.2	39.0	8.6	8.3	8.8
Germany	71.1	76.0	66.1	7.1	7.5	6.6	26.2	9.7	45.5	14.7	14.5	14.9
Estonia	61.0	61.5	60.6	16.9	19.5	14.3	11.0	7.1	14.5	3.7	4.7	2.8
Ireland	60.0	63.9	56.0	13.7	16.9	9.7	22.4	11.8	34.7	9.3	8.6	10.0
Greece	59.6	70.9	48.1	12.6	9.9	16.2	6.4	3.7	10.4	12.4	10.9	14.4
Spain	58.6	64.7	52.3	20.1	19.7	20.5	13.3	5.4	23.2	24.9	23.9	26.1
France	64.0	68.3	59.9	9.7	9.4	10.2	17.8	6.7	30.0	15.1	14.2	16.0
Italy	56.9	67.7	46.1	8.4	7.6	9.7	15.0	5.5	29.0	12.8	11.4	14.5
Cyprus	69.7	76.6	63.0	6.5	6.4	6.7	9.3	6.5	12.7	13.5	7.0	20.5
Latvia	59.3	59.2	59.4	18.7	21.7	15.7	9.7	7.8	11.4	6.8	8.9	5.0
Lithuania	57.8	56.8	58.7	17.8	21.2	14.5	8.1	6.7	9.3	2.4	3.3	1.7
Luxembourg	65.2	73.1	57.2	4.5	4.0	5.3	17.9	4.0	36.0	7.1	6.2	8.3
Hungary	55.4	60.4	50.6	11.2	11.6	10.7	5.8	3.9	8.0	9.7	10.1	9.2
Malta	56.0	72.3	39.2	6.8	6.6	7.2	12.4	5.9	24.9	5.7	4.7	7.3
Netherlands	74.7	80.0	69.3	4.5	4.4	4.5	48.9	25.4	76.5	18.5	17.3	19.9
Austria	71.7	77.1	66.4	4.4	4.6	4.2	25.2	9.0	43.8	9.3	9.8	8.8
Poland	59.3	65.6	53.0	9.6	9.3	10.0	8.3	5.7	11.5	27.3	27.4	27.1
Portugal	65.6	70.1	61.1	11.0	10.0	12.1	11.6	8.2	15.5	23.0	22.4	23.6
Romania	58.8	65.7	52.0	7.3	7.9	6.5	11.0	10.6	11.4	1.1	1.3	1.0
Slovenia	66.2	69.6	62.6	7.3	7.5	7.1	11.4	8.6	14.7	17.3	15.4	19.3
Slovakia	58.8	65.2	52.3	14.4	14.2	14.6	3.9	2.8	5.4	5.8	5.6	5.9
Finland	68.1	69.4	66.9	8.4	9.1	7.6	14.6	10.0	19.6	15.5	12.4	18.4
Sweden	72.7	75.1	70.3	8.4	8.5	8.2	26.4	14.0	40.4	15.8	14.0	17.6
United Kingdom	69.5	74.5	64.6	7.8	8.6	6.8	26.9	12.6	43.3	6.1	5.8	6.5
Croatia	54.1	59.5	48.8	11.8	11.5	12.3	9.7	7.3	12.5	12.3	12.1	12.6
Former Yugoslav Republic of Macedonia	43.5	52.8	34.0	[a]	[a]	[a]	5.9	5.0	7.4	16.4	18.6	13.3
Turkey	46.3	66.7	26.2	10.7	10.4	11.4	11.7	6.9	23.8	11.5	11.1	12.5
Norway	75.3	77.3	73.3	3.5	4.0	3.0	28.4	15.4	42.9	8.4	7.0	9.8
Albania[b]	42.3	51.0	33.5	13.5	11.2	16.7	[a]	[a]	[a]	[a]	[a]	[a]
Kosovo[c]	26.4	40.2	12.6	45.4	40.7	56.4	16.3	16.8	15.0	65.4	63.4	70.0
Montenegro[d]	47.6	54.3	41.0	19.7	18.9	20.7	5.0	5.3	4.5	18.3	18.3	18.2
EU27	**64.2**	**70.1**	**58.2**	**9.6**	**9.7**	**9.6**	**19.2**	**8.7**	**31.9**	**14.0**	**13.4**	**14.6**

Note: Unemployment data are not seasonally adjusted. Source for all countries, except for Albania, Kosovo and Montenegro, is Eurostat, LFS, 2010.

[a] Not available

[b] Source: Albanian Institute of Statistics (www.instat.gov.al)

[c] Data for 2009. Source: Statistical Agency of Kosovo (www.esk.rks-gov.net)

[d] Source: Statistical office of Montenegro (www.monstat.org)

(Broughton et al, 2010). Temporary contractual arrangements, either fixed-term (12%) or temporary agency contracts (1%), remain low in Europe. Four countries have a ratio of fixed-term contracts well above the European average: Poland (22%), Spain (18%), Portugal (16%) and the Netherlands (15%). At the other end of the spectrum are five countries where the workforce in fixed-term contracts is almost half the European average: Cyprus (6%), Austria (7%), the UK (7%), Luxembourg (7%) and Romania (8%). Among the countries where the proportion of the workforce in temporary agency contracts is below the European average are eight of the Member States that

joined between 2004 and 2007[6] and three of the EU15;[7] Denmark has the lowest ratio (0.2%).

The economic and cultural background of a country is important when considering the ratio between 'permanent' and 'temporary' contracts. In four EU countries, standard employment relationships are not the norm, meaning that 'only' 50%–60% of employees have indefinite contracts; these are Cyprus (52%), Greece (57%), Malta (61%) and Ireland (62%). In these countries, there is a clear correlation with a very high proportion of 'no-contract' employment arrangements (see below). In certain countries, however, as researchers have highlighted, for example Denmark (Bredgaard et al, 2009),[8] the differentiation between the types of contract is less prominent.

It is also important to take into account the specific characteristics of each 'non-standard' employment arrangements, as they do not have the same implications for workers' employment security. This category of contracts includes the apprenticeships or training contracts, which are thought to create opportunities for workers, usually young workers, in the labour market.[9]

Other non-standard employment arrangements have not proved to be as straightforward a way to stay in the labour market (Broughton, A., Biletta, I. and Kullander, M., 2010).

Finally, there are people working with 'no contract', a category which can incorporate various situations depending on the national context.[10] Although the proportion of respondents declaring themselves to be working with no contract is small, it is still significant (5%) at a European level. In the four countries with less than the average number of permanent contracts, this proportion is well above the EU average and is greater than 20% of employees: Cyprus (38%), Greece (28%), Malta (27%) and Ireland (23%). As the atypical forms of work are cyclical, the first jobs to be created when economic growth boosts business and the first to disappear in downturn periods, the recent economic and financial crisis could explain some of these figures.

Working age

Because the EWCS samples workers exclusively, the bulk of respondents are from the 'prime working age' population. As defined in various studies (Sum et al, 2006; de la Fuente, 2010), this is the population aged between 25 and 54 years. Almost three-quarters of the EWCS respondents are between 25 and 54 years old; 77% of the employed, 75% of the self-employed with employees, and 74% of the self-employed without employees belong to this age group.

On average employees are slightly younger than their self-employed counterparts (40 and around 44 years old respectively, see Table 2).[11] These figures are consistent with the situation in the labour markets of many European countries, which are concentrated on a restricted portion of the adult active population, with young and older workers facing difficulties joining and staying in the labour market.

Labour market segregation

Employment contract

Younger workers tend to have more non-standard employment contracts than other age groups. Almost 9 out of 10 workers (85%) on apprenticeship or training schemes are aged under 25; this proportion is not really surprising, as young people are clearly the target population of these types of contract. Moreover, 26% of workers on temporary agency contracts belong to the same age group, as do 22% of those with a fixed-term contract.

Looking at the proportion of each age group in each category of employment contract (Table 2), indefinite contracts are the common in all age groups, although only half (50%) of those under 25 are in this situation compared with 85% and over of those aged 35 and over. Workers under 25 are almost three times more often on fixed-term contracts than those over 35, and 1.5 times more often than the 25–34 age group. The proportion of the under-25 age group hired through temporary agency contracts (4%) is almost double that of the other age groups. Finally, as many as 10% of those aged under 25 are employed with

6 Czech Republic, Estonia, Latvia, Lithuania, Malta, Poland, Romania and Slovakia.

7 Denmark, Finland and Italy.

8 The literature on Danish flexicurity tends to assume that workers are in regular open-ended contracts, or, if not, that part-time or temporary contracts can be considered equivalent to regular employment.

9 Barbieri and Scherer (2007) found that in Italy workers entering the labour market as apprentices had an advantage over workers on fixed-term contracts: 'For both genders, we found that comparing apprentices with FTC workers, the former have clearly higher probabilities (about 25–30% higher) to be still in employment two years later than their first labour market entry, as well as three and four years later'.

10 See Broughton, A., Biletta, I. and Kullander, M. (2010) for a discussion on this category.

11 The age situation of employees and the self-employed is almost reversed (Table 2). Employees are younger: 78% of employees are under 50 and 37% under 35, while almost 77% of the self-employed are over 35 and 34% are over 50.

no contract;[12] this proportion is more than double that of other age groups (apart from the 55+ age group).

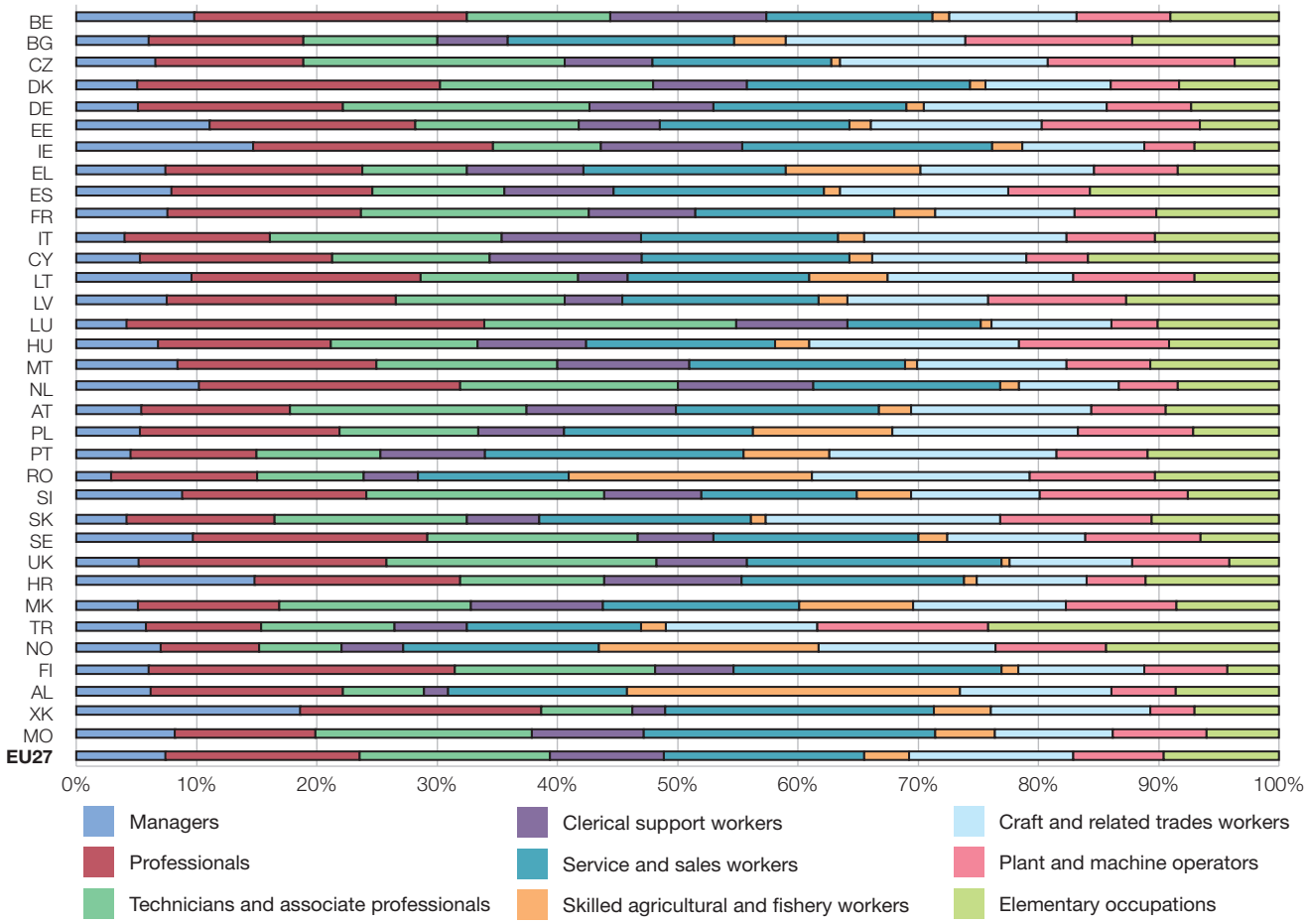
The workforce is concentrated in a few occupations and sectors across the EU27 as a whole. More than 60% of the workforce is employed in four occupational categories:[13] service and sales workers (17%), professionals (16%), technicians (16%) and craft and related trades workers (13%) (Figure 1). Up to 71% of the workforce works for private sector companies.

Table 2: Type of employment contract, by age group (%)

Age group	Indefinite contract	Fixed-term contract	Temporary agency contract	Apprenticeship or other training scheme	No contract	Other
Under 25	50	26	4	9	10	2
25–34	76	17	2	1	4	1
35–44	85	9	1	0*	4	1
45–54	87	7	0	0*	4	1
55+	85	8	1	0*	6	1
Total	**80**	**12**	**1**	**1**	**5**	**1**

*Too small to be measured.

Figure 1: Distribution of employment, by country and occupation (%)



Note: Based on ISCO-08 1-digit code.

[12] No contract is a category that covers a wide variety of contractual arrangements.

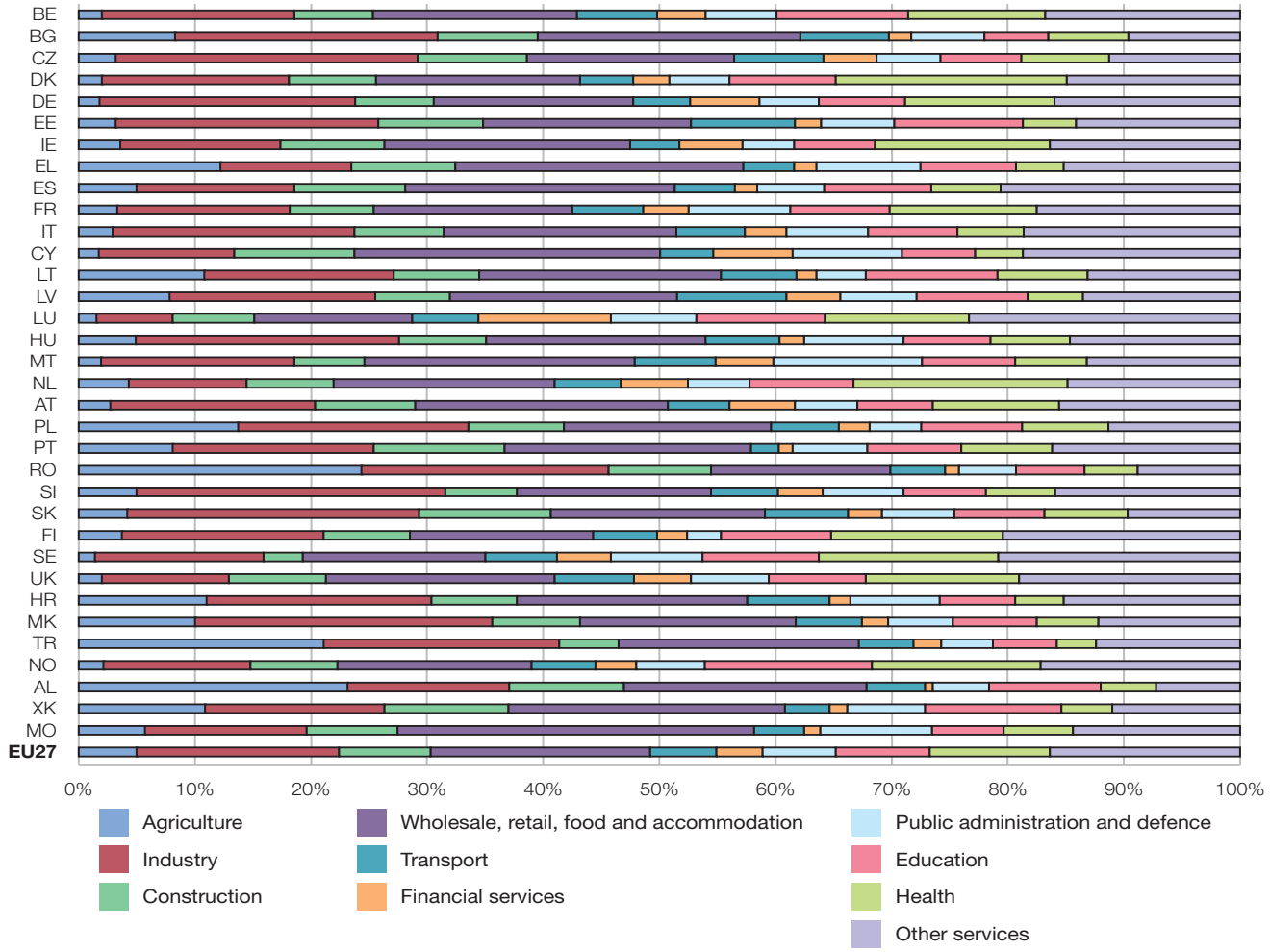
[13] Based on the International Standard Classification of Occupations 1-digit code adopted in December 2007 (see table at beginning of report).

Regarding the breakdown by sector per country, the European workforce is mainly occupied in three sectors: wholesale (18%), industry (17%) and other services (16%) (Figure 2).[14] Confirming a long-term trend, the importance of agriculture has declined in most countries: the EU27 average is 5%. Three Member States, however, still have relatively high employment levels in agriculture: Romania, Poland and Greece have 24%, 14% and 12% respectively of their workforce in the sector. In Greece and Romania, this sector employs more workers than does industry.

Excluding 'other services', the wholesale and industry sectors are the main employers in six countries (Czech Republic, Hungary, Italy, Latvia, Slovenia and Spain), where they employ more than 15% of the workforce (apart from the industry sector in Spain: 14%), while each of the other sectors employs less than 10%.

Specific sectors are prominent in some countries: the public administration sector in Malta employs 13% of workers, while the education sector in Estonia and the financial services sector in Luxembourg each employ around 11% of the workforce. Due to the economic crisis, the construction sector is no longer an important employer in most EU Member States. Only in three countries (Cyprus, Portugal and Slovakia) does it still employ 10%–11% of the workforce.[15] Interestingly, most of the workforce in the health sector works in the EU15. With the notable exceptions of Greece, Italy, Portugal and Spain (all well below 10%), the other EU15 countries plus Norway range between 11%

Figure 2: Distribution of employment, by country and sector (%)



Note: Sectors are based on NACE Rev. 2.

[14] The fifth EWCS carried out its sectoral analysis based on the NACE Rev. 2 classification; however, for simplicity the 21 NACE sectors have been compressed into 10 categories (see table at beginning of report).

[15] Construction sector: EU27 8%; Cyprus 10%; Portugal 11%; Slovakia 11%. For more on this topic, see Jettinghof and Houtman (2009).

and 20%, with three countries over 15%: Sweden (16%), the Netherlands (18%) and Denmark (20%).

Gender segregation

Increased female participation in the labour market[16] has long been one of the main targets of the European employment strategy (Lisbon targets, reaffirmed in the Europe 2020 strategy (European Commission, 2010a and 2012a)). One of 'Europe's structural weaknesses', highlighted in the Europe 2020 strategy, is that 'in spite of progress ... only 63% of women are in work compared to 76% of men' (European Commission, 2010a, p. 7). The strategy urges Member States to work towards 'inclusive growth' and 'high employment economy' but notes that 'the employment rates of women and older workers are particularly low' (ibid, p. 17).

Although the participation of women in the labour market has increased in all countries across Europe, this does not mean that women and men have the same access to and role in the labour market. The labour market in 2010 remains highly segregated. Men and women continue to work not only in different sectors but also in different occupations.

Sectors can still be classified according to gender. 'Male sectors' are those where the proportion of male workers is over 60%: construction (91%), transport (80%), industry (69%) and agriculture (65%) clearly belong to this group. In contrast, health (77% female) and education (67% female) are 'female sectors', with a female employment rate of over 60%.

Turning to the gender distribution in occupations, a similar pattern emerges (Table 3). Men are clearly dominant in several occupations: they represent 88% of craft workers, 85% of plant and machine operators, 69% of managers and 65% of skilled agricultural workers. On the other hand, women make up 67% of both clerical support and service and sales workers. Technicians and elementary occupations are evenly spread between men and women.

When occupations are grouped according to their proportion of male and female workers (in five bands from 5% and less to 20% and more), there are clear differences between the genders. The highest proportions of female workers are found in service and sales, professional, technician and clerical support occupations. Male workers are primarily concentrated in craft occupations, followed by professional, technician, and plant operator occupations. The proportion of women among managers (5%) is more than half that of men (9%).

The fourth EWCS report (Parent-Thirion et al, 2007, p. 14) analysed the phenomenon of 'occupational concentration' (defined as 'the predominance of one sex in a particular occupation or group of occupations'), which is clearly related to labour market segregation. When dividing the occupations along the lines of blue- and white-collar, clear trends emerge (Table 4).

Table 3: Occupational distribution, by gender (%)

ISCO code (1 digit)	Occupation	Men	Women
1	Managers	69	31
2	Professionals	46	54
3	Technicians and associate professionals	50	50
4	Clerical support workers	33	67
5	Service and sales workers	33	67
6	Skilled agricultural, forestry and fishery workers	65	35
7	Craft and related trades workers	88	13
8	Plant and machine operators, and assemblers	85	15
9	Elementary occupations	51	49
	Total	**55**	**45**

Note: Based on ISCO-08 1-digit code.

Armed forces occupations (0) are omitted due to the very small number of occurrences.

[16] On the impact of impact of segregation and employment patterns on OSH See EU-OSHA 2011 report on *New risks and trends in the safety and health of women at work* at http://osha.europa.eu/en/publications/reports/new-risks-trends-osh-women/view.

Table 4: Categorisation of occupations, by gender composition

Gender-segregated occupations	Occupational subcategory (ISCO 08)	ISCO code (2-digit)
Very male dominated white-collar (80% men or more)	Chief executives, senior officials and legislators	11
	Information and communications technology professionals	25
	Science and engineering associate professionals	31
	Information and communications technicians	35
	Protective services workers	54
Male dominated white-collar (60-80% men)	Production and specialised services managers	13
	Hospitality, retail and other services managers	14
	Science and engineering professionals	21
Mixed white-collar	Administrative and commercial managers	12
	Business and administration professionals	24
	Legal, social and cultural professionals	26
	Business and administration associate professionals	33
	Legal, social, cultural and related associate professionals	34
	Numerical and material recording clerks	43
	Other clerical support workers	44
Female dominated white-collar (60-80% women)	Health professionals	22
	Teaching professionals	23
	Health associate professionals	32
	General and keyboard clerks	41
	Customer services clerks	42
	Personal service workers	51
	Sales workers	52
Very female dominated white-collar (80% women or more)	Personal care workers	53
Very male dominated blue-collar (80% men or more)	Market-oriented skilled forestry, fishery and hunting workers	62
	Building and related trades workers, excluding electricians	71
	Metal, machinery and related trades workers	72
	Electrical and electronic trades workers	74
	Drivers and mobile plant operators	83
	Labourers in mining, construction, manufacturing and transport	93
Male dominated blue-collar (60-80% men)	Market-oriented skilled agricultural workers	61
	Handicraft and printing workers	73
	Food processing, wood working, garment and other craft and related trades workers	75
	Stationary plant and machine operators	81
	Assemblers	82
	Agricultural, forestry and fishery labourers	92
	Street and related sales and service workers	95
	Refuse workers and other elementary workers	96
Female dominated blue-collar (60-80% women)	Cleaners and helpers	91
	Food preparation assistants	94

Note: This categorisation is based on an analysis using the same approach as by Fagan and Burchell (2002). The blue-collar/white-collar worker division is based on assigning ISCO 1-digit categories 1–5 to white collar and categories 6–9 to blue collar (armed forces excluded).

* For definitions of the different subcategories see http://www.ilo.org/public/english/bureau/stat/isco/isco08/index.htm

Applying this analysis to the 2010 data confirms that the gender divide in occupations still exists today. Table 5 shows the current polarisation in the European workforce, with 80% of female workers in white-collar occupations (over half of them in 'female/very female dominated' white-collar occupations) and 47% of male workers are in blue-collar occupations (45% in 'male/ very male dominated' blue-collar occupations). The concentration of the workforce in white-collar occupations illustrates the importance of the services sector, with 80% of women and 53% of men working in these occupations.

The share of workers in occupations dominated by their own gender is almost the same for both sexes: 60% of women and 64% of men work in occupations dominated by workers of their own sex. The overall proportions of women (12% in blue collar and 6% in white collar) and men (2% in blue collar and 17% in white collar) working in occupations dominated by the opposite sex are almost similar and below 20%.

Two aspects are worth highlighting. Male workers are more evenly spread than female workers, among blue- and white-collar occupations, occupying respectively 47% and 53% of the male workforce. A higher proportion

Table 5: Distribution of male and female workers by 'gendered occupations' (%)

	Men	Women
Very male dominated white-collar (80% men or more)	10	2
Male dominated white-collar (60-80% men)	9	4
Mixed white-collar	17	22
Female dominated white-collar (60-80% women)	16	46
Very female dominated white-collar (80% women or more)	1	6
Very female dominated blue-collar (80% women or more)	0	0
Female dominated blue-collar (60-80% women)	2	8
Mixed blue-collar	0	0
Male dominated blue-collar (60-80% men)	15	10
Very male dominated blue-collar (80% men or more)	30	2

of women (22%) than men (17%) – 5 percentage points more – works in mixed-gender white-collar occupations.

Gender division by company size

Men work principally in large companies and women in small ones. There are more men than women (25% vs. 20%) working in workplaces with more than 100 employees and more women than men (60% vs. 54%) working in companies with fewer than 50 employees. The same proportion of men and women work either alone or in medium-sized companies of 50–99 employees.

Gender division at workplace level

Occupational segregation data at macro level can average out significant differences at local workplace level. This is illustrated by the example of hairdressers. When looking at averages, hairdressing is globally a mixed-gender occupation, but in practice, women work in female hairdressing salons and male hairdressers work in male salons/barbers. The EWCS provides unique information on this level of segregation as respondents are asked to report the gender of colleagues doing the same job as theirs.

Concentration in sectors and occupations leads to 'mono-gendered' workplaces. A majority of men work in workplaces with 'mostly men' having the same job title as themselves (59%), while for a majority of women (51%), colleagues with the same job title are 'mostly women'. Furthermore, the proportion of women working in a male environment (8%) is still very low, as is the proportion of men working in a female environment (7%). This finding corroborates those on gender-dominated occupations, with rare examples of crossover between such occupations.

In 2010, women and men are still not working in the same hierarchical positions. Only 13% of workers in Europe declared they had a supervisory role. Overall women are still less likely to be in this position than men: 13% of women and 22% of men supervise other workers.

In the long run, the proportion of workers in non-supervisory roles has increased, while the share of workers supervising '10 or more people' has decreased. This situation is particularly true for men (6% in 2010 compared with 8% in 2005). Nevertheless, men are still 2.5 times more often supervising 10 or more people than women (2%).

For women at the higher level of the workplace hierarchy, progress in achieving gender equality has been slow. In 1991 in the EC12 countries, 26% of workers who had supervisory responsibilities were women and 20 years later, in 2010, the figure for EU27 countries is 33% (32% in EC12). In 2010 only 12% of men have a female supervisor compared to almost half of the women (47%). (Eurofound, 2010a, Figure 1).

Women supervisors tend to be at a lower level in the hierarchy than their male colleagues. Female bosses have fewer subordinates than their male colleagues (on average 8 compared with 24) and the bosses of workers with supervisory responsibilities are more commonly men.

Individual characteristics of workers

Education level

A worker's level of educational attainment is key to their professional situation. For decades, the initial level of education was the parameter determining a person's entry point in the labour market. It was assumed that the more educated a person, the better the category of job, occupation, earnings and employment they had. In theory, initial educational attainment could also be 'topped up' during the professional career, enhancing career prospects. However, this assumption has not been true for some time; a person's occupation is often now no longer in line with the level of education achieved, creating a gap between the initial qualification and the tasks performed, with a consequent potential for frustration and demotivation.

More than half the 2010 respondents completed secondary education, and more than a quarter of them had reached a 'first stage of tertiary education' (as defined by Nicot and Houtman, 2006). Women in the labour market are more educated than men. The proportion of workers with tertiary education is higher among female workers (31%) than male ones (27%). This pattern applies to both employees and the self-employed.

Seniority

There has been no change in seniority levels since at least the third EWCS in 2000–2001. In 2010, 60% of the respondents were working in the same company for 5 years or more and around 40% have been there for 10 years or more.

The seniority indicator shows erratic features and long-term trends are not easy to interpret. Gender has a significant impact on seniority, but the trends are not linear. Since 2000, the proportion of men working for more than 10 years in their current job has barely increased (just from 44% to 45%), far from the 1995 figure of 50% (Table 6). For women, the proportions have been relatively stable. However, the gap between male and female workers is getting smaller. In 2010, 40% of women were working for 10 years or more in their current job, although this is still 5 percentage points less than the men. The proportion of female workers in this situation in 1995 was almost 10 percentage points less than the proportion of male workers.

Career

The professional careers of workers also give an insight into workers' profiles and the evolution of the labour market. The focus in the fifth EWCS is less on career evolution than on potential changes in employment relationships – even if the two aspects are linked. Progression on the professional ladder is not only based on occupational evolution, it may also be related, for example, to the shift from a temporary to an open-ended full-time contract.

The career situation of workers in 2010 shows very little change compared with their employment status 'immediately before the job' they are performing now (Table 7).

There seems to be a natural path from one employment relationship into another of the same type: a previous employment contract leads to employee status, while a previous self-employed situation leads to current self-employment. A significant proportion of employees in 2010 (more than 60%) were previously employees (all forms of contract). The same natural progression is seen for around a quarter of the self-employed (25% for the self-employed without employees and 28% for the self-employed with employees).

Table 6: Number of years in current job over time, by gender (%)

	Men			Women		
	up to 4 years	5 to 9 years	10 years or longer	up to 4 years	5 to 9 years	10 years or longer
1995	34	18	48	41	20	38
2000	36	17	47	42	19	39
2005	37	18	45	44	22	34
2010	36	18	46	41	20	39

Table 7: Previous employment situation of workers (%)

	Employed with an indefinite contract	Employed with a fixed-term contract	Employed with a temporary agency contract	Self-employed	Unemployed	In education or training	Other
Self-employed without employees	36	9	1	25	7	15	7
Self-employed with employees	40	9	1	28	6	12	5
Employed	48	15	2	3	10	17	5
Other	28	8	2	6	10	25	22

Note: Employment status is defined by answer to Q6: Are you mainly ...? 1 – self-employed without employees; 2 – self-employed with employees; 3 – employed; 4 – other.

Previous employment situation is defined by answer to Q13: Immediately before this job, in your main activity were you? 1 - employed with an indefinite contract; 2 - employed with a fixed term contract; 3 - employed with a temporary employment agency contract; 4 - self-employed; 5 – unemployed; 6 -in education or training; 7 – other; 8 - DK/no opinion (spontaneous); 9 - Refusal (spontaneous).

It follows that crossovers between types of employment relationship are less straightforward. Only 3% of employees in 2010 were previously self-employed. Broken down by type of contract, the 2010 picture confirms the dependency of a person's career progression on their employment status pathway: 54% of employees on indefinite contracts, 31% of employees on fixed-term contracts and 20% of employees on temporary agency contracts were previously in a similar contractual situation.

Nevertheless, there are some changes in employment status. Almost a quarter of the employees in 2010 on a fixed-term contract and no contract were previously on an indefinite contract. This was also the case for 17% of the temporary agency workers. Almost 40% of the self-employed had previously been employed on an indefinite contract.

Household characteristics

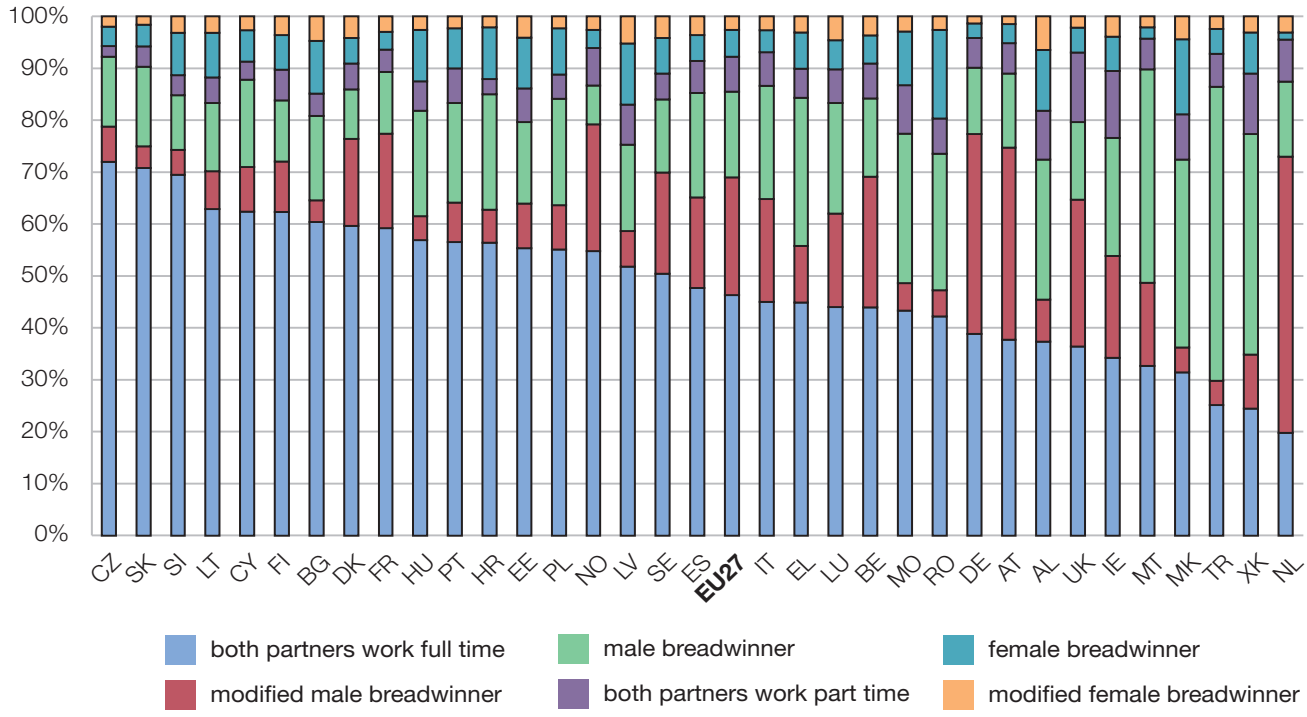
The evolution of work and employment conditions and the participation of female workers in the labour market have brought about modifications to the traditional 'male breadwinner model', in which care work and housework are carried out by mainly women within the family, while paid work is the responsibility of men. In Europe, households can be classified along three models, each comprising two categories (Figure 3): the male breadwinner model and its reverse, the female breadwinner, where only one partner (man or woman) has a paid full-time job and the other partner works less than 10 hours; the modified breadwinner model in which one partner (man or woman) is the main breadwinner and the other has a job (part-time, occasional, seasonal) contributing in part to the household income; the 'dual-earner model', in which the partners both work, either full time or part time.

In 2010 in Europe the 'male breadwinner model' has declined in significance, with only 11% of households conforming to it. The households mainly fall into the dual-earner (36%) and the modified breadwinner (17%) models. Apart from Malta and the Netherlands, both partners working full time is the most common pattern, with the proportion varying from around 35% of households in Ireland to 70% in the Czech Republic and Slovakia.

In some countries (mainly the EU12), the three most represented models are as follows.

- The majority are dual-earner households where both partners work full time.
- Some 15%–25% of households along the male breadwinner model.
- Some 10%–15% of households follow a female breadwinner model.

Figure 3: Household wage earner models in Europe (%)



Greece, Poland and Portugal follow this pattern but with a slight variation – the number of households following the female breadwinner model is almost equal to the number of households following the modified male breadwinner.

Even in Austria and Germany, where until now the male breadwinner model was dominant, slightly less than 40% of households have both partners working full time and the same proportion follows the modified male breadwinner model.

Self-employment

Around 15% of working people in Europe are currently self-employed. In several countries, this status gives rise to specific regulations, social protection and rights. As in previous studies, the fifth EWCS found variations in the proportion of self-employed across the EU27 – from above 30% in Greece to below 10% in Denmark, Latvia and Sweden. As shown in Figure 4, the population of self-employed fell in the early 2000s before rising again by 2005 and declining slightly by 2010. The data suggest the main decline is concentrated in the category of self-employed with employees, down from 5% of workers in the 2000–2001 EWCS to 4% in 2010.

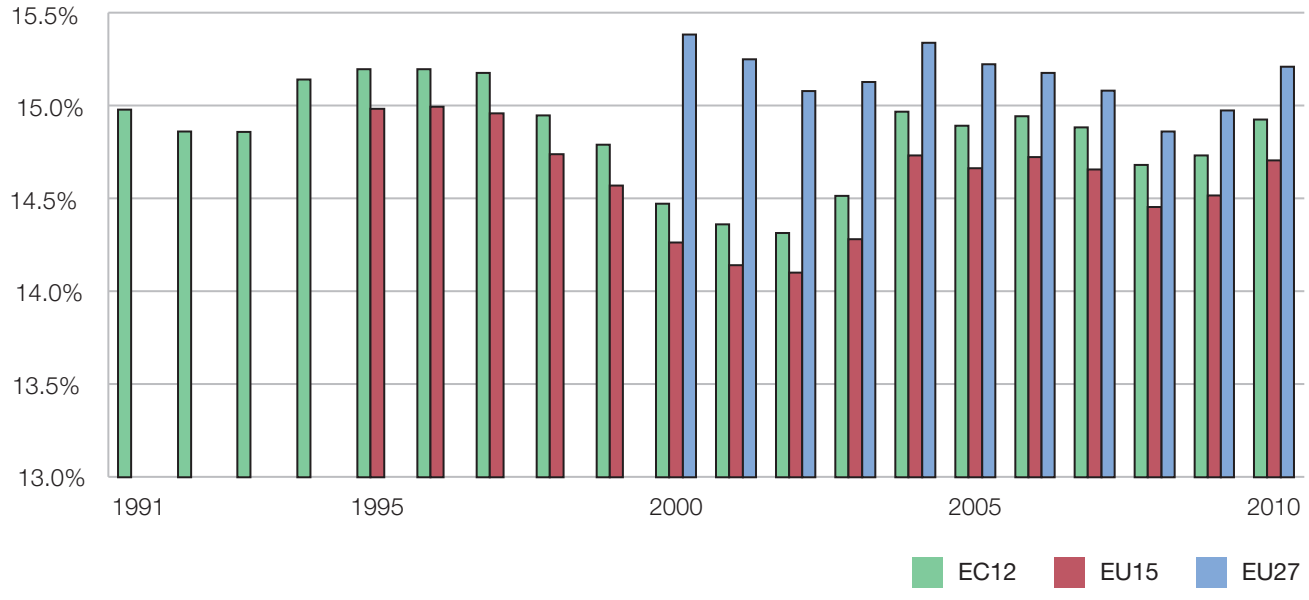
Characteristics of self-employment

Self-employment is difficult to identify and characterise. As many studies show, there is no simple characterisation of a self-employed worker, and comparative studies underline the variety of situations that could be considered as self-employment (Pedersini and Coletto, 2010). In Europe, there is currently neither a straightforward definition of self-employment nor of self-employed workers. Moreover, there are blurred situations where self-employed workers perform work under an entrepreneurial status while being in a 'dependent' (subordinate) position. Finally, there could be some ambiguity in the 'self-declared' status obtained with the EWCS methodology.

It is usually assumed that the main characteristic of self-employment is an entrepreneurial way of working. An entrepreneur is characterised by specific powers, such as autonomy of decision-making in organising work and hiring people, financial independence and related responsibility and constraints. 'Genuine' self-employed people are expected to possess these competencies.

The fifth EWCS questionnaire uses four parameters to distinguish the declared self-employed (especially self-employed without employees) from employees. Economic independence is considered by asking about the degree of dependency on only one client (a 'genuine business' is assumed to seek income from different sources). Secondly, resources should come through payment for products or services provided and not from a regular (monthly) payment like a salary. The other two parameters are the capacity for hiring staff when needed and the ability to decide significant steps for the business.

Figure 4: Self-employment as a percentage of the employed population over time



Source: Eurostat, LFS, 2010

Having more than one client, not receiving regular payment, and being able to take decisions for organising work and recruiting staff could be considered the marks of entrepreneurship. The survey results highlight the high proportion of financial autonomy (more than one client) and autonomous decision-making power (autonomy of decision on work organisation). A third (33%) of the declared self-employed without employees in 2010 have all four of these characteristics; 43% have three out of the four; and more than half of the declared self-employed (57%) have more than one client, no regular fee and decision-making powers in their organisation.

However, caution should be exercised when analysing the data as the sample size is small (particularly for self-employed without employees). In addition, the formulation and interpretation of the question posed is complex. Given the context (economic crisis), the accuracy of the answers to the question on the power to recruit as an indicator of the autonomous power of the entrepreneur may be reduced as respondents could have considered hiring staff but this was not possible due to economic constraints. Therefore, negative answers to this question could include a mix of potential impediments due to economic difficulties and structural impossibility due to lack of power in this field.

Profile of the self-employed worker

Despite this ambiguity, the self-employed can still be analysed as a specific category of workers. They have significant characteristics, for example, in terms of social protection and collective representation. In addition, various labour market regulations emphasise the differences between the self-employed and employed. Aspects of the profile and working conditions of the self-employed illustrate the differences between the two statuses.

The self-employed in Europe are older than their employee counterparts. Around 87% are over 35 years old and a third are over 50 years old, whereas more than three-quarters of employees are less than 49 years old.

The pattern of initial education for the whole population of workers applies to the self-employed, although the self-employed population has some specific characteristics. The proportions of self-employed who both 'finished full-time education before or at the age of 15' and who 'completed primary education or a first stage of basic education' are higher than their employee counterparts. Considering the latter level of education, this is especially true for women; there are more than twice as many in self-employment (7%) than in contractual employment (3%).

Turning to upper levels of education, another interesting figure is that the proportion of male workers with a second stage of tertiary education is almost the double among the self-employed (3%) than among employees (1.5%). In addition, the proportion of self-employed women with post-secondary education (39%) is higher than the proportion of women employees with the same level of education (37%).

The occupational profile of the self-employed differs from the profile for the employed, with concentrations in different occupations (Table 8).

Three occupations have almost the same proportion of self-employed and employees: professionals (16%), craft and related workers (14%) and service and sales workers (15%–17%). The self-employed are managers (17%) and skilled agricultural workers (16%), occupations in which the proportion of employees is extremely low (6% and 2% respectively). Conversely, the proportion of the self-employed in occupations such as technicians, elementary occupations and plant and machine operators is half that of employees. As expected, 90% of the self-employed work essentially in the private sector and less than 5% in the public sector.

The differences in the profile of employees and the self-employed have impacts on the working conditions experienced by the two groups of workers. These differences are highlighted in the following sections of the report.

Table 8: Occupation, by employment status (%)

ISCO code (1-digit)	Employed	Self-employed
Managers	6	17
Professionals	16	17
Technicians and associate professionals	17	10
Clerical support workers	11	2
Service and sales workers	17	15
Skilled agricultural workers	1	16
Craft and related trades workers	14	15
Plant and machine operators	8	4

5th
European
Working
Conditions
Survey

CHAPTER 2

Working environment and work organisation

Working environment and work organisation

This chapter explores characteristic features of the workplace, looking at the institutional factors and policies that impact on the work environment and the constraints within which work is carried out.

The chapter begins by examining the nature and extent of organisational change in Europe. This is followed by a section that analyses how much time Europeans spend working and where they work. The next section focuses on exposure to physical, posture-related and psychosocial risks, including harmful social behaviour. The final section of the chapter deals with the characteristics of work organisation in Europe. Trend data from the EWCS are presented where possible.

Organisational change

The fifth EWCS introduced a new question (Q15) aimed at eliciting to what extent organisational change had impacted on an individual's immediate working environment during the three preceding years. The question covers the following two aspects of change:

- 'new processes or technologies' – different kinds of new work processes (for example, teamworking), new monitoring systems, new machinery, new computer software, etc.;
- 'substantial restructuring or reorganisation' – dismissals, reorganisation of business units, closing of a branch, etc.

The inherent limitation of this question is that details such as the type, number and extent of the changes in the workplace cannot be identified. In addition, the relatively long timespan allowed means that it is not possible to pinpoint whether the changes took place simultaneously or at different times during the three years prior to the interview. Nevertheless, the answers to the two sub-questions can be interpreted as a proxy for the extent of organisational change in workplaces and therefore for workers' level of exposure to significant organisational change within the previous three years.

A quarter of employees in Europe report both types of organisational change having an impact on their workplace. An additional 17% report the introduction of new processes or technologies, and 9% report cases of restructuring or reorganisation. Altogether, just over half the employees in Europe witnessed the occurrence of some type of organisational change at their workplace in the three years prior to the survey.

The extent to which employees report organisational change varies greatly between countries (Figure 5). Persons in candidate and potential candidate countries report a much lower level of exposure to organisational change as a whole and are, not surprisingly, situated below the average for the EU27. At the opposite end of the spectrum, Sweden, Finland and Denmark have the largest share of workers reporting exposure to organisational change.

Financial services, industry, health, transport, and public administration and defence are the sectors where the largest proportion of workers report having been exposed to organisational change during the previous three years

(Figure 6). Financial services is the sector where workers seem to be most exposed to organisational change. The concurrent introduction of 'new processes and technologies' and 'restructuring and reorganisation' are reported by over one-third of workers in that sector. In total, two-thirds (67%) of employees report having been exposed to at least one of the organisational changes considered. However, perhaps surprisingly, the construction sector, a sector deeply affected by the 2008–2010 recession in terms of restructuring and jobs destruction (see Hurley et al, 2009; Mandl et al, 2010), shows a relatively lower proportion of employees reporting restructuring or reorganisation at their workplace.

Figure 5: Organisational change over the last three years, by country (%)

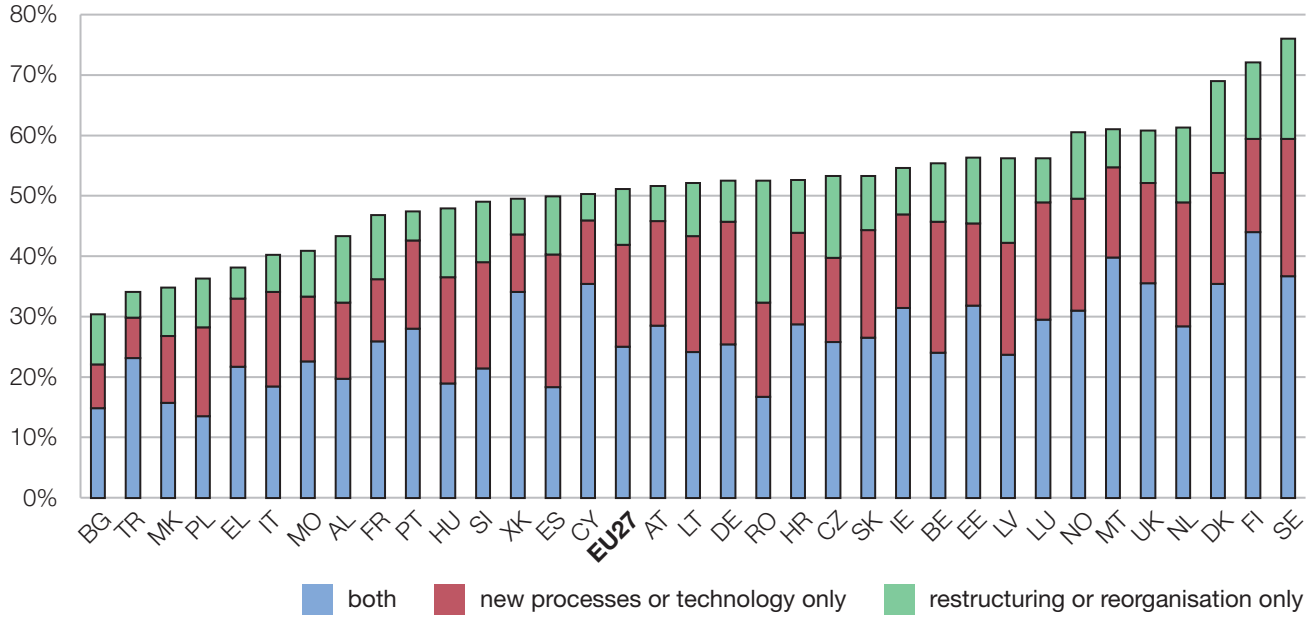
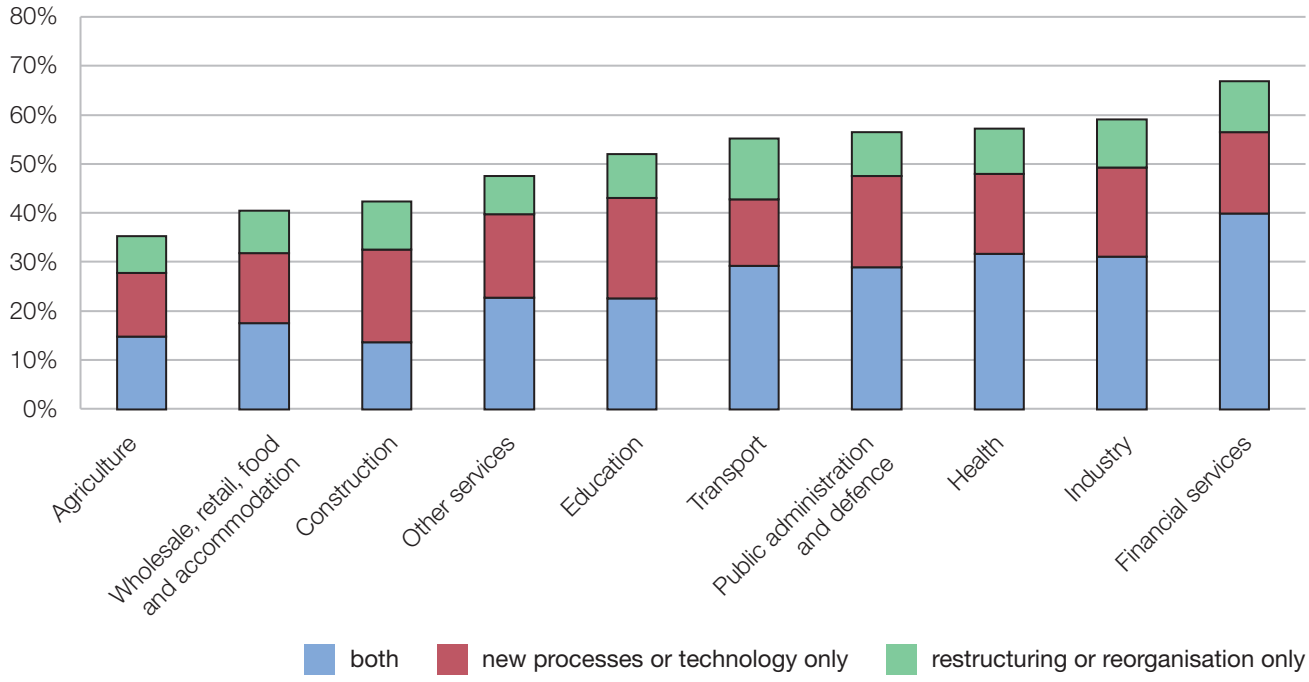


Figure 6: Organisational change over the last three years, by sector, EU27 (%)



Working time and place of work

Some of the changes to working time introduced in recent years in Europe are of fundamental importance for workers, their households, the companies that employ them and for society as a whole, with implications for the quality of work and life and workers and employers' ability to use time as an instrument for growth. The Working Time Directive (2003/88/EC) states that working time policies should aim to achieve the following goals:

- ensure a high level of protection of workers' health and safety in terms of working time;
- allow for greater flexibility for companies and Member States with regard to the management of working time;
- ensure a better balance between working and private life;
- avoid unreasonable constraints on companies, in particular on small and medium enterprises (SMEs).

Dimensions of working time

Working time has changed from the traditional 'nine to five – five days a week' arrangement to a more varied approach, both in the number of working hours and in the organisation of working time. This shift is due to:

- increasing numbers of people working in the service sector;
- extension of opening hours of shops in many countries;
- competition and globalisation of markets;
- increasing participation of women in the labour market.

There are now more possibilities for flexibility both in volume and organisation of working time in order to adapt to the diverse needs of employers and/or employees. Instruments such as flexible working time and working time accounts are commonly available. Time is the object of negotiation at individual and collective levels.

Understanding the fit between the different persons' needs is important to promote win–win solutions and to address potential difficulties.

The European social agenda has a strong time dimension. Achieving the Europe 2020 target of 75% employment of all 20–64 year olds by 2020 will require a rethinking regarding social times in different life phases to ensure a satisfactory balance between work and private life. It will also require a redefinition of the status of care. Currently, it is mostly an unpaid activity, or considered low- or medium-qualified work and EU Member States tend to have different approaches, often carried out in parallel. For example, in some countries, women are expected to stay at home to look after their children and other dependants; in other cases, the care of young children is seen as an occupation and high earners hire someone else to look after their children while they are out at work. In some countries, minding children and dependants is carried out in crèches or other institutions, where the staff are qualified and have career development opportunities. This is also embedded in the context of the different use of time and work within societies (Boulin and Mückenberger, 1999; Boulin, 2008).

These different types of arrangements impact on people's ability to work in terms of time planning and number of hours. They also have an impact on the number and quality of caring jobs. From another perspective, achieving a high level of participation of workers of all ages in the European workforce may require adjusting working time to suit different phases of life, including the transition from full-time to part-time working and vice versa.

The current economic crisis is raising new questions regarding working time, for example regarding the impact of short-time working schemes. Can working time be reduced while at the same time maintaining a skilled workforce and preventing unemployment and loss of expertise? Could reducing working hours in fact create jobs?

Time is also a dimension of cultural and societal change which is related to the place and value assigned to the various social times. Furthermore, it needs to be linked to the transformation of social relations between genders, ages and social classes. More generally, one can also say that time is money, as the quantity of working time is generally associated positively with earnings.

Time is a productive factor for companies, in particular when:

- production systems can, or are, operated 24/7 in a global market and value chain;
- the service economy requires the coming together at the same time of a client and a producer;
- the development of flexible systems allows more individualised needs to be catered for (including allowing the working time of workers to be arranged in a flexible way, predictable or not).

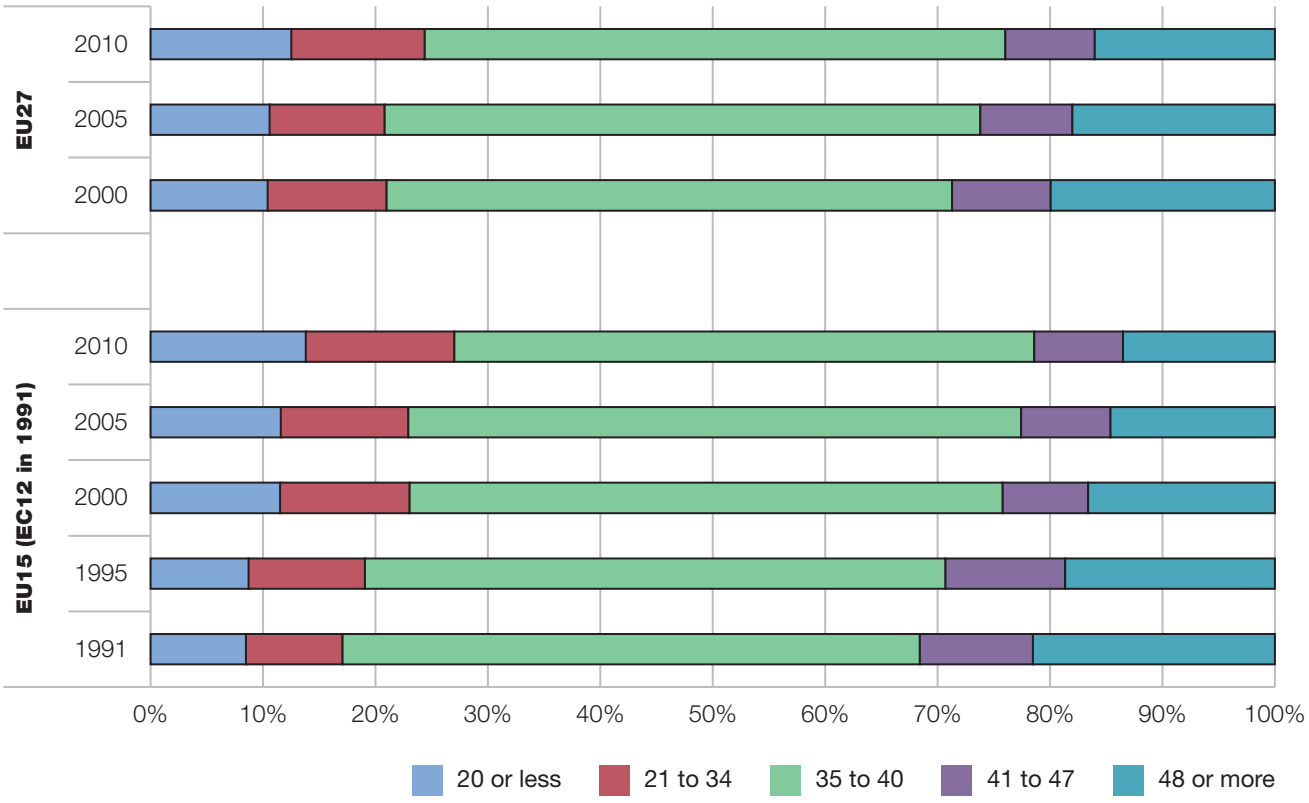
Working hours play a crucial role in the health and well-being of workers. The consequences of long or atypical hours on health are well known and have led to the adoption and definition of norms limiting such working hours. Working hours are fundamental for work–life balance, but given the variation in gender roles, different approaches might be appropiate for men and women, alongside a life cycle view. The extent of free working and non-working, time impacts on lifelong learning and the capacity to engage in activities which have a bearing on employment security, essential for the flexicurity model.

Technology can usefully support time management. The development of information technologies allows for more mobile work and work outside the traditional place of work, and therefore outside traditional working hours. Of course, this can lead to the blurring of the boundaries delimiting working time, making the measurement of such time quite difficult.

Working time patterns across countries and time

In line with the results of the EU Labour Force Surveys series, the findings of the fifth EWCS show that average working hours have reduced over time. The average working time in the EC12 in 1991 was 40.5 hours a week; in 2010 it was 37.5 hours a week in the EU27 (36.4 hours a week in the 12 'old' Member States[17]) (Figure 7). The number of people working part time – both 'short part time' (that is, working 20 hours per week or less) and 'substantial part time' (that is 21–34 hours per week) – has gradually increased from 17% in the EC12 in 1991 to 25% in EU27 in 2010 (27% in the EC12), while the number of people working long hours (working 48 hours or more per week) has decreased from 18% in the EC12 in 1991 to 13% in the EU27 in 2010 (12% in the EC12).

Figure 7: Evolution of weekly working hours, 1991–2010 (%)



[17] For more in-depth analysis on this subject, the reader should refer to the EU LFS at http://epp.eurostat.ec.europa.eu/portal/page/portal/microdata/lfs.

However, the EU average masks important differences between countries – especially regarding the distribution of working hours (Figure 8). Although there is not much variety in the number of hours worked in some countries (for example, Hungary, Latvia and Lithuania), the spread is much larger in others (for example, Austria, Belgium, the Netherlands, Poland and the UK). In most of the countries with a large spread, a wider variety of working time patterns is possible – mostly in different forms of part-time work. In other countries, however, some workers tend to work longer hours.

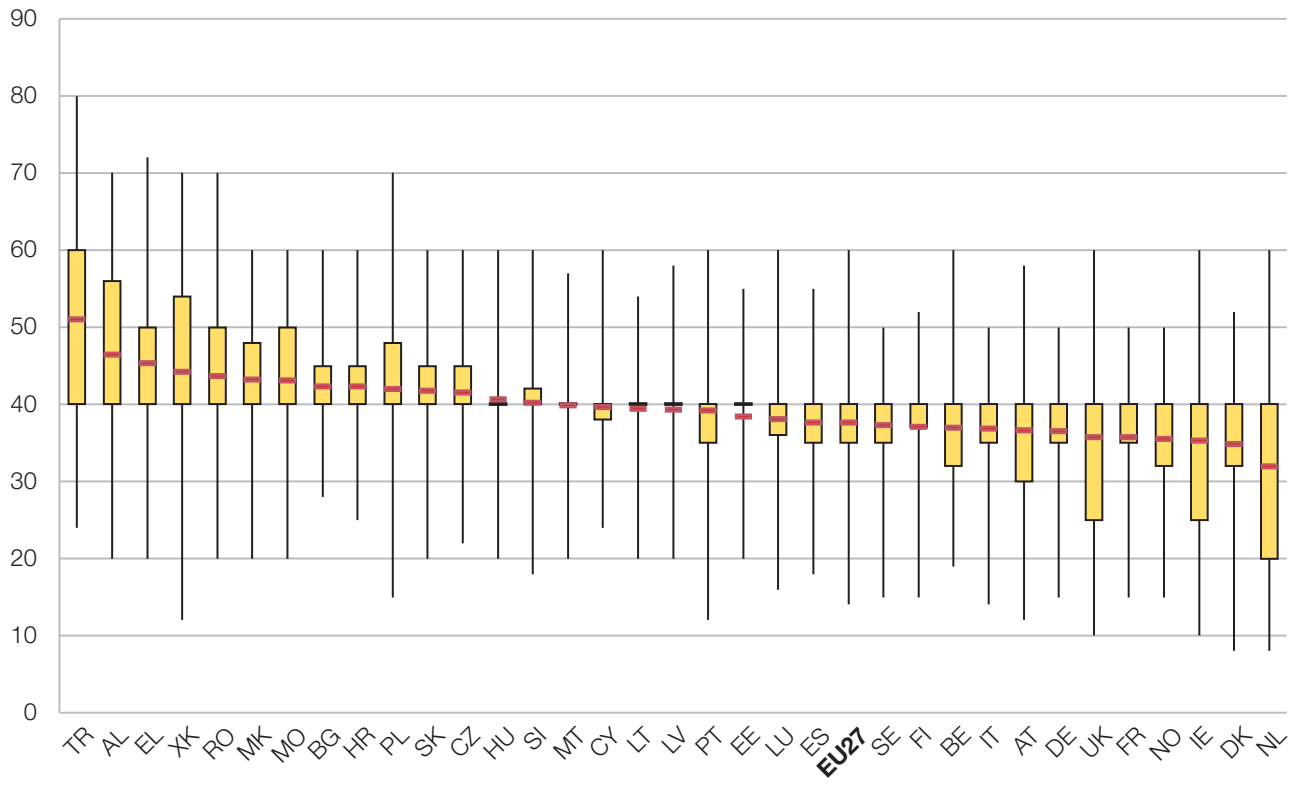
Changes in working time over the previous 12 months

The recession has had repercussions on working hours in different ways. Some workers have been laid off, others have reduced their working hours (for instance in short-time working schemes, possibly in combination with training or as part of a special leave scheme or using up accumulated flexitime), while others have seen an increase in their working hours (possibly because fellow workers have lost their jobs).

