



# Fourth European Working Conditions Survey



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European Foundation for the Improvement of Living and Working Conditions

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# Foreword

As the European Union continues to expand its borders, the differing norms in terms of both working and living conditions across the continent become increasingly apparent. For Europe's policymakers, such differences present serious challenges as they seek to increase productivity, boost employment and improve quality of work. In this context, understanding the conditions of work across the different EU Member States and other European countries is of fundamental importance. Equally, tracking the changes in these areas of quality of work is key to identifying trends which might influence future developments in this sphere.

In this report on the fourth *European Working Conditions Survey*, the Foundation provides a comprehensive overview of the state of working conditions across 31 countries in Europe. Reflecting workers' responses on a wide range of issues such as work organisation, working time, equal opportunities, training, health and well-being and job satisfaction, the report presents a very valuable insight into how European workers experience and assess their working lives and working conditions. Moreover, the five-year cycle of the survey provides an effective means of tracking the impact on working conditions of critical factors and events over a period of time.

As the European Union moves towards implementing the Lisbon objectives in an environment of increasing global competition and demands, we trust this report will contribute to a better understanding of what is required to shape Europe's working environment into the future.

Jorma Karppinen  
*Director*

Willy Buschak  
*Deputy Director*

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## Abbreviations used in the report

EWCS	European Working Conditions Survey
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 Organisation
OECD	Organisation for Economic Cooperation and Development

## Country codes

EU15	15 EU Member States prior to enlargement in 2004
NMS	10 new Member States that joined in 2004
EU25	15 EU Member States, plus the 10 NMS
EU27	25 EU Member States, plus the AC2
AC2	Two countries that joined the European Union in 2007: Bulgaria and Romania
CC2	Two candidate countries for membership of the EU: Croatia and Turkey

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

## Country groups

Continental countries: AT, BE, DE, FR, LU

Ireland and the United Kingdom: IE, UK

Eastern European countries: CZ, EE, HU, LT, LV, PL, SI, SK

Southern European countries: CY, EL, ES, IT, MT, PT

Scandinavian countries and the Netherlands: DK, FI, NL, SE

Acceding countries: BG, RO

Candidate countries: HR, TR

EFTA (European Free Trade Association): CH, NO

*Typology adapted from Esping-Andersen*



# Introduction

Promoting employment, and improving living and working conditions, are amongst the primary objectives of the European Union and its Member States, as stipulated in Article 136 of the Treaty of Rome; in order to achieve this aim, it is necessary to be able to monitor and assess progress in this field. To measure working conditions, it is important to consider a range of different aspects related to job characteristics and employment conditions, health and safety, work organisation, learning and development opportunities and the balance between working and non-working life.

Several tools attempt to address elements of quality of work in Europe. Eurostat labour force surveys provide a regular source of information on European labour markets; however, they give little information on working conditions, with the exception of some of the ad hoc modules. Statistics are collected at European level on occupational diseases (EODS) as well as on accidents at work (ESAW). They are primarily based on harmonised national administrative sources. Furthermore, while several countries carry out surveys on the quality of work, the data from different countries are not harmonised.

It was against this background and with the aim of improving quality of work in Europe that the Foundation launched its first survey on working conditions at the beginning of the 1990s, to cover the then 12 Member States. The survey has since been repeated in 1995/1996, to include the EU15, and again in 2000 when it included Norway. The 2000 survey was extended in 2001 to include the 10 new Member States (the then acceding countries) as well as Bulgaria, Romania and Turkey (at that time, the candidate countries). In 2005, the fourth *European Working*

*Conditions Survey* was carried out simultaneously in 31 countries: the EU25; the two acceding countries, Bulgaria and Romania; the two candidate countries, Croatia and Turkey; and Norway and Switzerland, which financed their own participation in the survey.

The initial aims of the survey remain valid: identifying priorities and measuring results; monitoring trends and changes over the years; and highlighting the possible contribution of the survey to policymaking. Over the 15 years in which it has run, the survey has provided a complex and multifaceted portrait of work and working conditions in an enlarged Europe. It has also stimulated new research in order to better understand, interpret and contextualise the data.

This new edition of the *European Working Conditions Survey* has benefited from much valued inputs from national and European experts on working conditions and data collection through a series of meetings aimed at reviewing the questionnaire. In parallel, a critical analysis of the production of the data took place with a view to improving and ensuring the quality of the data collected. In addition, a qualitative post test is being carried out in five Member States; it will contribute to better understanding the influence of (national) cultures and institutional frameworks.

This report gives a straightforward presentation of the key results of the fourth *European Working Conditions Survey*. More detailed statistical results are available on the Foundation's website and further in-depth analysis will focus on some of the key policy issues in greater detail.

# Context and structural data 1

This chapter provides an overview of the employment structure across the 31 countries that were included in the fourth *European Working Conditions Survey*, using tables and figures to illustrate the data. It gives a breakdown of the workforce first by job-related characteristics, then looks at employment status and contract and examines some individual characteristics of European workers. Finally, the chapter documents the nature and extent of gender segregation in Europe. It aims to provide background information on key characteristics of the European workforce for the report as a whole. In the general overview of structural factors in the context of the Europe-wide labour market, all 31 countries are included in the analysis; in the focus on gender segregation, the point of reference is the EU27.

Wherever possible, the chapter outlines trends for the 15-year period over which the survey has been running (at least for those variables that have remained the same). For each of these variables, conditions in the European Union at the time of each survey are compared, based on the number of Member States at that time. Therefore, the observed cumulative changes reflect real changes in working conditions over the period as well as the history of European integration. (Unless otherwise stated, this chapter consists of a description of the fourth *European Working Conditions Survey*.<sup>1</sup> Readers are advised to revert to the Labour Force Survey to quantify precisely some groups in the European workforce.)

## Country groups

In the report, countries are presented in groups according to an adapted Esping-Andersen<sup>2</sup> typology, which has been expanded to include all countries covered by the survey. The need to use a typology comes from the practical difficulties of analysing and reporting data for a large number of countries. The reasoning behind the selection of this typology was that these groups are familiar to European policymakers; moreover, the typology appears to ‘fit’ at least a superficial description of working conditions issues. The countries that took part in the fourth *European Working Conditions Survey* are divided into eight groups as follows:

- continental countries: AT, BE, DE, FR, LU<sup>3</sup>
- Ireland and the United Kingdom: IE, UK
- eastern European countries: CZ, EE, HU, LT, LV, PL, SI, SK

- southern European countries: CY, EL, ES, IT, MT, PT
- Scandinavian countries and the Netherlands<sup>4</sup>: DK, FI, NL, SE
- acceding countries: BG, RO<sup>5</sup>
- candidate countries: HR, TR
- EFTA<sup>6</sup>: CH, NO

This typology will be used throughout the report to highlight differences between country groups.

## Employment situation in Europe

At the time the survey was carried out, about 235 million people were employed in the 31 countries included in the survey. Table 1.1 presents key labour-market indicators for each country.

These indicators highlight the following divergences between countries:

- the high weighting of a number of countries compared to the averages: when considering the EU27, 50% of workers are concentrated in five countries – Germany (17%), UK (14%), France (12%), Italy (11%) and Spain (9%);
- the varying performances in employment and unemployment rates: for example, there is a difference of over 20 percentage points between Poland (52%) and Denmark (over 75%) regarding employment rates; nine countries covered by the survey have an unemployment rate of more than 10%, while in nine other countries it is below 6%;
- the different participation rates of women in the workforce: there is a gender employment gap of less than 10 percentage points in eight countries; in seven other countries, conversely, there is a gap of more than 20 percentage points;
- the different levels of use of temporary contracts;
- divergences in the use of part-time work: in seven of the survey countries, more than one out of five workers works part time; in 13 other countries, fewer than one in 10 works part time. In 12 countries, more than one woman in three works part time, while in seven countries the equivalent figure is less than one in 10.

These differences in labour market indicators are likely to impact on working conditions. Along with legal, social,

<sup>1</sup> *Quality Report of the 4th European Working Conditions Survey*. (<http://www.eurofound.europa.eu/ewco/surveys/EWCS2005/qualityassurance.htm>) documents the coherence of variables from the survey with similar variables from other surveys.

<sup>2</sup> Esping-Andersen, G., *The three worlds of welfare capitalism*, Cambridge, Polity Press, 1990.

<sup>3</sup> An explanation of the country codes is given on page viii at the beginning of the report.

<sup>4</sup> Due to increased similarities between Scandinavian countries and the Netherlands, the latter has been added to the group.

<sup>5</sup> Bulgaria and Romania became EU Member States on 1 January 2007.

<sup>6</sup> European Free Trade Association

Table 1.1: Key labour market indicators in Europe

	Employment (000s)	Employment rate, %	Unemploy- ment rate, %	Male employment rate, %	Female employment rate, %	Gender employment gap, percent- age points	Temporary contracts, % of workforce	Part-time work, % of workforce	Part-time work, % of female workforce
BE	4,134	60.6	8.4	67.9	53.3	14.6	8.6	21.5	40.5
DE	35,811	65.9	10.1	71.6	60.1	11.5	12.4	22.3	41.6
FR	24,048	62.9	9.5	68.5	57.3	11.2	12.6	16.9	30.3
LU	186	61.6	4.8	72.4	50.6	21.8	4.9	17.8	40.2
AT	3,745	68.1	5	75.2	61	14.2	8.7	19.7	38
EL	4,250	59.6	10.5	73.8	45.5	28.3	11.7	4.6	8.5
ES	18,181	61.8	10.6	74.2	49.2	25	32.9	8.7	17.7
IT	22,286	58	8.3	70.2	45.9	24.3	12	12.8	25.2
CY	332	68.8	5.2	79.8	58.6	21.2	12.6	8.5	13.4
MT	147	54.0	7	74.3	33.5	40.8	5.1	8.9	20.6
PT	4,821	67.8	7.5	73.8	62	11.8	19.4	11.5	16.5
DK	2,691	75.6	5.1	79.4	71.6	7.8	8.8	22.1	33.2
NL	8,022	73.1	4.6	80	66.1	13.9	15.1	45.8	74.6
FI	2,327	67.1	8	69	65.1	3.9	14.7	14.4	19.7
SE	4,195	71.5	6.2	73.1	69.9	3.2	15.2	24	36.7
IE	1,859	66.7	4.5	76	57.2	18.8	3.6	16.7	31.4
UK	27,614	71.8	4.7	78	65.7	12.3	6	25.3	42.9
CZ	4,672	64.5	8.2	72.8	56.1	16.7	9.1	4.8	8.3
EE	577	63.4	8.7	67.9	59.4	8.5	2.4	7.7	9.4
LT	1,423	61.4	10.7	64.9	58.1	6.8	5.8	8	10.1
LV	987	62.2	10.3	65.9	58.7	7.2	8.9	11.1	14.1
HU	3,884	57	6.3	63.3	51	12.3	7.1	4.7	6.4
PL	13,731	52.4	18.3	58.4	46.5	11.9	24	11.1	14.5
SI	911	64.9	6.6	70.1	59.5	10.6	17.7	8.8	10.3
SK	2,189	57.5	17.3	64	51.1	12.9	5.7	2.6	4.2
BG	2,871	54.1	12	58	50.3	7.7	6.9	1.9	2.2
RO	8,592	57.4	8.5	63.2	51.6	11.6	2	9.2	9.5
HR	1,333†	54.9	14.1	62.3	47.8	14.5	12.4	8.7	11.1
TR	21,791	43.7	10.3	73.5	26.5	47	No data	16.6*	30.8*
NO	2,226	75.3	3.9	78.1	72.5	5.6	10.1	29.4	45.7
CH	3,959	67.3	4.3	76	59.1	16.9	No data	31.7*	56.9

Source: EU data: Labour Force Survey, Statistics in Focus, 6/2005 (labour market trends for fourth quarter 2004); Turkey: national statistics, 2004; Switzerland: Enquête suisse sur la population active (ESPA) Office fédéral de la statistique, 2004; Croatia: From the LFS 3rd quarter 2005 and the Croatian Statistical Office website (†); \* Foundation's own calculations.

economic and cultural differences, they are worth keeping in mind when reading and interpreting results.

### Sectoral distribution

In the EU27, more than 66% of the workforce is employed in the services industry (codes G to Q in the NACE classification); 29% work in manufacturing (codes C to F) and 5% work in agriculture (codes A and B). The biggest

employers in the EU27 are the manufacturing industry (employing 19% of European workers), the wholesale and retail trade (16%), as well as health (10%) and education (7%).<sup>7</sup>

Since 1991, the trend towards declining employment in agriculture and manufacturing has continued, as has the trend of a corresponding increase in employment in

<sup>7</sup> Data have been weighted against the Labour Force Survey (LFS) for sectors, occupations, age, sex and region.

Figure 1.1: Distribution of employment, by sector (%)

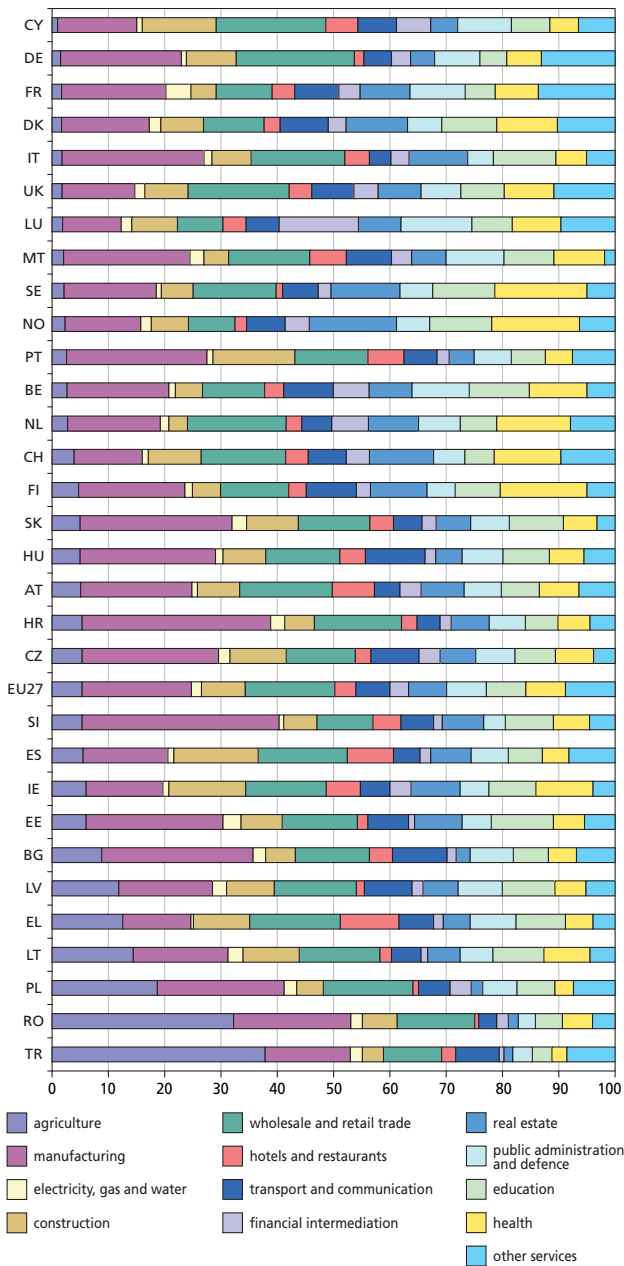
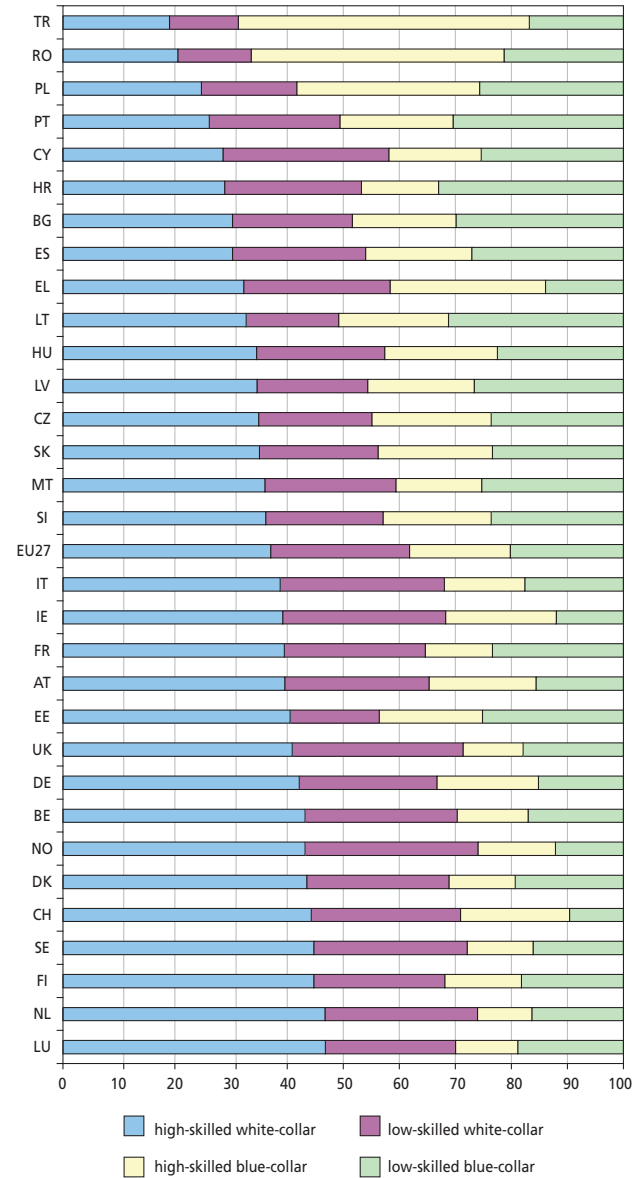


Figure 1.2: Distribution of types of occupation, by country (%)



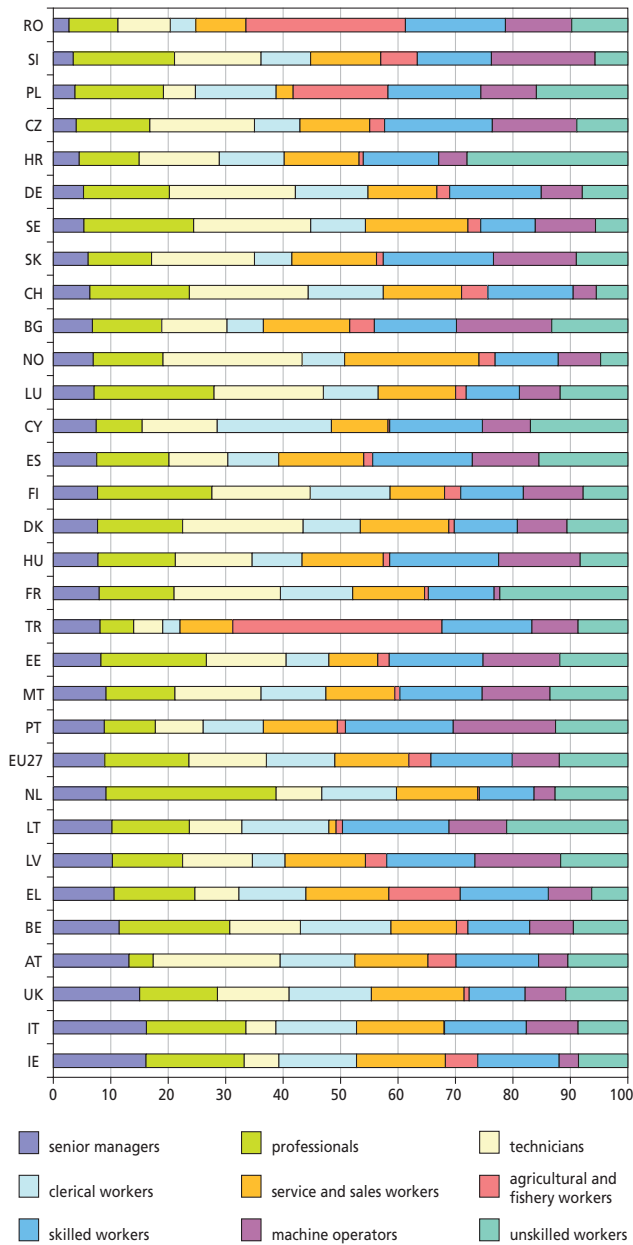
services, particularly in real estate, and health and social work. This trend has, however, halted slightly since the last wave of enlargement in 2004.

Country differences in the distribution of sectoral employment are important. In particular, the importance of agriculture as an employer varies considerably between countries: just 1% of the workforce is employed in agriculture in Cyprus, while it employs more than 10% of the

workforce in Greece, Latvia, Lithuania and Poland, and more than 30% of the workforce in Romania and Turkey. The specific nature of working conditions in agriculture is likely to impact on general working conditions in these countries: agricultural workers, by comparison with those in other sectors, are particularly exposed to physical risks and long and non-standard working hours; however, they also have greater latitude for decision-making.<sup>8</sup> Similarly, manufacturing employs a higher percentage of the

<sup>8</sup> See, for example, the Foundation study, *Sectoral profiles of working conditions*, <http://www.eurofound.europa.eu/pubdocs/2002/75/en/1/ef0275en.pdf>

**Figure 1.3: Occupational distribution of employment, by country (%)**



workforce in the eastern European countries; depending on the types of manufacturing being carried out, this will also impact on general working conditions in these countries.

**Occupational distribution**

The occupational structure of the employed population in the EU27 is composed of high-skilled white-collar occupations (37%), low-skilled white-collar occupations (25%), high-skilled blue-collar occupations (18%), and low-skilled blue-collar occupations (20%).<sup>9</sup> In nine Member

<sup>9</sup> The blue-collar/white-collar worker division is based on assigning ISCO 1-digit categories 1–5 to white collar and ISCO 1-digit categories 6–9 to blue collar (armed forces excluded).

States, high-skilled white-collar jobs now account for more than 40% of employment.

Figure 1.2 shows the distribution of workers in terms of occupation type in the 31 countries covered by the survey.

Figure 1.3 presents a detailed breakdown of the distribution of employment by occupation. Across the EU27 as a whole, more than 50% of the workforce is employed in four occupational categories: professionals (15%), skilled workers (14%), technicians (13%), and service and sales workers (13%).

**Company size and type**

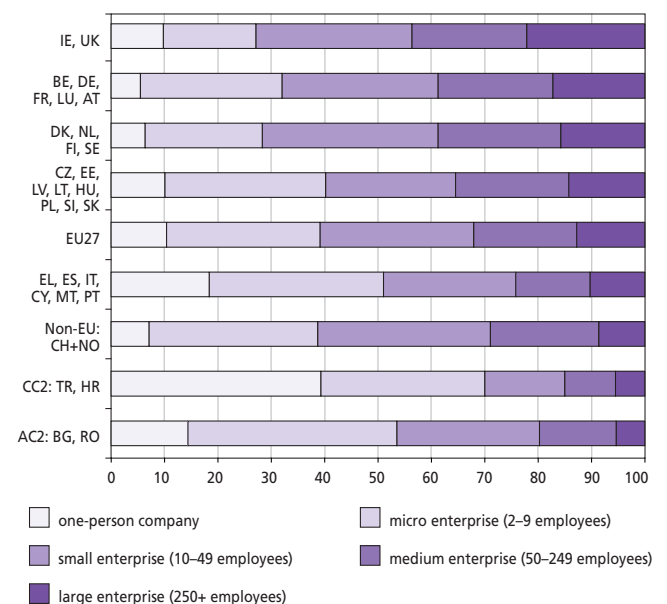
Most workers in Europe work in small companies: 10% in one-person companies, 28% in micro enterprises (up to nine workers), 28% in small enterprises (between 10 and 49 workers), 19% in medium-sized enterprises (between 50 and 249 workers) and 15% in large enterprises (250 employees and over).

Nearly seven out of every 10 workers are employed in the private sector; a quarter (25%) works in the public sector and 6% work in joint private-public organisations or non-governmental bodies. The lowest percentage of public-sector employment is to be found in the acceding and candidate countries, southern European and continental countries.

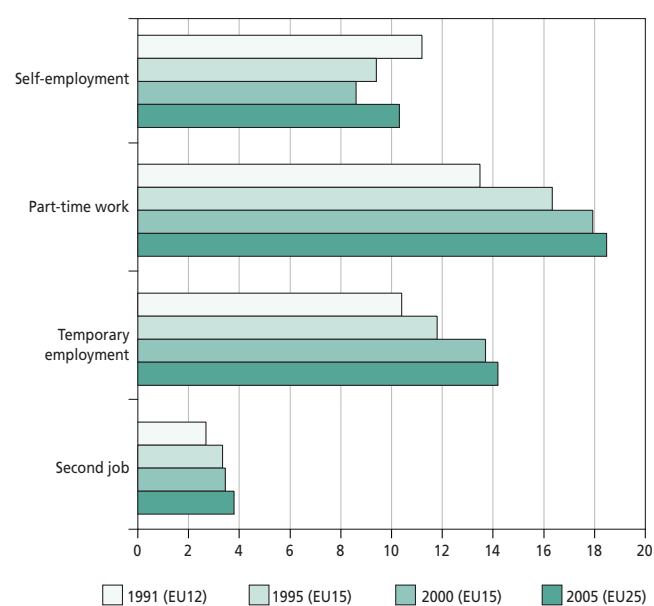
**Employment status**

Increased flexibility in recent years has contributed to a greater diversification of employment status, resulting in an

**Figure 1.4: Distribution of employment, by company size and country group (%)**



**Figure 1.5: Non-standard employment in the European Union, 1991–2005 (%)**



Source: Labour Force Survey.

Note: 'Temporary employment' refers to workers on fixed-term contracts and those on temporary agency contracts.

increase in non-permanent, non full-time forms of employment.

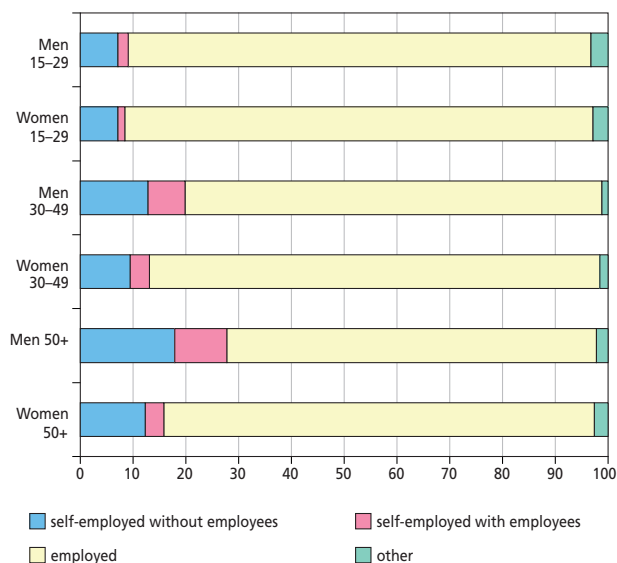
### Self-employment

The survey examined the extent of self-employment across Europe, looking in detail at persons who are self-employed on their own (11%), and those who are self-employed with employees (5%). A higher proportion of men than women are self-employed: of those who are self-employed without employees, 63% are men while only 37% are women. The equivalent percentages of men and women who are self-employed and have employees are 73% and 28% respectively.

The percentage of the workforce that is self-employed is highest in the candidate countries (44% without employees, and 8% with employees) and in the southern European countries (20% and 3% respectively). It is lowest in the Scandinavian countries and the Netherlands (7% without employees, and 3% with employees). Across Europe, there is a great variation in the nature of self-employed work, encompassing entrepreneurs, economically dependant workers and farmers.

In the EU27, self-employment is most concentrated in agriculture (48% of workers in agriculture are self-employed without employees and 7% are self-employed with employees). It is also quite prevalent in construction, hotels and restaurants, the wholesale and retail trade, real estate and other services (averaging in these sectors around 14%

**Figure 1.6: Employment status, by sex and age group, EU27 (%)**



of self-employed without employees and between 5% and 10% of self-employed with employees).

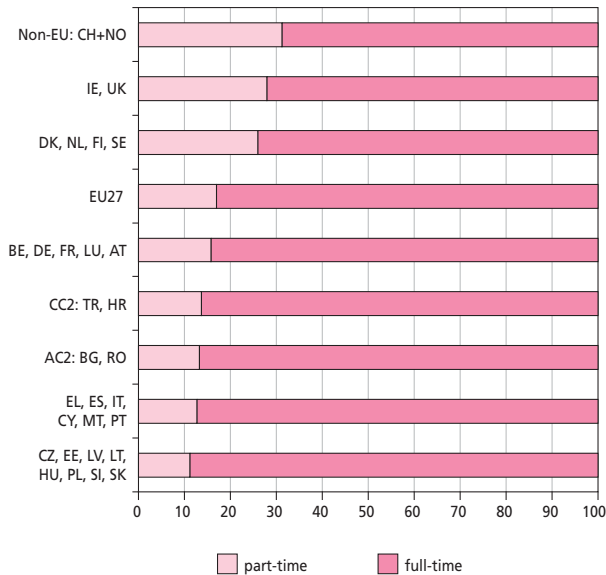
Of those who are self-employed without employees, 26% are agricultural and fishery workers. The typical self-employed person is an older, male worker who is less skilled than the rest of the workforce; however, self-employed individuals working in the agriculture sector have quite different profiles from other self-employed individuals.

### Part-time work

17% of all jobs in the EU27 are part-time jobs and these are mainly held by women: 29% work part time compared to 7% of men. The incidence of part-time work is most prevalent in Ireland and the UK (28%) and in the Scandinavian countries and the Netherlands (26%), and least prevalent in eastern European countries (11%) and southern European countries (13%) (see Figure 1.7). In terms of individual countries, it is most common in the Netherlands (where 34% of the workforce works part time) and the UK (29%); overall the proportion of part-time workers is above or just reaching the European average in nine countries (Belgium, Denmark, Luxembourg, Netherlands, Sweden and the UK). Part-time work is least common in Cyprus, Latvia, Slovakia, Slovenia and Portugal (less than 7%). Over half of all part-time workers (57%) declare they are satisfied with their working hours, 22% say they would prefer to work full time (the highest proportions in this respect are reported in eastern European and acceding countries) and 15% say they would like to work longer hours.

In the EU, part-time work is associated more with employees and with self-employed workers who have no

**Figure 1.7: Distribution of part-time and full-time work, by country group (%)**

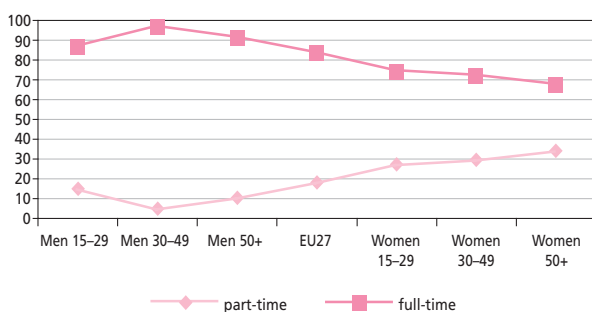


employees (17% of the latter work part time, compared to only 8% of self-employed workers with employees). Part-time work is also more often associated with temporary work: 25% of workers with a fixed-term contract and 37% of temporary agency workers work part time; in contrast, only 14% of workers on indefinite-term contracts do so.

As regards the sectoral distribution, part-time work is most prevalent in other services (30%) and health (28%), hotels and restaurants (27%), and in education and the wholesale and retail trade (24% and 23% respectively). A significant proportion of unskilled workers (29%), service and sales workers (28%), and clerical workers (24%) work part time; part-time work is considerably less common for skilled workers (5%), machine operators (6%) and senior managers (7%).

As Figure 1.8 illustrates, part-time work for women increases with age, whereas part-time work is most common among the younger (14%) and older (10%) age categories of men.

**Figure 1.8: Distribution of part-time work, by age and sex, 31 European countries (%)**

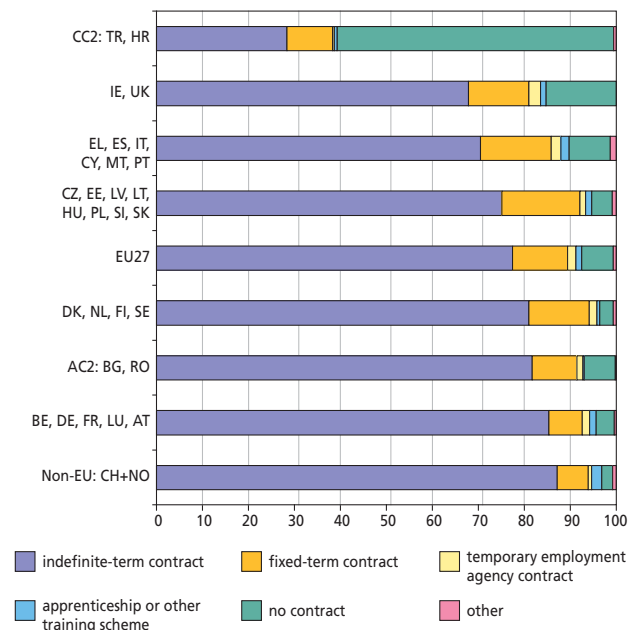


## Type of employment contract

### Indefinite-term contract

On average in the EU27, 78% of employees report holding a contract of indefinite term; however, substantial differences exist between countries: twice as many respondents in Luxembourg and Belgium (90% and 89% respectively) hold indefinite contracts as in Cyprus and Malta (46% and 50% respectively). In terms of country groups, a higher-than-average proportion of respondents in continental countries (85%) hold indefinite contracts, while the lowest proportion is found in Ireland and the UK and southern European countries: 68% and 70%, respectively. In the candidate countries, the majority of employees have no employment contract (60%), while 28% of them have an indefinite-term contract.

**Figure 1.9: Distribution of employment contracts, by country group, EU27 (%)**



Note: Figures apply to employees only

In general, workers with a higher level of education are more likely to hold an indefinite employment contract: 83% of those with a third-level education hold an indefinite term contract, as compared to 66% of those with only primary level education. Slightly more men (79%) than women (76%) hold an indefinite-term contract. Lower-than-average percentages of unskilled workers and skilled agricultural workers hold indefinite-term contracts (65% and 58% respectively).

### Fixed-term contract

On average in the EU27, 12% of employees work under fixed-term contracts; in this respect, however, there are

notable differences between individual countries. Fixed-term contracts are most prevalent in Poland (22% of employees), Spain (21%), Bulgaria (19%) and the Netherlands (16%).

Differences also exist between country groups: eastern European countries have the highest proportion of fixed-term contracts (17%) – 10 percentage points higher than the continental and EFTA countries, which have the lowest proportion (7%).

In the EU27, fixed-term contracts are most common in the hotels and restaurants sector (21%), education (16%), agriculture (15%), health and the wholesale and retail trade (14% in both sectors). Across all age groups, a higher proportion of women than men hold fixed-term contracts (14% compared to 10%). Higher-than-average proportions of unskilled workers and service and sales workers hold fixed-term contracts (15% and 14% respectively).

On average, the majority (58%) of workers on fixed-term contracts have a contract of one year's duration or less, while 20% have a contract with no specified duration. Ireland and the UK are, however, markedly different from the average: 21% of workers on fixed-term contracts have contracts of one year or less and 56% have contracts with no specified duration.

#### Temporary-agency contract

On average, only 2% of employees hold temporary-agency contracts: such contracts are most commonly held by employees in the hotels and restaurants sector and by unskilled workers (4% for both groups). Apprenticeship and training contracts are very scarce, being held by only 1% of employees.

#### Lack of employment contract

On average in the EU27, 7% of employees report having no employment contract; Cyprus has the highest proportion of such employees (42%), followed by Malta (39%), the UK (15%) and Slovenia (10%). The sectors that have the most employees without contracts are agriculture (24%) and hotels and restaurants (20%). In terms of occupational categories, agricultural workers and unskilled workers report the highest incidence of being without a contract (24% and 14% respectively).

#### Labour market entrants

Most of the new entrants to the labour market (those who have spent fewer than four years in paid employment since stopping full-time education) are employees (84%). The

majority (54%) hold an indefinite-term contract, 26% have a fixed-term contract, 10% have no contract, 5% are apprentices and 4% are temporary agency workers.

A high percentage of newly hired staff in companies (with less than a year's seniority) work under a temporary employment contract: 40% of workers who have been in a company for less than one year hold an indefinite-term contract, 33% a fixed-term contract, 7% a temporary agency contract, 3% are in an apprenticeship, while 15% have no contract.<sup>10</sup>

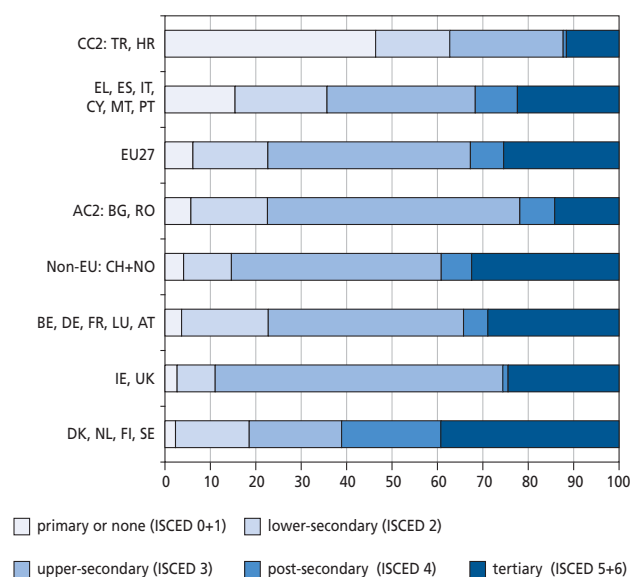
### Profile of the European worker

#### Educational level

The typical European worker is 40 years old and completed full-time education at the age of 18. On average, 59% of men finished their education before or at the age of 18 compared to 54% of women.

Major differences between country groups in this respect can be seen, with workers in the Scandinavian countries and Netherlands finishing their education at a later age than workers in the other country groups. This is mirrored by the higher proportion of workers in those countries that completes third-level education.