A new question[18] was included in the fifth EWCS to measure the change in working time duration since January 2009, with a view to understanding the situation of people who had a job at the time of the survey but who may have changed their working hours due to the recession or other factors.

Overall, 71% of the workers report no change but around 18% report an increase and 11% a decrease in their weekly working hours. This reflects the situation of workers who are still in employment and discounts the number of

Figure 8: Average weekly working hours, by country



Note: The red line represents the average weekly working time, the box represents the interquartile range (that is, 50% of the workers fall within the categories of working hours defined by the box) and the longer lines represent the 5th and 95th percentiles.

[18] Q14: If you compare your current situation with that of January 2009, have you experienced a change in the following aspects of your work? A – The number of hours you work per week? B – Your salary or income?

workers who lost their job (and who are no longer part of the survey unless they had worked for at least one hour in the previous week for pay). Young workers in particular indicate an increase in working hours (with no gender differences) – which might indicate a normal career development compared to the other age groups. However, at the same time, both younger and older workers report more of a decrease in working hours compared with workers of prime working age (aged 35 to 49 years).

Country differences in this respect are striking (Figure 9). In Estonia, Ireland, Latvia and Lithuania, the situation is the opposite to that prevailing in the other countries, with more workers reporting a decrease (17%–24%) than an increase (9%–15%).

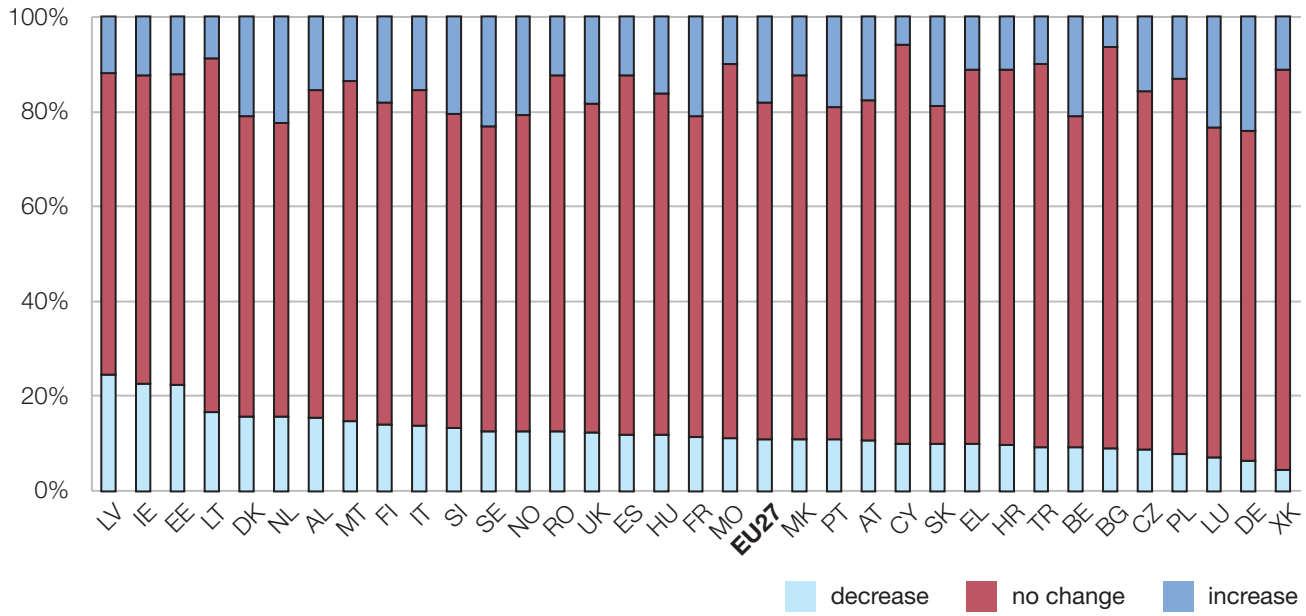
Construction is the only sector in which more workers are subject to a decrease in working hours (19%) compared with those who report an increase (14%). In the transport and industry sectors, 13% and 12% of the workers respectively saw a decrease (compared to 18% and 16% who saw an increase). More than 20% of workers in education, health, other services and financial services report an increase in working time over the previous year.

Part-time work

Nearly 24% of European workers work part time – defined as working 34 hours per week or less.[19] Part-time work is a predominantly a female affair: 38% of women work part-time compared with 13% of men. Part-time working can be voluntary (worker's choice) or involuntary (for example, at the request of the employer, or where it is the only job available, or dependent on the availability of social infrastructure).

The extent of part-time work varies considerably between countries. In the Netherlands, more than half of all workers (51%) work part time, followed by Belgium, Denmark, Ireland and the UK where around 30% of workers work part time. In these countries, it is mainly women who work part time (more than 80% in the Netherlands, 55% in the UK, 53% in Ireland and 46% in Belgium), and this is more or less evenly spread across different age groups. In Denmark, 41% of female workers work part time – in particular young women (53% of young female Danish workers work part time). Part-time work among men is more prevalent in the Netherlands (25% of male workers) and Denmark (21% of male workers).

Figure 9: Change in working time over previous 12 months, by country (%)



[19] The operationalisation of part-time work in this survey is based on a statistical definition, which is also used in the European Labour Force Survey (with 34 hours being the division between part-time and full-time work). However, there might be other operationalisations based on conventional agreements, which might vary between Member States and between types of activity.

Whereas women tend to work part time throughout their working life, men tend to work part time just at the beginning and end of their careers.

Part-time work can be categorised as either 'short' (fewer than 20 hours a week) or 'substantial' (between 20 and 34 hours a week). Across the EU as a whole, 19% of women and 7% of men work 'short' part-time. Only 3% of men aged 35–49 are on 'short' part-time hours compared with 18% of women in that age group (Figure 10).

Part-time jobs are found mostly in particular sectors. More than 38% of part-time workers (both 'short' and 'substantial') and more than 15% of the workers in short part-time work in the education, health and social services, other services, and retail and wholesale sectors. In terms of occupations, there are significant numbers of part-time workers in elementary occupations, service and sales, professionals and clerical support.

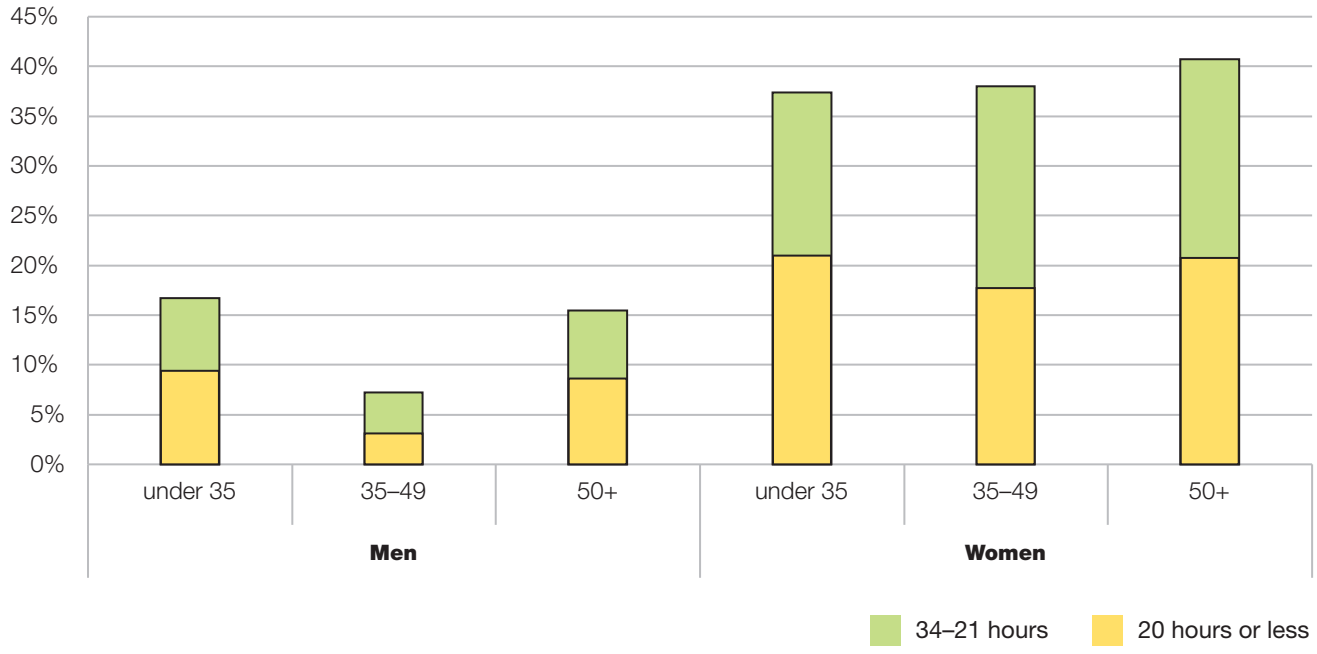
Part-time work is not always the preferred option of workers: 37% of those working part time and 45% of the short part-time workers would like to work more hours compared with just 10% of those working more than 34 hours per week.

Part-time work is associated with achieving a better balance between working life and private life.[20] Part-time workers are more likely to indicate that their work–life balance is 'good' or 'very good': 93% of short part-timers and 91% of part-timers compared with 80% of those not working part-time. They are also in a better position to take an hour off work for a private emergency situation (71% of short part-timers and 68% of part-timers compared with 64% of other workers).

However, those who work part time are less likely to say they have good career prospects. Of the 'short' part-timers (working 20 hours or less per week), only 23% 'agree strongly' that they have good career prospects compared with 28% of the 'substantial' part-timers (working 21–34 hours per week), who in turn indicate that they have lower career prospects than full-timers (around 33%–35%) In addition to the division between part-time and full-time, fewer women (whether working full time or part time) indicate they have good career prospects compared with men.

Across the EU, 16% of all workers agree strongly with the statement that they might lose their job within the next six months. There is no difference between male and female workers in this regard, or between workers working substantial part-time and those working full-time. However, 19% of part-time workers working short hours report that they are afraid of losing their job.

Figure 10: Part-time work, by gender and age (%)



[20] The associations remain after controlling for occupation and sector by ISCO and NACE classifications respectively.

Furthermore, part-time work correlates negatively with high income, indefinite contracts, night work, work intensity, work-related health risks and adverse health effects.

Long working hours

'Long' working hours is defined as working 48 hours a week or more. On average, long hours are worked by 43% of self-employed workers without employees, 54% of self-employed workers with employees and 11% of employees.

There are important differences between countries. More than 20% of workers work long hours in 10 countries: Albania, Bulgaria, Croatia, the Czech Republic, Greece, Kosovo, Montenegro, Slovakia, Turkey and the former Yugoslav Republic of Macedonia. Long hours are chiefly worked by men: over 30% of men work long hours in the Czech Republic, Greece, Poland, Romania and Slovakia, and more than 20% of men work long hours in Bulgaria, Ireland, Slovenia and the UK. However, there are hardly any gender differences for some countries: for example, in Greece and Romania more than 30% of women work long hours.

People who work more than 48 hours a week report more problems in terms of work–life balance and health than those who do not. They are indeed four times less likely to report that they have a good work-life balance. Besides health problems associated with working long hours, people who work 48 hours or more also indicate that they are more exposed to work intensity, think more often that their health and safety is at risk because of their work and think less (albeit not very much) that they might be able to do the job until they are 60. They also report slightly more that they are learning new things on the job. All these differences are significant.

However, the findings show that there are hardly any differences (and the differences are not significant) between those who work more than 48 hours per week and those who do not in terms of feeling well paid for the job they do, feeling at home in the organisation and being consulted about work targets (Table 9).

Working time preferences

A majority of workers (57%) are satisfied to work the same number of hours as they do currently. However, a considerable proportion would like to work fewer (29%) or more (14%) hours. The question in the fifth EWCS asks about working time preferences if workers were able to choose their working hours (taking into account the need to earn a living). There are important differences concerning the responses when controlled for age, gender, employment status and current working hours (Figure 11).

There are also country differences (Figure 12). In Sweden and Turkey, only 40% of workers would opt for the same number of working hours if they could choose and significant proportions of workers would like to work fewer hours. This contrasts with Bulgaria where more than 70% of workers are satisfied with the hours they work. The reasons for these responses could be based on different factors.

Table 9: Long working hours and working conditions (%)

	Working less than 48 hrs	Working 48 hrs or more	Odds ratio (working 48 hrs or more)
Good fit between working hours and social commitments	85	62	0.259
Health and safety at risk because of work	22	37	1.886
Work affects health negatively	23	37	1.785
Working at high speed at least half the time	44	54	1.850
Feeling well paid for the job	41	40	N.S.
Job involves learning new things	68	69	1.203
Consulted before work targets are set (always or most of the time)	46	52	N.S.
Feeling at home in the organisation you work for	69	74	N.S.
Able to do job at 60	59	57	0.814

Notes: The effect of the variables is expressed in odds ratios. The odds ratio is a way of comparing whether the probability of a phenomenon is the same for two groups. An odds ratio of 1 implies that the phenomenon is equally likely in both groups. An odds ratio greater than one implies that the phenomenon is more likely for those working 48 hours or more. An odds ratio less than one implies that the phenomenon is less likely for those working 48 hours or more.

The effects are controlled for variation between countries, sectors and occupations.

N.S. = not significant, all reported odds ratios are statistically significant ($p<.05$)

Figure 11: Working time preferences, by employment status, age and working time (%)

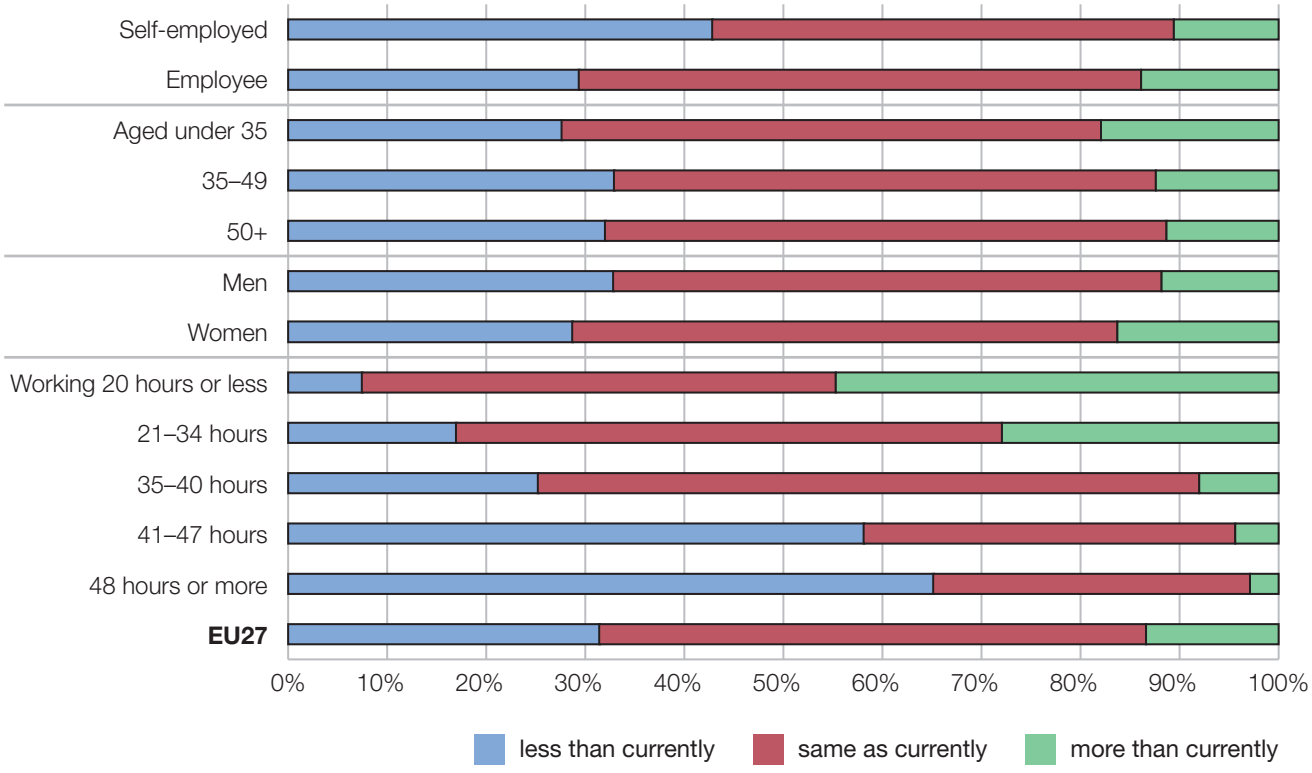
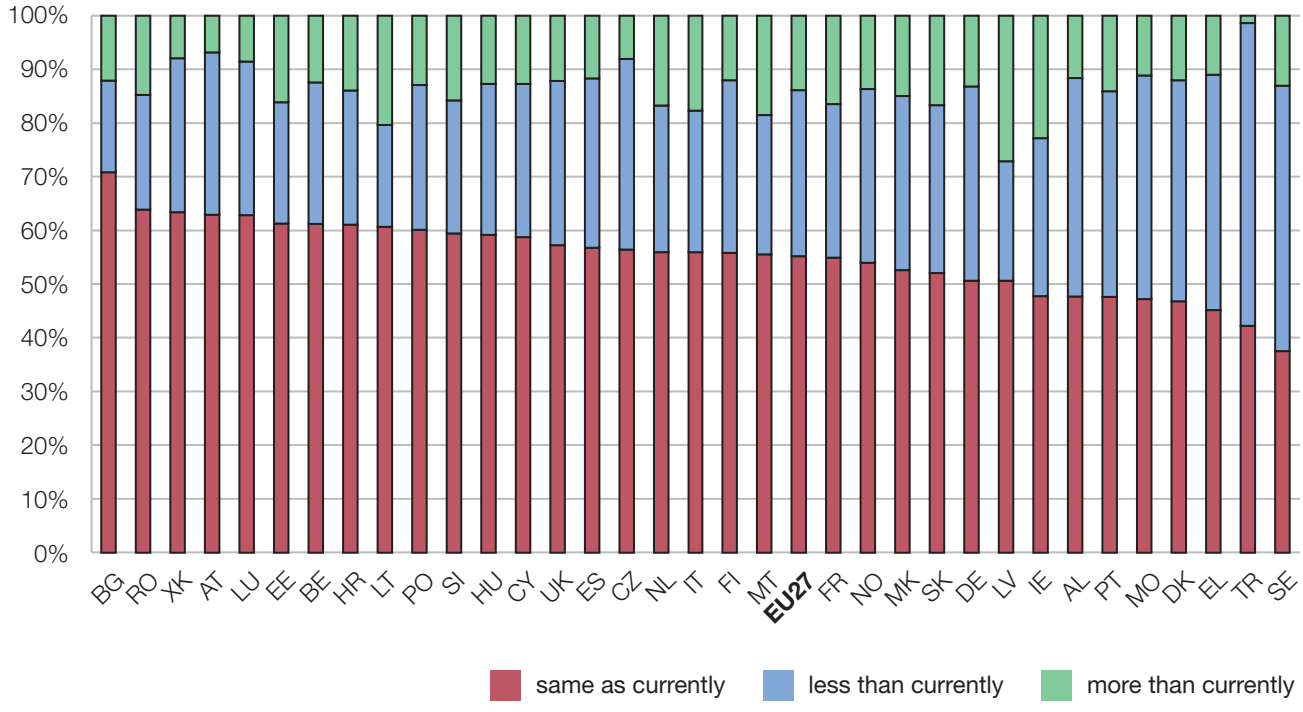


Figure 12: Working time preferences, by country (%)



In Ireland, Latvia and Lithuania more than 20% of workers would prefer to work more hours – these three countries had the highest proportion of workers reporting a decline in their working hours since January 2009.

Different factors explain the likelihood of wanting to increase or decrease working hours (Table 10).

According to a regression analysis on those who would like to decrease the working hours, men and young workers are less likely to want to cut down on their hours compared with women on the one hand and middle-aged and older workers on the other hand. There is no significant difference between workers with a temporary or other contract and self-employed compared with those who have a permanent contract.

Persons working long hours (more than 48 hours per week) are more than four times (4.6) as likely to want to cut down on their working hours compared with those who work 35–47 hours per week. Workers who work part time (fewer than 34 hours) and short part time (fewer than 20 hours per week) are significantly less likely to report that they would like to work fewer hours.

Working atypical hours also almost doubles the chance of workers wanting to reduce their working hours (1.8 times higher). A higher work intensity also significantly increases the chance (1.3 times higher) of wanting to reduce working hours, while more autonomy also significantly (but only slightly significant) increases the chance of this. Workers in the lowest income bands are slightly less likely to indicate that they would like to cut down on their working hours, but for those in the higher income bands there is no difference with those who have medium earnings.

Table 10: Factors influencing wish to change working hours

	Work less	Work more
Men	0.700	1.457
Women	ref	ref
Under 35	0.822	1.219
35–49	ref	ref
Fifty+	N.S.	0.827
Employee on permanent contract	ref	ref
Employee on temporary contract	N.S.	1.566
Employee on other contract	N.S.	1.368
Self-employed	N.S.	N.S.
Working 48 hrs or more	4.586	0.400
Working between 35 and 47 hrs	ref	ref
Working between 20 and 34 hrs	0.344	6.783
Working 20 hrs or less	0.223	10.556
Level of atypicality of working time (continuous)	1.843	N.S.
Level of work intensity (continuous)	1.353	1.465
Level of job autonomy (continuous)	1.138	N.S.
Low earnings	0.864	1.397
Medium earnings	ref	ref
High earnings	N.S.	0.799
Nagelkerke pseudo R^2	0.202	0.266

Notes: The effect of the variables is expressed in odds ratios. The odds ratio is a way of comparing whether the probability of a phenomenon is the same for two groups. An odds ratio of 1 implies that the phenomenon is equally likely in both groups. An odds ratio greater than one implies that the phenomenon is more likely for the group included in the model. An odds ratio less than one implies that the phenomenon is more likely for the reference group. Because the level of atypicality of working time, of work intensity and of job autonomy are continuous variables that are coded to range between 0 and 1. The odds ratio denotes the difference in the likelihood of wanting to work less or more between those with the lowest and those with the highest level.

The effects are controlled for variation between countries, sectors and occupations.

N.S. = not significant, all reported odds ratios are statistically significant ($p<.05$)

The Nagelkerke pseudo R2 denotes the proportion of variance in the dependent variable that is explained by the independent variables in the model.

Therefore the analysis suggests a link between the wish to decrease working time and elements related to the duration and organisation of working time.

However, a regression analysis carried out on those who would like to increase their working hours reveals completely different elements. Men are more likely to want to increase their hours than women. The age of workers is significant both for younger workers (more likely to want to increase their working hours) and older workers (less likely) compared to workers in the middle age group. Having a non-permanent contract makes a significant difference (more likely to want to increase) but being self-employed does not.

The number of hours worked plays an even more important role in determining the likelihood of wanting to change working hours. Part-time workers are 6.8 times more likely and workers working short part-time 10.6 times more likely to say they would like to increase their working hours, compared to those who work between 35 and 47 hours per week. Those working long hours (48 or more) are less likely to report that they would like to increase their working hours. Working atypical hours does not make a significant difference in this respect.

Earnings from work also make a difference: those in the lower income bands are significantly more likely to want to increase their working hours while those in higher income bands are less likely. Work intensity increases the chances of wanting to work more, but autonomy does not make a significant difference.

This analysis points to the influence of the precarious status in terms of employment contract, earnings and current working hours on the willingness to want to increase working hours.

Regularity of working hours

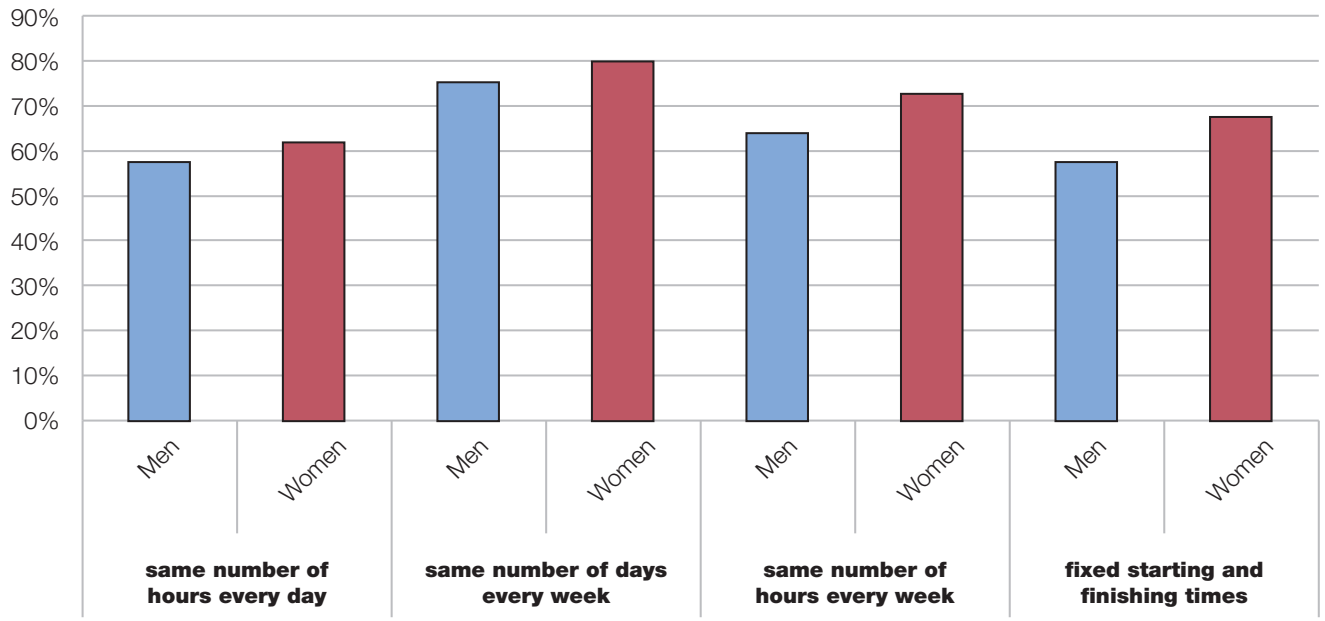
Most workers work standard working hours: from 9 am to 5 pm (or similar), five days a week. Regularity generally helps workers to combine work with their private life, although in some cases it can suit workers (and their family) to work a different regime.

Regularity is the norm for the majority of workers: 77% work the same number of days every week and 67% work the same number of hours every week. Regular hours are more common for women than for men (Figure 13); 58% of workers work the same number of hours every day, slightly more women (61%) than men (55%), and there is no difference in this respect between age groups.

This situation has changed little over time. A slightly higher proportion of people are working the same number of days each week in 2010 than was the case in 2005 when this indicator was first measured in the EWCS. For the other indicators the proportion has remained stable since 2000. The gender gaps (women working more regular hours and days than men) have similarly remained constant over time.

Regularity can be found most often in the industry and public administration sectors.

Figure 13: Regular working hours, by gender (%)



Employees (63%) work twice as often on a regular time schedule than the self-employed (whether with (33%) or without employees (29%)). Of the workers with regular hours, 84% indicate that they have a 'good' or 'very good' fit between working and private life compared with 71% of those who do not have the regular hours. They also have fewer health problems (24% compared with 30%).

Atypical working hours

A considerable proportion of workers work outside the standard working hours. More than half of all workers work at least one day in the weekend.

Around 26% work at least one Sunday a month and 10% at least three Sundays a month. This is slightly less than 15 years ago when 30% of workers in the EU25 (the EU27 minus Bulgaria and Romania) were working on a Sunday. Nearly as many women as men are now working Sundays, whereas previously Sunday work was more frequent for men. The majority of European countries have reduced the incidence of Sunday work since 1995, although Sunday work has been increasing in Denmark and the Netherlands.

Half of all workers (51%) work on Saturday, with 23% working at least three Saturdays a month. This is slightly less than in the mid-1990s.

Night work (working for at least two hours between 10 pm and 5 am) is undertaken by 19% of workers in the EU27, although it is more common for men (23%) than women (14%). Most men who carry out night work are aged 25–39 years (25%) and most women are aged under 25 years (16%). One in ten workers (10%) carries out night work more than five times a month.

Night work and Saturday work remain more frequent for men than for women and the gender gaps have not reduced over time.

Shift work is carried out by 17% of workers across the EU and in this regard there are no gender differences. Full-time workers do more shift work than part-time workers. Younger workers more often work shifts than older workers. In 2010, 18% of European workers report working a night shift – a slow decline since 1991.

Just over one worker in five (21%) works 'on call'. On-call work is undertaken mostly in transport (30% of workers), construction (27%), public administration and defence (24%), health (25%) and agriculture (23%). Men (23%) work more often on call than women (16%), and slightly more full-time workers carry out on call work in comparison with part-time workers.

A regression analysis comparing them to persons not working atypical hours confirm that atypical workers, both shift workers and workers who work on call, are less likely (0.5 and 0.6, respectively) to experience a good work–life balance when most job and individual characteristics are controlled for.

In addition, workers with atypical work schedules are more likely to report more often that work has a negative impact on their health. Again, when comparing them to workers not working atypical hours, persons working shifts and on call are more likely to report that their work affects their health negatively (1.5 times more likely for shift workers, 1.4 times more likely for on-call workers). Workers doing shift work and workers working on call also report higher levels of work intensity (defined as working at high speed for half their working time or more). Work intensity for shift workers is 1.6 times more likely to be higher and 1.5 times more for on-call workers compared to those who do not work these atypical work arrangements.

Table 11: Impact and effects of atypical working hours

	Shift work (%)	No shift work (%)	Odds ratio (shift work)	On call work (%)	No on call work (%)	Odds ratio (on call work)
Good fit between working hours and social commitments	71	84	0.519	74	83	0.629
Work affects health negatively	33	23	1.522	32	23	1.360
Working at high speed at least half the time	55	44	1.601	52	44	1.478
Consulted before work targets are set (always or most of the time)	40	48	0.790	52	46	1.256
Feeling at home in the organisation you work for	60	72	0.728	69	70	N.S.

Notes: The effect of the variables is expressed in odds ratios. The odds ratio is a way of comparing whether the probability of a phenomenon is the same for two groups. An odds ratio of 1 implies that the phenomenon is equally likely in both groups. An odds ratio greater than one implies that the phenomenon is more likely for those working shifts or on call. An odds ratio less than one implies that the phenomenon is less likely for those working shifts or on call.

The effects are controlled for variation between countries, sectors and occupations.

N.S. = not significant, all reported odds ratios are statistically significant ($p<.05$)

Shift workers report that they are consulted about their work targets less often than regular workers (0.7 time less likely). This is the opposite for on-call workers who report more often that they are consulted about their work targets (1.2 times more likely). Regarding the element of 'feeling at home at work', shift workers are 0.7 times less likely to feel at home compared to those who do not work shifts while there is very little difference in the reported figures between workers who work on call and not on call and the difference is not significant.

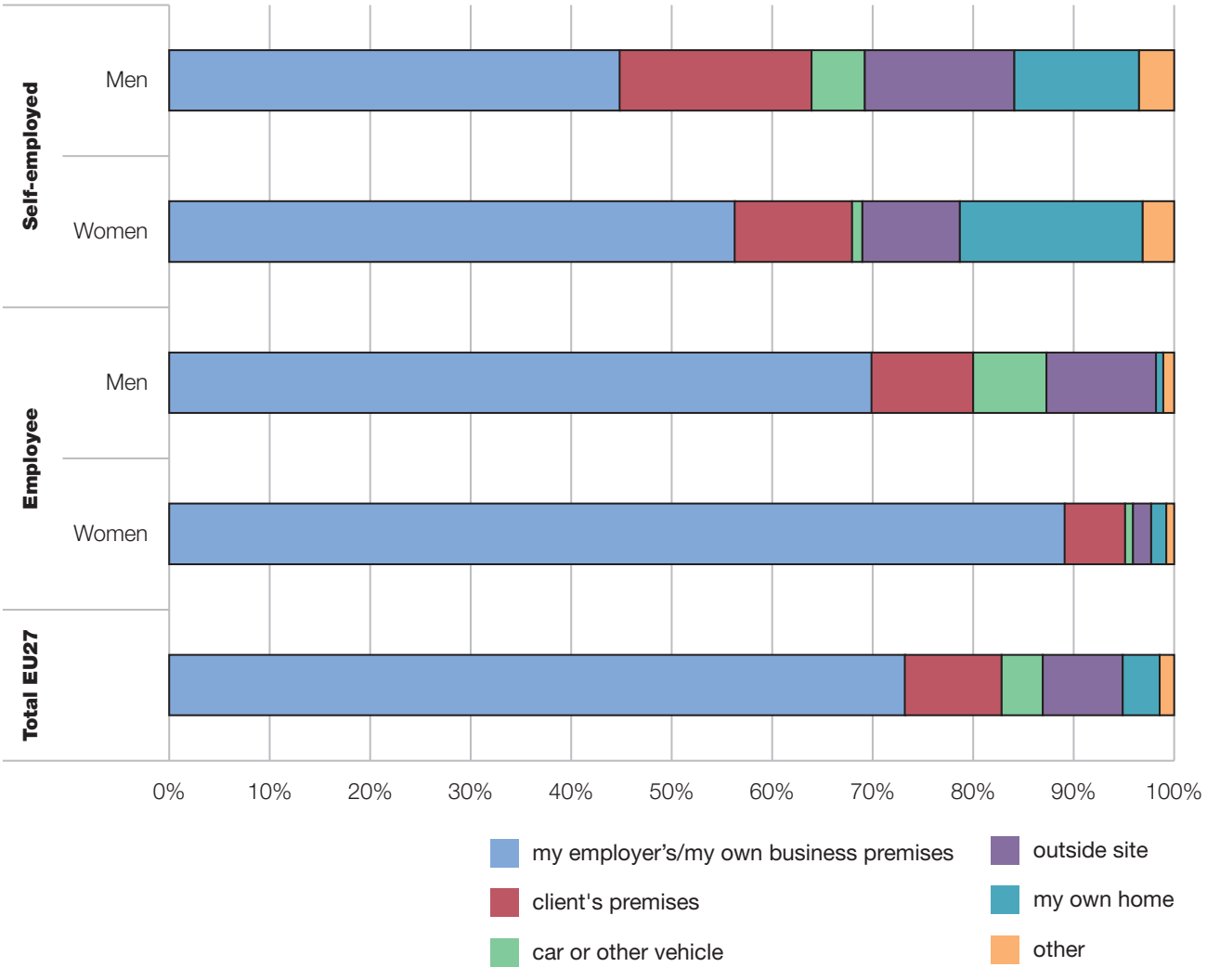
Place of work

The main place of work for almost three-quarters of European workers is their employer's premises (or their own premises if they are self-employed). More than a fifth work in an outside location either at clients' premises, in a vehicle or an 'outside site'; this includes construction sites, agricultural fields, streets, etc. Only about 4% report that they work from home.

As might be expected, the main place of work is significantly different depending on the type of employment and sex of the respondent (Figure 14). While the majority of employees (especially women) work at their employer's premises, this only applies to half the self-employed; the rest work mostly at their clients' premises, at an outside site or from home. Overall, there is a higher proportion of self-employed men working either at clients' premises or an outside site and a comparatively higher share of self-employed women working from home.

The proportion of individuals whose main workplace is not their employer's premises appears to increase with age, although male workers aged 35–49 account for the highest percentage (38%). Working from home in the EU27 is

Figure 14: Main place of work, by gender and type of employment, EU27 (%)



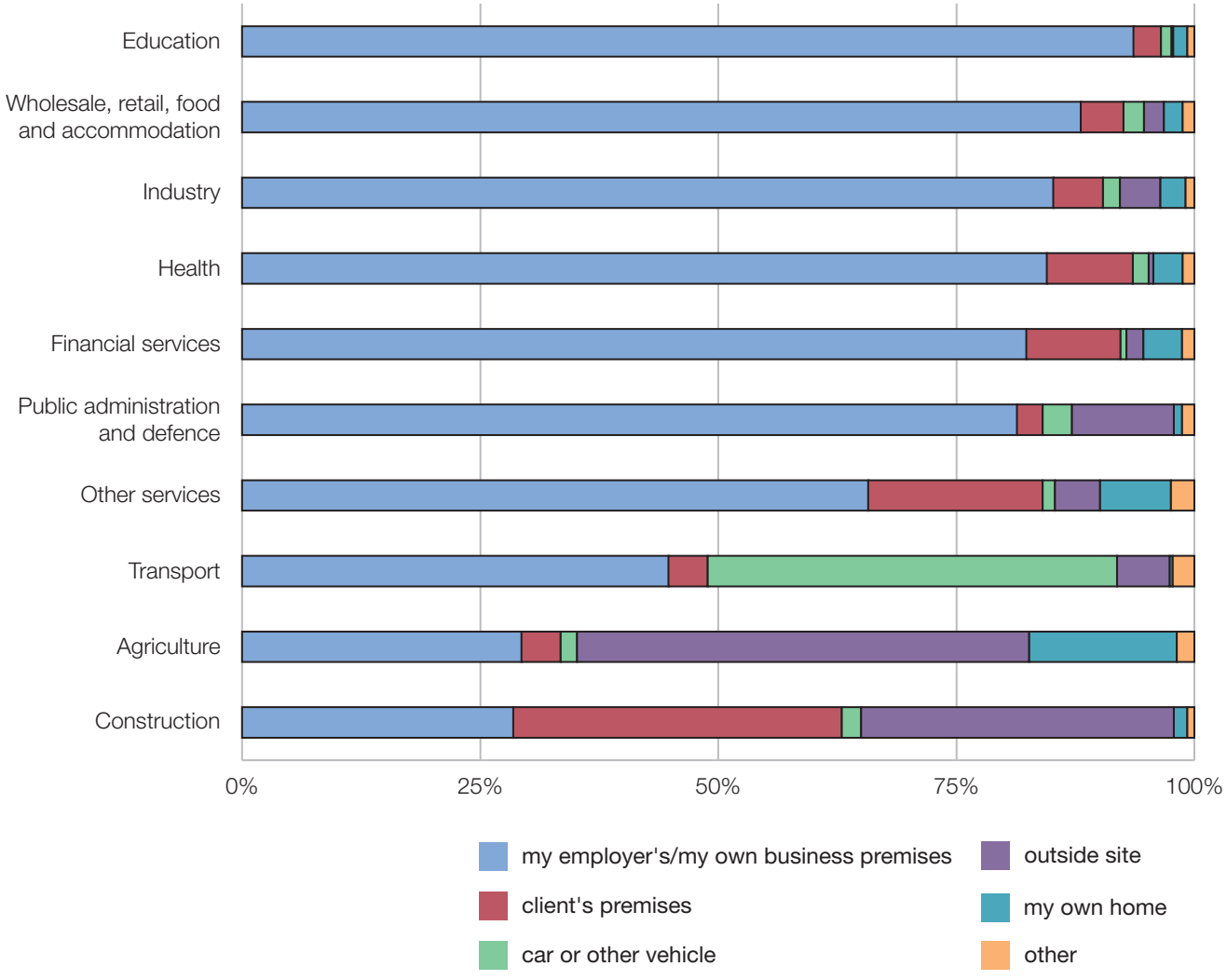
to some extent more common for women (4.2%) than for men (3.3%) – a pattern prevailing across all age groups. Nevertheless, working from home is slightly more common among highly educated men than among highly educated women (5% against 3.8%).

The proportion of individuals working outside their employer's or own business premises is higher for less educated workers. Although true for both sexes, it also reflects a 'gendered' division of labour. The share of men whose main place of work is an outside site, a vehicle or a client's premises is significantly higher among those with a lower educational attainment: 42% of men with basic to lower secondary levels and 35% of men with a secondary level.

All the countries covered by the EWCS show a similar structure in terms of distribution of individuals according to their main of place of work. Employer's or own premises is the main place of work for most workers, although there is some variation among countries: Greece (18%) and Romania (19%) are the EU Member States having the highest proportions of individuals working at an outside site, while France, Lithuania, Poland, Romania and the UK have the highest proportions of workers declaring they work mainly at home (from 5% in the UK to 11% in Romania).

Place of work varies considerably according to sector (Figure 15). Those sectors which have the highest proportion of people working outside their employer's or their own business premises are construction, agriculture and transport. Although working from home is most prevalent in the agricultural sector (15.5%), there are also significant proportions reporting working from home in 'other' and 'financial' sectors (7.5% and 4% respectively).

Figure 15: Main place of work, by sector, EU27 (%)



Visiting customers, patients and clients

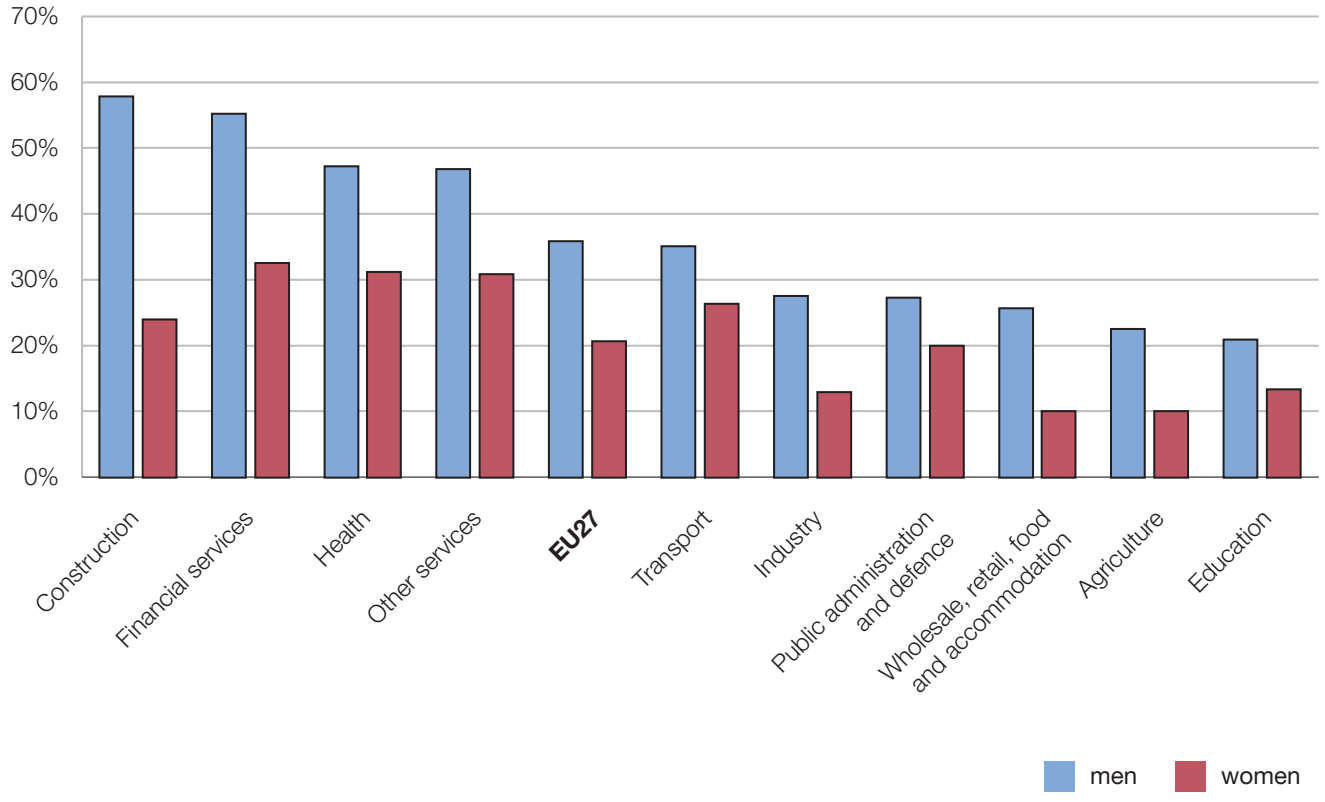
For the first time, respondents to the EWCS were asked whether their work involves having to visit customers, patients or clients.

In the EU27, more men (36%) report having to visit customers, patients or clients than women (21%). This pattern repeats itself in all sectors (Figure 16), with construction and financial services having the highest shares of workers visiting their customers and the biggest gender gap. This contrasts with the gender distribution of workers reporting having to deal directly with clients and patients during their work (see subsection 'Dealing with people outside work' in the section on work organisation). As expected, there are almost two times as many persons among the self-employed (48%) reporting having to visit customers, patients or clients than among employees (25%).

Physical and psychosocial risk factors in the workplace

Health and safety is a core competence of the European Union and one of the main fields in European social policy. Article 153 (1 and 2) of the Treaty of the Functioning of the European Union[21] authorises the Council to adopt, by means of EU directives, minimum requirements as regards 'improvement in particular of the working environment to protect workers' health and safety'. Directive 89/391/EEC places an explicit responsibility on the employer to adapt '… the work to the individual, especially as regards the design of work places, the choice of work equipment and the choice of working and production methods' (European Commission, 1989). Tackling new and increasing risks and improving the monitoring of progress are important objectives of Community strategies on health and safety at work (2007–2012).

Figure 16: Visiting customers, patients and clients, by gender and sector, EU27 (%)



[21] http://europa.eu/lisbon_treaty/full_text/index_en.htm

The range of topics covered in the EWCS questionnaire has to some extent mirrored the evolution in the focus on health and well-being of workers, as outlined by Anttonen and Räsänen (2009) and elaborated by Schulte and Vainio (2010). Initially the questionnaire looked mainly at physical risk factors but was gradually expanded to include psychosocial risk factors and more general information on well-being at work.

These changes have also been triggered by public debate and actions that have led to the highlighting of working conditions and workplace risks (Gollac and Volkoff, 2007). For example, awareness-raising campaigns on road safety may have the intended effect that more truck drivers report that 'mistakes in their work could cause physical injury to other people'.

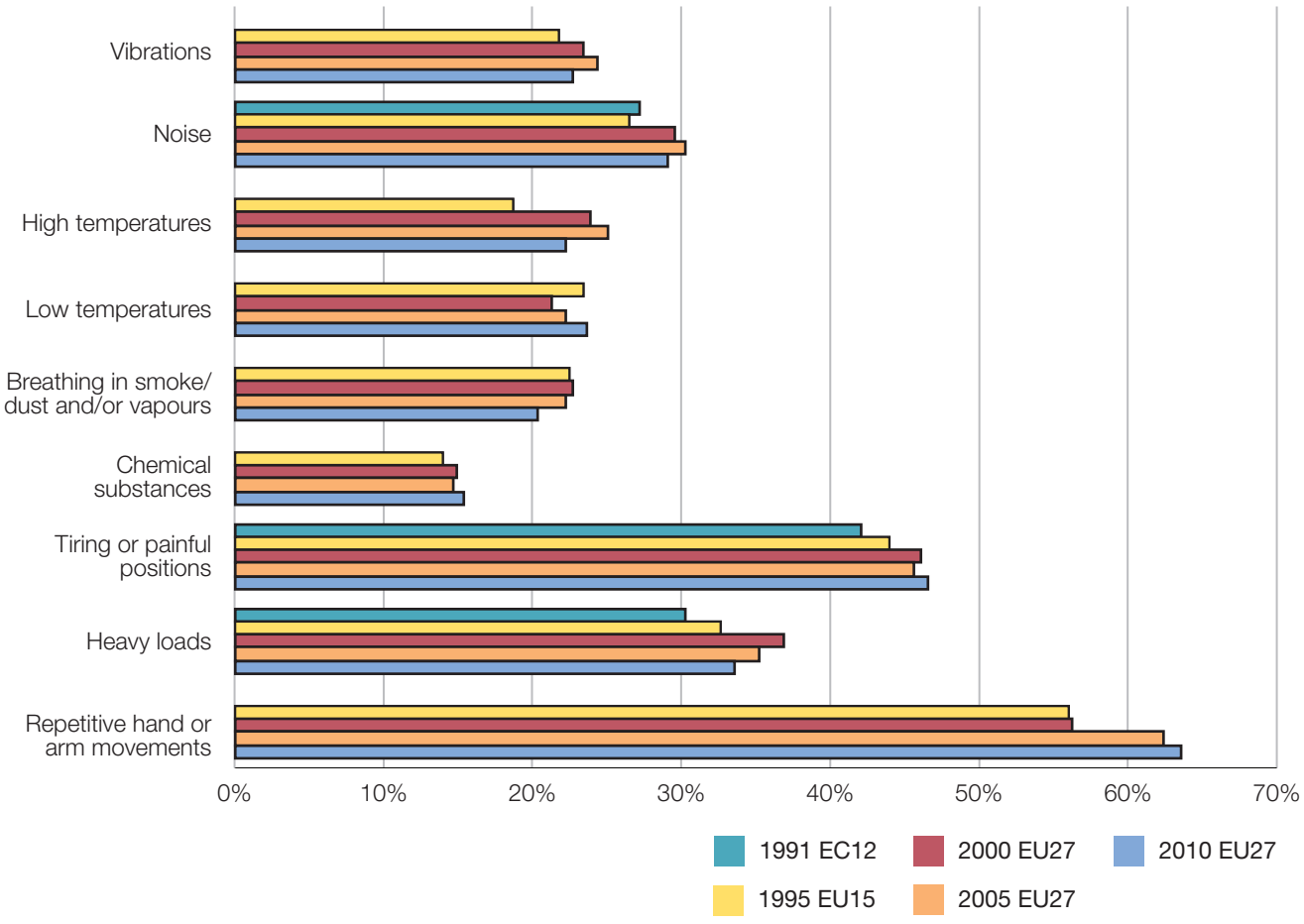
These developments have resulted in an increase in the number of risk factors measured by the survey and, in particular, more attention being paid to so-called 'psychosocial' risks. The survey also puts the accent on describing the combined exposure of workers to multiple risk factors, as well as on understanding risk exposure in relation to other work characteristics (such as quality of work and employment dimensions).

Nowadays it is widely acknowledged that exposure to both physical and psychosocial risk factors can negatively impact on the health and well-being of workers. As this is an overview report, the scope for detailed analysis is somewhat limited. As a consequence, most of the analyses are carried out on an aggregated level – combining various risks as well as various groups of workers, resulting in a general picture of the situation. In the next stage, more specific analyses aimed at the targeted prevention of risk exposure will be carried out.

Exposure to physical risks

Reported levels of exposure to physical risks in the workplace have not diminished much since 1991 (Figure 17). In fact, reported levels of exposure to some risks (particularly 'tiring and painful positions' and 'repetitive hand or arm movements') unfortunately show an upward trend.

Figure 17: Exposure to physical risks over time (% exposed quarter of time or more)



Exposure to repetitive hand or arm movements is by far the most prevalent risk, with 63% of workers reporting they have to carry out repetitive hand or arm movements at least a quarter of the time. This is closely followed by tiring or painful positions, which 46% of workers report having to endure at least a quarter of the time. For both these risks there appears to be a slight increase in prevalence since 2005.

Overall men are more likely to be regularly exposed to physical risks than women, with the exception of handling infectious materials and lifting or moving people (Figure 18). These two risks are particularly prevalent in health care jobs, which are predominantly carried out by women. The biggest differences between men and women are found in the exposure to vibrations, noise, breathing in smoke or vapours, carrying heavy loads and low temperatures. All these risks are associated with jobs in manufacturing and construction, which are mainly carried out by men. The differences between men and women prevail within these specific sectors, with men in manufacturing and construction much more likely to be regularly exposed to physical risks than women in these sectors.

Patterns and developments across countries

The fifth EWCS contained questions on a wide range of physical risks. In order to make comparisons between various groups of workers and between countries it was decided to construct indices, based on a set of questions on posture-related risks, biological and chemical risks and ambient risks.[22]

The country comparison of risk exposure in Figure 19 shows the scores for each country on separate indices measuring exposure to posture-related, biological and chemical, and ambient risks. The EU27 average has been set to 100. Countries showing relatively low levels of risk exposure are the Netherlands, Denmark, the United Kingdom, and Ireland, although for Denmark the level of exposure to ambient risks is not that low relative to other countries, nor is the level of exposure to biological and chemical risks in Ireland.

Countries with relatively high levels of exposure are the Former Yugoslavian Republic of Macedonia, Kosovo, Turkey and Albania, and, within the EU, Greece, France, Hungary and Cyprus. Differences again occur between the different types of risks: for instance, levels of exposure to biological and chemical risks are relatively low in Cyprus and not exceptionally high in Albania and Turkey.

[22] Posture-related risks: Q23a (vibrations), Q24a (tiring positions), Q24b (lifting people), Q24c (carrying heavy loads), Q24d (standing), Q24e (repetitive movements). Biological and chemical risks: Q23e (breathing in smoke) and Q23f (breathing in vapours) (these two variables were combined, using the highest score on either of the two variables as the score for the combined variable, before constructing the overall scale), Q23g (handling chemicals), Q23i (handling infectious materials). Ambient risks: Q23b (noise), Q23c (high temperatures), Q23d (low temperatures). In order to allow for comparison over time an overarching index covering all physical risks was constructed using only variables available from 1995 onward: Q23a (vibrations), Q23b (noise), Q23c (high temperatures), Q23d (low temperatures), Q23g (handling chemicals), Q24a (tiring positions), Q24c (carrying heavy loads), Q24e (repetitive movements) The indices were constructed in the same way as in the overview report of the fourth EWCS (Parent-Thirion et al, 2007). Reliability analyses were performed on the new dataset to confirm the internal consistency of each of the indices. The use of indices provides a simplified perspective, masking differences between sectors or occupations with regard to the prevalence of specific combinations of risks. More elaborate sectoral and occupational profiles with regard to risk exposure will be constructed as part of the secondary analysis of the fifth EWCS results.

Figure 18: Exposure to physical risks, by gender (% exposed quarter of time or more), EU27

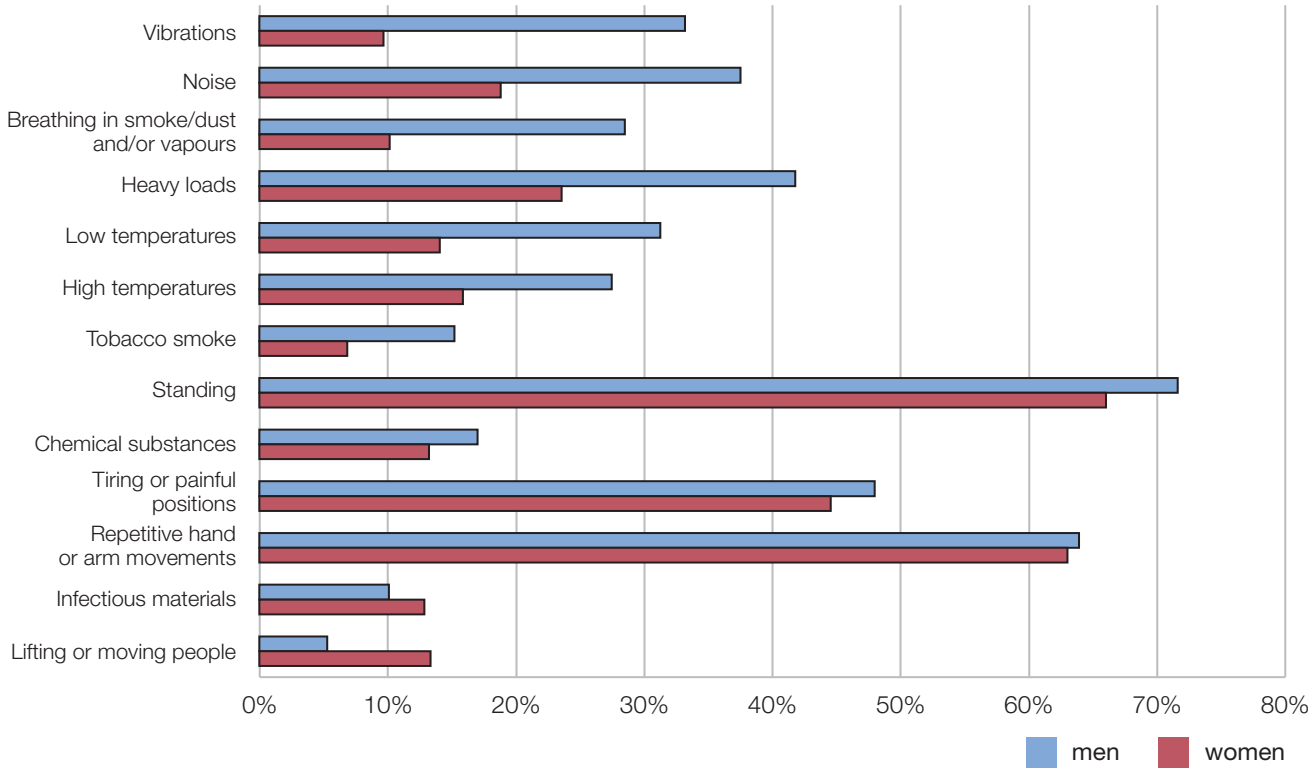
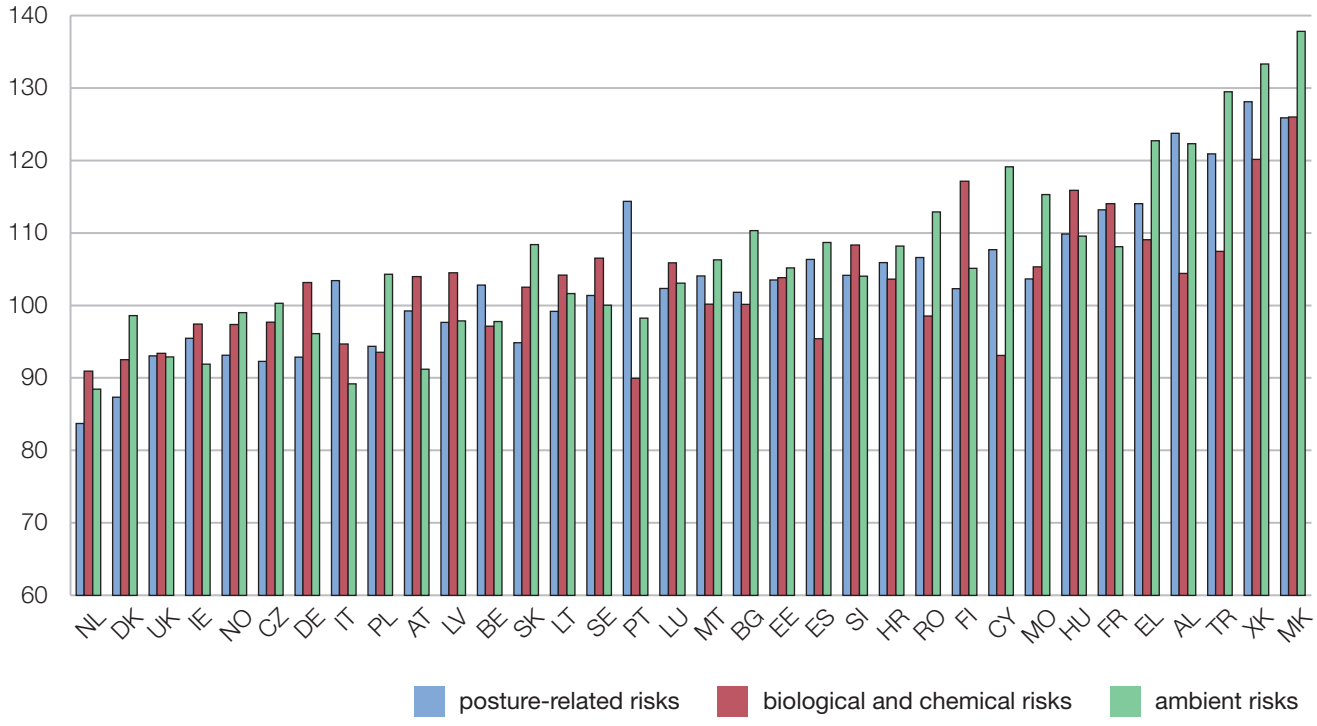


Figure 19: Exposure to combined physical risks, by country

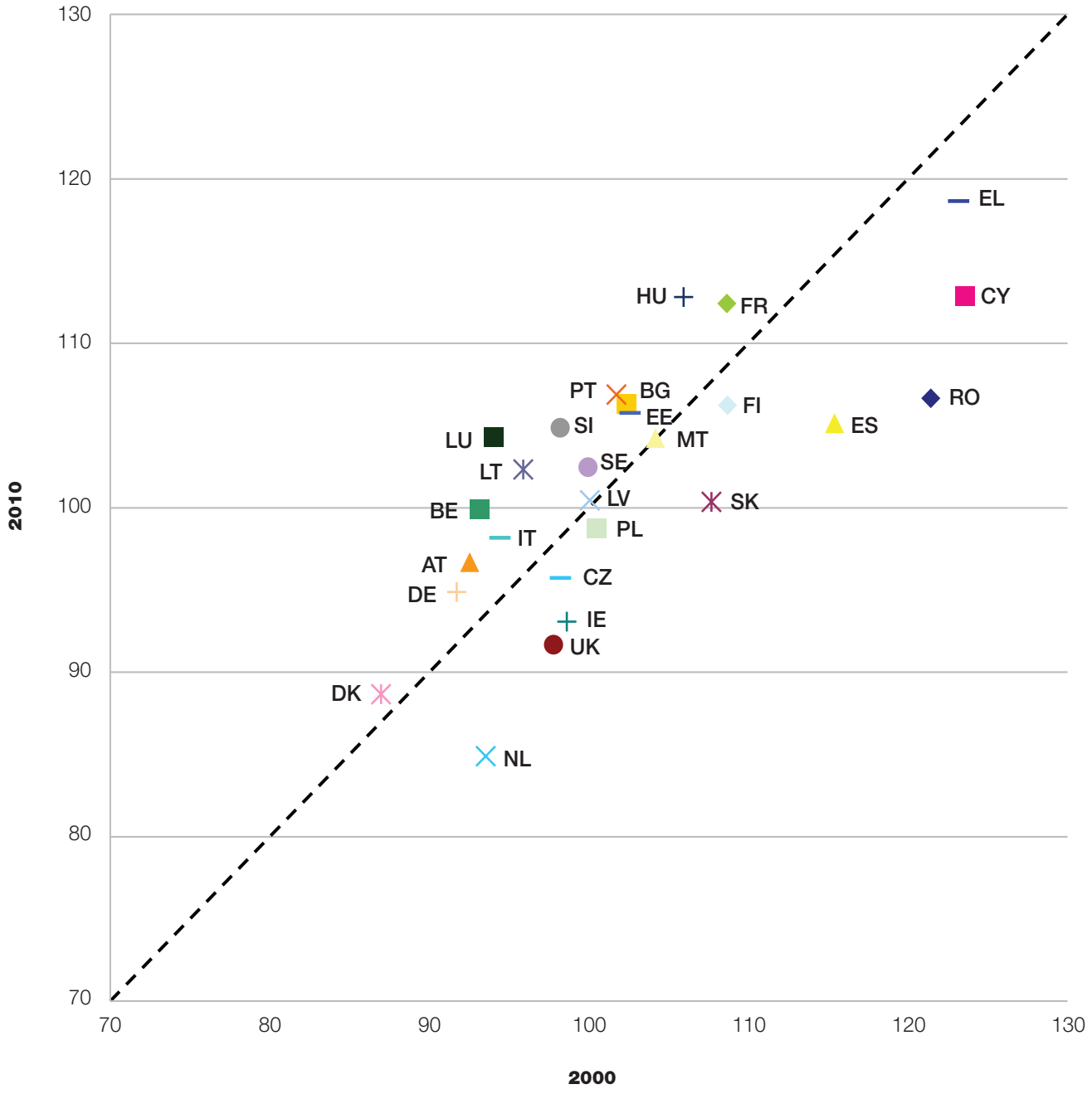


Note: index scores, EU27 average = 100

Figure 20 shows the development in average levels of exposure to all physical risks for which information was available in 2000 and 2010.