Figure 1.10: Educational level, by country group (%)



#### Job tenure

In the EU27, the average worker has spent 10 years in their current job. However, some sectors are characterised by shorter-than-average periods of job stability: in the hotels

<sup>10</sup> Among such employees, 2% were classified as 'other'.



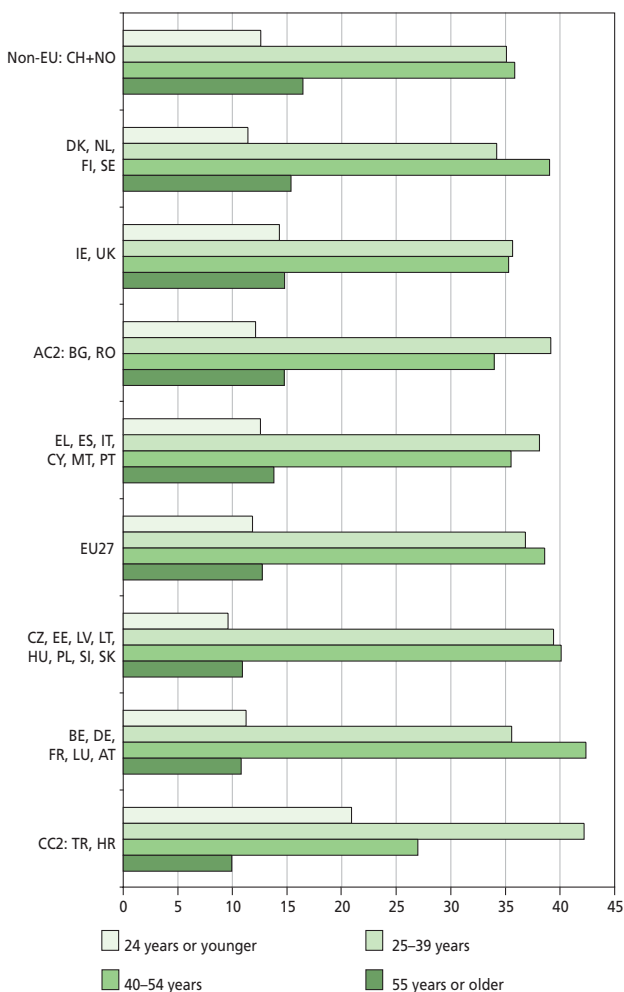
and restaurants sector, 25% of employees have spent only one year or less in their job; similarly, in the wholesale and retail trade, real estate, construction, and electricity, gas and water, 12%–13% of workers report just one year or less of service, which is an indication of the sectors with the highest turnover.

**Age**

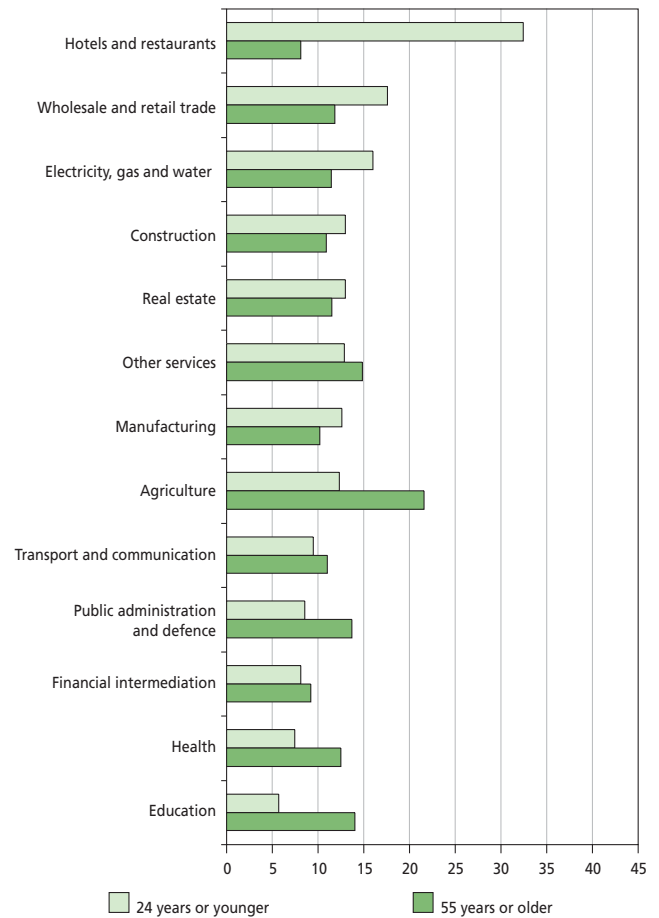
Figure 1.11 illustrates how demographic ageing is affecting different country groups: countries such as the Scandinavian countries and the Netherlands that have a higher proportion of older workers will see a substantial proportion (above 15%) of their workforce retiring over the next 10 years.

Differences also exist between the age profile of different sectors, as Figure 1.12 illustrates. For example, in two sectors – education and agriculture – the proportion of workers aged 55 years or more is more than eight percentage points higher than the proportion aged 24 years

**Figure 1.11: Age distribution of workers, by country group (%)**



**Figure 1.12: Age distribution, by sector, 31 European countries (%)**



or under, an indication that these sectors will have to adapt to current demographic pressures.

In contrast, three sectors have a much higher proportion of younger workers than older workers: the hotels and restaurants sector, the wholesale and retail trade and electricity, gas and water.

**Nationality**

Across all 31 European countries covered by the survey, 3% of workers are not citizens of the country in which they work: 2% comes from outside the EU, while 1% comes from another EU Member State.

Luxembourg has the highest proportion of non-national workers (38%), followed by Estonia (17%), Switzerland and Latvia (14%) and Spain (13%).

Most non-national workers are employed in other services and construction (18% and 17%, respectively).

**Household characteristics**

Over half of all households (55%) have two wage-earners and around a third (30%) have only one wage-earner. In a

small minority of households (15%), there are more than two workers.

### Gender segregation

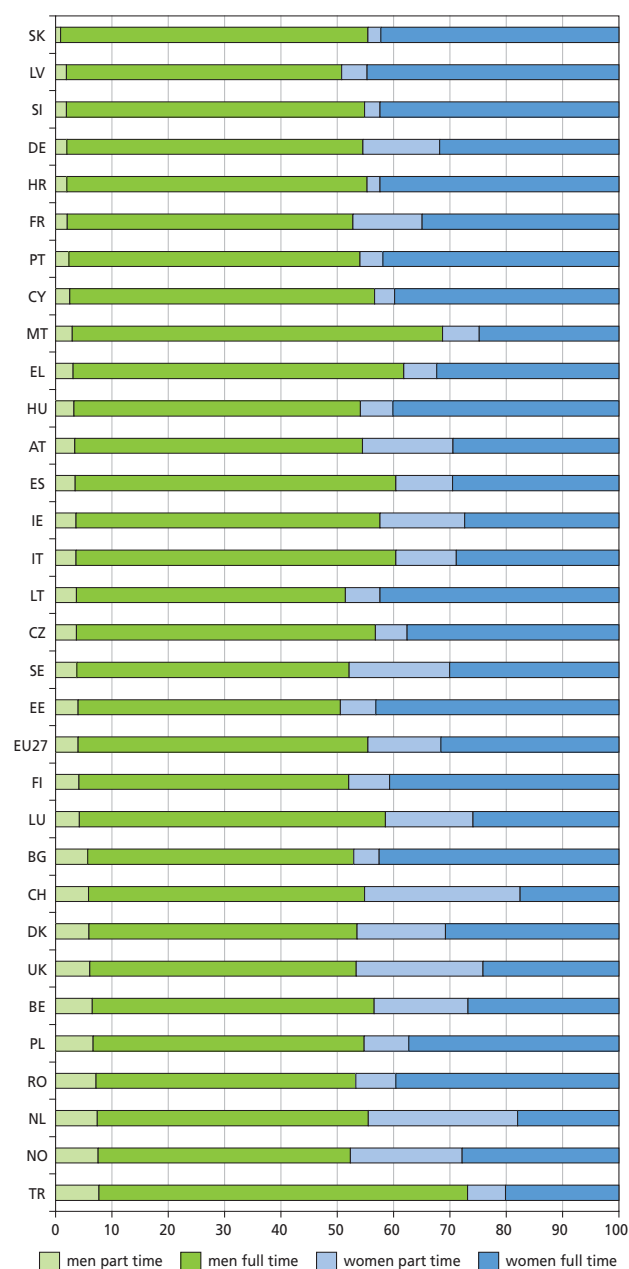
On average in the EU27, more men than women are in paid employment (55% compared to 44%).<sup>11</sup> However, in three countries – Lithuania, Latvia and Estonia – the proportion of women in the workforce is almost equal to that of men (49%), while in five countries it is less than 40% (Turkey 27%, Malta 31, Spain 39, Italy 40 and Greece 38%).

Gender segregation is the phenomenon of women being under-represented in some occupational areas and over-represented in others (relative to their average representation in employment overall). A number of studies, including analyses of the previous editions of the *European Working Conditions Survey* have revealed that a high degree of gender segregation is a persistent feature of the structure of employment in Europe.<sup>12</sup> Analysis of a number of dimensions in the survey reveals the extent of gender segregation in 2005.

Segregation can take place across various employment variables: occupation, sector, economic status of the firm, employment status, employment contract and form (full-time/part-time work). Alongside the 'horizontal' segregation of women into different types of jobs is 'vertical' segregation: the under-representation of women in higher hierarchical positions, better paid jobs and jobs with a higher status.

In recent years, part-time work – largely a female phenomenon – has been increasing in Europe. For example, between 2000 and 2005, 43% of newly created jobs have been women's part-time jobs, 15% men's part-time jobs, 22% men's full-time jobs and 20% women's full-time jobs.<sup>13</sup> This development can be categorised as a success as more people, especially women, have been able to re-enter or remain in the labour market due to the availability of part-time work and hence have been better able to reconcile work and outside work responsibilities; however, it is important to acknowledge that the rise in employment rates does not necessarily result in an improvement in the quality of employment any more than it guarantees greater equality between men and women.<sup>14</sup> This is why when considering gender equality issues, it is important to distinguish between male and female part- and full-time status.

Figure 1.13: Gender breakdown of employment, by country and employment status (%)



Looking at all jobs together, and differentiating them by gender and part-time/full-time status (Figure 1.13), it is interesting to note that, on average, the majority of jobs (52%) are men's full-time jobs, nearly a third of them (32%)

<sup>11</sup> For more information on participation rates, please refer to Figure 1.1.

<sup>12</sup> See for example, *Gender, jobs and working conditions in the European Union*, <http://www.eurofound.europa.eu/publications/htmlfiles/ef0249.htm> or *Gender and working conditions in the European Union*, <http://www.eurofound.europa.eu/publications/htmlfiles/ef9759.htm>

<sup>13</sup> *Employment in Europe 2006*, Figure 22, p. 40, European Commission, Brussels, 2006.

<sup>14</sup> See, for example, *Working-time preferences and work-life balances in the EU*, <http://www.eurofound.europa.eu/publications/htmlfiles/ef0342.htm>, *As time goes by: A critical evaluation of the Foundation's work on time* <http://www.eurofound.europa.eu/pubdocs/2003/09/en/1/ef0309en.pdf> or *Part-time work in Europe* <http://www.eurofound.europa.eu/ewco/reports/TN0403TR01/TN0403TR01.htm>

are women's full-time jobs, 13% are part-time women's jobs and 4% are men's part-time. The proportion of men's part-time jobs is above the EU27 average in Belgium, Bulgaria, Denmark, the Netherlands, Poland, Romania and the UK, while the proportion of women's part-time jobs is above average in Austria, Belgium, Denmark, Germany, Ireland, Luxembourg, the Netherlands (whose rate of 27% is higher than the proportion of women's full-time jobs in this country – 18%), Sweden and the UK (which at 23% is slightly less than the proportion of women's full-time jobs – 24%).

### Employment status

There are similarities in the employment status of men and women: for example, a similar proportion (6%) of men and women hold second jobs, in which they spend approximately the same length of time (around 12 hours per week). For 3% of both men and women, working in a second job is a regular activity, while for 4% it is occasional and/or seasonal.

The same percentage (7%) of male and female employees does not have any employment contract, and equal percentages (2%) are temporary agency workers. Among younger employees (those aged 29 years or younger), an equal proportion (60%) of men and women work under an indefinite-term contract.

However, there are some clear differences: for example, as we have seen earlier, a higher proportion of men than women are self-employed (the gender gap for the self-employed without workers is three percentage points and four percentage points for the self-employed with workers). As noted earlier, a higher proportion of female than male employees hold fixed-term contracts (14% compared with 10%), and part-time work is more common among women (29% of women work part time, compared to 7% of men).

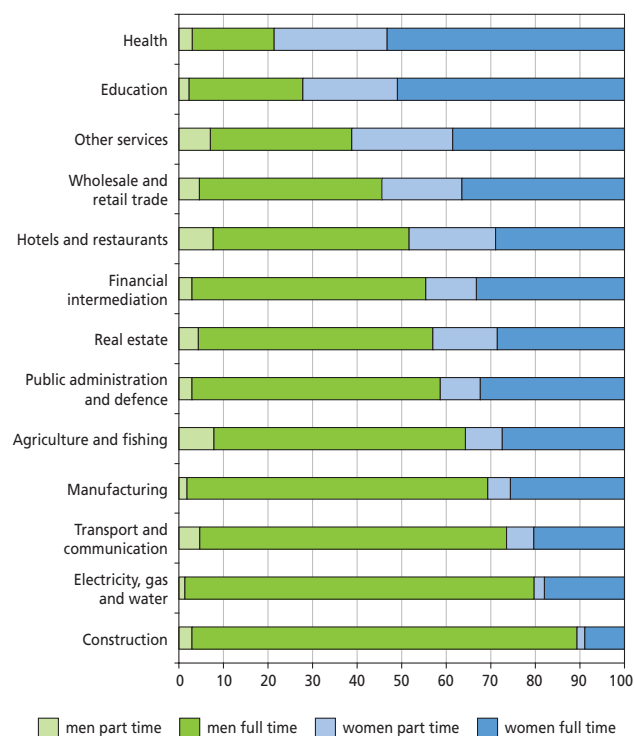
### Sectoral segregation

Figure 1.14 illustrates the extent of sectoral segregation in the EU27.

There are five sectors in which male workers predominate: the construction sector (89% of male workers), electricity, gas and water (80%), transport and communication (74%), manufacturing (69%) and agriculture (64%).

In contrast, there are four sectors in which women prevail: the health sector (79% of female workers), education (72%), other services (61%) and the wholesale and retail trade (55%). These sectors also have a higher-than-average proportion of women's part-time jobs (above 20% in all but wholesale and retail, where the proportion of women's part-time jobs is 18%).

**Figure 1.14: Distribution of employment, by sector, sex and part-time/full-time status, EU27 (%)**



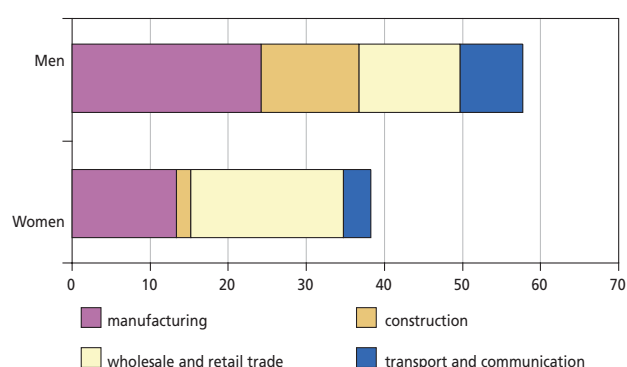
The extent of segregation is usually more pronounced at the company level rather than at a higher aggregated level of indicators, such as sector or occupation. It would be interesting therefore to perform this type of analysis again at a lower level of aggregation: for example, while in general manufacturing is largely male-dominated, some sub-sectors such as the manufacture of clothing and dressing and dyeing of fur are female-dominated.

Sectoral concentration is the extent to which female (or male) employment is concentrated in particular sectors. Male and female employment is almost equally concentrated in four sectors: 58% of men's jobs are concentrated in four sectors (manufacturing, wholesale and retail, construction, and transport) and 57% of women's jobs are concentrated in four sectors (wholesale and retail, manufacturing, health and other services).

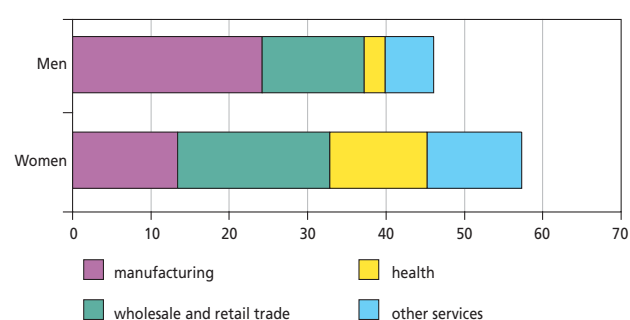
Figure 1.15 illustrates the concentration of men's and women's employment in the four sectors that employ the most men: manufacturing, the wholesale and retail trade, construction, and transport.

Figure 1.16, meanwhile, illustrates the concentration of men's and women's employment in the four sectors that employ the most women: manufacturing, the wholesale and retail trade, health and other services.

**Figure 1.15: Levels of men's and women's employment in sectors employing the most men, EU27 (%)**



**Figure 1.16: Levels of men's and women's employment in sectors employing the most women, EU27 (%)**



Changes in the working conditions of a sector that has a disproportionately male or female workforce, will, naturally, have a disproportionate impact upon men or women. For example, changes in the construction sector will impact on men to a much greater extent than on women.

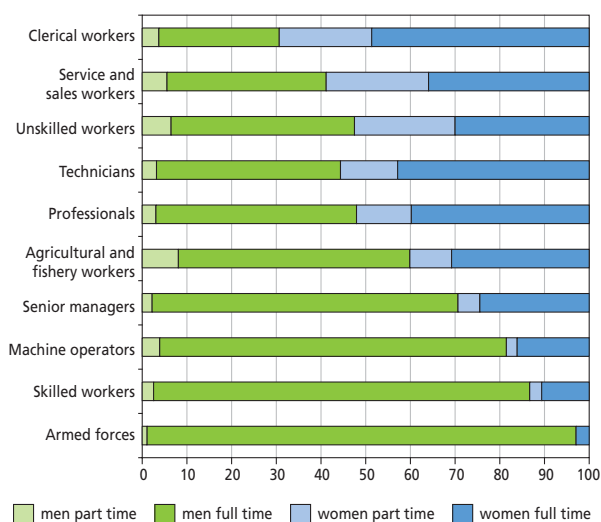
### Occupational segregation

Segregation (measured at 55% or more) can also be observed within occupational categories. As Figure 1.17 indicates, men account for the majority of agricultural and fishery workers, senior managers, machine operators,

**Table 1.2 Categorisation of occupations by gender composition**

Gender-segregated occupations	Occupational subcategory	ISCO code (2 digit)
Very male-dominated white-collar (80% or more of workers are male)	None at ISCO-2 level	
Male-dominated white-collar (60%–80% male, 20%–39% female)	Legislators and senior officials	11
	Corporate managers	12
	Managers of small enterprises	13
	Physical, mathematical and engineering science professionals	21
	Physical and engineering science associate professionals	31
Mixed white-collar (40%–60% female)	Other professionals	24
	Other associate professionals	34
Female-dominated white-collar (61%–80% female)	Life science and health professionals	22
	Teaching professionals	23
	Teaching associate professionals	33
	Office clerks	41
	Customer services clerks	42
Very female-dominated white-collar (80% female)	Life science and health associate professionals	32
Very female-dominated blue-collar (80% or more female)	None at ISCO-2 level	
Female-dominated blue-collar (61%–80% female)	Models, salespersons and demonstrators	52
	Sales and services elementary occupations	91
Mixed blue-collar (40%–60% female)	Personal and protective services workers	51
	Skilled agricultural and fishery workers	61
Male-dominated blue-collar (20%–39% female, 60%–80% male)	Precision, handicraft, printing and related trades workers	73
	Other craft and related trades workers	74
	Stationary-plant and related operators	81
	Machine operators and assemblers	82
	Agricultural, fishery and related labourers	92
Very male-dominated blue-collar (80% or more male)	Extraction and building trade workers	71
	Metal, machinery and related trade workers	72
	Drivers and mobile-plant operators	83
	Other labourers	93

Note: Armed forces are not included.

**Figure 1.17: Occupational segregation of women's and men's employment, EU27 (%)**


skilled workers and members of the armed forces while women account for the majority of clerical workers, service and sales workers and technicians. Only two occupational categories – unskilled workers and professionals – are gender-balanced at this level of aggregation. However, at the sub-category level of these two groups the picture is less balanced: among professionals, life science and health, and teaching professionals are female-dominated while another sub-category – physical, mathematical and engineering science professionals – is male dominated. Similarly, looking at the sub-levels of the unskilled workers category of the elementary occupations, the cleaning, domestic service, refuse and street vendors' occupations are all female-dominated.

Related to this occupational segregation is the phenomenon of occupational concentration (the predominance of one sex in a particular occupation or group of occupations). Table 1.2 categorises occupations by status and gender composition.<sup>15</sup>

**Table 1.3 Distribution of men's and women's employment in gender-segregated occupations categories, EU27 (%)**

Gender-segregated occupations	Percentage of men employed	Percentage of women employed	Percentage of total workforce employed
Male-dominated white-collar (60%–80% male, 20%–39% female)	10	4	14
Mixed white-collar (40%–60% female)	6	6	13 <sup>16</sup>
Female-dominated white-collar (61%–80% female)	6	14	20
Very female-dominated white-collar (80% female or more)	0	2	2
Female-dominated blue-collar (61%–80% female)	5	10	15
Mixed blue-collar (40%–60% female)	5	5	10
Male-dominated blue-collar (20%–39% female, 60%–80% male)	7	3	10
Very male-dominated blue-collar (80% or more male)	15	1	16
All occupations	53	45	100

**Table 1.4 Concentration of men's employment in gender-segregated occupations, EU27 (%)**

Gender-segregated occupations	Men		All men
	Part-time	Full-time	
Male-dominated white-collar (20–39% female)	1	18	19
Mixed white-collar (40–60% female)	1	11	12
Female dominated white-collar (61–80% female)	1	10	11
Very female-dominated white-collar (80% female)	0	0.4	0.4
Female-dominated blue-collar (61–80% female)	2	8	10
Mixed blue-collar (40–60% female)	1	8	9
Male-dominated blue-collar (20–39% female)	1	11	12
Very male-dominated blue-collar (less than 20% female)	1	27	28
All	7	93	100

<sup>15</sup> Model developed by Fagan and Burchell, see *Gender, jobs and working conditions in the European Union*, <http://www.eurofound.europa.eu/pubdocs/2002/49/en/1/ef0249en.pdf>

<sup>16</sup> Exact figures are 6.4 + 6.2, which is then rounded to 13.

Table 1.3 illustrates the extent to which most workers are in occupations dominated by their own sex: less than a quarter of the workforce (23%) is employed in gender-balanced occupations (13% in mixed white-collar and 10% in mixed blue-collar occupations). In 2000, when the same analysis was carried out for the EU15, 17% of workers were in mixed occupations.

Table 1.4 shows that 60% of men work in male-dominated or very male-dominated occupations – primarily in blue-collar occupations (40%). In contrast, only 21% of men work in mixed occupations, and 21% in female-dominated occupations.

As shown in Table 1.5, a slightly lower proportion of women than men are working in occupations dominated by their own sex: 57% of women are working in occupations that are female-dominated or very female-dominated. However,

25% of women are working in mixed occupations (four percentage points more than men), and the same proportion of women as men are working in occupations dominated by the opposite sex: 18% of women work in male- and very male-dominated occupations, while 21% of men work in female- and very female-dominated occupations. It is interesting to note that part-time work is most prevalent in female-dominated occupations and to a lesser extent in mixed occupations.

### Ownership and size of companies

Almost one third of women's jobs are in the public sector: hence, any changes in working conditions in this sector will have a disproportionate impact upon women. Men are slightly more likely to be employed in medium-sized and large companies, whereas women are more likely to work in micro and small companies.

**Table 1.5 Concentration of women's employment in gender-segregated occupations, EU27 (%)**

Gender-segregated occupations	Women		
	Part-time	Full-time	All women
Male-dominated white-collar (20%–39% female)	1	7	8
Mixed white-collar (40%–60% female)	3	11	14
Female-dominated white-collar (61%–80% female)	9	23	32
Very female-dominated white-collar (80% female)	1	3	4
Female-dominated blue-collar (61%–80 female)	9	13	21
Mixed blue-collar (40%–60% female)	4	7	11
Male-dominated blue-collar (20%–39% female)	1	6	7
Very male-dominated blue-collar (less than 20% female)	0.4	2	3
All	29	71	100

**Table 1.6 Concentration of women's and men's employment, by ownership and size of organisation, EU27 (%)**

		Men			Women		
		Part-time	Full-time	All	Part-time	Full-time	All
Ownership	Private-sector	5	70	75	18	44	62
	Public-sector	1	19	20	8	23	31
Size of organisation	1-person	1	9	10	3	7	10
	Micro-firm	2	24	26	9	20	29
	Small enterprise	2	25	27	8	21	29
	Medium-sized enterprise	1	19	20	4	14	18
	Large enterprise	1	16	17	3	10	13

# Working time 2

Working time is one of the key dimensions of working conditions, a dimension which lies at the heart of the employment relationship and which has an impact well beyond work. This means that working time is not only a key determinant of the conditions of *work*, but also of the conditions of *employment*. The length, scheduling and organisation of working hours are important determinants of the quality of work. Beyond the workplace, working time is obviously a crucial element in linking and balancing work and life: the organisation of time at work has a huge impact on the organisation of time outside work.

The fourth *European Working Conditions Survey* covers various aspects of working time, highlighting the different systems of working time organisation in different EU countries. The data serve to support the discussion of key issues, such as the impact of long working hours on working conditions, the relationship between paid and unpaid work and gender differences in relation to use of time. This chapter gives an overview of working hours in Europe, looking at time schedules in European workplaces and the different systems of working time organisation, with a special focus on their flexibility. It also explores working time outside the main job: time spent in second jobs, commuting times and unpaid working hours.

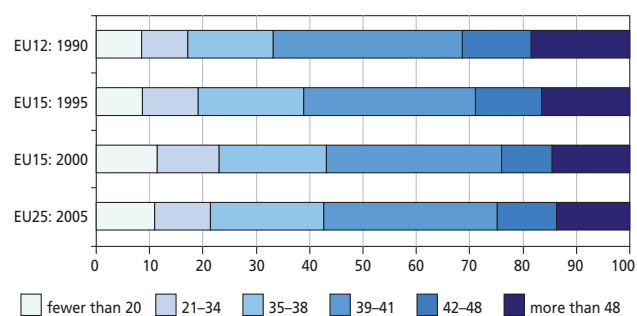
## Length of working time

### Weekly working hours

Since 1991, there has been a clear and consistent trend in the EU towards a reduction in paid working hours, a trend which only slowed in 2005 due to the impact of EU enlargement in 2004, the new Member States having longer average working hours. However, even in the NMS, the proportion of people working more than 41 hours per week has decreased considerably since 2001, while the proportion of people working shorter hours is gradually increasing.

Figure 2.2 shows average working hours (for both employees and self-employed) in 2005 in all the 31

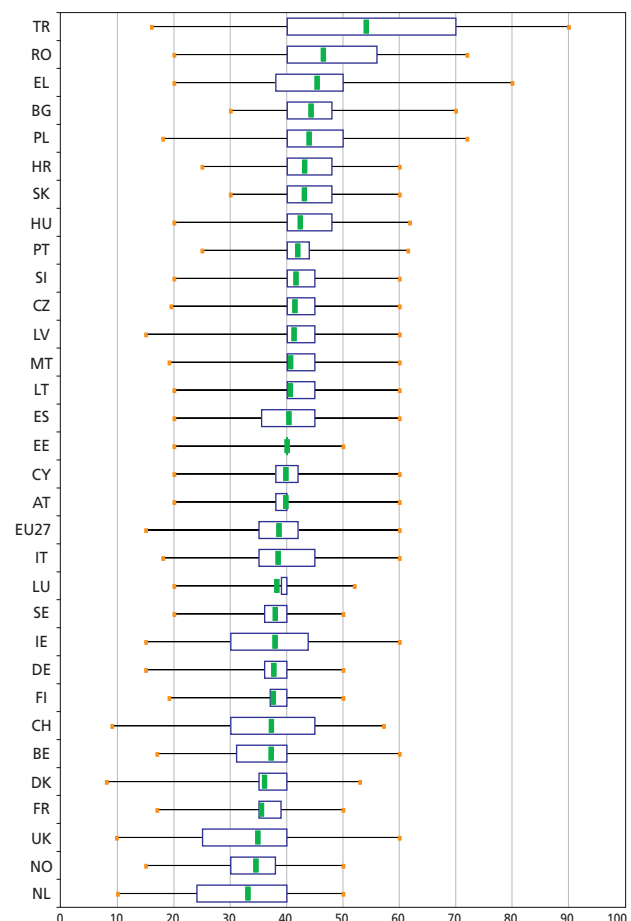
**Figure 2.1: Evolution of weekly working hours, 1990–2005 (%)**



countries covered in the survey. The differences are substantial, both in the average length of working hours and in the range of working time in each country. The thick green vertical line represents the average working time, the box around it represents the interquartile range (i.e. 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. In the Netherlands, for example, the average weekly working hours are 33; 50% of Dutch workers work between 24 and 40 hours (the limits of the box); 5% work more than 50 hours and 5% less than 10 hours (the extremes of the outward lines). Turkey has the longest working hours and is also among the countries with the greatest variation in hours worked. In most countries, the average working hours are around the standard 40 hours per week with most workers following this pattern.

However, there are variations between countries, which tend to follow a geographical pattern: eastern and southern European countries have the longest hours, while central and northern European countries (including Ireland and the United Kingdom) have the shortest hours. The Netherlands,

**Figure 2.2: Average weekly working hours, by country**

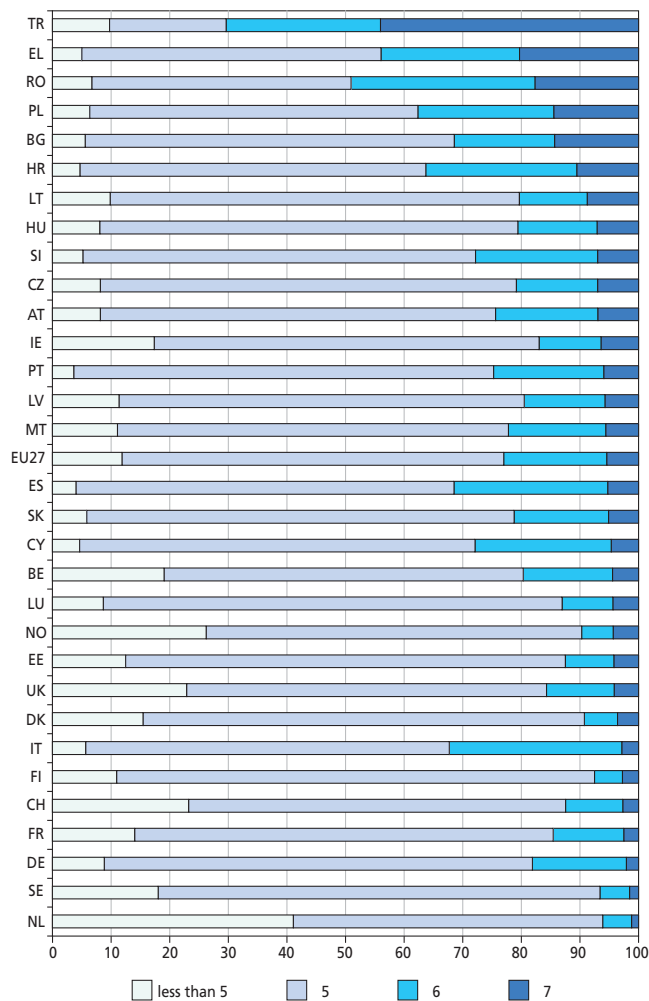


with its very high incidence of part-time work (reflected in Figure 2.2 by the large variation in working hours) has the shortest average working hours.

Figure 2.3 shows the number of days worked per week in all 31 European countries (ranked by the percentage of people working seven days a week). Turkey has a longer working week than most other countries: almost 50% of Turkish workers report working seven days a week, and almost 75% work six or seven days. These figures probably reflect the differences in sectoral composition of the Turkish economy compared to the rest of Europe, with a much higher proportion of workers in agriculture where working hours are very long. The differences between countries are very similar to the differences found in weekly working hours: a higher incidence of long working weeks in southern and eastern Europe and of short working weeks in northern and central European countries.

But even if there are clear differences between countries, it should be noted that there is a remarkable concentration of

**Figure 2.3: Number of days worked per week, by country (%)**



working times around what we can call the ‘standard time norm’ (40 hours and five days a week). With the exception of Turkey and probably the Netherlands at the two extremes, a substantial majority of workers in most countries work around 40 hours and five days a week.

**Long working hours**

Figure 2.4 shows the proportion of people working more than 48 hours a day in different countries (the reference for long working hours in the fourth *European Working Conditions Survey* is 48 hours or more). The country differences follow the same trends as the figures for average working hours, with the possible exception of Ireland, which in terms of average working hours did not stand out (it was one of the countries with shortest average hours) but which has a sizeable proportion of people working very long hours (almost 17% of the total working population). Surprisingly, considering the importance of this debate in the British context, the UK’s working hours are about average. In fact, the UK stands out only in terms of the long working hours of male full-time employees in comparison with other EU15 countries.

**Figure 2.4: Long working hours (>48h per week), by country**

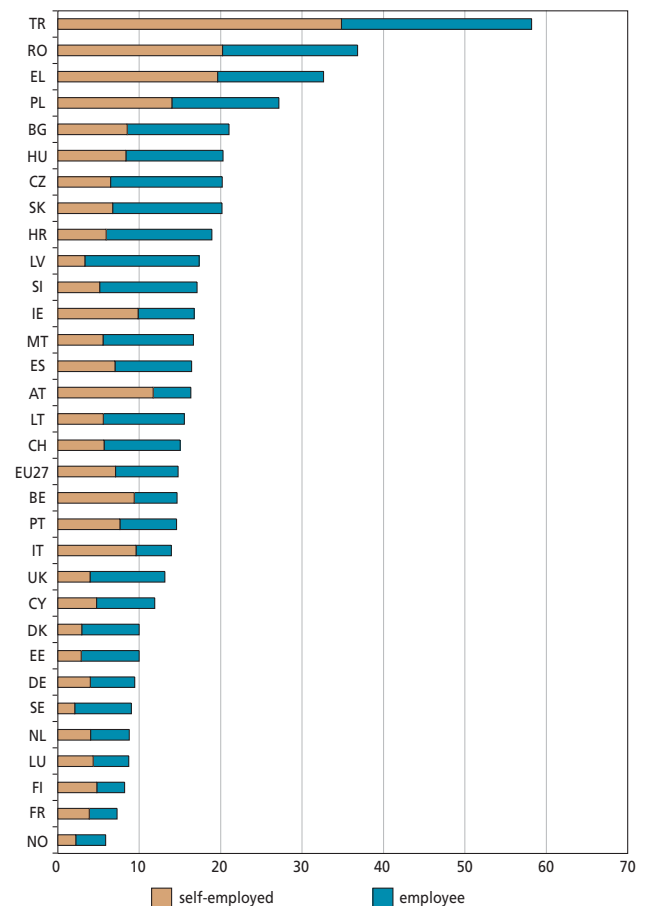
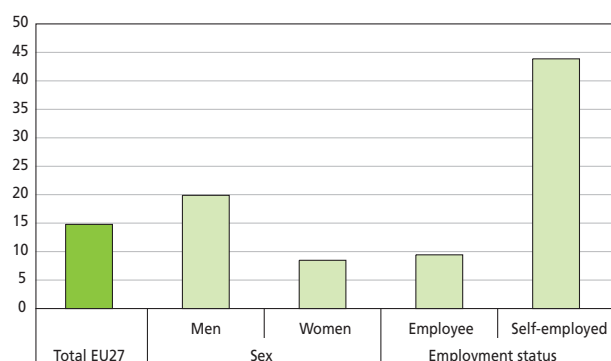


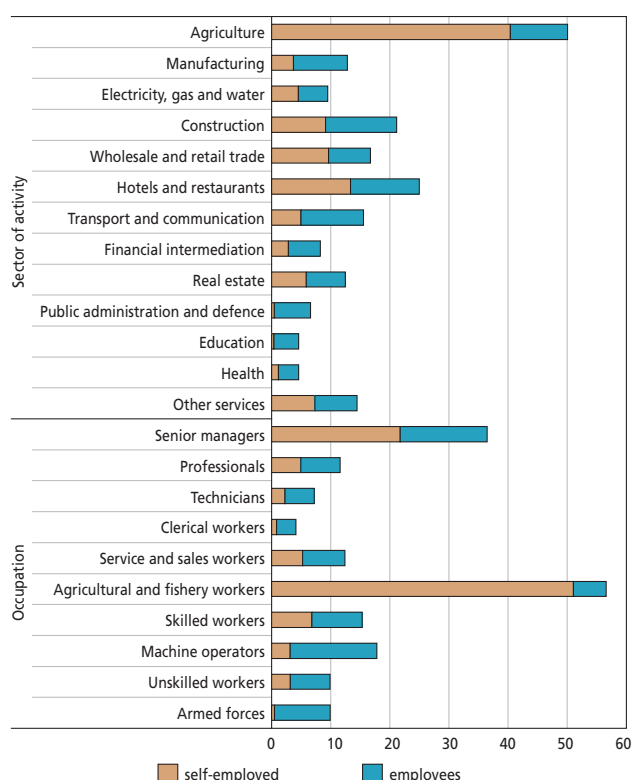


Figure 2.5 shows that long working hours are a predominantly male phenomenon in Europe (see, however, the discussion on unpaid working hours below), and one which affects self-employed workers to a greater extent than employees. The sectors most affected by long working hours (Figure 2.6) are agriculture, hotels and restaurants and construction (all with more than 20% of workers in this category); in terms of occupations, it is managers and agricultural workers who most often work more than 48 hours.

**Figure 2.5: Long working hours (>48h per week), by gender and employment status, EU27 (%)**



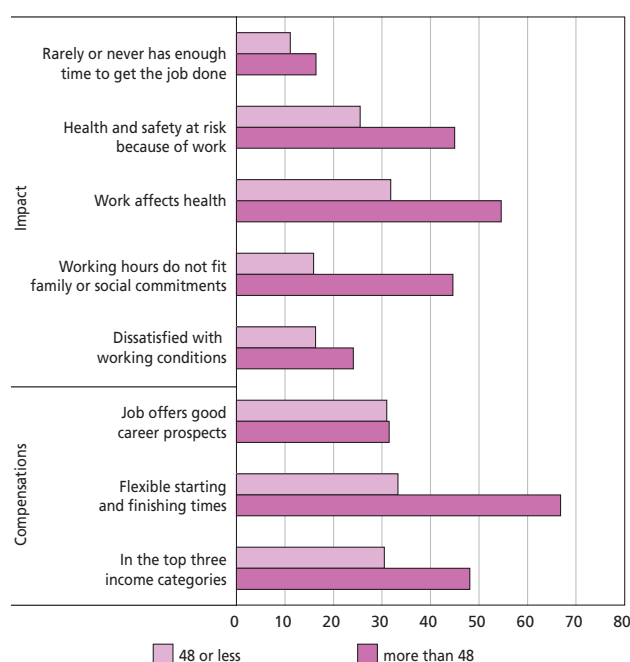
**Figure 2.6: Long working hours, by sector and occupation, EU27 (%)**



Finally, Figure 2.7 shows the impact of working long hours on some other indicators of working conditions, such as health and work–life balance. The first indicator shown – the proportion of workers complaining that they rarely or never have enough time to get their job done – is higher for those working very long hours. Of course, the causality here can go both ways, but it shows an interesting relationship between working time and flexibility that would merit further exploration. It is clear from the data that working very long hours may increase health and safety risks: those who work more than 48 hours a week are more likely to consider their health and safety at risk because of their work (twice as many as other workers), and that their job affects their health.

But the greatest negative effect of long working hours is on work–life balance: three times as many workers working long hours compared to other workers feel that their working hours do not fit in with their social and family commitments. However, there is far less of a difference between those workers working long hours and others in terms of the indicator for satisfaction with working conditions, probably because of the existence of possible benefits from working long hours (also shown in Figure 2.7). For example, while working long hours does not improve career prospects, it does pay: half of those working more than 48 hours a week are in the top three income deciles. Also, working long hours may bring with it a limited degree of flexibility: as Figure 2.7 shows, two thirds of those

**Figure 2.7: Impact and effects of long working hours, EU27 (%)**



working more than 48 hours are not constrained by fixed starting and finishing times, compared with only one third of those working less than 48 hours a week.

### Non-standard working hours

In terms of the percentage of EU workers with schedules outside the 'normal' working day, the results do not point to an increasing diversification of working hours, or a trend towards a 24-hour society. If anything, the proportion of people working outside normal working hours has slightly decreased since 1995.

Figures 2.8 and 2.9 show the proportion of workers with atypical schedules in the different EU country groups in 2005. Clearly, evening work is much more widespread than night work, and the Netherlands and the Scandinavian countries have the highest proportion of workers engaged in this type of work. But in fact, looking at the number of evenings worked, it appears that evening work in Scandinavian countries is mainly 'casual' evening work, probably related to the higher flexibility of working times in these countries (see Figure 2.8). In contrast, in southern and eastern European countries, the proportion of people working more than five evenings per month (that is, on a less casual basis) is much higher. As for night work, it is quite low in most countries except those in eastern Europe, where 25% of the working population are affected. Weekend work (see Figure 2.9) is most prevalent in the acceding and candidate countries (particularly Turkey), probably because of the very high proportion of agricultural workers in the Turkish workforce. Within the EU25, southern Europe has the highest proportion of workers working every Saturday per month, while Sunday work is most prevalent in the Netherlands and the Scandinavian countries, albeit only casual Sunday work (fewer than three Sundays per month). In general, the continental countries show a smaller proportion of workers with atypical work schedules.

Finally, Figures 2.10 and 2.11 show the breakdown for different sectors, for EU27 countries only. The sectors that clearly stand out in terms of atypical work schedules are hotels and restaurants, agriculture, and transport and communication. The wholesale and retail trade shows a very high proportion of work on Saturdays only. The sectors in which there is consistently less work at atypical hours are construction and financial intermediation.

### Organisation of working time

#### Regularity of schedules

Figure 2.12 illustrates the incidence of regular working hours in the different country groups. More than half of all

Figure 2.8: Evening and night work, by country group (%)

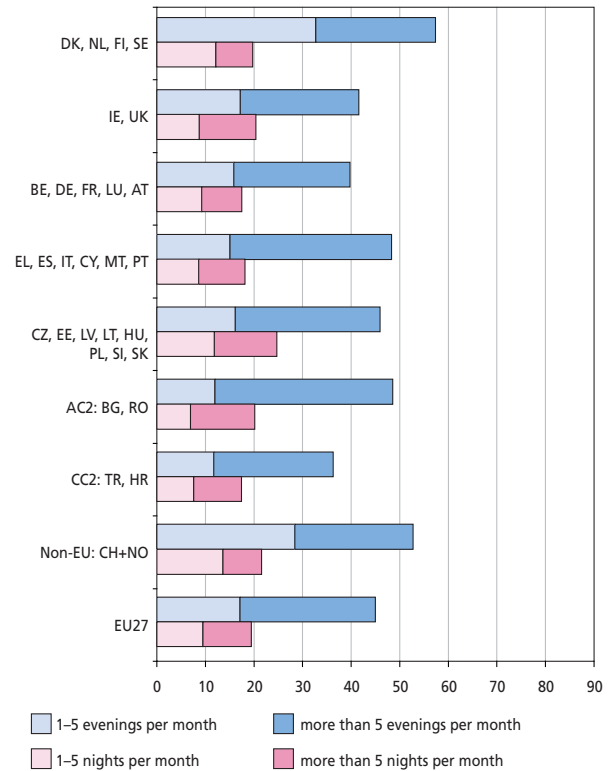


Figure 2.9: Saturday and Sunday work, by country group (%)

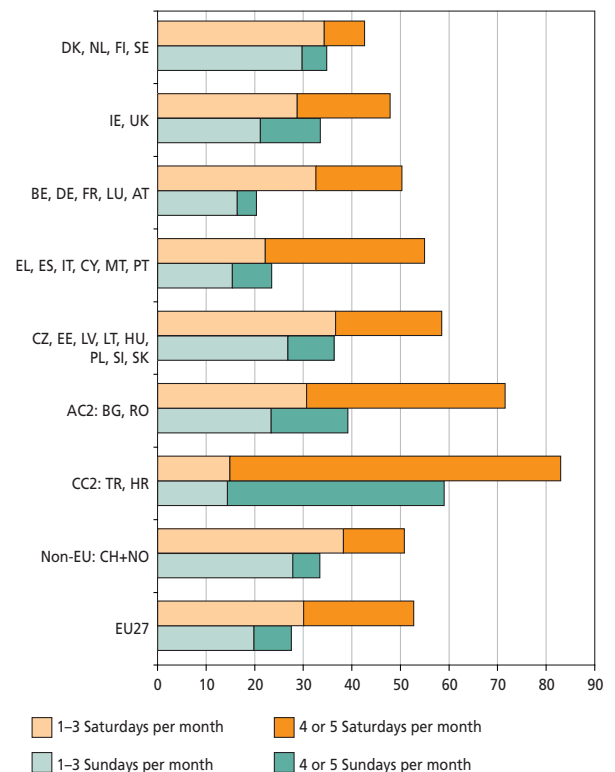


Figure 2.10: Saturday and Sunday work, by sector, EU27 (%)

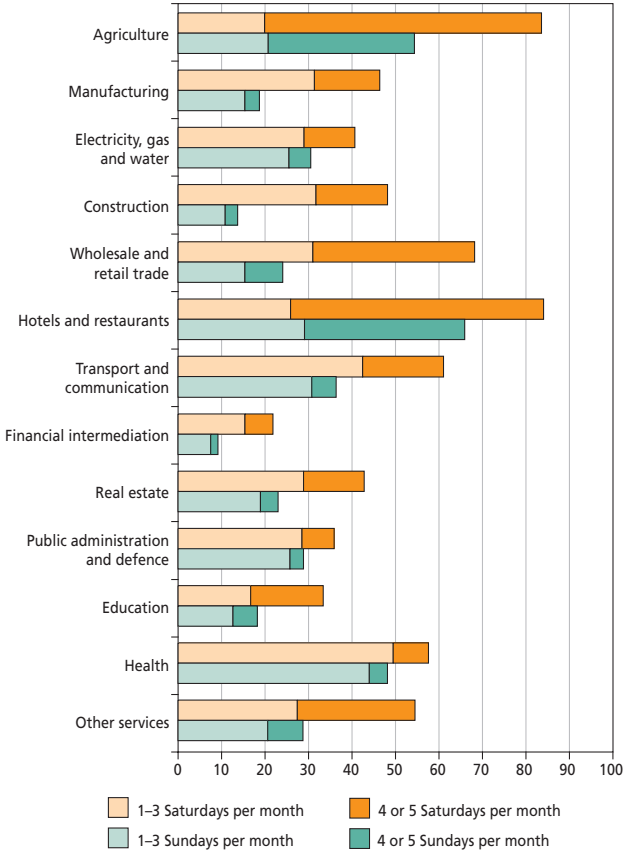
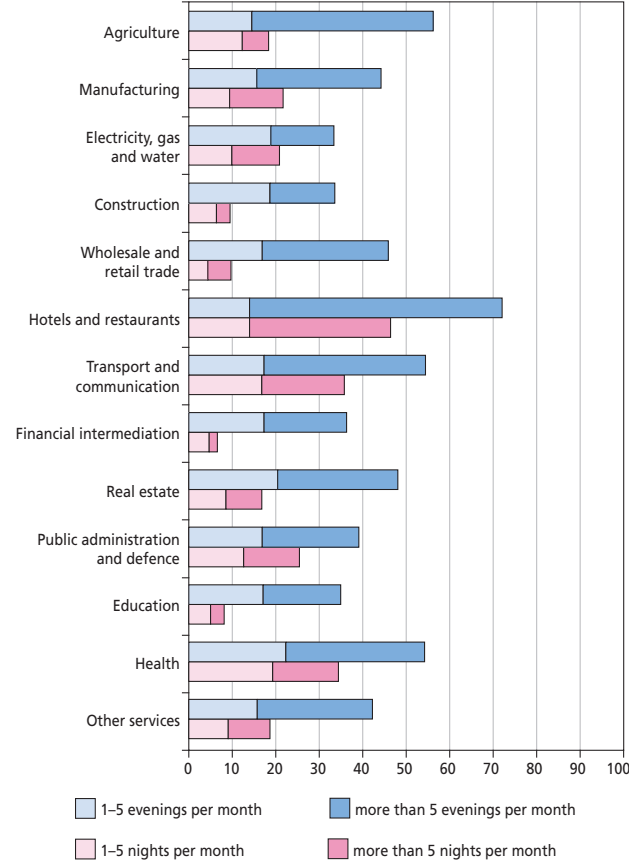
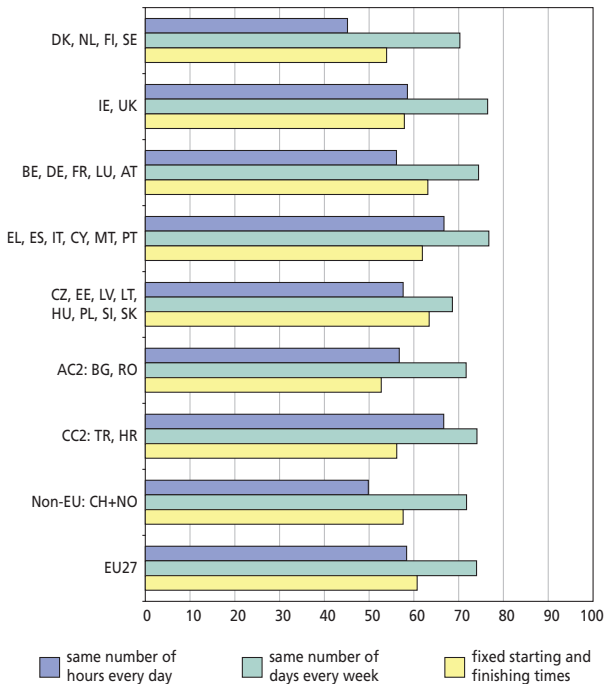


Figure 2.11: Evening and night work, by sector, EU27 (%)



workers (including employees and the self-employed) work the same number of hours every day, with fixed starting and finishing times, and the same number of days every week. The differences between different groups of countries in these indicators are important: in the Netherlands and the Scandinavian countries, work schedules tend to be more flexible (only around 45% of workers work the same number of hours every day, and around 53% have fixed starting and finishing times), whereas in southern European countries, the proportion of workers with fixed schedules and fixed working hours is higher than the average (around 67% of southern European workers work the same number of hours every day, and around 62% have fixed starting and finishing times). There is much more variation in the number and regularity of hours per day than in the number of days per week, which are much more consistent (only eastern European countries stand out in this respect with a slightly lower proportion of people working the same number of days every week).

Figure 2.12: Regularity of work schedules, by country group (%)



Of course, in Figure 2.12 the emphasis is on regular work schedules, but the figures can be reversed to reflect irregular work schedules: around 50% of the European workers

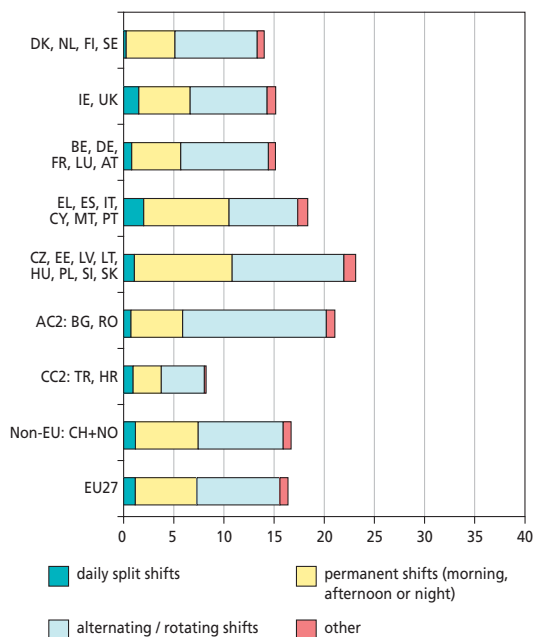
covered in the survey do not work the same number of hours every day, around 40% do not have fixed starting and finishing working hours, and around 30% do not work the same number of days every week. And this proportion is increasing, slowly but steadily: in 1995, 65% of EU workers had fixed work schedules, declining to 61% in 2005.

**Shift work**

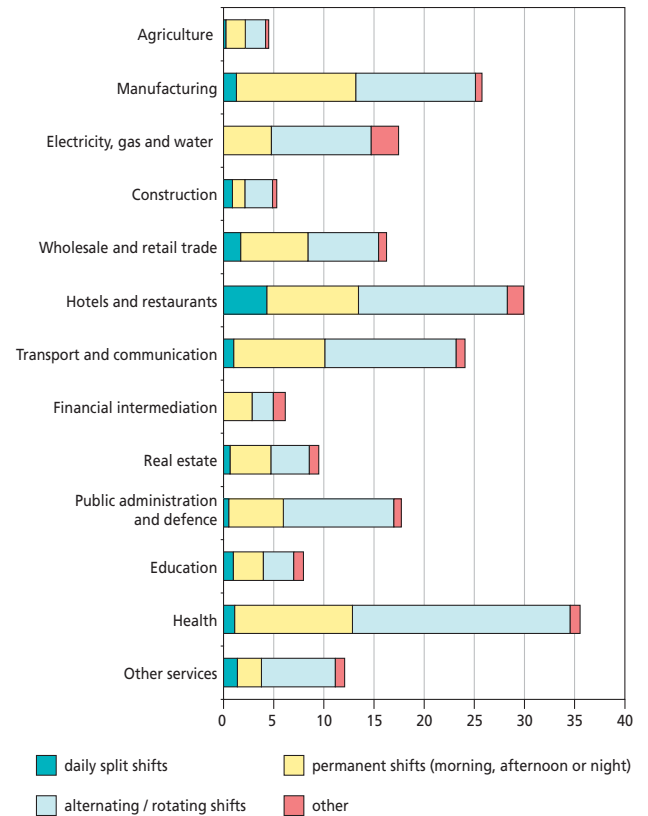
Shift work has an important economic function in companies' operations and a large impact on individual working conditions. Its economic importance is based on companies' dependence on the use of shift working in order to extend operating hours. This is usually a feature of companies where there are high fixed costs (typically the case in manufacturing, which uses expensive machinery) or where the time of operation has to match the time of demand (typically in services).

Figure 2.13 shows the proportion of workers involved in shift work in different groups of EU countries, and the type of shift system in operation. There is a considerably higher proportion of shift work in eastern European and, albeit to a lesser extent, southern European countries than in the other country groups. The differences between country clusters in the use of shifts is strongly influenced by the sectoral composition of the economy because, as Figure 2.14 shows, there is an important variation in the use of shifts in different sectors. In health, about one third of workers work shifts. In the hotels and restaurants, and manufacturing and transport sectors, around one in every four workers is a shift worker. This proportion is around or

**Figure 2.13: Incidence of shift work, by country group (%)**



**Figure 2.14: Incidence of shift work, by sector, EU27 (%)**



below 5% in agriculture, construction and financial intermediation.

Closer analysis of the survey data on shift work (Figure 2.15) reveals that shift workers tend to have more standard working hours than non-shift workers: almost 40% of those working shifts in Europe work in the very limited range of 39 to 41 hours per week (10% more than the rest of workers). Also, the proportion of shift workers with very long or very short working hours is almost half that of non-shift workers.

In terms of autonomy at work (the capacity to change the order of tasks, methods of work and rate of work), it is evident that shift workers are much less autonomous than other workers: the general level of shift workers without autonomy is around 50–60% compared to 30% for workers not working shifts. This is confirmed by looking at who decides how working times are organised: in the case of shift work, in 70% of the cases it is entirely decided by the company with no possibility for change. This is the case for only 53% of other workers. Only 15% of shift workers can really adapt working hours to their needs (with or without some limits), compared to almost 40% in the case of non-shift workers.

Figure 2.15: Time organisation of shift work, EU27 (%)

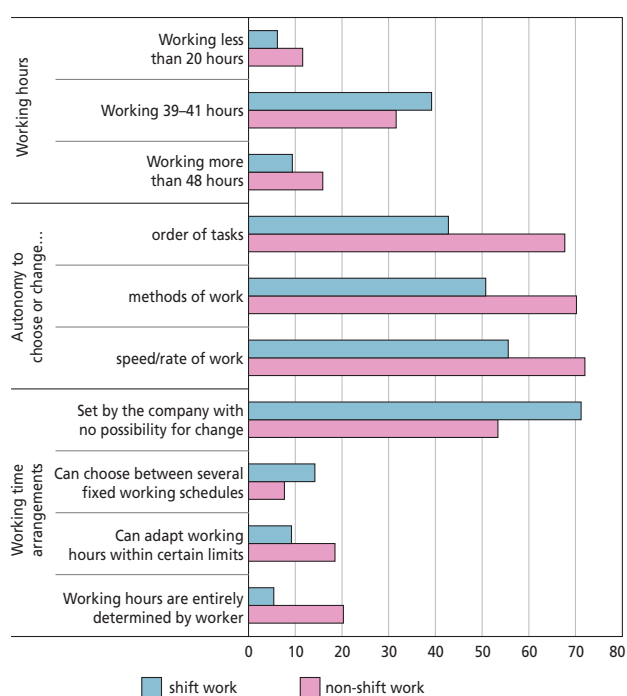
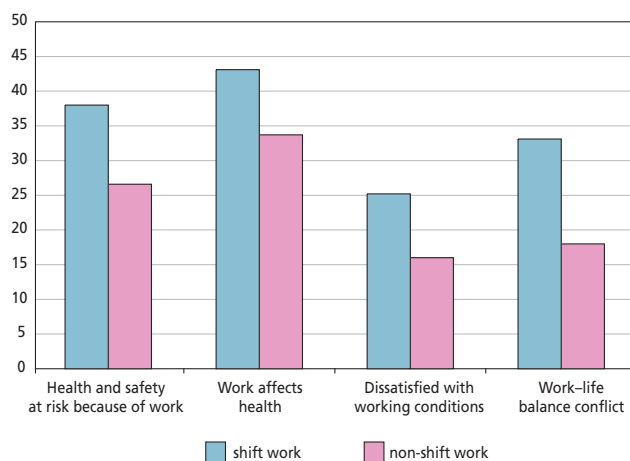


Figure 2.16: Effects of shift work, EU27 (%)



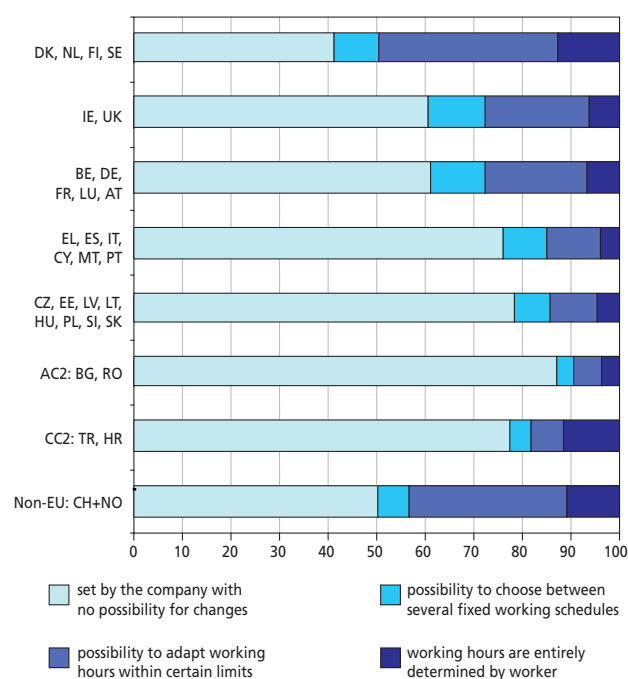
Finally, Figure 2.16 shows the relationship between shift work and other indicators of working conditions. Shift work seems to be correlated with a higher feeling of risk at work, and with a higher level of negative health outcomes. In terms of subjective well-being, there is also a clear relationship between shift work and dissatisfaction with working conditions, and an even stronger relationship between shift work and the perceived difficulty of balancing work and other commitments. However, these are only

correlations, and it is not known whether they are the result of the effect of other unobserved variables, but they clearly point to the negative impact of shift work on working conditions in general.

### Autonomy over working time schedule

Figure 2.17 indicates the extent to which the company or the worker has control over the organisation of working time across groups of countries. This is only relevant for employees, because in the case of the self-employed, the worker has, by definition, more control over their organisation of working time.<sup>1</sup> It is interesting to note that there is more variation between countries concerning autonomy over working time than on most other indicators on working time. This implies that there are different models in Europe concerning the worker's ability to decide on the organisation of working time, and not so much in respect to the actual time spent working. In northern European countries, workers can choose to adapt working time to their needs to a large extent (around half of employees say they can do so, with or without certain limits), which is in sharp contrast to southern and eastern European countries, where more than 75% of employees have no possibility whatsoever of adapting their work schedules, as they are set by the company.

Figure 2.17: Autonomy over working time, by group of countries (%)



<sup>1</sup> However, while this is true at a theoretical level (being self-employed means being one's own boss), the increasing prevalence of decentralisation and subcontracting implies that there is a significant proportion of so-called self-employed workers who are in fact still bound by company rules: former employees who merely change their contractual situation from standard employment to a service contract, without gaining in autonomy.

### Composite working time

Most analyses of working time are based on a restrictive (and not always explicit) definition. Working time is measured in standard labour force surveys as time spent in the main paid job. However, that does not necessarily correspond to the time the individual spends on working. There are three main ways in which this definition is too restrictive.

- It does not include time spent in paid jobs other than the main one. Although the proportion of people having a second job is small, it is not negligible, and for the people affected it makes a big difference.
- It does not include commuting time, that is, time spent travelling to and from work. Although from the perspective of the employer this is not working time, it is definitely time devoted to work from the perspective of the employee. It should, therefore, be considered when discussing the length of time dedicated to work.
- Most importantly, it does not include time spent doing unpaid work. Unpaid work is clearly as important in societal and economic terms as paid work, even if it is not remunerated by the market. And obviously, from the perspective of the individual, unpaid work (time spent on household duties, and caring for children and adults) still represents work, so it should be considered as such, even if not placed in the same category as paid work.

So far, the discussion on working time has been based on the definition of time spent in the main paid job. The fourth European Working Conditions Survey includes new indicators that explore working hours from a more integrated perspective, including these other working times. This section will first look at the three other types of working time and then present an aggregate working hours indicator.

There is, however, one limitation in the fourth European Working Conditions Survey's analysis of unpaid working hours. Because of the strict definition of the respondent in the survey, the sample only includes people who were in paid employment in the reference week. It is evident that unpaid work is not only performed by people in paid employment: a very sizeable proportion of unpaid work is carried out by people who do not have any paid job (such as women at home). Therefore caution should be exercised when interpreting the figures on unpaid working hours: in this context, it means the unpaid working hours carried out by people already in paid employment of some kind.

### More than one job

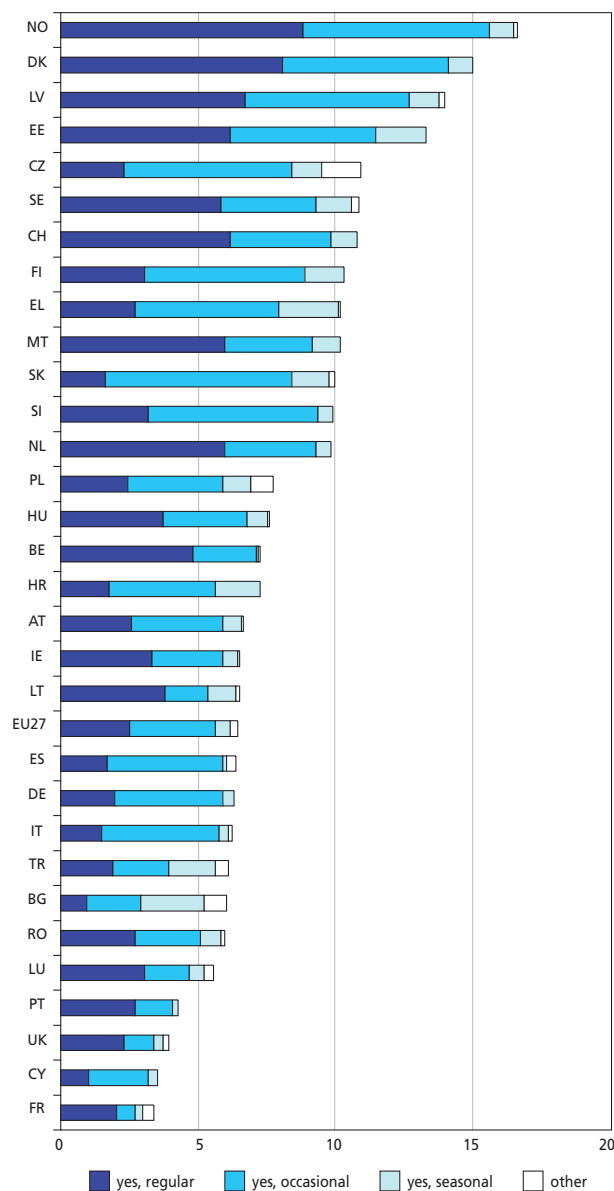
On average in the 31 countries covered in the fourth European Working Conditions Survey, less than 7% of the workers have more than one job. Although the proportion is

rather small in all countries (only in Norway is it more than 15%), the differences by country are important, as we can see in Figure 2.18. The Scandinavian countries and the Netherlands have a high proportion of workers with more than one job and this proportion is also high in eastern Europe. In the rest of Europe, multiple jobs are comparatively rare.

### Commuting time

Workers in all countries spend an average of around 40 minutes every day travelling to and from work – not an

Figure 2.18: Percentage of multiple-job holders by country (%)



Note: Question asked 'Besides your main paid job, do you have any other paid job?'

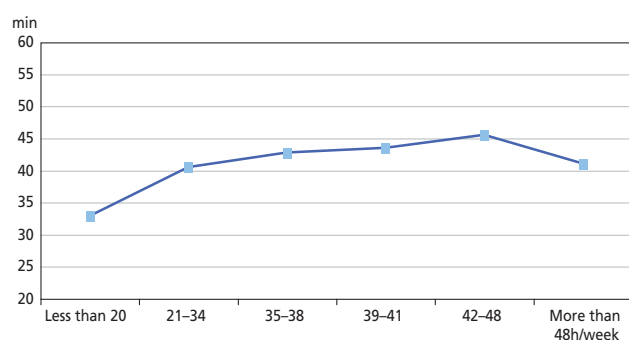
insignificant amount of time, as it represents an increase of 8% in a standard eight-hour working day. Average commuting time increases with working hours, as can be seen in Figure 2.19. Only in the case of very long hours of work (more than 48) is this positive relationship between commuting and working hours broken, which quite probably reflects the high proportion of agricultural workers in this category (average commuting times of agricultural workers are the lowest, along with those for hotel and restaurant workers). Specifically, the commuting times of part-time workers are substantially lower than the commuting times of full-time workers. This is consistent with numerous studies on the relationship between part-time work, gender and commuting times, in which it is often argued that the different household responsibilities of men and women at home lead women to choose jobs with shorter commuting times (in the same way that more women work part time).

### Unpaid working hours

The fourth *European Working Conditions Survey* did not include a specific question concerning the number of weekly hours spent on unpaid work. Respondents were asked how many hours per day they spent on different activities outside paid work and these were multiplied by seven to compute the weekly total.<sup>2</sup> While the measurement of unpaid working hours is probably a good approximation of the real values, the measurement is, however, less precise than the measurement for paid working hours.

Figures 2.20 and 2.21 show the three elements of the unpaid working hours indicator – hours spent caring for children and adults and hours spent on housework – by country group and gender. The total unpaid working hours indicator is calculated by combining these three individual

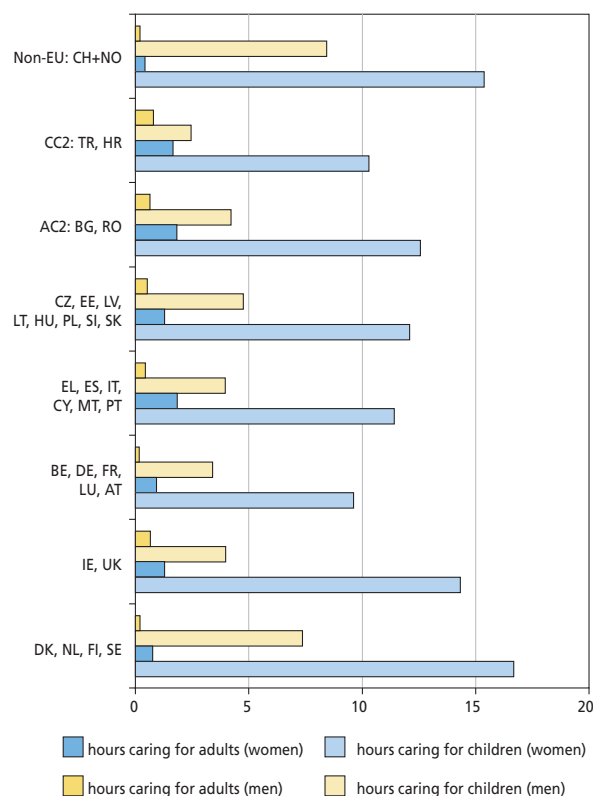
**Figure 2.19: Average commuting time in minutes, by weekly working hours, EU27**



values. The figures show the considerable differences between women and men in the amount of time devoted to unpaid work in all European countries. This is even more significant given the fact that the data reflect only the working population: if the data also took into account those not in paid employment (including a majority of women at home), the differences between the hours of unpaid work of women and men would be even higher.

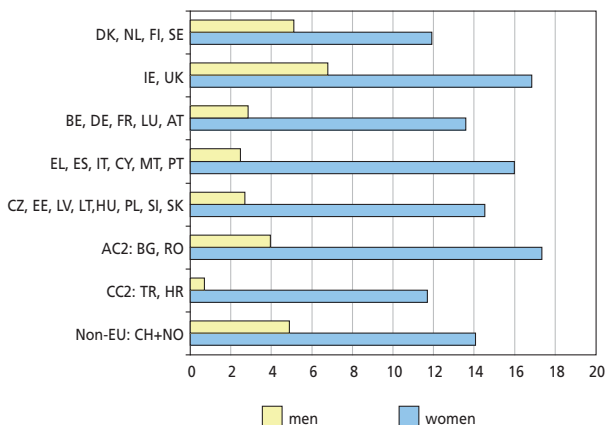
The results show clearly that working women spend more time in unpaid work than do working men in all European countries. However, there are important differences in the gender distribution by country group: in the Netherlands and the Scandinavian countries (and Switzerland), the amount of unpaid work is more equal between men and women than in southern European, continental and candidate countries; eastern European countries fall somewhere in between. There are also significant differences between countries regarding the type of activity: in the Netherlands and Scandinavian countries, workers devote more time to childcare. In continental countries and

**Figure 2.20: Hours spent caring for children and adults per week, by country group and sex**



<sup>2</sup> If the respondent replied 'less than one hour per day every day', he or she had to choose from several options such as 'every day or every second day for less than one hour', 'less than one hour per week', etc.

**Figure 2.21: Hours spent on housework per week, by country group and sex**



Ireland and the UK, workers devote more time to housework. Although fewer hours are spent caring for adults than on other activities everywhere, the amount of time devoted to caring for adults in southern European countries is considerably greater than in most other countries. The information contained in the variables of unpaid working hours is very rich, and although it clearly goes beyond the scope of this report to give further analysis, the data need to be analysed and viewed in the context of the different welfare systems, labour market situations, cultural values attached to childrearing, technologies assisting housework and general levels of gender inequality in different countries.

**Composite working hours indicator**

Figure 2.22 presents the combined working hours breakdown for the 31 European countries covered in the fourth *European Working Conditions Survey*. The composite working hours indicator is made up of the figures for weekly working hours, plus the average weekly working hours in jobs other than the main job, commuting time and the total weekly unpaid working hours. The countries have been ranked from high to low and the contrast between weekly working hours and total composite working hours is considerable.

Figure 2.23 shows the gender breakdown for combined working hours by country group, indicating that there is a huge difference in the working hours of women and men when unpaid work is taken into consideration. While men work longer hours than women in paid employment in all countries, women in fact work more hours than men when paid and unpaid working hours are combined.

The composite working hours indicator gives an interesting insight into part-time work. Part-time work is often promoted as a family-friendly measure that can help

workers to balance their working life with responsibilities outside work. But as the figures show, the time spent on unpaid work varies enormously between men and women. How do men and women spend the time they save when they work part time?