The biggest decline in risk exposure occurred in countries having relatively high levels of risk exposure, such as Cyprus, Romania and Spain, as well as in countries that already had a relatively low level of risk exposure, such as the Netherlands, the United Kingdom and Ireland.

Figure 20: Change in exposure to physical risks 2000–2010, by country



Note: Countries with an increase in exposure to physical risks are positioned above the index line and countries where exposure levels have decreased are below it.

Among a few of the mid-ranking countries, average levels of risk exposure have gone up substantially: for example, in Luxembourg, Belgium and Hungary. The shift in the ranking of countries with highest exposure levels implies that some countries with high risk exposure levels in the past have managed to improve their situation. What is a source of concern is the situation regarding those mid-ranking countries where exposure levels have increased over time.

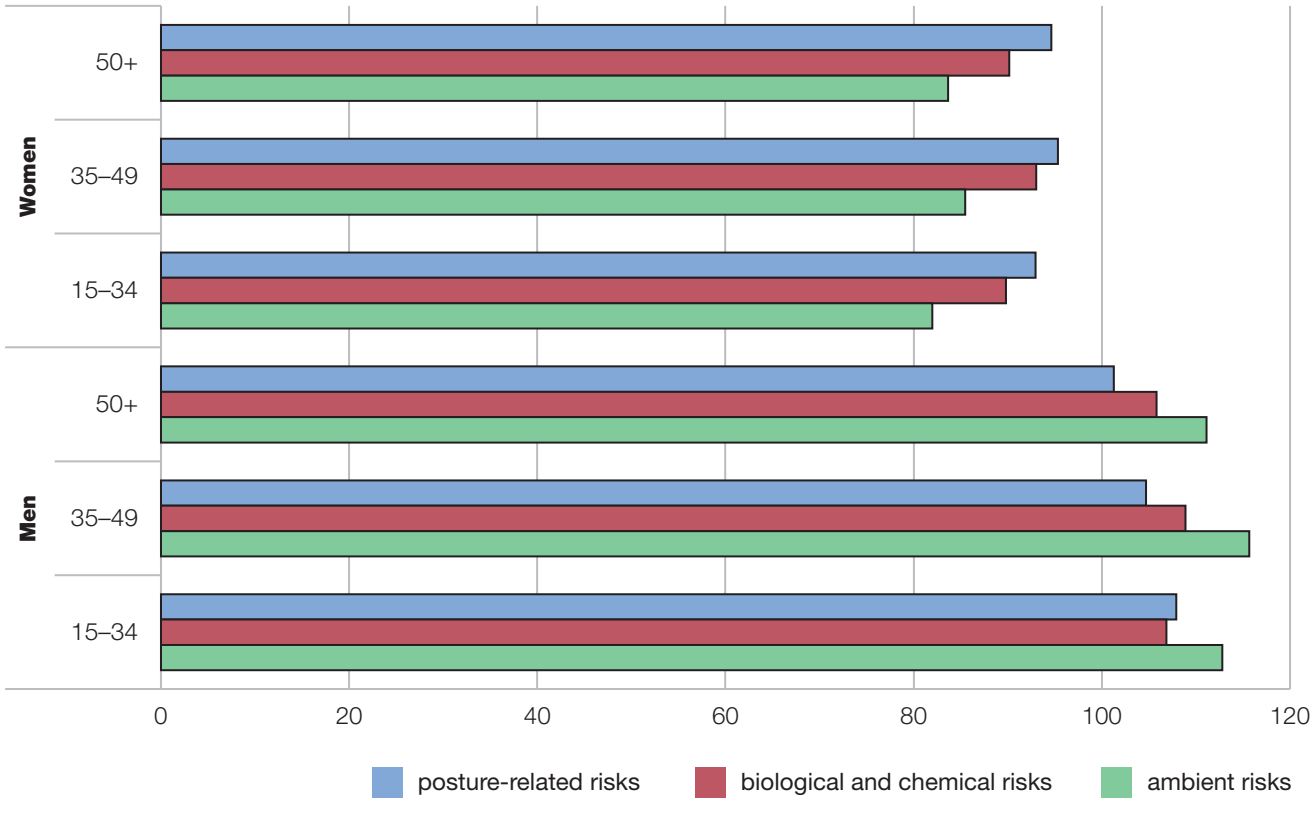
Most countries are clustered fairly closely around the EU average of a score of 100. Over time some convergence has taken place, with the distance between the best and the worst countries slightly diminishing over time. In 2000 Cyprus showed the highest exposure levels with an index score of 124 and Denmark the lowest with an index score of 87. In 2010 Greece shows the highest exposure levels (index score of 119) while the Netherlands has the lowest (index score of 85). However, this positive result is barely reflected in the EU27 average – which indicates a drop from 101 in 2000 to 100 in 2010 – due to the increasing levels of risk exposure among a few of the mid-ranking countries.

Patterns and developments across the workforce

A breakdown by gender and age (Figure 21) makes it clear that men show substantially higher levels of exposure to all three physical risks than women (as also shown in Figure 18). The exposure levels to posture-related risks of men decline with age whereas for women these levels initially rise with age and then decrease again for the oldest group. This pattern (an initial increase followed by a decrease) is repeated for the exposure levels of both men and women to biological and chemical risks and ambient risks.

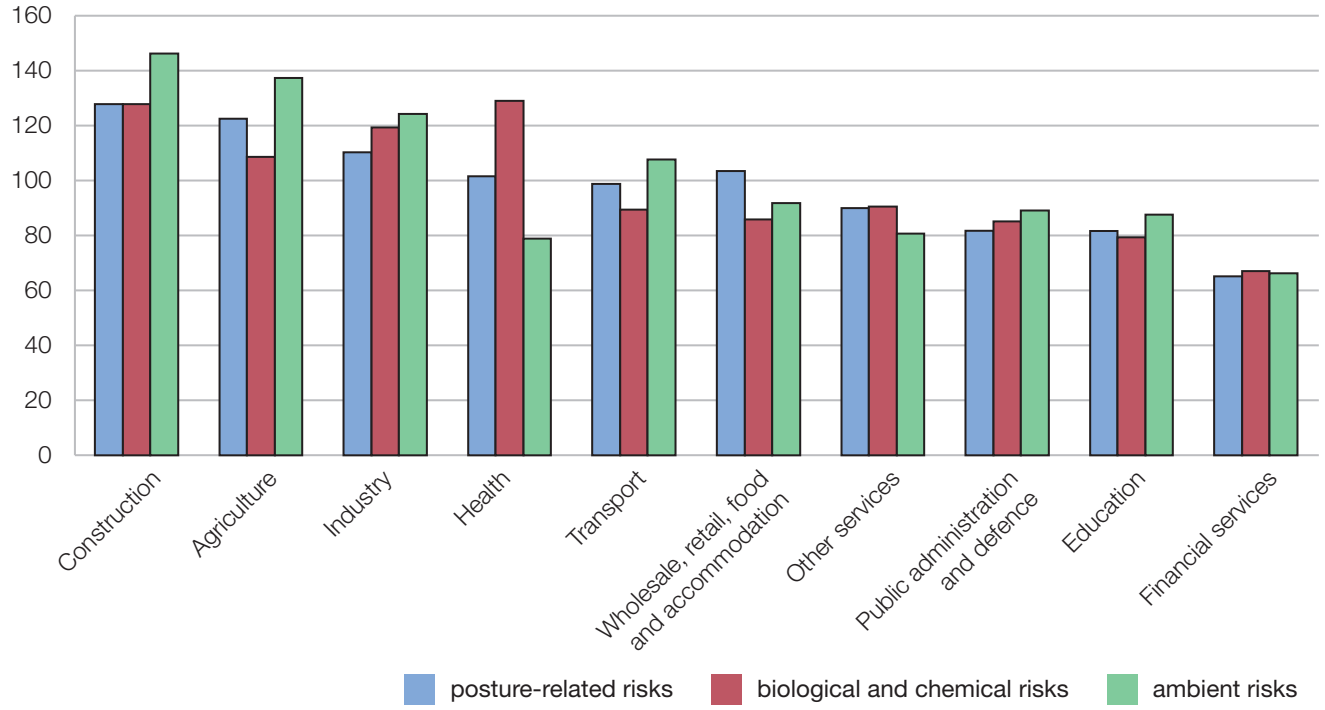
Exposure to posture-related and ambient risks is the highest in the construction sector (Figure 22), where the workers are often required to carry heavy loads, work in painful positions and are exposed to low or high temperatures and loud noise.

Figure 21 : Exposure to combined physical risks, by gender and age



Note: Index scores, EU27 average = 100

Figure 22: Exposure to combined physical risks, by sector



Note: Index scores, EU27 average = 100

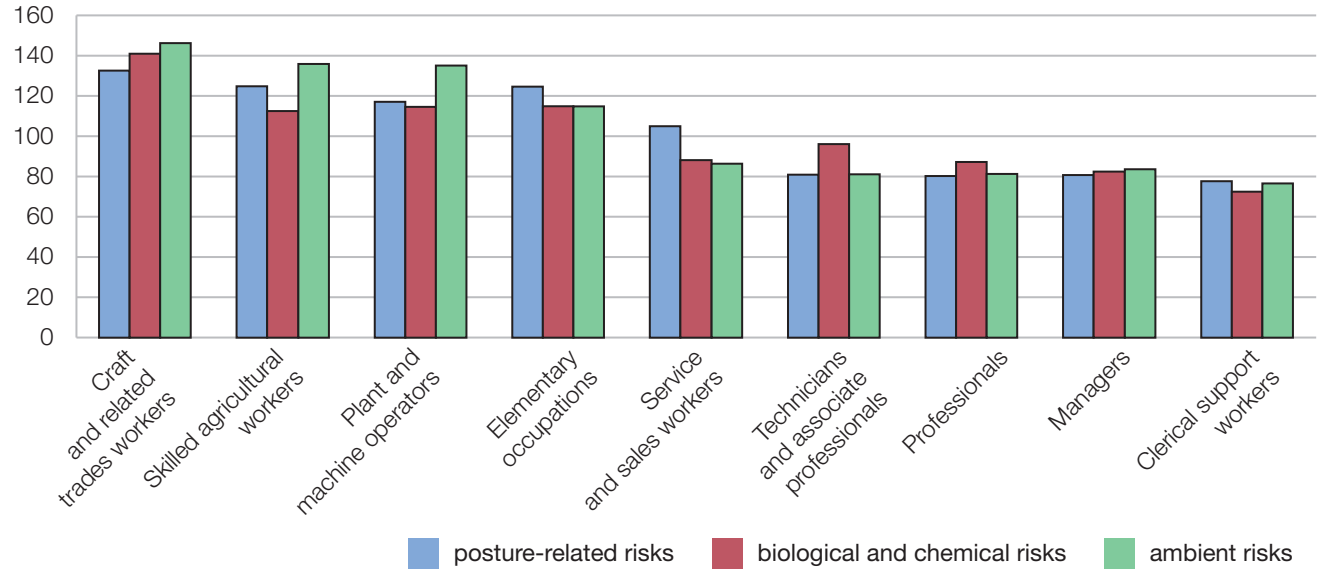
Exposure to biological and chemical risks is most prevalent in the health sector where doctors and nurses frequently have to handle infectious materials as well as the chemicals that are used to disinfect the instruments and the workplace. Other sectors with relatively high levels of exposure to physical risks are agriculture and industry. Figure 23 shows the breakdowns of exposure to the three types of physical risks by type of occupation, confirming the picture depicted in Figure 22.

Craft and related trades workers, skilled agricultural workers, plant and machine operators, and workers in elementary occupations show the highest levels of risk exposure. What is interesting is the relatively high level of exposure to posture-related risks among services and sales workers. This can be explained by the fact that these jobs often require workers to stand a lot of the time and to carry out repetitive movements, for instance, scanning products at a cash register.

Figure 24 shows the changes that took place between 2000 and 2010 in the average level of exposure to physical risks in each sector and in each type of occupation. As in Figure 20, which depicted changes at a country level, the main conclusion is that not that much has changed over the period.

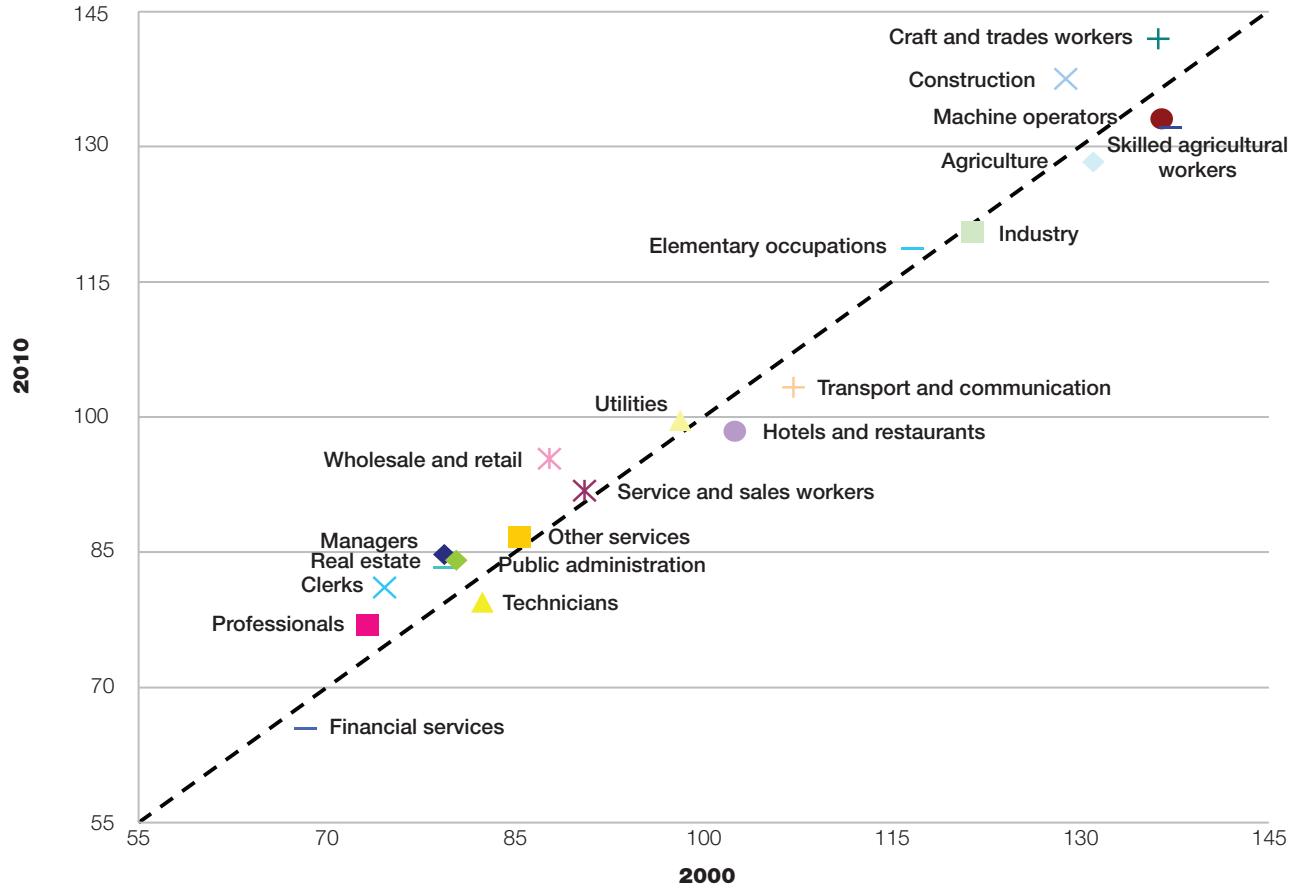
The gap in physical risk exposure levels between the manual and the clerical professions is still prevalent. In contrast with Figure 20, Figure 24 shows an increase in the level of exposure to physical risks in some occupations (craft and trades workers) and sectors (construction) that already showed high levels of physical risk exposure in 2000. The level of risk exposure has also shown a relatively large increase for the wholesale and retail sector, which is reflected in a relatively large increase in the level of physical risk exposure of clerical workers.

Figure 23: Exposure to combined physical risks, by occupation



Note: Index scores, EU27 average = 100

Figure 24: Change in exposure to physical risks, by sector and occupation, EU27



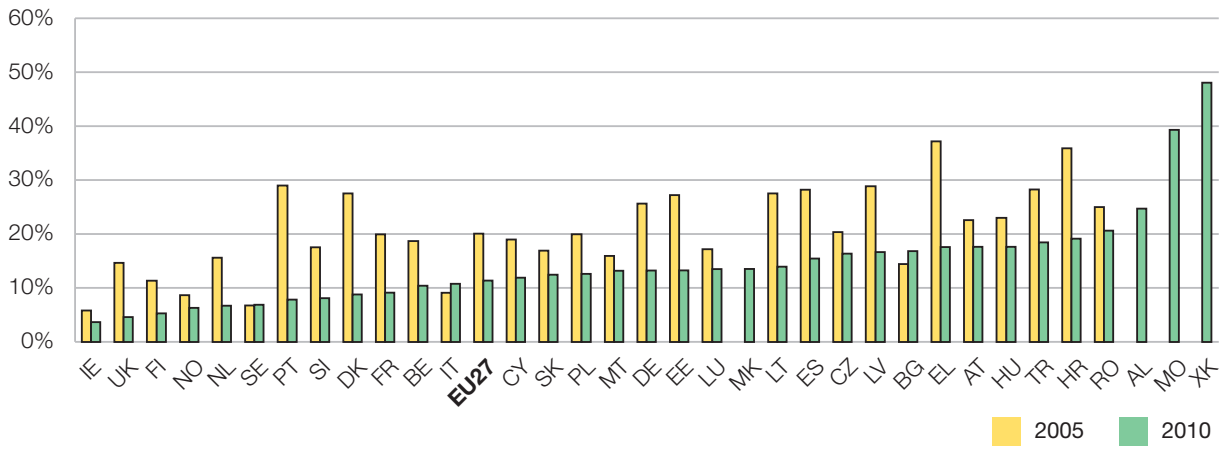
Note: Sectors with an increase in exposure to physical risks are positioned above the index line and sectors where exposure levels have decreased are beneath it.

Box 1: Tobacco smoke

A physical risk worthy of specific attention is the exposure at work to tobacco smoke from other people. As pointed out by the European Observatory on Health Systems and Policies, smoking is the largest cause of avoidable death and disease in the EU, killing 650,000 people every year (Mladovsky et al, 2009). Another 19,000 European non-smokers die every year from exposure to second-hand smoke either at home or in the workplace (European Commission, 2009).

While the European Union is considering taking action on this subject, many Member States have already put in place legislation to ban smoking from public places and workplaces. The findings from the fifth EWCS suggest that such national-level efforts are already yielding positive results (Figure 25).

Figure 25: Exposure at work to tobacco smoke from other people, by country (%)



Note: Exposed for a quarter of the time or more

Psychosocial risk factors

According to the European Agency for Safety and Health at Work (EU-OSHA): 'Psychosocial risks ... which are linked to the way work is designed, organised and managed, as well as to the economic and social context of work, result in an increased level of stress and can lead to serious deterioration of mental and physical health.' (EU-OSHA, 2007, p. 1).

The fifth EWCS includes a number of indicators of psychosocial risks, which can be grouped into six dimensions based on the classification developed by the College d'Expertise de Suivi des Risques Psychosociaux au Travail (French expert group on psychosocial risks at work):[23]

- high demands and work intensity;
- emotional demands;
- lack of autonomy;
- ethical conflicts;
- poor social relationships;
- job and work insecurity.

These six dimensions were covered by the fifth EWCS and the main findings are discussed here.

[23] In line with recommendations by Gollac and Bodier (2011). Other classifications are possible as the notion of psychosocial risks is also under discussion in the scientific and policy debate.

High demands and work intensity

High demands refer to the effort a person has to make to carry out their work in terms of its volume, speed and nature (for example, cognitive and physical efforts). Although work that is too undemanding can be a source of problems, the strongest negative health effects have been documented in relation to excessive demands. However, it is important to relate work intensity to the ability granted to individuals (autonomy) to allow them to deal with these demands in the best possible way in terms of their own health and personal characteristics.

Work intensity is difficult to measure. The EWCS provides both subjective and objective indicators on the topic, some of which are discussed in the next section on work organisation, such as the number of pace determinants, the frequency and significance of work interruptions, and the increasing requirement to meet quality standards, These phenomena have the common feature of reducing the room for manoeuvre of workers to perform their work in the way that suits them best.

The findings show that developments over time give some cause for concern. The subjective indicator of work intensity, which describes workers' experience of high demands, reveals an overall increase in work intensity in most European countries over the past two decades. Although this increase appears to have slowed down since 2005, 62% of workers in the fifth EWCS report working to tight deadlines (at least a quarter of the time) and 59% report working at high speed (at least a quarter of the time). Similarly, the proportion of workers whose pace of work is determined by three or more external factors (such as the speed of a machine, client demands, manager, etc.) has increased over the past 20 years, though this increase seems to have levelled off since 2005. Nevertheless, the fact that a substantial proportion of workers is affected raises questions about the sustainability of their jobs. This concern is particularly important given that Europe is faced with the challenge of an ageing workforce and the current policy focus aims to keep workers active for longer.

Work–life imbalance is also relevant here. When workers feel they cannot simultaneously meet the demands arising from their work and personal life, the related strain causes problems and can lead to illness. According to the findings of the fifth EWCS, 18% of workers are dissatisfied with their work–life balance (see the section on work–life balance in Chapter 3 for a more detailed discussion of the findings).

Another issue is the complexity of work and the cognitive demands work places on workers. A number of indicators in the EWCS help measure the cognitive dimension of work as well as the match between skills and tasks. Cognitive demands do not necessarily pose a risk: problem-solving and dealing with complex issues can make a job challenging and exciting. But when workers lack support from their environment, are faced with high work intensity and/or when their skills do not match their tasks, cognitive demands can result in unhealthy stress levels. A more comprehensive overview of both the positive and negative elements of cognitive demands, and the way they are distributed across the workforce, is presented in Chapter 3.

Emotional demands

'Emotional labour' refers to work where the worker is expected to display emotions or use feelings to accomplish tasks. Typically, in their contact with clients, patients, customers, etc., some workers hide their feelings (repressing fear or remaining friendly) or manage their feelings (limiting compassion or empathy). Excessive emotional demands are shown to have a negative impact on health. They can result in burn-out (see Maslach Burnout Inventory (MBI) in Maslach et al, 1996) and can lead to so-called 'depersonalisation (see 'la névrose des telephonistes', Le Guillant, 1956). Links have also been found with the incidence of musculoskeletal disorders as well as high blood pressure (Molinier and Flottes, 2010).

Contact with angry clients

Dealing with angry clients is an example of emotional labour. Women are more likely to be in a work situation which involves handling angry clients often (Figure 26).

Hiding feelings

Hiding or suppressing feelings can result in psychological strain. In general there is not much difference in the extent to which men and women report having to hide their feelings at work.

There are large differences between sectors, with only a small percentage of workers in agriculture reporting having to hide their feelings (12% of men and 9% of women) compared with a fairly large proportion of workers in health (41% of men and 37% of women) (Figure 27). Differences between men and women are more pronounced in some sectors than in others. For instance, in financial services, substantially more men than women report having to hide their feelings, whereas the opposite pattern is observed in the transport and construction sectors.

Figure 26: Handling angry clients (almost) all the time, by gender and age, EU27 (%)

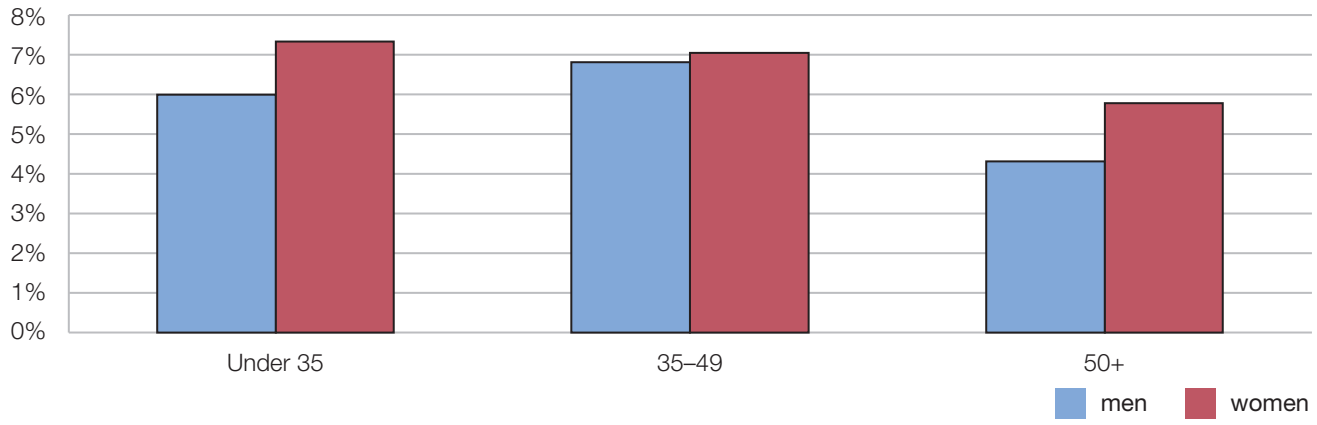
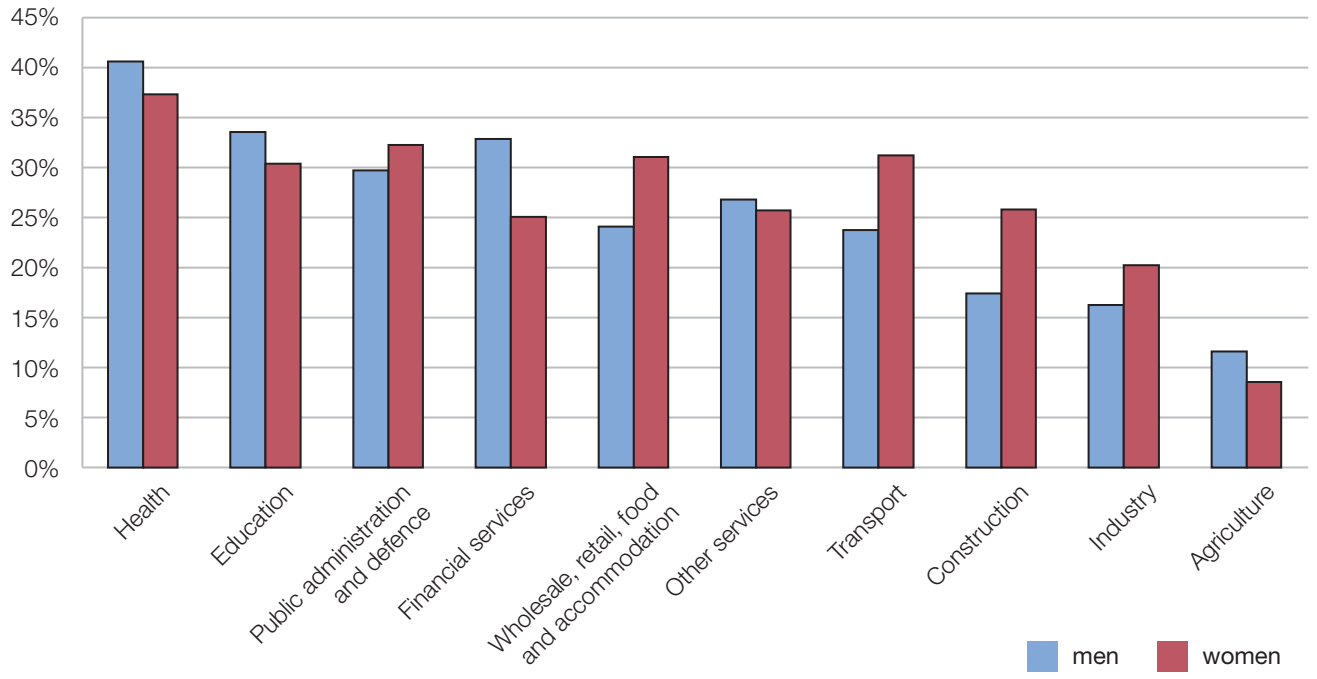


Figure 27: Hiding one's feelings, always or most of the time, by gender and sector, EU27 (%)



Consequences of mistakes

Another type of emotional demand arises from the consequences of mistakes workers make in their jobs. The more severe the consequences, the more pressure that is put on workers to avoid making mistakes, which may result in strain. Men are much more likely to report that making a mistake in their work could result in either physical harm to others or financial loss to the organisation (Figure 28). The differences between age groups are more or less the same for men and for women, as are the differences for physical harm and financial loss, with workers in the middle age group (35–49 years) reporting slightly higher levels than younger and older workers.

Lack of autonomy

Epidemiological research has shown that a lack of autonomy increases the probability of cardiovascular diseases. The combination of high demands and low autonomy is associated with a higher propensity to cardiovascular disease, as well as to mental health problems (Belkic et al, 2004; Kivimaki et al, 2006; Bonde, 2008; DARES and DREES, 2009).

Procedural autonomy refers to the ability to change or choose the order of tasks, the speed or rate of work and the method of work. Developments over time show mixed results. The level of change is limited, while two out of three indicators in the EWCS show a limited increase in a lack of procedural autonomy:

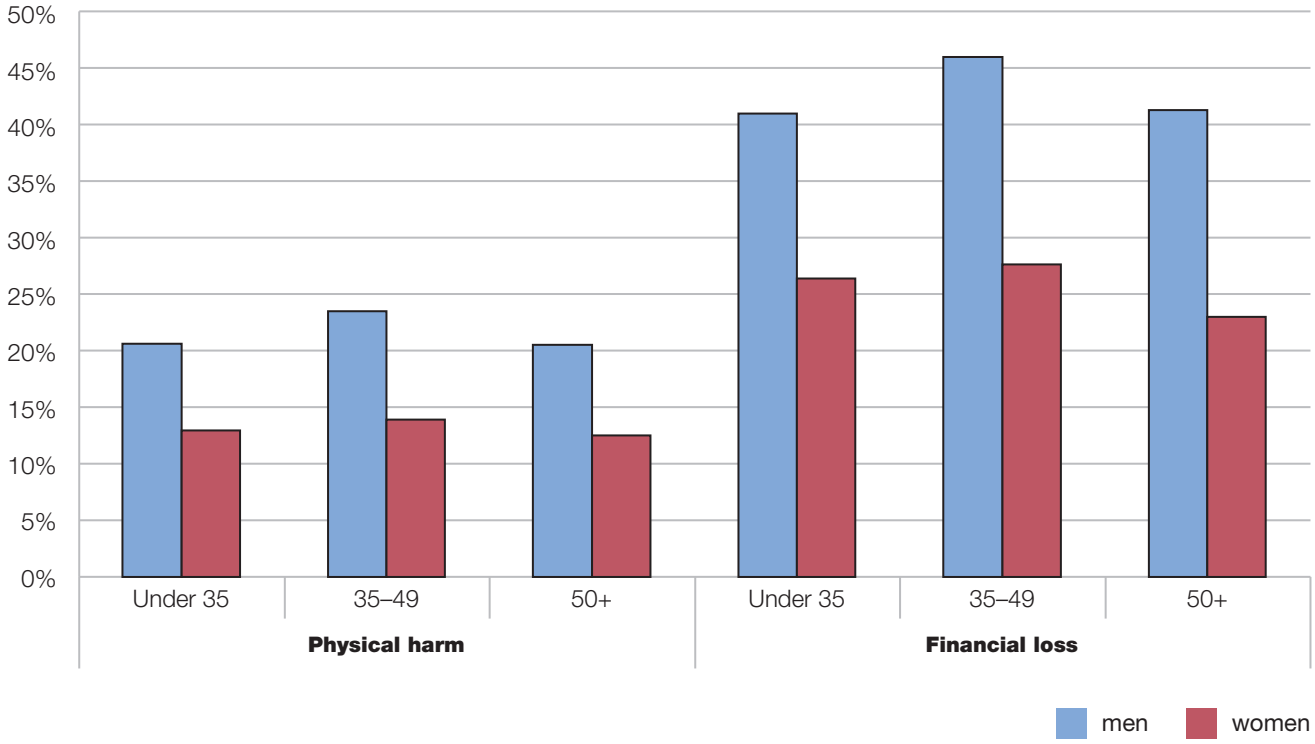
- 37% of workers report not being able to choose their method of work;
- 34% report not being able to change the order of their tasks;
- 30% report not being able to change their speed of work.

Changes in other aspects of autonomy show more positive results:

- not having a say with regard to one's working partners has declined slightly to 60% (from 64% in 2005);
- not being able to take a break when one wishes has declined to 33% (from 36% in 2005).

Finally, a lack of autonomy can occur where workers do not have the chance to learn and develop and/or to fully utilise their skills. As with many of the other psychosocial factors, it is mainly workers in low-skilled jobs who are faced with these circumstances. The issue of mismatch between tasks and duties is discussed more fully in Chapter 3.

Figure 28: Consequences of mistakes, by age and gender, EU27 (%)



Ethical conflicts

Ethical or value conflicts at work and feelings of usefulness are important psychosocial factors. Not having a sense of work well done or feeling that one's work is not useful has been shown to lead to personal distress, which can be associated with health problems (Dejours, 1998).

Although only a small proportion of workers suffer from the absence of a feeling of work well done or doing useful work, there are substantial differences between sectors. The proportion of workers in wholesale and retail and industry reporting 'rarely' or 'never' having the feeling of doing useful work is five times that in health or education. Similarly, the proportion of workers in transport reporting 'rarely' or 'never' having the feeling of work well done is more than twice that in education, health and construction.

Around 9% of workers report that their work 'always' or 'most of the time' involves carrying out tasks that conflict with their personal values. The variation between sectors is not large, but value conflicts appear to be most prevalent in construction and least prevalent in industry and education. A fuller discussion of the EWCS findings on feelings of work well done and of doing useful work is given in Chapter 3.

Poor social relationships

Epidemiological studies have looked at the effect of social isolation at work and have found associations with absenteeism and the likelihood of having an accident at work, and also directly with physical health problems, such as cardiovascular diseases, as well as mental health problems (Lindblom, 2006; Ducharme et al, 2008).

Lack of social support

The EWCS explores workers' lack of social support (or social isolation) in a range of questions on the practical support and assistance workers receive from their colleagues and manager(s). The proportion of workers reporting lack of social support from colleagues declined from a level of 15% in 2005 to 10% in 2010. Perceived lack of support from managers also fell to 19% (24% in 2005).

A sense of belonging and of affinity with the organisation and with fellow workers can compensate for the pressures workers have to contend with. Workers are more likely to be able to cope with work pressures when they feel at home in the organisation or when they feel they have good friends at work.

The proportion of workers reporting they do not have good friends at work has been stable at around 10%. Workers in education, construction and public administration are the most likely to have good friends at work, while workers in financial services, agriculture, transport and other services are the least likely.

A different pattern is found for the indicator 'feeling at home in the organisation'. Workers in agriculture, health and education are the most likely to feel at home in their organisation (over 75%), while workers in industry and transport are the least likely (65% for both sectors). Although overall these percentages are fairly high, it does mean that more than one in three workers in industry and transport do not agree with the statement that they feel at home in the organisation they work for.

Lack of role clarity

A sense of social isolation or lack of support can result from not knowing what is expected in the job. In almost all sectors there is a small group of workers who 'at least sometimes' do not know what is expected of them at work (Figure 29). This is most common in financial services (8.2%), agriculture (7.4%) and construction (6.7%).

Poor leadership

There is a sizeable body of research on leadership styles in relation to creating good working conditions and in achieving the goals set for the organisation. Eriksson et al (2010) distinguish between management support for health-promoting activities and supportive management. The latter means that work is managed in a health-promoting way, for example, by balancing the demands put on employees, supporting their participation and providing social support and recognition.

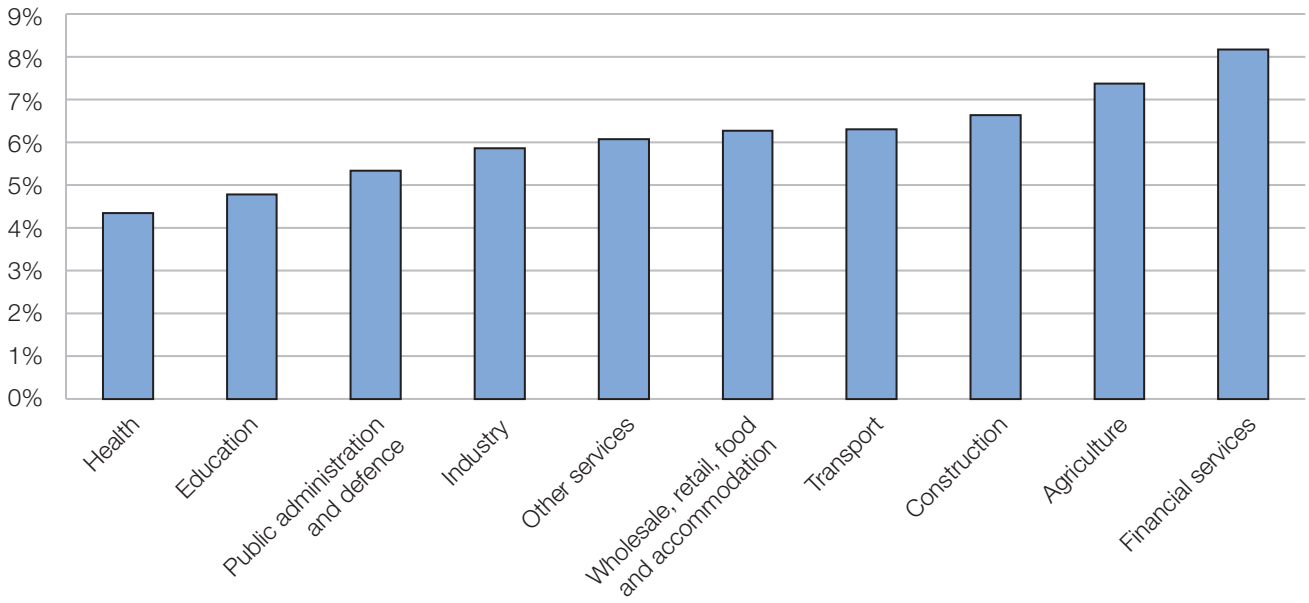
New questions in the fifth EWCS tap into different aspects of leadership behaviour. The findings are generally positive:

- 95% of employees affirm that their immediate manager respects them as a person;
- over 80% say that their manager provides help and support, is good at resolving conflicts, and in planning and organising the work;
- 78% of workers report receiving feedback.

However, less than 70% report being encouraged to take part in important decisions.

The importance of leadership for the well-being of workers is demonstrated by the finding that employees who evaluate their manager positively are almost twice as likely to report being satisfied with their working conditions as those who evaluate their boss negatively.

Figure 29: Not knowing what is expected in the job, at least sometimes, by sector, EU27 (%)



Adverse social behaviour

Adverse social behaviour means all acts of physical and verbal violence and intimidation at work. Bullying and violence in the workplace has been shown to be linked to mental health problems as well as to an increased risk of suicide (Leymann, 1990).

The fifth EWCS contained six questions on various types of adverse social behaviour, relating to: verbal abuse; unwanted sexual attention; threats and humiliating behaviour; physical violence; bullying and harassment; and sexual harassment.

The first three questions asked respondents whether they had suffered verbal abuse, unwanted sexual attention or threats and humiliating behaviour during the previous month. Verbal abuse is quite prevalent in the workplace, with 11% of workers reporting having experienced it in the timeframe. Humiliating behaviour occurs less frequently, with 5% of workers reporting having been humiliated or threatened in the previous month. Unwanted sexual attention is the least prevalent, being reported by just 2% of workers. A significant gender difference is found with regard to sexual behaviour, with women twice as likely as men to have received unwanted sexual attention in the month preceding the interview.

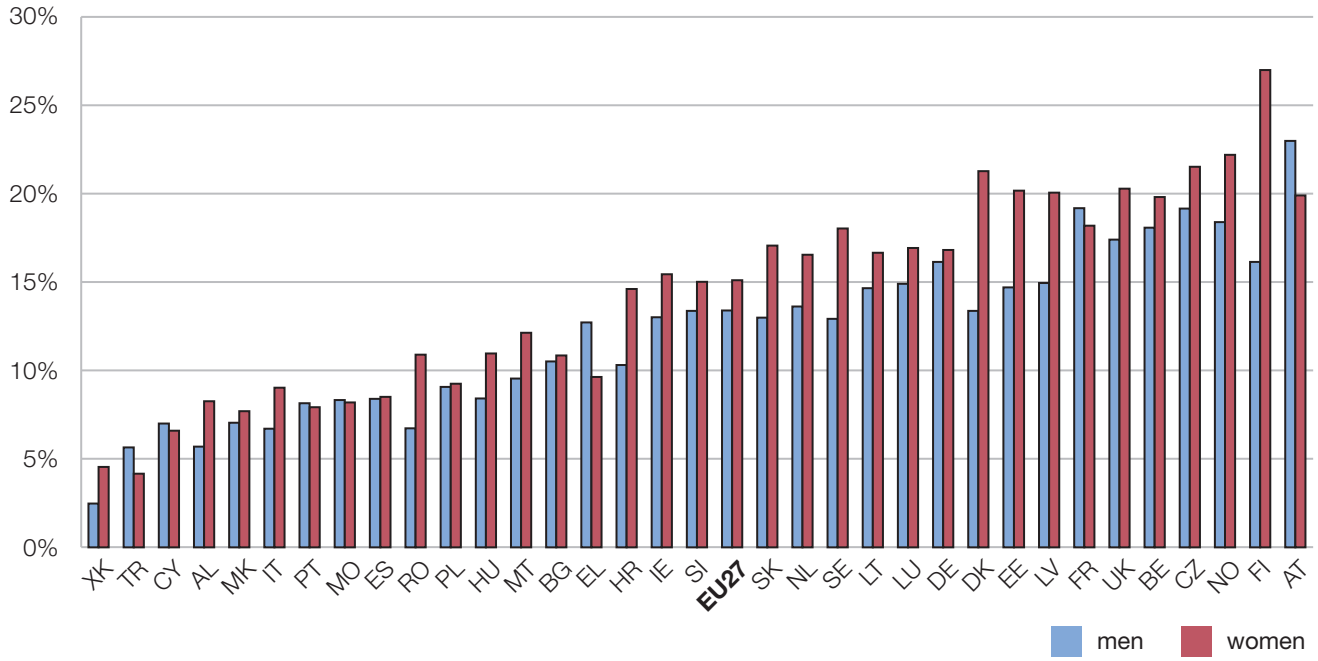
The next three questions asked respondents whether they had been subjected to physical violence, bullying and harassment, or sexual harassment during the previous year. Of these, bullying and harassment is the most prevalent, with 4% of workers reporting having been a victim of bullying or harassment in the year preceding the survey. Only 2% of workers report having been subjected to physical violence in the previous year and just around 1% of workers said they were subjected to sexual harassment. Only with regard to sexual harassment is there a significant gender difference, with women almost three times as likely to be subjected to sexual harassment as men.

To make comparisons easier, an index of exposure to adverse social behaviour was constructed.[24] However, it is difficult to interpret the differences between countries concerning exposure to adverse social behaviour (Figure 30), as the differences not only reflect variations in the actual prevalence of adverse social behaviour, but also cultural differences with regard to the type of behaviour that is considered adverse (e.g. when does 'playful teasing' turn into bullying? what type of sexual attention is unwanted?). Moreover, there are country differences in the likelihood of people reporting that they were subjected to any of these types of behaviour (while people might recognise that they are being bullied or harassed, they could feel that reporting it is socially less acceptable).

Overall, reported levels of subjection to adverse social behaviour are lowest in Kosovo (3%) and Turkey (5%). Cyprus (7%) and Italy (8%) are the EU Member States with the lowest reported levels. Levels are highest in Austria (22%) and Finland (21%). Finland also stands out as

[24] The index assigns a score of 1 to anybody who was subjected to bullying, violence and sexual harassment in the past year and/or verbal abuse, humiliating behaviour and unwanted sexual attention in the past month. Respondents who were not subjected to any of these forms of adverse social behaviour were assigned a score of 0.

Figure 30: Workers subjected to adverse social behaviour, by gender and country (%)



being the country with the widest gap between reported levels for men (16%) and women (27%). Interestingly, the other highest scoring country, Austria, shows the opposite result, with men (23%) reporting higher levels than women (20%). Although in most countries women report higher levels than men, Austria is not an exception: men also report significantly higher levels of adverse social behaviour than women in Greece and Turkey.

While remaining relevant, cultural differences have less of an impact on the comparison between sectors (Figure 31). Reported levels of subjection to adverse social behaviour are lowest in agriculture (6%) and construction (9%), and highest in transport (20%) and health (23%). Again, differences between men and women vary. In many sectors, men and women do not differ significantly in the extent to which they report exposure to adverse social behaviour, but in sectors where they do differ, the difference can go either way.

In health and education (two sectors where female workers are in the majority), men are more likely than women to report having been subjected to adverse social behaviour; however, the same pattern is found for construction, which has more male than female workers. In agriculture and financial services, on the other hand, more women than men report having been subjected to adverse social behaviour.

Job and work insecurity

A final important psychosocial factor is job and work insecurity. The fear of losing one's job and the effects that this might have, as well as the lack of career prospects, can have serious implications for the health and well-being, not only of the worker but also of other members of their household (Wichert, 2002).

The fact that the survey was carried out during a time of economic crisis (first half of 2010) is likely to have affected the level of reported job insecurity.

Levels of job and employment security and the prospects of career advancement vary between sectors (Figure 32). In terms of job security, workers in the public services express highest levels, with 90% of workers in public administration, 89% in health and 88% in education expecting to be able to retain their job at least for the next six months. This compares with 79% of workers in industry and 78% in construction.

However, a different picture emerges when respondents are asked if they would find it easy to get a new equivalent job in the case of job loss. Workers in transport (42%), agriculture (38%) and construction (38%) are the most optimistic, while workers in financial services are the least convinced they will be able to find a new job with similar pay (19%). However, workers in financial services are by far the most positive about the prospects for career advancement offered by their job, with 51% (strongly) agreeing that these are good. Workers in agriculture (14%) and, to a lesser extent, transport (24%) are the least optimistic in this regard.

Figure 31: Workers subjected to adverse social behaviour, by gender and sector, EU27 (%)

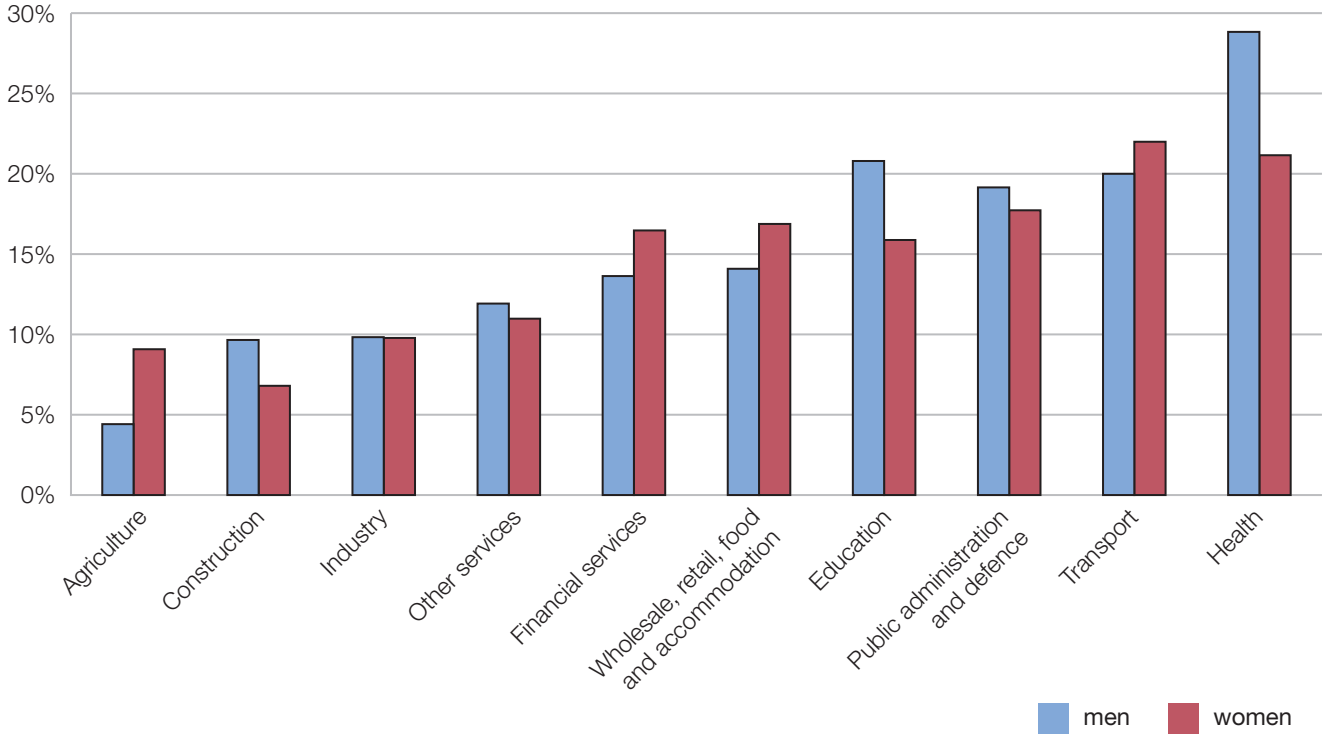
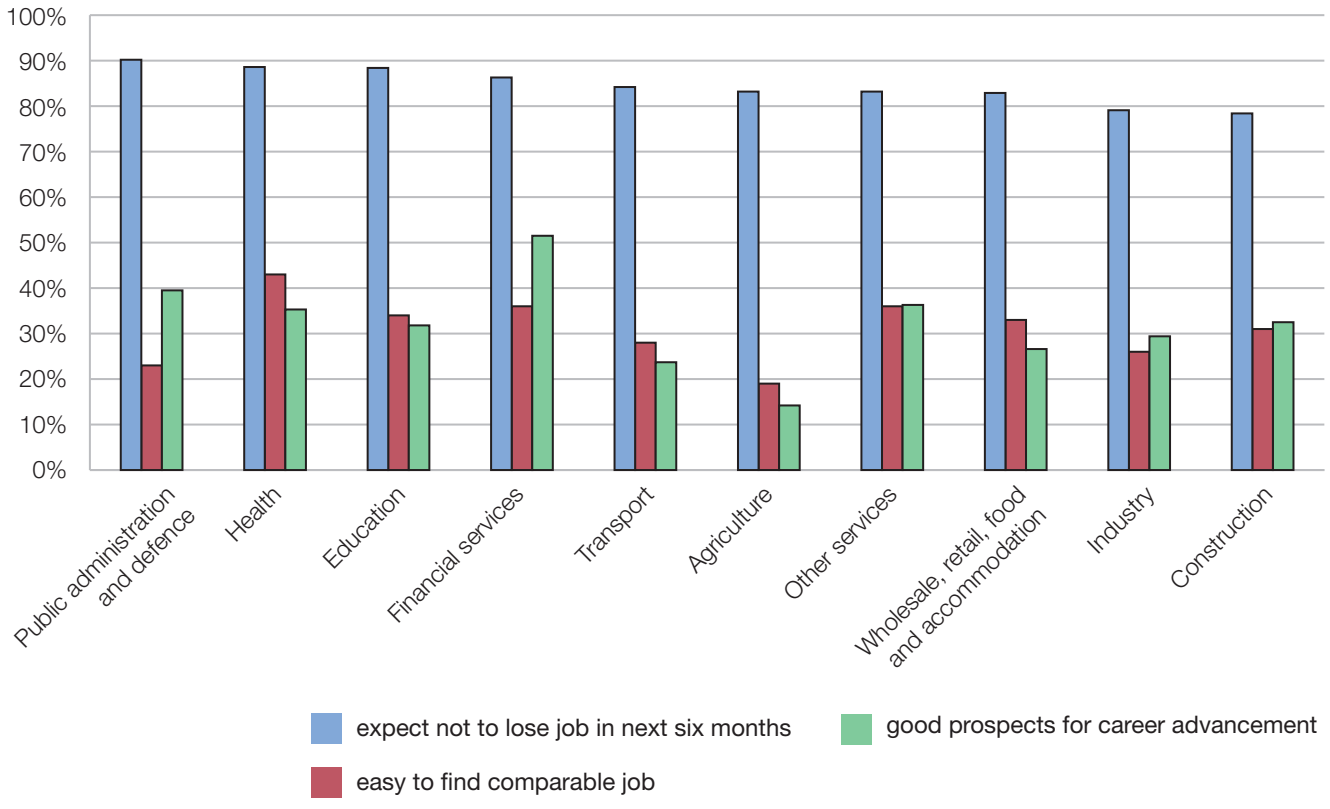


Figure 32: Job and work insecurity, by sector, EU27 (%)



Awareness and prevention of health and safety risks at work

It is important to link exposure to health and safety risks to work organisation and other features of work and the worker. This is because a risk does not always lead to a negative health outcome, as protective factors and policies (at European, national, sectoral or company level) can be in place to mitigate or even prevent the risk occurring in the first place. Employers have a legal obligation to prevent risk. Following a risk assessment, employers are expected to put in place an appropriate risk management strategy, identifying appropriate prevention measures according to an explicit hierarchy – starting with risk elimination, then risk reduction and ending with provision of training and suitable protective equipment.

- The EWCS captures the personal experience of workers and, from that perspective, gathers information on organisational processes that can limit exposure to risk, such as task rotation and employee involvement in shaping work organisation, as well as on risk awareness - an important tool for both companies and workers in protecting workers' health.

Examples of mitigating risk include modifying worker behaviour and imposing a requirement to use personal protective equipment. Safety shoes, helmets, goggles and other garments or equipment are available to protect the wearer's body from injury by blunt impacts, electrical hazards, heat and infection.

- It is recognised that workers will try to achieve the best compromise between the task at hand and preserving and protecting their health (Volkoff et al, 2005). In addition, risk factors differ in terms the degree of seriousness of the negative outcome, the probability of the outcome happening, etc. Finally, physical and psychosocial risks can affect workers simultaneously or in interaction, and exposure to physical risk can lead to mental health problems just as exposure to psychosocial risk can result in physical issues.

Perception of health and safety risks due to work

The proportion of workers in the EU27 reporting their health and safety to be at risk because of their work fell from 31% in 2000 to 24% in 2010 (29% of men versus 19% of women). In most European countries, men are more likely than women to report that their health and safety is at risk because of their work. Gender differences in response to this question may be partly explained by occupational segregation. Employment status also plays a part: the self-employed (28%) report more often than permanently employed (24%) and workers in temporary employment (22%) that their health and safety is at risk because of their work. In this respect, there is less applicable legislation and dissemination of good practice for the self-employed.

There are wide variations between occupations (Figure 33), with male agricultural workers almost three times (2.9) as likely to report that their health and safety is at risk because of their work as male managers. The ratio between female agricultural workers and female clerical workers is even greater (5.1).

Men employed in the agriculture, transport and construction sectors as well as industry and health are more likely to report that their health and safety is at risk because of work. An average level of risk is reported by women working in agriculture, health, industry and transport.

Differences in levels reported between countries (Figure 34), among other things, reflect awareness about topics, objective differences, differences in the economic structure of employment, and differences in legislation and preventive measures.

Information about workplace risks

Closely related to whether workers feel their health and safety is at risk because of work is the extent to which they feel they are sufficiently informed about workplace risks. Overall, the vast majority of workers (90%) report being very well informed. This figure is back at the 2000 level following a 5% drop in 2005. The fifth EWCS results produced the following findings on this matter:

- Young workers seem to have almost closed the information gap and now report levels similar to other workers.

- Non-permanent workers are less likely than permanent workers to report that they are 'very well' and 'well' informed about the health and safety risks they face.

- The percentage of workers reporting they are not well informed is substantially higher among workers who work in single-person workplaces (13%).

- Workers on fixed term or temporary agency contracts and workers who do not have a contract are most likely to report a lack of information on workplace risks (Figure 35).

- Workers in elementary occupations stand out as being less well informed. Managers, technicians and professionals, on the other hand, are relatively well informed.

Figure 33: Perception of health or safety at risk, by gender and occupation, EU27 (%)

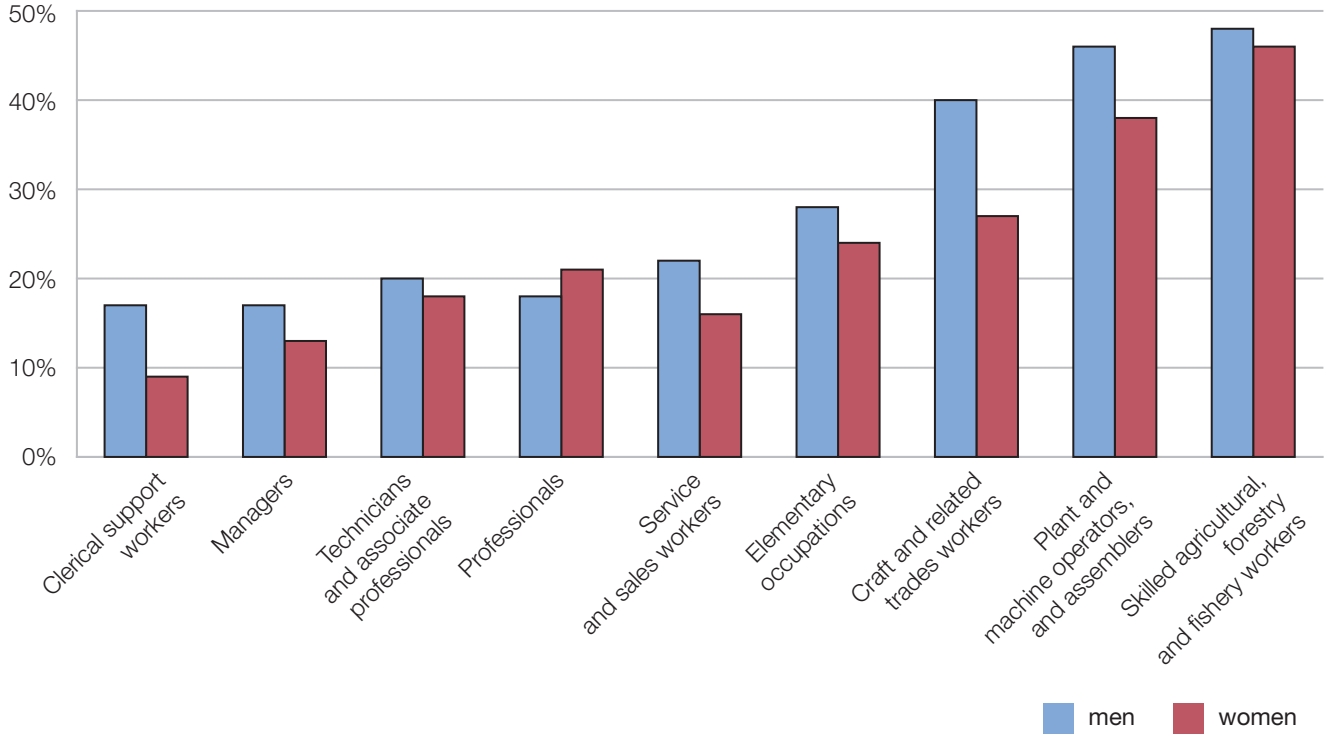


Figure 34: Perception of health or safety at risk, by gender and country, EU27 (%)

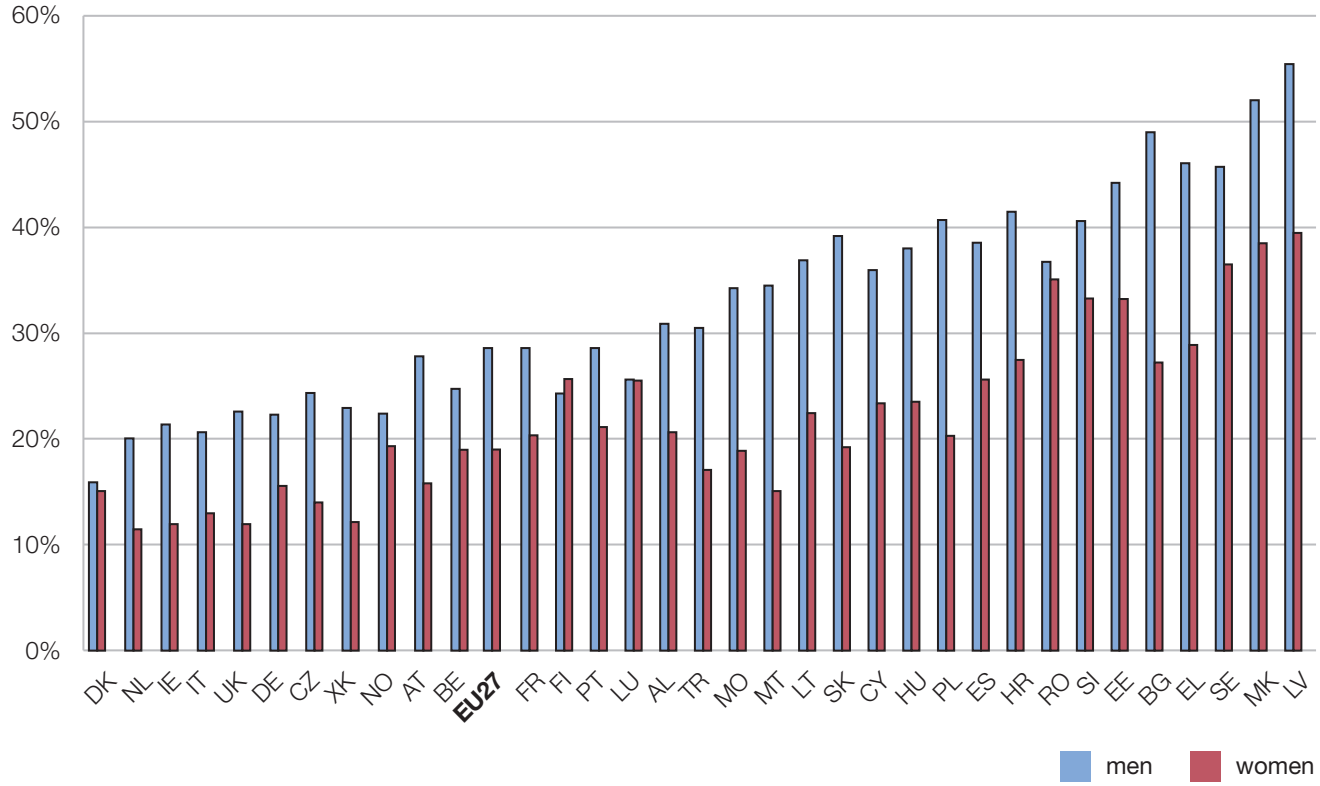
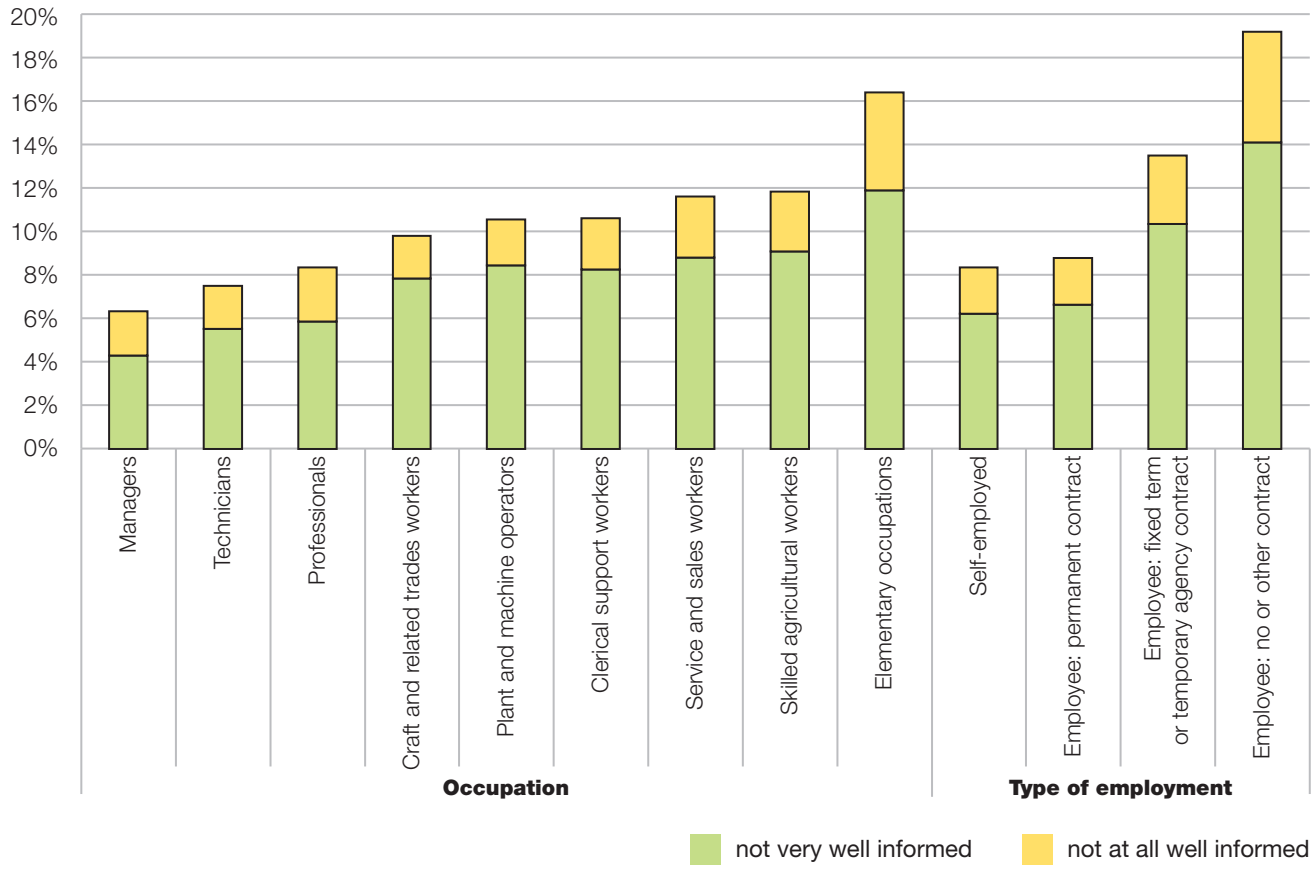


Figure 35: Lack of information on workplace risks, by occupation and employment status, EU27 (%)



Protective equipment

Respondents to the survey were asked whether their jobs require them to wear personal protective equipment. As is the case for exposure to physical risks, men are more likely than women to be in jobs that require the wearing of personal protective equipment (Figure 36), since they tend to predominate in occupations such as skilled agricultural workers, plant and machine operators and craft and related trades workers. Men are also more likely than women to carry out tasks that require them to wear protective equipment.