Figure 2.24 shows the figures for combined working hours broken down by full-time and part-time work and sex across the EU27. Even if somewhat expected, these results are quite striking. While male part-time workers dedicate even less time to unpaid work than male full-time workers (7.2 hours), women working part time appear to use the time saved to carry out unpaid work (volume of hours only taken into consideration, notwithstanding the voluntary character of part-time work, its impact on salary and career

**Figure 2.22: Composite working hours indicator, by country**

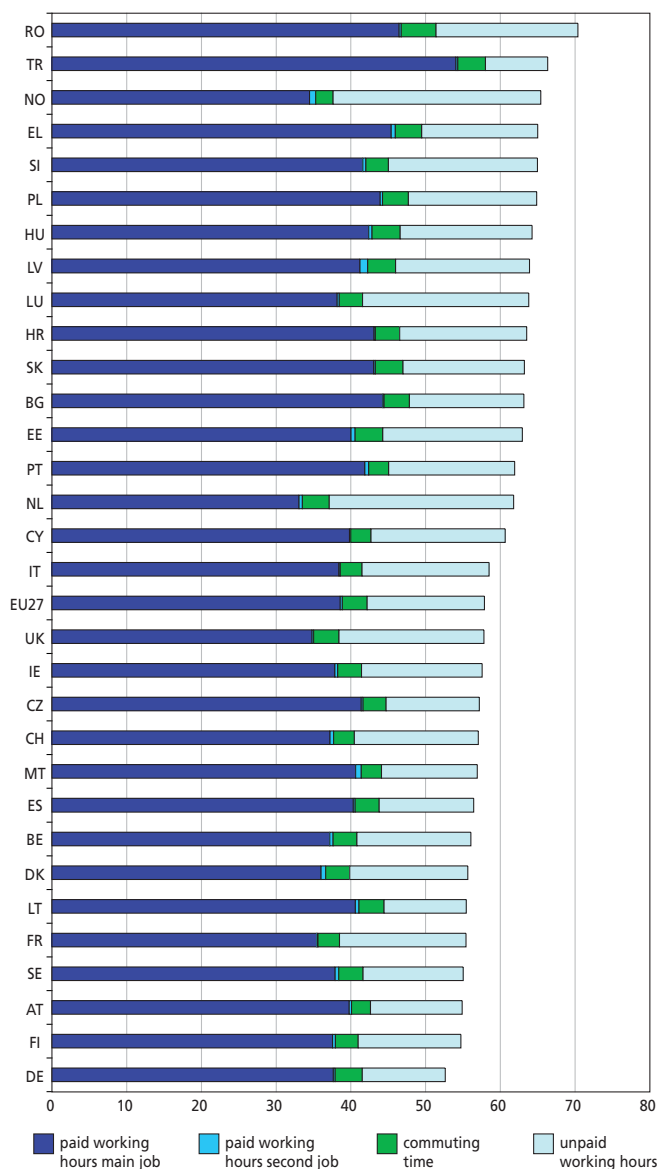




Figure 2.23: Composite indicator of working time, by country group and sex (hours)

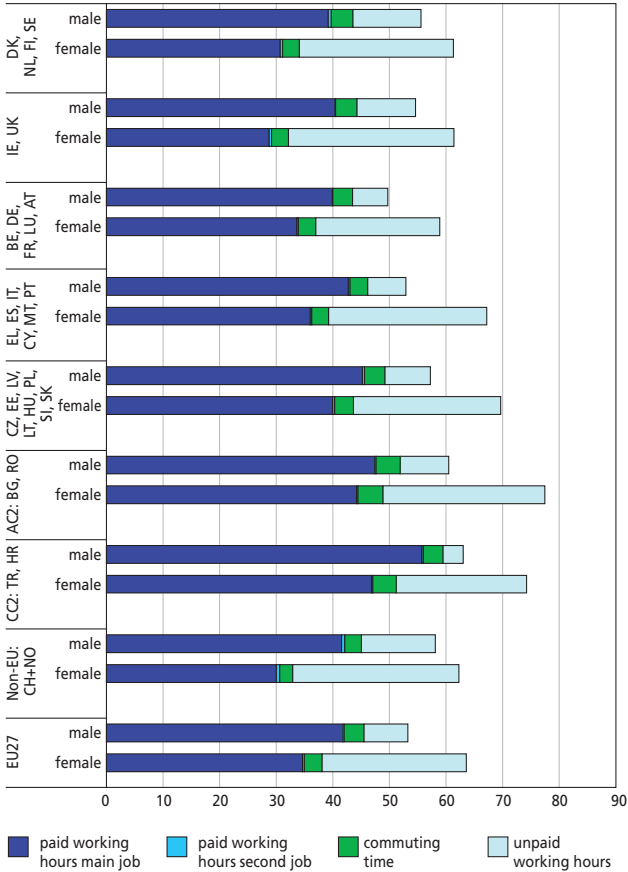
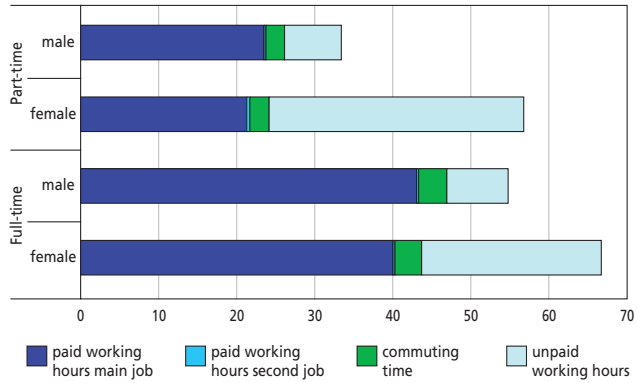


Figure 2.24: Composite working hours indicator, by full-time/part-time hours and sex, EU27



development, etc). On average, the unpaid work–paid work ratio is 150% for female part-time workers whereas it stands at 33% for male part-time workers. It is also important to note that when considering paid and unpaid work in combination as measured by the *European Working Conditions Survey*, female part-time workers work more hours in total per week than male full-time workers (56 against 54 hours). Also, the total working hours of women working full time are the longest, at more than 65 per week in total.

# Physical risk factors 3

Despite a decline in the proportion of the workforce employed in traditional, physically demanding sectors such as manufacturing and agriculture, the fourth *European Working Conditions Survey* reveals that some physical risks are still prevalent. It also confirms findings from the previous surveys that changes in levels of exposure to most work-related physical risks tend to be small from one survey to another. Such improvements as there have been in exposure to some factors tend to be gradual, with countervailing negative trends.<sup>1</sup>

One in five workers continues to be exposed to breathing in smoke, powder or fumes and nearly one in two workers reports working at least a quarter of the time in painful or tiring positions. While 15 years is a relatively short period in terms of evolving employment structure, it might have been expected that the workplace changes that have taken place during this time would generate improved working conditions, especially in terms of a significant decrease in the overall incidence of workplace physical risks.

This chapter examines the overall incidence of a number of individual physical risk factors, including some that have been included for the first time in the 2005 survey (e.g.

exposure to infectious materials and to workplace tobacco smoke). It provides a three-way grouping of risk factors (ergonomic, biological/chemical and noise/temperatures). It also looks at the extent to which different categories of workers (by age group, sex and, especially, sector) are affected by each. Finally, some of the consequences of increased physical risk exposure in terms of individual perceptions of job sustainability and work-related health risks are explored.

As Figure 3.1 shows, trends for most physical risks have remained within a narrow range across the four surveys since 1990. The proportion of workers exposed to repetitive hand or arm movements at least one quarter of the time has actually increased over the last five years. This is the most commonly cited physical risk, with 62% of the working population reporting exposure.

There has been a small decrease in workers reporting more or less permanent (all/nearly all of the time) exposure to radiation, handling of chemical products or substances and breathing of smoke, fumes, dust or powder. However, exposure to vibrations and noise has increased since 2000.

## New survey questions

Three new questions relating to physical work factors were introduced in the 2005 survey, concerning exposure to tobacco smoke and to infectious materials and the proportion of working time spent standing or walking.

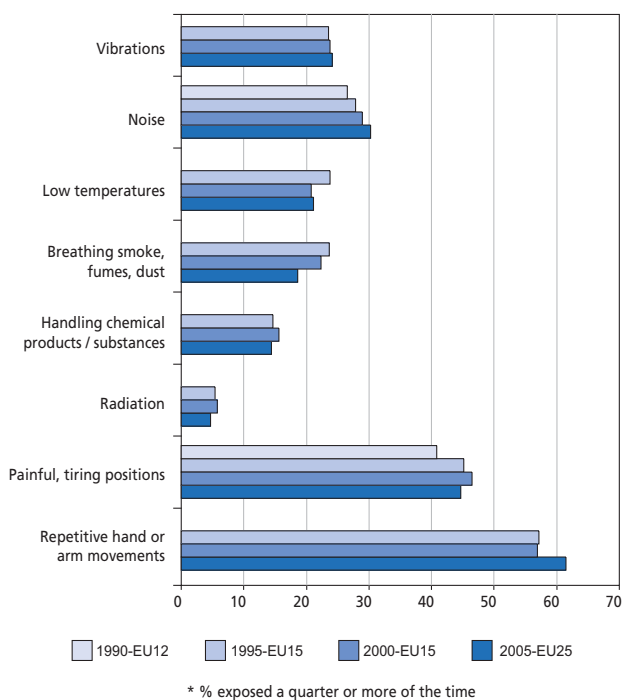
### Exposure to tobacco smoke

One in five workers report being exposed to tobacco smoke from other people at least a quarter of the time (20%, dropping to 7% for those reporting being exposed all or nearly all of the time). There was a significant difference according to the sex of the respondent: 25% of male workers report exposure at least a quarter of the time compared to 14% of female workers. There is also a wide variation from country to country, showing the probable effect of national legislation to restrict or ban smoking in the workplace, with countries already having such legislation in place showing the lowest levels.

### Exposure to infectious materials

Nearly one in 10 workers (9%) reports being exposed to infectious materials (such as waste, bodily fluids and laboratory materials) at their workplace at least a quarter of the time, but more women (5%) than men (2%) report a high level of such exposure (all or nearly all of the time),

**Figure 3.1: Exposure to physical risks,\* 1990–2005 (%)**



Note: No data is available for 1990 for some of the risks, as questions on these were only introduced in later waves of the survey.

<sup>1</sup> In this chapter, the term 'physical risks' refers to physical risks in the broadest sense, encompassing exposure to physical or ergonomic risks (e.g. work involving painful or tiring positions), biological or chemical risks, as well as to ambient or environmental risk factors (e.g. noise, high/low temperatures).

attributable in large part to the higher proportion of women working in the most exposed sectoral category, health and social work (where 23% report themselves exposed all or nearly all of the time).

**Work involving standing or walking**

Another new question introduced in 2005 is whether work involves standing or walking. While standing or walking are healthy activities in themselves, being subjected to these activities for extended periods can predispose a worker to physical risk, in particular musculoskeletal problems or fatigue. At the other end of the scale, jobs – often office-based – that are almost completely sedentary can lead to increased health risks related to physical inactivity (for example, high blood pressure and obesity).<sup>2</sup>

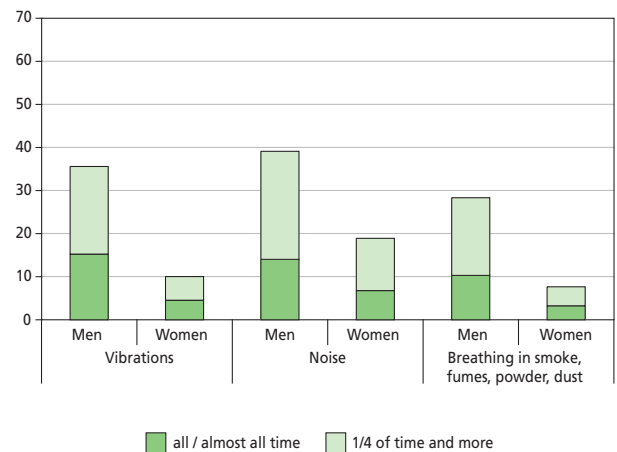
The findings reveal that the degree of walking and standing at work is overall quite high. Almost three quarters (73%) of respondents carry out their work while standing or walking at least a quarter of the time while 43% report doing so all, or nearly all of the time. The youngest age category (under 25 years of age) reports the highest levels of walking and standing. More women (30%) than men (25%) report that their work never, or almost never, involves standing.

The sector in which people work has a more decisive impact than either sex or age on the extent to which work involves standing or walking. At one end of the scale, those working in financial intermediation – primarily desk and office-based jobs – report comparatively low levels. At the other end, four out of five workers in the hotel and restaurants sector report having to stand or walk in their main paid job all, or almost all of the time.

**Gender dimension of physical risk factors**

In general, more men than women report being subjected to traditional physical work risks (such as noise and vibrations), although there are exceptions to this rule. In particular, ergonomic risks (for example repetitive hand or arm movements, work involving painful or tiring positions) tend to be more gender-neutral, especially in terms of the proportion of workers exposed all or nearly all of the time. For certain risks (exposure to infectious materials, jobs involving lifting or moving people) prevalence is higher amongst female workers, reflecting at least in part the segregation of the sexes in specific sectors, notably the health and social work sector.

**Figure 3.2: Gender differences in exposure to physical risk, with a male higher risk (%)**



**Table 3.1: Physical risks exposure (% exposed quarter of time or more)**

EU country rank		Vibrations	Noise	High temps	Low temps	Breathing smoke, fumes	Vapours	Handling chemicals	Radiation	Tobacco smoke	Infectious materials	Tiring / painful positions	Moving, lifting people	Heavy loads	Standing walking	Repetitive hand / arm movements
Most exposed	1	HU 34.2	PL 41.6	RO 45.0	EL 39.0	RO 29.1	LT 17.5	FI 23.3	MT 8.5	EL 37.2	RO 19.0	EL 66.2	ES 12.4	RO 45.1	LT 80.4	FI 79.6
	2	EE 33.6	SI 40.1	EL 44.5	RO 38.6	SK 28.5	CZ 16.6	LT 19.9	SI 7.8	PT 29.0	FI 15.8	RO 61.5	SE 12.1	LT 41.9	PT 80.0	RO 77.2
	3	PT 33.3	LT 40.0	CY 36.7	CY 32.7	LV 27.9	SK 16.3	SI 19.8	DE 6.8	LV 28.9	SE 14.5	CY 59.6	FI 11.4	LV 41.4	FI 79.4	EL 76.8
	4	LT 31.8	EE 39.4	MT 32.5	LT 30.6	EE 27.5	ES 14.7	EL 18.2	SE 6.8	ES 28.2	MT 13.1	PT 57.1	RO 11.3	EL 41.3	RO 78.8	PT 74.2
	5	LV 31.7	HU 38.2	RO 32.0	ES 28.6	EL 27.3	FI 14.4	PL 17.8	FI 6.2	DK 27.5	LT 13.1	HU 53.2	UK 11.1	PL 40.8	SE 77.6	LT 69.3
Least exposed	24	DK 16.8	IT 23.9	LT 17.7	BE 16.4	IE 14.2	IE 6.3	LU 10.5	LU 3.3	FI 11.3	PL 6.2	IE 31.6	LV 4.5	DK 29.8	LU 64.7	LU 54.1
	25	NL 15.9	UK 23.7	UK 16.4	AT 15.8	NL 13.7	SE 6.2	DK 10.2	BE 3.3	IT 9.1	CY 5.6	UK 30.6	IT 3.9	IT 28.5	CY 62.1	BE 52.4
	26	UK 15.4	LU 23.4	IE 14.6	IE 15.3	DK 13.2	UK 6.0	CY 9.6	IT 3.1	SE 6.7	BG 5.0	CZ 30.0	BG 3.6	LU 25.6	CZ 59.6	IE 51.5
	27	SE 15.1	NL 20.0	EE 14.0	IT 13.6	UK 11.7	DK 4.5	NL 8.7	UK 3.1	IE 5.8	IT 3.7	NL 24.8	PL 3.1	NL 22.0	NL 59.1	MT 51.1

<sup>2</sup> See for example *Expert Forecast on emerging physical risks related to OSH*, [http://riskobservatory.osha.eu.int/risks/forecasts/physical\\_risks/](http://riskobservatory.osha.eu.int/risks/forecasts/physical_risks/)

### Measurement of exposure to combined physical risks

In order to identify those categories of workers with the greatest exposure to a combination of different types of risk factor, data indicating the average exposure of respondents to a variety of related workplace physical risk factors can be used.

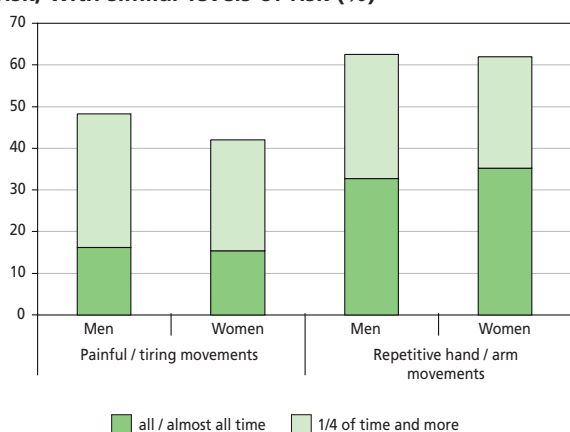
As all the variables are measured using the same seven-point scale (from 1 'all of the time' to 7 'never'), the average exposure on a scale of 1-7 can be calculated for three composite variables representing exposure to different types of risk: ergonomic, biological/chemical and noise/temperatures. The greater the exposure to multiple risks and

the more intense the nature of the exposure to individual risks, the higher an individual's combined risk score will be.<sup>3</sup>

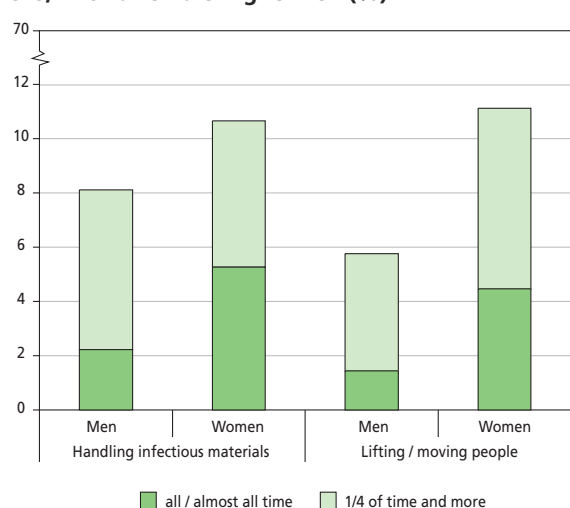
To facilitate interpretation, a standardised score (z-score) was calculated across the distribution: 0 represents median exposure, a positive score is greater than median exposure and a negative score is less than median exposure, measured in standard deviation units. In general, a positive score indicates higher exposure to risk and can therefore be considered negative from a working conditions or health and safety perspective.

What emerges is that men, especially younger men, report themselves more exposed than women to physical risk factors at the workplace (see Figure 3.5). Exposure to physical risk factors diminishes for men as they grow older but even in the most senior of the three age categories (age 50+), men still have a slightly greater-than-average level of exposure to the composite indicators for biological/chemical and noise/temperatures. For women, the pattern is more

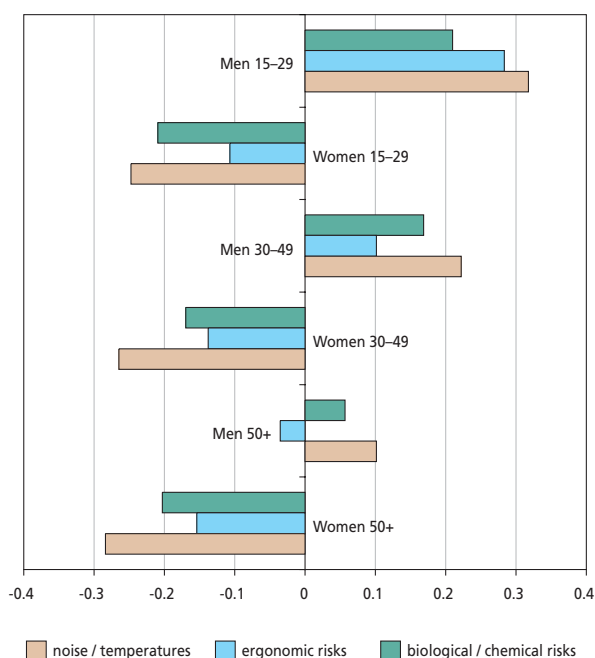
**Figure 3.3: Gender differences in exposure to physical risk, with similar levels of risk (%)**



**Figure 3.4: Gender differences in exposure to physical risks, with a female higher risk (%)**



**Figure 3.5: Exposure to combined physical risks, by sex and age (mean z-score for composite risk indicators)**



Note: +/- < 0.25 = small deviation from mean exposure  
 +/- 0.25-0.5 = substantial deviation from mean exposure  
 +/- > 0.5 = very substantial deviation from mean exposure

<sup>3</sup> Composite physical risk factors were constructed as follows: ergonomic risks = combined exposure to painful/tiring positions, vibrations, lifting or moving people, carrying heavy loads, standing or walking, repetitive hand/arm movements (Cronbach's alpha = 0.73); biological/chemical and radiation risks = combined exposure to breathing in smoke, fumes, powder or dust, breathing in vapours such as solvents and thinners, handling chemical products, radiation, handling infectious materials (Cronbach's alpha = 0.72); ambient risks = combined exposure to noise, high temperatures and low temperatures (Cronbach's alpha = 0.71). Cronbach's alpha is a statistical measure that assesses the reliability of a rating summarising a group of survey answers which measure some underlying factor (i.e. in this example, ergonomic risks, etc). Cronbach's alpha scores of 0.7 or above are generally taken to indicate a reliable rating

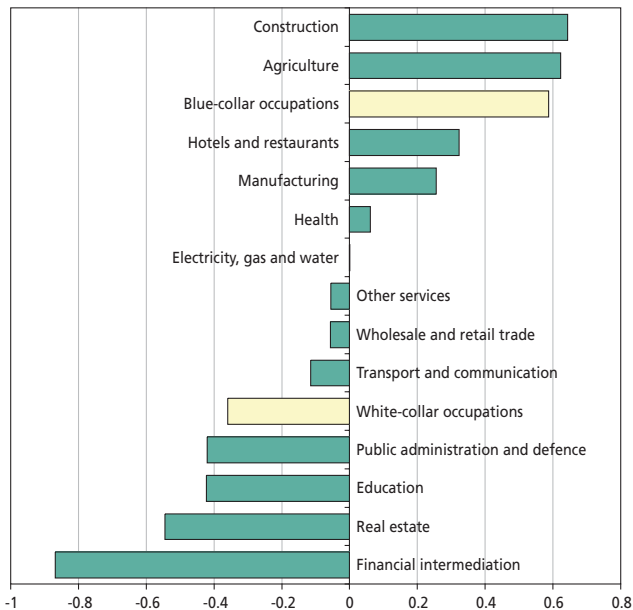
stable in general with less than average exposure to each set of risk factors across all age groups.

### Occupational and sectoral dimension of physical risk factors

There is a strong correlation between working in specific occupations and sectors and exposure to physical risks, as Figures 3.6–3.8 illustrate. By occupation, the most exposed groups are craft and related trades workers, plant and machine operators and skilled agricultural and fishery workers – in this respect there is a clear differentiation in terms of blue-collar and white-collar jobs.

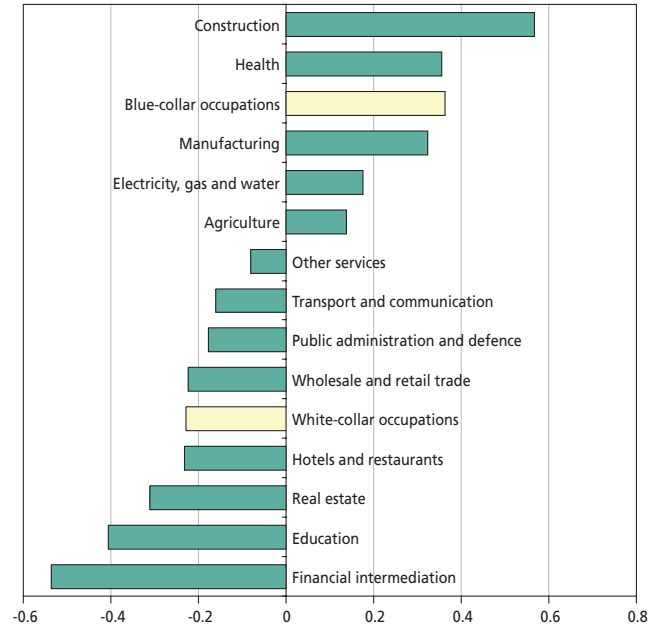
In terms of sectors, the construction sector reports the highest level of exposure to each set of risks, with the agriculture and manufacturing sectors also reporting higher-than-median exposure. The financial intermediation and real estate sectors are those in which the lowest exposure is reported for each set of risks. The hotel and restaurants and the health sectors are the only sectors in which there are marked differences between levels of exposure to the three sets of risks. Workers in the hotel and restaurants sector report high levels of ergonomic risk but relatively low levels of biological and chemical risk. In the health sector, workers

**Figure 3.6: Type of exposure to ergonomic risk factors, by sector and occupation (average standardised (z) score)**



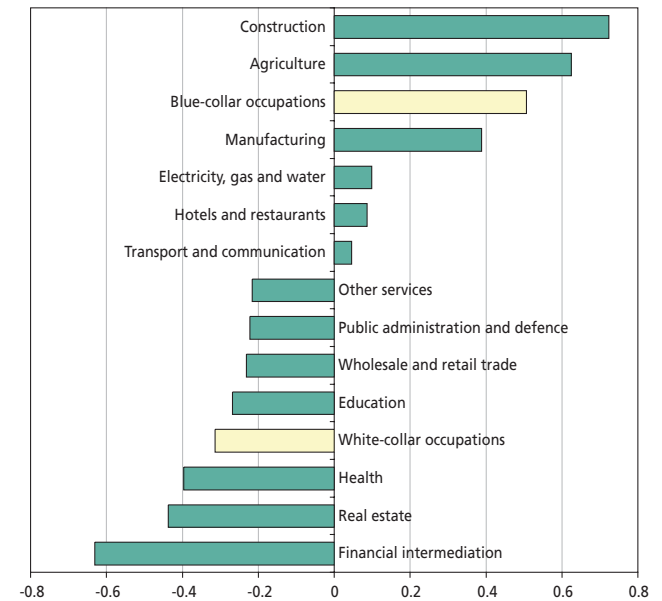
Note: +/- < 0.25 = small deviation from mean exposure  
 +/- 0.25-0.5 = substantial deviation from mean exposure  
 +/- >0.5 = very substantial deviation from mean exposure

**Figure 3.7: Exposure to biological and chemical risk factors, by sector and type of occupation (average standardised (z) score)**



Note: +/- < 0.25 = small deviation from mean exposure  
 +/- 0.25-0.5 = substantial deviation from mean exposure  
 +/- >0.5 = very substantial deviation from mean exposure

**Figure 3.8: Exposure to noise/temperatures, by sector and type of occupation (average standardised (z) score)**



Note: +/- < 0.25 = small deviation from mean exposure  
 +/- 0.25-0.5 = substantial deviation from mean exposure  
 +/- >0.5 = very substantial deviation from mean exposure

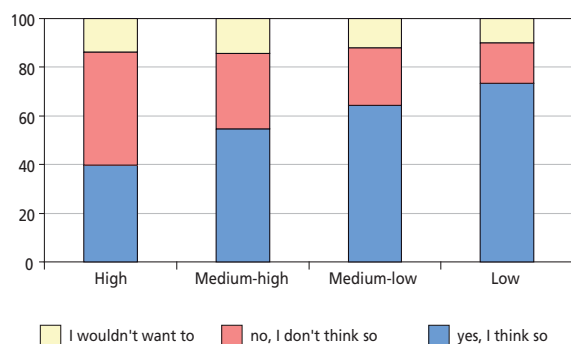
report substantial levels of biological and chemical risk, but very low levels of risks from noise/temperatures.

### Impact of increased exposure to physical risks

The survey sought to identify the correlation between exposure to physical workplace risks and a worker's perception of health risks arising from work and also on their perception of work sustainability. Persons who report a high level of exposure to physical risk are more likely to report that their health is at risk as a result of their work. They also do not think they will be able to carry out their current main job at the age of 60. Of the three sets of physical risks (ergonomic, biological/chemical and noise/temperatures), increased exposure to ergonomic risk has the most significant impact on a respondent's perception of their ability and/or willingness to carry out their current job when they are 60 (Figure 3.9).

The most commonly reported physical risk at work is repetitive hand or arm movements (62% exposed a quarter of the time or more). The survey confirms a correlation between the level of exposure to this risk and health problems such as muscular problems in the shoulder, neck or limbs, and backache. Repetitive hand/arm movement is only one of several factors contributing to work-related musculoskeletal problems and there is clearly a wide variation in the nature of the relationship from one individual to another. While the incidence of backache and musculoskeletal problems has been found to rise with increased exposure to repetitive movements, nonetheless the majority of those workers with the greatest exposure ('all

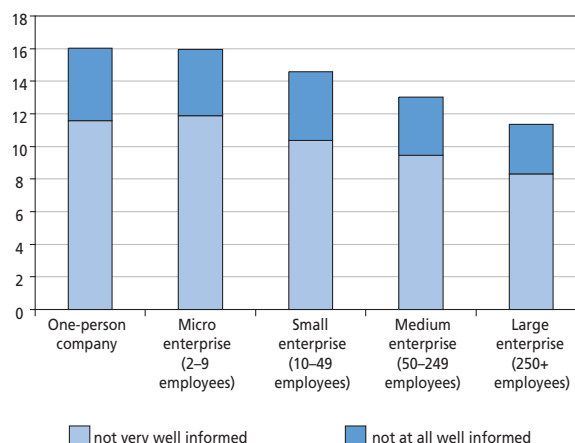
**Figure 3.9: Ability to do same job at the age of 60, by level of ergonomic risk exposure (z-score quartiles)<sup>4</sup> (%)**



Note: The survey question on work sustainability was, 'Do you think you will be able to do the same job you are doing now when you are 60 years old?'

<sup>4</sup> Note: Quartiles are values that divide a sample into four equal parts while terciles divide a sample into three equal parts.

**Figure 3.10: Lack of information on workplace risks, by company size (%)**

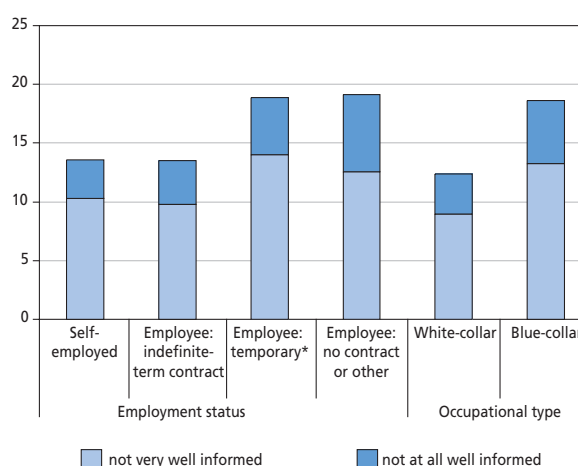


of the time') do not report that they suffer from each of the related health problems. On the other hand, the likely presence of a 'healthy worker effect' may serve to reduce the reported levels. In other words, workers for whom repetitive movements have a major negative health impact may no longer be in the workforce.

### Information about workplace risks and use of protective equipment

In addition to measuring exposure to a variety of physical risk factors, the survey also asked respondents whether they considered themselves to be well-informed about the health

**Figure 3.11: Lack of information on workplace risks, by employment status and occupational type (%)**



\* ie. fixed-term or temporary agency contract

and safety risks related to the performance of their job and also whether their job necessitated the wearing of personal protective equipment.

Workers in the new Member States declare themselves to be better informed regarding workplace risks than their EU15 counterparts: 15% of EU15 workers report themselves not very well informed or not at all informed regarding workplace risks, compared to 9% of NMS workers. There has been a relatively significant increase (five percentage points) in the proportion of EU15 workers reporting themselves not well-informed over the last five years.

There was an increase in the proportion of EU15 workers wearing protective equipment in 2005 (32%) compared to 2000 (28%).

There is a significant correlation between company size and contract status with level of information regarding workplace risks. Workers in bigger organisations consider themselves generally to be well informed about workplace risks. Workers on indefinite contracts consider themselves to be better informed about risks than those with a less permanent attachment to their main job. Among the self-employed, those working alone are twice as informed about workplace risks (16%) as those with employees (8%).

# Violence, harassment and discrimination in the workplace 4

National working conditions surveys in recent years have highlighted a trend towards the increasing incidence of psychological health problems cited as the basis for work-related health problems.<sup>1</sup> Significant factors contributing to psychological ill-health and stress may include bullying or harassment, violence or the threat of violence, as well as various forms of discrimination. Research shows that, if left unchecked, these forms of behaviour can have damaging effects, not only on the individual well-being and performance of the person targeted but also on the collective psychosocial work environment and overall organisational and economic performance.

The small percentages reported for all of these issues reveal them to be the exception rather than the norm in the working lives of Europeans. One in 20 workers reports having been exposed to bullying and/or harassment in the previous 12-month period and a similar proportion reports having been exposed to violence;<sup>2</sup> only about one worker

in 100 reports experiencing discrimination in relation to religion, ethnic origin or sexual orientation. It should be pointed out, however, that selection bias may lead to underreporting for many of these categories. For instance, it could be the case that many workers subjected to serious instances of abuse (physical or psychological) or discrimination are no longer working and hence do not appear in the target population group 'persons in employment'.

It is also the case that certain forms of discrimination – for example, those related to religion, ethnic origin, sexual orientation and nationality – may only realistically apply to very limited subgroups from the survey sample belonging to specific minority groupings. The low overall incidence of these forms of discrimination tends to conceal a much higher incidence in the groups potentially affected. Therefore, figures relating to discrimination should be interpreted with caution.

**Table 4.1: Incidence of violence, harassment and discrimination at work (%)**

<i>Over the past 12 months, have you or have you not been personally subjected at work to:</i>	<b>1995 EU15</b>	<b>2000 EU15</b>	<b>2005 EU25</b>	<b>2005 EU15</b>	<b>2001 NMS</b>	<b>2005 NMS</b>	<b>2001 AC2</b>	<b>2005 AC2</b>
Threats of physical violence	-	-	6	6	-	5	-	4
Physical violence								
from people within workplace	4*	2	2	2	1	1	1	1
from people outside workplace		4	4	5	3	4	3	3
Physical violence either from people within or outside workplace **	4	5	5	6	3	4	4	4
Intimidation	8	9	-	-	7	-	7	-
Bullying and/or harassment	-	-	5	5	-	4	-	4
Sexual discrimination	2	2	1	1	1	1	<1	1
Unwanted sexual attention	2	2	2	2	2	2	2	1
Age discrimination	3	3	3	3	3	3	3	3
Nationality discrimination	1	1	1	1	<1	1	1	1
Ethnic discrimination	1	1	1	1	<1	1	1	1
Religious discrimination	-	-	1	1	-	<1	-	<1
Disability discrimination	1	1	<1	<1	1	<1	1	<1
Sexual orientation	-	<1	<1	<1	<1	<1	1	<1

\* The two sub-questions were combined in 1995.

\*\* A combined variable based on those answering 'Yes' to either Q29b or Q29c

<sup>1</sup> See, for example, the following reports from the Foundation: *Trends of quality of work in the Netherlands*, available at [http://www.eurofound.europa.eu/ewco/surveys/NL0601SR01/NL0601SR01\\_7.htm](http://www.eurofound.europa.eu/ewco/surveys/NL0601SR01/NL0601SR01_7.htm) and *Work-related disorders in Sweden* [http://www.eurofound.europa.eu/ewco/surveys/SE0601SR01/SE0601SR01\\_3.htm](http://www.eurofound.europa.eu/ewco/surveys/SE0601SR01/SE0601SR01_3.htm)

<sup>2</sup> Where the term 'physical violence' or 'violence' is used without any qualification, it refers to situations where a worker is exposed to violence from persons either inside or outside the workplace.



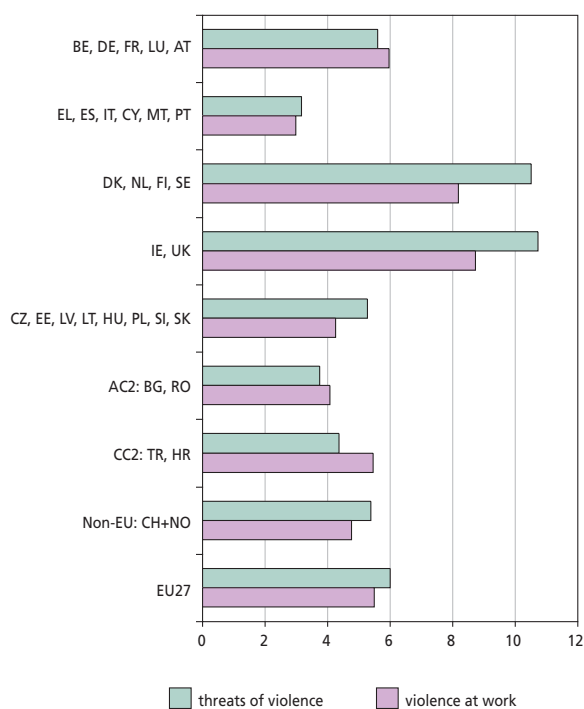
In terms of trends, the incidence of various forms of violence, harassment and discrimination at work has remained broadly stable over the last 10 years, although levels of exposure to violence appear to be increasing (from 4% to 6% over the period 1995–2005, in the EU15 only).

There have been changes in the phrasing of some questions. An existing question on exposure to ‘intimidation’ has been amended to refer instead to ‘bullying/harassment’ to reflect a growing consensus of usage based on these terms. A new sub-question on ‘threats of physical violence’ introduced in the 2005 survey indicated, not surprisingly, that a higher proportion of workers were exposed to such threats than to actual acts of violence.

### Physical violence

Physical violence at work affects just a small proportion of the overall workforce: one in 20 workers (5%) overall reports having been personally subjected to violence either from fellow workers or from others. Higher-than-average levels are reported in the Netherlands (10%), France and the UK (both 9%) and Ireland (8%).

**Figure 4.1: Workers subjected to violence or threats of violence, by country group (%)**



In general, there is a higher reported incidence of exposure to violence, as well as to threats of violence, in the northern European Member States and a lower reported incidence in the southern Member States. There has been an increase in the level of physical violence in the period 1995–2005 (from 4% to 6%) in the EU15, which is consistent with findings at national level.<sup>3</sup>

More workers are affected by violence from people outside the workplace (4%) than from fellow workers (2%) – levels similar to those reported in 2000 (for the EU15). A slightly higher percentage of workers (6%) reports being subjected to threats of physical violence than to actual violent acts.

Neither sex nor employment nor contractual status appears to have a significant impact on exposure to violence, although there are substantial occupational and sectoral variations. In contrast to standard workplace physical risk exposures, white-collar workers are somewhat more exposed than blue-collar workers to risks related to violence, harassment and discrimination (6% compared to 4%).

### Harassment

Two forms of harassment are examined in the survey: bullying and/or harassment<sup>4</sup> and sexual harassment (‘unwanted sexual attention’).

#### Bullying and harassment

Around one in 20 (5%) workers reports having been subjected to bullying and harassment in the workplace in 2005. However, this low average figure conceals wide variations between countries, ranging from 17% in Finland and 12% in the Netherlands to 2% in Italy and Bulgaria. Such differences may reflect different levels of cultural awareness of, and sensitivity to, the issue as much as differences in actual incidence. Despite the change in wording of this question, it is worth noting that Finland and the Netherlands were also the two countries with the highest reported incidence of ‘intimidation’ in the 2000 survey, at 15% and 14% respectively.