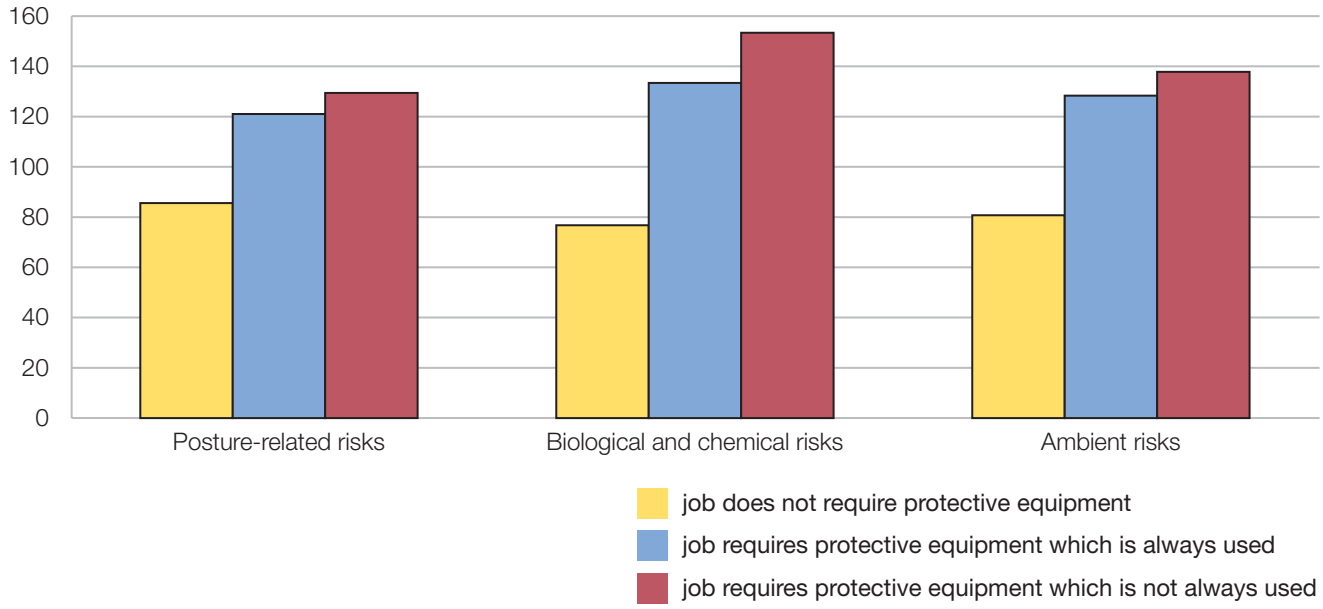
Unsurprisingly, exposure to physical risks is much higher in jobs that require the wearing of protective equipment than in jobs that do not. Furthermore, workers whose job requires the wearing of protective equipment but who admit to not always doing so report higher levels of exposure to physical risks than those who adhere to the requirement. This finding implies that, despite an awareness of exposure to physical risks (reflected in the reported high levels), some workers adopt a casual attitude about protective equipment. Workers try to find a balance between protecting their health and carrying out their tasks efficiently and effectively. Where protective equipment is uncomfortable, unpractical or otherwise unsuitable, workers might choose not to wear it despite an awareness of the consequences.

Work organisation

Work organisation is a broad concept that refers to the choices made within organisations on issues such as the structure of the production process, the relationship between staff and production departments, the responsibilities at different hierarchical levels and the design of individual jobs (Valeyre, 2009).

Modernisation of work organisation has been on the European agenda for more than 20 years. Soft instruments in general have often been used to advance the discussion, as these issues are seen implicitly as a managerial prerogative or an issue for social partner negotiations. The European employment strategy encourages and monitors the 'adaptability of businesses and their employees'. Among other things, it covers adaptability in terms of the organisation of work. Discussion has focused mostly on the 'new forms of work organisation' linked to flexibility,

Figure 36: Exposure to physical risks, by requirement and use of protective equipment



Note: Index scores, EU27 average = 100

industrial restructuring and productivity. The role of work organisation in relation to health, work–life balance, productivity and innovation is the subject of debate.

Europe's commitment to smart growth has focused renewed attention on work organisation practices and these are now being discussed under the concept of 'workplace innovation'. As acknowledged by the European Economic and Social Committee (EESC, 2011), this concept needs to be clearly defined at European level; a review of the literature (for example, Totterdill, 2009; Dhondt, 2011; Pot, 2011), together with some EU policy documents, provides converging suggestions on what workplace innovation is. Examples are given below.

- Workplace innovation is an important part of successful innovation in an organisation. It is complementary to technological innovation.
- Workplace innovation combines interventions in the fields of work organisation, human resource management and supportive technologies. Areas for improvement can include 'work processes, work organisation, working methods, the physical working environment and tools, professional skills and working practices, and management and leadership' (EESC, 2011, p. 22).
- The expected benefits of workplace innovation have a positive impact on companies' overall profitability, improve job satisfaction and reduce sickness absence, save energy and resources, and sustainably improve the productivity of the organisation. These benefits will reduce long-term costs to companies (EESC, 2011).
- Workplace innovation can be conducive to 'simultaneous improvement of performance and quality of working life ... under certain conditions such as the participation of employees in change projects' (Pot, 2011). Workplace innovation is inherently a social process. 'It is about building skills and competence through creative collaboration' (Dhondt et al, 2011). There is empirical evidence that the likelihood of workplace innovation is increased by good working relations, working environment and conditions of work.

Data from the EWCS provide a unique source of information at European level for describing and characterising work organisation in Europe as they allow for the identification of current practices and relate them to the quality of work and employment of workers.[25] As highlighted by Valeyre et al (2009) in a secondary analysis of work organisation from the fourth EWCS, the data available

[25] The next edition of Eurofound's European Company Survey (2012–2013) will deal with work organisation, workplace innovation, worker participation and social dialogue in companies, and will complement data from the EWCS on these topics.

in the EWCS are rich. It is not possible in this overview report to present detailed findings or analysis. This section looks at:

- elements influencing the nature of work such as use of technology, contact with clients and use of quality standards;
- key dimensions of a worker's job design at individual level (autonomy, social support and pace-of-work determinants);
- practices often associated with 'modern' or 'high performance' workplaces (such as task rotation, teamwork and worker involvement) that lead to incremental improvements in the efficiency of work processes and the quality of its products.

Box 2: Employee representation

In the European context, social dialogue at its various levels is considered to be an essential element of democratic governance. Social dialogue, indeed, is a core part of the European social model, contributing to a sound process of social and economic development and cohesion. Research on the relationship between social dialogue and the improvement of working conditions shows that the existence of employee representation in the workplace can be a determining factor for improving working conditions (Voss, 2009; Oxford Research, 2011). Therefore, if and how employees are represented in the workplace are issues related to the quality of their working conditions.

Eurofound's European industrial relations dictionary[1] defines employee representation as 'the right to seek a union or individual to represent employees for the purpose of negotiating with management on such issues as wages, hours, benefits and working conditions'. Employee representation in the workplace can take different forms, from employee delegates to works councils, from trade union delegates to health and safety committees. There are several types of representative bodies and structures which vary, among other aspects, according to national characteristics, regulations and establishment size.

Given the topic's complexity, the EWCS acknowledges the difficulty in drawing a reliable picture of the collective aspects of workers' representation via a survey of individual workers. Nevertheless, the EWCS tries to explore the issue by addressing two related aspects: the existence of an employee representative in the workplace (Q63) and whether work-related problems have been raised with an employee representative (Q62B). In 2010, 45% of European employees reported having an elected employee acting as a representative in the local unit of the company for which they work. Clearly this figure does not give the overall picture of employee representation in Europe. For a more precise interpretation of the figures, one should keep in mind that there are at least two limitations to the data. First, the respondents' possible lack of knowledge, as there are employees who are not aware of the existence of a local representative in their workplace (4% answered 'don't know' to Q63). Second, the limited coverage of the question on the existence of a representative in the workplace excludes representatives that may be in the company but not at the respondent's workplace level (in another establishment, for example).

The need for a careful interpretation of the data is illustrated by the fact that not all the employees who report having raised work-related problems with an employee representative in the 12 months prior to the survey (representing 19% of the total) mention the existence of a representative at the workplace. This indicates that, in some cases, individuals may have representation in the company as a whole but not in the local unit where they work.

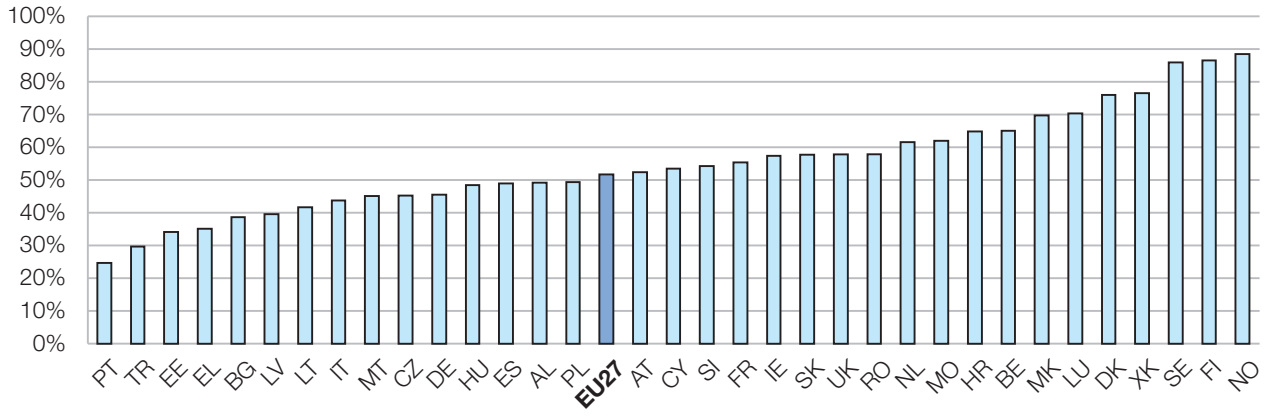
It is possible to get a more accurate estimate of the extent of employee representation by combining the answers to the two questions regarding the existence of an employee representative in the workplace and raising a work-related problem with an employee representative. Using this formula, about 52% of employees in the EU27 report having an employee representative in their organisation (Figure 37).

[1] http://www.eurofound.europa.eu/areas/industrialrelations/dictionary/

>>>

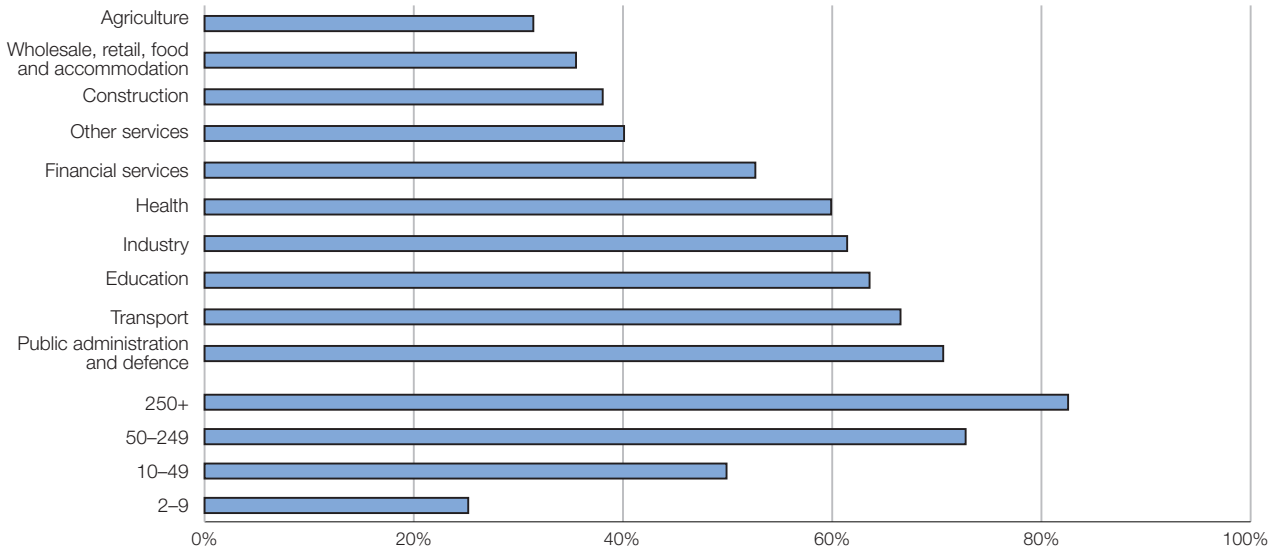
Employee representation varies according to sector and the size of the establishment. Agriculture, wholesale, retail, food and accommodation, construction, and other services have lower levels of employee representation than the EU27 average. Transport and public administration have high levels, with two-thirds or more of employees reporting having some sort of employee representation.

Figure 37: Employee representation, by country (%)



The European Information and Consultation Directive (2002/14/EC) established the rights to information and consultation between employers and employee representatives in enterprises with at least 50 employees or establishments with at least 20 employees (European Parliament, 2002). Not surprisingly, among those workers declaring that they have employee representation, the proportion of employees working in local units with 50 or more employees is considerably higher than that of those working in smaller units. Nevertheless 25% of individuals working in small units (2–9 employees) reported having a representative (Figure 38).

Figure 38: Employee representation, by sector and establishment size, EU27 (%)



The nature of work

This section looks at three practices influencing the nature of work and the constraints under which it is performed:

- contact with clients and people outside the workplace;
- use of technology;
- use of quality standards.

Dealing with external people at work

An important dimension of work is direct contact with people external to the workplace such as customers, passengers, pupils and patients. This indicator has been measured in the EWCS since its second wave in 1995 with, overall, little change over time being reported.

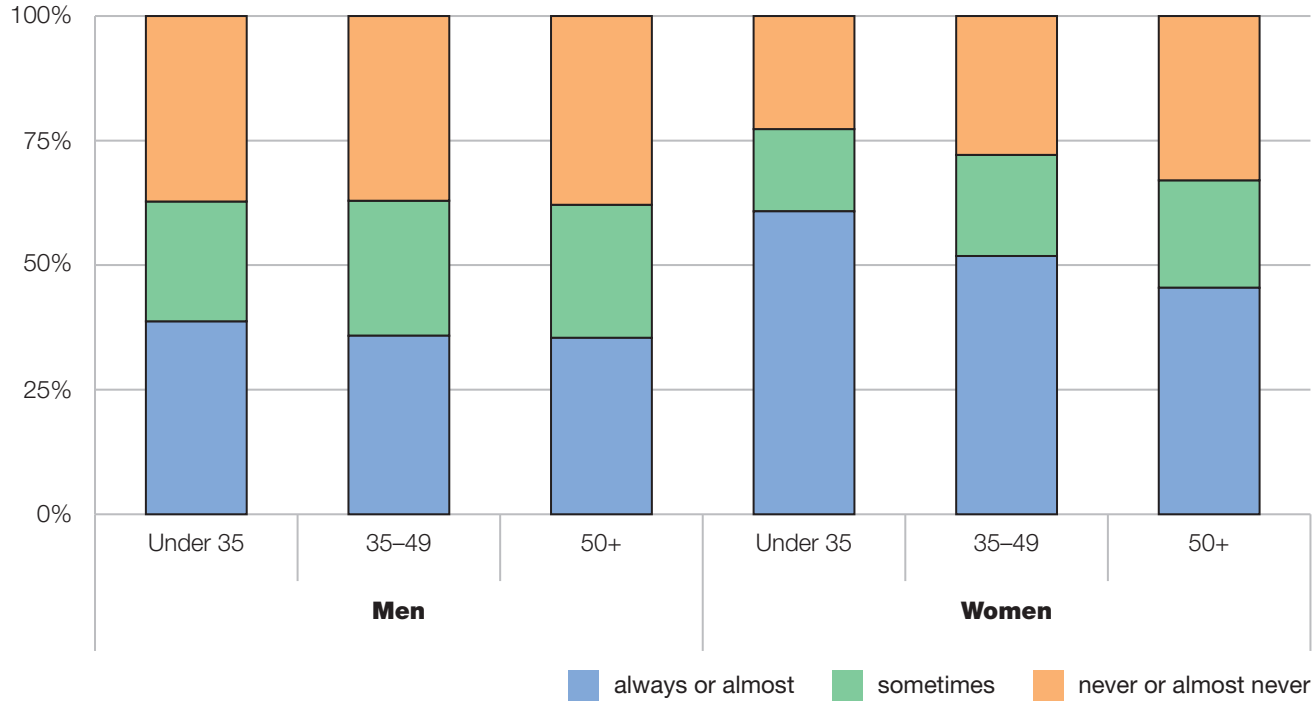
Different patterns can be distinguished according to workers' sex and age (Figure 39). In general, more women than men have a job that involves contact with external people. But while the proportion does not vary significantly for men when age is taken into account, the proportion of individuals stating that their job involves dealing with customers, patients and so on is highest for the youngest female group and decreases with age. This is one more aspect of the gender division of labour.

Contact with people external to work varies significantly between sectors. As expected, it is a common feature of such sectors as health, education and wholesale and retail; in these sectors, more than 6 out of every 10 workers have to deal with external people. Agriculture, industry and construction are the sectors in which most workers do not have to deal with external people or only to a small extent.

The proportion of workers dealing with people external to work also varies considerably between occupations. Service and sales workers, obviously, but also professionals and managers are the occupational categories involving more external contact. Workers in occupations commonly found in sectors involving less external contact naturally show lower levels of external contact; that is the case for agricultural workers, craft and related trades workers, elementary occupations, and plant and machine operators.

The subject of workers whose job involves visiting customers, patients and clients is dealt in the earlier section on working time and place of work. The extent to which workers' pace of work is determined by direct demand from customers, passengers, pupils or patients is discussed later in this chapter.

Figure 39: Dealing with external people at work, by age and gender, EU27 (%)



Technology in the workplace

Technologies that enable the production of goods and services, allowing for more efficient communication and innovation processes, are at the core of Europe's commitment to 'smart, sustainable and inclusive growth' (European Commission, 2010a). The European Union's focus on investment in human capital for education and skills growth in its guidelines on employment policies in the Member States reinforces this commitment, as a skilled workforce is better prepared to develop, and make more efficient use of, technologies.

The EWCS includes four questions that can be used as indicators of the use of information and communication technologies (ICT) and of more traditional types of technology (such as hand-tools and machines) in the workplace. The variables used for this purpose are:

- working with a computer;
- using the internet or email for professional purposes;
- exposure to vibrations from hand-tools or machinery;
- pace of work dependent on the automatic speed of a machine or movement of a product.

The EWCS data are consistent with a significant increase in the use of ICT at work. The trend perspective provided by data for the EC12 (the original 12 Member States prior to enlargement) since the first EWCS in 1991 shows that the proportion of people using computers at work has steadily risen during the past 20 years: the proportion of workers reporting using a computer 'almost all the time' or 'most of their time' at work more than doubled from around 14% in 1991 to 31% in 2010. Although it is not possible to look at trends in the use of the internet and email for work (the question was asked for the first time in 2005), the 4 percentage point increase between 2005 and 2010 in both the group of 12 new Member States post-enlargement and the EU27 also suggests an upward trend in ICT use at work.

The opposite trend can be observed in relation to the use of more traditional types of technology. The data show a steady decrease in the proportion of people working with machines over the past 15 years, as indicated by proxy through the proportion of workers exposed to machine vibrations and those whose work depends on the speed of a machine. The same evolution in traditional technologies and ICT can be seen for the EU27 and the 12 new Member States, although the proportions are slightly lower in the former than in the latter.

A composite indicator was created from the four variables following the approach used by Dhondt et al (2002) and in the fourth EWCS (Parent-Thirion et al, 2007). Based on the predominance of the different types of technology used at work, the indicator distinguishes four categories of workers:

- those whose work is greatly determined by the use of computers and the internet but not machinery, classified as 'ICT';
- those whose work is greatly determined by the use of machinery but not computers or the internet, classified as 'machinery';
- those whose work is greatly determined by both, classified as 'ICT and machinery';
- those whose work is not significantly determined by either ICT or machinery, classified as 'irrelevant use of technology'.

While the proportion of those whose work is mainly determined by the use of ICT (by itself or coupled with machinery) is increasing, the proportion of those whose work is determined mainly by the use of machinery, and especially of those for whom the use of technology is not so important, is plummeting (Figure 40).

Health, public administration, education and financial services are the sectors where ICT use is above the EU average and the use of machinery is almost irrelevant (Figure 41). Sectors such as industry, transport, construction and agriculture have more reported use of machinery.

In terms of occupation, the findings point to three groups (Figure 42). Skilled agricultural workers, elementary occupations, plant and machine operators and craft and related trades workers make up a group characterised by little use of ICT and extensive use of machinery. Managers, technicians, clerical support workers and professionals make extensive use of ICT, while exclusive use of machinery is almost negligible. Service and sales workers show an intermediate pattern in which machinery, even coupled with ICT, does not play an important role, and ICT is not as important as for managers and professionals but is more important than for operators and elementary occupations.

There are also important differences according to individual characteristics such as sex and level of educational attainment. Use of ICT is higher for female workers while use of machinery is higher for men. Finally, the use of ICT increases significantly with the level of educational attainment; however, for those with a low level of education the use of machinery and machinery with ICT is more prevalent.

Figure 40: Evolution of technology use, EU27 (%)

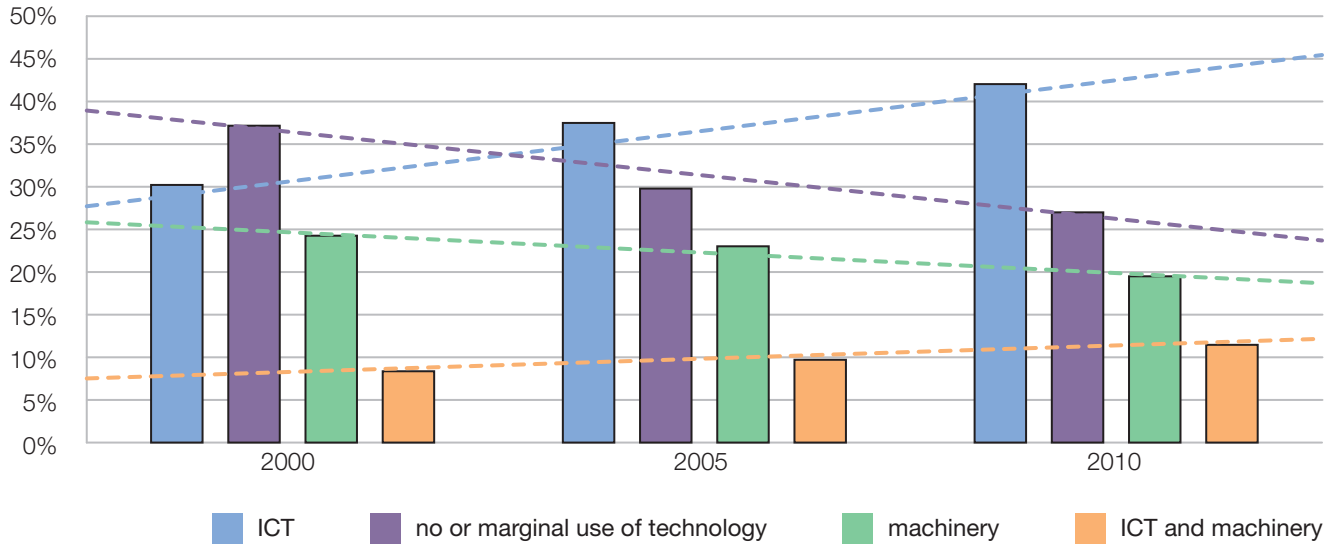


Figure 41: Technology use by sector, EU27 (%)

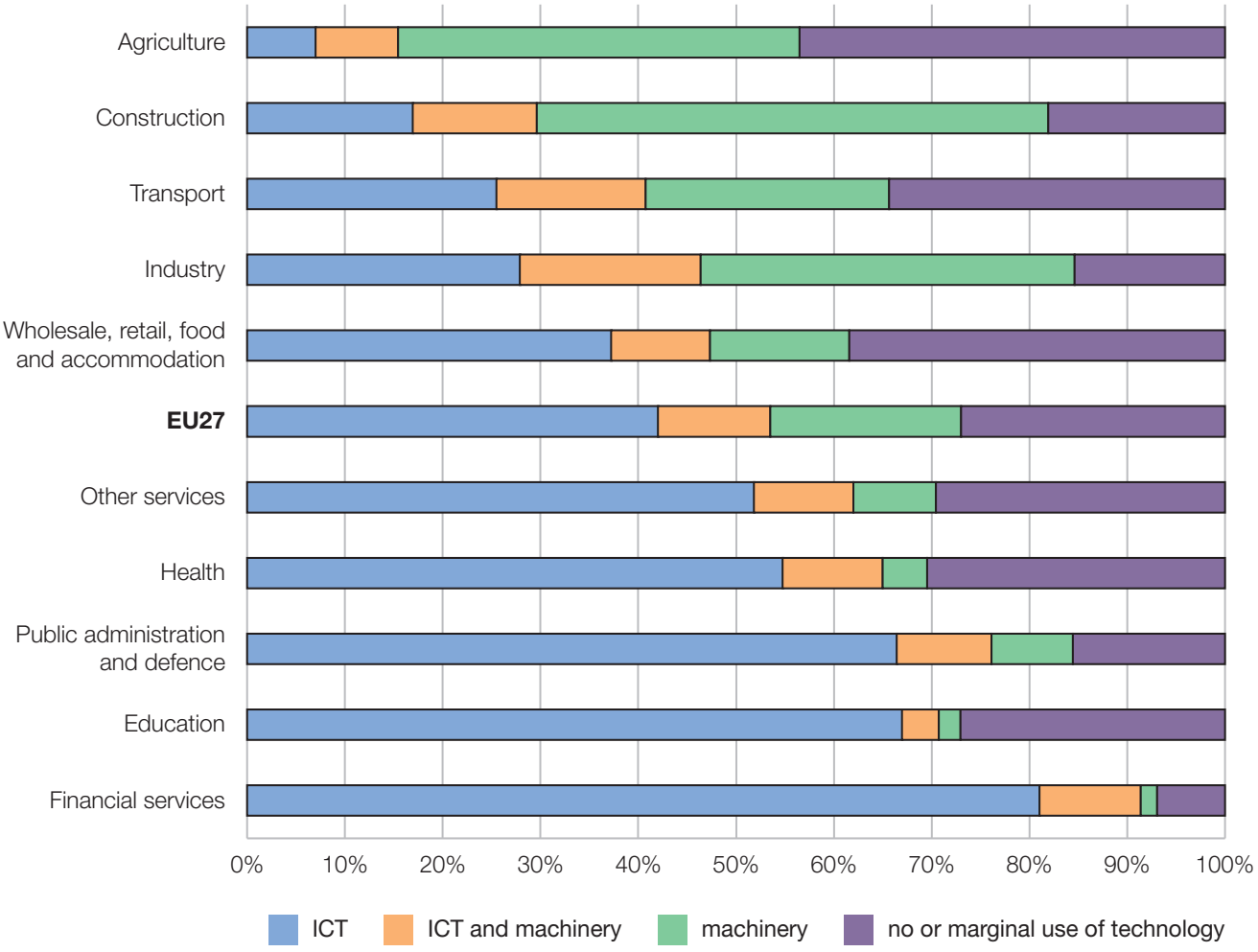
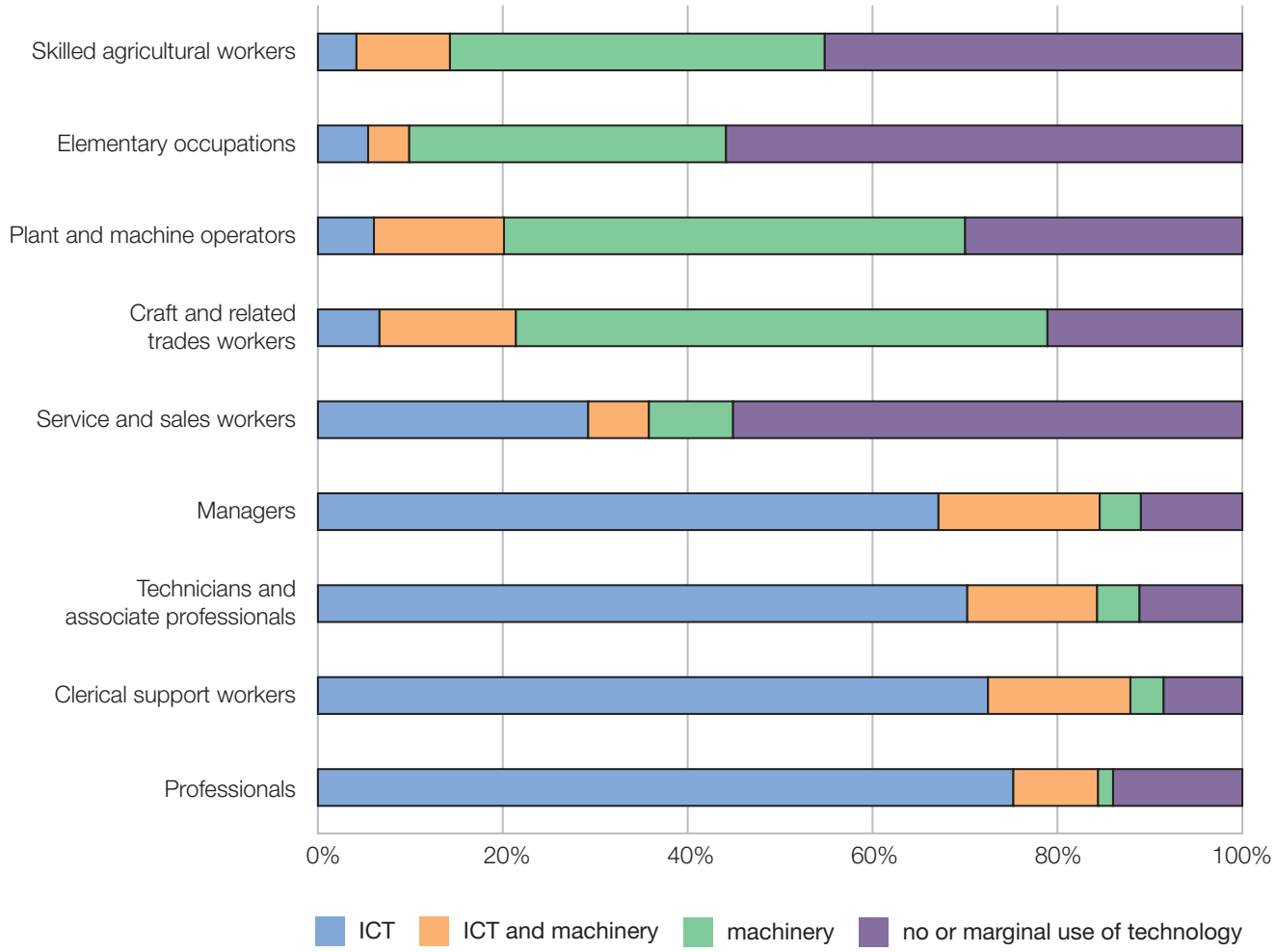


Figure 42: Technology use by occupation, EU27 (%)



Use of quality standards at work

Standardisation (see, for example, Pokinska, 2007) is a phenomenon linked to globalisation as it allows for easier coordination and control in the global market. Interaction between organisations is made easier if they follow the same standards and if products and processes are compatible with each other; moreover, the work of other organisations (general contractors, subcontractors) becomes easier to predict. From another perspective, the total quality management (TQM) approach emphasises standardisation as an important tool in achieving organisational excellence.

The impact of standardisation on working conditions can be positive or negative. For example, some argue that formalisation ensures that best practice (which can also be the safest) is the norm and that it reduces uncertainties and therefore stress, ultimately helping workers to perform better (as well as managers to supervise the quality of their work). However, it is also argued that standardised work is monotonous and may reduce the creativity and commitment of workers as well as the potential for learning.

The EWCS shows that more workers meet quality standards since 2000, while the practice of self-assessment of quality of work has remained stable. Assessing the quality of their own work (73% in the EU27) and meeting quality standards (72%) are common for workers in Europe, with slightly more men than women working in such ways. Assessing the quality of their own work characterises work in the education (80%), health (79%) and construction (78%) sectors; meeting precise quality standards is particularly common in the construction (85%) and health (77%) sectors but also in industry (84%). Agriculture, wholesale and retail, and public administration report lower levels than average for both indicators. Assessing the quality of one's own work is least common in the transport sector (63%), and the education sector has the lowest proportion of people whose work involves meeting precise quality standards (66%).

Occupations also differ in the extent of standardisation as well as how it is applied. Assessing the quality of one's own work is most common for managers and professionals (84% for both occupations). Self-assessing quality is least common for plant and machine operators, as well as workers in elementary occupations (61% for both). Craft and trades workers most often meet precise quality standards in their work (89%). This is least common for service and sales workers, skilled agricultural workers, and those in elementary occupations (65%–68%). Employees with a temporary agency contract report the highest level of precise quality standards of work (80%), reflecting both the sectors that make most use of temporary agency work and the high level of standardisation of work offered in this market.

Core dimensions of individual-level job design

Because work organisation is mainly relevant for employees in workplaces where tasks need to be divided in a more or less formal way, the analyses presented in the remainder of this chapter cover only workplaces with 10 or more employees. Workers in the armed forces are also excluded in the analysis.

Autonomy

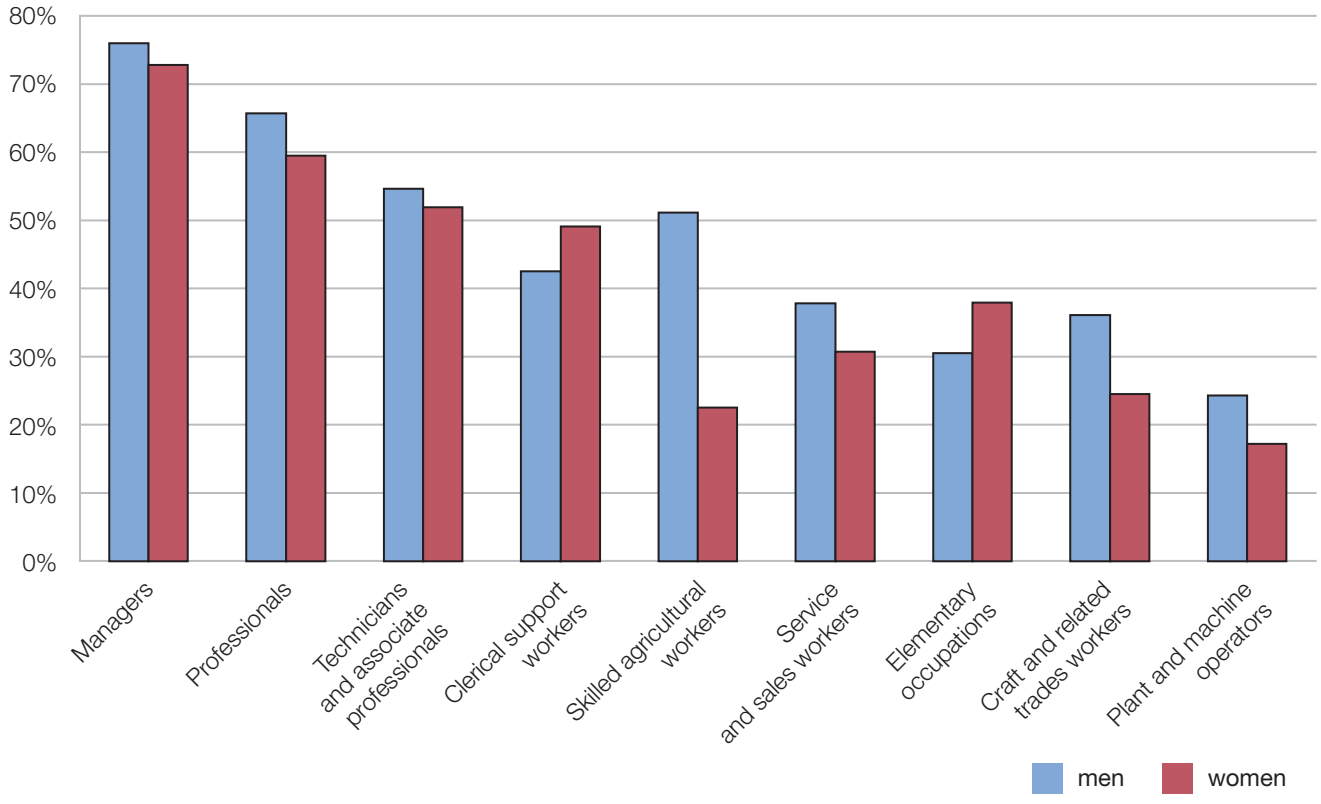
As indicated in the section on psychosocial risks, the higher the level of autonomy, the better the resources available to workers to do their job.

In general, about half of the EU27 workforce enjoys a high level of procedural autonomy, with 46% of workers able to control the methods, speed and order of their work. The levels of procedural autonomy differ greatly across occupations (Figure 43). The highest percentage is found among managers (76% of men and 73% of women), and the lowest percentage is found among plant and machine operators (24% of men and 17% of women).

Differences between economic sectors are less pronounced; the highest levels are in education (64%) and financial services (56%) and the lowest levels in transport (30%), agriculture (37%) and industry (41%).

On average women report slightly more procedural autonomy than men; this is more pronounced for both younger and older workers. However, men aged 35–49 years report 1 percentage point more procedural autonomy than their female counterparts.

Figure 43: Procedural autonomy, by gender and occupation, EU27 (%)



Country differences are quite important, with the lowest prevalence of autonomy being reported in the former Yugoslav Republic of Macedonia (24%), Greece (29%) and Bulgaria (31%), and the highest in Malta (80%), Denmark (69%) and Finland (64%). The prevalence of a high level of autonomy has barely changed over time.

Factors determining the pace of work

A key element of job design is the pace or the rate at which people carry out their work. Several types of constraints can affect this:

- 'automatic' constraints linked to the operation of a machine or to the position in the production flow;
- 'norm-based' constraints relating to production or performance targets;
- 'hierarchical' constraints linked to the direct control of a superior;
- 'market' constraints linked to interaction with customers;
- 'horizontal' constraints related to dependence on the work of colleagues.

In order to capture the prevalence of the pace constraints determining the rhythm of work, respondents were asked whether the pace of their work is dependent on:

- the automatic speed of a machine or movement of a product (reported by 21%);
- numerical production targets or performance targets (47%);
- direct control of their boss (43%);
- direct demands from people such as customers, passengers, pupils or patients (64%);
- work done by colleagues (45%).

The higher the number of pace determinants, the higher is the strain put on workers (Burchell et al, 2009). Workers not only have to cope with an increased number of constraints but are faced with the additional task of balancing them, while being limited in their capacity to anticipate their workload as well as to carry out their work safely.[26] Overall, 11% of employees report no pace determinants, 53% report one or two pace determinants and 37% report three or more. It is the latter category in particular that can be expected to suffer the consequences: this group is most prevalent among managers (52%) and craft and related trades workers (55%), and smallest among professionals (31%).

Differences between sectors appear to be more important, with the proportion of workers faced with more than three pace determinants being highest in industry and construction (both 53%) and lowest in public administration (30%) and education (24%).

Men (43%) more often report than women (37%) three or more pace determinants. The incidence and likelihood of facing three or more constraints decrease with age. Again, country differences are quite important, with the proportion of workers facing three or more pace constraint being highest in Greece and Ireland (both 56%), the UK (55%) and Hungary (54%), and lowest in the Netherlands (23%) and Denmark (25%).

In addition to this fairly objective indicator of work intensity, respondents were asked to give a more subjective assessment through questions on the prevalence of working at high speed and to tight deadlines and of not having enough time to get the job done at least half of their working time (Table 12). For these indicators, there are significant differences within occupations and between men and women. Overall, men are more likely to report working at high speed or having tight deadlines at least half of their working time.

Plant and machine operators and craft and related trades workers report the highest levels of working at high speed. Although these occupations also show a relatively high prevalence of working to tight deadlines, this factor is most common among managers. Managers, female professionals, technicians and associate professionals, and male skilled agricultural workers more often report not having enough time to get the job done.

Working at high speed decreases with age. Working to tight deadlines is most prevalent among 35–49-year-olds, and there is little difference between age groups in the extent to which they report not having enough time to get the job done.

The construction sector has a comparatively high prevalence of working to tight deadlines (66%) as well as at high speed (61%). Tight deadlines are also very common in financial services (65%), while working at high speed occurs relatively frequently in industry (56%) and wholesale, retail, food and accommodation (58%). Education is the sector with by far the lowest prevalence of working to tight deadlines (27%) and working at high speed (27%).

[26] For example in times of emergency, a nurse will lift a patient rather than use the equipment designed to assist them, or, as a consequence of a change in route, a truck driver will lift a heavy load they might not have done had the goods been packed the best way for the route.

Table 12: Subjective measures of work intensity, by gender and occupation, EU27 (%)

	High speed (at least half the time)		Tight deadlines (at least half the time)		Enough time to do job (sometimes, rarely or never)	
	Men	Women	Men	Women	Men	Women
Managers	44	52	69	73	32	37
Professionals	39	34	51	43	28	30
Technicians and associate professionals	46	51	52	55	27	31
Clerical support workers	50	45	58	47	27	21
Service and sales workers	47	53	38	40	26	27
Skilled agricultural workers	51	48	44	39	34	10
Craft and related trades workers	57	67	60	66	28	20
Plant and machine operators	57	74	58	67	28	28
Elementary occupations	57	53	56	48	24	23

Reports of rarely having enough time to get the job done are most prevalent in financial services (38%) and health (35%), and least prevalent in public administration (24%) and agriculture (24%).

Turkey has by far the highest level of subjective work intensity, ranking the highest on all three indicators. Other countries that rank high are Austria, Cyprus and Germany. Countries with relatively low levels of subjective work intensity are Albania, Bulgaria and Latvia.

Frequent disruptive interruptions

When asked how often they have to interrupt work to take on an unforeseen task, 33% of respondents report this happens 'very' or 'fairly' often; 9% see these interruptions as positive, 39% say they have no consequences, and 52% find them disruptive. This last category is particularly interesting. Interruptions can be an inherent part of the job (for example, the health of a patient taking a turn for the worst), but can also be a sign of poor work organisation (having to deal with unplanned, tight deadlines) or mismanagement. Or they can be an indication of carrying out work as part of a network of relationships.

The incidence of frequent disruptive interruptions has been increasing since 2000, when it was reported by 10% of workers. Overall in 2010 (as in 2005), 17% of employees report frequent disruptive interruptions: women (18%) are slightly more likely to experience them than men (16%). Managers (33%) report the highest levels, and plant and machine operators and skilled agricultural workers report the lowest (less than 10%). Relatively high levels are reported in health (27%) and financial services (24%), and low levels in agriculture (7%) and transport (11%).

'Modern' work organisation practices

Over the past 15 years, a number of managerial practices and new modes of work organisation have been advocated and promoted as instruments that could contribute to increased globalisation. They might also support the development of the so-called 'flexible' company presented as the answer to the mass production model, which had been shown to have serious drawbacks (European Commission, 1997).

A number of models and practices are discussed under the terms 'high trust', 'high skills' and 'high performance'. These new models of work organisation are expected to contribute to increased learning and the development of new skills, and lead away from the hierarchical way of organising companies.

Task rotation

Task rotation in the EU27 is available to about half (51%) of the employees working in organisations with 10 or more employees. Task rotation covers a variety of situations:

- the tasks involved may or may not require different skills (the latter case is referred to as multiskilling);
- the scheme may or may not be controlled by management (the latter case is referred to as an autonomous scheme).

The most common scheme of task rotation is management-controlled multiskilling (30%). The 'innovative practice' of autonomous multiskilling task rotation is practised by 10% of employees in European workplaces with 10 or more employees; management-controlled fixed task rotation is practised by 8% of employees; and autonomous fixed task rotation is marginal (2%).

It is argued that task rotation can increase productivity for at least four reasons:

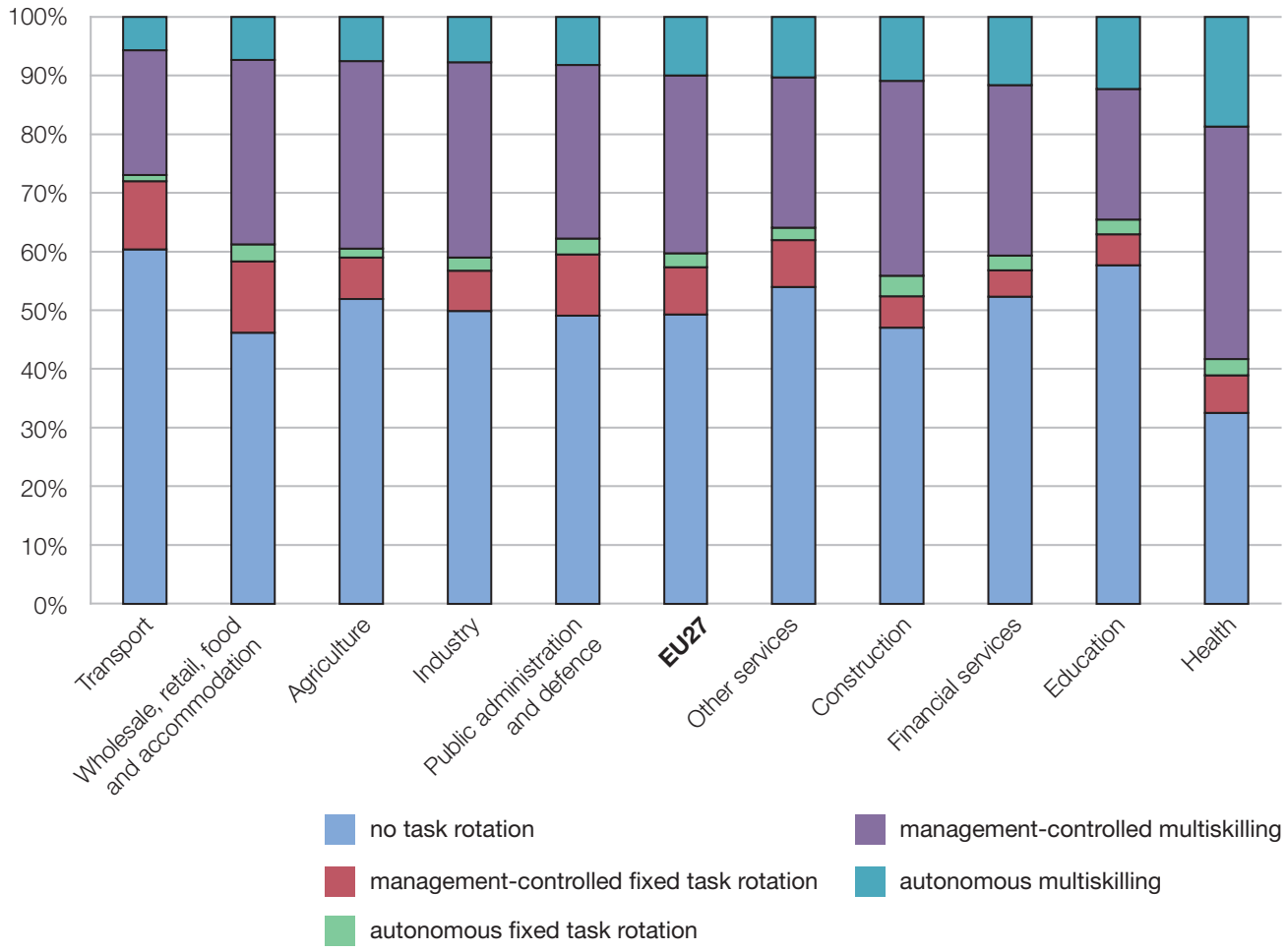
- workers are able to carry out more tasks;
- coordination between workers is easier, as all workers know the tasks to be performed;
- workers can be allocated to different tasks according to production needs;
- task rotation facilitates the regular maintenance of machines, which in turn reduces breakdowns.

It has also been welcomed for its benefit to workers' well-being, as it can be a useful instrument in mitigating the effects of repetitiveness and can therefore be used in the prevention of repetitive strain disorders such as musculoskeletal disorders.

Task rotation is also useful in relation to the learning opportunities it provides or in preventing boredom and monotony when the tasks at hand are deemed to increase motivation. As such, it contributes to job enrichment and, when skills are transferable, possibly to employment security. When task rotation schemes are implemented by an autonomous group, the multiskilling can go beyond task enrichment at the individual level and can address the whole production unit.

Autonomous multiskilling task rotation systems are deemed to be associated with higher performance for companies as well as motivation for workers. Such schemes are slightly more common among the middle age group of workers (35–49 years) – 11% – and are practised by 18% of managers, 14% of professionals and 11% of technicians. They are also common in health (19%), education (12%), financial services and construction (11%) (Figure 44). Three countries are at the vanguard of this

Figure 44: Task rotation for workers in companies with 10 or more employees, by sector (%)



practice: Denmark, where 35% of employees in organisations with 10 or more employees work under this type of scheme, the Netherlands (25%) and Norway (18%). In 14 countries (Albania, Bulgaria, Cyprus, the Czech Republic, Greece, Hungary, Italy, Latvia, Malta, Poland, Portugal, Romania, Slovakia and Turkey), these practices are marginal and cover less than 5% of the workforce, with the other countries lying in between.

Management-controlled multiskilling task rotation (30%) is the most common form of task rotation; its incidence is slightly more common for men than for women (2 percentage points more) and decreases with age. It is practised by 41% of craft workers, 31% of technicians and professionals, and least practised by managers (19%). It is practised by more than one-third of workers in the health sector (37%), and about one-third of workers in construction and industry (both 33%) (Figure 44). Incidence varies quite a lot across countries, with 65% in Slovenia, 46% in Bulgaria and 39% in Finland, compared with 18% in Hungary and Portugal.

Management-controlled task rotation is practised by 8% of employed workers and decreases with age. It is slightly more common for elementary occupations (15%), plant and machine operators (14%), and among workers in the transport and wholesale, retail, food and accommodation sectors (12% for both sectors). Employed workers in Greece (20%), the former Yugoslav Republic of Macedonia (16%), Portugal (15%), and Cyprus and Turkey (14% each) report the highest use of this practice.

Autonomous fixed task rotation is little seen as only 2% of employed workers (mostly workers in elementary occupations and service workers) in Europe work this way. It is slightly more common in Denmark, Sweden and the UK (4% each).

The coexistence of different practices within countries illustrates how different modes of work organisation coexist in one country and refutes simplistic explanations of a move towards a single best practice.

Teamwork

Teamwork is seen as an alternative way of working to a high division of labour as 'business as usual no longer works' (Applebaum and Batt, 1994). Teamwork is supposed to lead to higher outputs, less absenteeism as well as a more committed workforce, to be associated with broader job content, less stressful work, and improved relationships at work.

Teamwork can result in numerous positive benefits such as an increase in the expertise of the team members, an improvement of working processes through drawing on different skills and strengths, as well as increased creativity and collaboration. However, it can lead to higher work pressure in some instances (for example, in lean production).

Teamwork reflects a wide variety of practices. It also builds on different research traditions based on the sociotechnical model, which relies on significant team autonomy, or on lean production models, characterised by less autonomy.

The EWCS found different types of teamwork, including cases where the team has little autonomy and resembles what is referred to as 'low road' teamworking and lean production, and cases of self-managed autonomous teams consistent with with the sociotechnical teams of the 'high road'. Expectations in terms of benefit are different, in particular in relation to learning.

Considering teamwork in general, nearly half of employed European workers (48%) always belong to the same team. Some (19%) work in several teams, while 32% do not work in a team or group.

Workers were asked to describe some characteristics of the team in which they work most of the time. This allows the following characterisation of teamwork in Europe for companies with 10 or more employees:

- 20% of employees work in self-managed teams where the team can select its leader, the timetable of work and the division of tasks;
- 20% of employees work in teams with at least one positive answer on autonomy;
- 27% of employees work in teams where the division of tasks, the timetable of work and the team leader are decided outside the team;
- 32% of employees do not work in a team.

Women report slightly more than men that they work in highly autonomous teams from the middle of their career onwards. Fewer women than men work in teams with no autonomy. The proportion of employees not working in teams increases with age by 4 percentage points.

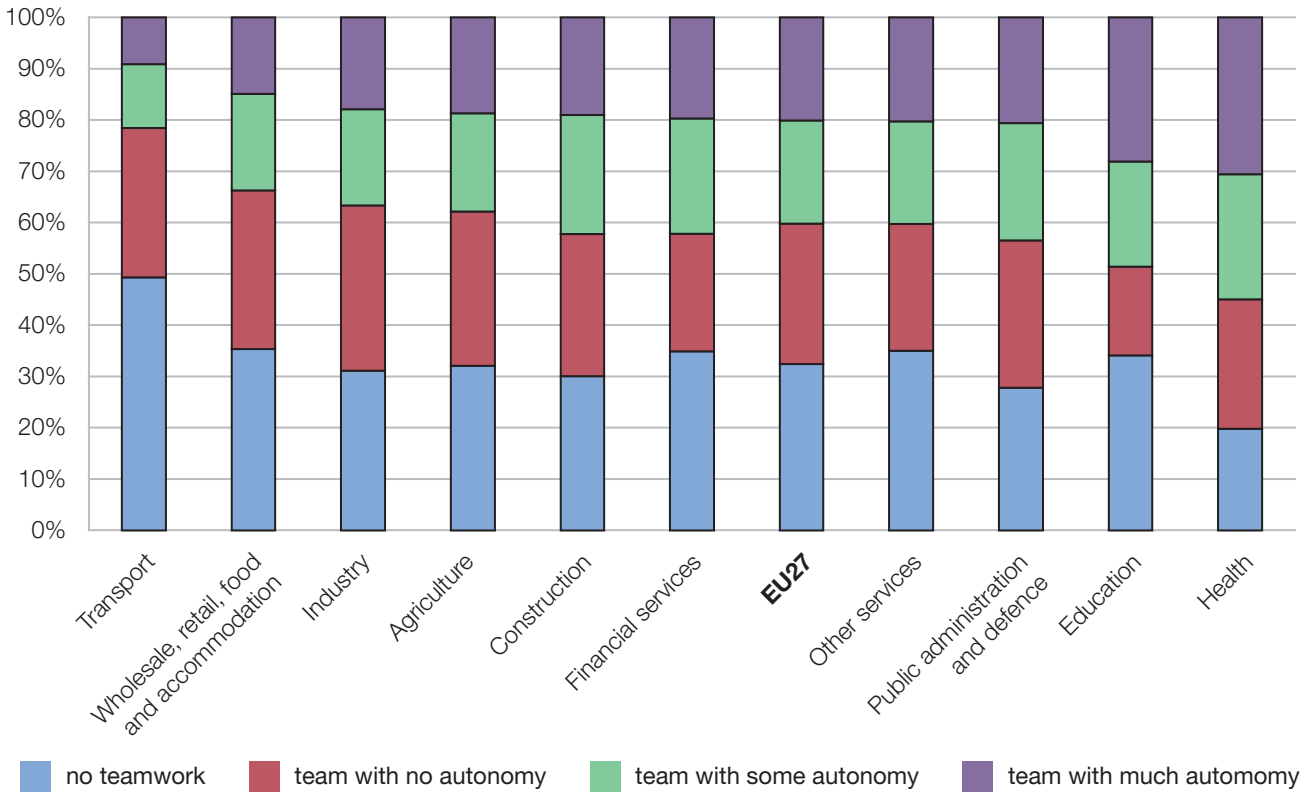
Participation in autonomous teamwork follows the usual gradient by occupation: the higher the level of educational attainment necessary for the occupation, the higher the frequency of autonomous teamwork. It should be noted that there is a difference between the individual's autonomy and that of the team. In this case, the autonomy of the team is measured and used to characterise the different types of teams.

Not working in a team is more frequent in sectors where people tend to work alone, such as transport (49%), other services and wholesale and retail (both 35%), At the other end of the spectrum, only 20% of employees in the health sector do not work in a team (Figure 45). Portugal and Turkey have the highest incidence of not working in a team (over 45%). About a third of managers, plant and machine operators, workers in elementary occupations and craft workers work in a team that does not have autonomy; this is the same proportion for those working in industry.

A slightly above average frequency of teamwork with medium autonomy is reported in health (24%), public administration and financial services (both at 23%) and education (21%). Norway (32%), the Netherlands (31%), Sweden (28%), Denmark (27%), Latvia (26%), and Finland and Romania (25% each) report a higher-than-average incidence of such practices.

Self-managed autonomous teamwork is most frequent for professionals (30%), managers (24%) and technicians (23%). Autonomous self-managed teams are more common in health (31%), education (28%) and public administration (21%), and are less prevalent in transport (9%). They are also more frequent in Denmark (38%), Sweden (34%), Finland (33%), Norway (32%), Ireland (31%), Luxembourg (26%), and Austria, Belgium, the Czech Republic, Lithuania and Germany (all 22%–23%). The lowest level of autonomous teamwork is found in Portugal where only 3% of workers report working in a team with a high level of autonomy.

Figure 45: Types of teamwork, by sector (%)



Workplace innovation

The fifth EWCS contains new questions designed to measure the participation of workers in work improvement processes. These questions were inspired by the work of Dutch researchers and practitioners on *social innovatie* (workplace innovation) and cover a set of three practices (Table 13).

A scale[27] was produced to measure the implementation of this set of practices, which allow employees to contribute to improvements as well as setting performance targets. The scale ranges from 1 (none of the practices in use) to 5 (all of the practices in use). According to this scale (in which the EU27 scores 3.0 overall), male employees (3.0) are slightly more exposed to these practices than women (2.9). The practices are more frequent for older employees (3.6 for men and 3.5 for women). Managers by far report higher levels of being exposed to such practices (4.0); technicians (3.2) and professionals (3.1) also report higher-than-average levels of such practices. Workers in elementary occupations (2.3) and plant and machine operators (2.4) are least exposed to these practices, reflecting again the traditional gradient by occupation.

In all but elementary and clerical occupations, women report lower levels of work innovation than men.

Education (3.5), health (3.2) and financial services (3.2) report higher-than-average levels of work innovation practices and transport and agriculture (both at 2.7), the lowest levels.

Contractual status affects participation in workplace innovation: workers with a permanent contract report a higher level of such practices (3.1) than workers with a fixed-term contract (2.7) or workers with a temporary agency contract (2.5).

There are also important differences between countries. These practices are least frequent in Turkey (2.7), Greece (2.8), Italy (2.8), Bulgaria (2.8), Germany (2.8), France (2.8) and Spain (2.9). They are more frequent in Kosovo (3.8), the Netherlands (3.5), Norway (3.5), Ireland (3.5) and Finland (3.4). In a few countries (Austria, Bulgaria, Kosovo, Norway, Slovakia and Sweden) women report being exposed to these types of practices more than men. A number of countries have developed programmes that support these practices (see Totterdill, 2009; Pot, 2011).

Table 13: Participation in work improvement processes (%)

Response	Always	Most of the time	Some-times	Rarely	Never
You are involved in improving the work organisation or work processes of your department or organisation	20	23	21	13	23
You can influence decisions that are important for your work	11	21	28	18	22
You are consulted before targets for your work are set	21	25	20	13	21

[27] Cronbach's α = .754. Cronbach's α (alpha) is a coefficient of reliability, commonly used as a measure of the internal consistency of a set of items. A set of items needs to have a Cronbach's α of at least .7 to be deemed sufficiently consistent to be combined into a reliable scale.

Box 3: Workplace innovation practices and selected working conditions: an empirical analysis

In general, innovative workplace practices are associated with higher commitment and learning but often also with exposure to strenuous working conditions.

Task rotation and selected working conditions

Workers involved in management-controlled task rotation schemes report a higher exposure to tiring or painful working positions and to carrying heavy loads for at least a quarter of the time (Table 14) than those involved in autonomous task rotation schemes or not involved in task rotation schemes.

In all cases, involvement in task rotation schemes is associated with a higher level of support by colleagues and managers.

Table 14: Task rotation and working conditions (%)

Task rotation	Tiring or painful position**	Carrying heavy load**	Feel at home†	Organisation motivates me†	Work well done†
No task rotation*	40	25	65	56	80
Management-controlled fixed	**52**	**38**	62	56	76
Autonomous fixed	43	34	72	60	81
Management-controlled multiskilling	**52**	**39**	**68**	**63**	**83**
Autonomous multiskilling	**41**	**31**	78	65	88

Note:
* Reference category
** At least a quarter of the time
† 'Strongly agree' and 'Agree'
Bold indicates that the group was shown to significantly differ from the reference group in a logistic regression analysis controlling for age, gender, country, occupation and sector.

Multiskilling schemes (management-controlled and autonomous) are associated with higher motivation, a higher reported feeling of being at home in the company, and work well done. The associations remain only for management-controlled multiskilling when logistic regressions controlling for occupation and sector are carried out.

>>>

Multiskilling in general and autonomous multiskilling in particular are associated with more learning and creativity, whereas management-controlled fixed task rotation is associated with a high level of monotonous tasks and a lower than average level of task variety (Table 15).

Task rotation systems differ in their incidence and their associations with working conditions, confirming that the different schemes should not be amalgamated. Multiskilling schemes, and in particular autonomous ones, are associated with more task variety, increased commitment and a middle level of exposure to strenuous working conditions.

Table 15: Task rotation – learning and task variety (%)

Task rotation	Apply own ideas	Solving unforeseen problems	Complex tasks	Learning new things	Monotonous tasks
No task rotation*	49	80	57	**66**	44
Management-controlled fixed	**36**	**69**	**44**	59	**57**
Autonomous fixed	47	82	50	**64**	52
Management-controlled multiskilling	47	**87**	**72**	**82**	**48**
Autonomous multiskilling	**66**	**93**	**77**	82	39

Note:
* Reference category
Bold indicates that the group was shown to significantly differ from the reference group in a logistic regression analysis controlling for age, gender, country, occupation and sector.

Teamwork and selected working conditions

The EWCS found a higher incidence of tiring positions and carrying heavy loads associated with teamwork. As the autonomy of the team increases, the exposure to strenuous postures decreases; the association persists when sectors and occupations are controlled for (Table 16).

Table 16: Teamwork and working conditions (%)

Teamwork	Strenuous postures		Commitment		Work well done†
	Tiring or painful position**	Carrying heavy load**	Feel at home in this organisation†	Organisation motivates me†	
No teamwork*	41	27	63	53	79
Team with no autonomy	**50**	**37**	64	**59**	79
Limited autonomous teams	**45**	**31**	**71**	**61**	**84**
Self-managed autonomous teams	**42**	**28**	**75**	**67**	**87**

Note:
* Reference category
** At least a quarter of the time
† 'Strongly agree' and 'Agree'
Bold indicates that the group was shown to significantly differ from the reference group in a logistic regression analysis controlling for age, gender, country, occupation and sector.

>>>

Teamwork is associated with having more say in the choice of working partners as the team's level of autonomy increases. Workers involved in autonomous teams report a higher level of work well done and higher commitment. The relationship is weak but significant. Autonomous teamworking is associated with increased learning as well as more frequent use of quality standards (Table 17).

Table 17: Teamwork – learning and task variety (%)

Teamwork	Learning and task variety				Meeting precise quality standards
	Apply own ideas	Solving unforeseen problems	Complex tasks	Learning new things	
No teamwork	45	78	53	62	71
Team with no autonomy	**40**	79	**61**	**71**	**82**
Limited autonomous teams	**53**	**86**	**66**	**80**	**78**
Highly self-managed autonomous teams	**66**	**91**	**75**	**82**	**79**

Note:

* Reference category

Bold indicates that the group was shown to significantly differ from the reference group in a logistic regression analysis controlling for age, gender, country, occupation and sector.

Work innovation and selected working conditions

At a first glance, the association between workplace innovation and working conditions (Table 18) suggests that it could be important to promote these practices at least to encourage better working lives. More detailed analyses and studies are needed to understand the conditions under which win–win agreements can be reached in the interest of both workers and companies. Adapting the EWCS's design could help us to better understand the relationship between workplace innovation and companies' performance and the improvement of working lives.

Table 18: Workplace innovation – summary of EWCS responses

		Index of workplace innovation
Tiring or painful positions:	Less than a quarter of the time	3.18
	At least more than a quarter of the time	2.75
Carrying or moving heavy load:	Less than a quarter of the time	3.11
	At least more than a quarter of the time	2.71
I feel at home in this organisation:	No	2.53
	Yes	3.21
Work well done:	Less often	2.5
	Always or most of the time	3.10
Apply own ideas:	Less often	2.42
	Always or most of the time	3.57
Organisation motivates me to give my best performance:	Sometimes, rarely, never	2.57
	Always/most of the time	3.28
Solving unforeseen problems:	Yes	3.15
	No	2.22
Monotonous tasks:	No	3.20
	Yes	2.74
Learning new things:	Yes	3.22
	No	2.39

5th
European
Working
Conditions
Survey

CHAPTER 3

Quality of work and employment

Quality of work and employment

Quality of work and employment remains high on the European policy agenda. Developing sustainable quality of work and employment is key to meeting the Europe 2020 objectives with regard to smart, sustainable and inclusive growth (European Commission, 2010a).

Quality of work and employment has four dimensions:

- ensuring career and employment security;
- maintaining and promoting the health and well-being of workers;
- developing skills and competences;
- reconciling working and non-working life (Eurofound, 2002).

All four pillars need to be addressed if the EU aim of sustainable quality of work and employment is to be met.

The EWCS gathers information on all these aspects, helping to paint a picture of the quality of jobs in Europe. The survey findings give some clues on the areas or issues that require attention in order to develop good working conditions for all workers. The findings highlight the importance of policies and actions at all levels (European, national, workplace and individual) in creating healthy working conditions.

The first section of this chapter offers a global insight into satisfaction with working conditions, the intrinsic rewards the job can give, commitment to the organisation, and the factors that are important for a worker to be satisfied.

One of the important contributors to the satisfaction of workers is having a balance between working time and family or private commitments. Work–life balance has gained even more importance in recent years as more women have entered the labour market. The increase in the number of dual-earner households poses challenges in balancing professional and household activities, and has an impact on the way men and women divide their time between their work and private lives. This is explored in the second section of this chapter, which describes both the state of play and the challenges men and women reported facing in 2010 when combining work and private life.

Another important element for workers to be able to continue working is skills development throughout their working career. A long-standing European policy goal has been to move towards 'the most competitive knowledge-based economy in the world'. Lifelong learning has therefore been extensively promoted as one means to achieve this ambitious goal. The changes in the content of jobs also require that workers learn new skills. The EWCS provides information on the possibilities for workers to develop their skills and expertise, the current balance between skills and duties, and the possibilities of receiving training at work. Training is only one part of lifelong learning but is nevertheless significant. For many, work is the main area for self-development. The EWCS identified groups of lower-skilled workers with less access to a learning environment at work than higher-skilled workers. It also found that the culture of training is not spread evenly across Europe. The third section of the chapter explores these issues in more detail.

Pay is an important element of quality of work and employment. Because the EWCS was carried out in the middle of the economic crisis, the 2010 survey included a new question about changes in salary or income and working hours compared with the previous year (that is, January 2009). The section on financial security describes the earnings of individual workers and income at the household level. The picture of overall financial security is completed by the survey's findings on workers' perceptions of the possibility of losing their job and their prospects of finding a new job. The section ends with a discussion of households' abilities to 'make ends meet'.

The final section of this chapter examines the health and well-being of workers. The EWCS includes a variety of indicators measuring health and well-being, such as physical and mental health, perceptions of the impact of work on health, sickness absence, presenteeism and workers' assessment of the sustainability of their jobs. Health and well-being indicators are then associated with a selection of working conditions known to impact on health outcomes. This selection of working conditions covers a wide range of domains, such as exposure to physical and psychosocial risks and work organisation features. Results indicate significant associations between certain working conditions and negative health outcomes, and confirm previous findings of other research. In addition, the health and well-being of workers differ substantially across occupations, sectors and countries.

Intrinsic rewards, commitment and satisfaction with working conditions

It is easy to recognise the value of feeling well when working. For some people, work can give a sense of meaning, for example, when performing tasks that are perceived as useful for a wider society, or when the tasks are done well and the objectives set for the work are met. At a more general level, many people spend a significant amount of time at work, and the feelings of work-related satisfaction or dissatisfaction also contribute to our overall quality of life (see, for example, Drobnič et al, 2010). Beyond the value of positive feeling for the individual, the benefits for organisations have been investigated widely, with several studies finding that job satisfaction can have an impact on productivity, absenteeism and turnover (see, for example, Furnham, 2005; Cabrita and Perista, 2006).

Intrinsically rewarding work and job satisfaction are considered in the international policy debate where quality of work and sustainable working careers are promoted (see, for example, European Commission, 2010a). Job satisfaction has been promoted as a synthetic indicator summing up all individual preferences. This approach, however, has been shown to have limitations. The EWCS measures job satisfaction with an overarching question on perceived satisfaction with working conditions,[28] as well as specific questions on the intrinsic rewards of the job and commitment to the organisation.

Reporting positive feelings related to work is common but some groups of workers report them more frequently than others. For example, self-employed workers stand out as a group who report high intrinsic rewards; almost all frequently feel that they are doing useful and quality work. Employees who work in teams whose members can decide how to organise the work report high levels of commitment to the organisation.

The EWCS also investigates the complex relationship between job satisfaction and working conditions. The perception that health or safety is at risk because of work, bullying and verbal abuse, job insecurity or a high level of work intensity decrease the likelihood that workers will report a high level of satisfaction with work. By contrast, the perception of being well paid for their work, having a good fit between working time and private life, having good career prospects and, for employees, having good leadership make it more likely that workers will be satisfied.

Intrinsic rewards

Most workers in the EWCS obtain intrinsic rewards from their work. Most say that they have a feeling of doing useful work and that the job gives a feeling of work well done. For 84% of the workers in the EU27, the job arouses these feelings 'most of the time' or 'always'. The self-employed stand out in this respect with over 91% reporting these feelings compared with 82% of employees.[29]

Always having a feeling of doing useful work is reported most often by three occupation groups: managers, professionals, and skilled agricultural workers. With the exception of professionals, the two other groups also have the highest proportions of workers who always have a feeling of work well done. Technicians and associate professionals and craft and related trades workers also have these feelings frequently. Conversely, there are some occupational groups where a notable minority have positive feelings 'sometimes', 'rarely' or 'never'. These include:

- around a quarter of plant and machine operators and those in elementary occupations, who do not commonly express a feeling of doing useful work;
- more than a fifth of service and sales workers, plant and machine operators, and those in elementary occupations, who do not often have the feeling of work well done.

[28] In addition to the question on satisfaction with working conditions, the EWCS contains other indicators for measuring well-being. Q75 asks if workers think they will be able to do the same job they are currently doing at the age of 60, and QEF4 provides information on general mental well-being in positive terms. These two variables are considered in the final section of this chapter.

[29] The fifth EWCS also asks self-employed workers if they enjoy being their own bosses; 94% confirm that they do.

In contrast, the EU27 average is 16% for both these indicators.

Workers in the health, education and agriculture sectors (93%, 92% and 89% respectively) commonly say that they frequently have a feeling of doing useful work. These three sectors, together with the construction sector, also have the highest proportions of workers who say that their job gives them a feeling of work well done (Figure 46). In contrast, the financial services sector has the smallest proportions of people who always have a feeling of doing useful work or work well done. However, overall the lowest intrinsic rewards are reported by workers in the transport and wholesale, retail, food and accommodation sectors.

Commitment to the organisation

Other and perhaps somewhat more tangible positive aspects of work (also from the organisation's perspective) include feeling 'at home' in the organisation and being motivated in the organisation. These two indicators give an idea of the commitment to the organisation.

Nearly all self-employed workers feel they are at home in the organisation (86%) and that the organisation motivates them to give their best job performance (79%).

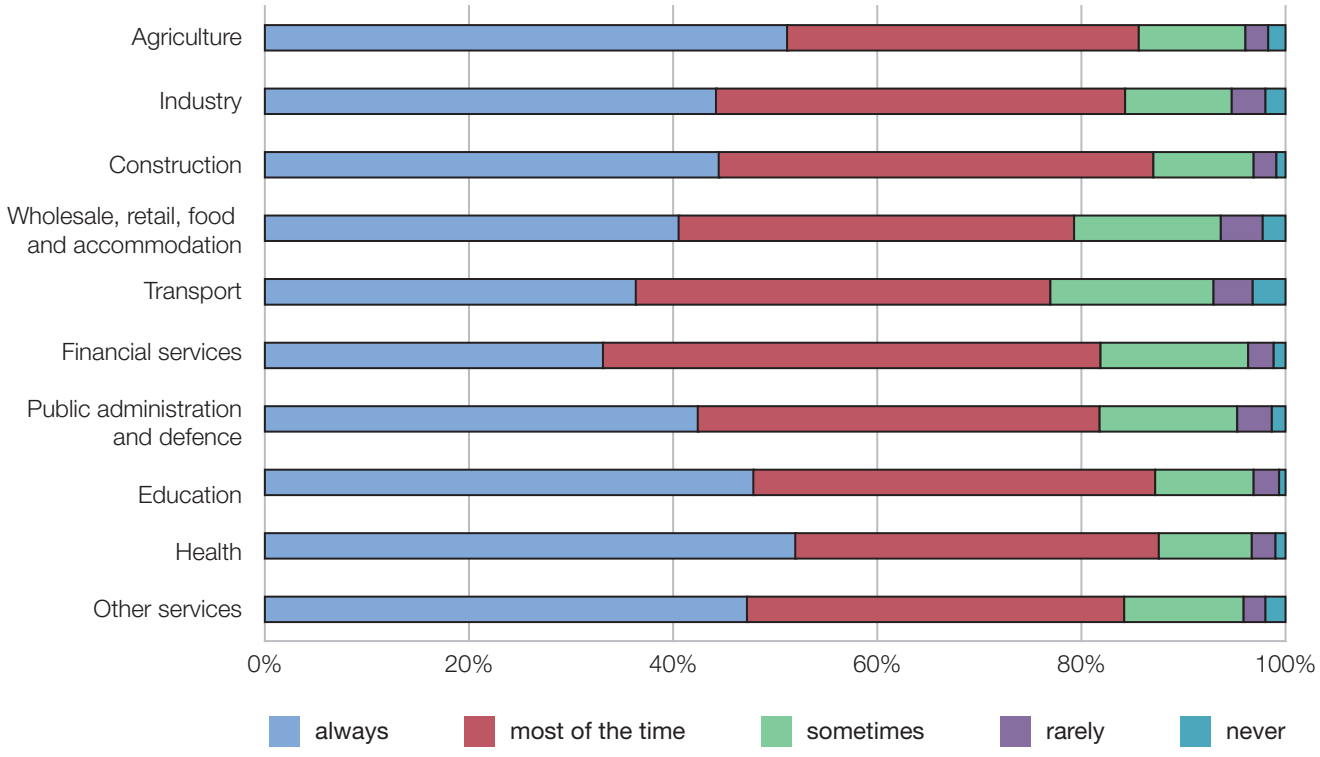
However, these indicators are more relevant for measuring the commitment employees have to their organisation; 68% of them feel at home and 60% agree that the organisation motivates them to perform to the maximum.

Having a permanent contract is associated with a higher level of commitment; 70% of those with an indefinite contract feel at home in the organisation, compared with 62% of those with no contract, 61% of apprentices, 58% of employees with a fixed-term contract, and only 50% of those on a temporary agency contract. Furthermore, 61% of employees who have an indefinite contract agree that the organisation motivates them to give the best performance, compared with around 55% with a non-permanent contract (all types).

Naturally the more years spent in the organisation, the more common it is to feel at home, as those workers who did not feel at home would probably look for another job. Yet it is as common for someone who has been in the organisation for a year or less to agree that it motivates them as it is for an employee who has been there for 5 or 10 years.

As indicated in the section on work organisation in Chapter 2, workers who work in autonomous teams whose members can decide on the division of tasks, the timetable

Figure 46: Feeling of work well done, by sector, EU27 (%)



for the work and the team leader report higher levels of commitment. In addition, workplace innovation practices and task rotation schemes where different skills can be used are positively related to a perception that the organisation motivates workers to give the best performance and a feeling of being at home in the organisation.

Satisfaction with working conditions

Surveys consistently indicate that more than 80% of workers are satisfied in their jobs. The EWCS specifically asks for a subjective evaluation of working conditions in the main paid job as a source of satisfaction. As in many other surveys, a majority of respondents in the fifth EWCS are positive about their working conditions, with 84% of workers in the EU27 saying they are either 'very satisfied' (25%) or 'satisfied' (59%).

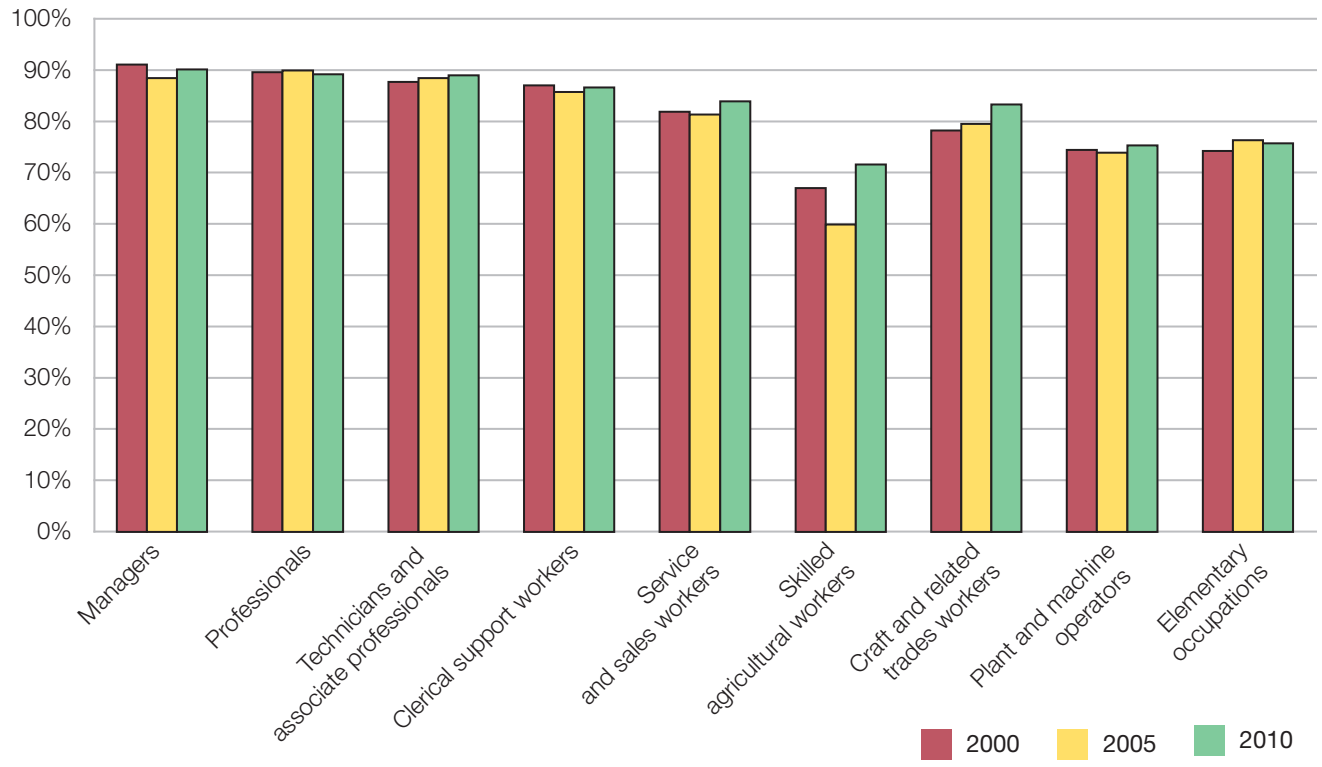
This high level of satisfaction has remained stable throughout the past decade, with the economic downturn after the 2005 survey not appearing to have affected satisfaction with working conditions. If anything, satisfaction with working conditions went up marginally by 2 percentage points between 2005 and 2010. Eurofound's European Quality of Life Survey (EQLS) asks a related question on satisfaction with the present job in the context of satisfaction with different life domains. The EQLS data show a slight drop in job satisfaction between 2003 and 2007, but from 2007 to 2009 (years in the middle of the economic crisis), the trend was stable (Eurofound, 2010b).

In the EWCS, the only drop in satisfaction between 2000 and 2005 was among skilled agricultural workers, although this had increased again by 2010 (Figure 47). Craft and related trades workers show a linear increase in satisfaction over the 10-year period. For other occupations the levels remained stable.

Figure 47 highlights the differences in satisfaction between occupations. The 2010 data reveal that 90% of managers, 89% of professionals, and 89% of technicians and associate professionals are satisfied with their working conditions whereas the percentages are below 80% for skilled agricultural workers, plant and machine operators, and those in elementary occupations.

Less than 80% of workers in the agriculture and transport sectors are satisfied with their working conditions, leaving more than a fifth of workers in these occupations and sectors not satisfied.

Figure 47: Satisfaction with working conditions over time, by occupation, EU27 (%)



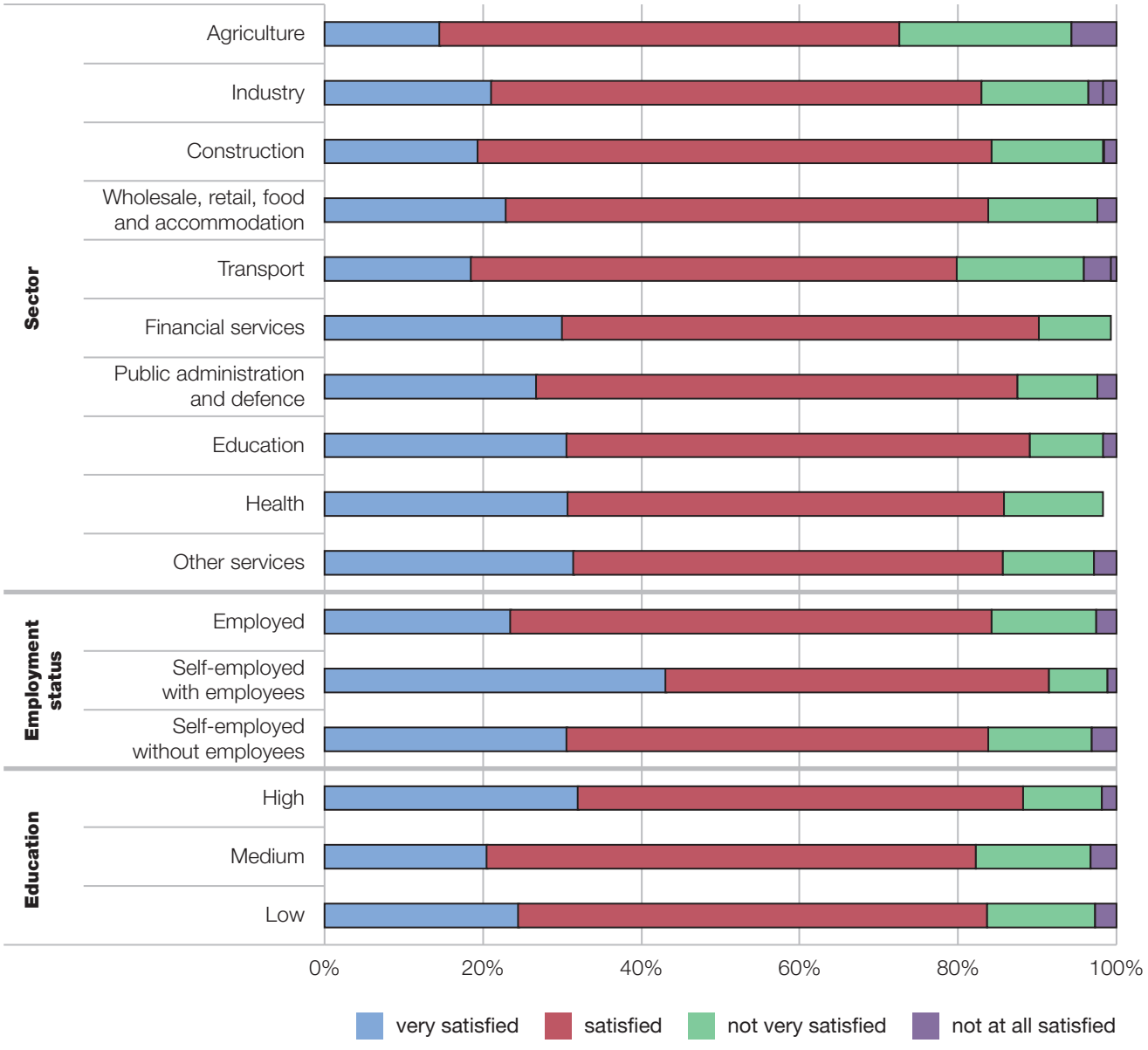
The self-employed (especially self-employed with employees) report the highest levels of satisfaction. Higher educated workers also tend to report a higher level of job satisfaction compared with workers with low or medium levels of educational attainment (Figure 48).

The differences in satisfaction with working conditions for different groups of workers are largely in line with the differences for intrinsic rewards and positive elements of the job. The same groups of workers who commonly report high levels of intrinsic rewards and positive job elements often also have high levels of satisfaction with working conditions. However, there are some exceptions.

For example, skilled agricultural and fishery workers and those working in the agricultural sector have high intrinsic rewards from their work but the lowest levels of satisfaction with working conditions. While workers in the financial services sector report the highest levels of satisfaction with working conditions, the sector has the lowest proportion of workers who always have a feeling of work well done.

Overall, intrinsic rewards and positive job elements are associated with satisfaction with working conditions. This means that a person who is satisfied with their working conditions also often has intrinsic rewards from their work and positive job elements.

Figure 48: Satisfaction with working conditions, by sector, employment status and educational attainment, EU27 (%)



Factors related to satisfaction with working conditions

Generally there is a consensus that job satisfaction is a multidimensional concept combining various aspects of working conditions, but also living conditions and personal dispositions (see, for example, Dorman and Zapf, 2001). Because there are many simultaneous factors at play, there are no easy and straightforward answers to the question of what makes workers satisfied with their job or working conditions.

According to Furnham (2005, p. 331), it is possible to divide the factors that contribute to satisfaction into three distinct groups.

1. **Organisational policies and procedures** are important. They concern aspects such as reward systems, supervision and decision-making practices, and the perceived quality of supervision.

2. **Specific aspects of the job** such as workload, skill, variety, autonomy, feedback and physical nature of the work environment contribute to satisfaction.

3. **Personal characteristics or traits** such as self-esteem, ability to tolerate stress and general life satisfaction have to be accounted for.

When investigating job satisfaction across countries, **macroeconomic and societal conditions** can be added as a fourth group. These factors concern, for example, unemployment rate, degree of unionisation, average wage levels and the level of gross domestic product (GDP) (see, for example, Pichler and Wallace, 2009).

The EWCS includes indicators for the first two groups of factors, which relate to the organisation and the job. It gathers information on the four dimensions of quality of work and employment. The first pillar of the theoretical model, health and well-being, includes for example risk exposure, work organisation and health problems. Reconciliation of work and non-work life encompasses working and non-working time as well as social infrastructures that help in the reconciliation. Skills development concerns qualifications, training, learning organisation and career development. Finally, career and employment security covers employment status, income, social protection and workers' rights.

Although the survey includes questions that provide information on all four pillars of quality of work and employment, it concentrates on those aspects where it is possible and where it enhances the analysis to collect cross-country comparable information from worker interviews. For example, 'career and employment security' is a wide concept and is embedded in the labour marker context of each country.

The dimensions also interact with each other; for example, skills development is also commonly regarded as contributing to career and employment security, where employment security rather than job security is the aim.

Multivariate analysis of survey data is one way of shedding light on the interactions between several working conditions variables and subjective feelings of satisfaction. In his analysis of the fourth EWCS data, Timming (2010) found that a number of determinants of satisfaction with working conditions were the same in most of the 31 countries he studied (EU27, Croatia, Norway, Switzerland and Turkey). Receiving support from superiors, job security, work–life balance, opportunities to learn and grow, and satisfaction with pay had a significant relationship with satisfaction with working conditions in most of the countries. Correlations with satisfaction were found in some countries but not in others for some other working conditions variables (for example, work intensity, ability to apply own ideas, monotony and autonomy). Finally, (high) job complexity and (long) working hours, for example, could have either a positive or negative relationship with satisfaction with working conditions depending on the country.

Another study using International Social Survey Programme (ISSP) data from 21 countries (Bulgaria, Cyprus, the Czech Republic, Denmark, France, Germany, Hungary, Iceland, Italy, Japan, New Zealand, Norway, Portugal, the Russian Federation, Slovenia, Spain, Sweden, Switzerland, the Netherlands, the UK and the USA) found that having an interesting job and good relations with management are the most important determinants of job satisfaction across countries. Pay and job security were important in some but not in all the countries (Sousa-Poza and Sousa-Poza, 2000).

The multivariate analysis using the fifth EWCS data, which is limited to work-related determinants of satisfaction, confirms some of these results (Table 19). Variables measuring all four pillars of the model of quality of work and employment are included in the analysis, together with some demographics. The analysis was performed separately for 'all employees' (that is, excluding the self-employed) and 'all workers' in order to include leadership in the model (only employees are asked the questions on leadership in the EWCS).

To illustrate how to read Table 19, take the results for the health at risk variable as an example. The odds ratios for this health and well-being variable reveal how likely it is for workers who say that their health is at risk because of work to be satisfied with working conditions compared with those who do not report this risk when the impact of the other working conditions variables listed in the first column are taken into account. The second column shows that employees who perceive that their health is at risk are clearly less likely (0.42 times) to be satisfied with their working conditions than employees who do not have the risk.

Table 19: Some determinants of satisfaction with working conditions, EU27

Independent variables	Odds ratios for employees (EU27)	Odds ratios for all workers (EU27)
Demographics		
Men (ref cat = women)	1.11	1.13
Low education	N.S.	N.S.
Medium education	ref	ref
High education	0.79	0.83
Self-employed (ref cat = employee)	N.A.	1.36
Health and well-being (ref cat = not exposed/present)		
Health at risk	0.42	0.43
Ergonomic risks	0.83	0.84
Biological or chemical risks	N.S.	N.S.
Ambient risks	0.82	0.78
Bullying	0.43	0.44
Verbal abuse	0.57	0.57
Good leadership	2.11	N.A.
Autonomy	1.39	1.45
Intensity	0.70	0.74
Reconciliation of work and non-work life		
Working 34 hours or fewer	N.S.	N.S.
Working between 35 and 47 hours	ref	ref
Working 48 hours or more	0.85	0.87
Good fit between working time and private life (ref cat = poor fit)	2.27	2.31
Skills development		
Employer-paid training (ref cat = no training)	1.25	1.29
Learning new things (ref cat = not learning new things)	1.08	1.19
Applying own ideas (ref cat = not applying own ideas)	1.44	1.58
Complex tasks (ref cat = no complex tasks)	N.S.	N.S.
Need for further training	0.75	0.78
Skills match duties	ref	ref
Skills to do more demanding tasks	0.82	0.79
Career and employment security (ref cat = not exposed/present)		
Good career prospects (ref cat = poor career prospects)	2.28	2.40
Low earnings	N.S.	0.87
Medium earnings	ref	ref
High earnings	N.S.	N.S.
Well paid for the work (ref cat = not well paid)	3.11	3.20
Might lose the job (ref cat = will not lose job)	0.55	0.51
Nagelkerke pseudo R^2	0.37	0.35

Note:

The effect of the variables is expressed in odds ratios. The odds ratio is a way of comparing whether the probability of a phenomenon is the same for two groups. An odds ratio of 1 implies that the phenomenon is equally likely in both groups. An odds ratio greater than 1 implies that the phenomenon is more likely for the group included in the model. An odds ratio less than 1 implies that the phenomenon is more likely for the reference group.

The effects are controlled for age and for variation between countries, sectors and occupations.

N.S. = not significant; all reported odds ratios are statistically significant ($p<.05$). N.A. = not applicable

The Nagelkerke pseudo R^2 denotes the proportion of variance in the dependent variable that is explained by the independent variables in the model.

With the exception of the age of the worker, low education level, biological or chemical risks at work, part-time work, complex tasks, and low and high income, which are not statistically significant, all the other variables included in the model have a significant effect on the feeling of satisfaction with working conditions. The perception of having health at risk, having experienced bullying in the previous 12 months prior to the survey interview or verbal abuse in the previous four weeks when working, and the perception of the possibility of losing one's job have the biggest negative impact. On the positive side, having a good fit between working hours and social commitments, the perception of being well-paid for the work, as well as good career prospects and good leadership (for employees) have the biggest positive impact.

Arguably an individual's evaluation of their satisfaction with working conditions in the present job is not made in isolation but takes into account not only the actual working conditions but also the norms and expectations concerning the job.

Some of the effect of the norms has been taken into account in the analysis by including occupation, sector and the EU27 countries in the model as control variables. For employees, occupation and sector do not have a significant impact on satisfaction but the country contexts do. For all workers, occupation does not contribute to the model, whereas sector and country specifics do impact on satisfaction with working conditions.

The limited effect of occupation and sector shows that the indicators on health and well-being, work–life balance, skills development, and career and employment security capture the aspects of sectors and occupations that affect satisfaction with working conditions rather well. However, these indicators do not fully explain the variation in satisfaction across countries. Overall, the two models explain 35%–37% of the variance in satisfaction with working conditions.

Because feeling satisfied with working conditions is influenced by personal and cultural dispositions as well as by the objective working conditions, satisfaction cannot be treated as an indicator of good working conditions. It should be kept in mind that although good working conditions positively affect satisfaction, high levels of satisfaction do not necessarily imply good working conditions.

Work–life balance for men and women

Reconciliation of work and private life is a key element in the quality of work and employment, meriting a mention in the Europe 2020 strategy (European Commission, 2010a). It is an important element of gender equality and a pre-condition for increasing employment participation of men and women.

The way people combine work with their private life depends very much on their personal circumstances, including their family situation. To work or not, how many hours someone is available to work, and when or how flexible they can be are often decided during discussions at home, in the sense that these issues depend on the household situation. The requirements for work–life balance also differ over the course of a person's lifetime. It is therefore important to consider the situation of men and women at different ages as well as the possibility of transitions between circumstances.

Cultural traditions (for example, the mother staying at home to take care of children or other dependants), social infrastructure (crèches, afterschool care), working hours (for example, the opening hours of shops) and the option of flexible working time arrangements impact on how and to what extent men and women can take up work. In addition, choices can be influenced by the social protection system.

Employers can also play an important role in the sense that they may facilitate certain working time arrangements (which suit the workers) or ask for more flexibility from workers in order to suit the company's needs. Flexibility can therefore be both positive and negative for the employer and the worker. For instance, the preference of some workers to work part time or flexitime to fit in with their private needs might require extra organisation by the employer or might simply not be possible. In other organisations, some jobs might be available only part time when workers are looking for a full-time job. This can also be true for other working time arrangements such as shift work or overtime, which may or may not suit workers and companies depending on their circumstances or preferences.

Household work arrangements differ across countries (see Chapter 1). Indeed, the male breadwinner model has been replaced in many countries by other household work arrangements. The most common arrangements for households in the EWCS where at least one person is working are the modified male breadwinner model (where the female partner participates in the labour market but to a limited extent) and dual-earner couples. This has important consequences for the organisation of work and private life and indeed the work–life balance of men and women.

All these elements together have an impact on the work–life balance of men and women. Sen's capabilities approach[30] is a useful and interesting approach to looking at work–life balance, including the differences between men and women in various countries and situations. The combination of several elements and possibilities determines whether men and women do have a real choice and what people are effectively able to do and to be.

[30] The articles in a special issue of *Social Politics* (Hobson et al, 2011) discuss the application of Sen's approach to work–life balance across European welfare states and within work organisations. Sen's capabilities theory is also used with regard to the reflections on working time in general by Lee and McCann (2006), who refer to two key features: institutional settings shape work and family options, and preferences are shaped by shifts in economic opportunities and cultural values. The capabilities approach asks about the opportunities for real choice.

Juggling working time and private life

Some 18% of workers indicate they have problems with their work–life balance. On average, men have more problems than women, particularly in the middle of their working career. Nearly a quarter of men (23%) aged 35–49 indicate that their working working hours fit 'not very well' or 'not at all well' with family or social commitments (Figure 49).

The presence of children or other relatives in the household has an impact on work–life balance, as does the gendered division of work in the household. Workers with children (particularly where both partners work) express more problems with work–life balance, although this is more the case for men than women (Figure 50).

It is clear that a person's work–life balance is a complex phenomenon that depends on their private situation, the

Figure 49: Poor fit of working hours with family or social commitments, by age and gender, EU27 (%)

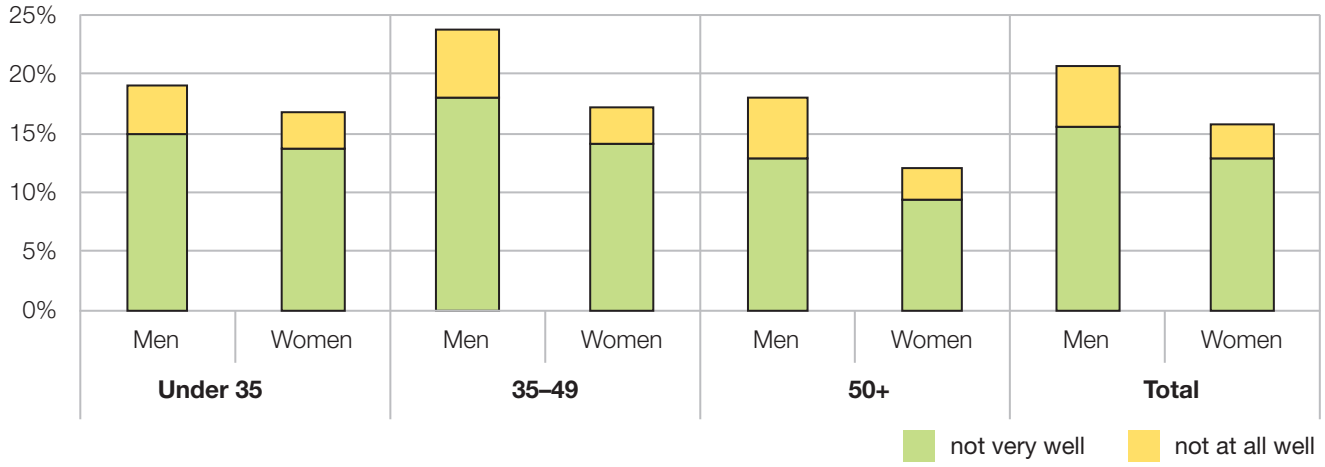
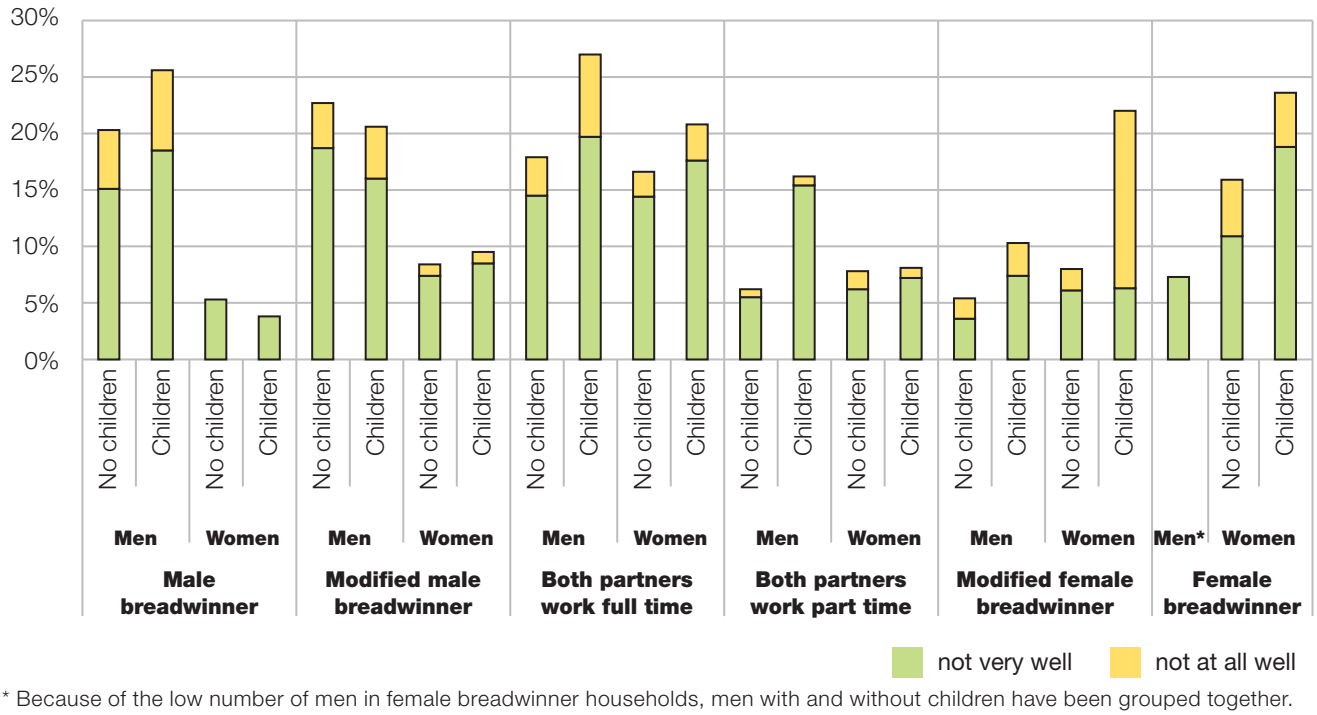


Figure 50: Poor fit of working hours with family or social commitments, by gender and household wage earner model (%)



* Because of the low number of men in female breadwinner households, men with and without children have been grouped together.

work situation (and number of working hours) of a partner and the presence of children in their household.

Organisation of working time in the workplace

The organisation of working hours can also play an important role in work–life balance. For example, the number of hours worked has an impact on the perception of work–life balance. Part-time work can have a positive impact on work–life balance; less than 10% of the workers working 34 hours or fewer indicate work–life balance problems, compared with over 20% of those working full time. Working long hours has a negative effect on work–life balance; 38% of the workers working 48 hours or more per week report problems with work–life balance.

Working time schedules and their regularity, variability or predictability also have an impact on the fit between working time and private time for workers, although the same issues do not apply to all workers. In some cases, it is more useful to know exactly when you are at work and when you are at home (for example, someone needs to be at home when children come home from school or have a free afternoon). In other instances, some flexibility might help the worker deal with unexpected situations or adapt to what is happening in their private life. For example, someone who encounters heavy traffic on the journey to work might benefit from flexitime or many workers might find it useful to be able to take some time off for private appointments like going to the dentist.

Regularity of working time

Regular working hours can be useful for combining work and private life; it can also be better for employers. Women in all age groups have more regularity in their working hours (same number of hours every day, same number of days every week, same number of hours every week, fixed starting and finishing times) than men throughout their working life (Figure 51). This difference remains even when comparing men and women in the same occupations and sectors. For instance, more male managers (20%) have no regularity in their working hours than their female counterparts (16%). This difference between more regularity for women and less regularity for men remains very stable throughout life.

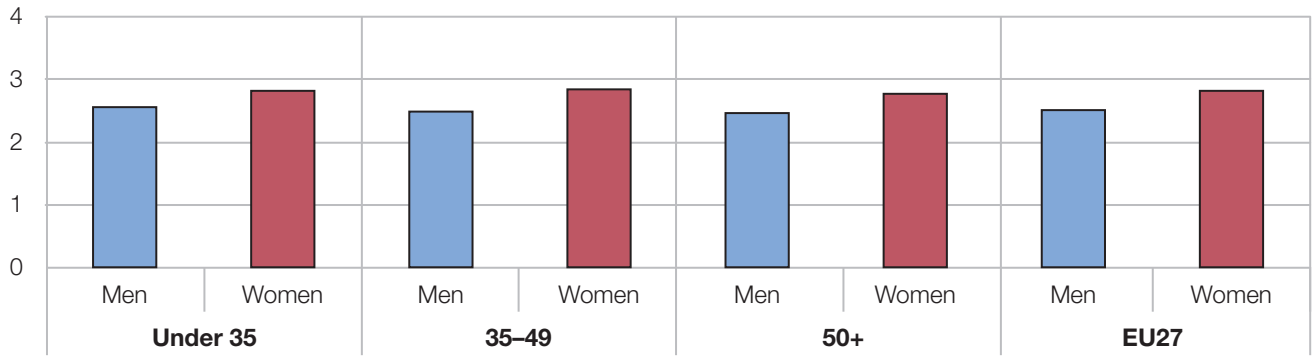
Regularity has an impact on work–life balance. The less regular the working time scheme, the more problems with the balance between work and private life; 13% of workers with very regular schemes have problems compared with 28% of workers with no regularity in their working time.

Setting working time schedules

Certain forms of flexibility can also be beneficial for work–life balance. Both flexitime and determining one's own hours can be used to meet the requirements of both private life and the company should the need arise. The possibility to work flexitime and to determine freely one's working time is more the case for men throughout all age groups (and gradually increases throughout life) than for women (Figure 52), and could entail the potential to be more flexible for one's private life.

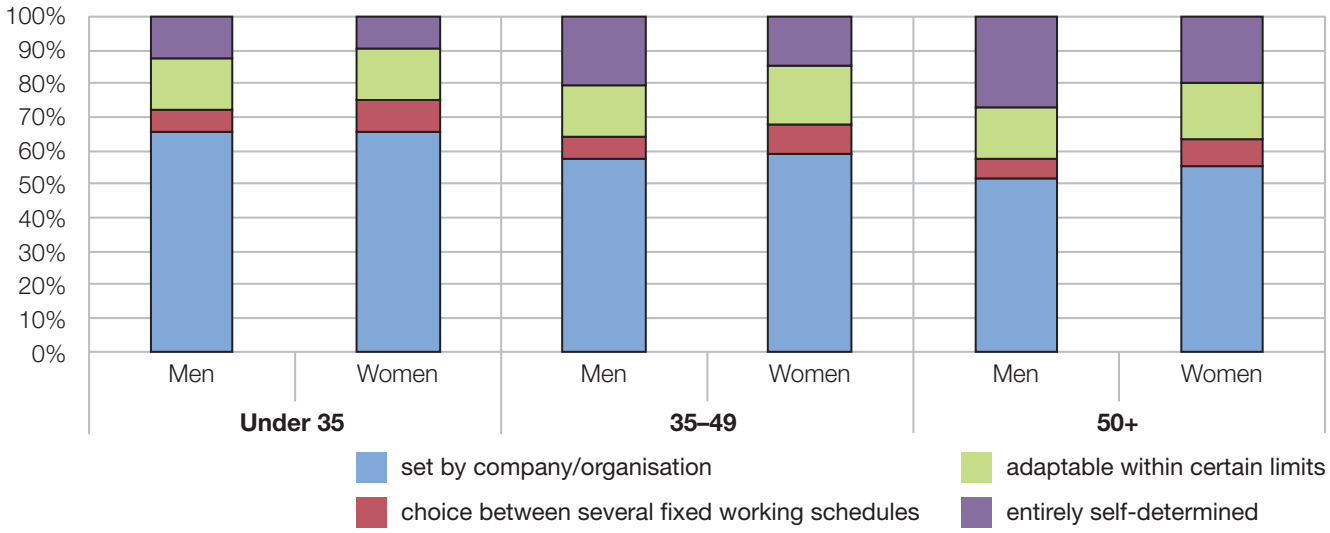
Looking at shift work, more women do permanent shifts than men, and more men do rotating shifts in the 50+ age bracket, although this is not true over their lifetime. Problems with work–life balance are stronger for those with alternating or rotating shifts (30%) than for those on permanent shifts (26%), and above average in both instances.

Figure 51 : Regularity of working hours, by age and gender



Note: Regularity of working hours is measured on a four-point scale, where 4 = very regular and 0 = very irregular. The index is built on four indicators: 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 average score for each group of workers was calculated.

Figure 52: Freedom to set working time schedules, by age and gender (%)



Knowing one's schedule in advance, or predictability of working time, is another element in this; a majority of workers (65%) indicate they have no changes in their work schedule (63% of men and 67% of women). In cases where there are changes, more men than women know about these changes only on the same day (10% versus 7%) or the day before (10% versus 8%).

Work schedule changes hamper work–life balance. Only 14% of workers with no changes indicate having problems with work–life balance, compared with 35% who know about these changes only the same day, 30% who know about them the day before, 25% who know about them several days in advance and 21% who know about them several weeks in advance.

Emergency leave

Being able to take time off for emergency situations in one's private life can be very useful for workers, although this is not possible in all companies or work situations. A total of 65% of workers report this is 'not difficult' (67% of men and 62% of women) and, for one worker out of three, it is 'not difficult at all'. However, it is more common in some sectors than in others; it is not difficult for over 80% of workers in agriculture and 74% of workers in financial services and public administration (Figure 53).

Factors contributing to a good work–life balance

A number of elements play an important role in predicting a better fit between work and private life (Table 20). The relevant individual and household characteristics are age and whether there are children living in the household. In addition, several working time features are significant in determining whether the worker indicates a good fit between working and private life. Working part time supports a good fit compared to those who do not work part time, while working long hours halves the chance of having a good fit between working and private life compared with those not working long hours. Autonomy is a second important determinant that can substantially improve the chances of having a good work–life balance. Those who determine their working hours themselves and who work flexitime are more likely to be satisfied with their work–life balance than those who have their working hours set by the company. Allowing the workers to take time off during working hours at short notice for private reasons has a very strong positive effect; having this type of flexibility nearly triples the likelihood of having a good work–life balance.

Regularity of working hours – working the same hours every day and having fixed starting and finishing times – contributes significantly and positively towards a good work–life balance.

Atypical working hours make a significant difference but, when other factors are corrected for, their negative effect is not as strong as other working time features.

Working outside of working hours

Working in one's free time to meet work demands has become more common, particularly because of the use of technological tools. One worker in three does this at least once or twice a month, 15% of workers once or twice a week and 7% nearly every day. Gender differences are small (6% of both men and women do it every day, and 17% of men and 15% of women do it once or twice a week).

Figure 53: Difficulty of arranging time off for emergencies, by sector (%)

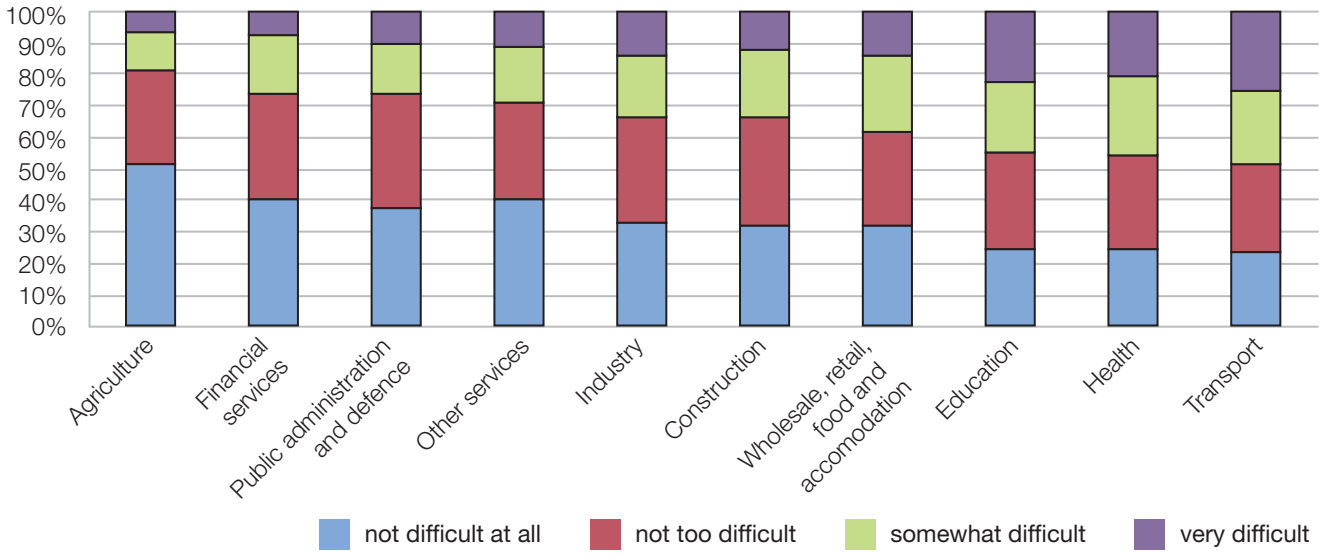


Table 20: Factors predicting an influence on a good work–life balance

Individual and household characteristics	
Age (continuous)	1.01
Women (ref cat = men)	N.S.
Employees (ref cat = self-employed)	N.S.
Single – no children	1.71
Single parent	ref
Couple – no children	1.48
Couple – with children	N.S.
Working time features	
Working 34 hours or fewer	1.71
Working between 35 and 47 hours	ref
Working 48 hours or more	0.41
Can determine working hours	1.65
Can choose between fixed schedules	1.14
Flexitime	1.38
Working hours set by company	ref
Working the same hours every day (ref cat = not working same hours)	1.41
Having fixed starting and finishing times (ref cat = no fixed times)	1.44
Night work (ref cat = no night work)	0.69
Evening work (ref cat = no evening work)	0.59
Sunday work (ref cat = no Sunday work)	0.87
Saturday work (ref cat = no Saturday work)	0.67
Easy to take time off during working hours (ref cat = not easy to take time off)	2.97
Nagelkerke pseudo R^2	0.26

Note:

The effect of the variables is expressed in odds ratios. The odds ratio is a way of comparing whether the probability of a phenomenon is the same for two groups. An odds ratio of 1 implies that the phenomenon is equally likely in both groups. An odds ratio greater than 1 implies that the phenomenon is more likely for the group included in the model. An odds ratio less than 1 implies that the phenomenon is more likely for the reference group. Because age is a continuous variable, the odds ratio can be interpreted as the increase in the likelihood of having a good work–life balance for each year the worker ages.

The effects are controlled for variation between countries, sectors and occupations.

N.S. = not significant; all reported odds ratios are statistically significant ($p<.05$).

The Nagelkerke pseudo R^2 denotes the proportion of variance in the dependent variable that is explained by the independent variables in the model.

Working in one's free time has an impact on work–life balance. Whereas 13% of workers who never work in their free time indicate having problems with work–life balance, this proportion gradually increases with working more in one's free time, and 27% of workers who do this every day say they have problems with work–life balance. The effect on work–life balance is stronger for men.

Workers who work long hours more commonly work outside their working hours than those working fewer hours (Figure 54). Nearly 40% of workers working 48 hours or more per week work in their free time to meet work demands at least once or twice a week compared with about 20% of those working 41–47 hours, 9.5% of those working 35–40 hours, 12% of those working 21–34 hours and 11% of those working 20 hours or fewer per week. At the extreme, nearly 20% of those working 48 hours per week or more indicate that they work nearly every day in their free time to meet work demands compared with less than 4.5% among the other categories.

Towards a good fit between working life and private life?

Composite paid and unpaid working hours

Working time includes more than paid work. The huge amount of work people do in their private lives (see Figure 55) adds to their workload in general terms. Although this is usually not paid work but unpaid work carried out as part of their private lives, it influences how they work in paid work and counts towards overall working time. Domestic work, taking care of a dependant (children, grandchildren, elderly or disabled relatives), enrolling in a training or education course, and participating in voluntary or political activities all require time but are useful for the people involved, their families and, ultimately, for society.

Men and women have a different commitment towards unpaid work. Overall, women take on the bulk of the unpaid work (whether they work full time or part time), and men work longer hours at their paid job (this is partly because there are more women working part time). Children play an important role here, particularly for single parents (both men and women) and mothers (as part of a couple). Single parents and those in couples with children report the most unpaid working hours, compared with those who are single or in a couple with no children. Nonetheless, women in a couple with children and single mothers work more unpaid hours than their male counterparts with the same status, and this is mostly due to caring activities (Figure 55).

This time issue merits specific attention given the effects of long working hours and the EU aim to increase the participation of men and women in the labour market in a sustainable way (over their lifetime).

Work–life balance and working time preferences

The fifth EWCS found that 33% of men would like to reduce their working hours compared with 29% of women. However, a more subtle picture is obtained when looking at the household situation. Where there are children in the household, more men and women would like to reduce

Figure 54: Working outside working hours, by length of working week (%)

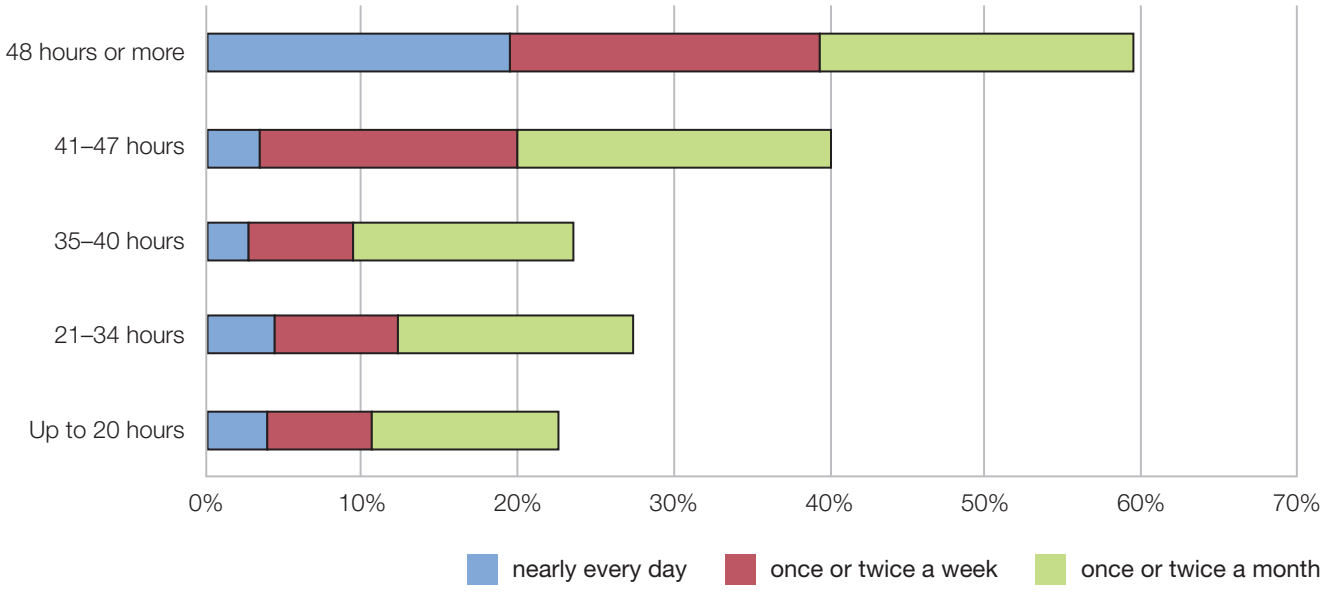


Figure 55: Composite working time (in hours), by gender and family situation

their working hours compared to those without children. When both partners work full time or when both partners work part time, the women are more likely to indicate they would like to reduce their working hours than the men.

The more hours people work, the more they would like to reduce their working hours; 65% of those who work 48 hours or more per week would like to reduce their working hours compared with 7% of those working 20 hours or fewer. Of this latter group, 43% would like to increase their working hours. Of those who indicate they would like to work less, 29% indicate they have problems with work–life balance, compared with 13% of those workers who would like to keep the same hours. (Working time preferences are also dealt with in Chapter 2.)

E-nomads

Technology that makes it possible to work remotely, either away from the office or main place of work, evolved at an unprecedented pace over the past two decades. These developments have not only reshaped the sectoral structure of most economies (the so-called tertiarisation phenomenon and the growth of sectors related to the development and production of ICT), but also the way in which countless tasks in many occupations are performed. In addition, the number of tasks that do not require a specific workplace for their performance is increasing every day due to technological developments, allowing easier detachment from a single permanent workplace. This means that the ways work is performed are changing as well for some occupations in a variety of sectors.

The terms 'telework' or 'telecommuting' have been used for many years to designate the way of organising or performing work using ICT where work that could be performed at the employer's premises is carried out away from those premises on a regular basis. These terms are often used to refer to work performed at home or from an office ('telework centres') using a computer connected to the employer's network. However, these arrangements essentially presuppose the replacement of commuting time between home and the workplace by telecommunication links, and do not take account of those people who do not necessarily work from home or an office using ICT but from clients' premises or vehicles, or even outside sites.

Based on the main place of work and the reported use of computers and the internet in the EWCS (which can be used as indicators of the use of ICT),[31] it is possible to create an indicator that allows the characterisation of workers who do not work all the time at their employer's or their own business premises and who use ICT for their work – known as electronic nomads or e-nomads.[32] E-nomads are people who do not work all the time at their employers' or their own business premises and habitually use computers, the internet or email for professional purposes.

A quarter of the European workers are e-nomads. The incidence of e-nomads varies considerably between countries, ranging from just above 5% in Albania, Bulgaria, Romania and Turkey to more than 40% in the Netherlands, Denmark and Sweden, and 45% in Finland.

Most of the e-nomads are men (65%), have tertiary education (55.5%) and are 35–49 years old (45%). They are concentrated in certain sectors of economic activity and occupations. Financial services, other services, education, and public administration and defence are the sectors

[31] The section 'Technology in the workplace' in Chapter 2 addresses the evolution of the main technologies used in and for work.