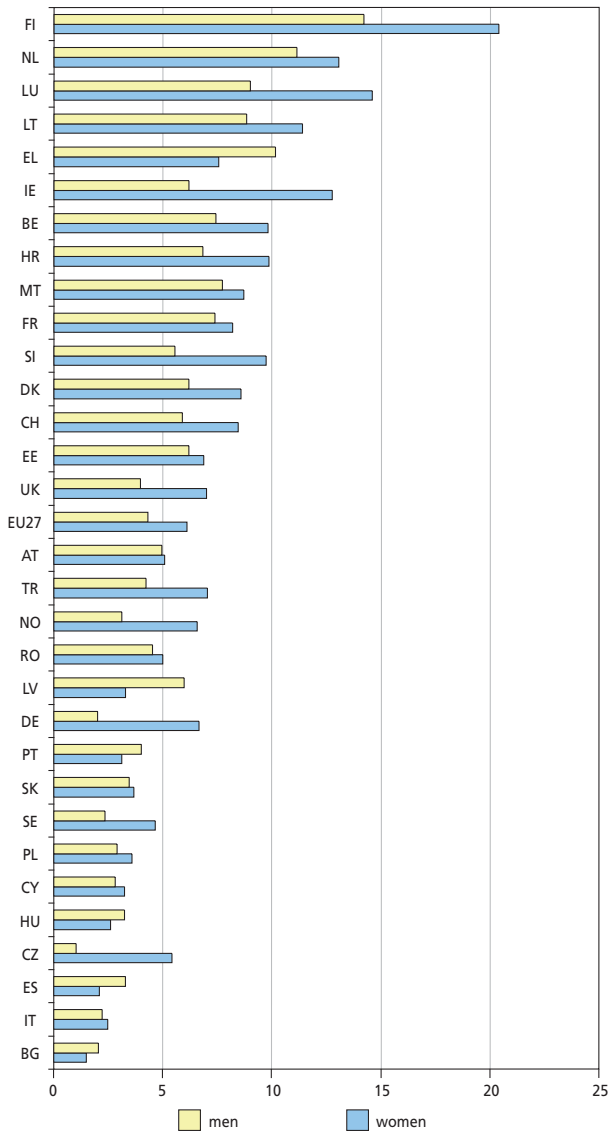
Women are more subject to bullying and harassment (6%) than men (4%) and younger women are at greatest risk (8% of those under 30 years old). Employees (6%) are more susceptible than self-employed people (3%), while there are no notable differences according to employment status.

There are substantial differences in the incidence of

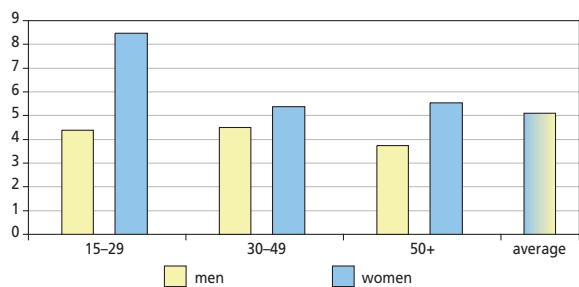
<sup>3</sup> See, for example, the Foundation report *Violence, bullying and harassment in the workplace*, available online at <http://www.eurofound.europa.eu/ewco/reports/TN0406TR01/TN0406TR01.pdf>

<sup>4</sup> This sub-question was reworded in this fourth survey to reflect the prevailing usage of the terms ‘bullying’ and/or ‘harassment’ to describe certain types of behaviour, in place of the term ‘intimidation’ which had been used in previous surveys. On the basis of the change in wording, it is inadvisable to draw any conclusions on trends.

**Figure 4.2: Bullying and harassment, by sex and country (%)**

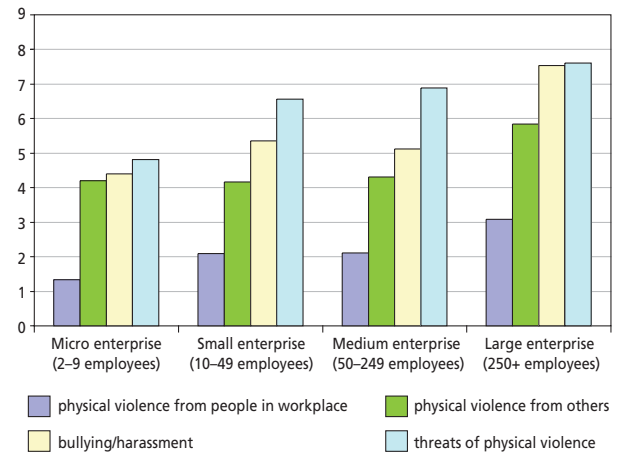


**Figure 4.3: Bullying and harassment, by sex and age, EU27 (%)**



bullying and harassment by company size: those working in larger establishments (over 250 workers) report the highest levels (8%). Sector is also an important variable, with workers in the education, health and social work, and hotels and restaurants sectors reporting higher-than-average incidences.

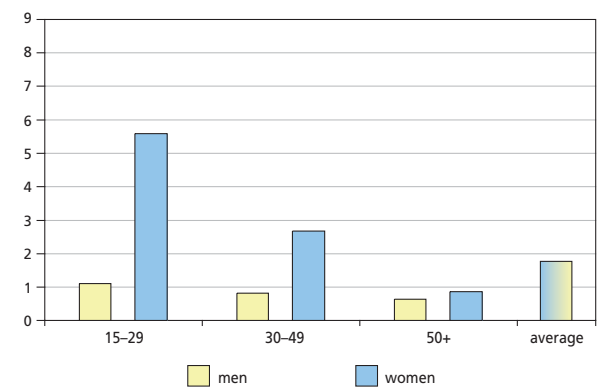
**Figure 4.4: Violence and harassment, by company size, EU27 (%)**



**Sexual harassment**

The incidence of sexual harassment, or unwanted sexual attention, is reported by fewer than 2% of respondents overall but affects three times as many female workers as male. Women in the Czech Republic (10%), Norway (7%), Turkey, Croatia, (6%), Denmark, Sweden, Lithuania and the UK (5%) are the most affected, while in some southern European countries the phenomenon is barely reported at all. Italy, Spain, Malta, Cyprus all have incidences of less than 1% overall.

**Figure 4.5: Sexual harassment, by sex and age, EU27 (%)**

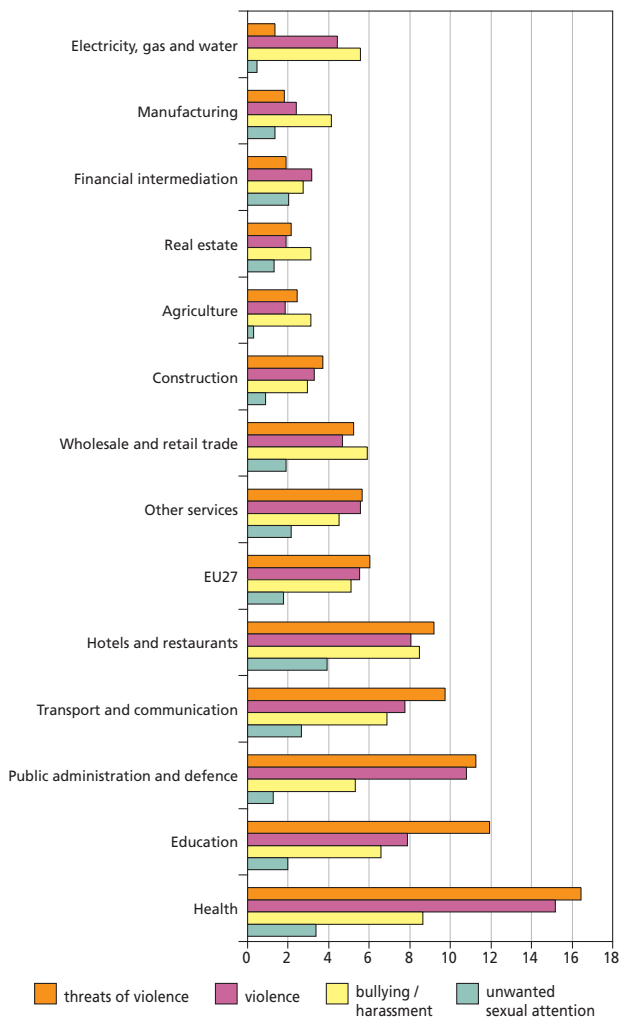


Again, the group most at risk is young women (under 30 years old), where the incidence rises to 6%. The rate is higher for employed workers than for self-employed, and in terms of contract status, women on fixed-term contracts or temporary agency workers report higher levels (5%) than those on indefinite contracts (2%).

**Incidence of violence and harassment by sector and occupation**

The survey reveals major sectoral differences in the incidence of violence and harassment. In many sectors where physical risks are high – agriculture, construction and

**Figure 4.6: Level of violence and harassment, by sector, EU27 (%)**



manufacturing – relatively low levels of violence and harassment are reported. The reverse is also true: in sectors where physical risks are low, high levels of exposure to psychosocial risk factors are reported. Workers in the health sector are eight times more likely to have experienced the threat of physical violence than workers in the manufacturing sector.

Significantly, these differences can be shown to exist across all the sub-questions related to psychosocial risks: exposure to physical violence, threat of violence, bullying and/or harassment and unwanted sexual attention.

The risk of experiencing both violence and harassment is greatest in the education and health sectors as well as the

public administration and defence sectors, with lower but still significantly above average levels in the transport and communication and hotel and restaurant sectors.

Given that the health and social work sector reports the highest incidence of any sector, it is unsurprising therefore that in occupational terms life science and health professionals and associate professionals (occupational categories including, for example, doctors, dentists, nurses, dental technicians, etc.) also report high levels of exposure to violence. A high level of occupational skill or specialisation does not appear to offer protection in this respect, as professionals are somewhat more affected than associate professionals.

**Table 4.2: Violence at work: the most exposed sectors and occupations, EU27 (%)\***

Sector	Occupation
Health and social work 15.2	Life science and health professionals 15.3
Land transport; transport via pipelines 11.5	Personal and protective services workers 14.6
Public administration and defence 10.8	Life science and health associate professionals 13.4
Hotels and restaurants 8.1	Drivers and mobile plant operators 9.5
Education 7.9	Customer services clerks 8.2
Other service activities 5.2	Teaching professionals 7.6

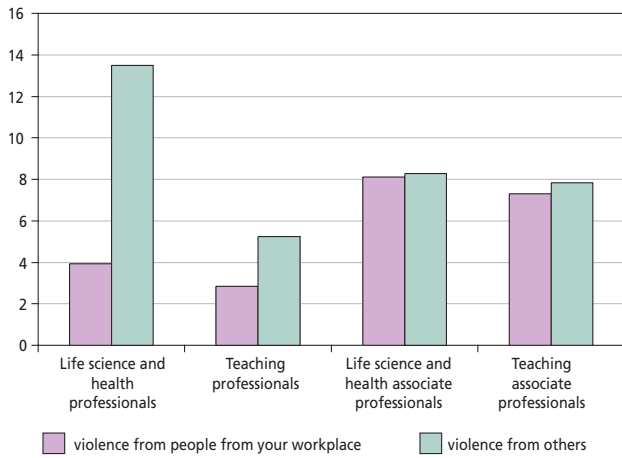
\* Classification based on ISCO/NACE 2-digit codes; only sectors / occupations with N>500 included.

If the figures above are further analysed in terms of the two components of workplace violence – violence from fellow workers and violence from people outside the workforce – interesting differences show up both in the health and teaching professions between occupational levels. Professionals – those generally holding more senior positions – have a high level of exposure to violence from non-colleagues but comparatively low levels of exposure to violence from colleagues.<sup>5</sup> For associate professionals in both professions, on the other hand, violence is as likely to be at the hands of people from their workplace as from people outside the workforce.

Overall, 6% of public sector workers report having experienced bullying or harassment compared to 4% of those working in the private sector. For each of the questions relating to violence in the workplace, public

<sup>5</sup> Professionals (ISCO-88 major group 2) include occupations whose main tasks require a high level of professional knowledge and experience and generally education and training to university-degree level (e.g. medical doctors, secondary school teachers, etc). Technicians and associate professionals (ISCO-88 major group 3) include occupations whose main tasks require technical knowledge and experience with some post-secondary training but generally not to university-degree level (e.g. dental assistant). See the ILO's ISCO web site for more information (<http://www.ilo.org/public/english/bureau/stat/isco/isco88/index.htm>).

**Figure 4.7: Exposure to violence in the health and education sectors, by occupational category, EU27 (%)**



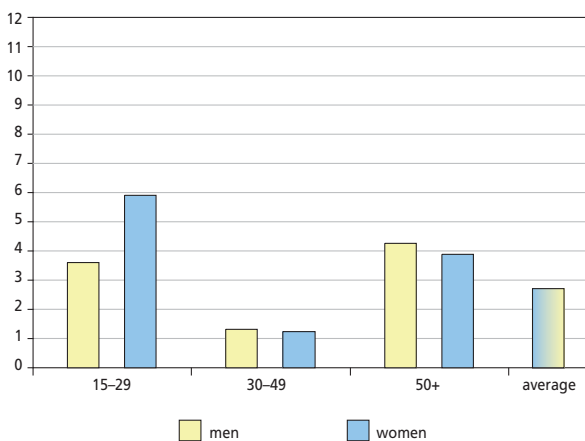
sector workers are more than twice as likely to have been subjected to threats of violence or actual violence as those in the private sector.

One reason why public sector workers are more affected by violence or the threat of violence at the workplace may be the higher level of interaction with people other than colleagues. Around half of the public-sector workers surveyed (50%) reported that their job involves dealing directly at least three quarters of the time with non-colleagues (i.e. customers, students, patients, etc.) compared to just 38% of private sector workers.

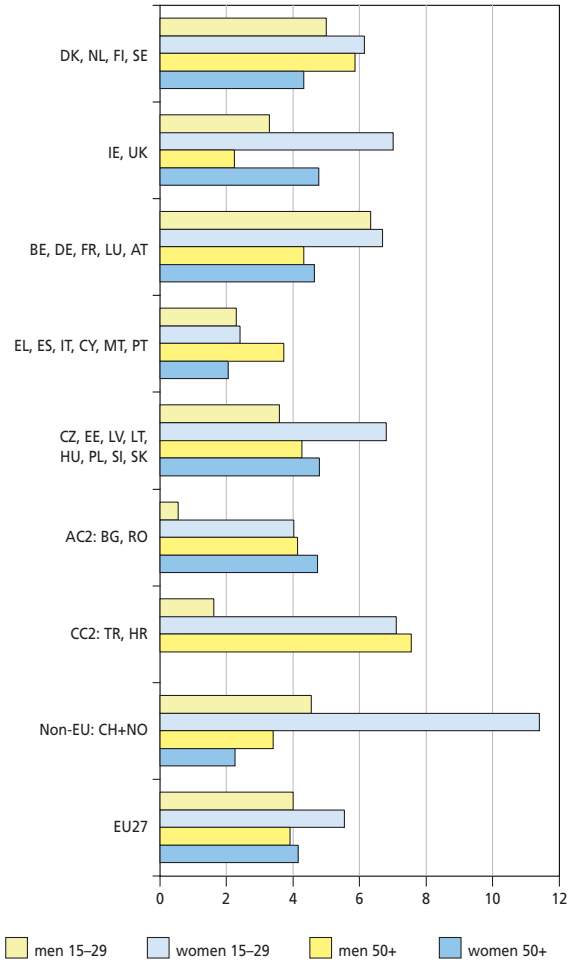
**Discrimination**

The survey assesses discrimination of different types: based on sex, ethnic background, age, nationality, religion, disability and sexual orientation. In general, levels of discrimination in the workplace are low – from less than 1% in relation to religion, ethnic background, sexual orientation and disability to 1% in relation to nationality or sex

**Figure 4.8: Age discrimination by sex and age, EU27 (%)**



**Figure 4.9: Age discrimination by age, sex and country group (%)**



(although 2% of women and 4% of those under 30 years of age are affected). Levels have remained stable for all questions between 2000 and 2005.

Only discrimination related to age is reported by more than a marginal percentage of respondents (3%), varying from less than 1% in Spain to 6% in the Czech Republic. Interestingly, more respondents under 30 years of age (5%) report being subject to age discrimination than respondents over 50 (4%), with women under 30 years of age reporting the highest levels.

Looking at the incidence of age discrimination by country group reveals interesting variations by sex and in age groups most affected. In the Scandinavian countries and the Netherlands, there is little differentiation by sex or age in reported levels of age discrimination. In the UK and Ireland and in the eastern European countries, higher proportions of younger female workers are affected and this pattern is even more marked in the case of non-EU Member States Norway and Switzerland.

**Impact of violence and harassment in the workplace**

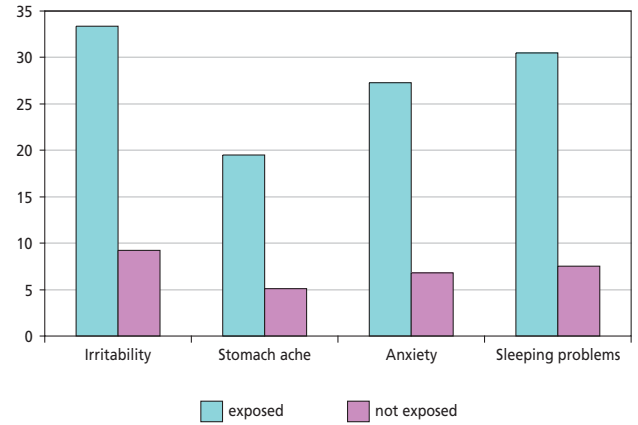
Those affected by violence or harassment in the workplace tend to report higher levels of work-related ill-health. What is especially noticeable from the survey is that the proportion of workers reporting symptoms of psychosocial factors, such as sleeping problems, anxiety and irritability, is nearly four times greater among those who have experienced violence or bullying and harassment as among those who have not. The negative impacts are not exclusively psychological or mental, however. It is also the case that a higher incidence of physiological symptoms, notably stomach ache, is reported by those subjected to bullying and harassment. And a much higher proportion of bullied workers suffer from multiple work-related health problems: 40% report being affected by six or more of the 17 symptoms indicated in the questionnaire, compared to a level of 15% in the working population as a whole.

Higher levels of stress are also reported, although the proportionate increase is not as great as for the four symptoms indicated in the figure below.

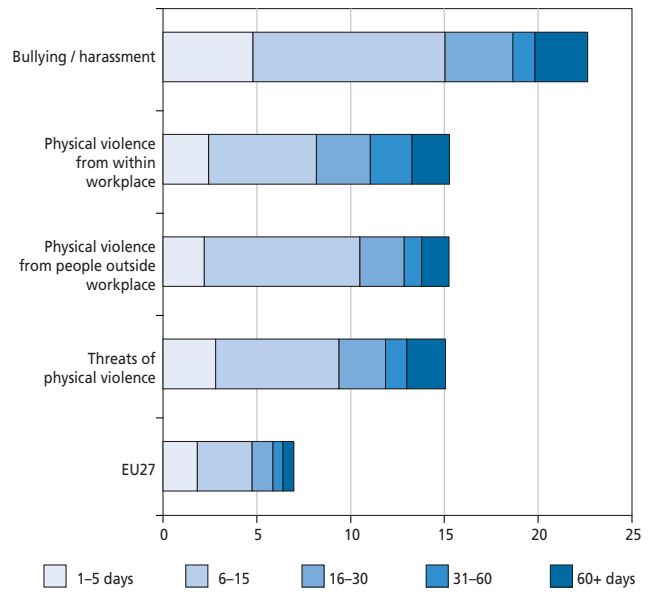
There is a similar correlation evident for the health impacts of being affected by violence and threats of violence at work. In each case, anxiety, irritability, sleeping problems and stomach ache are among the symptoms with the highest proportionate increase in incidence if compared to those not exposed.

Overall, 23% of workers report having been absent from work in the 12 months prior to the survey as a result of health problems. Taking into account only those who attribute at least a proportion of such absences to work-related causes (as distinct from general health problems unrelated to work), this percentage falls to 7%. It is clear from Figure 4.11 that those who are exposed to psychosocial risks are significantly more likely than the average to report absence due to work-related ill health. This is notably the case for those workers subjected to bullying and harassment; these workers also tend to have longer durations of work absence and are over-represented in that category of workers who took 60 days off in the previous 12 months due to work-related ill health. Again, it is important to point out that there is not necessarily a causal connection between incidences of bullying or

**Figure 4.10: Health problems associated with bullying and harassment, EU27 (%)**



**Figure 4.11 Proportion of workers absent and number of days absence due to work-related health problems (%)**



violence and increased work-related sickness absence. It may be that these were just some among a number of contributing factors to the levels of absence attributable to (unspecified) work-related health problems of individual respondents.

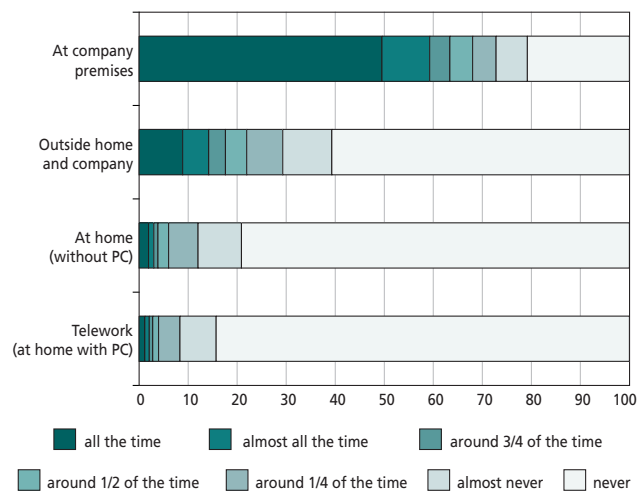
This chapter examines some of the changes taking place in how work is performed: where work is carried out, the increasing use of information technology at work, and the possibilities for on-the-job learning.

## Place of work

Previous editions of the *European Working Conditions Survey* included indicators on telework and working from home. In this fourth edition of the survey, two new indicators have been introduced that facilitate the study of Europeans' place of work in greater detail: the proportion of time spent working at company premises and the proportion of time working in places other than at home or at company premises (at clients' premises, on the road etc.)

Figure 5.1 shows the distribution of these four indicators for the whole of the EU27. As expected, company premises are by far the most important place of work in Europe: almost 60% of EU workers work all or almost all the time at company premises. It is interesting to note that a considerable proportion of people never or almost never work at company premises (almost 30%). Around 15% of respondents work always or almost always outside the home or company premises, and twice as many do so at least a quarter of the time. The proportion of workers working all or almost all of the time from home (with or without a personal computer (PC)) is extremely low: less than 3% of the EU working population. On the other hand, around 12% of European workers report working at least a quarter of the time from home without a PC and 8% at home with a PC – a sizeable proportion. This suggests that, although telework or working from home is not yet a real alternative to working on company premises, it is used by a substantial proportion of people as a complement to their normal working arrangements.

**Figure 5.1: Place of work, EU27 (%)**



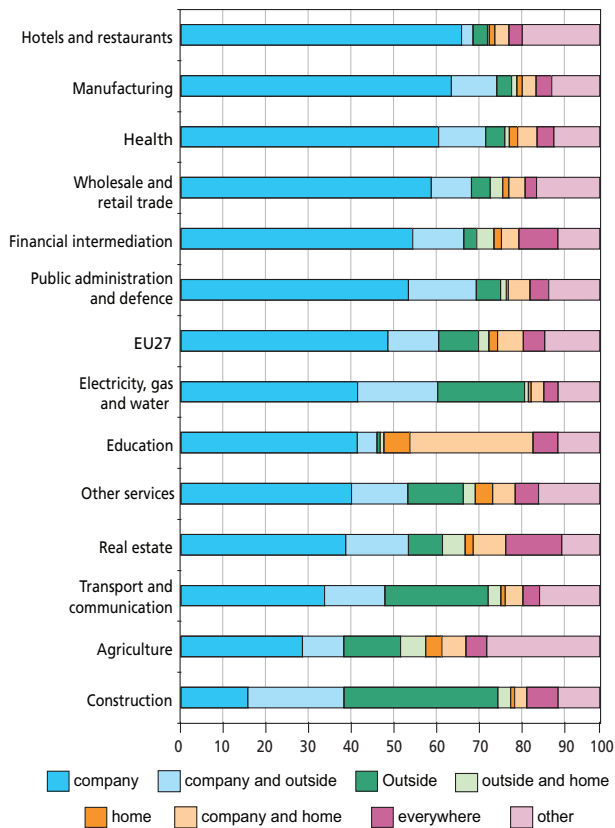
The general distribution of the four indicators of place of work shown in Figure 5.1 does not provide an overall picture of the usual place of work of Europeans, because it does not show, for example, whether those who never work at company premises work from home or elsewhere. For this reason, a single composite indicator of the usual place of work has been created, aggregating the information provided by each of the four individual indicators. This composite indicator classifies workers according to their answers in one of the following eight categories:

- 1) work only in company premises (50% of EU workers);
- 2) work both at company premises and outside (12%);
- 3) work only outside (10%);
- 4) work outside and from home (2%);
- 5) work only from home (2%);
- 6) work at company and from home (6%);
- 7) work a significant amount of time in all locations (5%);
- 8) do not work a significant amount of time in any of these categories; it can be assumed that they work in some other place (13%).

Figure 5.2 illustrates the usual places of work (using the composite indicator) in the different sectors of the EU economy. There is quite a big variation between different sectors. In hotels and restaurants, manufacturing, health, retail, financial intermediation and public administration, the proportion of people working only at company premises is much greater than for all the other categories (only the category of 'company and outside' has a similar share). In the other sectors, a substantial proportion of people work in places other than company premises. Construction, transport and utilities stand out as the sectors in which the proportion of people working outside is highest. Education has a high proportion of people working from home (around one third works either mainly or significantly from home), and, to a lesser extent, real estate and agriculture. Although it is a marginal category in all sectors, the proportion of people who are working everywhere (at company premises, outside and from home, a significant amount of time) is highest in real estate and financial intermediation. Finally, the category of 'other' is quite large in agriculture and fishing, which probably indicates that the indicators used to measure place of work in the survey do not fit the experience of workers in this sector very well.

The implications for workers of the different places of work can be explored. Figure 5.3 shows the relationship between the place of work and the time spent there, showing the average working hours for workers in each of the place-of-

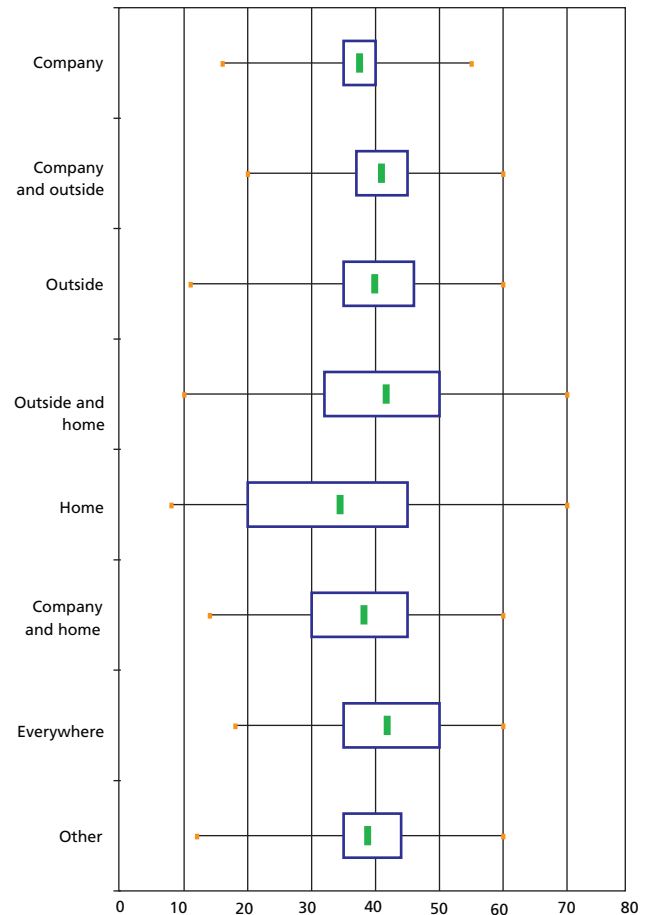
Figure 5.2: Usual place of work, by sector, EU27 (%)



work categories (represented by the thick line in the middle of each of the boxes) as well as their dispersion (the box represents the 50% of workers around the average, and the vertical lines represent the 90% around the average). For instance, the average weekly hours of those working at company premises are 37.5; 50% of these workers work from 35 to 40 hours, and 90% between 16 and 55 hours per week. What the graph indicates is that those working at company premises show much less variation in their weekly working hours than all the others (the box and vertical lines for them are much less spread out than for the other categories). By contrast, those working from home (or also at the company premises or outside) show a much greater dispersion of working hours. This points to the fact that working from home is by nature much more flexible time-wise (in most cases, the organisation of the hours worked from home are entirely determined by the worker), whereas working at company premises implies a higher degree of coordination with the work process and cooperation with others, which often leads to lower flexibility and therefore more standardisation of working hours.

Related to this, Figure 5.4 shows the levels of satisfaction with work–life balance (measured by the question of how well the respondent considers that working hours fit with

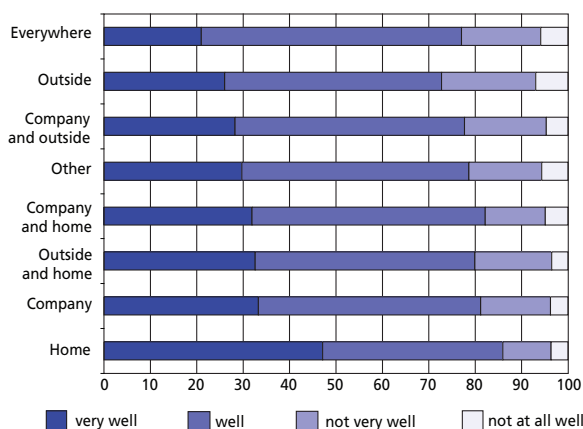
Figure 5.3: Weekly working hours by usual place of work, EU27



family and social commitments) of the workers in the different places of work. Although the levels of satisfaction with work–life balance are quite high across all categories, there is a clear correlation between satisfaction with work–life balance and usual place of work. Specifically, those working from home are considerably more satisfied with their work–life balance than all other workers and those working outside and everywhere are least satisfied. This suggests that not only working hours, but the place of work has an impact on the work–life balance of workers.

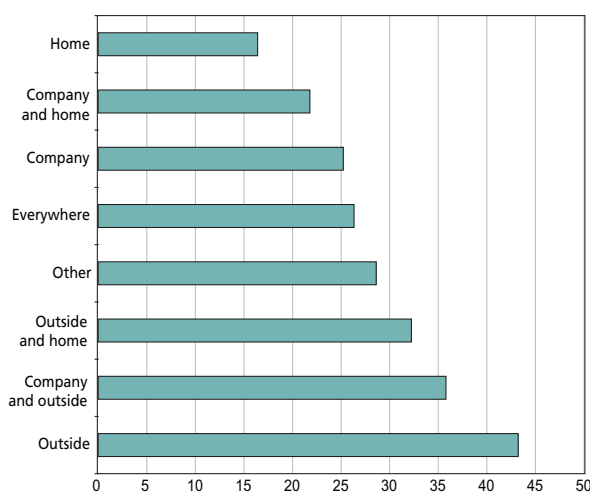
Finally, Figure 5.5 shows the relationship between the place of work and the perception of health and safety risks. There is a clear and quite important correlation: those working from home face the lowest risk levels and those working outside face the highest, with the category of working at company premises falling in between. A multivariate logistic regression model (not shown here), controlling for sector and occupation, confirms that working outside has a negative impact on the perception of safety risks from work while working from home has a positive impact.

**Figure 5.4: Work–life balance, by usual place of work, EU27 (%)**



Note: Question asked ‘Do your working hours fit in with your family or social commitments outside work?’

**Figure 5.5: Perceived impact of work on health, by place of work, EU27 (%)**



Note: Respondents were asked ‘Is your health and safety at risk because of your work?’

### Use of technology

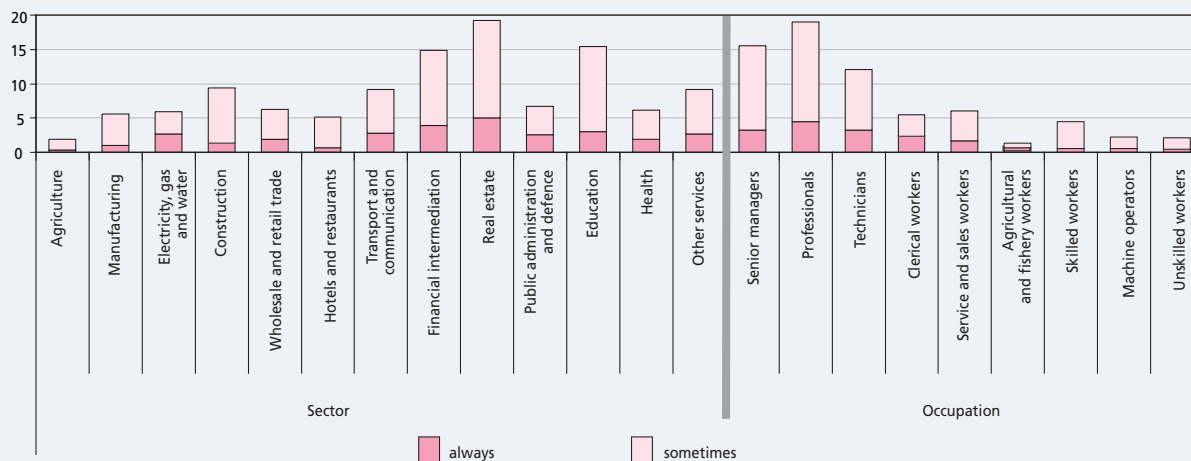
Changes in the use of technology are one of the main determinants of changes in the process of work and, consequently, of working conditions in the long term. According to many analysts, in the last couple of decades the use of technologies at work is going through a process

of radical change matched only by the first and second industrial revolutions. The most salient aspect of this revolution is, of course, the use of information technology (IT) in work processes in advanced economies.

### Telework

In the fourth *European Working Conditions Survey*, there is a specific indicator on telework, which is defined as working from home and with a PC. Figure 5.6 shows the distribution of telework for a number of variables. The overall proportion of people doing telework is very low: slightly more than 8% of all EU workers do any telework at all, and less than 2% regularly work from home and with a PC. Although generally very low everywhere, the proportion of people teleworking is highest in the Scandinavian countries and the Netherlands and lowest in the southern European countries; it is also high in eastern European countries. Telework is much more often carried out by self-employed persons than by employees, and men are slightly more likely to do telework than women. In terms of sectors, three stand out with a considerably higher use of telework than all the rest: real estate, financial intermediation and education. Only professional, managerial and technical occupations have more than 10% of workers working sometimes or always from home and with a PC. Educational level (not shown here) is also strongly related to telework: the higher the formal qualifications, the more likely workers are to telework.

**Figure 5.6: Telework by sector and occupation, EU27 (%)**





The survey has indicators on the use of IT and of more traditional types of technology, which can be used to explore the use of both types of technology in European workplaces. Drawing from four questions in the survey, a composite indicator has been derived, following closely the approach of a previous report on technology and working conditions carried out by the Foundation in 2002.<sup>1</sup> The four original variables are: use of PC at work, use of internet and email, work affected by vibrations from machinery and pace of work determined by the automatic speed of a machine. Those workers whose work implies a significant use of PC and internet are classified as ‘IT’ (37% of EU workers) and those whose work is significantly determined by the use of machinery are classified as ‘machinery’ (23%). There is a mixed category (workers significantly affected by both, around 10% in the whole of the EU) and a category of workers not significantly determined by either IT or machinery (30%).<sup>2</sup>

Figure 5.7 represents the proportion of workers that fall into the IT and machinery category in each country.<sup>3</sup> There is a strong negative correlation at the country level between the use of IT and the use of machine technologies: those countries with a higher proportion of workers using IT are also the countries with less use of machinery, and vice versa. This may suggest a trade-off, an international technological specialisation or simply the substitution of old technologies by new – one of the characteristics of a technological revolution (which would mean that those countries that are higher in the graph are more advanced in this revolution). In any case, there is a clear differentiation by countries in the graph: all the Scandinavian countries and the Netherlands score very highly in terms of IT use but have very little use of machine technology, whereas most eastern and southern European countries are the opposite. Bulgaria, Romania and Turkey score significantly lower than all the other countries in the use of IT at work, and relatively highly in the use of machinery. The results seem to show that the composite indicator of use of technology at work is indeed capturing what it intends to capture, as the country differences are consistent with what could be expected, according to previous literature and other similar indicators.

Figure 5.8 shows the distribution of the use of IT and machinery technologies by sector. The sectors in which the

Figure 5.7: Use of technology at work, by country (%)

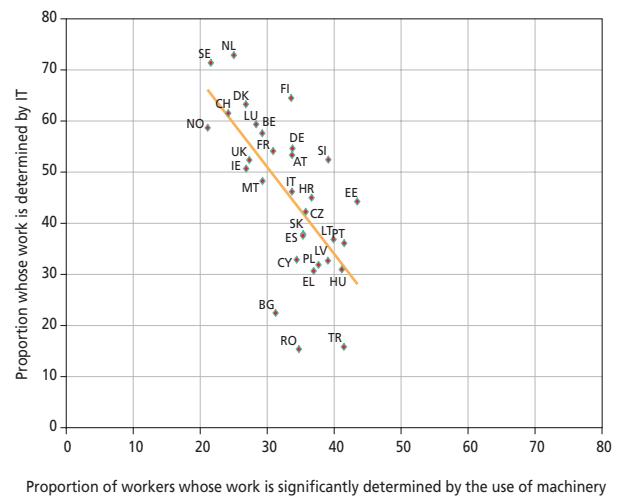
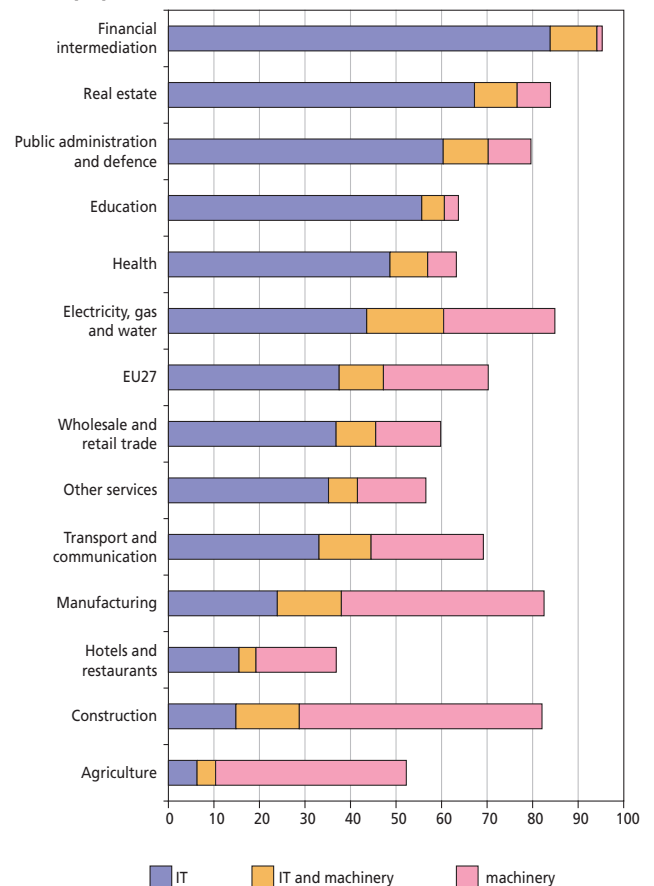


Figure 5.8: Use of technology at work, by sector, EU27 (%)



<sup>1</sup> Dhondt, S. et al (2002): *Work organisation, technology and working conditions*, <http://www.eurofound.europa.eu/publications/htmlfiles/ef0205.htm>

<sup>2</sup> Although this composite indicator of use of technologies is meaningful and consistent, it has to be interpreted with care. Because of the way the original questions were constructed, the indicators for IT are ‘softer’ (they only measure whether people use computers and internet at work a significant amount of time) than the indicators for machinery (which not only reflect the use of machinery, but also whether the worker is significantly affected or determined by them). This means that the indicator probably slightly underestimates the use of machine technology, and, consequently, overestimates the proportion of workers whose work is not significantly determined by their use. This need not be a weakness of the indicator, as long as one is aware of its limitations.