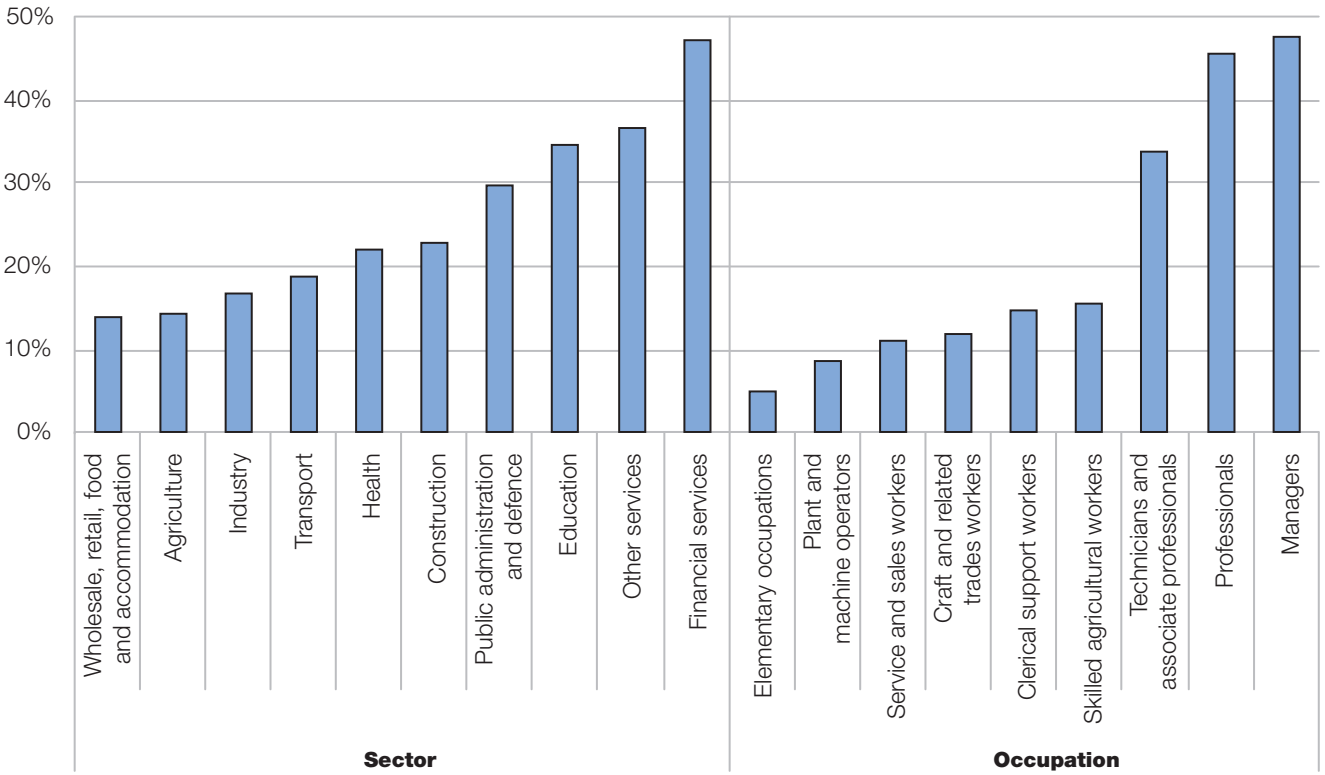
with the higher incidence of e-nomads, while managers, professionals, and technicians and associate professionals are the occupations in which more e-nomads are found (Figure 56).

Apart from being a distinct group of workers in terms of place of work and use of ICT, e-nomads display patterns of working time that are quite distinct from those who mostly work at their employers' or own premises. On average, e-nomads work longer hours, more often on Sundays and more often in the evenings than other workers. They also report having to work during their free time more often than the average; 1 out of every 10 e-nomads does so in order to meet work demands nearly every day, compared with only 3.7% of those working all the time in their employers' or own premises. In addition, e-nomads (particularly men) experience changes in their working schedules more often than others. Almost 24% of e-nomads report having changes to their work schedule the day before or the same day compared with around 15% of others.

Developing skills at work and access to training

Developing skills throughout one's working life has become increasingly important in the past 20 years. During this period, the proportion of workers working in agriculture and fisheries and in industry decreased and the proportion of those working in services saw a corresponding increase (Eurofound, 2010a). A skills forecast made for the European labour market in 2011 (Cedefop, 2011) suggests that, as the industry structure changes and technological developments continue, the demand for skills (in terms of formal qualifications) will increase and people with high- and intermediate-level qualifications will be particularly in

Figure 56: E-nomads, by sector and occupation, EU27 (%)



[32] According to the Oxford English Dictionary, a 'nomad' is 'a member of a people who travels from place to place to find fresh pasture for its animals, and has no permanent home. Also (in extended use): an itinerant person; a wanderer.' For the construction of the concept of e-nomad, the aspect of travelling from place to place or being itinerant as part of a certain occupation has been kept and the prefix 'electronic' added, representing an extensive use of ICT when at work. E-nomads include individuals who use ICT at least sometimes and do not have their employer's premises (or their own premises if self-employed) as their main place of work, or, if they do, they have worked in another location in the three months prior to the survey.

demand. According to the European Commission (2010a), having a highly skilled workforce helps adjust to changes and boosts Europe's competitiveness.

The European workers entering the labour market today are better educated than before. Nonetheless, regardless of their formal qualifications, most will still need further training in the course of their career. In addition, many learn the core skills for the job mainly through practical work experience. Workplaces are important arenas for self-development and for gaining professional experience and expertise. As indicated in the section on work organisation in this chapter, modern forms of work organisation (workplace innovation) are associated with higher learning and task variety.

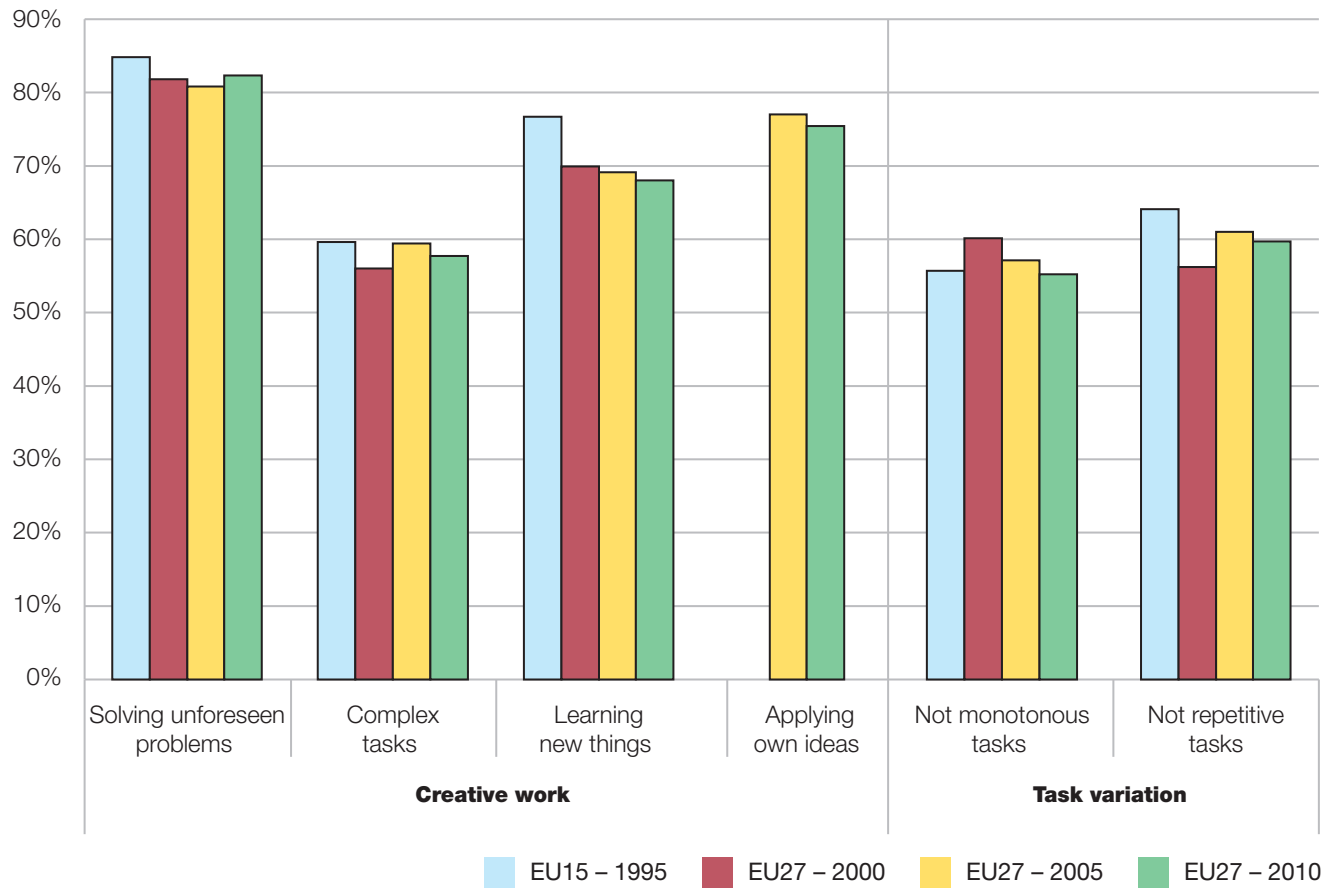
Creative work and variety of tasks

Creative work and task variation contribute to self-development at work, as well as being traditionally considered important for intrinsic work motivation when workers have the knowledge and skills to take up new challenges (see, for example, Hackman and Oldham, 1980). This theory still receives some empirical support 30 years after its publication as the fifth EWCS data show that creative and non-monotonous work are related to feelings of doing useful work and of work well done.

According to Schulte and Vainio (2010), the learning environment can also be linked with increased motivation and performance. This suggestion seems to be supported by the survey data. Those who have creative and non-monotonous work are more likely to say that the organisation motivates them to give their best performance compared with individuals whose job does not include these aspects. Furthermore, having these elements present in the job is related to having a positive perception of career prospects.

Most workers in the EU27 have a job in which they can be creative; 82% solve unforeseen problems and 75% apply their own ideas when working (Figure 57). Learning new things and having complex tasks are also common (68% and 58% respectively). In addition to creativity, task variation is important for a job to be challenging and motivating; 55% of workers in the EU27 say they do not have monotonous tasks and 60% say they do not have repetitive tasks.

Figure 57: Trends in creative work and task variation (%)



Even though the majority of workers report possibilities for creativity at work and more than half say their job does not include monotonous or repetitive tasks, the general trends for the EU27 countries show only a slight change in these indicators over the past 10 years (Figure 57). Not having monotonous work has become less common, whereas not having repetitive tasks has become slightly more common. For other indicators, the trends are less clear. These developments are somewhat puzzling considering the prevailing European discourse which highlights the importance of learning throughout working life.

Creativity and task variety are not equally present for individuals in different jobs and changing workplaces. Creativity at work is somewhat more common for men than for women. The gender gap is highest for having complex tasks (63% of men and 52% of women) and for solving unforeseen problems (85% of men and 79% of women), whereas men and women learn new things and apply their own ideas almost to the same extent. There is not much difference between men and women in terms of task variation.

Workers in the middle age group (35–49 years old) most commonly solve unforeseen problems (85%) and have complex tasks (60%), whereas younger workers report most often that they learn new things in the course of their work (72%). Both middle-aged and older workers have somewhat more varied tasks than the youngest age group. The higher the level of educational attainment, the more creativity and task variation the work entails.

More of the self-employed perceive their work as creative than employees. The margin is widest for applying one's own ideas (95% versus 72%) and solving unforeseen problems (92% versus 81%). The self-employed report slightly more than the employed that their jobs do not involve monotonous and repetitive tasks.

Workers in higher-skilled occupations generally have more opportunities for being creative when working and for having varied tasks. Almost all managers (96%) solve unforeseen problems and apply their own ideas. Managers also often undertake complex tasks as do professionals (76% of workers in both occupations). Learning new things is most common for professionals (90%) and for technicians and associate professionals (83%). Clerical support workers and craft and trades workers quite commonly solve problems (81% and 82% respectively); 70% of clerical support workers also learn new things at work and 67% of craft and trades workers undertake complex tasks – percentages that are well above the average. Skilled agricultural workers commonly solve problems (83%), but it is even more characteristic for these workers to apply their own ideas (92%). Service and sales workers, plant and machinery operators and workers in elementary occupations rate lower than the average on all the indicators of creative work.

The average is 55% for not having monotonous work and 60% for not having repetitive tasks. Task variation is most common for professionals, with around 70% not having monotonous or repetitive tasks. Managers and technicians and associate professionals also often have varied tasks. Skilled agricultural workers rate well above the average for not having repetitive tasks (66%). The following occupations are below the averages:

- 38% of workers in elementary occupations, 39% of plant and machine operators, and 49% of clerical support workers do not have monotonous tasks;
- 47% of craft and related trades workers, 49% of workers in elementary occupations, and 53% of plant and machinery operators do not have repetitive tasks.

Although some occupations clearly have much more creativity and task variety than others, the period between 2000 and 2010 saw some changes. Three of the four indicators measuring creative work were included in all three waves of the EWCS in the 2000s.

- For solving unforeseen problems, the trends are quite stable for all occupations.
- Complex tasks have become more common in higher-skilled occupations such as managers, professionals, and technicians and associate professionals, as well as for craft and trades workers. For other occupations no clear trends emerge.
- Learning new things at work shows a downward trend for clerical support workers as well as for plant and machine operators. A downward trend can also be seen for people in elementary occupations in 2010 after an increase from 2000 to 2005 (Figure 58).

Overall, fewer workers reported having jobs that are not monotonous in 2010 than in 2000. Although the trend for the absence of repetitive tasks shows an increase between 2000 and 2005, most occupations experienced a small reversal in 2010. Only in higher-skilled occupations such as managers, professionals, and technicians and associate professionals did the proportions of those who do not have repetitive tasks slightly but constantly increase over the past 10 years.

Other job characteristics such as use of technology and position in the workplace hierarchy play a role in offering possibilities for development opportunities. For example, using ICT or both ICT and machinery is clearly related to more creativity (Figure 59).

Figure 58: Learning new things at work, by occupation, EU27 (%)

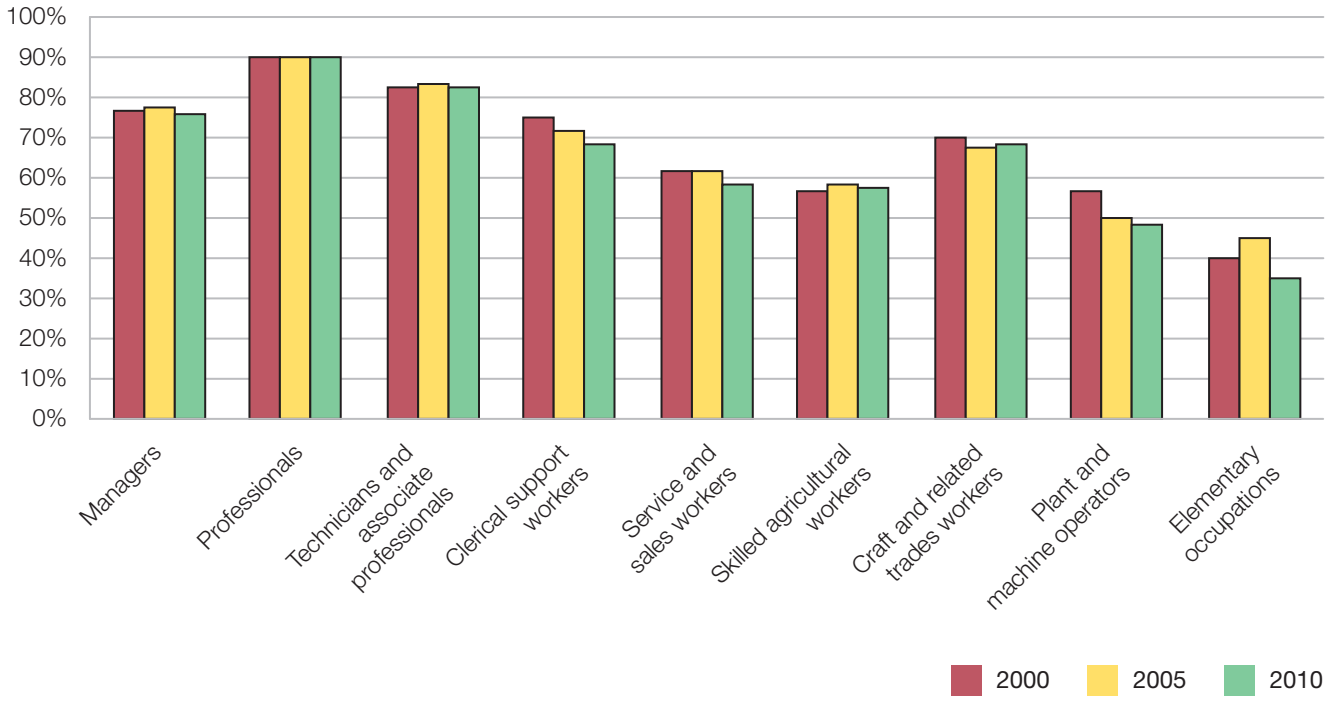
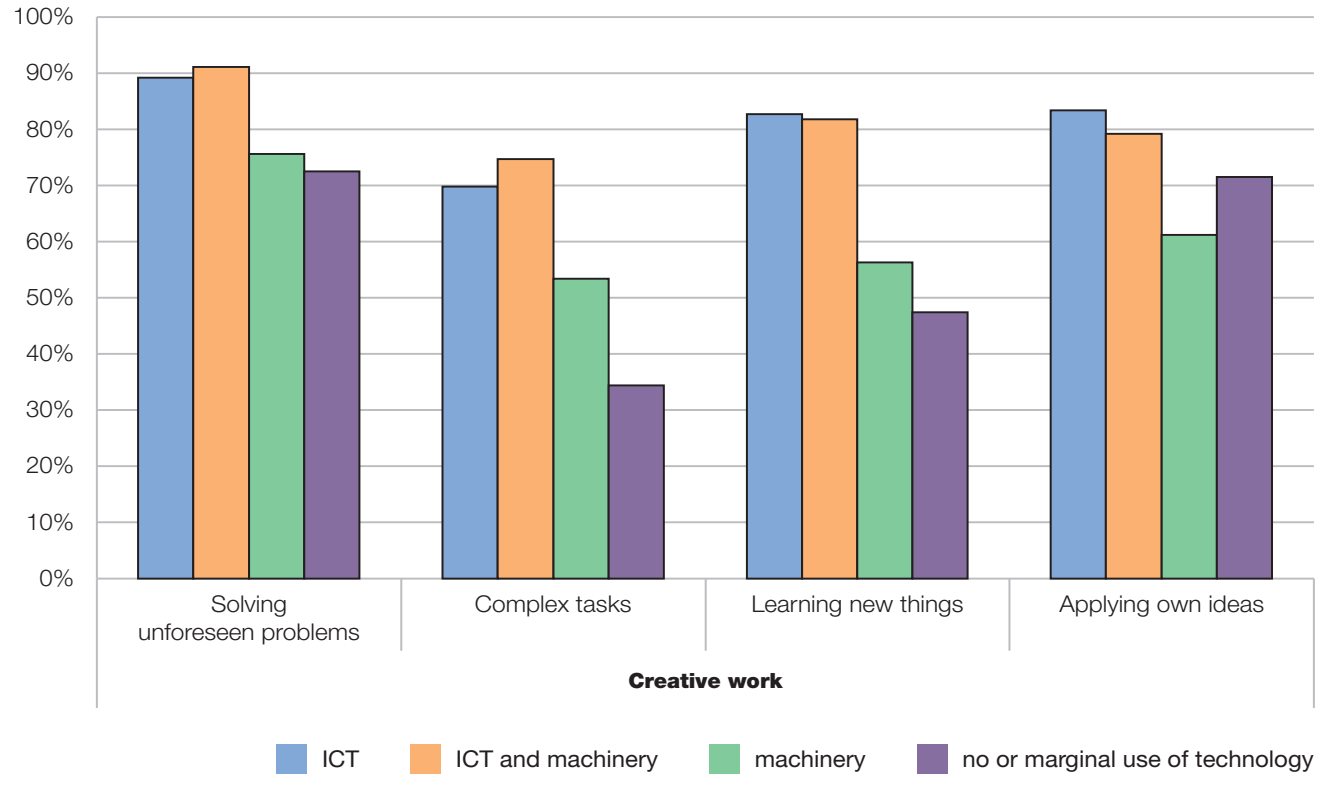


Figure 59: Creative work, by use of technology, EU27 (%)



Higher seniority is linked with creative work and task variation. Only for learning new things does seniority not seem to matter much. The relationship between creative work and task variety and supervisory roles is also straightforward; the higher the level of hierarchy, the more task variety and creativity.

When a workplace has recently introduced new processes or technologies or has undergone restructuring or reorganisation in the past three years, the cognitive dimensions of the work seem to increase at least temporarily. However, such changes seem to have an ambiguous impact on task variation. For example, in workplaces where new processes or technologies have been introduced or restructuring has taken place, slightly fewer workers report not having repetitive tasks. No clear differences emerge for the indicator of not having monotonous tasks.

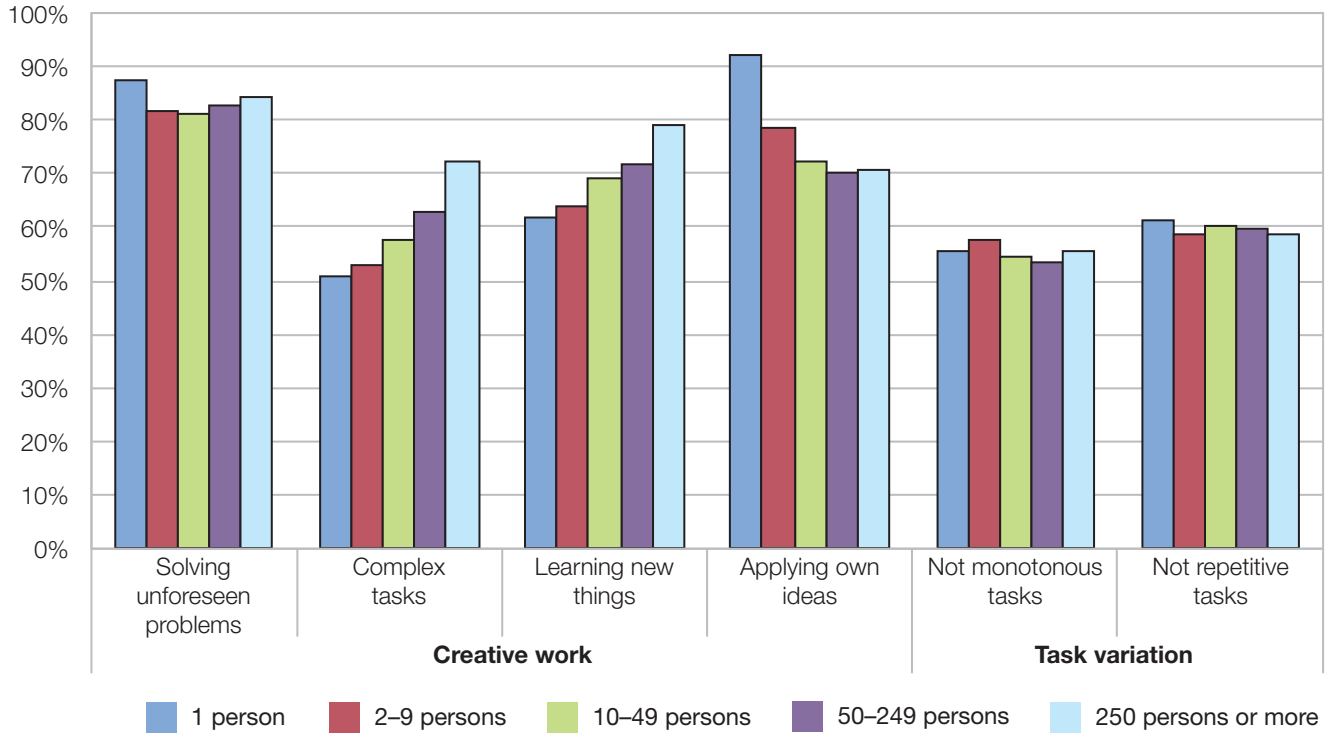
In a workplace with only one person working (common for the self-employed), this worker will frequently solve unforeseen problems and apply their own ideas. However, the extent to which workers have complex tasks to undertake and learn new things commonly increases with the size of the workplace. For task variation, the size of the workplace does not seem to make a difference (Figure 60).

Working in a particular sector involves different kinds of creative work and task variety. The financial services sector rates highest for work including complex tasks (74%) and learning new things (83%). Learning new things is as common in education (83%) but it is particularly common in this sector for workers to also solve unforeseen problems (89%) and apply their own ideas (92%). The agriculture sector rates quite high for work that includes applying one's own ideas (85%). Complex tasks are also relatively common for workers in the construction and the public administration and defence sectors (69% in both). The wholesale, retail, food and accommodation sector has the lowest proportion of workers who carry out complex tasks (42%). Learning new things is least common in the transport and agriculture sectors (51% and 54% respectively). The transport sector also has the lowest proportions of people who apply their own ideas at work or who do not have monotonous tasks (58% and 45% respectively). In the construction and industry sectors, it is least common not to have repetitive tasks compared with other sectors (51% and 53% respectively).

Skills and training

Matching workers' skills with labour market needs is challenging. If not adequately addressed, a mismatch between skills and duties (created, for instance, by not providing further training or more challenging tasks) may become a source of dissatisfaction and reduced well-being among workers (see, for example, Green, 2011, p. 20). For companies, this may materialise in problems in recruiting workers

Figure 60: Creative work and task variation, by size of workplace, EU27 (%)



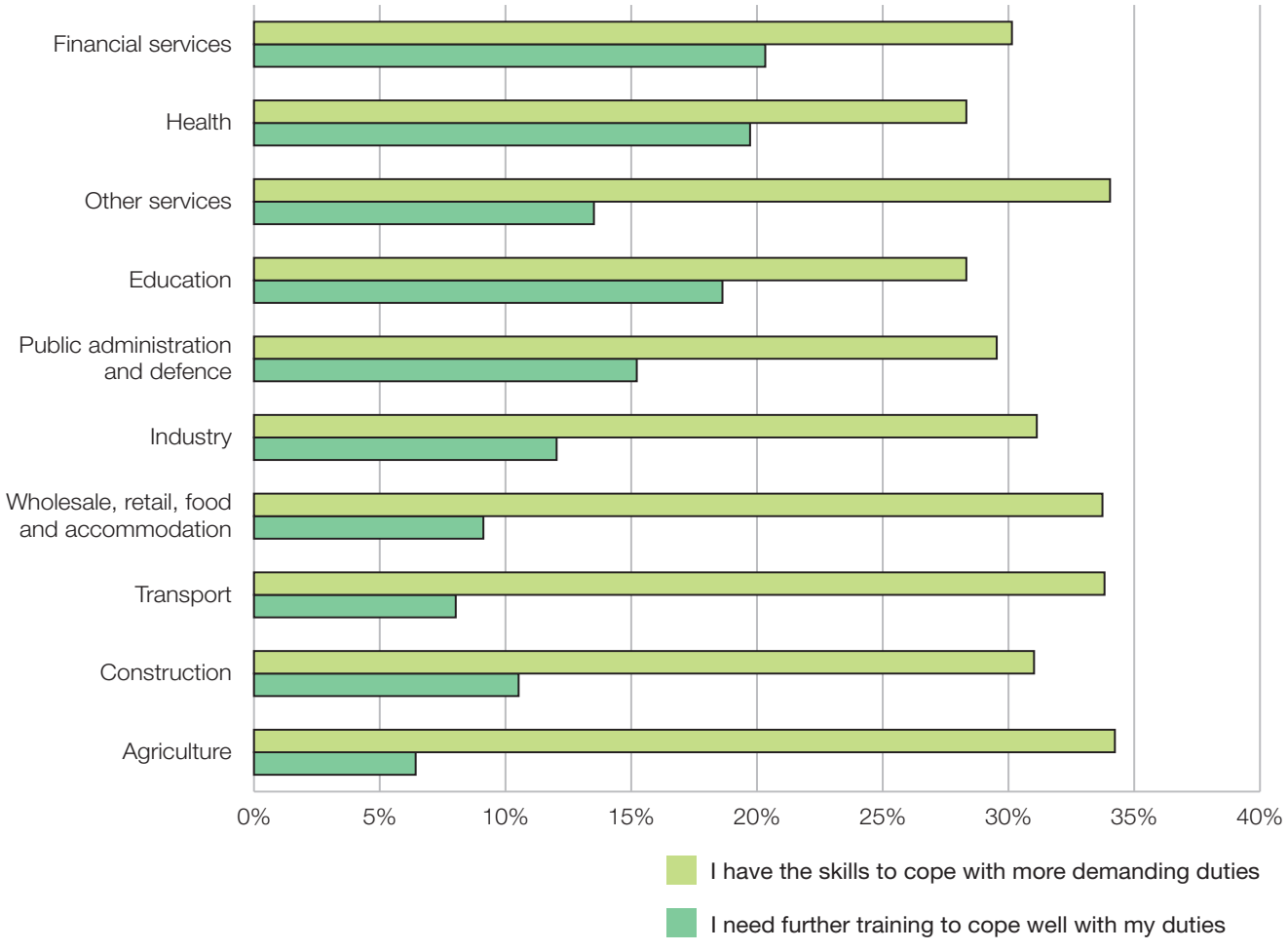
with the adequate skills and qualities to perform the job. In the years of economic downturn, providing training for employees could equip companies to be better prepared for the upswing. However, this practice does not appear to be very common as the financial resources available (especially in smaller companies) are scarcer than before (Isusi, 2011).

In the EWCS, 55% of workers say that their present skills correspond well to their duties. However, notable proportions of workers report either needing more training or possessing the skills to cope with more demanding duties. For example, a considerable share of workers in the financial services, health and education sectors think they need further training to cope well with their duties (Figure 61). More than a quarter of the workers across all sectors report that they have the skills to cope with more demanding duties.

Younger workers more often than older colleagues say they need more training to cope well with their duties (16% of people under 35 years old compared with 11%–12% of older workers). A balance between skills and duties is more common for older workers. However, across all age groups, the same proportion of workers (32%) report having the skills to cope with more demanding duties.

Use of technology at work seems to challenge the balance between skills and duties; 17% of those who use ICT or ICT and machinery at work say that they need further training – almost twice as many as those who use machinery or whose work is not technology oriented (9%). These two latter groups most often say that they have a balance between skills and duties (59%–60%, compared with 48% of workers using ICT and machinery, and 53% of those working with ICT). Of those workers using ICT and machinery at work, 35% consider they have the skills to cope with more demanding duties whereas the percentage is lower for the other groups at 31%–33%.

Figure 61 : Skills and duties match, by sector, EU27 (%)



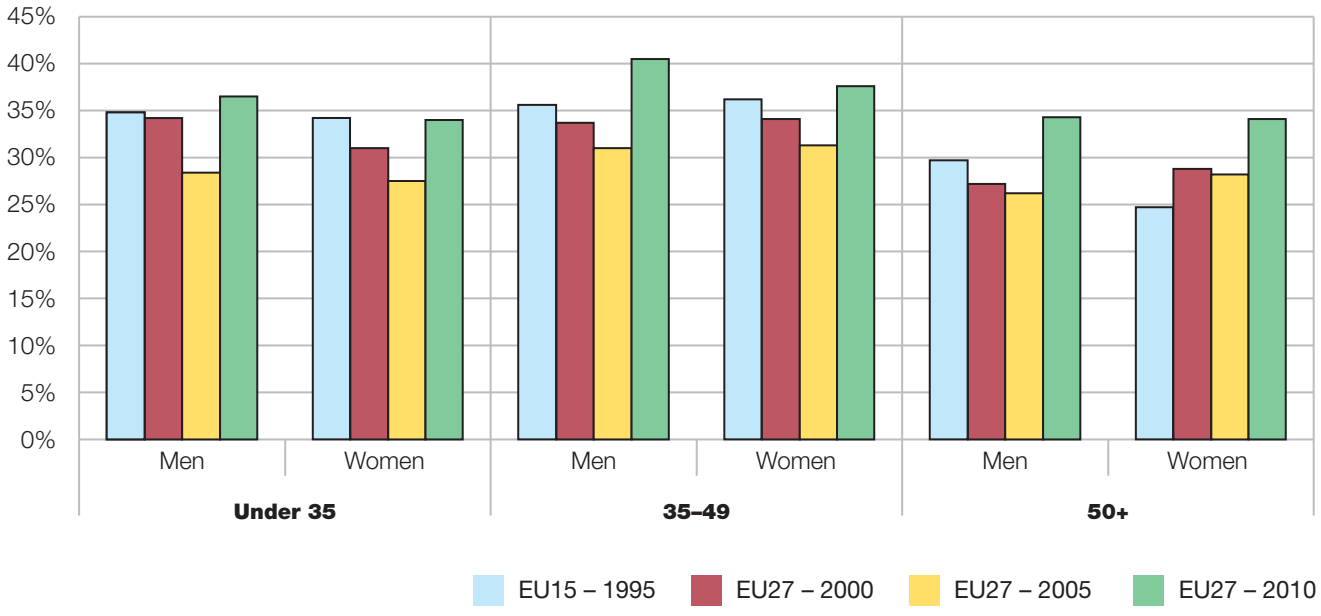
Access to employer-paid training is mainly relevant for employees as the self-employed are usually responsible for their own training. For employees, the responsibility is commonly shared between themselves and their employer. The many studies in this area have concluded that highly skilled employees receive the most training, giving them an even greater advantage over those with lesser skills (see, for example, Ward et al, 2009). The EWCS confirms this inequality, which has persisted since the question about participation in employer-paid training was first asked in the 1995 wave of the survey.

The divide between clerical and manual occupations is very clear. In 2010, over 50% of managers and professionals and 48% of technicians and associate professionals received employer-paid training, compared with only 26% of craft and related trades workers, 28% of service and sales workers, 28% of plant and machine operators, and 33% of clerical support workers. However, receiving training is even less common for skilled agricultural workers (14%). It is also more common for employees working full time (38%) and with an indefinite contract (39%) to receive training than employees working part time (34%) and employees with a fixed-term (31%) or temporary agency contract (26%).

Overall, participation in employer-paid training increased between 2005 and 2010 from 29% to 37%.[33] However, it is not possible to identify what is behind this increase (which took place during the years of economic downturn) as the survey question does not specify the type of training undertaken by the worker.

Employer-paid training is received to varying extents by men and women, and by young (under 35 years old), middle-aged (35–49 years old) and older (50 years old and over) workers. The highest proportion receiving training in 2010 was men aged 35–49 (over 40%) followed by women aged 35–49 and men under 35 (Figure 62). The increase in access to training seems particularly strong for men; in 2005, 29% of both men and women had undergone employer-paid training, but in 2010, the proportion went up to 38% for men and 36% for women.

Figure 62: Participation in employer-paid training over time, by age group and gender (%)



Note: Employees only

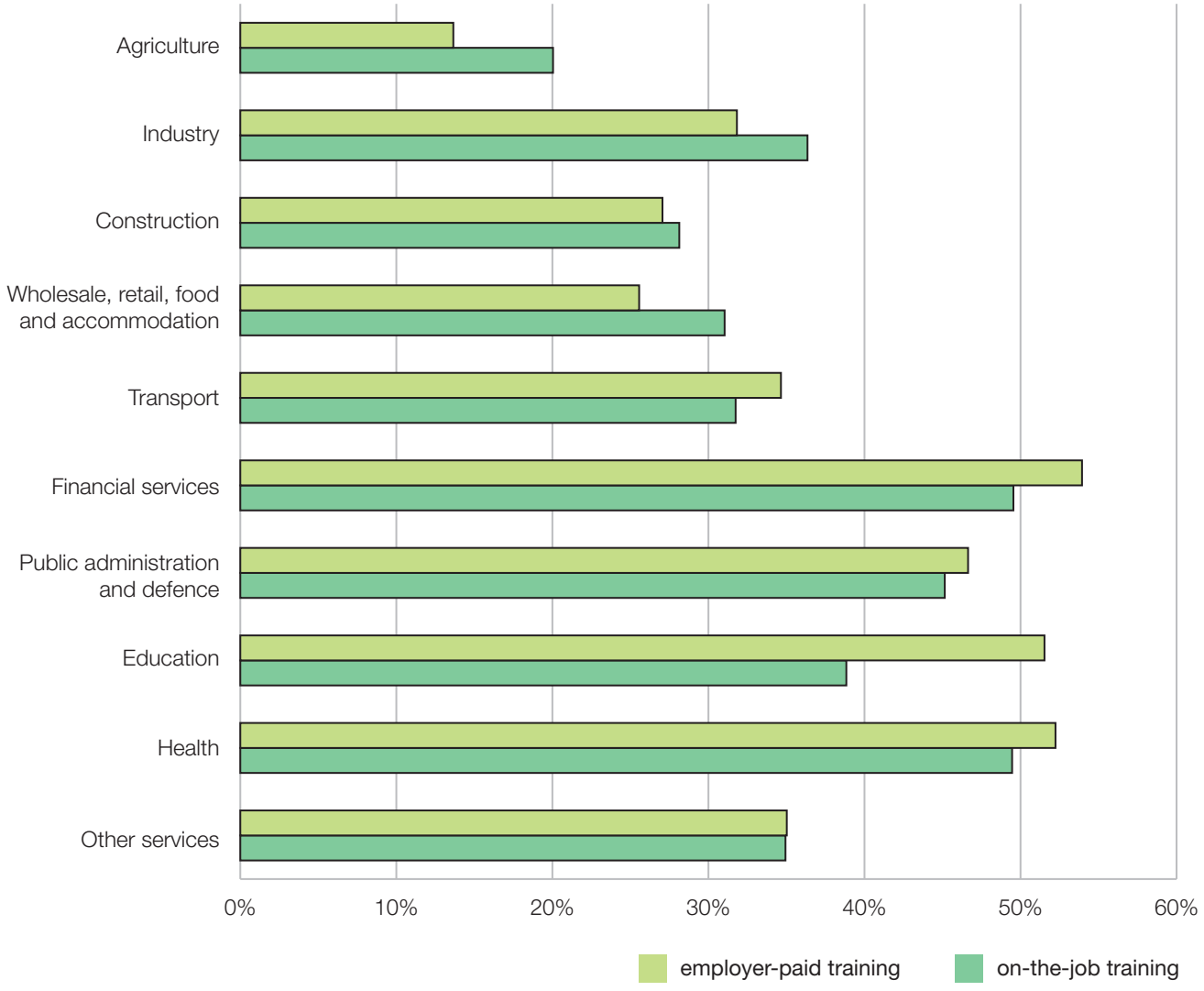
[33] Eurostat's Labour Force Survey (LFS) has a question on participation in lifelong learning in the four weeks prior to the survey interview. The LFS trend does not show an increase in lifelong learning from 2005 to 2010 in the EU27. However, the EWCS and LFS questions on training and learning are conceptually different; the EWCS has a more narrow definition and the question refers to the 12-month period prior to the data collection. Furthermore, the two surveys have different methodologies. Nevertheless, the differences in the trends merit further investigation.

The EWCS shows that, overall, 37% of employees receive training in the course of their work. This proportion has increased by seven percentage points since 2005. On-the-job training is most common in higher-skilled occupations. Just over 45% of managers, professionals, and technicians and associate professionals have had training in the course of their jobs, compared with only around 20% of employees in elementary occupations and employees in skilled agricultural occupations.

Employer-paid and on-the-job training are most common for employees working in the health, education, public administration and defence, and financial services sectors (Figure 63). These sectors are also the ones with the biggest proportions of workers (15%–20%) reporting that they need further training to cope well with the duties their job entails (see Figure 61). The EWCS training indicators on employer-paid training and on-the-job training are associated with each other, meaning that an employee who participates in one will probably also receive the other.

Employees do not commonly finance their own training to develop new skills; in 2010, only 6% did so (5% in 2005). Employed professionals stand out, as 15% of them had undergone some kind of training at their own expense in the 12 months prior to the survey interview. This is significantly more than managers (9%), technicians and associate professionals (8%) and employees in other occupations (less than 5%).

Figure 63: Participation in employer-paid training and on-the-job training, by sector, EU27 (%)



Note: Employees only

Over half of the employees in Finland, the Netherlands, Slovenia and Sweden had training over the previous 12 months whereas fewer than one in five had done so in Bulgaria, Greece, Montenegro, Turkey and the former Yugoslav Republic of Macedonia (Figure 64). In countries where a greater share of employees had received training in the previous 12 months, it was also often the case that more employees had asked for training but had not received it. In northern Europe and the Netherlands, workers seem to have a more active role in requesting training compared with other countries; over 70% of employees in Denmark, Finland and Sweden and around 65% in the Netherlands and Norway either received employer-paid training or asked for it in the previous 12 months.

Nearly 90% of employees who received employer-paid training in the previous 12 months agree that it has improved the way they work, and around 70% believe that, following the training, their job is more secure and their prospects for future employment are better.

Development on the job often takes place in everyday work. The EWCS shows that the majority of workers can apply creativity in their work. This kind of informal learning is especially common for the self-employed and workers who use technology in their work. In many cases, the creativity is supported by participation in training, either as part of the job or provided by the employer.

The EWCS findings on development on the job and training give some clues to the current situation with regard to the aim of increasing the skills of the EU workforce. Overall, the trends in creative work and variety of tasks do not show much change in the past 10 years. However, there seems to be a small improvement in employees' participation in training provided by their employer, which is good news even if this is just a small part of overall skills development.

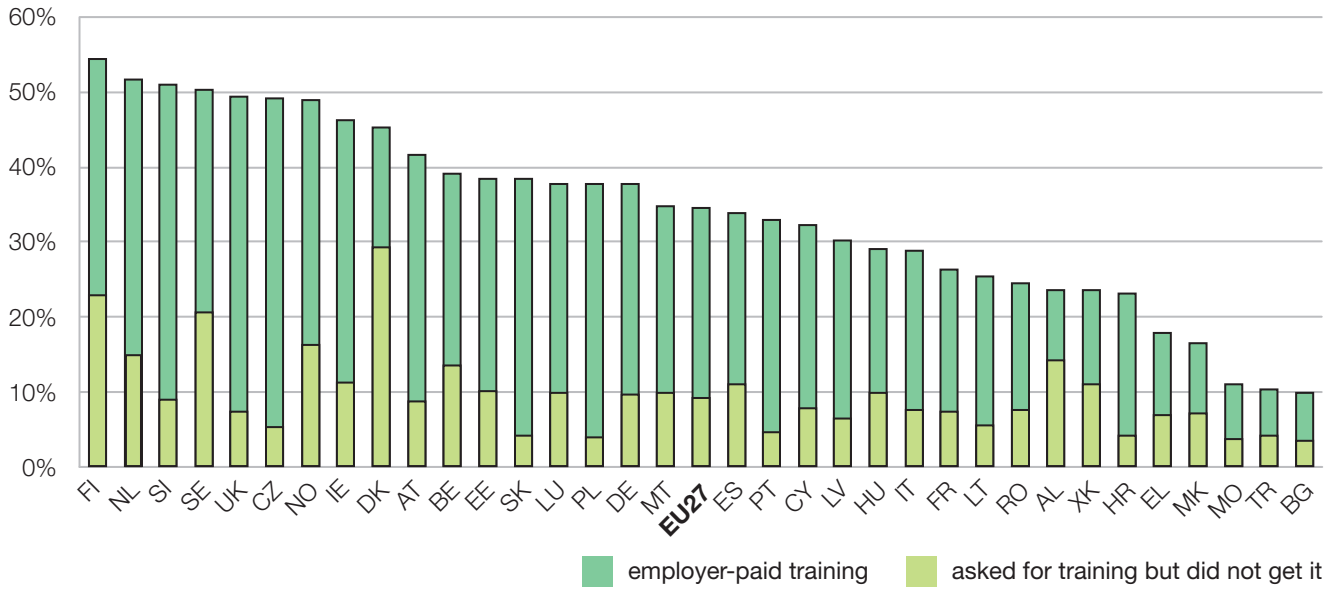
Possibilities for learning new things and applying one's own ideas at work are markedly lower in lower-skilled occupations than in higher-skilled jobs. The same concern applies to participation in training.

Income and financial security

The spread of recession throughout most EU Member States in 2010 put particular emphasis on employment vulnerability, income insecurity and sustainability.

The financial element of work is a key feature of the employment relationship. The effort of work has to be compensated for by a price or wage. A wage is (legally) a constitutive element of the employment contractual arrangement. For employers, pay is the most significant part of labour costs, which on top of wages includes contributions to statutory social security schemes, allowances, training and transport costs. The self-employed determine the price of their service/product, which establishes the income they will get from their work depending on market considerations. Wages, earnings and/or income from work are part of quality of work and employment.

Figure 64: Employer-paid training requested and provided, by country (%)



Note: Employees only

Nonetheless, wages, earnings and/or income should not be seen as merely an individual characteristic but should also be analysed in relation to the workers' household composition and nature. Household characteristics have consequences for the overall net revenue to which earnings and other sources of income (for example, revenue from properties) can contribute. The global issue of income is a policy topic involving all social actors, business, trade unions, public authorities and workers.

Various elements have to be considered when examining the financial security of workers. Like other elements of precariousness, financial vulnerability is dependent both on multiple aspects and on their combination, including individual characteristics and more contextual ones.[34]

Having a job or not, receiving the minimum wage or more, working in the formal economy or not, having a standard (permanent full-time) contract or not (atypical or very atypical contractual arrangements) all make significant differences to financial security. But as noted above, the more global context in which the earning is embedded makes the most difference. The composition and nature of the household (with or without a partner and/or children), the various (if any) sources of revenue (partner's work, second job, other types of revenue) contribute to the full picture of workers' vulnerability. Moreover, security/vulnerability should be acknowledged over a lifetime perspective (including retirement), allowing an assessment of various elements such as the potential to change job, develop and change occupation. To complete the picture, the impact of social protection systems, the ability to escape 'vulnerability traps' and obtain sustainable work in the long run, all need to be taken into account.

Assessing the financial vulnerability of workers in Europe is not a simple task. The first difficulty arises from the lack of reliable data. Also lack of information on wages or income has to be acknowledged. Talking about wages or income is something that people are reluctant to do, especially in an interview and particularly when the income/wage is considered relatively high or low compared with others.

Furthermore, the nature of earnings can be particularly complex as earnings are made up of several elements, some of which might be flexible or variable depending on the company or group/individual performance.

The background is important when assessing revenue as there are 'fashion trends' in income policies. For example, businesses can be spurred on to apply some variability in wages as part of a reward and/or motivation scheme, giving management more flexibility in pay monitoring. Income can also be part of national policies or measures aiming to implement aspects linked, for example, with flexicurity debates at European level.

Finally, interpreting data on earnings/income vulnerability is far from straightforward. Evolution can be perceived either negatively or positively by workers depending on the proportion and nature of income, their personal circumstances and the economic context.

The overall complexity of the interactions and the fact that all these dimensions could not be examined extensively in one European survey means that our analysis has some limitations. The EWCS only marginally touches on the lifetime perspective and the link with social protection systems, and neither topic is developed here.

However, regarding pay systems, an initial analysis of some data allows a discussion on the level of earnings and the perception of workers' purchasing power in Europe in 2010. Furthermore, the data allow for an analysis of some recent changes experienced by workers in their employment relationship, changes leading to a reduction in resources and a decline in future potential evolution and on the issue of 'making ends meet' at a household level.

Pay components

The EWCS asks workers about the components of the compensation they receive in exchange for their work. The questions cover traditional basic fixed salaries or wages and other components such as variable pay, compensation for extra hours of work and participation in profits. The survey captures the characteristics of the earnings of both employees and self-employed.

Pay components of employees

The vast majority of employees in the EU27 have a basic fixed salary or wage (approximately 96%). Piece rate or productivity payments are part of the earnings of about 12% of employees – a level that has been relatively stable for the past 20 years.[35]

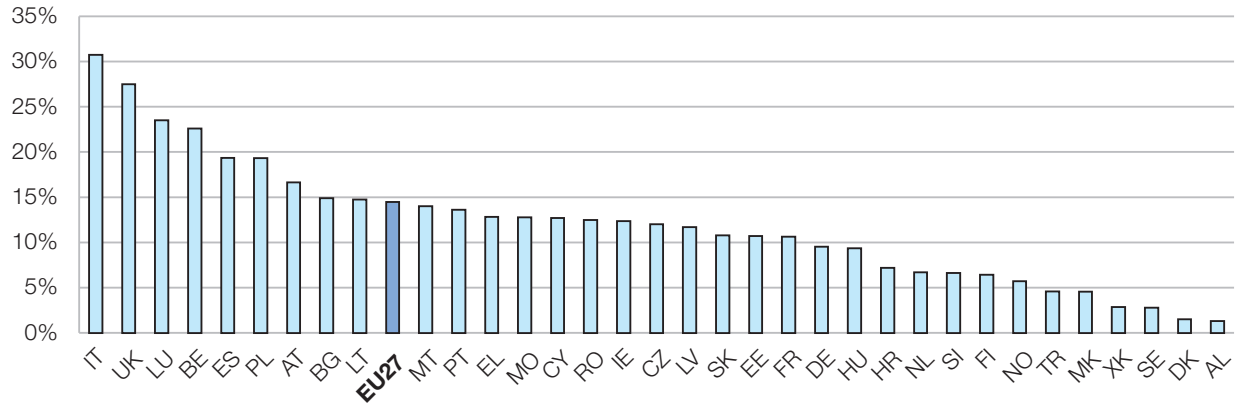
[34] Guio (2005) discusses indicators and concepts such as poverty risk, relative poverty risk and how poor the poor are. The list of common indicators has a primary focus on indicators of relative income poverty, referring to individuals living in households where equivalised income is below the threshold of 60% of the national equivalised median income. Given the conventional nature of the retained threshold, and the fact that having an income below this threshold is neither a necessary nor a sufficient condition of being in a state of poverty, this indicator is referred to as a measure of poverty risk.

[35] See trends résumé and previous EWCS waves.

Box 4: Refusal to disclose earnings

As people tend to be reluctant to provide information about how much they earn, it is important to look at the level of non-responses to the question on earnings' levels. This analysis shows that the percentage of people refusing to disclose their earnings varies more between countries (Figure 65) than with most of the other variables. Despite this significant variation, a binomial logistic regression found that employment type, occupation, age, gender, sector and reported capacity to make ends meet explain a significant part of the reluctance to disclose levels of earnings. The self-employed, managers and professionals, older workers, men and those reporting it being relatively easy 'to make ends meet' are less likely to disclose their earnings than their counterparts.

Figure 65: Non-disclosure of earnings, by country (%)



Note: When calculating the percentages, only spontaneous refusals were taken into account as non-responses.

Confirming the recent increasing trend in the use of variable pay systems (see, example, Broughton et al, 2010), the 2010 EWCS data show that the proportion of individuals who receive at least one type of variable pay, apart from piece rate or productivity payment, increased over the past five years. In 2010, 63% of employees in the EU27 reported that their earnings included variable components; this compares with 62% in 2005. These components include extra pay for overtime (35% of total), other forms of extra pay (26%), extra pay for work on Sundays (15%) and extra pay compensating for bad or dangerous working conditions (8%) (Figure 66).

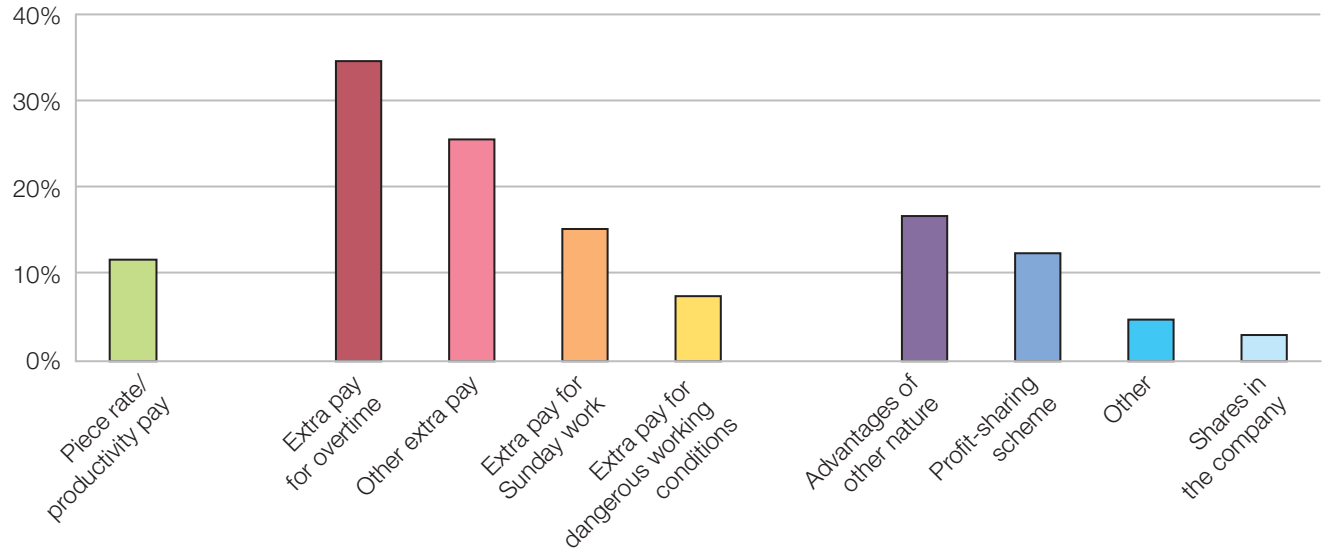
Additional payments to regular income based on overall performance or profitability of the company in a given period were mentioned by 13% of respondents and income from shares in the company by no more than 3%. 'Advantages of other nature' are part of the earnings of 17% of European employees.

There are significant differences between countries in terms of the relative importance of basic fixed salary and piece rate or productivity pay (Figure 67). Of the EU Member States, only the Baltic countries (Estonia, Latvia and Lithuania) and Italy have more than 10% of employees without a fixed component of earnings. The relative importance of piece rates and/or productivity pay as components of pay varies greatly across countries. Italy and Slovakia stand out from the other countries in having considerably higher proportions of individuals reporting having such a component of pay in their earnings.[36]

When considering the 'other components of pay', the ranking of countries changes again depending of the nature of the element considered.

[36] This was already the case in 2005 (Parent-Thirion et al, 2007).

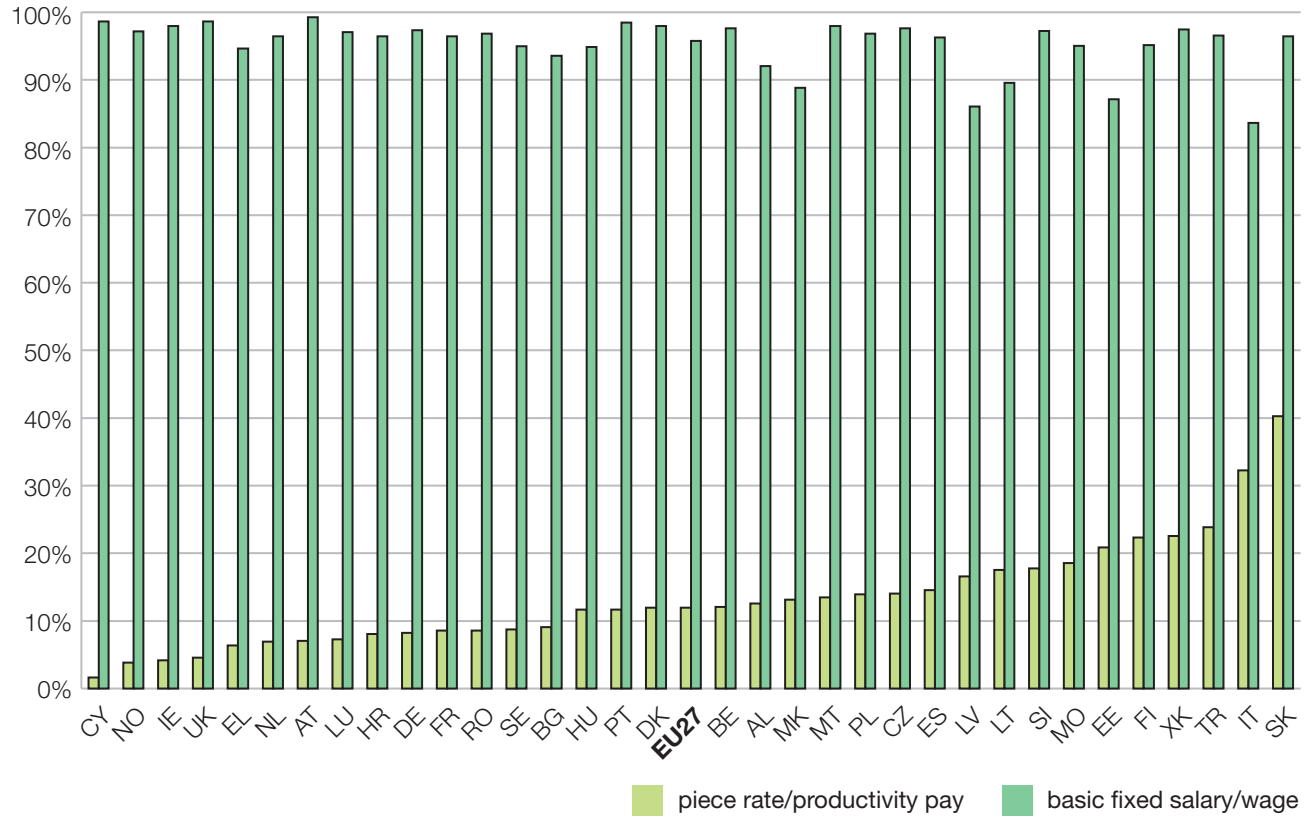
Figure 66: Components of pay, EU27* (%)



* Apart from the basic wage and piece rate/productivity rate, the question identifies whether respondents receive additional income by way of overtime, profit-sharing, employee share ownership programmes (ESOPs), anti-social working hour bonuses and benefits-in-kind (health insurance, other allowances, etc.).

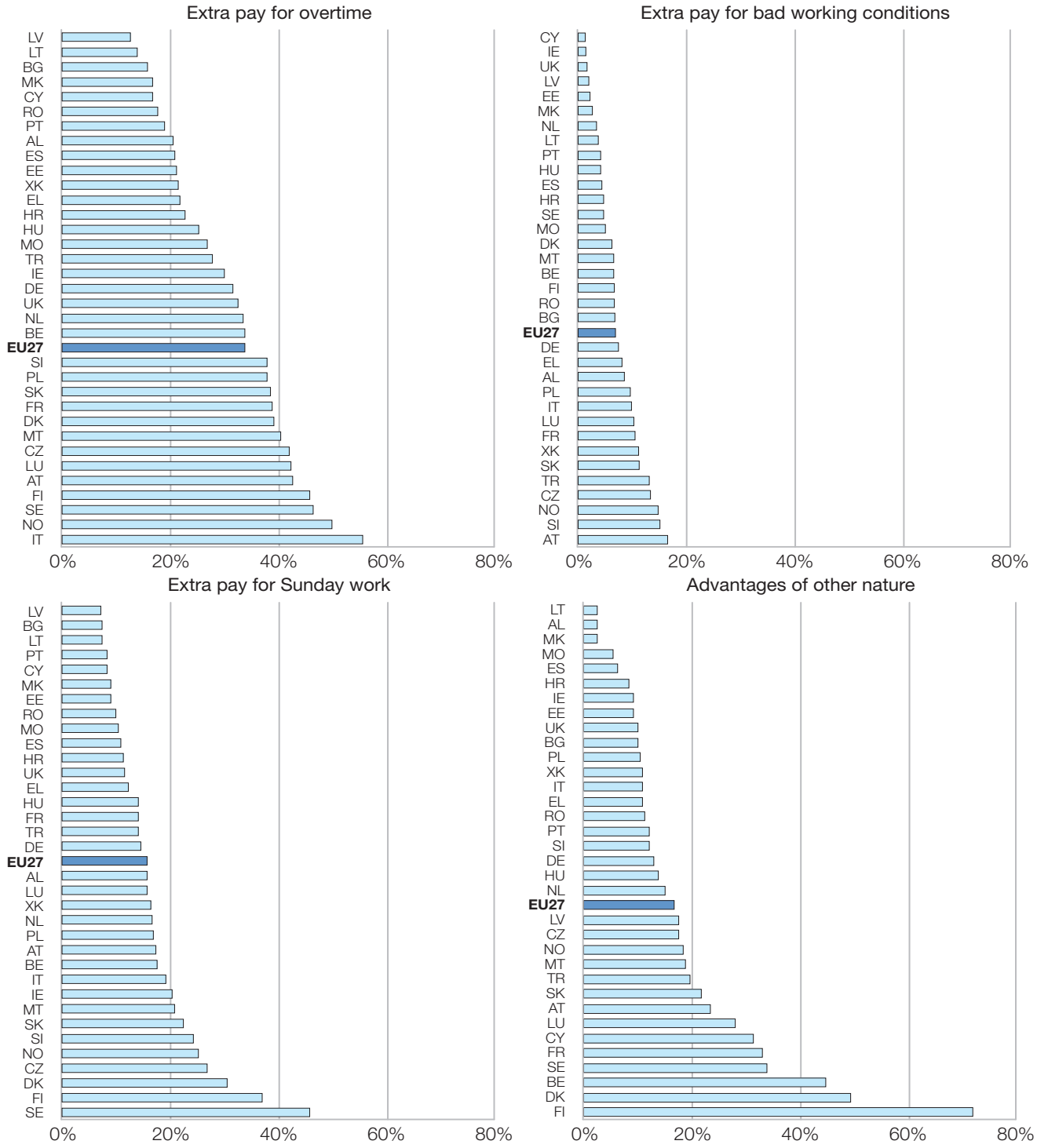
Note: Percentage of employees whose earnings from their main job include each of the mentioned components of pay; cases weighted for the EU27.

Figure 67: Basic fixed salary and piece rate/productivity pay, by country (%)



Compensation for additional hours of work or overtime is relatively important for most former EU15 countries apart from Greece, Portugal and Spain (Figure 68). It is a relatively common feature in Austria, the Czech Republic, Finland, Italy, Luxembourg and Sweden. Those countries in which the payment for overtime is less widespread joined the EU later: Bulgaria, Cyprus, Latvia, Lithuania and Romania report this type of payment as representing less than a fifth of the total.

Figure 68: Extra pay components, by country (%)



Payment for work on Sundays is more common in the Nordic countries than in all other countries and less relevant in the Baltic countries, Bulgaria, Cyprus and Portugal (Figure 68). Extra payment compensating for bad or dangerous working conditions is much more frequent in Austria, the Czech Republic and Slovenia, and less widespread in Cyprus, Estonia, Ireland, Latvia and the UK.

The picture for 'advantages of other nature' is much more diverse (Figure 68); these include for instance medical services or privileged access to certain products or services. The range of employees reporting this sort of compensation varies from 2.5% in Lithuania up to almost 72% in Finland, with no apparent pattern in how widespread this form of compensation is. The top five are Nordic and central European countries (Finland, Denmark, Belgium, Sweden and France).

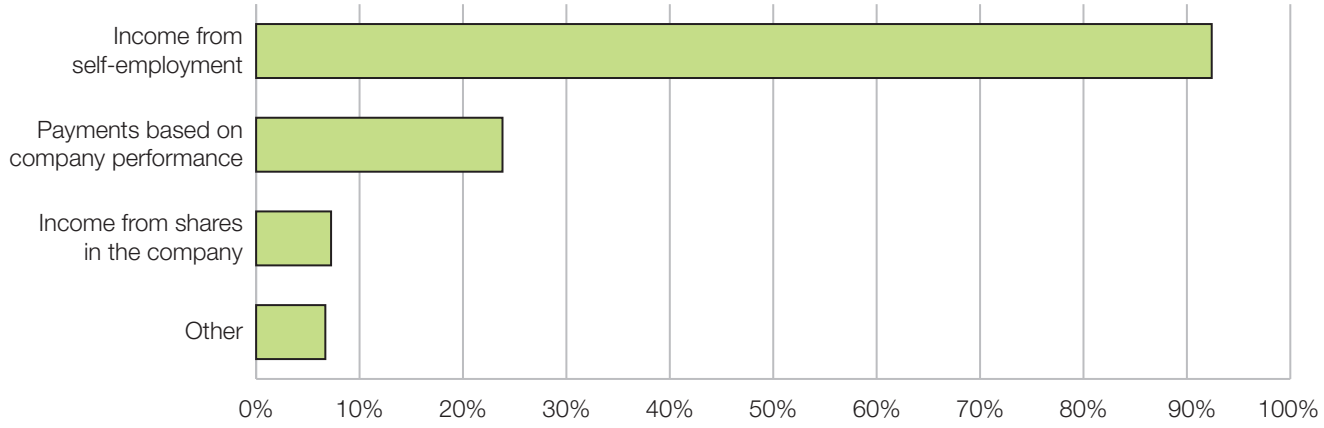
The EWCS also looked at the incidence of individuals participating in the company's profits or shares (Figure 69). Profit-sharing schemes (where employees receive part of the profits generated by the company they work for) feature as one of the earnings' components for around one out of every five employees in Finland, France, Slovakia, Slovenia and Sweden, but are almost negligible in most Mediterranean countries (Cyprus, Greece, Malta and Portugal). Company shares (employees own part of their company and consequently receive some income) are much less common in Europe. Although they have some significance in Denmark, France, Luxembourg and Sweden, this form of financial participation is a rarely used form of compensation in comparison to others.

Pay components of the self-employed

Taking into account the different nature of self-employed earnings, specific questions have been devised in the EWCS. To assess the self-employed compensation from work, the questions focus on the income related to a profession, business or farm, consider the possibility of self-employed receiving payments based on the overall performance of the company or partnership where they work and/or income from shares in the company for which they work.

Figure 69: Employee participation in profit-sharing schemes and company shares, by country (%)

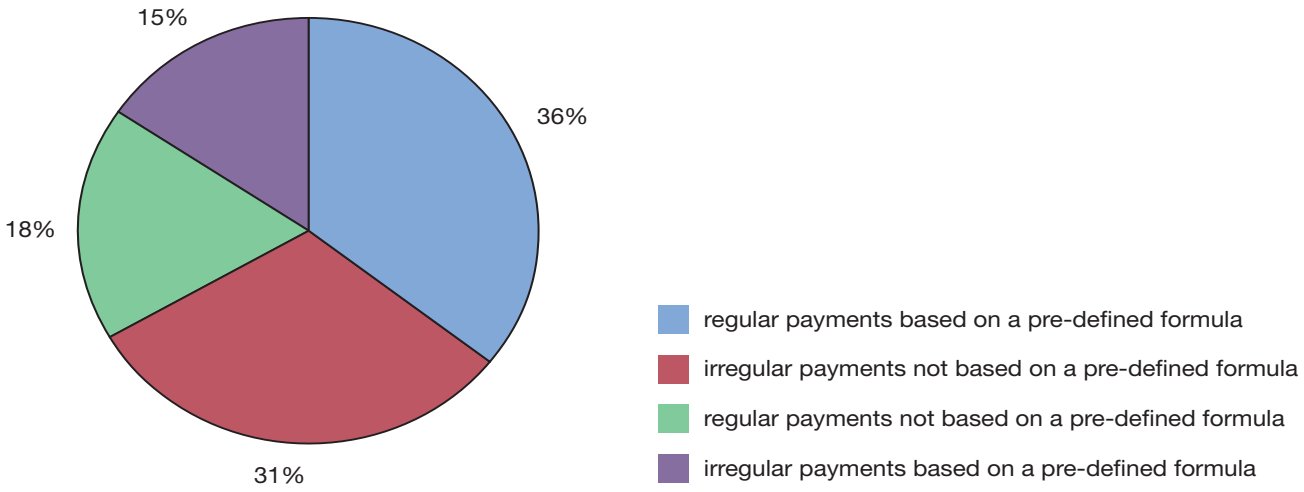
Figure 70: Pay components of self-employed, EU27 (%)



Similar to the employees' situation in which the basic salary is the most important component of earnings, more than 9 out of 10 self-employed people in Europe report that their earnings include income from the self-employment activity or business. The main difference between employees and self-employed is in the variable components; profit-sharing schemes and shares in the company play a relatively more important role for the income of the self-employed than for employees (Figure 70).

Self-employed receiving payments from profit-sharing schemes were asked whether these payments were calculated according to a pre-defined formula and whether they were regular. No apparent pattern can be seen at European level. Slightly more than half of the self-employed receive payments based on the performance of the company on a regular basis. A pre-defined formula to calculate the payments is also reported in half the cases. Considering those two dimensions altogether, it can be said that the earnings based on profit-sharing schemes are certain, that is they are regular and based on a pre-defined formula, for around one-third of the cases, whereas the earnings of this nature for the other two-thirds are subject to some uncertainty by being irregular, or calculated independently of any pre-defined formula, or both. The latter group, with a higher level of uncertainty associated with their profit-sharing schemes, represents almost one-third of the cases (Figure 71).

Figure 71: Characteristics of self-employed earnings from profit-sharing schemes, EU27 (%)



Note: Figures represent percentages of total self-employed individuals reporting payments based on the overall performance of the company or partnership where they work.

Earnings from work

One of the main determinants of financial security/insecurity is earnings from work. The EWCS tackles the issue from different angles. It starts by asking workers for the exact amount of earnings received from their (main) paid job (Q EF10). If they do not know the net monthly figure or decline to give it, they are asked to select an 'approximate range', from ranges that go from less than €25 to more than €1,001 per week. The answers are collated and presented through 10 bands of earnings calculated for each country.

For the workers reporting their income in 2010, 86% are employees, 8% are self-employed with employees, 3% are self-employed without employees, and 3% belong to the 'other' category. Clearly the number of hours worked has a direct impact on earnings; more workers with part-time jobs are found in the lower earning bands (49% of part-timers are found in the lower two earning bands) and more workers with full-time jobs are found in the higher earning bands (26% of workers in full-time jobs can be found in the highest two earning bands).

Depending on the worker's status, the earnings situation can be described by a particular pattern, with a clear split in the self-employed category (Figure 72).

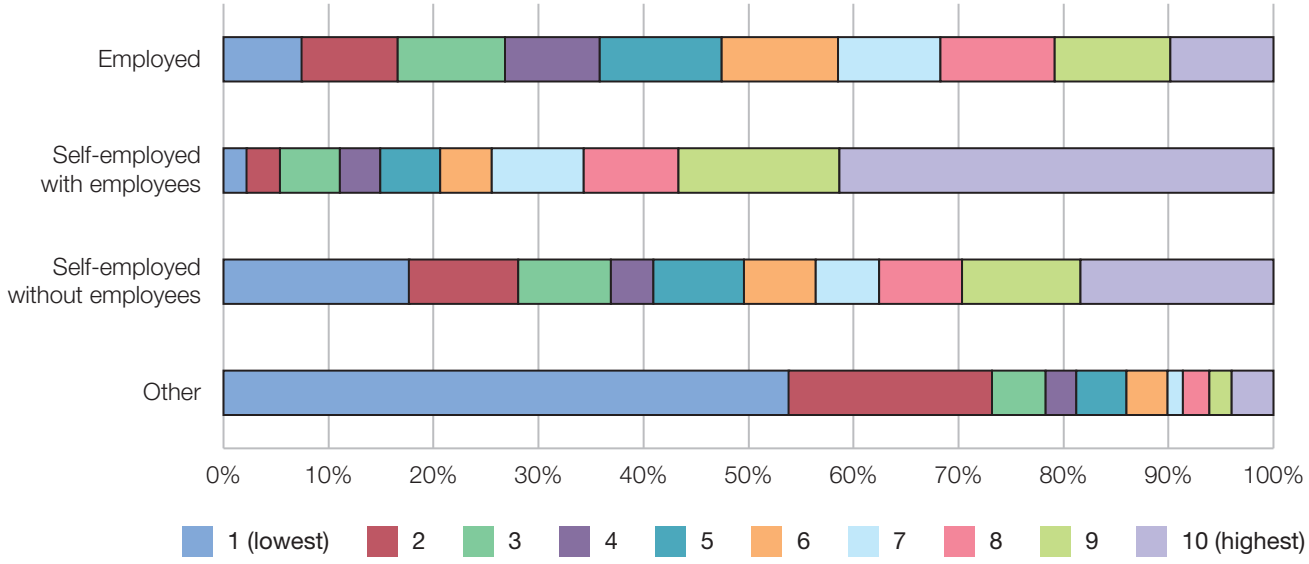
Employees are evenly spread between the earning bands. The self-employed without employees have a similar distribution, though with a concentration in the lowest and highest earning bands (almost 20% at each end). This suggests that the 'self-employed without employees' are a heterogeneous group in which some fare very well from work while others struggle to make a living from their professional activities.[37]

The self-employed with employees are concentrated in the highest income bands (more than 50% are in the two highest earning bands) while the proportion in the five lower earning bands is just above 20%. Conversely, more than half of 'other' workers are concentrated in the lowest earning band.

Women are more likely to be found in the lowest two earning bands and men are more likely to be found in the highest two (Figure 73). There are a number of reasons for this, including gender segregation in the labour market; differences in the number of working hours (women work more 'shorter hours' and men more 'longer hours'; see section on working time in Chapter 2). The situation of women in the various earning bands can also be linked to the gender pay gap – the still 'unexplained part' of the earnings differences between male and female workers (see, for example, Aumayr et al, 2011).

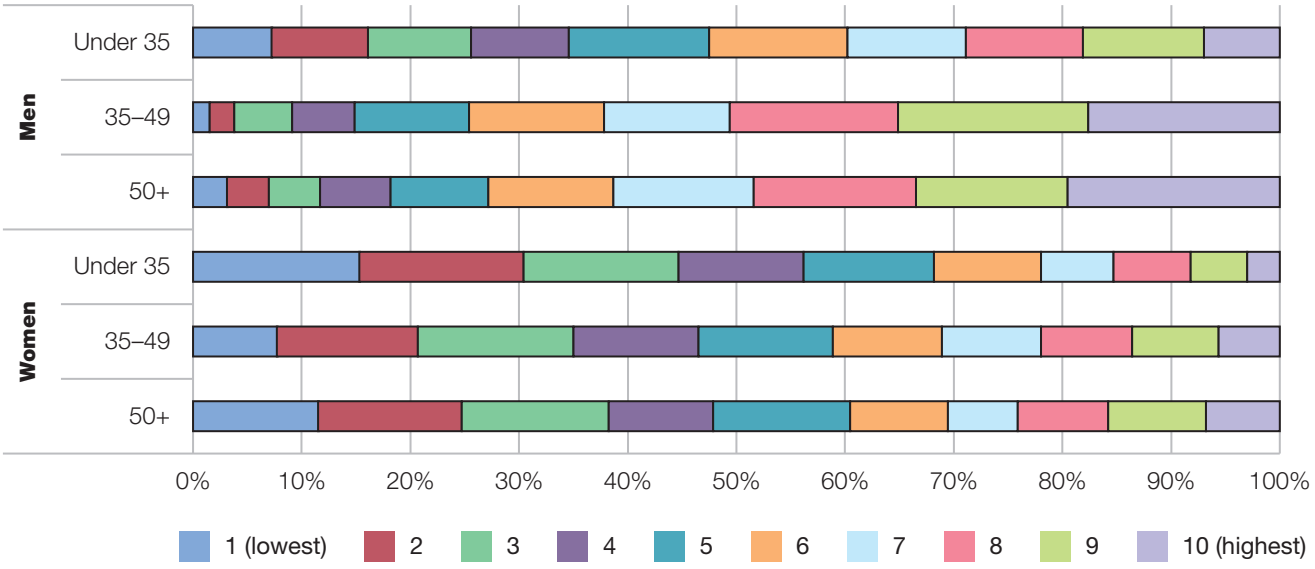
As far as occupations are concerned, 57% of managers and 40% of professionals are found in the highest two earning bands, while 39% of workers in services and

Figure 72: Earnings by income deciles, by employment status, EU27 (%)



[37] See also section on 'Self-employed workers' in Chapter 1.

Figure 73: Earnings by income deciles, by age and gender, EU27 (%)



sales, 21% of skilled agricultural workers and 37% of the elementary occupations are found in the lowest two earning bands. Despite some increase in the variable component of pay and in individual negotiations on pay, there is still evidence of earnings rising with seniority.

In a further attempt to pinpoint the reality of what workers earn from their work, the EWCS asks if besides their main paid job workers have another paid job – occasionally or regularly (Q21). Up to 93% of workers state that they do not have any paid job besides their main job. For the few who do have one, it is mainly occasional; the highest percentages of workers working occasionally in another paid job are to be found among employees on 'no or other contract' and employees on 'atypical contracts'.

The amount of earnings is one aspect; the perception of what this amount allows a person to do is the other side of the coin. The EWCS has a series of questions dealing with the perception of what respondents can afford with the earnings from their job.

With regard to the more subjective aspect, 41% of workers say that they 'agree' or 'strongly agree' with having a 'feeling of being well paid' (Q77). There are no differences between full-timers and part-timers and women are slightly more dissatisfied with their pay compared with men.

Turning to occupations, the answers regarding the 'feeling of being well paid' are consistent with the previously described respective positions on the earning bands. It is therefore not surprising that 55% of managers 'agree' or 'strongly agree' with the statement (managers feature in the highest two income bands) while 55% of skilled agricultural workers, 37% of service and sales workers, 37% of those in elementary occupations and 36% of plant and machine operators 'disagree' or 'strongly disagree' with this statement.

Overall, almost one-third of employees (31%) and self-employed without employees (32%), 'disagree' or 'strongly disagree' with the statement compared with 20% of the self-employed with employees.

Changes in workers' revenue

Whatever amount of earnings workers receive from their work, this financial element can be affected by various circumstances. The fifth EWCS includes a new question that asks for a comparison of working hours and salary/income with the situation in January 2009 (that is, one year before the interview).

Workers mainly report no change since January 2009 in the number of hours worked per week.[38] This general picture applies with some variations depending on the worker's employment status: the divide is between employees on permanent contracts and all other workers (self-employed, employees on atypical contracts (fixed-term and temporary agency) and employees with no or other contract). Just over three-quarters of employees on

[38] As seen in the section in Chapter 2 on working time, almost three-quarters of workers experienced no change (71%), while 18% saw an increase in their working hours per week.

permanent contracts declared no changes (77%) while only 59% of the self-employed and employees on atypical contracts report being in the same situation compared with a year before. Following a similar pattern, around a quarter of self-employed and employees on atypical contracts said they had experienced an increase in the number of hours worked (24% for the former and 23% for the latter), while only 15% of employees on permanent contracts are in this situation.

The picture is slightly different for salary/income. The majority of workers report experiencing no change in their salary/income compared with the previous year but the proportion (58%) is lower than for the working hours and a quarter even experienced an increase. A clear distinction for income is seen between the self-employed and employees. The former seem to have experienced more difficulties maintaining their revenue, as less than half (47%) declared no change and more than a third (37%) indicated a decrease, with only 16% experiencing an increase. The situation of employees on atypical contracts is in between that of the self-employed and employees on a permanent contract; 53% declare no change (like the self-employed) but 30% indicate an increase in their salary, slightly more than employees on a permanent contract (28%).

To understand workers' expectations and potential to change their financial situation, the EWCS looks at different characteristics of employment security that are directly linked to financial sustainability.

While the majority of the workers (almost 68%) 'disagree' or 'strongly disagree' with the statement 'I might lose my job in the next 6 months' (Q77a) around 16% still fear losing their job in the near future. The segregation of the labour market again applies as one young worker out of five and nearly half of those with a non-permanent contract (53% of those with a temporary agency contract and 39% on fixed-term contracts) fear losing their job. Like the self-employed, apprentices and employees with no contract do not express this fear.

The feeling of precariousness is more or less present, depending on sectors and occupations, with 21% of workers in industry and 22% in construction fearful of losing their job. This fear is shared by 24% of workers in elementary occupations and 21% of plant and machine operators.

Considering the more positive side of the changes, workers were asked, in case they would lose (their) job, if 'it would be easy for (them) to find a job of similar salary' (Q77f). A high proportion of workers in the agriculture, industry, transport and public administration sectors disagree with the statement. The split is somewhat unusual in terms of employment status, as both categories – self-employed workers and employees on permanent contract – show great polarisation. While a majority 'disagree' or 'strongly disagree', around 30% 'strongly agree' this was a possibility.

Ability to make ends meet

In an attempt to capture directly the financial vulnerability of workers, the fifth EWCS asks whether the household can 'make ends meet'.

As described previously, the trend in Europe is for an increase in the number of dual-earner households. Many reasons can explain this trend such as the increased entry of women to the labour market, the systematic increase of young girls and women in education, and the need for more than one income per household in order to make a living.

The issue of 'making ends meet' is complex. Several questions have to be asked to assess someone's potential to be living in a household that is making ends meet such as: Who contributes to the household income? Is there in the household, a single or multiple sources of income? Is the household income 'sufficient' to 'make a living'? How 'sustainable' is (are) the source(s) of revenue?[39]

The concept of making ends meet is clearly subjective; nevertheless the answers give an indication of the perception of the purchasing power workers obtain through their work. Respondents were asked in the context of their household's total monthly income to position their ability in making ends meet, on a six-step scale: going from 'very easily' to 'with great difficulty' (Q EF6).

For more than a half of households, the respondent is the main contributor to the household income. This is especially true when the respondent is self-employed with employees. Men are the most important contributors to the household income: 86% of men aged over 35 and 87% of men aged 50+ contribute the most to the household compared with 35% of women aged 35–49 and 46% of women aged 50+.

Overall, the fifth EWCS draws quite a positive picture. Around 62% of workers declare they have no problem making ends meet (answering 'very easily', 'easily' or 'fairly easily' to the question). Nevertheless, there is still over one-third (38%) who experience either 'some' to 'great' difficulty. Moreover, specific categories of workers face significant problems in this regard.

[39] The focus here is on the collective element of household and household capacities to make ends meet and not on the capacity of the individual worker.

Self-employed and employees on permanent contracts display the same pattern very similar to the EU average, with over 60% of them reporting no problem to make ends meet, while more than one-third declare having some to great difficulties. Among the self-employed, 11% even declare it is 'very easy' for them to make ends meet. Yet, not all self-employed are in the same situation: around 40% of the self-employed without employees have difficulty making ends meet whereas only 25% of the self-employed with employees report difficulties.

When considering the situation of employees, again the type of contract makes a difference. More than half of employees on atypical contracts or with no contract report difficulties making ends meet. Furthermore, employees on fixed-term and temporary agency contracts (6%) and workers who have no contract (10%) report having 'great difficulties' making ends meet twice or three times as often as those on indefinite contracts (3%). There is little difference between full- and part-timers.

Some sectors and occupations display a very different situation than the European average. For example, in the agriculture sector, 63% of the workers report having some to great difficulties making ends meet. And again, when turning to occupation, 65% of skilled agricultural workers and 58% of workers in elementary occupations report living in a household that has difficulties making ends meet. As mentioned previously, the household situation and the presence of children play an important role too; 64% of single parents living with relatives, 58% of single parents and 58% of couples with children report having difficulty or great difficulty making ends meet.

Given the specific situation of the self-employed, the issue of income sustainability is studied more in depth via a proxy indicator – the proportion of revenue depending on 'the most important client'. The hypothesis is that when the self-employed are in a situation where there is only one buyer (monopsony), then the financial sustainability of the business can be questioned.

Around 60% of the self-employed consider that their most important client represents less than 50% of their income. It could therefore be argued that, if this main client fails, these self-employed will still be able to obtain some revenue and contribute to the household income. Nevertheless, some are really not 'safe' in this respect, as almost a quarter depend on their main client for more than 75% of their income. Moreover, 61% of the self-employed consider they would not be financially secure in the event of long-term sickness (Q EF12a).

Considering the type of household, in a sign of the times, the ones that apparently find it easiest to make ends meet are those where the traditional breadwinner model has been modified or where both partners work (either full time or part time); 9%–10% of these households declare it is 'very easy' for them to make ends meet and 50%–60% consider it is 'easy' or 'fairly easy' to do so. Confirming the importance of another contribution to bring more security to the household income, around half of more traditional breadwinner model households (that is, only one partner working) acknowledge 'some' or 'great' difficulty in making ends meet.

Again, the household's breadwinner model seems to be a determinant in the (marginal) occurrence of workers reporting another paid job. Workers with a second paid job are found mainly in modified female breadwinner households (6.2% regularly and 7.4% occasionally) and in households in which 'both partners work part time' (4.6% regularly and 5.9% occasionally).

These findings corroborate: the numerous studies on the gender pay gap and highly segregated labour market that show that, compared to men, women are still in 'lower paid' positions, occupations and sectors; earlier analyses of the difficulty in making a living through (some) atypical forms of employment.

Protecting health and well-being

Preserving the capacity of all to work as well as ensuring that people of different capacity and health can engage in paid work was an objective set by EU Member States in the Lisbon Strategy and reiterated in the Europe 2020 strategy (European Commission, 2010a). It is an essential dimension of quality of work and employment.

The EWCS includes a series of indicators documenting the health of workers, sickness absence and presenteeism (that is, attending work when sick), and their assessment of the impact that work has on health (neutral, positive or negative). One indicator assesses the sustainability of work from the point of view of the worker. This section relates these indicators to a series of working conditions.

European debate and policy relevance

The European Treaties legislation and policy measures recognise the importance of preserving the health and safety of workers, protecting their health and maintaining their well-being. A key document is Directive 89/391/EEC, which states that 'work shall be adapted to individuals and not individuals to work' (European Commission, 1989). The Community strategy 2007–2012 on health and safety at work

restates the prime objective for 'an ongoing, sustainable and uniform reduction in accidents at work and occupational illnesses' (European Commission, 2007, p. 4). The recent increased attention to health inequalities is partly linked to the adoption of the Lisbon Treaty, which grants more competence to the European Union on public health as well as guaranteeing the enforcement of the Charter of Fundamental Rights.[40] Article 31 on fair and just working conditions states that 'every worker has the right to working conditions which respects his or her health, safety and dignity'.

Evidence at international level (CSDH, 2008) and national level shows clear inequalities in mortality across socioeconomic groups in all countries and over time. As health has improved, inequalities do not appear to have reduced. Alongside income and educational attainment, occupational status affects risk factors, health status and mortality. The relationship between health and socioeconomic status may be bidirectional: either health status influences socioeconomic position (selection) or social context leads to illness (causation). At times of serious economic crisis when concerns are voiced over rising inequalities, the issue of health (in)equalities is gaining more momentum and requires serious attention.

As Europe develops competence in public health, a new issue is coming to the forefront – mental health. The European pact for mental health and well-being stresses that:

'Employment is beneficial to physical and mental health. The mental health and well-being of the workforce is a key resource for productivity and innovation in the EU. The pace and nature of work is changing, leading to pressures on mental health and well-being. Action is needed to tackle the steady increase in work absenteeism and incapacity, and to utilise the unused potential for improving productivity that is linked to stress and mental disorders.' (European Commission, 2008, Section III)

The pact invites 'policymakers, social partners and further stakeholders' to:

'... take action on mental health in the workplace including the following:

- Improve work organisation, organisational cultures and leadership practices to promote mental well-being at work, including the reconciliation of work and family life;
- Implement mental health and well-being programmes with risk assessment and prevention programmes for situations that can cause adverse effects on the mental health of workers (stress, abusive behaviour such as violence or harassment at work, alcohol, drugs) and early intervention schemes at workplaces;
- Provide measures to support the recruitment, retention or rehabilitation and return to work of people with mental health problems or disorders.' (European Commission, 2008, Section III)

Work and health: a complex relationship

The relationship between work and health is complicated to study and to measure.

Workers' health is affected by both their work and non-work activities, which in turn are to some extent influenced by the broader political and economic context. Redistributive mechanisms such as the extent of health insurance coverage as well as the existing care infrastructure or the introduction of prevention programmes impact on health outcomes and mediate the impact of social determinants of health. Furthermore, regulations on the working environment (including collective bargaining) (see, for example, Bambra, 2011) have an impact on work and working conditions. Differences in employment structure between countries can also affect worker exposure to risks as well as health outcomes.

Exposure to risk may have a direct impact on health; for example, exposure to high levels of noise may lead to (temporary or long-term) hearing problems. This is also true for work-related stress, which may have direct effects on health through biological as well as psychological pathways. Some of the negative effects of work on health may or may not be reversible, and may therefore affect the capacity of people to engage in paid work in the future and thus impact on their quality of life and work.

Exposure to a specific risk may have an indirect impact on health; for example, studies have shown that, as part of collective defence strategies, male construction workers tend to drink alcohol to avoid experiencing fear all the time (Dejours, 1980). Work-related stress has been shown to impact workers' health through both direct and indirect mechanisms (behaviours at risk).

Many of the effects of exposure to risk factors differ and will have different impacts depending on a wide range of individual worker characteristics (genes, lifestyle, socioeconomic position, etc.)

A number of health problems are caused by more than one factor. The attributable fractions defined and calculated

[40] http://www.europarl.europa.eu/charter/default_en.htm

by epidemiologists are important in this respect, as they allow the effects of occupational exposure to be distinguished from those of non-work factors.

The 'healthy worker effect' means that workers who face the most difficult conditions and have frail health will either leave a job that places demands on their health or leave the labour market completely.

This section describes differences in health-related answers in the EWCS and relates them to characteristics of the respondents' work. As women and men differ not only in their biology but also in the roles and responsibilities assigned to them by society, data are provided separately for men and women. When interpreting the results, it is important to remember that the EWCS is cross-sectional while the state of a person's health develops over time.

Data on health of European workers

The fifth EWCS collected information on self-reported health (Q68) and mental well-being (using the WHO-Five Well-being Index (WHO-5).[41] Indicators on self-reported health and the WHO-5 index have been validated in previous research and are widely used in international studies. A number of studies have shown that self-reported health is a good predictor of mortality and functional ability even after controlling for other objective health factors. This predictive power may be related to its multifaceted nature whereby self-reported health incorporates multiple dimensions of health. However, caution is required in making cross-country comparisons of perceived general health since people's assessment of their health is subjective and can be affected by their social and cultural backgrounds within and across countries.

The method used is cost-effective as the alternative of either having every respondent examined by a doctor or gaining access to their medical records is not possible. It would also create harmonisation difficulties.

Information from the EWCS on the self-reported health and well-being of European workers also allows investigating to what extent people with a frailer health are included in the labour market.

Self-reported health

Over three-quarters (78%) of workers in Europe report 'very good' and 'good' health, 19% 'fair' health and 2% 'bad' or 'very bad' health, that is, a total of 22% have a poor self-reported health. The proportion of women who report having (very) good health is 2 percentage points less than men.

The proportion of respondents who report poor health ('fair', 'bad' or 'very bad') increases with age. It is expected that workers who are not able to work due to frail health would have left the labour market and so only the healthier older workers remain (the so-called healthy workers effect).

A report on the concepts and principles for tackling social inequalities in health prepared for the World Health Organization (WHO) states that: 'Three distinguishing features, when combined, turn mere variations of differences in health into a social inequality of health. They are "systematic", "socially produced" (and therefore modifiable) and "unfair". ... Mortality and morbidity increase with declining social position ... This social pattern is universal, though its magnitude and extent vary among countries' (Whitehead and Dahlgren, 2006, p. 2).

Differences between occupations are important and reflect the traditional inequalities between socioeconomic groups described in numerous publications (see Table 21). In every country where health data are collected, rates of morbidity and mortality are found to be higher in groups with lower educational attainment, occupational status or income level. The proportion of workers reporting (very) good health is lowest in agriculture, transport, construction and industry (see Table 22). Differences between countries are also important.

Mental well-being

The five questions used by the WHO-5 index assess:

- positive mood (good spirit, relaxation);
- vitality (being active and waking up fresh and rested);
- general interest (being interested in things).

The answers score from 0 to 25. Levels below 13 indicate a poor mental well-being and show up the need to test for depression.[42] As this goes beyond the scope of the survey, this further investigation did not take place.

In the EU27, 20% of workers (18% of men and 22% of women) report a score below 13 which is referred to in this report as 'mental health at risk'. This quite high level supports the growing need for attention to be paid to mental health in the workplace.

The proportion of older workers (aged 50+) whose mental health is at risk is 7 percentage points higher than that for younger workers (aged less than 35). This is a smaller gap than the one for general health.

41 http://www.who-5.org

42 Evidence has shown the WHO-5 index to be a good screening instrument for the detection of depression in the general population.

Table 21: Prevalence of health outcomes, by gender and occupation (%)

		Able to do job at 60	Poor general health (fair, bad, very bad)	Mental health at risk (WHO-5)	Health and safety at risk because of work	Work affects health negatively	Work affects health positively	Absenteeism (>5 days)	Absenteeism due to an accident in work	Presenteeism
Managers	men	75	15	15	17	21	7	13	12	57
	women	62	20	24	13	17	7	18	5	56
Professionals	men	78	14	12	18	19	8	19	9	46
	women	64	19	21	21	25	8	23	10	47
Technicians and associate professionals	men	69	16	18	20	19	9	26	12	37
	women	68	17	19	18	19	7	26	9	41
Clerical support workers	men	66	21	18	17	17	8	31	12	30
	women	71	17	21	9	13	5	28	9	38
Service and sales workers	men	54	19	18	22	22	7	18	17	34
	women	50	22	20	16	20	6	23	12	38
Skilled agricultural workers	men	53	34	23	48	46	11	18	27	38
	women	48	51	35	46	50	11	15	25	45
Craft and related trades workers	men	49	24	19	40	37	7	26	22	31
	women	51	31	28	27	31	8	28	11	34
Plant and machine operators	men	47	30	23	45	40	7	27	21	37
	women	38	38	35	37	43	2	36	11	35
Elementary occupations	men	41	22	20	28	25	9	22	21	34
	women	39	34	29	24	26	6	22	11	37

Table 22: Prevalence of health outcomes, by gender and sector of activity (%)

		Able to do job at 60	Poor general health (fair, bad, very bad)	Mental health at risk (WHO-5)	Health and safety at risk because of work	Work affects health negatively	Work affects health positively	Absenteeism (>5 days)	Absenteeism due to an accident in work	Presenteeism
Agriculture	men	58	31	22	42	40	12	16	25	37
	women	47	42	30	41	46	8	15	20	44
Industry	men	58	22	20	31	32	6	28	17	35
	women	55	26	28	21	26	5	29	7	34
Construction	men	46	24	18	42	38	7	23	21	33
	women	73	12	22	7	11	4	31	8	42
Wholesale, retail, food and accommodation	men	55	17	16	19	21	7	21	16	38
	women	53	21	21	14	18	6	21	9	40
Transport	men	55	26	24	42	35	8	26	18	38
	women	59	24	23	23	22	6	28	18	41
Financial services	men	75	15	15	11	16	5	21	14	41
	women	69	17	21	9	17	4	28	6	41
Public administration and defence	men	60	21	17	29	24	8	28	20	32
	women	67	24	21	17	20	5	30	9	45
Education	men	72	16	12	17	18	10	22	9	46
	women	60	22	22	18	23	9	21	10	45
Health	men	69	20	15	31	26	8	21	10	42
	women	61	22	20	29	28	8	29	11	43
Other services	men	68	17	16	20	18	9	17	14	44
	women	57	21	21	14	17	8	20	11	40

Countries differences[43] are important with highest level of low mental well-being reported in Lithuania (41%), Albania (39%), Turkey (37%), the Czech Republic (32%) and Latvia (32%) and the lowest in the Netherlands, Norway and Spain (10%), Ireland (9%), and Denmark (7%). The highest gender gaps are reported in Portugal (14%), Romania (13%) and the former Yugoslav Republic of Macedonia (11%) (Figure 74). There is almost no gender gap in the Netherlands. Men report on their mental well-being at risk more often than women in Albania, Austria, Kosovo, Montenegro, Slovakia and Turkey.

Higher levels of 'mental health at risk' are found among the elementary occupations, plant and machine operators, and skilled agricultural, forestry and fishery workers. However, the level of mental health at risk reported by female professionals and managers is quite high and higher than that reported by their male equivalents.

An above average level of poor mental health is reported in the agriculture (30% for women and 22% for men), industry (28% for women and 20% for men), transport (23% for women and 24% for men) and education (22% for women) sector.

Main health problems reported

Respondents were asked whether they had suffered over the last 12 months from any of a list of 14 health problems (Q69). Nearly equal proportions of men and women had suffered from the seven most common problems (Table 23).

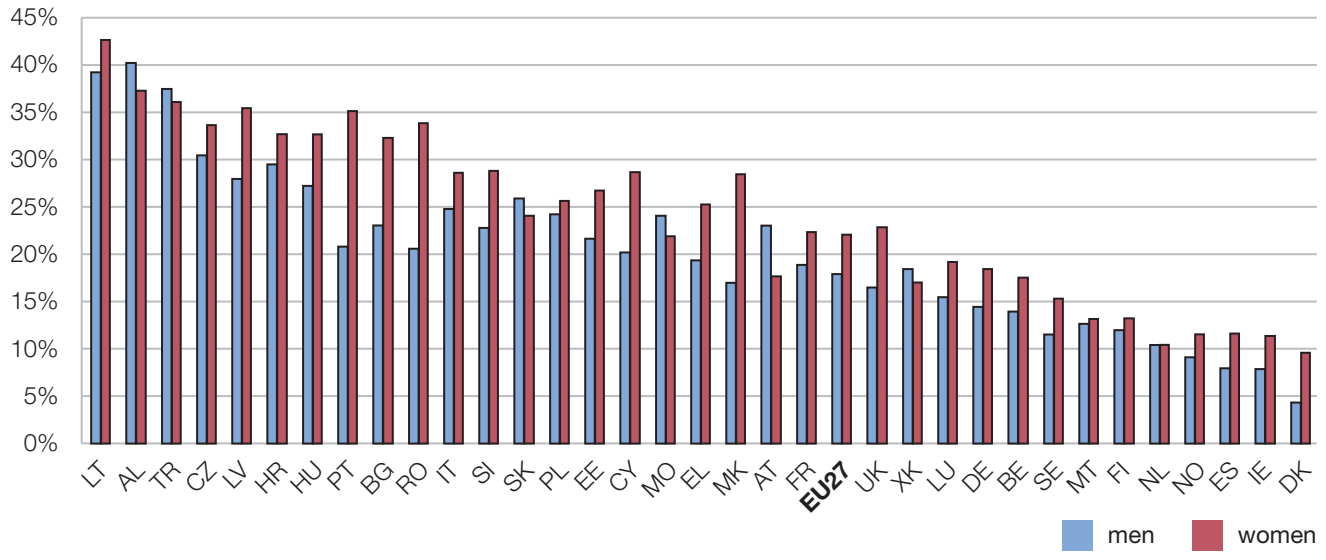
Prevalence varies considerably between occupations. Skilled agricultural workers, craft and machine operators, and those in elementary occupations report more symptoms than those in other occupations, as well as the highest prevalence of muscular pains. It varies also by sector. The highest levels of self-reported muscular symptoms are reported in the agriculture, transport and construction sectors. Workers in the health and education sectors report the highest incidence of stomach aches, insomnia and headaches/eyestrains.

Attendance at work and health

The EWCS provides information on self-reported absence from work due to health reasons and due to accidents at work, the duration of such absences as well as on presenteeism. Although data are available from the European Statistics on Accidents at Work (ESAW) project, the European Occupational Diseases Statistics (EODS) project and the 2007 ad hoc module of the Labour Force Survey, none of these sources covers presenteeism. Controlling both absence from work and presenteeism is beneficial for a number of reasons for all parties (workers, colleagues, companies and society).

Previous studies, which have related sickness leave to various aspects of the work situation, have highlighted the combination of work-related, personal and institutional factors.

Figure 74: Mental health at risk, by country and gender (%)



[43] Evidence has shown a clear relationship with GDP, with mental well-being increasing uniformly with an increase in GDP.

Table 23: Health problems in the past 12 months (%)

	Women	Men
Backache	47	46
Muscular pains in shoulders, neck and/or upper limbs	45	41
Headache/eyestrain	46	33
Muscular pains in lower limbs	30	30
Insomnia or general sleep difficulties	21	16
Stomach ache	15	12
Injury	6	11

Absence from work due to health reasons

More than two-fifths (43%) of European workers report having been absent from work because of health problems for at least one day within the past 12 months and 23% for more than five days.

The average duration of absence for health reasons is 14 days per year for those who took health-related leave. Nearly half (46%) of those absent from work for health-related reasons in the past 12 months had been absent for fewer than six days, 42% for 6 to 21 days and 13% for 21 days or more.

Of the sectors, agriculture reports the lowest prevalence of absence from work for health reasons for both men and women (24% each). For men, the highest levels are reported in public administration (48%) and industry (46%). For women, the highest levels are reported in public administration (56%) and financial services (52%). The longest absences are reported by plant and machine operators as well as clerical workers. Skilled agricultural workers and managers report the lowest levels of absence due to health reasons.

National differences in the prevalence of health-related absence from work are widely reported in the literature.

Absence from work due to a work accident

Six per cent of male European workers and 3% of female European workers report having been away from work because of a work accident within the previous 12 months. Accidents are more frequent for younger male workers.

Male craft and related trade workers, male plant and machine operators, and male and female skilled agricultural workers report higher proportions of absence due to an accident at work.

Male workers in the construction, industry and public administration sectors as well as all workers in the transport sector report higher than average levels of absence due to an accident at work. Female workers in the transport, agriculture and health sectors report a higher than average prevalence of work accidents.

For nearly half (45%) of the cases, the absence from work lasts for fewer than six days. For 37%, it is 6–20 days. In 18% of cases, the absence lasts longer than 21 days. On average the mean duration of absence due to a work accident is 17 days.

The lowest levels of absence due to a work accident are reported in Bulgaria and Romania (about 1%) and the highest levels in Belgium, Finland, Kosovo and Slovenia (7% in all countries). The highest levels for male workers are reported in Germany, Kosovo and Slovenia (all at 9%) and for female workers in Finland (8%). The order of countries changes for the duration of absence, partly reflecting differences in reporting on accidents at work already documented in a previous study.

'Presenteeism' in the workplace

Presenteeism refers to a phenomenon whereby 'employees go to work despite feeling so sick that they should have stayed at home' (Heponiemi et al, 2010, p. 830). Presenteeism can have serious negative consequences for health as well as loss of productivity.

Thirty-nine per cent of workers in the EWCS report having worked when they were sick (women: 41%, men: 38%); 62% of these report having worked while sick for fewer than six days during the previous 12 months, 33% between six and 20 days, and 5% more than 20 days.

The prevalence of reported presenteeism does not vary much with age.

Managers (57% of men and 56% of women) and professionals (46% of men and 47% of women) report the highest level of presenteeism, whereas male craft workers (31%), male clerical staff (30%), female craft workers (34%) and

female plant and machine operators (35%) report below average prevalence. The physically demanding character of some occupations may prevent presenteeism as workers might not be able to carry out their work when sick.

Above average levels of presenteeism are reported in education (46% of male workers and 45% of female workers), other services (44% of male workers), health (42% of male workers) as well as public administration for female workers (45%). Less than average prevalence is reported in public administration, construction, agriculture and industry.

Does your work affect your health?

The perception of the relationship between work and health is not at all obvious (Q67). Overall, two-thirds of workers report that there is no relationship, one quarter that their work affects their health mainly negatively and 7% that it improves it positively.

The direction and strength of the relationship is influenced by the level of scientific evidence available, cultural and country norms and stereotypes, as well as gender, occupational and other differences. Answers to this question are clearly subjective. But although self-reported, these are important data that should be further analysed as well as triggering debate and policy actions. It is particularly important to learn more about the working conditions of those who report that their work affects their health negatively and those who report that work actually improves their health.

Differences by countries are significant. The lowest proportion of workers reporting that work does not affect their health are found in Latvia (39%), Estonia and Slovenia (both 41%), Norway and Sweden (both 46%) and the highest proportion are reported in the UK and Ireland (both 78%), Italy (77%), Germany (74%) and the Netherlands (72%).

The proportion of women reporting that work does not affect their health is higher than for men in Bulgaria and Kosovo (both 12%), Malta and Poland (both 11%), Portugal (10%), and Spain and Turkey (both 9%). The proportion of men reporting that work does not affect their health is higher than that of women in Denmark (7%), Norway (6%) and Finland (3%).

The proportion of workers who report that their work affects their health negatively is highest in Latvia (53%), Slovenia (45%), Estonia (44%), Greece (41%) and the former Yugoslav Republic of Macedonia (41%). In contrast, Finland (29%), Sweden (28%) and Norway (25%) report the highest proportion of workers stating that their work improves their health. Interesting, the gender gap is reversed in these three countries and women report more often than men that work affects their health positively (around 3 percentage points more).

Skilled agricultural workers and plant and machine operators report a higher than average perception that their work affects their health negatively (over 40%). Women in these occupations report more often negative health effects than men.

Men report that their work affects their health most in the agriculture (40%), construction (38%), transport (35%) and industry (32%) sectors. For women, it is the agriculture (46%), health (28%) and industry (26%) sectors.

On the positive side, 12% of male workers in agriculture, 10% of male workers in education, 9% of male workers in other services, 9% of female workers in education and 8% of female workers in agriculture, health and other services report that their work improves their health.

Working conditions and health outcomes: an empirical analysis

Eight indicators on health outcomes were selected for analysis:

- poor health;
- mental health at risk;
- my work affects my health negatively;
- my work affects my health positively;
- my health and safety is at risk because of work;
- absence from work due to health reasons;
- absence from work due to a work accident;
- presenteeism.

The following indicators of working conditions known to be associated with health outcomes were selected based on a review of the literature:

- exposure to physical risks;
- work–life imbalance;
- posture-related risks;
- psychosocial risks;
- job insecurity;
- reward and cognitive dimensions of work;
- workplace innovation.

Table 24: Associations between psychosocial and physical work exposures and health outcomes (%)

		Poor general health (fair, bad, very bad)		Mental health at risk (WHO-5)		Health and safety at risk because of work		Work affects health negatively		Work affects health positively		Absenteeism (>5 days)		Absenteeism due to an accident in work		Presenteeism	
		men	women	men	women	men	women	men	women	men	women	men	women	men	women	men	women
Self-employed	employee	20	22	18	22	28	18	27	22	7	7	25	26	17	10	35	40
	self-employed	24	25	19	22	31	21	30	24	9	8	12	14	17	11	49	49
Working hours	34 or less	20	21	18	20	18	16	17	19	10	8	16	21	12	10	34	40
	35–47	20	22	17	22	27	18	26	22	7	6	26	28	17	10	35	39
	48 or more	24	32	20	30	39	32	38	37	7	6	17	19	19	12	49	56
Exposure to posture and movement related risks	low	16	17	15	19	16	9	16	13	8	7	20	23	10	7	38	38
	high	25	30	20	26	40	30	37	33	8	7	25	26	22	14	38	44
Exposure to biological and chemical risks	low	17	20	15	20	17	12	17	17	7	6	19	22	13	9	36	38
	high	25	28	21	26	40	31	37	33	8	8	26	28	20	13	40	46
Exposure to ambient risks	low	16	18	14	18	14	12	15	15	7	6	19	23	13	8	36	37
	high	24	30	20	28	38	29	35	33	8	7	25	26	19	13	39	47
Having been subjected to discrimination at work	no	20	22	17	21	28	18	27	21	7	7	22	24	16	9	37	40
	yes	29	33	30	33	44	35	37	38	13	7	38	32	28	18	49	53
Having been subjected to bullying or harassment	no	19	21	16	20	26	16	25	19	8	7	21	23	15	9	35	38
	yes	29	30	27	32	47	35	43	40	9	7	33	32	24	13	54	58
Working hours fit with family or social commitments	no	28	32	28	34	44	33	44	37	6	5	23	27	20	13	49	50
	yes	19	21	15	20	25	16	23	19	8	7	23	24	16	9	35	39
Easy to take time off for private matters	no	24	27	22	25	36	25	35	29	6	6	28	28	19	10	40	44
	yes	19	20	16	20	25	15	24	18	8	8	20	22	15	10	37	40
Received training paid by employer	no	23	24	19	23	29	17	28	21	7	6	22	23	17	10	35	38
	yes	16	19	16	21	28	22	25	25	9	8	24	27	16	10	43	47
Good career prospects	no	25	25	22	26	33	20	32	25	7	6	24	26	18	10	37	42
	yes	12	15	11	14	22	15	19	16	9	8	21	22	15	9	39	40
Job insecurity	no	19	20	16	20	27	17	26	21	8	7	23	25	16	10	37	40
	yes	27	31	28	31	39	27	37	31	7	7	24	25	21	12	41	44

Table 24: Associations between psychosocial and physical work exposures and health outcomes (%) (continued)

		Poor general health (fair, bad, very bad)		Mental health at risk (WHO-5)		Health and safety at risk because of work		Work affects health negatively		Work affects health positively		Absenteeism (>5 days)		Absenteeism due to an accident in work		Presenteeism	
		men	women	men	women	men	women	men	women	men	women	men	women	men	women	men	women
Well paid for job	no	25	27	23	27	35	22	34	27	8	6	24	26	19	12	40	43
	yes	15	16	11	14	21	13	20	15	8	8	21	22	13	8	35	39
Earnings from main paid job	low	24	26	20	24	28	19	26	23	10	7	19	24	16	10	38	41
	medium	22	21	20	22	32	19	30	22	7	7	26	28	17	10	36	41
	high	19	18	16	20	27	21	27	24	7	7	23	24	15	8	41	46
Level of workplace innovation	low	18	20	14	17	25	18	24	20	9	9	21	24	15	10	42	43
	high	23	25	22	26	33	20	31	24	6	5	27	27	19	10	33	39
Having a good manager	no	22	24	20	24	31	21	31	25	7	5	28	28	18	10	37	41
	yes	15	16	11	14	23	15	20	17	9	8	22	24	15	9	32	38
Receiving social support from colleagues	no	30	30	28	30	31	21	30	25	7	5	26	26	19	13	40	38
	yes	19	21	16	21	28	19	27	22	8	7	24	26	16	10	37	41
Job gives feeling of work well done	no	30	37	35	45	38	30	35	39	8	5	32	30	24	12	38	44
	yes	20	22	17	21	28	18	27	21	8	7	22	24	16	10	38	41
Job involves learning new things	no	26	26	22	25	29	16	28	20	6	5	24	24	16	10	30	33
	yes	18	21	16	20	29	20	27	23	9	8	22	24	17	10	41	45
Applying own ideas at work	no	25	27	24	29	35	22	31	26	5	4	29	29	19	11	32	35
	yes	19	21	16	20	27	18	26	21	8	8	21	23	16	10	40	43

Bivariate analyses were performed for each health outcome indicator and logistic regression models controlling for country, occupation and economic sector were run to confirm the selection of indicators. The fit of models was adequate (less so for work affects health positively as well as absenteeism/presenteeism). Most working conditions that in the literature are categorised as resources or strains behave as expected. These associations are in general confirmed by logistic regression models.

Workers experiencing more physically demanding working conditions report a higher prevalence of negative health outcomes (see Table 24). This is true for most types of risks on most outcomes except for 'my work improves my health' and presenteeism. Analyses with individual physical risk factors are in line with these results. Posture-related risks as well as biochemical risks are associated with the highest probability of negative outcomes such as 'my health and safety is at risk' and 'my work affects my health negatively' and absenteeism, in particular related to a work accident.

Negative health outcomes are reported by workers experiencing discrimination, verbal abuse, threats and humiliating behaviour, physical violence, bullying and sexual harassment. The strengths of the effects are very high in particular in association with health and safety at risk, presenteeism and 'work may affect my health negatively', indicating that dealing with these abusive situations is a priority (see Table 24).

Work–life imbalance is associated with negative health outcomes but not with higher reporting of sickness absence. Furthermore, work–life balance has a very strong protective effect in most models of poor negative health outcomes. Long hours are also associated with a higher prevalence of negative health outcomes.

Job insecurity and the absence of career prospects are associated with negative health outcomes but do not seem, at first glance, to have much relationship with absence from work. Further analysis indicates the effect is moderate.

Being well paid (a dimension of reward) is associated with a lower prevalence of negative health outcomes. Levels of earnings matter, especially for low earners who report higher levels of poor health.

Workplace innovation is associated with more positive health outcomes but the effect is generally weak.

Having a good manager plays its expected protective role. Learning and training are also associated with better health outcomes. However, the effects are rather small.

The analysis highlights the importance of distinguishing between men and women as the strength and number of significant working conditions vary when they are considered separately. Age matters for predicting negative health outcomes but the effects are weak. Countries, occupations and sectors make a difference.

Further work is needed on this topic. It will also be relevant to study the interaction with national systems.

Box 5: Karasek job demand and job control model

Theoretical models are important as they provide an explanation of associations between work and health. They select the relevant component from the complex reality and allow for generalisations beyond single observations. The job demand and job control model of the American sociologist, Robert Karasek, explains stress at work and links it to the interaction of psychological demands from work, with the degree of control or decision latitude with the worker (Karasek, 1979). Although the model has attracted some criticism (see, for instance, Mansell and Brough, 2005), it is widely used. A review of epidemiological studies (Niedhammer et al, 2011) confirms the validity of the Karasek model in predicting an association between certain characteristics of work organisation and an increase in cardiovascular disease as well as mental health problems.

The model hypothesises that job strain (work-related stress) is highest when workers are put under high work demands while being limited in the extent to which they control the way in which they carry out their job. Figure 75 shows a simplified version of the model. This representation was introduced in the overview report of the fourth EWCS (Parent-Thirion et al, 2007) and is based on indices for job autonomy and work intensity only.

>>>

Workers in services and sales are in the bottom left quadrant of Figure 75. These workers are predominantly in '**passive**' jobs, characterised by relatively low levels of intensity and relatively low levels of autonomy. Workers in these types of jobs are not very much at risk of work-related stress, but are at risk of frustration and low motivation as their jobs are not sufficiently challenging and they are not in the position to change much about what they do in their job and how they do it.

Workers in the agriculture, education and public administration sectors (top left quadrant), as well as skilled agricultural workers in general, are predominantly in '**low strain**' jobs, characterised by relatively low levels of work intensity and relatively high levels of job autonomy. These workers are at low risk of stress, and are not as likely to suffer from frustration and loss of motivation as those in passive jobs. However, their jobs might not challenge them to realise their full potential.

The top right quadrant contains workers in the financial services, other services and construction sectors, as well as professionals, technicians and managers. Workers in these sectors and occupations tend to be in '**active**' jobs with relatively high levels of work intensity but also with relatively high levels of job autonomy. Although their jobs can be very demanding, they have sufficient discretion to choose the way in which they do their job as well as to develop coping strategies through active learning and are challenged into developing their potential to the full.

Finally, the most problematic category is '**job strain**' in the bottom right quadrant with workers in the transport, industry, wholesale and retail and, but less pronounced, health sectors, and plant and machine operators, craft and trades workers, workers in elementary occupations and clerical support workers. Their jobs are characterised by higher than average levels of intensity as well as lower than average levels of autonomy. These workers therefore run the risk of accumulating high levels of unresolved strain, which can cause unhealthy stress levels and consequently a range of stress-related illnesses such as cardiovascular disease and mental health problems.

Exposure to psychosocial risk tends to coincide with exposure to physical risks. Those exposed to job strain also report the highest level of exposure to ergonomic, biological and chemical and ambient risks. Workers in active jobs report superior to average levels of exposure to physical risks.

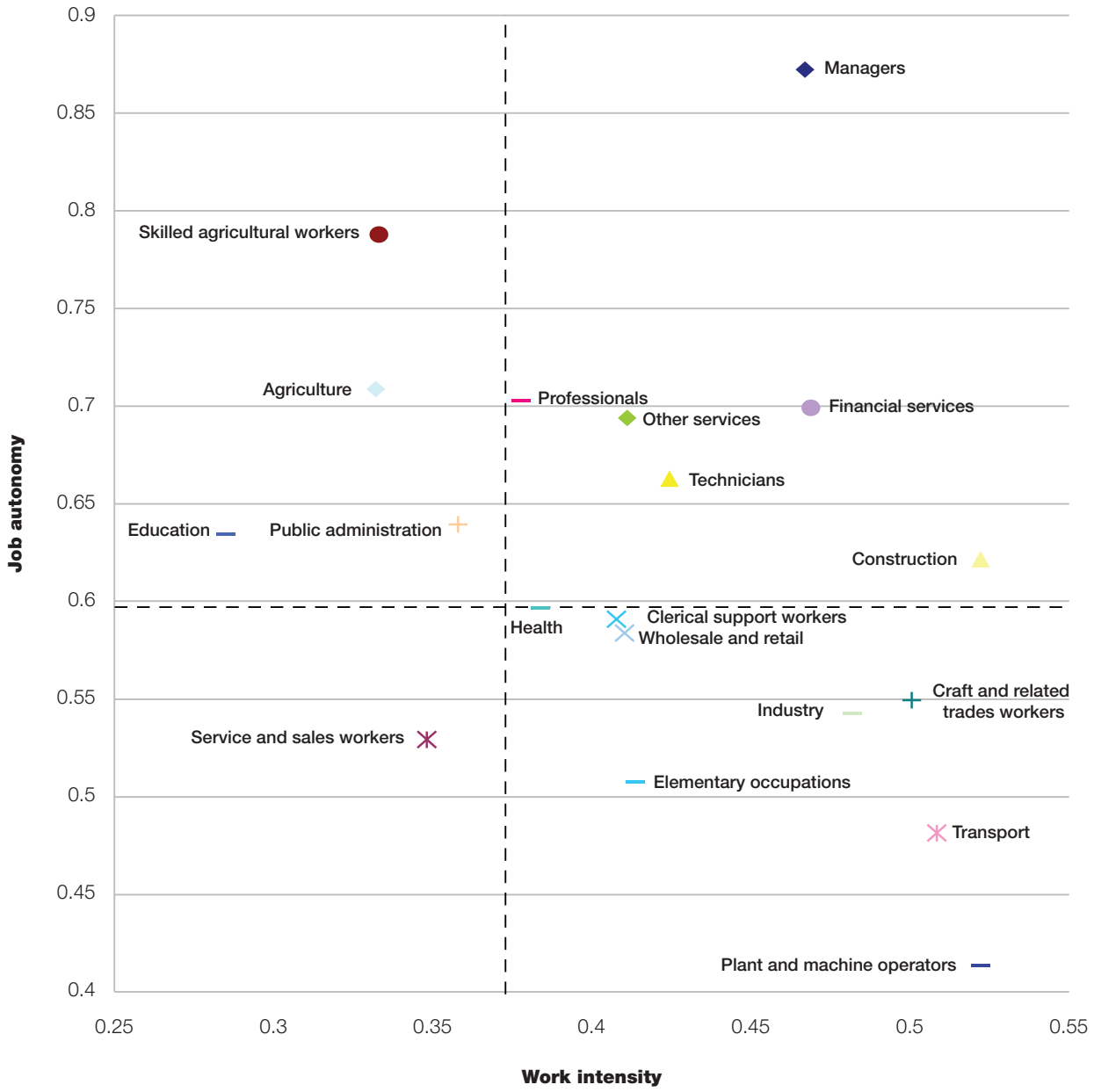
As expected from the literature, workers in the job strain category report more negative health outcomes. Low strain jobs (low demands and high latitude) report the more favourable health outcomes with the exception of sickness absence. Workers in active jobs present a mixed picture in terms of health outcomes and are associated with the highest level of presenteeism.

Table 25: Health outcomes and Karasek model (%)

		Able to do job at 60	Poor general health (fair, bad, very bad)	Mental health at risk (WHO-5)	Health and safety at risk because of work	Work affects health negatively	Work affects health positively	Absenteeism (>5 days)	Absenteeism due to an accident at work	Presenteeism
Passive (low intensity, low autonomy)	Men	58	18	17	24	21	6	24	13	29
	Women	57	18	21	15	17	6	23	9	34
Low strain (low intensity, high autonomy)	Men	70	17	14	19	18	9	18	12	37
	Women	67	18	18	13	16	8	23	9	38
Job strain (high intensity, low autonomy)	Men	46	26	22	40	38	7	31	22	36
	Women	47	30	27	29	34	5	30	11	44
Active (high intensity, high autonomy)	Men	63	19	16	30	31	9	20	16	48
	Women	65	23	20	19	23	8	27	9	52

>>>

Figure 75: Work intensity and job autonomy, by sector and occupation, EU27



Note: The dashed lines indicate the EU27 median levels of work intensity (vertical) and job autonomy (horizontal).

Both indices range between 0 and 1 and are constructed by calculating the average of a number of variables. The index for work intensity was based on Q45a and Q45b, asking whether the respondents work involves working at very high speed and working to tight deadlines, and Q51g asking whether the respondent has enough time to get the job done. The index for job autonomy is based on Q50a, Q50b and Q50c, on whether the respondent can change his or her order of tasks, methods of work and speed or rate of work, question Q51e on having a say in the choice of working partners, and Q51f on being able to take a break when desired.

Sustainable work: an empirical analysis

If the European Union is serious about meeting the objectives in its Europe 2020 strategy, sustainable work and employment should be given high priority as this is a precondition for meeting the objective of high employment. Understanding the role that work plays over a person's career is an important dimension of this issue as it will impact on their decision to retire early or to continue to work until retirement age.

The EWCS has monitored for the past 10 years the extent to which people believe they would be able to do the same job when they are 60 years old. Respondents are offered three alternatives: 'yes I think so', 'no I don't think so' and 'I wouldn't want to' (Q75).

On average, well over a half (59%) of European workers responded positively to the question. Positive answers increase with age (73% of men and 70% of women aged over 50). A quarter of workers in Europe think they would not be able to do the same job when they are 60 years old and less than a fifth (16%) of all workers report they would not want to.

There are important differences between countries. Over 70% of workers in Germany and the Netherlands feel they would be able to do their job at 60 compared with 26% of workers in Slovenia. The percentage of workers believing they would be able to do their job at the age of 60 corresponds closely with the actual percentage of older workers in their country's workforce. Out of the 10 Member States with the lowest percentage of workers expecting to be able to do their job at age 60, seven are also in the bottom 10 in terms of the proportion of workers aged 50 and older in the workforce. The percentage of workers believing they would be able to do their job at age 60 is also close to the actual percentage of older workers in their country's workforce.

The perceived sustainability of jobs varies considerably between sectors. Particularly in sectors where work tends to be physically demanding, workers commonly think they would not be able to do their current job when they are 60. Only in the financial services sector does the percentage of workers who think they could continue working in the same job until a late age exceed 70%. In contrast, only slightly more than half of the workers feel the same way in the agriculture, wholesale and retail, food and accommodation, industry and transport sectors.

With regard to perceived sustainability, occupations can be roughly divided into two groups:

- managers, professionals, technicians and clerical support workers;
- service and sales workers, skilled agricultural and fishery workers, craft and trades workers, plant and machine operators, and workers in elementary occupations.

Workers in the second group are much less positive about their job sustainability than workers in the first group. In general, men and women in the same type of occupation do not differ much in terms of their perception of job sustainability. However, there are some exceptions with male managers, professionals and plant and machine operators being more positive about being able to do their jobs at 60 than their female counterparts.

The conclusions from the results shown in Table 26 are summarised below.

- Autonomy plays a protective role and work intensity a deterrent role. Workers in low strain and active jobs report higher levels of sustainability than others.
- Work–life balance is important and positively associated with sustainability of jobs.
- Working time duration seems to have a limited impact: levels of reported job sustainability remain the same in the case of long working hours. Being able to take some time off as well as having some autonomy in relation to taking break, etc. are positive resources.
- Experience of discrimination, violence, abuse, bullying or harassment are associated with lesser levels of job sustainability.
- Less physically demanding working conditions are associated with higher prevalence of job sustainability.
- Social support from colleagues and managers plays the expected role. High support is associated with a higher proportion of positive answers to this question.
- Job insecurity is associated with lower levels of job sustainability.
- Not having monotonous task is assessed positively in terms of job sustainability as well as cognitive dimensions of work.
- The highest levels of workplace innovation are associated with higher reporting of job sustainability.
- Intrinsic rewards are associated with higher levels of job sustainability.

Running a series of logistic regression models confirmed the importance of the following: work–life balance, job strain and active jobs, harassment, exposure to ergonomic risks and ambient risks, workplace innovation which is associated with the say of the worker, having career prospects as well as being well paid, and ability to do quality work. It is clear that health matters in the issue of sustainable work and is a major pre-condition. It is also noticeable that favourable working conditions increase the level of reported sustainability of work. Human resources policies that develop workers are also key in this respect.

Table 26: Relationship between working conditions and sustainable work (%)

		Able to do job at 60	
		men	women
Self-employed	employee	57	57
	self-employed	70	66
Working hours	34 or less	54	60
	35–47	60	58
	48 or more	59	52
Exposure to posture and movement-related risks	low	73	69
	high	47	46
Exposure to biological and chemical risks	low	66	62
	high	52	52
Exposure to ambient risks	low	71	64
	high	52	49
Having been subjected to discrimination at work	no	60	59
	yes	47	48
Having been subjected to bullying or harassment	no	61	60
	yes	45	47
Working hours fit with family or social commitments	no	47	42
	yes	62	62
Easy to take time off for private matters	no	50	50
	yes	64	64
Received training paid by employer	no	56	56
	yes	64	63
Good career prospects	no	54	55
	yes	67	66
Job insecurity	no	62	61
	yes	43	47
Well paid for job	no	52	52
	yes	68	69
Earnings from main paid job	low	49	53
	medium	53	61
	high	66	62
Level of workplace innovation	low	49	52
	high	67	64
Having a good manager	no	52	54
	yes	66	67
Receiving social support from colleagues	no	53	51
	yes	59	59
Job gives feeling of work well done	no	36	36
	yes	60	59
Job involves learning new things	no	51	50
	yes	63	62
Applying own ideas at work	no	46	48
	yes	63	62

Conclusions

Smart, inclusive and cohesive growth requires that some policy attention is given to work and working conditions, and the impact of growth on quality of work, employment of workers and companies' performance.

Work is an activity fundamental for the achievement of the European Union's goal 'to promote economic and social progress and a high level of employment' (Article 2 of the Treaty on European Union). The renewed attention to the measurement of well-being has demonstrated again the importance of work to well-being at individual level but also at societal level, in the sense that work as an activity and its quality will impact on the quality of our lives, our cities, and many more dimensions of existence.

The evolution of work will be a key activity allowing Europe to meet its objectives, in particular in relation to increasing participation rates, as more people will have to work in the productive system longer. Workers will need different abilities and skills for new activities, many of which analysts say do not even exist yet.

Work is already a relevant concern and object of interest in many European policies, such as policies on gender equality, social cohesion, education, public health, business, and research and development. It may be key in contributing to their success.

Analyses of the European Working Conditions Survey (EWCS) series and of its fifth wave give some insights into the efficiency and design of these policies and their impact on work.

Evolution of work

Changes in the employment structure of our economies are well known: increased employment in the service industry, upskilling of occupations, increased participation of women in the labour market, and the development of non-permanent employment. These changes have been an important concern in employment policy and may have eclipsed attention to transformations in work itself.

Describing changes of work over time is not easy. It would be misleading, for example, not to take account of changes in the employment structure, or to aggregate data into averages that disguise developments in different directions and differences between EU Member States. Yet as European integration has advanced over the last 20 years and Member States have followed common policies that impacted on work, it is interesting to be able to assess what global changes have taken place and whether they have been in line with European policy goals.

The fifth wave of the EWCS was conducted in 2010; some changes between 2005 and 2010 may be related to the crisis, and long-term trends may resume once growth returns to normal. Alternatively, these changes may represent an enduring break with previous trends. Future waves of the EWCS will tell. Looking at changes in work over time, as measured by the EWCS series, shows limited changes globally, and the overview results do not fully reflect the emphasis in (European) policymaking over the last 20 years. They reveal also contrasting situations across Member States.

The first finding, indeed, is that on most indicators, average change has been limited at European level. The second is that changes may not be converging in the same direction, indicating that changes for some workers have gone in the opposite direction to changes experienced by other workers.