<sup>3</sup> Those in the middle category (work determined by both) have been added to both.

use of IT is above the EU average are financial intermediation, real estate, public administration, education, health and utilities. In all these sectors, except for utilities, the use of machinery is marginal. Sectors that are below the EU average in the use of IT are retail, other services, transport, manufacturing, hotels and restaurants, construction and agriculture. In manufacturing, construction and agriculture, the percentage of workers whose work is substantially determined by the use of machinery is very high (above 40% in all cases). At the same time, there is also a large group of workers in agriculture (and in hotels and restaurants) whose work is not determined significantly by any type of technology.

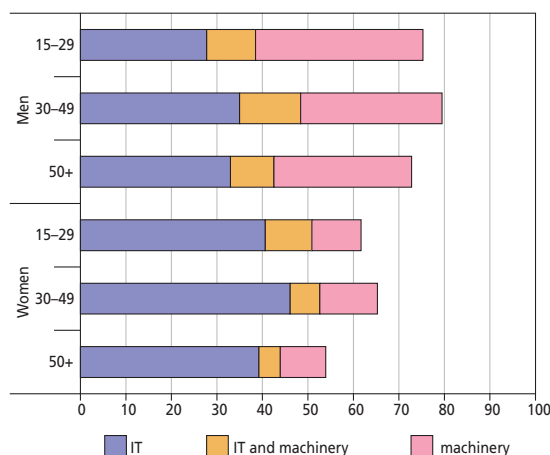
There are also very substantial differences in the use of technologies in the different occupational groups, as shown in Figure 5.9. Professionals, clerical workers, technicians and managers use IT most widely, in all cases above 50%; at the other end of the spectrum are skilled workers and machine operators (who use machine technologies in more than 60% of cases). Agricultural workers, unskilled workers and service workers show low levels of use of both types of technology (with more than 50% of workers not making any substantial use of technology at all).

Figures 5.10 and 5.11 show the use of technology at work by sex, age and educational level. The use of IT is slightly higher for women than for men, and the use of machine technologies is considerably higher for men than for women of all ages. This reflects the sectoral composition of male and female work: many of the sectors where men

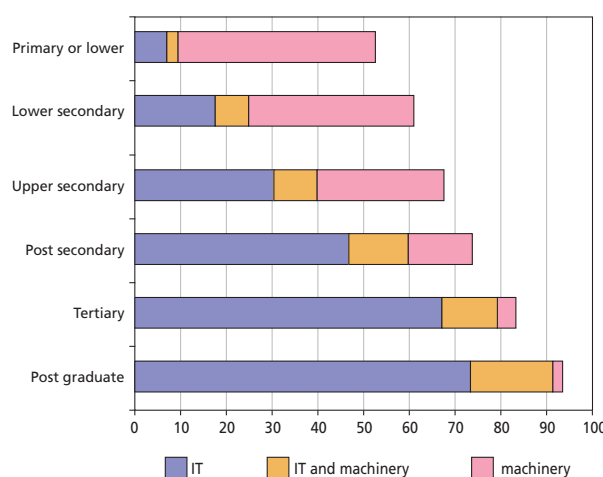
**Figure 5.9: Use of technology at work, by occupation, EU27 (%)**



**Figure 5.10: Use of technology at work, by sex and age, EU27 (%)**



**Figure 5.11: Use of technology at work, by level of education, EU27 (%)**

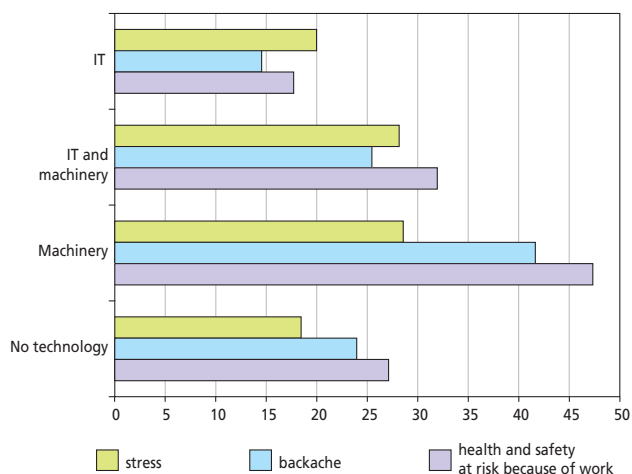


predominate (notably manufacturing and agriculture) use machine technologies extensively whereas women are overrepresented in health, education, the public sector and in clerical occupations, all characterised by greater use of IT.

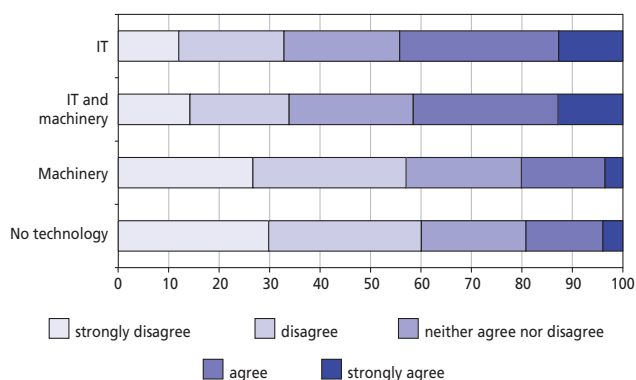
The relationship between education and use of technologies at work is very strong, as can be seen in Figure 5.11. The use of IT at work increases dramatically with the educational level, while both the use of machinery and not using technology at all decrease substantially.

So, there are wide variations in the use of technology at work by country, sector, occupation, sex and education. In general, there is also a clear correlation between the use of IT at work and better working conditions as reflected in a variety of indicators, and between the use of machinery and poorer working conditions. Work determined by machinery is characteristically more repetitive and monotonous, with less autonomy and is physically – and sometimes

**Figure 5.12: Occupational health risk, by use of technology, EU27 (%)**



**Figure 5.13: Perception of likelihood of job advancement, by use of technology, EU27 (%)**



Note: Question asked: 'Do you agree with the following statement "My job offer good possibilities for career advancement"?'

psychologically – more demanding. As Figure 5.12 shows, this has an impact on the occupational health risk of workers. Work determined by machine technology results in much higher levels of musculoskeletal disorders (represented in Figure 5.12 by backache) and considerably more exposure to workplace risks, according to the evaluation of workers themselves. The use of machine technology is also (although not very strongly) correlated with higher levels of stress.

Figure 5.13 gives a final indication of the relationship between the different uses of technology at work, and working and employment conditions. In this case, it can be seen that those working with IT technologies are considerably more optimistic about the possibilities for career progression offered by their job than workers whose work is determined by machine technology, or workers who do not make substantial use of any technology.

### Skills development and training

A job that makes cognitive and intellectual demands is more likely to provide opportunities for the worker to develop their cognitive/intellectual skills; in this respect, the level of learning demanded in a job and the degree of intellectual challenge involved are indicators of the extent to which workers can develop their skills on the job.

Being in a position to avail of learning development opportunities in a job also increases general employability. Employability – a key concept in the current Lisbon strategy – depends on a worker continually updating skills, both to progress in the current job, and to retain the flexibility to find another job, hence ensuring greater employment security. A number of indicators of employability were examined in the survey; these included the cognitive and intellectual dimensions of work and the possibilities for professional development (including access to training).

### Cognitive dimensions of work

Table 5.1 shows the distribution of cognitive demands of work in Europe by sex, age, educational levels, occupation, sector and use of technologies at work. Eight indicators have been selected from the fourth *European Working Conditions Survey* that can provide an idea of the different aspects of cognitive demands from work: two of them are related to the use of quality standards in the work process (meeting precise quality standards and assessing the quality of your own work), three of them refer to the complexity of work and the need to learn new things (solving unforeseen problems, carrying out complex tasks and learning new things) and three of them reflect the opposite: whether work has low cognitive demands and is characterised by monotonous and repetitive tasks.

In general, most European workers consider their jobs intellectually demanding in one way or another, although almost half of them report their job as involving a significant number of monotonous tasks. But as Table 5.1 shows, there are quite substantial differences by sector, occupation, and also by sociodemographic characteristics. In the table, apart from the proportion of workers who report being affected by each of the indicators, the Cramer's V coefficient is also displayed, to facilitate the interpretation of the table. This coefficient, which ranges from 0 to 1, reflects the strength of the relationship between each variable (e.g. education) and each indicator (e.g. complex tasks), so it can be used to compare the relationship between cognitive demands and each of the variables shown in the table. For instance, education is seen to have a stronger influence on the level of cognitive demands from work than sex and age, because the Cramer's V coefficients are higher for almost all indicators.

Table 5.1: Cognitive demands of work, EU27 (%)

	Meeting precise quality standards	Assessing the quality of own work	Solving unforeseen problems on your own	Complex tasks	Learning new things	Monotonous tasks	Short repetitive tasks of less than one minute	Short repetitive tasks of less than 10 minutes		
<b>EU27 Average</b>	<b>74.2</b>	<b>71.8</b>	<b>80.8</b>	<b>59.4</b>	<b>69.1</b>	<b>42.9</b>	<b>24.7</b>	<b>39.0</b>		
<b>Sex/age</b>	<b>Men</b>	15–29	77.6	67.5	75.6	57.3	72.6	49.0	30.4	44.0
		30–49	78.5	74.7	86.0	67.2	71.3	40.9	22.5	35.1
		50+	75.5	75.4	85.4	63.9	65.8	37.3	21.1	36.8
<b>Women</b>	15–29	66.7	62.6	72.7	50.3	69.0	48.0	30.8	44.8	
	30–49	72.0	72.6	79.4	55.6	70.9	44.3	25.6	39.8	
	50+	68.2	69.8	77.6	51.1	59.2	41.0	21.6	39.5	
	<b>Cramer's V</b>	<b>0.10</b>	<b>0.09</b>	<b>0.12</b>	<b>0.13</b>	<b>0.08</b>	<b>0.07</b>	<b>0.08</b>	<b>0.07</b>	
<b>Education</b>	Primary or lower	71.0	62.8	69.1	36.5	46.3	61.1	34.7	48.4	
	Lower secondary	73.4	66.4	73.3	48.0	54.7	45.7	28.0	45.4	
	Upper secondary	74.5	70.0	78.3	56.7	66.5	47.2	26.0	40.8	
	Post secondary	74.6	71.5	87.0	64.6	76.5	39.1	22.7	42.1	
	Tertiary	75.2	80.1	91.0	74.5	86.5	30.9	18.8	29.2	
	Postgraduate	69.4	88.10	93.9	87.1	87.8	28.2	16.8	21.3	
	<b>Cramer's V</b>	<b>0.03</b>	<b>0.13</b>	<b>0.18</b>	<b>0.23</b>	<b>0.27</b>	<b>0.17</b>	<b>0.10</b>	<b>0.14</b>	
<b>Occupation</b>	Senior managers	76.4	84.1	90.7	67.5	77.5	34.9	16.7	29.2	
	Professionals	75.4	80.8	90.7	78.9	89.6	28.2	17.4	27.2	
	Technicians	73.8	76.9	86.4	75.3	83.7	32.3	21.9	35.1	
	Clerical workers	67.9	64.3	80.0	57.5	71.5	45.2	25.6	39.4	
	Service and sales workers	67.4	63.7	78.2	42.6	61.3	42.1	26.9	42.3	
	Agricultural and fishery workers	62.6	66.4	85.4	54.2	58.3	54.8	24.3	39.4	
	Skilled workers	89.3	79.6	78.8	67.3	67.4	49.8	30.6	48.5	
	Machine operators	77.6	60.8	69.6	45.0	49.7	58.2	30.8	47.3	
	Unskilled workers	69.0	61.7	67.2	32.6	44.6	55.8	28.7	44.6	
	<b>Cramer's V</b>	<b>0.17</b>	<b>0.19</b>	<b>0.20</b>	<b>0.32</b>	<b>0.32</b>	<b>0.21</b>	<b>0.12</b>	<b>0.15</b>	
<b>Sector</b>	Agriculture and fishing	63.2	66.0	81.8	50.9	58.0	54.2	26.4	38.0	
	Manufacturing	84.4	74.0	73.8	60.8	67.1	49.1	28.2	42.9	
	Electricity, gas and water	86.0	81.1	87.7	79.1	83.6	42.8	19.8	41.7	
	Construction	85.1	78.2	82.0	69.8	73.2	49.1	32.7	49.1	
	Wholesale and retail trade	67.1	65.5	79.3	46.4	58.7	41.8	26.5	41.1	
	Hotels and restaurants	79.4	68.1	77.2	37.0	53.6	49.0	37.3	49.4	
	Transport and communication	73.7	63.9	84.7	54.8	59.5	45.7	20.7	34.1	
	Financial intermediation	74.4	77.9	88.9	73.6	85.4	36.4	17.2	31.8	
	Real estate	72.7	76.0	84.8	70.0	76.3	36.4	17.2	30.2	
	Public administration and defence	67.4	67.1	83.6	68.3	77.8	42.8	20.1	31.3	
	Education	68.5	78.2	86.1	61.8	84.4	31.6	15.3	25.3	
	Health	77.8	75.2	85.9	69.7	83.0	36.5	24.9	43.4	
	Other services	66.0	72.5	78.9	54.0	65.0	37.4	25.0	40.1	
	<b>Cramer's V</b>	<b>0.18</b>	<b>0.11</b>	<b>0.11</b>	<b>0.20</b>	<b>0.21</b>	<b>0.13</b>	<b>0.12</b>	<b>0.14</b>	
	<b>Technology at work</b>	IT	71.6	75.9	88.8	72.8	85.2	31.6	17.5	30.7
IT and machinery		87.2	81.4	89.8	75.8	82.6	49.2	33.0	46.8	
Machinery		85.1	73.2	75.3	57.3	60.5	57.8	33.5	50.5	
Not technology-dominated		64.7	62.2	72.1	38.7	51.0	43.8	24.4	38.3	
<b>Cramer's V</b>		<b>0.20</b>	<b>0.15</b>	<b>0.20</b>	<b>0.30</b>	<b>0.33</b>	<b>0.21</b>	<b>0.15</b>	<b>0.16</b>	

Although sex and age do not have a very strong relationship with the levels of cognitive demands of work, it still should be noted that women systematically report lower levels of cognitive demands (and more monotonous and repetitive tasks) than men, in all age groups. Education, on the other hand, shows a consistent relationship with the indicators of cognitive demands of work: as the educational level increases, the reported levels of cognitive demands also increase, and the proportion of workers doing monotonous work decreases considerably. This suggests that there is a relationship between the educational level and cognitive demands of work, as expected.

Occupation has a more complex relationship with the different indicators. The use of quality systems at work is higher for skilled occupations and lower for clerical and service occupations. Complex tasks and the requirement of learning new things at work are more frequent in skilled, professional and technical occupations, but occur rarely in unskilled, semi-skilled and service occupations. As for monotonous tasks, they tend to be less prevalent in higher occupational groups.

By sectors, the picture is also complex. Quality systems are more important in manufacturing, utilities and construction, but play no particular role in retail, public administration, education and other services. Complex tasks can be often found in utilities, financial services and real estate, but rarely in retail and hotels and restaurants. Learning new things is most reported in utilities, financial services, education and health, but not so much in retail, hotels and restaurants and agriculture. Monotonous tasks are more frequent in agriculture, manufacturing, construction and hotels and restaurants, and less frequent in financial services, real estate, education and health.

The main conclusion that can be drawn from looking at the different cognitive demands by occupation and sector is that there are important differences, with some sectors and occupations showing fairly high cognitive demands and others quite low ones (which are normally also correlated with monotonous and repetitive work). Professionals, technicians and skilled workers report higher levels of cognitive demands, as do the sectors of financial intermediation, education and health. Unskilled and semi-skilled occupations and the retail, hotels and restaurants and agriculture sectors show consistently lower levels of reported cognitive demands, and higher levels of monotonous and repetitive work.

Finally, Table 5.1 also shows the relationship between the use of technology at work and the different types of cognitive demands. There is a consistent relationship between both aspects of work. Complex tasks and learning new things are much more frequent in jobs using IT than in jobs using machinery, while the opposite applies to monotonous tasks (more prevalent in machinery work). The use of quality standards is on the other hand more frequent in work determined by machinery, which is not surprising, considering that such work is easier to standardise.

### Professional development

It has already been mentioned that there seems to be a relationship between the level of education and the cognitive demands of work. But there should also be some type of relationship between cognitive demands and training at work. Table 5.2 shows how workers facing each type of cognitive demand assess the match between their skills and the duties of their current jobs. Those workers who carry out complex tasks and learn new things at work are much more likely to feel that they need further training, whereas the opposite is the case for those carrying out monotonous or repetitive tasks (who are actually more likely to consider themselves overskilled for the work they do). And, according to the training levels reported by respondents, this has an impact on real training levels: in general, all those workers who report high cognitive demands are considerably more likely to have received training in the 12 months prior to the survey, even when they themselves paid for the training. The opposite is the case for those who perform monotonous tasks: they are slightly less likely to have received any training in the last 12 months.

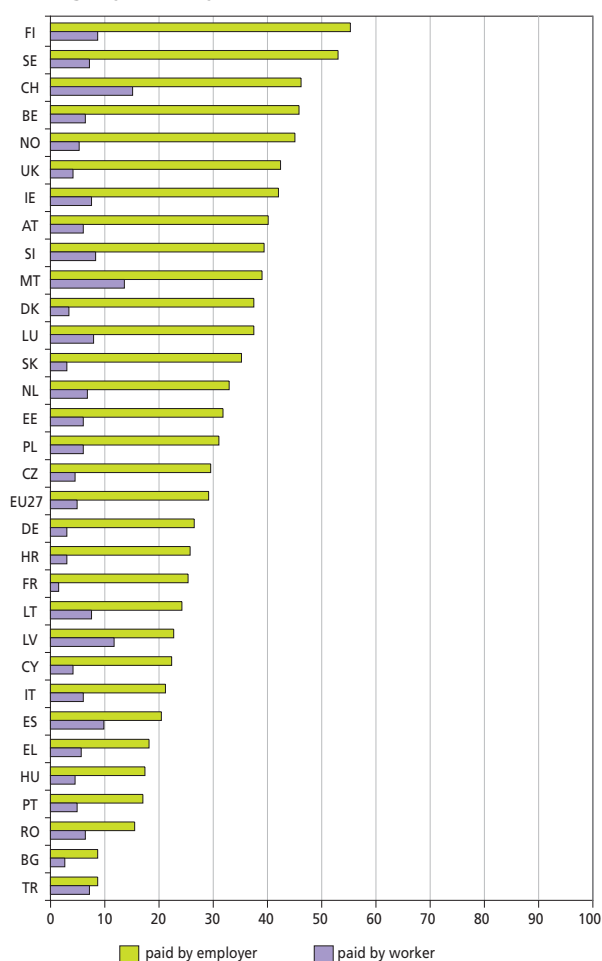
### Access to training

The levels and types of cognitive demands at work do not only vary substantially by different educational levels and job characteristics: they are also correlated with the perception of skills match and the levels of training. But data in Table 5.2 show that the levels of training are not very high in general, even for those workers facing cognitively demanding jobs. As Figure 5.14 shows, less than 30% of EU employees received any type of training at work in 2005. The levels of training in the EU have not increased in the last 10 years, since the *European Working Conditions Survey* started measuring them<sup>4</sup>. But there are very big country differences. As in previous editions of the survey, northern European countries come at the top of the league: more than 50% of workers received training at work in

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<sup>4</sup> See the Foundation report *15 years of working conditions in the EU: Charting the trends*, at <http://www.eurofound.europa.eu/publications/htmlfiles/ef0685.htm>

**Figure 5.14: Percentage of employees who received training, by country (%)**



Finland and Sweden. At the other end of the scale are most southern and eastern European countries, where the levels of training are very low, hardly reaching 20% of employees in Spain, Greece, Hungary, Portugal, Romania and 10% of employees in Bulgaria and Turkey.

Table 5.3 shows the main differences in training levels in different sectors and occupations. The levels of training provided by the employer are much higher in public administration, finance, education and health; they are very low in hotels and restaurants, agriculture, construction, the retail trade and manufacturing. By occupation, managers, professionals and technicians receive much more training than the rest: the levels of training are particularly low in skilled, semi-skilled and unskilled industrial and service occupations. By employment and part-time status there are significant differences as well: part-time and temporary workers are less likely to have received training than their full-time, permanent colleagues. Finally, both the amount of training received from the employer and paid for by the worker themselves increases steadily with the level of education, ranging from 11% of workers with a primary level of education to nearly 40% for workers with a tertiary level of education.

**Table 5.2: Cognitive demands, skills match and training, EU27 (%)**

		Which of the following alternatives would best describe your skills in your own work?			Have you undergone training paid for or provided by your employer in the last 12 months?		Have you undergone training paid for by yourself in the last 12 months?		
		I need further training to cope well with my duties	My duties correspond well with my present skills	I have skills to cope with more demanding duties	Yes	No	Yes	No	
		No	Yes	No	Yes	No	Yes	No	
Does your main paid job involve...?	meeting precise quality standards	No	10.5	55.0	34.5	23.0	77.0	4.2	95.8
		Yes	14.1	51.2	34.7	31.3	68.7	5.0	95.0
	assessing the quality of own work	No	11.4	56.1	32.5	20.5	79.5	3.5	96.5
		Yes	13.8	50.7	35.5	32.9	67.1	5.4	94.6
	solving unforeseen problems on your own	No	11.2	58.8	30.0	16.7	83.3	2.4	97.6
		Yes	13.7	50.8	35.6	32.4	67.7	5.5	94.5
	complex tasks	No	7.7	55.9	36.5	18.7	81.3	3.6	96.4
		Yes	16.9	49.9	33.2	36.3	63.7	5.8	94.2
	learning new things	No	4.7	57.4	37.9	11.7	88.3	2.4	97.6
		Yes	16.9	50.1	32.9	36.8	63.2	6.0	94.0
	monotonous tasks	No	14.8	53.4	31.8	32.3	67.7	5.9	94.1
		Yes	11.1	51.0	37.9	25.0	75.0	3.7	96.3
short repetitive tasks of less than one minute	No	13.4	53.1	33.5	30.2	69.8	5.0	95.0	
	Yes	12.0	50.9	37.2	25.2	74.8	4.5	95.5	
short repetitive tasks of less than 10 minutes	No	13.4	53.1	33.4	30.9	69.1	5.0	95.0	
	Yes	12.7	51.3	36.0	26.1	73.8	4.7	95.3	

Table 5.3: Training by sector, occupation, type of contract, tenure and use of technology at work (%)

Sector	Paid by employer	Paid by worker
Agriculture	15.6	1.8
Manufacturing	24.1	2.7
Electricity, gas and water	34.5	4.4
Construction	20.0	3.7
Wholesale and retail trade	23.5	3.3
Hotels and restaurants	12.3	5.2
Transport and communication	29.9	5.1
Financial intermediation	43.7	4.2
Real estate	29.0	4.3
Public administration and defence	43.7	3.6
Education	42.2	13.0
Health	42.2	9.1
Other services	24.0	4.8
<b>Occupation</b>		
Senior managers	49.9	7.3
Professionals	44.0	11.5
Technicians	39.2	5.6
Clerical workers	29.6	4.0
Service and sales workers	24.4	3.8
Agricultural and fishery workers	13.3	3.1
Skilled workers	17.9	2.4
Machine operators	17.0	1.9
Unskilled workers	16.2	2.0
<b>Part-time status</b>		
Part-time	25.2	4.7
Full-time	30.0	4.9
<b>Employment status</b>		
Permanent employee	30.8	4.7
Non-permanent employee	23.4	5.6

Over the last 20 years, debates on the organisation of work in modern market economies have revolved around the contraposition of two types of work organisation – the ‘traditional industrial model’ versus ‘new forms of work organisation’. The traditional industrial model is characterised by a centralised, top-down organisation of work, with limited autonomy and rigid hierarchies; by contrast, new forms of work organisation emphasise flatter authority structures, more autonomy at all hierarchical levels, and teamwork.

In this chapter, the fourth *European Working Conditions Survey* will be used to study the main features of work organisation in Europe. First, the levels of autonomy at work, teamwork and task rotation will be analysed. The main determinants of pace of work in European workplaces and the perceived levels of work intensity will then be examined. Finally, an analytical model linking work organisation and job demands will be used to summarise the main findings of the chapter.

## Autonomy at work

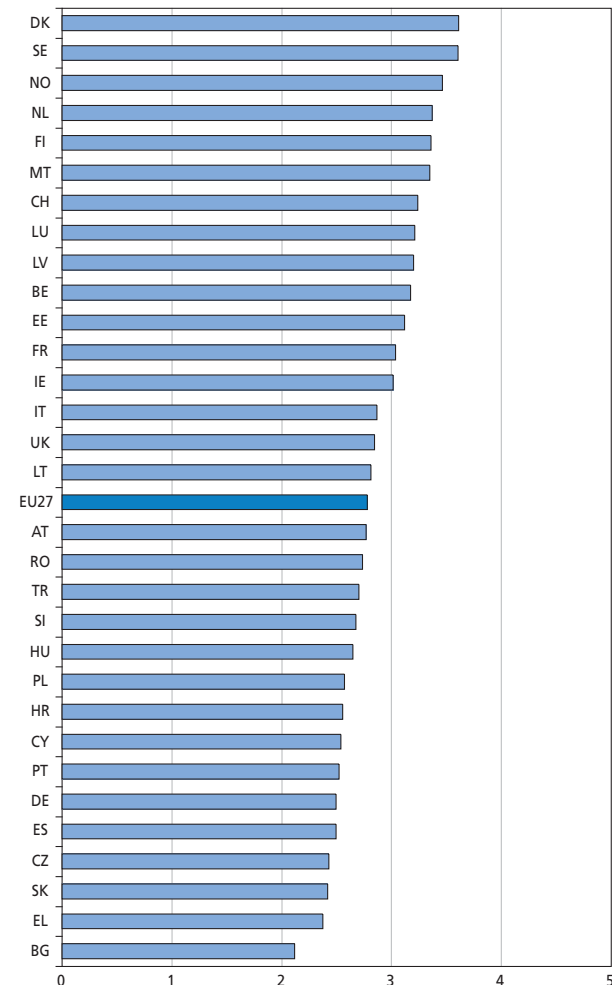
The fourth *European Working Conditions Survey* includes several indicators of autonomy at work. Table 6.1 outlines the current levels of work autonomy in the EU27 for five of these indicators.<sup>1</sup> Three of these indicators have to do with the worker’s freedom to exercise control over the work process (the ability to choose or change the order of tasks, the methods of work and the speed or rate of work); the fourth refers to the influence the worker has over the choice of working partners, and the fifth concerns the ability of the worker to interrupt their work in order to take a short break, when they wish.

**Table 6.1: Extent of work autonomy, by employment status (%)**

	Self-employed	Employees
Able to choose or change order of tasks	87	59
Able to choose or change methods of work	87	63
Able to choose or change speed of work	89	65
Influence over choice of working partners	64	32
Able to take a break when desired	90	58

Table 6.1 shows that a high proportion of workers enjoy some control over the work process, and can take a break

**Figure 6.1: Extent of autonomy in the workplace, by country**



Note: Figures apply to employees only.

when they wish: almost two thirds of European employees report control over these four indicators. A much lower proportion (32%) has any influence over the choice of working partners.

To facilitate the analysis of the degree of autonomy in different countries and types of work, a composite indicator was constructed, drawn from the five indicators shown in Table 6.1. and using the statistical measure Cronbach’s alpha to gauge reliability.<sup>2</sup> As each of the five individual variables can only take a positive or negative value, the composite variable can be constructed by simply adding the individual indicators.<sup>3</sup> By way of illustration, an individual with a score of four in the autonomy composite indicator has control over four of the five indicators in Table 6.1.

<sup>1</sup> Given the fact that the self-employed enjoy much higher levels of autonomy than employees, this section will focus mainly on employees.

<sup>2</sup> The internal consistency of this group of variables is quite high, as shown by the Cronbach’s alpha of the five individual indicators: 0.72.

<sup>3</sup> Adding the individual indicators implies an assumption that the individual variables in the composite indicator all have the same relative importance, i.e. they are all equally weighted in the indicator.



**Table 6.2: Autonomy composite indicator, by sector, occupation and use of technology at work**

Sector	
Agriculture	2.98
Manufacturing	2.40
Electricity, gas and water	3.40
Construction	2.66
Wholesale and retail trade	2.66
Hotels and restaurants	2.31
Transport and communication	2.63
Financial intermediation	3.42
Real estate	3.34
Public administration and defence	3.01
Education	2.96
Health	2.79
Other services	3.01
Occupation	
Senior managers	4.02
Professionals	3.29
Technicians	3.15
Clerical workers	2.84
Service and sales workers	2.55
Agricultural and fishery workers	3.23
Skilled workers	2.35
Machine operators	1.84
Unskilled workers	2.43
Technology in workplace	
Information technology only	3.36
Information technology and machinery	3.02
Machinery only	2.11
No technology	2.41

Note: Figures apply to employees only.

The composite indicator allows for comparisons to be made in the level of autonomy in the workplace in different European countries, as Figure 6.1 shows. Scandinavian countries and the Netherlands display the highest levels of autonomy, with Denmark and Sweden having a score of around 3.6; southern and eastern European countries have the lowest levels, with Bulgaria having a score of just 2.1.

There are considerable sectoral and occupational differences in levels of autonomy measured by the composite indicator, as is shown in Table 6.2. The highest levels of autonomy are found in financial intermediation (3.42), electricity, gas and water (3.40), and real estate (3.34); the lowest levels are found in hotels and restaurants and in manufacturing (2.31 and 2.40 respectively). By occupation, the differences are even greater: senior managers enjoy the highest levels of autonomy (4.02), followed by professionals (3.29) and technicians (3.15); at the other end of the scale, machine operators have the

lowest levels of autonomy (1.84), followed by skilled workers (2.35). Table 6.2 also indicates the different degrees of autonomy associated with different uses of technology: it is interesting to note that the use of information technology in the workplace is clearly associated with a higher degree of autonomy (3.36) in comparison with the use of machine technology (2.11) or no technology at all (2.41).

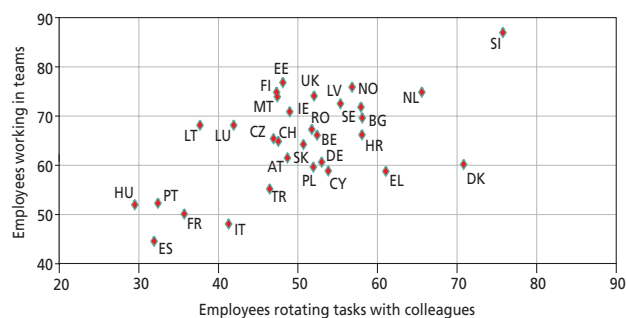
### Functional flexibility and teamwork

Another key difference between the ‘traditional’ and the ‘new’ forms of work organisation is the importance attached in the latter forms to functional flexibility and teamwork.

Looking at the results of the fourth *European Working Conditions Survey*, it seems that the levels of functional flexibility and teamwork are quite high in European workplaces: around 50% of employees in the EU27 rotate tasks with their colleagues, i.e. they are functionally flexible, and 60% do part or all their work in teams (as Table 6.3 shows).

The survey questionnaire used follow-up questions to assess the degree of autonomy associated with these two forms of work organisation. In the case of functional flexibility, different skills are required in almost 78% of cases; however, it was usually the boss or manager who decided the division of tasks (in around 72% of cases), while the team participated in the division of tasks in around 50% of cases. Therefore, it seems that the level of autonomy associated with this indicator is relatively high. In the case of teamwork, only around 50% of those employees who work in teams decide themselves on the division of tasks, and less than 30% can select the head of their team. So for teamwork, while it is prevalent as a form of work organisation, the levels of autonomy and decentralisation of decision-making in the teams is much lower than for task rotation.

**Figure 6.2: ‘Basic’ functional flexibility and teamwork, by country (%)**



Note: Figures apply to employees only.

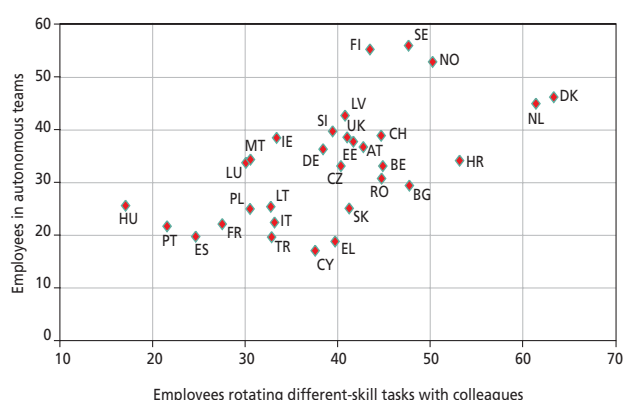
**Table 6.3 Autonomy in functional flexibility and in teamwork (%)**

Employees whose job involves rotating tasks with colleagues	47.7	
		of total
tasks require different skills	77.8	37.1
manager decides division of tasks	71.6	34.1
team decides division of tasks	51.0	24.3
Employees whose job involves doing part or all work in teams	60.0	
		of total
team members decide division of tasks	52.1	31.3
team members select head of team	28.8	17.3

Looking at the national and sectoral distribution of these indicators gives a more precise picture regarding their prevalence. Figure 6.2 illustrates the extent of task rotation and of teamwork in different European countries. Both forms of work organisation are most prevalent in Slovenia, Netherlands and some Nordic countries, while they are least prevalent in France, Hungary, Italy, Portugal and Spain.

As mentioned above, it is important to qualify the general indicators of functional flexibility and teamwork with the answers given to the follow-up questions, which indicate the prevalence of advanced forms of both types of work organisation. As Figure 6.3 shows, these ‘advanced’ forms of work organisation are considerably more prevalent in the northern European countries, while they are least prevalent in the southern and eastern European countries.

**Figure 6.3: ‘Advanced’ functional flexibility and teamwork, by country (%)**



Note: Figures apply to employees only.

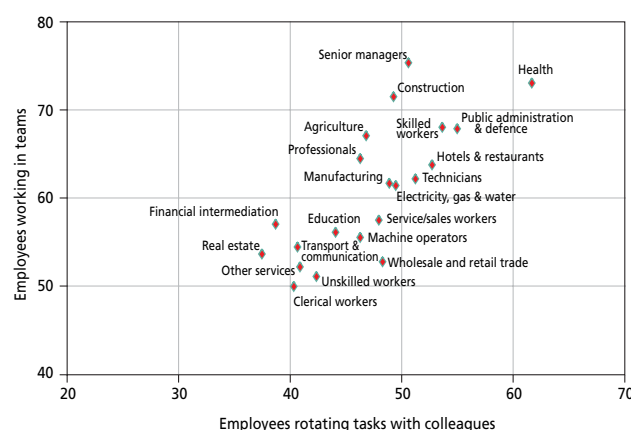
Figures 6.4 and 6.5 show the levels of functional flexibility and teamwork (both ‘basic’ and ‘advanced’) among EU27 employees in different sectors and occupations. Health is the sector that displays the greatest prevalence of advanced forms of both functional flexibility and teamwork. Other

sectors where functional flexibility and teamwork are prevalent are electricity, gas and water, education, and construction. In contrast, the two indicators are least prevalent in transport and communications, and in a number of service sectors.

In terms of occupations, both indicators are most prevalent among professionals, managers and skilled workers, and are least prevalent among unskilled workers, machine operators and clerical workers.

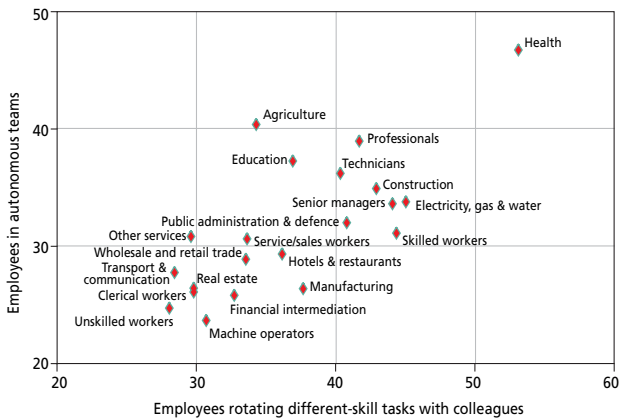
The results show that there is a wide variation in the use of functional flexibility and teamwork across sectors and occupations. In some cases, the presence or absence of these forms of work organisation may not necessarily reflect forms of work organisation but may instead reflect the nature of the work processes themselves. In construction, for instance, the fact that work is organised in teams and entails high levels of task rotation is probably due to the nature of construction work itself: top-down coordination of work is difficult, and most work can best be carried out by groups of skilled labourers working together.