Working time: Briefly, work has become more intense, but workers work fewer hours. The extent of atypical working hours, such as night work, shift work and weekend work at least once a month, has decreased. At the same time, workers who work long hours also tend to work more intensively.

Work organisation: Work has become more collaborative as employers' clients exert greater influence on work, and workers take more responsibility for the coordination of tasks. The social dimension of work, as illustrated, for example, by the high level of social support from colleagues and managers, remains very important. Developments such as the increase in variable components of employees' pay, however, suggest that employment relationships may have become more individualised.

Quality of work: Work has become more reliant on technology, especially on computer use. Limited changes over

time in the cognitive dimensions of work and in the experience of learning new things at work defy the idea of rising skill demands and present a more nuanced picture of the evolution of work. Autonomy indicators, too, show limited changes and trends in contradictory directions, but the autonomy of low-qualified blue-collar workers has increased slightly over time.

Risk: Work has remained very physical. Psychosocial risks have probably increased as work intensity has increased and is not compensated for by an increase in autonomy. Certainly awareness of risk has increased. At the same time, workers report less that their health and safety is at risk because of work; they also report a high level of availability of information on health and safety risks associated with the performance of their work.

Employment status: A blurring of the frontiers between different employment statuses – which occurs when considering, for example, the distinction between self-employed workers without employees and employed workers, the definition of care as employment or not, the place and timing of work, as well as the incidence of work during free time – suggest that some of our descriptive categories may reflect differences in level rather than of kind.

Gender equality: Progress in achieving gender equality at the workplace has been rather slow. Women still bear much of the burden of care activities and the impact of those activities on both their private and professional lives. Labour market gender segregation remains. Men report a higher level of combined exposure to physical, posture-related and ambient risks.

Job satisfaction: The previously high level of satisfaction of workers with their working conditions has declined slightly, as has the high level of balance between work and non-work. However, the proportion of workers who report that they would like to do their job at the age of 60 has increased slightly.

Inequalities in working conditions

Differences between countries in working conditions are important: they reflect a whole range of social and cultural differences and, most notably, differences in working arrangements. They also suggest different policy answers. In general, northern European countries and the Netherlands fare better on many indicators, but the extent of differences varies according to which dimension of work is considered. A better understanding of factors leading to this situation continues to be necessary and is useful for improving working conditions throughout Europe.

For many working conditions, the findings reveal that important differences between workers' characteristics, sectors, occupations and countries are lost at the aggregate level. In addition, when differences, for example, by gender may appear to be small, the analysis by full-time and part-time status and occupational group may show that these additional factors can reinforce risks or disadvantages, and interact to create high-risk groups (Burchell et al, 2007). This reinforces the need to develop gendered analysis and policies in relation to the development of working lives. As women continue to bear most of the caring and domestic tasks, such policies need to consider actions to contribute to a better sharing of the load between men and women.

Male and female blue-collar workers continue to be exposed to the highest levels of combined risks. This is reflected partly in differences in life expectancies. Actions that can improve their working conditions may need to target these groups as a priority. Policies supporting structural changes, for example towards the greening of the economy, may integrate these concerns.

Differences between sectors are important, with some sectors presenting a number of unfavourable working conditions. Survey results on this concern may assist in the development of sectoral policies.

Unfavourable working conditions tend to cluster disproportionally in some groups. Actions to address social inequalities need to integrate and address inequalities at the place of work, as the cost of no work or bad work is high for workers, the households they belong to, companies and society. Such actions can be justified on cost-efficiency grounds.

Addressing unfavourable working conditions

Evidence presented in this report confirms that efforts need to be continued in relation to addressing unfavourable working conditions. It suggests that action in this respect would benefit from the involvement of all concerned, as the meeting of different perspectives and possibly diverging opinions is important.

Policy instruments to address these challenges are numerous: legislation limiting externalities (activities that have negative side effects on workers) and promoting collective and individual rights, collective bargaining and agreements at all levels, financial support, and awareness-raising. Evidence on what works and has made a difference will continue to be collected and analysed, so that good practice can inspire future actions by all concerned.

As unfavourable working conditions tend to cluster among certain groups, policies should be multidimensional, incorporating lifelong learning, working time and work–life balance, health and safety, remuneration and work organisation practices, to name just a few factors to be considered. Consultation and employee representation is key to the effectiveness of these policies.

Furthermore, a more global reflection on the real 'capabilities' of workers, analogous to Sen's capabilities theory (Hobson et al, 2011), is needed to reach the policy goal of an inclusive labour market. Indeed, whether and how men and women, with their different backgrounds, in a wide sense, participate in work and what kind of work they can engage in depends not only on their choice but also on the following: possibilities that are embedded in the institutional setting (for example, the educational system and opportunities for vocational training throughout their lives, social protection measures, social infrastructure, and private arrangements that allow them to organise working life and private life) and (access to) the concrete workplace arrangements in companies. These structural elements of work are not static but can change over time, and all actors can play a role in this reflection.

Towards win-win arrangements

Analysis of the survey data shows that a number of working conditions are associated with better well-being among workers, including:

- creating a positive working climate that has no tolerance for discrimination, violence and bullying, and encourages social support by colleagues and managers;
- giving a say to workers, enabling them to be heard and to make improvements that clarify their roles and tasks;
- good job design;
- creating a safe working environment;
- encouraging collaborative work;
- addressing job insecurity;
- taking steps to improve workers' career development and their participation in work over the life course;
- ensuring that workers are able to do quality work;
- facilitating a good work –life balance;
- developing approaches that address both collective and individual needs;
- emphasising gender mainstreaming and integrating the different circumstances that men and women face in relation to their participation in the labour market.

These factors are also associated with high motivation, engagement and willingness to remain in the labour market (sustainable work). At workplace level, many of these actions may not be easy to implement, but not all of them are costly and could in theory be implemented even in times of economic downturn. Evidence from other research suggests that they may also have a positive impact on companies' results (Pot, 2011), and could constitute a productive factor contributing to the objectives and values embedded in the European social model. Analyses of the EWCS series demonstrate that in order to increase trust and confidence, which are important ingredients of flexicurity, management policies are central to the solution. Best practice in this respect will be key to achieving quality of work and employment.

Evidence shows that progress in this direction has been made in some instances, and some countries have promoted models of work that incorporate workers' well-being. Reflecting on our political willingness as well as the policy mix to meet these objectives is important and may be essential for the future development of Europe.

Making work visible in European policies

Current employment policy priorities to increase employment levels, prolong working life, increase the participation of women, and increase flexibility and productivity depend for their success not just on changes in the external labour market but also on the successful management of life at work and at home, by all parties concerned (Morley, 2010).

The analysis of working conditions in Europe suggests that a stronger integration of work and quality of work in the setting of the policy agenda would be beneficial for the effectiveness of this policy goal. Policies improving the quality of work and employment might need to be strengthened, as the improvement of working conditions is not automatic and needs to be supported. The number of policy actors involved is considerable, and their actions may need to be supported.

A narrow approach to health and safety may no longer be sufficient: increasing concern over psychosocial risks suggests that prevention of risks should take account of organisational factors. This may lead to different approaches in research, integrating corporate governance questions. The issue requires more debate between all social actors concerned on the actions to be taken and policies to be implemented, including those that support learning on prevention and intervention that works.

The increased incidence of cardiovascular diseases, musculoskeletal diseases and other diseases, and their association with prior exposure to unfavourable working conditions suggest that a dual approach aimed at preventing negative outcomes but also promoting well-being of workers is required.

Differences in exposure to unfavourable working conditions matter from a cost-efficiency perspective, as they are likely to lead to further costs in absenteeism and, in some cases, early exit from the labour market. They also matter from an equity perspective. The debate on social inequalities in health has already recognised and acknowledged the existence of structural and repeated differences in relation to health outcomes by occupation. This point has been part of the debate on the extension of working life in some countries.

Many proposals have been made to encourage lifelong learning and to enable workers develop their employability. Changes over time show limited progress and inequalities in access to learning opportunities. This calls for monitoring and understanding of the impact and limits of our current efforts in this field. Policies to make work pay should also be reviewed, as a significant but noticeable proportion of workers report experiencing great difficulties in making ends meet. The current context of high job insecurity and unemployment levels calls for a review of policies on fighting poverty in work, promoting social inclusion, and supporting upward mobility and career progression.

The definition of care as paid employment or an unpaid activity compels policies to go beyond the narrow view of current employment policies to deal with access to social services and to acknowledge the economic role of care activities. Ensuring an adequate work-life balance requires policymakers to consider issues of gender equality, company practices and agreements on working time flexibility.

The policy agenda should promote sustainable work over the entire length of careers: in other words, the ability for all involved in paid employment to maintain their engagement in paid work over their professional career. Such an agenda could be narrow (for example, focusing just on health) or comprehensive (focusing on key factors affecting participation in paid employment, such as health, training, lifelong learning, availability of a care infrastructure, marketable skills or motivation). The scope of this agenda and the policy mix of instruments should be elaborated further.

In terms of objectives, that agenda may focus on preventing the premature exclusion of workers from the labour market due to health incapacity. It could also address the causes of and ways to deal with specific working conditions, such as those that are compatible only with abilities of the fittest, often the 'average 30- to 40-year-old male worker'. The solution could be an overall improvement of working conditions or a limitation of exposure to unfavourable conditions. This agenda might also consider the effect of various working careers on the lives of workers after retirement: the so-called *pénibilité* (hardship) agenda in France, which questioned fairness in pension reforms.

Limited progress in the development of smart working reinforces the need for a better knowledge of the interactions among work, working conditions, quality of work and employment of workers as well as work organisation, human resources policies and practices, and company results. The slow pace of change also indicates that policy instruments should be elaborated to support progress towards this objective.

Changes over time suggest that a range of European policies might not have operationalised work in their content. Future reviews of whole policies, such as those on fiscal matters (and the taxation of labour costs), industry, education and green growth, may benefit from mainstreaming work.

Future political choices on international labour standards, as well as the development of international regulation of the financial market, will strongly influence the future of work (De Balathier-Lantage et al, 2011).

A number of recent initiatives have started measuring societal progress in Europe going beyond the traditional methods of national accounting. A better understanding of the role of work in shaping the well-being of workers and contributing to societal progress is useful in this respect. These initiatives, in part, are based on the premise that citizens and workers should be encouraged to achieve their full potential. Transforming this agenda into action will require the development of trust and confidence in all people and in all aspects of their lives, something that seems difficult in this time of economic crisis. This is an important challenge for Europe, which must avoid seeing economic issues, social protection and industrial relations as separate domains (Morley, 2010).

Transforming this agenda into action may require promoting the principle of capabilities at the heart of our policies.

Further debate and research is also needed on how all relevant actors, from a multilevel perspective (workers and the households they belong to, company actors, social partners, labour market institutions and national actors), influence quality of work and employment.

Indeed, many goals are assigned to quality of work and employment, including well-functioning labour markets, good matching between workers' preferences and quality of jobs available, preparation for future labour market needs, productivity and innovation for companies, and provision of earnings, security and fulfilment for workers.

Tensions between conflicting views need to be made explicit and addressed. Ultimately actors' roles will need to be embedded in existing European, national and sectoral frameworks, and assessed against the success of their policies and actions in relation to the multiple goals assigned to quality of work and employment. This calls for debate among social actors at all levels in order to identify priorities and discuss actions so that a coordinated and coherent strategy can be elaborated.

Changes over time show that considerable progress has been achieved on quality of jobs when one considers a longer period of time (Kalleberg, 2011). The economic crisis may be an enabler in addressing the challenge of good work as we rethink many important policies.

Eurofound will continue to monitor and analyse changes in work over time and debate these with European policy actors and its tripartite stakeholders. Good work may well be one of the keys for smart, inclusive and sustainable growth.

Bibliography

(All Eurofound publications are available at www.eurofound.europa.eu)

Anttonen, H. and Räsänen, T. (eds) (2009), *Well-being at work – New innovations and good practices*, Finnish Institute of Occupational Health, Helsinki.

Anxo, D., Boulin, J.Y., Fagan, C., Cebrián, I., Keuzenkamp, S., Klammer, U. et al, Eurofound (2006), *Working time options over the life course: New work patterns and company strategies*, Publications Office of the European Union, Luxembourg.

Anxo, D., Fagan, C., Smith, M., Letablier, M.-T. and Perraudin, C., Eurofound (2007), *Part-time work in European companies: Establishment survey on working time 2004–2005,* Publications Office of the European Union, Luxembourg.

Appelbaum, E. and Batt, R. (1994), *The new American workplace: Transforming work systems in the United States*, ILR Press, Ithaca, NY.

Aumayr, C., Cabrita, J. and Demetriades, S. (2011), *Pay developments – 2010*, Eurofound, Dublin.

Azkenazy, P. (2004), *Les désordres du travail: Enquête sur le nouveau productivisme*, Seuil, Paris.

Bambra, C. (2011), 'Health inequalities and welfare state regimes: Theoretical insights on a public health "puzzle"', *Journal of Epidemiology & Community Health*, Vol. 65, No. 9, 2011, pp. 740–745.

Barbieri, P. and Scherer, S. (2007), *Flexibilising the Italian labour market. Unanticipated consequences of the partial and targeted labour market deregulation*, flex/CAREER Working Paper No. X, Faculty of Social and Economic Sciences, Otto-Friedrich-University Bamberg, Bamberg.

Belkic, K.L., Landsbergis, P.A., Schnall, P.L. and Baker, D. (2004), 'Is job strain a major source of cardiovascular disease risk?', *Scandinavian Journal of Work, Environment and Health*, Vol. 30, No. 2, 2004, pp. 85–128.

Bennett, J.B. and Lehman, W.E.K. (1999), 'The relationship between problem co-workers and quality work practices: A case study of exposure to sexual harassment, substance abuse, violence and job stress', *Work & Stress*, Vol. 13, No. 4, 1999, pp. 299–311.

Bielenski, H. and Hartmann, J. (2000), *Employment options of the future: Family and career*, Eurofound, Dublin.

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, 2008, pp. 438–445.

Boulin, J.-Y. (2008), *Villes et politique temporelles*, La Documentation Française, Paris.

Boulin, J.-Y. and Mückenberger, U. (1999), *Times in the city and quality of life*, BEST No. 1/1999, Eurofound, Dublin.

Boulin, J.-Y., Lallement, M.J., Messenger, C. and Michon, F. (eds) (2006), *Decent working time: new trends, new issues*, International Labour Organization, Geneva.

Bredgaard, T., Larsen, F., Madsen, P.K. and Rasmussen, S. (2009), *Flexicurity and atypical employment in Denmark*, CARMA Research Paper 2009:01, Centre for Labour Market Research, Aalborg.

Broughton, A. (2009), *Wage formation in the EU*, Eurofound, Dublin.

Broughton, A., Biletta, I. and Kullander, M. (2010), *Flexible forms of work: 'Very atypical' contractual arrangements*, Eurofound, Dublin.

Budd, J.W. and Spencer, D.A. (2011), 'Toward an integrated and interdisciplinary approach to worker well-being', Working paper, available at http://www.legacy-irc.csom.umn.edu/faculty/jbudd/research/worker_well-being_v6.pdf [accessed December 2011].

Burchell, B., Cartron, D., Csizmadia, P., Delcampe, S., Gollac, M., Illéssy, M. et al, Eurofound (2009), *Working conditions in the European Union: Working time and work intensity*, Publications Office of the European Union, Luxembourg.

Cabrita, J. and Perista, H. (2006), *Measuring job satisfaction in surveys – comparative analytical report*, Eurofound, Dublin.

Cedefop (2011), *What next for skills on the European labour market?*, Briefing note 9059 EN, European Centre for the Development of Vocational Training, Thessaloniki.

Clot, Y. (1995), *Le travail sans l'homme? Pour une psychologie de milieux de travail et de vie*, La Découverte, Paris.

Clot, Y. (2010), *Le travail à coeur: Pour en finir avec les risques psychosociaux*, La Découverte, Paris.

CSDH (2008), *Closing the gap in a generation: Health equity through action on the social determinants of health*, Final report of the Commission on Social Determinants of Health, World Health Organization, Geneva.

DARES and DREES (2009), *Indicateurs provisoires de facteurs de risques psychosociaux au travail*, Collège d'Expertise sur le Suivi Statistique des Risques Psychosociaux au Travail, Ministry of Work, Employment and Health, Paris.

De Balathier-Lantage, H., Klein, T. and Guézennec, C. (2011), *Le travail et l'emploi dans 20 ans: 5 questions, 2 scenarios, 4 propositions*, Note de synthèse 231, Centre d'analyse stratégique, Paris.

De la Fuente, A. (2010), *Fewer people outside the labour force in 2009. Increased female participation in the labour market*, Statistics in Focus 57/2010, Eurostat, Luxembourg.

Dejours, C. (1980), *Travail, usure mentale – De la psychopathologie à la psychodynamique du travail*, Bayard, Paris [revised 1993, 2000].

Dejours C. (1998), *Souffrance en France: la banalisation de l'injustice sociale*, Seuil, Paris.

Dew, K., Keefe, V. and Small, K. (2005), 'Choosing to work when sick: workplace presenteeism', *Social Science and Medicine*, Vol. 60, No. 10, 2005, pp. 2273–2282.

Dhondt, S. (2011), 'Do innovative sustainable workplaces provide better productivity, working conditions and lifelong learning?' (conference presentation), *Structure change and workplace learning*, conference, 12 October 2011, Brussels.

Dhondt, S., Kraan, K. and van Sloten, G., Eurofound (2002), *Work organisation, technology and working conditions*, Publications Office of the European Union, Luxembourg.

Dhondt, S., Van Gramberen, M., Keuken, F., Pot, F., Totterdill, P. and Vaas, F. (2011), 'Workplace innovation workshop summary', *Social Innovation Europe launch event*, 17 March 2011, Brussels.

Dormann, C. and Zapf, D. (2001), 'Job satisfaction: a meta-analysis of stabilities', *Journal of Organizational Behavior*, Vol. 22, No. 5, 2001, pp. 483–504.

Drobnič, S., Beham, B. and Präg, P. (2010), 'Good job, good life? Working conditions and quality of life in Europe', *Social Indicators Research*, Vol. 99, No. 2, 2010, pp. 205–225.

Ducharme, L.J., Knudsen, H.K. and Roman, P.M. (2008), 'Emotional exhaustion and turnover intention in human service occupations: The protective role of coworker support', *Sociological Spectrum*, Vol. 28, No. 1, 2008, pp. 81–104.

Edwards, P. and Greasley, K. (2010), *Absence from work*, Eurofound, Dublin.

EESC (2011), 'Opinion of the European Economic and Social Committee on "Innovative workplaces as a source of productivity and quality jobs" (own-initiative opinion) (2011/C 132/05)', *Official Journal of the European Union*, C132, 3/5/2011, pp. 22–25.

Eriksson, A., Axelsson, R. and Axelsson, S.B. (2010), 'Development of health promoting leadership–experiences of a training programme', *Health Education*, Vol. 110, No. 2, 2010, pp. 109–124.

Esping-Andersen, G. (1999), *Social foundations of post-industrial economies*, Oxford University Press, Oxford.

EU-OSHA (2006), *OSH in figures: Young workers – facts and figures*, Publications Office of the European Union, Luxembourg.

EU-OSHA (2007), *Expert forecast on emerging psychosocial risks related to occupational health and safety (OSH)*, FACTS 74, European Agency for Safety and Health and Work, Bilbao.

EU-OSHA (2011), *Risks and trends in the safety and health of women at work*, Summary prepared for EU-OSHA by the European Risk Observatory, European Agency for Safety and Health and Work, Bilbao.

Eurofound (2000), *Working time and place of work. A first analysis of the survey results*, Dublin.

Eurofound (2002), *Quality of work and employment in Europe: Issues and challenges,* Foundation Paper No. 1, Publications Office of the European Union, Luxembourg.

Eurofound (2010a), *Changes over time – First findings from the fifth European Working Conditions Survey*, Publications Office of the European Union, Luxembourg.

Eurofound (2010b), *Trends in quality of life in the EU: 2003–2009 – Résumé*, Publications Office of the European Union, Luxembourg.

Eurofound (2011), *5th European Working Conditions Survey: Translation process for the questionnaire*, Dublin.

Eurofound (2012), *European Working Conditions Survey 2010: Survey questionnaire*, Dublin.

European Commission (1989), 'Council 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', *Official Journal of the European Communities*, L183, 29/06/1989, pp. 1–8.

European Commission (1997), *Partnership for a new organisation of work. Green Paper. Document drawn up on the basis of COM(97) 128 final*, Publications Office of the European Union, Luxembourg.

European Commission (2003), *The European Union labour force survey. Methods and definitions – 2001*, Publications Office of the European Union, Luxembourg.

European Commission (2007), *Improving quality and productivity at work: Community strategy 2007–2012 on health and safety at work*, COM(2007) 62 final, Brussels.

European Commission (2008), 'European pact for mental health and well-being' (conference presentation), EU high-level conference, *Together for mental health and well-being*, 12–13 June 2008, Brussels, available at http://ec.europa.eu/health/archive/ph_determinants/life_style/mental/docs/pact_en.pdf [accessed December 2011].

European Commission (2009), *Tobacco control in the EU*, Fact sheet, Directorate-General for Health and Consumers, Brussels.

European Commission (2010a), *Europe 2020: A strategy for smart, sustainable and inclusive growth*, COM(2010) 2020 final, Brussels.

European Commission (2010b), *Lisbon Strategy evaluation document*, Commission Staff Working Document, SEC(2010) 114 final, Brussels.

European Commission (2010c), *The increasing use of portable computing and communication devices and its impact on the health of EU workers*, Publications Office of the European Union, Luxembourg.

European Commission (2010d), *An agenda for new skills and jobs: A European contribution towards full employment*, COM(2010) 682 final, Brussels.

European Commission (2010e), *Employment in Europe 2010*, Publications Office of the European Union, Luxembourg.

European Commission (2010f), *Europe 2020 Flagship Initiative Innovation Union*, Commission Staff Working Document, SEC(2010) 1161, Brussels.

European Parliament (2002), 'Directive 2002/14/EC of the European Parliament and of the Council of 11 March 2002 establishing a general framework for informing and consulting employees in the European Community', *Official Journal of the European Communities*, L80, 23/03/2002, pp. 29–34.

European Parliament (2003), 'Directive 2003/88/EC of the European Parliament and of the Council of 4 November 2003 concerning certain aspects of the organisation of working time', *Official Journal of the European Communities*, L299, 18/11/2003, pp. 9–19.

Eurostat and European Commission (2010), *Health and safety at work in Europe (1999–2007): A statistical portrait*, Publications Office of the European Union, Luxembourg.

Fagan, C. and Burchell, B., Eurofound (2002), *Gender, jobs and working conditions in the European Union*, Publications Office of the European Union, Luxembourg.

Felstead, A., Gallie, D., Green, F. and Zhou, Y. (2007), *Skills at work, 1986 to 2006*, ESRC Centre of Skills, Knowledge and Organisational Performance, Oxford and Cardiff.

Ferrarini, T. (2006), *Families, states and labour markets. Institutions, causes and consequences of family policy in post-war welfare states*, Edward Elgar Publishing, Cheltenham.

Fitoussi, J.P., Sen, A. and Stiglitz, J. (2009), *Report by the Commission on the Measurement of Economic Performance and Social Progress*, Commission on the Measurement of Economic Performance and Social Progress, Paris.

Furnham, A. (2005), *The psychology of behaviour at work. The individual in the organisation*, Psychology Press, New York.

Gallie, D. (2007), *Employment regimes and the quality of work*, Oxford University Press, Oxford.

Gallie, D. and Russell, H. (2009), 'Work–family conflict and working conditions in western Europe', *Social Indicators Research*, Vol. 93, No. 3, 2009, pp. 445–467.

Gallup Europe (2010a), *5th European Working Conditions Survey, 2010: Sampling implementation report*, Eurofound, Dublin.

Gallup Europe (2010b), *5th European Working Conditions Survey, 2010: Coding report*, Eurofound, Dublin.

Gallup Europe (2010c), *5th European Working Conditions Survey, 2010: Quality assurance report*, Eurofound, Dublin.

Gollac, M. (2004), 'Measuring working conditions', unpublished presentation given at a meeting on the fourth European Working Conditions Survey, 10–11 June 2004, Brussels.

Gollac, M. and Volkoff, S. (1996), 'Citius, altius, forties', *Actes de la Recherché en Sciences Sociales*, Vol. 114, 1996, pp. 54–67.

Gollac, M. and Volkoff, S. (2006), 'La santé au travail et ses masques', *Actes de la Recherché en Sciences Sociales*, Vol. 163, 2006, pp. 4–17.

Gollac, M. and Volkoff, S. (2007), *Les conditions de travail*, La Découverte, Paris.

Gollac, M. and Bodier, M. (2011), *Mesurer les facteurs psychosociaux de risque au travail pour les maîtriser*, Collège d'Expertise sur le Suivi des Risques Psychosociaux au Travail, Ministry of Work, Employment and Health, Paris.

Green, F. (2011), *What is skill? An inter-disciplinary synthesis*, Centre for Learning and Life Changes in Knowledge Economies and Societies, London.

Grönlund, A. and Öun, I. (2010), 'Rethinking work–family conflict: Dual-earner policies, role conflict and role expansion in western Europe', *Journal of European Social Policy*, Vol. 20, No. 3, 2010, pp. 179–195.

Guio, A.-C. (2005), *Income poverty and social exclusion in the EU25*, Statistics in Focus 13/2005, Eurostat, Luxembourg.

Hackman, J.R. and Oldham, G.R. (1980), *Work redesign*, Addison-Wesley, Boston, MA.

Hall, M. and Purcell, J. (2011), *Information and consultation practice across Europe five years after the EU Directive*, Eurofound, Dublin.

Heponiemi, T., Elovainio, M., Pentti, J., Virtanen, M., Westerlund, H., Virtanen, P. et al (2010), 'Association of contractual and subjective job insecurity with sickness presenteeism among public sector employees', *Journal of Occupational and Environmental Medicine*, Vol. 52, No. 8, 2010, pp. 830–835.

Hobson, B., Drobnič, S. and Fagan, C. (eds) (2011), 'Special issue: Sen's capabilities and agency framework applied to work–life balance across European welfare states and within work organisations', *Social Politics*, Vol. 18, No. 2, June 2011, pp. 147–329.

Hurley, J., Mandl, I., Storrie, D. and Ward, T., Eurofound (2009), *ERM Report 2009: Restructuring in recession*, Publications Office of the European Union, Luxembourg.

Ieromnimon, T., Kleideri, M. and Petrakos, M. (2011), *Quality assessment of the 5th European Working Conditions Survey*, Eurofound, Dublin.

Isusi, I. (2011), *Preparing for the upswing: Training and qualification during the crisis*, Eurofound, Dublin.

Ivar Elstad, J. and Vabø, M. (2008), 'Job stress, sickness absence and sickness presenteeism in Nordic elderly care', *Scandinavian Journal of Public Health*, Vol. 36, No. 5, 2008, pp. 467–474.

Jettinghoff, K. and Houtman, I. (2009), *A sector perspective on working conditions*, Eurofound, Dublin.

Kalleberg, A.L. (2011), *Good jobs, bad jobs. The rise of polarized and precarious employment systems in the United States, 1970s to 2000s*, Russell Sage Foundation, New York, Chapter 2.

Karasek, R.A., Jr. (1979), 'Job demands, job decision latitude, and mental strain: Implications for job redesign', *Administrative Science Quarterly*, Vol. 24, 1979, pp. 285–308.

Karasek, R. and Theorell, T. (1992), *Healthy work: Stress, productivity, and the reconstruction of working life*, Basic Books, New York.

Kivimaki, M., Virtanen, M., Elovainio, M., Kouvonen, A., Vaananen, A. and Vahtera, J. (2006), 'Work stress in the etiology of coronary heart disease – a meta-analysis', *Scandinavian Journal of Work, Environment & Health*, Vol. 32, No. 6, 2006, pp. 431–442.

Krieger, N. (2000), 'Discrimination and health', in *Social epidemiology*, Berkman, L.F. and Kawachi, I. (eds), Oxford University Press, New York, pp. 36–75.

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, 2010, pp. 867–874.

Lee, S. and McCann, D. (2006), 'Working time capability: towards realising individual choice', in Boulin, J.-Y., Lallement, M., Messenger, J.C. and Michon, F. (eds), *Decent working time: New trends, new issues*, International Labour Organization, Geneva.

Le Goff, J.-P. (2003), *Les illusions du management: Pour le retour du bon sens*, La Découverte, Paris.

Le Guillant, L. (1956), 'La névrose des téléphonistes', *La Presse Médicale*, Vol. 64, No. 13, 1956, p. 275 [cited in Molinier, 2008].

Leymann, H. (1990), 'Mobbing and psychological terror at workplaces', *Violence and Victims*, Vol. 5, No. 2, pp. 119–126.

Lilja, R. and Hämäläinen, U., Eurofound (2001), *Working time preferences at different phases of life*, Publications Office of the European Union, Luxembourg.

Lindblom, K. (2006), 'Burnout in the working population: Relations to psychosocial work factors', *International Journal of Behavioral Medicine*, Vol. 13, No. 1, 2006, pp. 51–59.

Linhart, D. (2009), *Travailler sans les autres?*, Seuil, Paris.

Linhart, D., Guilbaud, F., Dussuet, A. and Leduc, S. (2008), *Pourquoi travaillons-nous? Une approche sociologique de la subjectivité au travail*, Erès, Toulouse.

Mandl, I., Storrie, D., Hurley, J., Mascherini, M., Broughton, A., Owczarzak, R. et al, Eurofound (2010), *Extending flexicurity – The potential of short-time working schemes: ERM Report 2010*, Publications Office of the European Union, Luxembourg.

Mansell, A. and Brough, P. (2005), 'A comprehensive test of the job demands-control interaction: Comparing two measures of job characteristics', *Australian Journal of Psychology*, Vol. 57, No. 2, pp. 103–114.

Maslach C., Jackson S.E. and Leiter M. (1996), *Maslach Burnout Inventory Manual, 3rd Edition,* Consulting Psychologists Press, Palo Alto, California.

Meda, D. (2008), *Le temps des femmes: Pour un nouveau partage des rôles*, Flamarion, Paris.

Mladovsky, P., Allin, S., Masseria, C. et al (2009), *Health in the European Union: Trends and analysis*, World Health Organization, Copenhagen.

Molinier, P. (2008), *Les enjeux psychiques du travail: Introduction à la psychodynamique du travail*, Collection: Petite Bibiothèque Payot, Paris.

Molinier, P. and Flottes, A. (2010), *Les approaches en cliniques du travail en France*, College d'Expertise de Suivi des Risques Psychosociaux au Travail, Paris.

Morley, J. (2010), *Fourth European Working Conditions Survey: Contribution to policy development*, Eurofound, Dublin.

Muffels, R., Chung, H., Fouarge, D., Klammer, U., Luijkx, R., Manzoni, A. et al, Eurofound (2008), *Flexibility and security over the life course*, Publications Office of the European Union, Luxembourg.

Nicot, A-M. and Houtman, I. (2006), *Gender mainstreaming in surveys*, Eurofound, Dublin.

Niedhammer, I., Bourgkard, E., Chau, N. and the Lorhandicap Study Group (2011), 'Occupational and behavioural factors in the explanation of social inequalities in premature and total mortality: A 12.5-year follow-up in the Lorhandicap study', *European Journal of Epidemiology*, Vol. 26, No. 1, 2011, pp. 1–12.

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, 2004, pp. 1531–1541.

Nyberg, A., Westerlund, H., Magnusson Hanson, L.L. and Theorell, T. (2008), 'Managerial leadership and sickness presenteeism among Swedish men and women', *Scandinavian Journal of Public Health*, Vol. 36, No. 8, 2008, pp. 803–811.

O'Driscoll and O'Driscoll (2010), *Mental capital and wellbeing: Making the most of ourselves in the 21st century*, Foresight Project on Mental Capital and Wellbeing, Final project report, The Government Office for Science, London.

Oxford Research (2011), *Social dialogue and working conditions*, Eurofound, Dublin.

Paoli, P., Eurofound (1992), *First European survey on the work environment 1991–1992*, Publications Office of the European Union, Luxembourg.

Paoli, P., Eurofound (1997), *Second European survey on working conditions*, Publications Office of the European Union, Luxembourg.

Paoli, P. and Merllié, D., Eurofound (2001), *Third European survey on working conditions 2000*, Publications Office of the European Union, Luxembourg.

Paoli, P. and Parent-Thirion, A., Eurofound (2003), *Working conditions in the acceding and candidate countries*, Publications Office of the European Union, Luxembourg.

Parent-Thirion, A., Fernández Macías, E., Hurley, J. and Vermeylen, G., Eurofound (2007), *Fourth European Working Conditions Survey*, Publications Office of the European Union, Luxembourg.

Parnanen, A., Sutela, H. and Mahler, S. (2004), *Combining family and full-time work*, Eurofound, Dublin.

Paugam, S. (2000), *Le salarié de la précarité*, Presses Universitaires de France, Paris.

Pedersini, R. and Coletto, D. (2010), *Self-employed workers: Industrial relations and working conditions*, Eurofound, Dublin.

Petrakos Agilis, M. (2007), *Quality report of the 4th European working conditions survey*, Eurofound, Dublin.

Pichler, F. and Wallace, C. (2009), 'What are the reasons for differences in job satisfaction across Europe? Individual, compositional, and institutional explanations', *European Sociological Review*, Vol. 25, No. 5, 2009, pp. 535–549.

Poksinska, B. (2007), 'Does standardization have a negative impact on working conditions?', *Human Factors and Ergonomics in Manufacturing*, Vol. 17, No. 4, 2007, pp. 383–394.

Pot, F. (2011), 'Workplace innovation for better jobs and performance', *International Journal of Productivity and Performance Management*, Vol. 60, No. 4, 2011, pp. 404–415.

Pot, F.D. and Koningsveld, E.A.P. (2009), 'Quality of working life and organizational performance – two sides of the same coin?', *Scandinavian Journal of Work, Environment & Health*, Vol. 35, No. 6, 2009, pp. 421–428.

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.

Riedmann, A., Bielenski, H., Szczurowska, T. and Wagner, A., Eurofound (2006), *Working time and work–life balance in European companies: Establishment Survey on Working Time 2004–2005*, Publications Office of the European Union, Luxembourg.

Riedmann, A., Van Gyes, G., Román, A., Kerkhofs, M. and Bechmann, S., Eurofound (2010), *European Company Survey 2009 – Overview*, Publications Office of the European Union, Luxembourg.

Riso, S. (2010), *Very atypical work: Exploratory analysis of fourth European Working Conditions Survey – Background paper*, Eurofound, Dublin.

Schaufeli, W., Maslach, C. and Marek, T. (eds) (1993), *Professional burnout: Recent developments in theory and research*, Taylor & Francis, Philadelphia, PA.

Schulte, P. and Vainio, H. (2010), 'Well-being at work – overview and perspective', *Scandinavian Journal of Work, Environment and Health*, Vol. 36, No. 5, 2010, pp. 422–429.

Senett, R. (1998), *The corrosion of character: The personal consequences of work in the new capitalism*, Norton, London.

Senett, R. (2008), *The craftsman*, Yale University Press, London.

Siegrist, J. (2009), 'Psychosocial risks at work' (conference presentation), Committee of Senior Labour Inspectors, Thematic Day, *Supervision of psychosocial risk assessments*, 23 November 2009, Stockholm, available at http://www.av.se/dokument/inenglish/European_Work/slic2009/Siegrist.pdf [accessed December 2011].

Sousa-Poza, A. and Sousa-Poza A.A. (2000), 'Well-being at work: a cross national analysis of the levels and determinants of job satisfaction', *Journal of Socio-Economics*, Vol. 29, No. 6, 2000, pp. 517–538.

Stansfeld, S. and Candy, B. (2006), 'Psychosocial work environment and mental health – a meta-analytic review', *Scandinavian Journal of Work, Environmnt and Health*, Vol. 32, No. 6, 2006, pp. 443–462.

Steenland, K., Fine, L., Belkic, K., Landsbergis, P., Schnall, P., Baker, D. et al (2000), 'Research findings linking workplace factors to CVD outcomes', *Occupational Medicine,* Vol. 15, No. 1, 2000, pp. 7–68.

Sum, S., Khatiwada, I., Palma, S., Tobar, P., McLaughlin, J., Madjarov, K. et al (2006), *Mass economy: The labor supply and our economic future*, MassINC and Center for Labor Market Studies, Boston, MA.

Thery, L., Askanazy, P. and Gollac, M. (2010), *Le travail intenable: Résister collectivement à l'intensification du travail*, La Découverte, Paris.

Timming, A.R. (2010), 'Cross-national variation in the determinants of job satisfaction. How far do our results "travel"?', *International Journal of Organization Theory and Behavior*, Vol. 13, No. 4, 2010, pp. 525–545.

Totterdill, P., Exton, O., Exton, R. and Sherrin, J. (2009), *Workplace innovation policies in European countries*, UK Work Organisation Network, Nottingham.

Valenduc, G., Vendramin, P., Pedaci, M. and Piersanti, M. (2009), *Changing careers and trajectories: How individuals cope with organisational change and restructuring*, WORKS project CIT3-CT-2005-006193, Katholieke Universiteit Leuven, Leuven.

Valeyre, A., Lorenz, E., Cartron, D., Csizmadia, P., Gollac, M., Illéssy, M. and Makó, C., Eurofound (2009), *Working conditions in the European Union: Work organisation*, Publications Office of the European Union, Luxembourg.

Vendramin, P. (2004), *Le travail au singulier. Le lien social à l'épreuve de l'individualisation*, Academia Bruylant, Louvain-la-Neuve, and L'Harmattan, Paris.

Vogel, L. (2003), *The gender workplace health gap in Europe*, European Trade Union Institute, Brussels.

Vogel, L. and Paoli, P. (2006), *New scope for the Community health and safety at work strategy 2007–2012*, European Trade Union Institute, Brussels.

Volkoff, S., Cristofari, M.F., Gadbois, C., Laville, A., Molinié, A.F., Prunier-Poulmaire, S. et al (2005), *L'ergonomie et les chiffres de la santé au travail: ressources, tensions et pièges*`, Octares, Toulouse.

Voss, E., Eurofound (2009), *Working conditions and social dialogue*, Publications Office of the European Union, Luxembourg.

Ward, T., Sanoussi, F., Kullander, M. and Biletta, I. (2009), *Low-qualified workers in Europe*, Eurofound, Dublin.

Whitehead, M. and Dahlgren, G. (2006), *Concepts and principles for tackling social inequalities in health. Levelling up Part 1*, World Health Organization, Copenhagen.

Wichert, I. (2002), 'Job insecurity and work intensification: the effects on health and well-being', in Burchell, B., Ladipo, D. and Wilkinson, F. (eds), *Job insecurity and work intensification*, Routledge, London and New York.

Wozowczyk, M. and Massarelli, N. (2011), *European Union labour force survey – annual results 2010*, Statistics in Focus 30/2011, Eurostat, Luxembourg.

Additional resources

Further tables of results by isco, age and gender, NACE etc. are available on the Eurofound website at http://www.eurofound.europa.eu/surveys/ewcs/2010/index.htm

The questionnaire used in the fifth Working Conditions Survey is available for download on the Eurofound website as well as a statistical annex which provides a more complete breakdown of key demographic indicators.

Methodology

Conducting an international survey in many different countries and languages is very demanding in terms of organisational planning and procedures. In order to ensure that the survey is carried out to the highest specifications and scientific standards, a detailed methodological framework has been put in place. More information on the quality assurance and the methodology is available in the Quality Assurance Report and the Technical Report, both prepared by Gallup Europe and available on the Eurofound website.

Quality assurance report: http://www.eurofound.europa.eu/surveys/ewcs/2010/documents/qualassurance.pdf

Technical report: http://www.eurofound.europa.eu/surveys/ewcs/2010/documents/technical.pdf

Survey mapping tool

Eurofound's Survey Mapping Tool (SMT) allows you to create graphical representations of the survey findings. For every question presented, you can:

- view the 2010 data on the map or in bar charts or tables;
- click on a country to see the data for this country compared with EU averages;
- view EU level trend data in bar charts and national level trend data in tables
- explore the 2010 figures and the trends broken down by gender, age, employment status, activity of the organisation or type of occupation;
- download the data as an .xls or a .csv file.

The SMT can be found on the Eurofound website at http://www.eurofound.europa.eu/surveys/smt/ewcs/results.htm

Datasets

The Eurofound datasets and accompanying materials are stored with the UK Data Archive (UKDA) in Essex, UK and promoted online via the Economic and Social Data Service (ESDS) International at http://www.esds.ac.uk/.

The data is available free of charge to all those who intend to use it for non-commercial purposes. Requests for use for commercial purposes should be forwarded to Eurofound for authorisation.

Annex 1: Survey methodology

The fieldwork for the fifth European Working Conditions Survey was carried out between 23 January and 27 June 2010.[44] A total of 43,816 face-to-face interviews were carried out with workers in 34 European countries (all EU27 Member States plus Croatia, Turkey, the former Yugoslav Republic of Macedonia, Albania, Montenegro, Kosovo and Norway) answering questions on a wide range of issues regarding their employment situation and working conditions.

Gallup Europe was contracted by Eurofound to carry out the fieldwork. Preparation for the survey included a review of the EWCS statistical production process and design of a strict quality assurance framework.

The target population was all residents of these countries aged 15 or older (aged 16 or older in Spain, the UK and Norway) and who were in employment at the time of the survey. People were considered to be in employment if they had worked for pay or profit for at least an hour in the week preceding the interview (ILO definition).

Previous European Working Conditions Surveys were carried out in 1991 (Paoli, 1992), 1995 (Paoli, 1997), 2000 (Paoli and Merllié, 2001) (with an extension to the then candidate countries in 2001 and 2002; Paoli and Parent-Thirion, 2003) and 2005 (Parent-Thirion et al, 2007). The range of countries covered in the EWCS reflects the expansion of the European Union. The first wave, in 1991, covered only 12 countries; the second wave in 1995 covered 15 countries; and from the third wave in 2000–2001 onwards, all 27 current EU Member States were included, plus Turkey (in 2002, 2005 and 2010), Norway and Croatia (in 2005 and 2010), Switzerland (in 2005) and Albania, Montenegro, Kosovo and the former Yugoslav Republic of Macedonia in this most recent wave.

The number of questions and issues covered in the survey has expanded in each subsequent wave. The survey allows for comparison over time by retaining a core of key questions and for comparison across countries by using the same questionnaires in all countries.

Questionnaire design and translation process

The questionnaire has been updated with a view to:

- maintain the balance between the different topics;
- retain core 'trend' questions to ensure continuity;
- identify new and emerging areas of interest;
- ensure gender mainstreaming.

The main topics covered in the questionnaire for the fifth EWCS are:

- job context;
- working time;
- work intensity;
- physical factors;
- cognitive factors;
- psychosocial factors;

[44] The fieldwork period had to be extended in Belgium where the extended sample size of 4,000 required a slightly longer fieldwork period than foreseen (until 17 July 2010), and in Norway where organisational issues resulted in the finalisation of fieldwork being delayed until 29 August 2010.

- violence, harassment and discrimination;
- work organisation;
- skills, training and career prospects;
- social relationships;
- work–life balance and financial security;
- job fulfilment;
- health and well-being.

The questions on household characteristics were expanded in the fifth EWCS to find out more about the other members of the respondent's household (age, gender, economic activity, whether working full time or part time). New questions were introduced to enable more in-depth analysis of psychosocial risks, workplace innovation, precarious employment and job security, place of work, work–life balance, leadership styles and health. It also included new questions addressed specifically at self-employed workers (for example, financial security).

Gender mainstreaming was an important concern when designing the questionnaire. Attention was paid to developing gender-sensitive indicators as well as ensuring that the questions capture the work of both men and women.

The questionnaire was developed by Eurofound in close cooperation with a questionnaire development expert group. The expert group included members of Eurofound's Governing Board, representatives of the European social partners, other EU bodies (European Commission, Eurostat, European Agency for Safety and Health at Work), international organisations (OECD, ILO), national statistical institutes and leading European experts in the field. The expert group met twice during the preparation phase.

Where possible the survey questionnaire makes use of internationally validated questions or questions used in other international or national surveys. The English master questionnaire and its French translation were also pre-tested in two countries: France and the UK. The aim was first to assess whether the questionnaire was relevant to and easily understood by the respondents in terms of the concepts and the way they were phrased in the questions, and secondly to assess the technical functioning of the questionnaire. Based on the results of the pre-testing, the final version of the survey questionnaire was compiled.

The development of a valid and reliable measurement instrument that is internationally comparable required a series of steps and contributions from a team of experts to translate the English master questionnaire into the other languages used in the fifth EWCS. For each version:

1. two independent experts translated the questionnaire into their language;
2. these versions were combined into one version by a third person;
3. this version was translated back into English;
4. a final version was validated by experts on working conditions research (members of the European Working Conditions Observatory, EWCO).

As several waves of the EWCS have been carried out, different procedures were followed for existing questions (trend questions) and new questions. To maintain the consistency of the data over time, the translations of trend questions (some of them dating back as far as 1991) were changed only in case of serious discrepancies between the English master and the translation.

The fifth EWCS questionnaire was translated into 32 languages (Table A1) including the key minority languages of the surveyed countries. Nine of the languages were used in more than one country and adapted to the cultural context when necessary.

The questionnaire has been published separately and is available on the Eurofound website (Eurofound, 2012). For more information about the translation process see Eurofound 2011.

Table A1 : Survey languages

Country	Language	Country	Language
Austria	German	Malta	Maltese, English
Belgium	French, Dutch	Netherlands	Dutch
Bulgaria	Bulgarian	Poland	Polish
Cyprus	Greek	Portugal	Portuguese
Czech Republic	Czech	Romania	Romanian
Denmark	Danish	Slovakia	Slovakian
Estonia	Estonian, Russian	Slovenia	Slovenian
Finland	Finnish, Swedish	Spain	Spanish, Catalan
France	French	Sweden	Swedish
Germany	German	United Kingdom	English
Greece	Greek	Croatia	Croatian
Hungary	Hungarian	Turkey	Turkish
Ireland	English	Former Yugoslav Republic of Macedonia	Macedonian, Albanian
Italy	Italian	Albania	Albanian
Latvia	Latvian, Russian	Kosovo	Albanian, Serbian (Latin and Cyrillic)
Lithuania	Lithuanian	Montenegro	Montenegrin (standard and Ijekavski dialect), Serbian (Latin and Cyrillic)
Luxembourg	Luxembourgish, French, German	Norway	Norwegian

Sampling design

The sample used in the EWCS is representative of those aged 15 years and over (16 and over in Spain, the UK and Norway) who are in employment and resident in the country being surveyed. In each country, a multistage, stratified random sampling design was used.

In the first stage, primary sampling units (PSUs) were sampled, stratified according to geographic regions (NUTS 2 level or below) and level of urbanisation. Subsequently, households in each PSU were sampled.[45] In countries where an updated, high-quality address or population register was available, this was used as the sampling frame. Registers of individuals were used for sampling in Denmark, Estonia, Finland, Hungary, Poland, Slovenia, Sweden and Norway, and registers of residential addresses were used in Bulgaria, Ireland, the Netherlands, Spain and the UK. A random route procedure was used if such a register was not available. For the first time in the fifth EWCS, the enumeration of addresses through this random route procedure was separated from the interviewing stage. Finally, a screening procedure was applied to select the eligible respondent within each household.

The target number of interviews was 1,000 in all countries except Slovenia (1,400), the UK, Italy and Poland (each 1,500), Germany and Turkey (each 2,000), France (3,000) and Belgium (4,000). The Belgian, French and Slovenian governments took up the option offered by Eurofound to pay for an addition to the initial sample size.

The number of interviews completed in each country is summarised in Table A2. For more information on the sampling design, see Gallup Europe (2010a).

Fieldwork outcome and response rates

The survey interviews were carried out face-to-face at respondents' homes (so outside the workplace). The average duration of the interviews was 44 minutes. The overall response rate for the fifth EWCS was 44%, though there was considerable variation in the participation rates in the different countries (Table A3).

[45] Apart from Denmark and Finland where the Population Registry Office sourced a stratified random sample of individuals for the EWCS without any clustering.

Table A2: Number of interviews

Austria	1,003	Germany	2,133	Netherlands	1,017	Croatia	1,100
Belgium	4,001	Greece	1,037	Poland	1,500	Turkey	2,100
Bulgaria	1,014	Hungary	1,006	Portugal	1,000	Former Yugoslav Republic of Macedonia	1,100
Cyprus	1,000	Ireland	1,003	Romania	1,017		
Czech Republic	1,000	Italy	1,500	Slovakia	1,002	Albania	1,000
Denmark	1,069	Latvia	1,001	Slovenia	1,404	Kosovo	1,018
Estonia	1,000	Lithuania	1,004	Spain	1,008	Montenegro	1,041
Finland	1,028	Luxembourg	1,000	Sweden	1,004		
France	3,046	Malta	1,000	UK	1,575	Norway	1,085

Box A1: Calculation of outcome rates

Outcome rates are calculated by applying the formula recommended by the American Association for Public Opinion Research (AAPOR) standard definitions to the information recorded on the contact sheets. The abbreviations used are as follows:

- I = complete interview
- P = partial interview
- R = refusal and break-off
- NC = non-contact
- O = other
- UH = unknown eligibility, household
- UO = unknown, other
- e = estimate for each country of the proportion of eligible respondents based on the proportion of non-workers in those contacted households where employment status could be obtained.

The **cooperation rate (COOP)** is the proportion of all cases interviewed of all eligible units ever contacted. To calculate the cooperation rate, both refusals by a member of the household and refusals by the potential respondent have been taken into account.

$$COOP = \frac{I}{(I+P)+R}$$

Those unable to do an interview are defined as incapable of cooperating and are excluded from the base (COOP3).

The **contact rate (CON)** measures the proportion of all cases in which some responsible member of the housing unit was reached by the survey.

$$CON = \frac{(I+P)+R+O}{(I+P)+R+O+NC+e(UH+UO)}$$

>>>

The **refusal rate (REF)** is the proportion of all cases in which a housing unit or respondent refuses to do an interview, or breaks off an interview of all potentially eligible cases.

$$REF=\frac{R}{(I+P)+(R+NC+O)+e(UH+UO)}$$

Finally the **response rate (RR)** is the proportion of complete interviews of all potentially eligible cases in the sample.

$$RR=\frac{I}{(I+P)+(R+NC+O)+e(UH+UO)}$$

The base for the contact rate, refusal rate and response rate includes the potentially eligible cases. These are the estimated eligible cases among the undetermined cases (AAPOR formulae CON2, REF2 and RR3).

Table A3: Response rates (%)

	Cooperation rate	Contact rate	Refusal rate	Response rate
All EWCS	60	76	30	44
Austria	40	84	49	32
Belgium	50	70	34	34
Bulgaria	77	88	20	66
Cyprus	80	85	17	66
Czech Republic	62	78	29	47
Denmark	71	84	23	58
Estonia	67	84	27	56
Finland	63	77	28	47
France	66	55	18	34
Germany	61	96	36	56
Greece	58	76	28	40
Hungary	57	84	35	47
Ireland	67	79	25	50
Italy	43	82	46	34
Latvia	86	86	13	74
Lithuania	59	92	37	54
Luxembourg	56	73	32	40
Malta	74	72	18	52
Netherlands	45	87	46	37
Poland	57	78	33	44
Portugal	53	84	39	44
Romania	67	89	29	59
Slovakia	82	70	12	57
Slovenia	51	84	41	42
Spain	43	74	42	31
Sweden	53	69	32	35

Table A3: Response rates (%) (continued)

	Cooperation rate	Contact rate	Refusal rate	Response rate
UK	66	59	19	37
Croatia	66	67	22	43
Turkey	68	85	27	56
FYROM	82	84	15	68
Albania	71	83	24	58
Kosovo	76	83	20	63
Montenegro	72	83	23	59
Norway	50	66	33	32

Coding

The fifth 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. After the data were collected, the answers were coded according to international classification systems for occupation (ISCO-88 and ISCO-08) and the activity of companies and organisations (NACE Rev. 1.1 and 2.0).

For both ISCO and NACE, the answers were coded using the current and the previous version of the classification system. The coding using the previous versions is needed to make comparisons with previous waves of the EWCS.

For the fifth EWCS, ISCO coding was carried out at the four-digit level to allow for very specific distinctions between occupations. This was partly done to enable an appropriate transition from the old ISCO classification to the more recent one.

Not only open-ended questions require coding. The question about the respondent's level of education was recoded into International Standard Classification of Education (ISCED) categories in order to make the country-specific education categories internationally comparable.

The income questions referred to the national currency in each country, which was subsequently converted into euros according to the exchange rates at the time of conversion (1 March 2010).

For more information on coding, see Gallup Europe (2010b).

Weighting

As in previous waves of the EWCS, three types of weights were applied to ensure that results based on the fifth EWCS data can be considered representative for workers in Europe.

Selection probability weights

Because of the way the sampling process is designed, people in households with fewer workers have a greater chance of being selected into the sample than people in households with more workers. For example, within a household with one person in employment, the probability of this person to be selected is 100%, whereas it drops to 50% for people in a household with two people in employment. Selection probability weights (or design weights) are constructed to correct for this.

Post-stratification weights

Because of differences in the willingness and availability to participate in the survey, certain groups are overrepresented and other groups are underrepresented in the EWCS sample. To ensure that the results accurately reflect the population of workers in each country, post-stratification weighting is applied. The weights are calculated by comparing the EWCS to the Labour Force Survey (Eurostat) with regard to the gender, age, region, occupation and sector of economic activity of the respondents.

Because Eurostat only provides Labour Force Survey statistics for EU Member States, EFTA countries (including Norway) and EU candidate countries (Croatia, Turkey and to some extent for the former Yugoslav Republic of Macedonia), national LFS statistics were used as post-stratification weighting targets in Albania, Montenegro, Kosovo and the former Yugoslav Republic of Macedonia. Because of issues with the comparability of these national-level statistics and the target population of the survey, the weighting strategy had to be adjusted in some of these countries. Most importantly, the information on sector (NACE) was not used in the former Yugoslav Republic of Macedonia and the information on occupation (ISCO) was not used in Albania. In Kosovo, the national LFS statistics referred to the active population (including the unemployed) rather than the working population. As a consequence, care is needed when interpreting the weighted results (particularly for Kosovo).

Supra-national weights

The differences between countries in the size of their workforce are not (fully) reflected in the sample size in each country. To ensure that larger countries weigh more heavily in the EU-level results, supra-national weights have been applied when performing analyses on the European level.

Quality assurance

To ensure high quality of the fifth EWCS data, each stage of the survey was carefully planned, closely monitored and documented, and specific controls were put in place (Gallup Europe, 2010c).

When designing the fifth wave, close attention was paid to information gathered in a data user survey on satisfaction with the previous wave and on future needs. In addition, an assessment was made of how the survey can better address the topics that are central to European policymaking.

Questionnaire development meetings were held with experts on survey research as well as with experts on working conditions from several European countries and international organisations to identify emerging topics and to ensure that the questions were relevant and meaningful for both stakeholders and respondents in all European countries.

The findings from the user survey and a review of the relevance of the EWCS for policymaking, as well as the suggestions and recommendations from the experts, were taken into account when drafting the tender specifications for the fifth EWCS, when compiling the draft questionnaire and when planning the management of the survey. The quality report of the fourth EWCS (Petrakos Agilis, 2007) provided recommendations for further improving the survey methodology.

Quality control mechanisms were included in the tender specifications to ensure the survey was implemented in accordance with best practice and that the various stages were documented in detail.

After the fieldwork, an external quality assessment of the fifth EWCS analysed to what extent the quality criteria outlined in the European Statistical System (ESS) had been met (Ieromnimon et al, 2011).

Limitations of the survey

- Indicators are self-reported by the respondents. Although this method has limitations, it is particularly appropriate for those indicators (mostly psychosocial) that cannot be observed by an external observer. The method is also cost-effective.

- The questionnaire design makes use of questions that have been validated and/or used in other surveys. However, some questions are unique to the EWCS and extensive testing of these questions in all the surveyed countries was not possible.

- The survey is cross-sectional and, even if the survey allowed investigation of the relationships between the different working conditions indicators, causal relations cannot be drawn based on the data. Particularly in analysing work and health, 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.

- As the survey is highly harmonised, it allows comparisons across countries. However, differences between countries may be a result of cultural differences in the interpretation of certain concepts, making it impossible to translate a question completely equivalently.

- The results are based on a sample and not on the whole European population. As a consequence, small differences between countries and over time can be observed as a result of sampling rather than reflecting real differences. This needs to be taken into account when looking at the tables and graphs in the reports. Whenever findings are discussed in the text, differences have been statistically tested to ensure they are not a result of sampling error. Where deemed necessary or interesting, multivariate tests have been carried out to control for the effects of other relevant variables.

Annex 2: Network of national fieldwork institutes

Coordination of the fieldwork was carried out by Gallup Europe. The team was directed by Robert Manchin and coordinated by Agnes Ilyes and Gergely Hideg.

Code	Country	National fieldwork partner
AT	Austria	SPECTRA Marktforschungs GmbH
BE	Belgium	IRB Europe and Fieldforce
BG	Bulgaria	Vitosha Research
CY	Cyprus	Cymar Market Research Ltd
CZ	Czech Republic	FOCUS Centre for Social and Market Analysis
DK	Denmark	SFI Survey
DE	Germany	IFAK Institut GmbH & Co.
EE	Estonia	SAAR POLL Ltd
EL	Greece	Metron Analysis S.A
ES	Spain	Simple Logica
FI	Finland	TOY
FR	France	EFFICIENCE3
IE	Ireland	RED C Research & Marketing Ltd
IT	Italy	Demoskopea S.p.A
HU	Hungary	The Gallup Organisation Hungary
LT	Lithuania	Baltic Surveys Ltd
LU	Luxembourg	Gallup Luxembourg SA and Fieldforce
LV	Latvia	Latvian Facts Ltd
MT	Malta	Misco International Ltd
NL	Netherlands	MSR Consulting Group
PL	Poland	The Gallup Organisation Poland
PT	Portugal	INTERCAMPUS
RO	Romania	The Gallup Organisation Romania
SI	Slovenia	Valicon
SK	Slovakia	FOCUS Centre for Social and Market Analysis
SE	Sweden	IMRI AB – International Market Research Institute
UK	UK	ICM Research
HR	Croatia	Hendal Market Research
TR	Turkey	Konsensus Research and Consultancy
MK	Former Yugoslav Republic of Macedonia	Strategic Puls Research
NO	Norway	Synovate
AL	Albania	Strategic Puls Research
XK	Kosovo	Strategic Puls Research
MO	Montenegro	Strategic Puls Research

Annex 3: Expert questionnaire development group

An expert questionnaire development group was set up in order to discuss the questionnaire of the fifth European Working Conditions Survey. The group was composed of national experts, along with representatives of the European Commission and international organisations.

Advisory Committee

The Advisory Committee is composed of representatives of Eurofound's Governing Board and follows the development of the survey from the questionnaire design to analysis.

Governments

Michel de Gols
Ministry of Labour and Employment
Belgium

Constantinos Petinis
Ministry of Employment and Social Protection
Greece

Employers

Heitor Salgueiro
Confederation of Portuguese Industry (CIP)
Portugal

Maria Angeles Asenjo
National Construction Federation (CNC)
Spain

Trade unions

Herman Fonck
ACV – Dienst Onderneming
Belgium

Erik Pentenga
FNV Beleidsmedewerker arbeidsvoorwaarden
Netherlands

European Commission

Guido Schwarz
Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL)
Belgium

Experts

Michel Gollac
Centre de Recherche en Economie et Statistique (CREST)
France

Jouko Natti
University of Tampere
Finland

National experts

Alain Piette
Belgian Federal Public Service Employment, Labour and Social Dialogue
Belgium

Liliya Bratoeva
Institute for Social Analyses and Policies
Bulgaria

Zvonimir Galic
Faculty of Humanities and Social Sciences,
University of Zagreb
Croatia

Orestis Messios
Ministry of Labour and Social Insurance
Cyprus

Renata Kyzlinkova
Research Institute for Labour and Social Affairs (RILSA)
Czech Republic

Hermann Burr
National Research Centre for the Working Environment
Denmark

Anna-Maija Lehto and Hanna Sutela
Statistics Finland
Finland

Elisabeth Algava
DARES, Ministry of Labour
France

Beate Beermann
Federal Institute for Occupational Safety and Health (BAuA)
Germany

Éva Berde
Corvinus University of Budapest
Hungary

Philip O'Connell
Economic and Social Research Institute (ESRI)
Ireland

Claudia Villosio
LABORatorio R. Revelli, Centre for Employment Studies
Italy

Zaiga Priede
Central Statistical Bureau of Latvia
Latvia

Roland Maas
CEPS-Instead
Luxembourg

Saviour Rizzo
Centre for Labour Studies, University of Malta
Malta

Irene Houtman
TNO
Netherlands

Cecile Aagestad
National Institute of Occupational Health
Norway

Anna Baranowska
Ministry of Labour and Social Policy
Poland

Heloísa Perista
Centro de Estudos para a Intervenção Social (CESIS)
Portugal

Liliana Voicu
AxA Consulting
Romania

Clotilde Nogareda
Instituto Nacional de Seguridad e Higiene en el Trabajo (INSHT)
Spain

Kerstin Fredriksson
Statistics Sweden
Sweden

Brendan Burchell
University of Cambridge
United Kingdom

Ralph Krieger
State Secretariat for Economic Affairs (SECO)
Switzerland

Tuba Burcu Senel
Turkish Confederation of Employer Associations
Turkey

Milan Petkovski
Macedonian Occupational Safety and Health Association (MOSHA)
Former Yugoslav Republic of Macedonia

European Commission

Eleni Dapergola
Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL)
Belgium

Bart De Norre
Eurostat
Luxembourg

Luis del Barrio
Eurostat
Luxembourg

European and international institutions

Marc Sapir
European Trade Union Institute (ETUI)
Belgium

Ana Llena-Nozal
Organisation for Economic Co-operation and Development (OECD)
France

William Cockburn
European Agency for Safety and Health at Work (EU-OSHA)
Spain

Sangheon Lee
International Labour Office (ILO)
Switzerland

European Foundation for the Improvement of Living and Working Conditions

Fifth European Working Conditions Survey: Overview Report

Luxembourg: Publications Office of the European Union

2012 – 151 p. – 21 × 29.7 cm

doi:10.2806/34660
ISBN 978-92-897-1062-6

SALES AND SUBSCRIPTIONS

Publications for sale produced by the Publications Office of the European Union are available from our sales agents throughout the world.

How do I set about obtaining a publication?

Once you have obtained the list of sales agents, contact the sales agent of your choice and place your order.

How do I obtain the list of sales agents?

- Go to the Publications Office website: http://www.publications.europa.eu/
- Or apply for a paper copy by fax (352) 2929 42758

TJ-30-12-411-EN-C

Work plays a pivotal role in people's lives, in the functioning of companies and in society at large. Improving the quality of work and working conditions has long been at the forefront of EU policy, most recently in the Europe 2020 Strategy towards 'Smart, inclusive and cohesive growth'. The fifth European Working Conditions Survey (EWCS) explores topics as diverse as physical risks, working time, gender segregation, work–life balance, employee representation, work organisation, stress at work, skills development and pay, as well as health and well-being. The survey charts trends in working conditions, identifies major risk factors and highlights issues meriting policy attention. Based on interviews with 44,000 workers across 34 European countries, the fifth EWCS represents a rich store of information and analysis on work in all its dimensions in Europe today.

ISBN 978-92-897-1062-6

Publications Office

Eurofound