**Figure 6.4: ‘Basic’ functional flexibility and teamwork, by sector and occupation (%)**



Note: Figures apply to employees only.

**Figure 6.5: ‘Advanced’ functional flexibility and teamwork, by sector and occupation (%)**



Note: Figures apply to employees only.

**Determinants of pace of work**

As Table 6.4 indicates, the most important determinant of the pace of work – according to more than 68% of European workers – is direct demands from people, which can be understood as an indicator of direct market constraints upon the work process. By contrast, the most visible industrial constraint – a pace of work determined by the automatic speed of a machine – affects only 19% of European workers (a proportion that has been decreasing over the past 15 years).

In recent years, shifts in the structure of the economy (with the services sector growing at the expense of manufacturing) have resulted in changes in the determinants or constraints of work. Moreover, pressure from increasing market competition, economic activity and consequently work itself is becoming more directly dependent on market constraints.

Between these two poles of industrial and market constraints, there are three types of determinants that do not fit so clearly into either bracket (and affect more than one third of the EU working population): the work done by colleagues (42%), numerical production targets (42%) and the direct control of a superior (36%); these types of constraints reflect the organisation of work, rather than external constraints. In any case, the survey responses regarding these five indicators confirms the predominance of market constraints and the decreasing importance of mechanised industrial constraints. While direct control of a

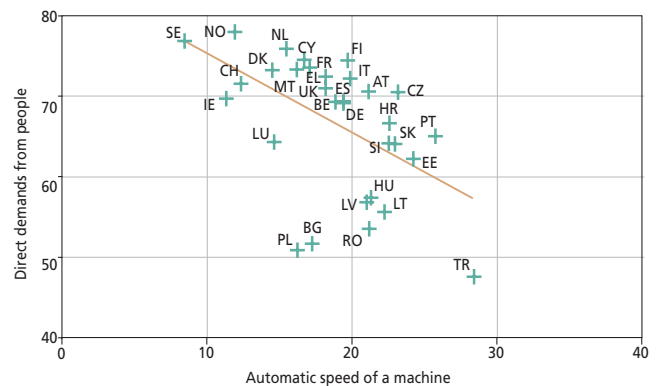
superior shows a downward trend, the work done by colleagues and numerical and production targets are increasing in importance as determinants of the pace of work in Europe.<sup>4</sup>

Table 6.4 shows the determinants of pace of work in different occupations and sectors. Direct demands from people are most important in services sectors (more than 70%), and in high-skilled occupations (more than 70% for senior managers, professionals and technicians). Direct demands are least important in agriculture and fishing (35%) and manufacturing (55%), and for those occupations more closely linked to manufacturing industry – skilled workers, machine operators and unskilled occupations (all between 50% and 60%).

The automatic speed of a machine, by contrast, is a major determinant of the pace of work in manufacturing (41%), and is also important in construction (24%), transport and communications (23%) and agriculture (22%); in sectoral terms it is a very important determinant of pace of work among machine operators (50%) and skilled workers (33%). However, it is almost negligible in education, health, and other services, and in professional and service occupations.

In Figure 6.6, countries are plotted on a chart, according to the percentage of workers whose pace of work depends on market constraints, i.e. direct demands from people, and the percentage of workers whose pace of work depends on industrial constraints, i.e. the speed of a machine. A negative correlation between the incidences of the two types of constraints is clearly visible: for countries in which market constraints are more important, industrial

**Figure 6.6: Market constraints and industrial constraints as determinants of pace of work, by country (%)**



<sup>4</sup> For a discussion of the evolution of these and other indicators, see the Foundation résumé, *15 years of working conditions in the EU: Charting the trends*, <http://www.eurofound.europa.eu/publications/htmlfiles/ef0685.htm>

Table 6.4: Determinants of pace of work, by sector and occupation (%)

	Direct demands from people	Work done by colleagues	Numerical production targets	Direct control of boss	Automatic speed of a machine
<b>EU27 average</b>	<b>68.1</b>	<b>42.2</b>	<b>42.1</b>	<b>35.7</b>	<b>18.8</b>
<b>Employment status</b>					
Employers	83.4	35.6	45.2	3.7	18.5
Self-employed	69.88	16.5	32.8	6.4	12.6
Permanent employee	67.97	46.0	45.5	40.8	19.87
Non-permanent employee	64.5	47.8	36.5	45.7	20.1
<b>Cramer's V</b>	<b>0.08</b>	<b>0.20</b>	<b>0.10</b>	<b>0.29</b>	<b>0.06</b>
<b>Sector</b>					
Agriculture	29.6	33.3	50.1	22.1	22.1
Manufacturing	54.7	51.6	63.3	46.1	41.4
Electricity, gas and water	65.3	48.9	47.1	38.1	14.6
Construction	67.4	57.6	51.5	43.4	23.5
Wholesale and retail trade	82.0	34.5	31.1	33.8	13.1
Hotels and restaurants	87.6	48.7	30.9	36.8	14.3
Transport and communication	70.6	42.4	46.8	38.6	22.4
Financial intermediation	77.2	37.6	48.6	36.3	10.1
Real estate	71.1	39.5	41.0	31.6	11.7
Public administration and defence	61.7	43.9	30.5	39.9	10.8
Education	79.4	30.5	32.8	28.4	3.8
Health	83.0	47.7	30.08	29.5	7.9
Other services	65.8	31.5	29.2	24.95	9.7
<b>Cramer's V</b>	<b>0.30</b>	<b>0.18</b>	<b>0.26</b>	<b>0.16</b>	<b>0.31</b>
<b>Occupation</b>					
Senior managers	83.0	39.8	45.3	21.4	15.0
Professionals	76.2	37.8	41.5	27.4	7.9
Technicians	74.8	41.7	43.1	35.9	12.4
Clerical workers	72.4	44.3	34.4	42.0	13.0
Service and sales workers	82.0	37.4	29.8	31.8	9.4
Agricultural and fishery workers	27.3	26.9	47.4	12.1	18.4
Skilled workers	59.6	51.6	55.7	44.8	33.7
Machine operators	55.1	51.7	56.1	48.5	49.6
Unskilled workers	53.4	38.9	33.2	40.9	19.7
<b>Cramer's V</b>	<b>0.29</b>	<b>0.13</b>	<b>0.18</b>	<b>0.19</b>	<b>0.31</b>

constraints are less important, and vice versa. In Turkey and most eastern European countries, the automatic speed of a machine is a much more important determinant of the pace of work – and direct demands from people a much less important determinant – than in most other countries.

Figure 6.7 plots countries in a similar way, but using the determinants of direct demands from people, and direct control by a superior. A clear negative correlation is once again apparent, as is an even clearer differentiation of countries: for northern European countries, work is strongly determined by direct demands from people, while the direct control of a superior is almost negligible as a determinant; for countries such as Bulgaria and Croatia, direct control by

a superior is still an important determinant of the pace of work, while direct demands by people play a more limited role. Cyprus, Malta and the UK are exceptions to this pattern: in these countries, work is strongly determined by direct demands from people; however, the direct control of a superior is also an important determinant.

Econometric analysis of the impact of the different determinants of pace of work on working conditions was carried out to show that the impact is quite significant in most areas. Workers whose pace of work is determined by the automatic speed of a machine or by numerical production targets are more likely to be affected by physical health problems, to perceive work as more intense and

### Support at work

Another, less formal way in which employees collaborate at work is through assistance – either from colleagues, superiors or from individuals outside the organisation. Table 6.5 illustrates the availability of these three sources of support in different sectors, in different occupations and in terms of the extent of use of technology. Nine out of 10 employees in most sectors and occupations can get assistance from colleagues if they need it; a slightly smaller proportion – eight out of 10 – can also get assistance from their superiors. External assistance is much less available, only around 50% of employees having access to it if needed; its availability varies considerably among occupations (as indicated by the higher value of Cramer's V, which indicates the variability of each indicator).<sup>5</sup>

In general, for positions higher in the occupational structure, more support is available from colleagues, superiors and, in particular, external sources. The type of technology used at work is also related to the availability of support: those using information technologies have more support. Sectoral differences do not seem to be very important in determining the availability of support.

**Table 6.5: Sources of support at work (%)**

	Support from colleagues	Support from superior	External support
<b>EU27 average</b>	88.2	81.2	49.7
<b>Sector</b>			
Agriculture	89.25	84.0	52.4
Manufacturing	90.2	80.3	42.0
Electricity, gas and water	92.3	87.0	54.3
Construction	93.1	85.1	55.09
Wholesale and retail trade	88.9	85.0	49.0
Hotels and restaurants	87.9	80.3	39.7
Transport and communication	79.5	77.2	49.9
Financial intermediation	92.7	88.5	57.0
Real estate	86.7	82.2	52.7
Public administration and defence	93.5	84.5	56.8
Education	87.2	78.1	54.3
Health	90.4	81.2	53.1
Other services	76.5	72.2	46.7
Cramer's V (sector)	<b>0.15</b>	<b>0.10</b>	<b>0.11</b>
<b>Occupation</b>			
Senior managers	92.3	84.7	68.7
Professionals	91.1	84.9	59.4
Technicians	91.1	85.7	55.6
Clerical workers	88.5	82.7	47.9
Service and sales workers	86.6	82.5	46.9
Agricultural and fishery workers	87.5	81.7	47.2
Unskilled workers	91.4	80.2	46.2
Machine operators	85.6	78.5	41.8
Unskilled workers	78.1	69.3	34.6
Cramer's V (Occupation)	<b>0.14</b>	<b>0.13</b>	<b>0.18</b>
<b>Technology at work</b>			
IT	90.9	85.7	56.8
IT and machinery	93.8	86.1	60.0
Machinery	89.2	78.1	41.2
Not technology-dominated	81.7	75.5	42.5
Cramer's V (technology)	0.13	0.12	0.16

Note: Figures apply to employees in the EU27 only.

<sup>5</sup> Cramer's V is a coefficient that indicates the relationship among two categorical variables. The value for Cramer's V gives a useful overview of the impact that sector, occupation and technology make upon the availability of support. For instance, the value of 0.15 for support from colleagues in terms of sector is higher than the value of 0.13 for support from colleagues in terms of technology; this greater variability indicates that sector plays a bigger role in determining availability of support than does the technology employed.

### Interruptions at work

Having frequent interruptions at work is another obvious determinant of the pace of work; this can also have important consequences in terms of stress and the perceived intensity of the work effort. Around one third of EU workers experience interruptions in their work often or very often, although in most cases these interruptions are without consequences (see Figure 6.8). Interruptions at work were compared (in a similar manner to support available at work) by constructing a composite index.<sup>6</sup> Analysis of the different indices reveals that interruptions at work are much more prevalent in service sectors than in manufacturing, construction or transport and communications, and are more prevalent among workers in the higher occupational ranks (see Table 6.6). Those using information technologies and those with a higher degree of autonomy at work report more frequent interruptions.

Figure 6.8 Interruptions at work (%)

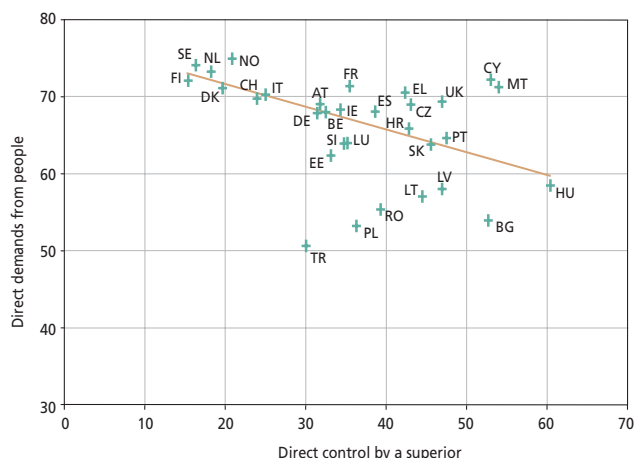


Note: The questions asked were: 'How often do you have to interrupt a task in order to take on an unforeseen task?' and 'For your work, are these interruptions...disruptive/without consequences/positive?'

Table 6.6 Interruptions index by sector, occupation, technology and autonomy

Sector	Index
Agriculture	0.30
Manufacturing	0.35
Electricity, gas and water	0.40
Construction	0.37
Wholesale and retail trade	0.38
Hotels and restaurants	0.42
Transport and communication	0.32
Financial intermediation	0.44
Real estate	0.40
Public administration and defence	0.43
Education	0.36
Health	0.50
Other services	0.35
Technologies	Index
Information technology	0.46
Information technology and machinery	0.46
Machinery	0.32
No technology	0.30
Occupation	Index
Senior managers	0.56
Professionals	0.42
Technicians	0.42
Clerical workers	0.42
Service and sales workers	0.38
Agricultural and fishery workers	0.32
Skilled workers	0.35
Machine operators	0.25
Unskilled workers	0.30
Autonomy	Index
0 (low)	0.26
1	0.32
2	0.37
3	0.40
4	0.42
5 (high)	0.49
<b>EU27 average</b>	<b>0.38</b>

Figure 6.7: Types of demands as determinants of pace of work, by country (%)



stressful, and to enjoy less autonomy at work. Workers whose pace of work is determined by direct demands from people report higher levels of negative psychological health outcomes.

### Intensity of work

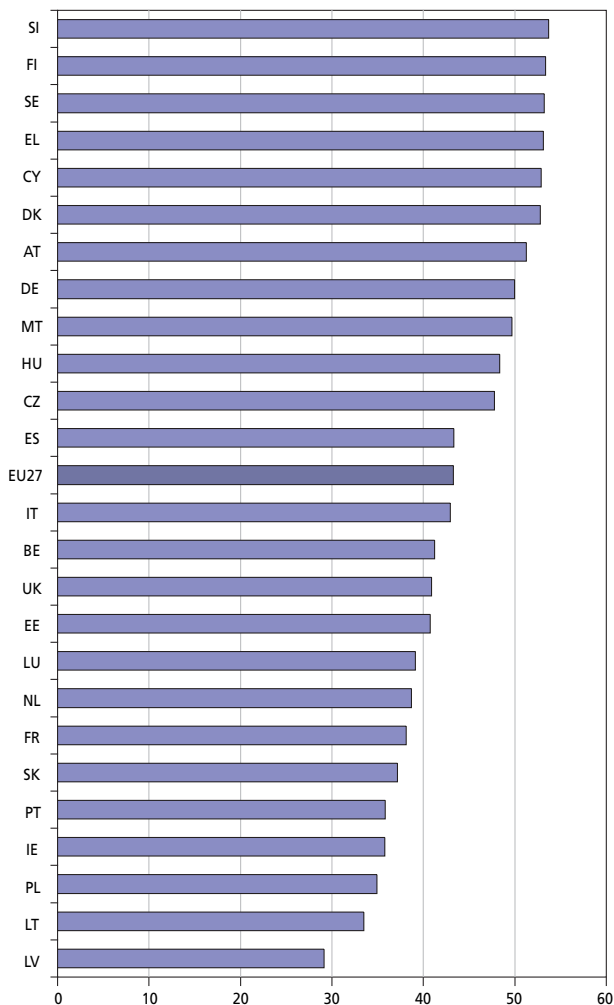
The most direct impact of the pace of work on working conditions is via the perception of intensity of work. In the fourth *European Working Conditions Survey*, there are three indicators for work intensity: 'working at a very high speed', 'working to tight deadlines' and 'not having enough time to get the job done'. In order to simplify the analysis, a

<sup>6</sup> The index assigns a value of 0 to 'never', 0.3 to 'occasionally', 0.6 to 'fairly often' and 1.0 to 'often'.

composite index has been constructed, using the two indicators ‘working at a very high speed’ and ‘working to tight deadlines’ (the inclusion of the third indicator is not possible because of the different construction of the scale and because of its change in the last wave of the survey).<sup>7</sup> Figure 6.9 indicates the value of the index for all 31 survey countries. There is considerable variation between countries: while the intensity index for the EU27 as measured in 2005 is 43%, it ranges from more than 50% in Austria, Cyprus, Denmark, Finland, Greece, Slovenia and Sweden to less than 35% in Bulgaria, Latvia, Lithuania and Poland.

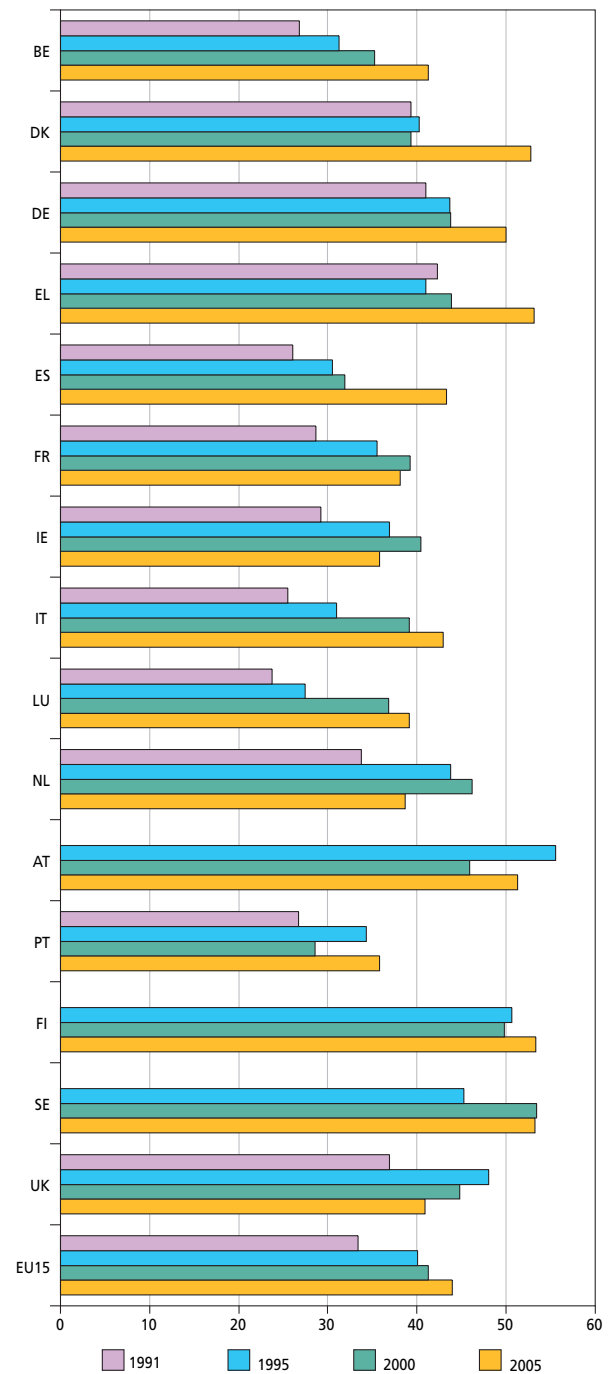
Figure 6.10 charts the change in work intensity over the last 15 years, for those countries included in the survey since its inception. One of the clearest trends since the first *European Working Conditions Survey* was carried out 15

Figure 6.9 Intensity index, by country (%)



years ago is a rise in the levels of perceived work intensity. This rise, already evident in 2000, is confirmed by national working conditions surveys in most Member States. In

Figure 6.10: Evolution in work intensity, EU15, 1991–2005 (%)



Note: Austria, Finland and Sweden, being outside the EU in 1991, were not included in that year's survey. Data for 1991 cover EU12 only.

<sup>7</sup> This index assigns a value of 0 to ‘never’, 10 to ‘almost never’, 25 to ‘a quarter of the time’, etc. The composite index is the average of the two indicators of work intensity.

almost all countries in the former EU15, there has been a clear and consistent increase in the levels of perceived work intensity over the last 15 years.

In the NMS, however, there has been a slight decrease in the perception of work intensity since 2001 (the first year for which we have data for these countries); the same applies in Bulgaria and Romania (see Figure 6.11).

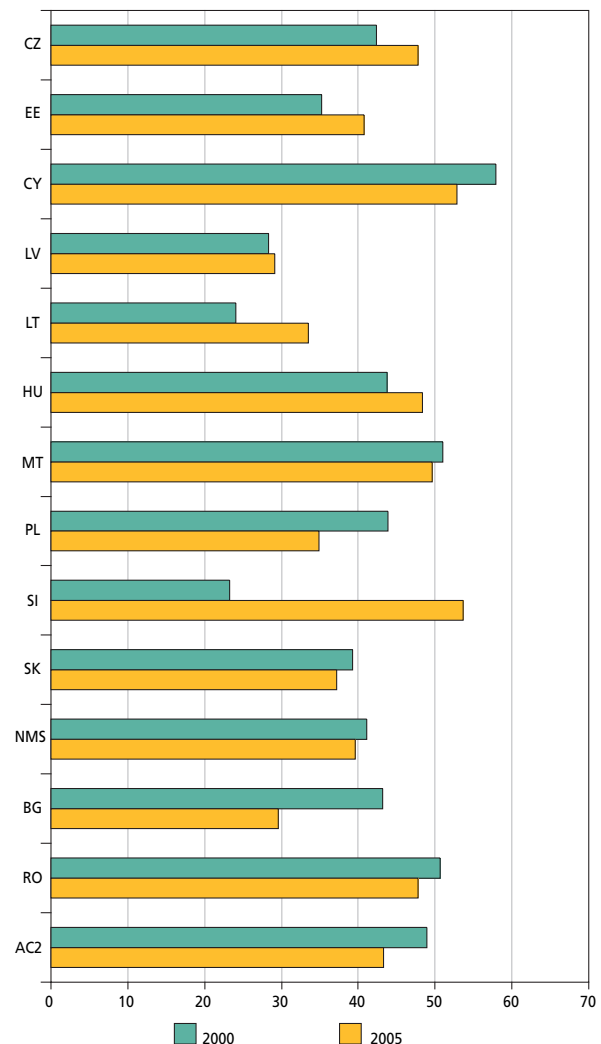
In order to test what determines the perceived intensity of work, a multivariate regression was carried out: this indicated that the hotels and restaurants sector has the highest levels of work intensity, and education the lowest. In terms of occupation, there are no significant differences in intensity levels; there are, however, notable differences depending on which technologies are in use at work: those working with machinery perceive the highest levels of intensity at work. Having greater autonomy at work is associated with a lower perceived level of intensity, while having to deal with frequent interruptions at work is associated with a higher level.

### Work organisation and intensity

In one of the most widely cited and used models of job strain, Karasek explained stress at work as the interaction of psychological demands from work, with the degree of control or decision latitude of the worker. The basic hypothesis of his model was that the negative health outcomes of stress occur most often when the worker has to face high levels of psychological demands, but has low levels of autonomy at work: psychological demands create stress; if the worker cannot channel this stress because of their low levels of control, this 'unreleased' stress accumulates and has a negative impact on health, job satisfaction, etc. The ideal situation would be, then, one in which demanding work is accompanied by a higher degree of control (what Karasek termed 'active work situations').<sup>8</sup>

Although Karasek's model was originally developed to explain stress at work, it provides a useful conceptual framework for linking work organisation and working conditions. By looking simultaneously at job demands and job control, it is possible to divide the different forms of work organisation into four categories: *active work organisation*, characterised by high demands and high control; *high-strain work organisation* (high demands and low control); *low-strain work organisation* (low demands

**Figure 6.11 Evolution in work intensity in the NMS, 2001–2005 (%)**



and high control); and *passive work organisation* (low demands and low control).

It is possible to replicate Karasek's model with the data from the fourth survey, using the composite indicator of job autonomy and the composite index of work intensity (both discussed earlier); the composite indicator equates to Karasek's concept of 'control', while the composite index equates to 'job demands'.<sup>9</sup> Figure 6.12 shows into which category of work organisation each country falls; it also indicates how they are positioned in relation to the EU27 average (shown by the dotted lines). Figure 6.12 summarises the overall conclusions of the analysis carried out in this chapter.

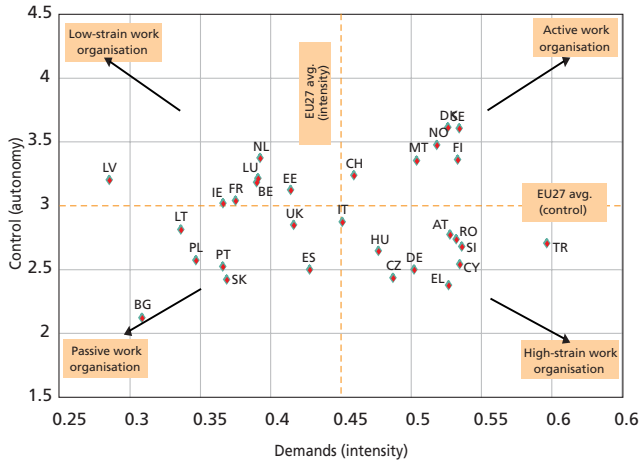
<sup>8</sup> Karasek, J.A., 'Job demands, job decision latitude, and mental strain: implication for job redesign', *Administrative Science Quarterly*, 24, 1979, pp. 285–308.

<sup>9</sup> This way of applying Karasek's model closely follows the approach of Gimeno, D. et al, 'Psychosocial factors and work related sickness absence among permanent and non-permanent employees', *Journal of Epidemiological Community Health*, 2004, 58, pp. 870–876.



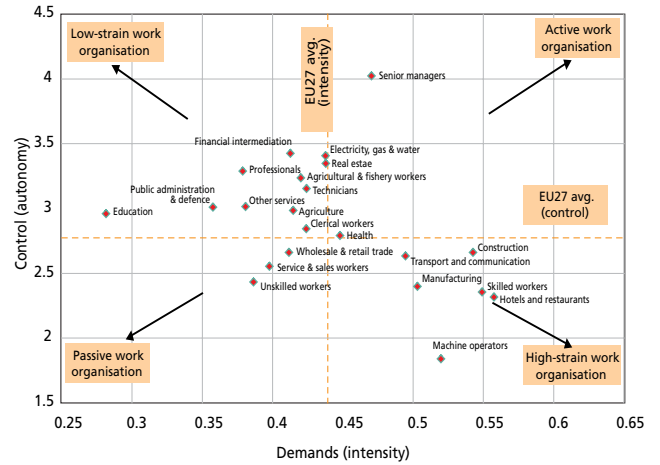
Figure 6.12 shows that the Nordic countries included in the survey most closely approach the ‘active work organisation’ category, which has been identified as being most conducive to performance (without negative consequences for working conditions): greater demands on the worker are counterbalanced by greater control over the content of work, diminishing the negative impact of work intensity. Cyprus, the Czech Republic, Germany and Greece approach most closely the category of ‘high-strain work organisation’: workers in these countries face levels of job demands that cause stress, but have relatively low levels of autonomy; such a form of work organisation has the most negative impact on working conditions. Belgium, Luxembourg and the Netherlands approach most closely the low-strain category, with low levels of demands but high autonomy. (These three countries are characterised by very high productivity levels, which indicates that ‘low-strain’ does not mean low performance). Finally, Bulgaria, Poland, Portugal and Slovakia approach most closely the passive work organisation category; according to Karasek, this model has the most negative implications for performance.

Figure 6.12: Job demands and control, by country



Note: Figures apply to employees only.

Figure 6.13: Job demands and control, by sector and occupation



Note: Figures apply to employees only.

To end this chapter, Figure 6.13 illustrates how sectors and occupations fit into the work organisation model. Only workers in managerial positions fall into the ‘active work organisation’ category; these are the only workers who, in general, enjoy high levels of control and at the same time have demanding jobs. Skilled and semi-skilled industrial occupations and workers in hotels and restaurants and in manufacturing are closer to the category of ‘high-strain work organisation’, with high levels of stress and low control, and consequently, the most arduous working conditions. Professionals and those working in financial intermediation and public administration are closest to the ‘low-strain work organisation’ category. Finally, unskilled workers and those in service occupations and the retail sector are closest to the ‘passive work organisation model’. The positioning of occupations and sectors along the axes of job demands and job control are clearly within expectations and confirm the consistency of the approach.

# Impact of work on health 7

'Maintaining and promoting the health and well-being of workers' is one of the four main pillars of the Foundation's research model for quality of work and employment.<sup>1</sup> Earlier research by the Foundation has found that, despite the general trend towards a service- and knowledge-based economy, the physical and psychological strain factors of work have not reduced substantially over the last 15 years. Some of the trends observed in employment relationships and working conditions in the last 15 years have in fact had a negative impact on the health of European workers – for example, the flexibilisation of the employment relationship<sup>2</sup> or the intensification of work associated with new forms of work organisation.<sup>3</sup> It is crucial, therefore, to monitor the relationship between work and health, as reported by workers, in order to identify the most problematic cases (according to sectors and occupations), so that specific policies can be developed to address them.

This chapter will first consider the overall perceived impact of work on health. It will then look at individual work-related health outcomes as measured in the fourth *European Working Conditions Survey* and their relationship with characteristics of work and employment. The final section will explore the levels of health-related leave in Europe.

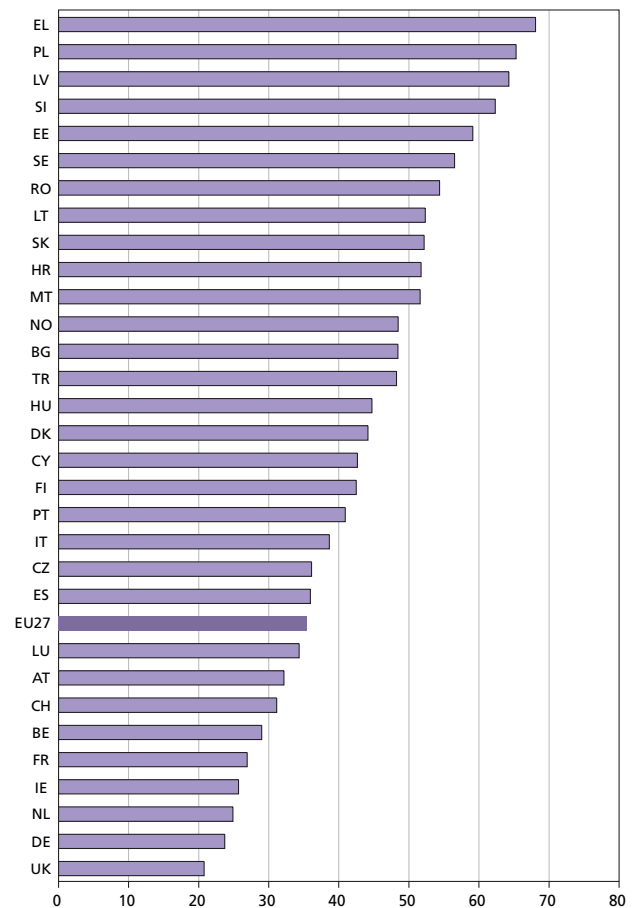
Work can impact on health in numerous ways and its effects vary from person to person. A person's state of health can in turn impact on how work is being carried out. Research shows that people at work tend to be in better health than the general population (the 'healthy worker effect'); this effect becomes even more pronounced in cases of difficult work situations. Moreover, the level of reporting of health problems differs greatly between countries, gender, occupations, sectors, etc.

## Perceived impact of work on health

The first question about work-related health outcomes asks the respondent, 'Does your work affect your health?' This question measures a worker's individual perception of the impact of health on work, and also serves as a filter question for detailing any symptoms the worker suffers from on account of work. As a single indicator, this general question can be taken as a good approximation of the health impact of work in different European countries, as

shown in Figure 7.1. While the EU27 average is 35%, differences between European countries in this respect are quite substantial. In Greece, Poland, Latvia and Slovenia, around two thirds of workers report that their work affects their health, a perception shared by only one fifth of UK workers and one quarter of German, Dutch, Irish and French workers. It is important to note that the levels of health impact of work as shown in Figure 7.1 clearly reflect other indicators of working conditions described elsewhere in this report, although for this particular question, the differences between countries are more significant. Eastern European countries, on average, report the highest levels of work-related health impact.

**Figure 7.1: Perceived impact of work on health, by country (%)**



Note: Respondents were asked 'Does your work affect your health?'

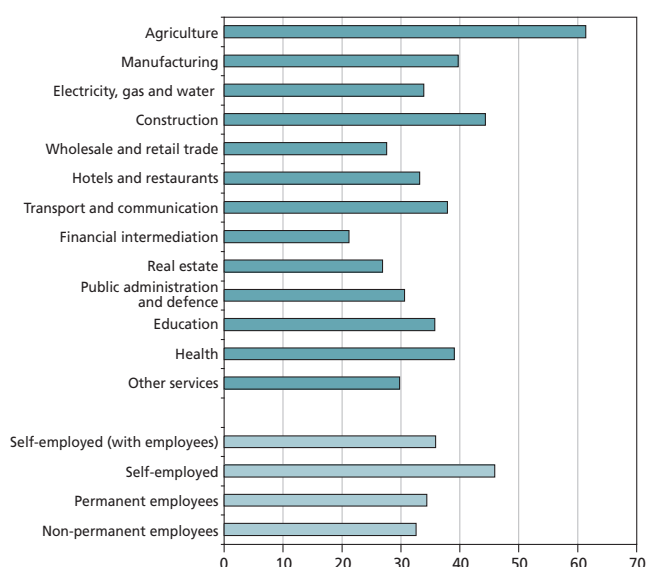
<sup>1</sup> See the Foundation report, *Quality of Work and Employment in Europe*, 2002, available online at <http://www.eurofound.europa.eu/pubdocs/2002/12/en/1/ef0212en.pdf>

<sup>2</sup> See Benach, Gimeno and Benavides, *Types of employment and health in the European Union*, 2002, available online at <http://www.eurofound.europa.eu/pubdocs/2002/21/en/1/ef0221en.pdf>

<sup>3</sup> See Daubas-Letourneux and Thébaud-Mony, *Work organisation and health in the European Union*, 2003, available online at <http://www.eurofound.europa.eu/pubdocs/2002/06/en/1/ef0206en.pdf>

Figure 7.2 shows the results for the same indicator, broken down by sector and employment status. As with Figure 7.1, the differences are quite substantial: the agricultural sector stands out as having a much higher level of work-related health impact; higher-than-average levels are also reported for construction, manufacturing, transport, health and education. The differences according to employment status are not so pronounced, but still quite relevant and consistent with previous research: the self-employed report higher levels of work-related health problems (45%) than self-employed with employees (36%) or employees (average between permanent and non-permanent of 33%).

**Figure 7.2: Impact of work on health, by sector and employment status, EU27 (%)**



### Types of work-related health problems

The persons who replied in the affirmative to the question about perceived impact of work on health were then asked to identify from a list of 16 health symptoms those that apply to them. Table 7.1 shows the percentages of workers reporting different symptoms across the EU27 as a whole.

The most often reported symptoms are musculoskeletal disorders (backache and muscular pains), followed by fatigue, stress, headaches and irritability. Other symptoms such as problems with eyesight, hearing, skin and respiratory problems are all reported by fewer than 10% of workers.

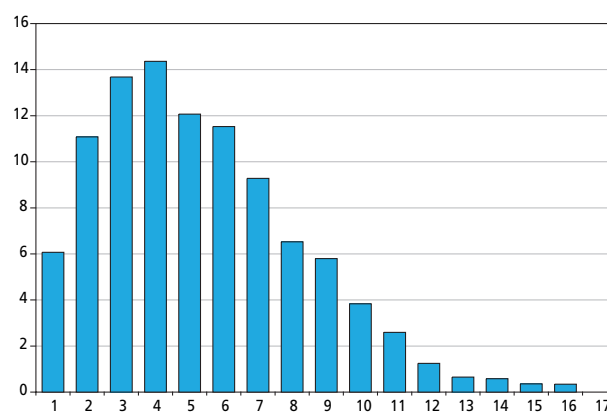
It is important to note that because the question about individual symptoms allows for multiple responses, most people reported between two and six individual symptoms (as shown in Figure 7.3). For this reason, it was decided to analyse all the symptoms together, taking into account the overall prevalence and considering which symptoms tend

to be reported together, and then to establish the correlation between different symptoms, using factor analysis.

**Table 7.1: Percentage of workers reporting each individual symptom, EU27 (%)**

Symptom	Percentage (%)
Backache	24.7
Muscular pain	22.8
Fatigue	22.6
Stress	22.3
Headaches	15.5
Irritability	10.5
Injuries	9.7
Sleeping problems	8.7
Anxiety	7.8
Eyesight problems	7.8
Hearing problems	7.2
Skin problems	6.6
Stomach ache	5.8
Breathing difficulties	4.8
Allergies	4.0
Heart disease	2.4
Other	1.6

**Figure 7.3: Number of reported symptoms per respondent, EU27 (%)**

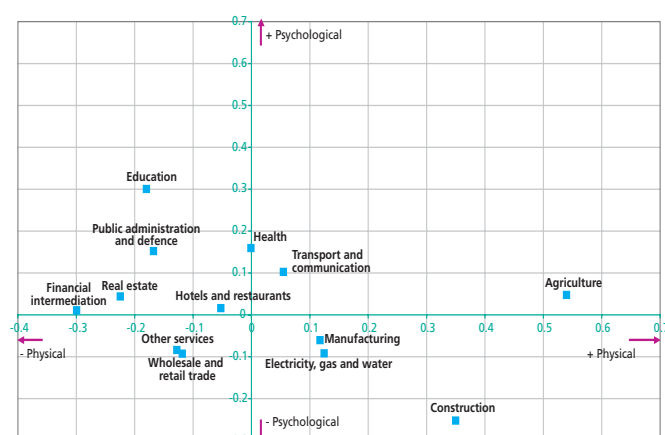


Note: Figures are only for those respondents who reported at least one symptom.

### Sectoral and occupational differences

The physical and psychological health factors developed from factor analysis are displayed in Figures 7.4, 7.5. and 7.6. The horizontal axis represents physical health factors: the further an occupation, sector or country lies to the right, the higher the incidence of this type of health outcome. The vertical axis represents psychological health factors: the further an occupation, sector or country lies towards the top, the higher the incidence of this type of health outcome. The chemical or biological factor was not analysed, as it incorporates only a small percentage of the original information and is highly specialised.

**Figure 7.4: Physical and psychological health factors, by sector, EU27 (%)**



In terms of sectors (Figure 7.4), agriculture has a high rating for the physical health factor, but a low rating for the psychological health factor. Construction also has a fairly high rating for the physical health factor (although lower than agriculture); however, its rating for the psychological health factor is below the average. The converse applies to the education, health and public administration sectors: here, the levels of reported physical problems are below the average, but the levels of psychological strain are higher than for all other sectors. The sectors that are least affected by both factors are the wholesale and retail trade and financial intermediation.

In terms of occupations, Figure 7.5 shows that agriculture is again very strongly affected by the physical health

### Measuring the correlation between health symptoms

Factor analysis is a statistical technique that studies the correlation between groups of interrelated variables, looking for patterns of correlation. When these patterns exist, the technique creates new variables – called factors – that sum up the information contained in the original set of variables in a simpler way, even if some of the original information may be lost in the process. Because the individual variables in the question on health impact of work are strongly correlated, they are suitable for this technique.

Table 7.2 shows the outcome of this factor analysis: 55% of the information contained in the 16 original variables is summed up in three factors: *physical and psychological health*

*factor* (the most important factor, incorporating 38% of the original information), *psychological health factor* (incorporating 9% of the original information) and *respiratory and skin health factor* (incorporating 7%). To understand the content of these factors, it is necessary to look at the rotated factor matrix: some variables show a strong correlation with each factor and permit the interpretation of the factors. The first factor is strongly correlated with musculoskeletal disorders (backache and muscular pains), fatigue, injury, stress and headaches. The second factor is strongly correlated with anxiety, sleep problems, irritability and stomach ache. Finally, the third factor captures respiratory problems, allergies, skin and heart problems.

**Table 7.2: Factor analysis of individual symptoms (EU27)**

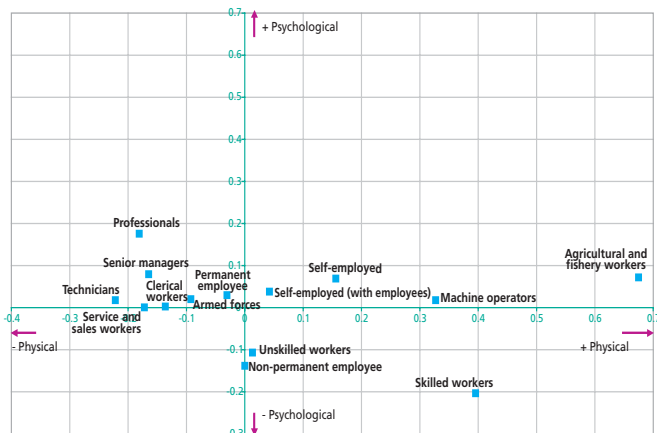
	Type of health outcome (using the rotated factor matrix)*		
	Physical (associated with physically demanding work environments)	Psychological (associated with psychologically demanding work environments)	Chemical/biological (associated with chemical/biological risks)
Hearing problems	0.51	0.04	
Eyesight problems	0.38	0.26	0.27
Skin problems	0.40	0.05	0.59
Backache	0.82	0.25	0.12
Headaches	0.55	0.49	0.13
Stomach pain	0.14	0.60	0.22
Muscular pain	0.81	0.26	0.12
Breathing difficulties	0.21	0.07	0.69
Heart trouble	-0.04	0.34	0.52
Injury	0.61	0.05	0.33
Stress	0.59	0.58	0.03
Fatigue	0.70	0.44	0.12
Sleeping problems	0.16	0.73	0.15
Allergies	0.15	0.14	0.68
Anxiety	0.15	0.74	0.08
Irritability	0.29	0.70	0.09

\* rotation method = varimax with Kaiser normalisation (seven iterations)

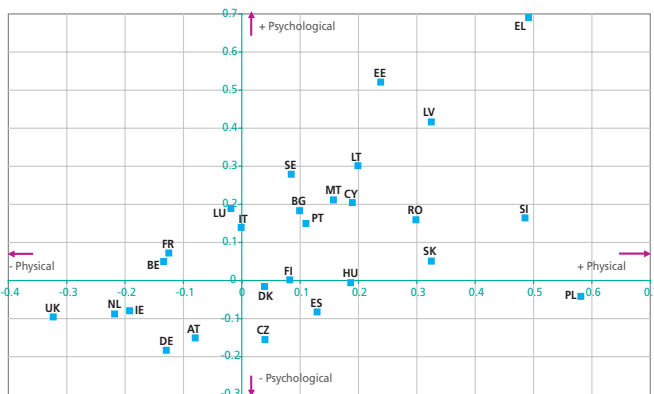
outcomes of work. Skilled workers have relatively high levels of physical health outcomes, but low levels of psychological health factors. Professionals and senior managers report relatively high levels of psychologically related health problems but low levels of physical problems.

Employment status does not appear to be strongly related to these two factors. Only the self-employed report relatively higher levels (although not significantly so) of work-related health outcomes for both factors.

**Figure 7.5: Physical and psychological health factors, by occupation and employment status, EU27 (%)**



**Figure 7.6: Physical and psychological health factors, by country, EU27 (%)**



**Country differences**

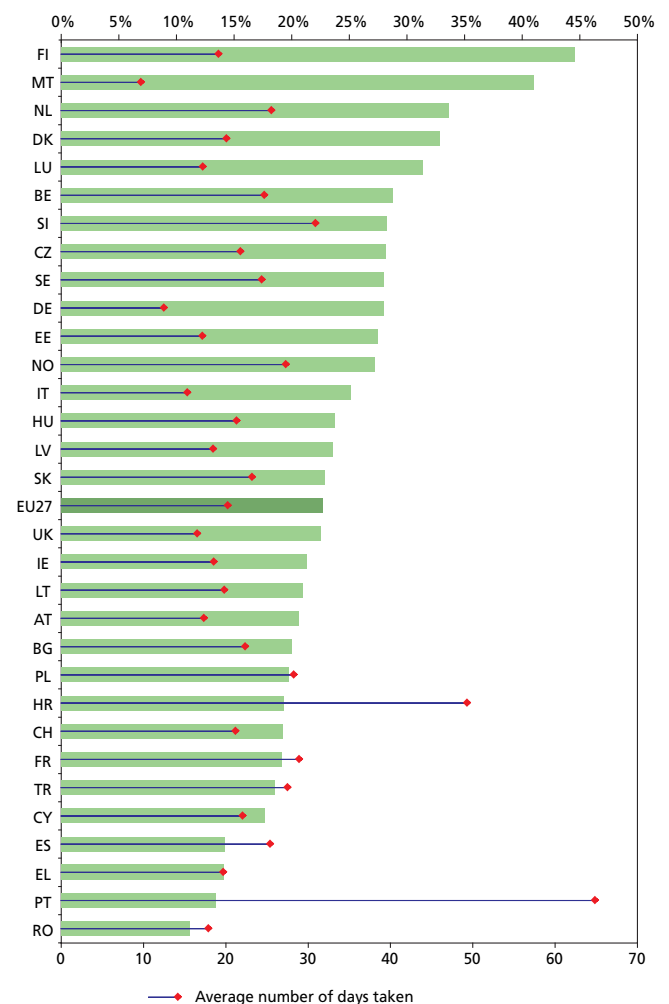
Figure 7.6 indicates which kinds of work-related health problems are most often reported in different countries. Substantial differences are apparent in this respect. Greece has very high levels of reported physical and psychological work-related health problems, followed by Estonia and Lithuania. Respondents in Poland, Slovenia and Slovakia report high levels of physical risks but relatively low levels of psychological risk. The opposite is the case for Sweden: respondents here report relatively high levels of

psychological health problems, but low levels of physical health problems. There are a number of countries in which respondents report lower-than-average risk levels for both factors: the UK (particularly low levels of physical health factors), Germany, Netherlands, Ireland and Austria.

**Health-related leave**

The fourth *European Working Conditions Survey* includes questions on health-related leave. Respondents were asked if they had taken health-related leave in the previous 12-month period and, if so, how many days they took, and how many of those days were on account of work-related health problems. Health-related leave is a complex phenomenon, dependent on many factors such as working conditions, the individual health of the workers, and the different regulatory systems operating in each country (and sometimes even in each sector – the difference between the public and private sector is quite important in this respect).

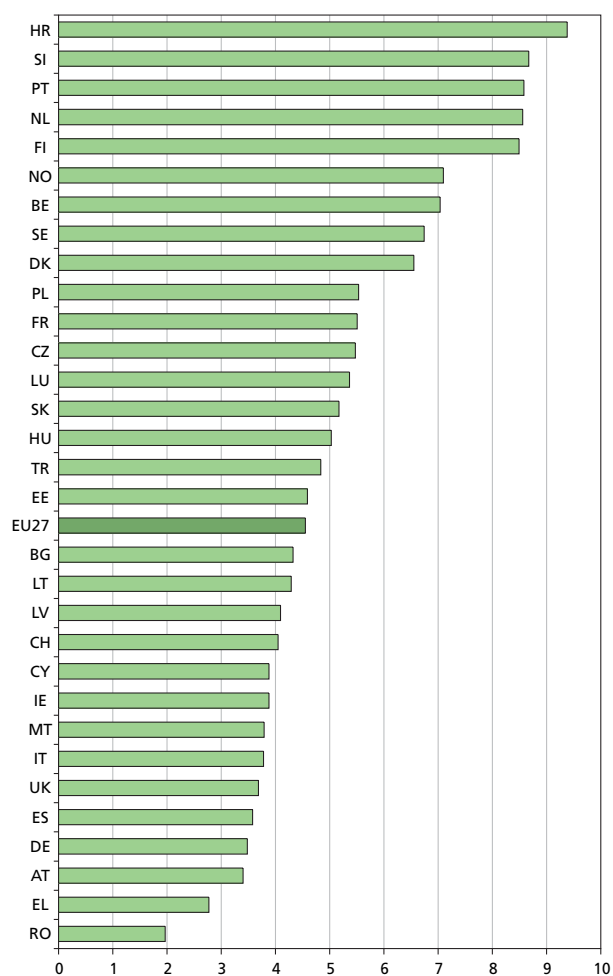
**Figure 7.7: Proportion of workers taking health-related leave and average days taken, by country**



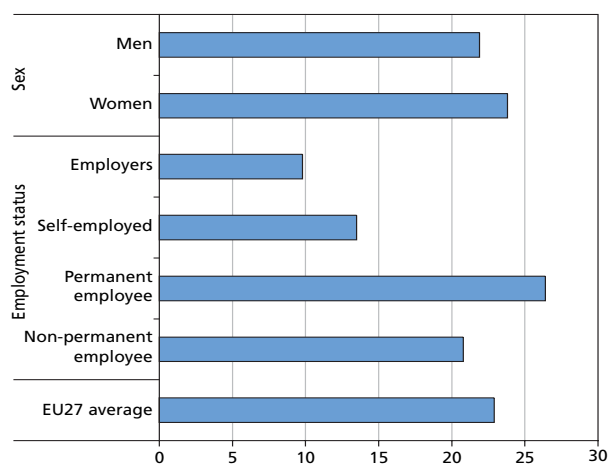
However, these national and sectoral differences remain outside the scope of this report.

Figure 7.7 gives a picture of health-related leave levels across the EU27: the horizontal bars represent the proportion of workers in each country who took health-related leave in the previous 12-month period; the diamonds (its scale is at the bottom of the graph) represent the average number of days' leave these workers took. There seems to be no correlation between the levels of reported impact of work on health (as described in the previous section) and the levels of health-related leave. The countries with higher levels of reported work-related health problems are not the countries where there is more health-related leave. For instance, Greece, which has by far the highest level of reported impact of work on health, has one of the lowest proportions of workers taking health-related leave. This clearly demonstrates the complex and multidimensional aspects of health-related absenteeism.

**Figure 7.8: Average number of health-related leave days per worker (all workers), by country**



**Figure 7.9: Health-related leave, by sex and employment status, EU27 (%)**



Note: Figures apply to workers who took health-related leave over previous 12 months.

A different way of presenting the same information is shown in Figure 7.8. In this case, the average for each country refers to the number of health-related leave days taken per worker. This includes all active workers, not only those who did actually take leave. It serves as an indicator for the impact of health-related leave on each of the national labour markets: it means that, on average, each worker in Croatia took slightly more than nine days' health-related leave in 2005, compared to only two days for Romanian workers.

Figure 7.9 presents data regarding health-related leave, broken down by sex and employment status. An average of 23% of workers across the EU27 reported taking time off work on account of health-related problems during the previous 12-month period, with slightly more women (24%) than men (22%) affected. Table 7.3 presents data showing the average number of health-related days of leave taken by workers across the EU27, broken down by sex, employment status and size of company.

Finally, Table 7.4 gives the sectoral breakdown for health-related leave, with agriculture (14%) and public administration and defence representing the two extreme poles (30%) and most other sectors adhering closely to the EU27 average number of days.

**Table 7.3: Number of days of health-related leave**

	Average no. of days taken by workers (all)	Average no. of days taken by workers who took at least one day of leave	Average no. of accident-related days taken by workers (all)	Average no. of other work-related days taken by workers (all)
<b>EU27 average</b>	<b>4.6</b>	<b>20.2</b>	<b>0.4</b>	<b>1.8</b>
Men	4.2	19.2	0.5	1.8
Women	5.0	21.3	0.4	1.7
Self-employed	2.8	21.2	0.3	1.4
Permanent employee	5.5	21.1	0.4	2.2
One-person enterprise	2.5	22.9	0.2	1.3
Micro enterprise (2–9 workers)	3.2	19.0	0.5	1.0
Small enterprise (10–49 workers)	4.6	19.0	0.4	1.9
Medium sized enterprise (50–249 workers)	5.6	19.0	0.5	2.0
Large enterprise (250 + workers)	7.4	24.3	0.7	3.0

**Table 7.4: Health-related leave, by sector, EU27 (%)**

Sector	
Agriculture	14.2
Manufacturing	25.9
Electricity, gas and water	26.4
Construction	21.3
Wholesale and retail trade	19.4
Hotels and restaurants	18.8
Transport and communication	25.0
Financial intermediation	22.5
Real estate	18.2
Public administration and defence	30.7
Education	29.9
Health	25.4
Other services	18.5
EU27 average	22.9

Note: Percentage of workers who took health-related leave over previous 12 months.

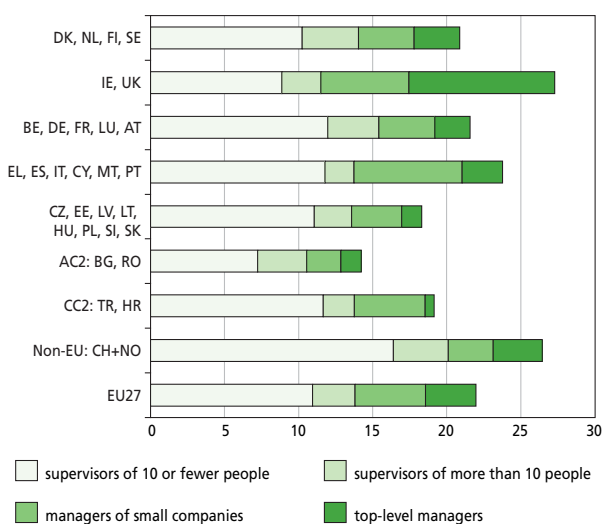
# Management and communication structures 8

One of the defining features of the European economic and social model is the level of employee participation and involvement in decision-making in the workplace, carried out through both formal and informal channels. This was acknowledged by the EU Information and Consultation Directive (2002/14/EC), which extended this model to the few European countries where there was no such tradition. This report, based as it is on a survey of individual workers, is not the vehicle for exploring formal systems of employee representation at the workplace. The survey findings, however, give an overview of the extent of informal communication in European workplaces, and how this is organised. As employee participation and communication takes place mainly between hierarchical levels in the workplace, this chapter first looks at hierarchical structures in European countries and then examines how communication and participation take place.<sup>1</sup>

## Managerial and supervisory positions

The survey reveals a number of key findings concerning hierarchical levels in European companies. The concentration of managerial and supervisory roles varies between country groups: there are, for example,

**Figure 8.1: Proportion of supervisors and managers in workforce, by country group (%)**



Note: 'Top-level managers' refers to ISCO codes 11 and 12: senior managers in public and private enterprises; 'managers of small companies' refers to ISCO code 13.

substantially greater concentrations of top-level managers in the UK and Ireland than in other country groups. Both longer working hours and higher remuneration are characteristic of those occupying higher management positions. Women occupy far fewer supervisory and managerial roles than do men, and, when in these roles, they mainly manage other women, or less qualified workers.

The structure of workplace hierarchies differs between different European country groupings. Figure 8.1 gives an overview of the proportion of workers with supervisory or managerial roles across European countries.<sup>2</sup>

According to the survey, around 20% of respondents have some type of managerial or supervisory role: between a half and three quarters of them are supervisors, while between a quarter and a half are managers.

The proportion of supervisors and managers in a company is, to a large extent, determined by company characteristics such as its size, and the economic sector in which it operates. However, the variation between country groups also suggests that there are different management models and hierarchical cultures in the various countries.

For example, the proportion of top-level managers in Ireland and the UK (at 9%) is higher than in the other country groups; in eastern European countries and the acceding countries, the proportion is below average (just over 1% in both groups). In southern European countries (and to a lesser extent also in Ireland and the UK) there is a somewhat above-average proportion of managers of small companies (7% and 6% respectively). In Bulgaria and Romania, the figure is 2%.

## Working hours and salary

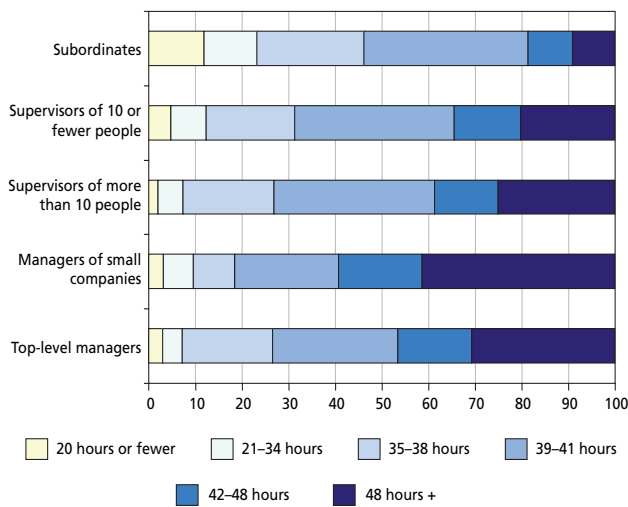
Two key dimensions of working conditions are working hours and salary. As Figures 8.2 and 8.3 indicate, as the level of responsibility rises, both working hours and salaries increase substantially. While – according to the survey – workers with no managerial or supervisory responsibilities comprise more than 80% of the workforce, only 9% of them work more than 48 hours per week. By contrast, between 20% and 25% of those with supervisory responsibilities work more than 48 hours per week, while 30% of top-level managers do so. Interestingly, managers of small companies

<sup>1</sup> The information in this chapter relates to workers in establishments of two or more people.

<sup>2</sup> The variable – managerial or supervisory position – was constructed using two different sources: the question concerning the occupation of the respondent and the question concerning supervisory duties ('How many people work under your supervision, for whom pay increases, bonuses or promotion depend directly on you?').



Figure 8.2: Working hours, by position (%)

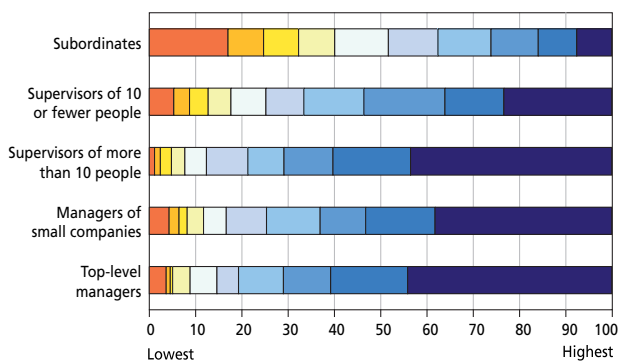


Note: Subordinates are respondents who report having no managerial or supervisory responsibilities.

work longer hours than do all other groups – 41% work more than 48 hours per week.

Supervisory or managerial position has an even greater impact on salary than on working hours: more than 40% of top-level managers are in the top 10% of the income scale of all respondents, compared to less than 10% for subordinates; similarly high figures are seen for supervisors of more than 10 people. Managers of small companies on average, however, earn slightly less: fewer than 40% are in the top income bracket.

Figure 8.3: Place in salary scale, by position (%)



Note: Scale ranges from lowest to highest income decile.

**Women in supervisory positions**

Since 1995, the *European Working Conditions Survey* has asked respondents whether their immediate superior is a man or a woman. From the answer given, a slight, gradual increase in the percentage of women superiors has been visible: from 20% in 1995, to 23% in 2000, to 25% in

Figure 8.4: Proportion of women superiors, by country (%)

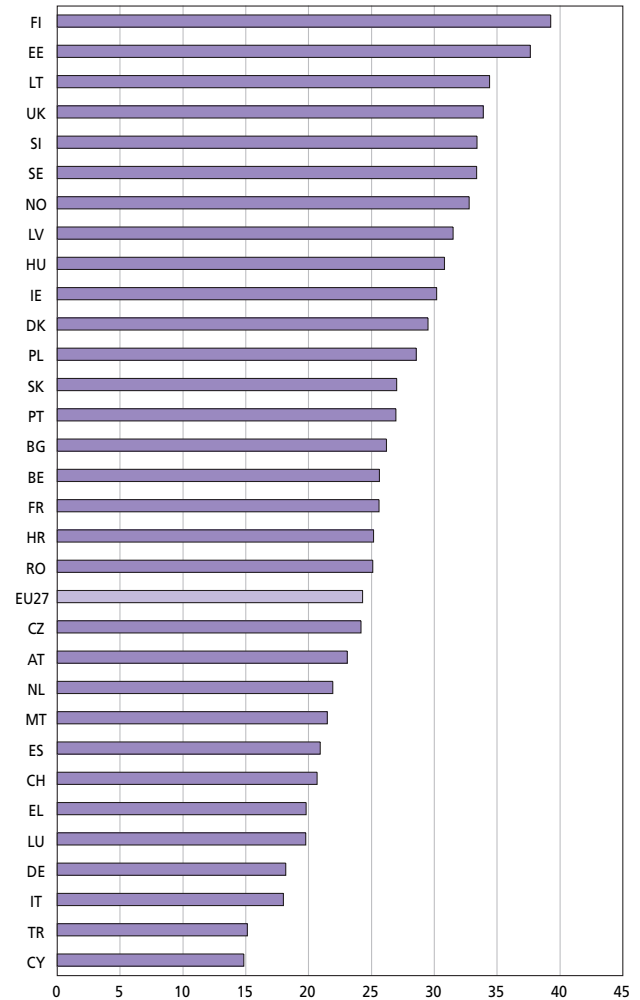
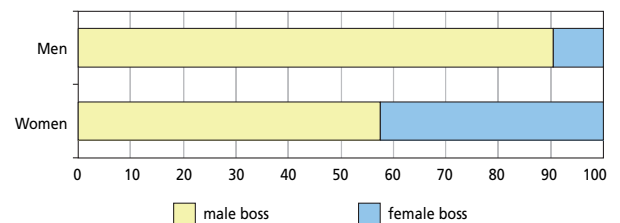


Figure 8.5: Sex of immediate superior, by sex of respondent (%)



2005. As Figure 8.4 indicates, differences between countries in this respect are substantial. The highest proportions of women in supervisory and managerial positions are in northern and eastern European countries (reaching nearly 40% in Finland and Estonia); by contrast, southern European countries, and some continental countries, have the lowest proportions – less than 20% in Germany and Italy.

**Figure 8.6: Sex of immediate superior, by position of respondent (%)**



Figure 8.5 shows that most female supervisors and managers in the EU27 have female subordinates: fewer than 10% of men have a woman as their immediate superior, as against 42% of women.

Figure 8.6 shows that the proportion of female superiors falls as the position of those they are supervising rises: that is, female superiors are more prevalent among the lower ranks of workers. A related finding is that women are more likely to supervise part-time than full-time workers: 41% of part-time workers have female bosses, compared to 21% of full-time workers. Both men and women in part-time employment are more likely to be managed by a woman.

**Communication and consultation**

**Communication with superiors**

In order to measure the extent to which workers interact with their immediate superiors, the survey asked respondents whether they had had a discussion with their boss about their work performance over the previous year, and also if they had discussed work-related problems.

There are substantial differences between the different country groups in the levels of direct communication between workers and superiors. These differences cannot be explained solely by the relative proportions of supervisors (see Figure 8.1), or by differences in the relative importance of economic sectors or types of companies: instead, they would seem to reflect the existence of different organisational cultures. The highest levels of direct communication in European workplaces are in the Scandinavian countries and the Netherlands, where more than 70% of workers had discussed their work performance, and work-related problems with their superior. In Ireland and the UK, and in the eastern European countries, the figure was between 50% and 60%, while the lowest levels were observed in southern European and continental countries (around 40%). These findings are consistent with published research on organisational systems in different EU countries.

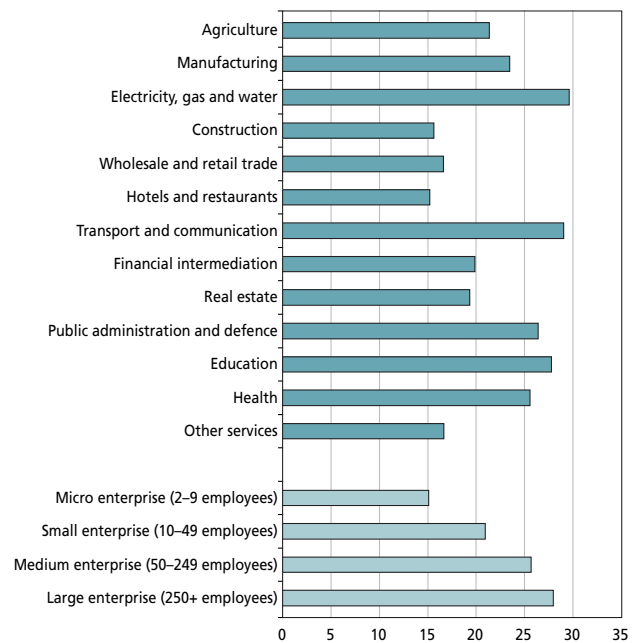
**Communication with employee representatives**

Another important dimension of communication within the workplace (particularly in the European model) is the communication that takes place between workers and employee representatives.

To measure the extent of such communication, the survey asked respondents whether they had discussed work-related problems with an employee representative in the previous 12-month period. In the EU27, around one in five employees had discussed work-related problems with employee representatives in the previous 12 months. Again, differences between country groupings are substantial: around 30% of respondents in the acceding countries, the eastern European countries and Ireland and the UK report such communication, as compared to between 16% and 19% in continental countries and southern European countries.

Different sectors and different sizes of organisations have different levels of employee representation, and these differences are reflected in the survey findings. As Figure 8.7 shows, the bigger the company, the greater the reported levels of communication with employee representatives. A number of sectors also report higher levels of communication: public administration and defence; electricity, gas and water; transport and communication;

**Figure 8.7: Communication with employee representative, by sector and size of enterprise (%)**



Note: The question asked if respondents had discussed work-related problems with an employee representative in the previous 12-month period.

and manufacturing. Lower levels of communication are reported in small companies, construction and other services.

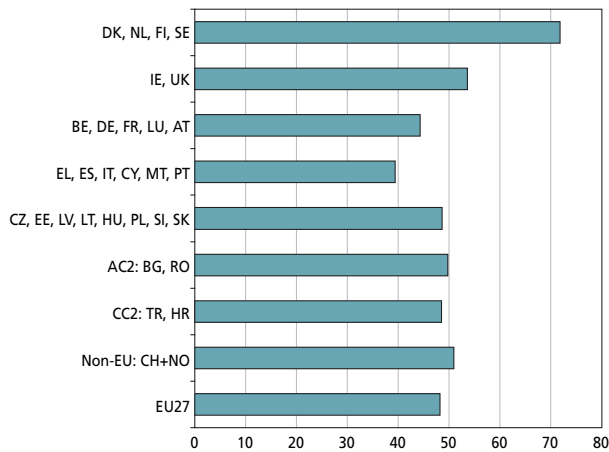
**Consultation on work organisation**

In addition to discussions on performance and work-related problems, another element of workplace communication is the extent of consultation regarding changes in work organisation and working conditions. As Figure 8.8 indicates, the highest levels of such consultation are found in the Scandinavian countries and the Netherlands, where more than 70% of respondents report having been

consulted about changes in work organisation or working conditions in the previous 12-month period, almost twice the level found in southern European countries (just under 40%).

The findings also show that the level of consultation reported by workers is related to their occupation: the lower a respondent's position in the occupational structure, the less they are consulted about changes in work organisation or working conditions. Almost 70% of senior managers are consulted, compared to less than 40% in all blue-collar occupations, both skilled and unskilled.

**Figure 8.8: Consultation in the workplace, by country groups (%)**



Note: The question asked if respondents had been consulted about changes in work organisation and/or working conditions in the previous 12-month period.

**Figure 8.9: Consultation in the workplace, by occupation (%)**



Note: The question asked if respondents had been consulted about changes in work organisation and/or working conditions in the previous 12-month period.

Extensive data was collected in the fourth *European Working Conditions Survey* about the organisation of time, including working time and time spent on non-work activities (domestic tasks, caring for children and older relatives as well as leisure, voluntary and political activities), and about people’s perceptions as to how well their working arrangements fit in with family and social commitments.

These questions sketch a broad picture of people’s work–life balance in Europe. They provide information which enable the links between work and non-working life to be explored – for example, the working time arrangements of parents and their domestic responsibilities and the degree of satisfaction with the work–life balance of each partner. They also make it possible to identify particular categories of workers who express comparatively high levels of dissatisfaction with their work–life balance. What these questions cannot do, of course, is identify the institutional settings, such as levels of social provision (e.g. childcare) and the social organisation of time, which vary greatly from country to country and which could influence workers’ perceptions of work–life balance. Equally, issues relating to changing gender roles and expectations in work and family life can only be approached indirectly. Nevertheless, what workers report regarding their work–life balance impacts on the quality of their work and also reflects the broader social perspective.

This chapter will look at how negative or positive reporting of work–life balance varies according to sex, parental status and number of working hours. It also explores how other aspects of working time – regularity, predictability, flexibility, individual discretion over working hours, and different working time schedules – affect work–life balance.

## Satisfaction with work–life balance

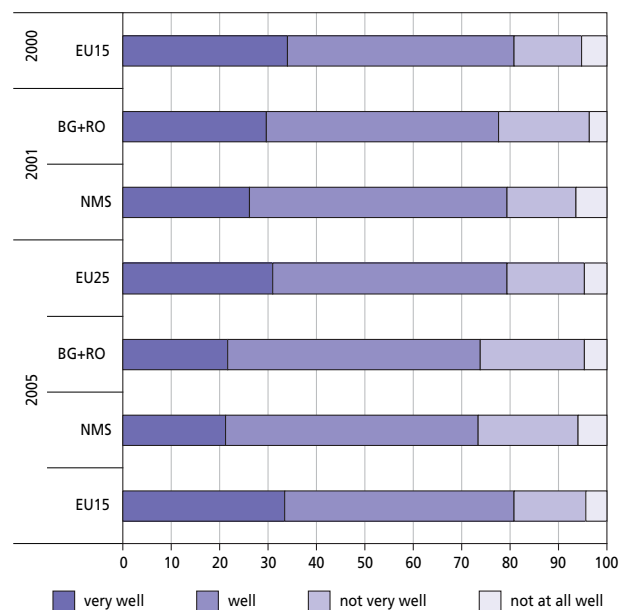
In the survey, respondents were asked if their job ‘fits in with their family or social commitments outside work’ according to a four-point scale (‘very well’, ‘well’, ‘not so well’, ‘not at all well’). Four out of five European workers say they are satisfied with how their working time arrangements fit in with their non-work commitments. Satisfaction levels in the older Member States have remained similar since the previous survey in 2000, while in the new Member States and Bulgaria and Romania they have declined by around 5%. (see Figure 9.1)

The overall figure for positive perception of work–life balance is high (over 80% in the EU as a whole) but, as with the survey question regarding general job satisfaction (see Chapter 10), questions on satisfaction with work–life balance tend to routinely elicit high levels of positive

response. For this reason, the survey included additional questions to further explore elements of work–life balance.

One of the principal factors influencing work–life balance is the volume of hours worked. The more hours a person works, the greater the difficulty in reconciling work and non-working activities. While very high levels of basic satisfaction with work–life balance (85% and higher) is reported by those working fewer than 30 hours per week,

**Figure 9.1: Perception of work–life balance, trends over time (%)**



Note: Question asked ‘In general, do your working hours fit in with your family or social commitments outside work?’

**Figure 9.2: Perception of work–life balance, by length of working week, EU27 (%)**

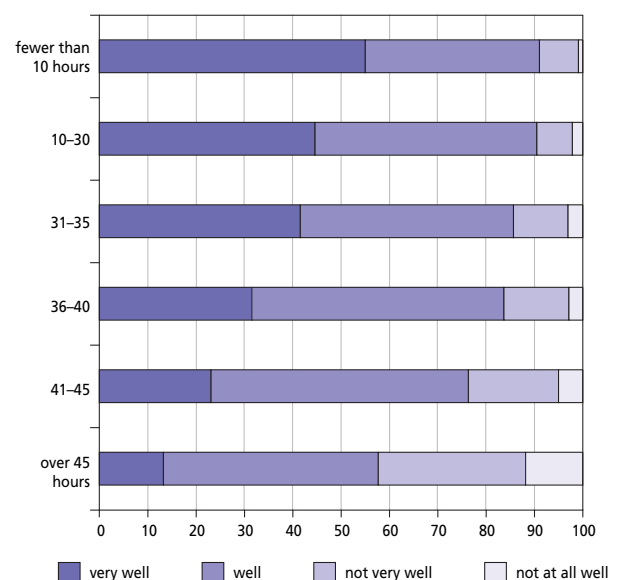
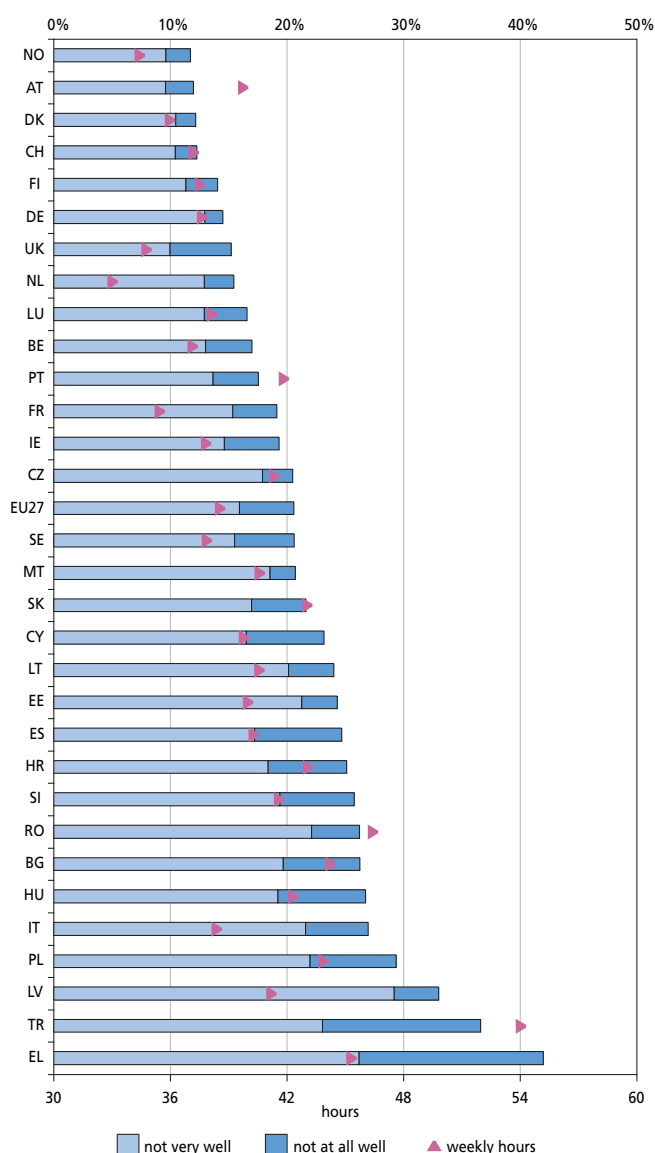


Figure 9.3: Perception of work–life balance, by country



Note: Question asked 'In general, do your working hours fit in with your family or social commitments outside work?'

over 40% of those working more than 45 hours per week report that their working hours do not fit in well with their family and social commitments (see Figure 9.2).

Broken down by country, the data show considerable variation, from 11% dissatisfaction with work–life balance in Norway and Austria to over 40% in Greece (see Figure 9.3). Including a country marker for average weekly working hours (in the respondent’s main job) confirms that there is a positive correlation between hours worked and dissatisfaction with work–life balance at a country level.

### Gender differences

Given the assumption that working women remain disproportionately involved in unpaid domestic and caring activities – an assumption supported by evidence from the survey, as shown later in this chapter – a key focus in the work–life balance debate has been the specific pressures on working women. It is interesting, therefore, to note that men report more dissatisfaction with their work–life balance than women. The main factors contributing to this unexpected outcome are, however, the volume of weekly working hours and the different ways in which working hours are organised between men and women. In general, part-time workers are twice as likely as full-time workers to have a positive perception of their work–life balance. The high incidence of part-time work among women, and the low incidence of part-time work among men, are therefore key factors in explaining the levels of satisfaction with work–life balance among working men and women.

However, even among both sexes working full-time, a somewhat higher proportion of men (24% compared to 20% of women) have a negative perception of their work–life balance.

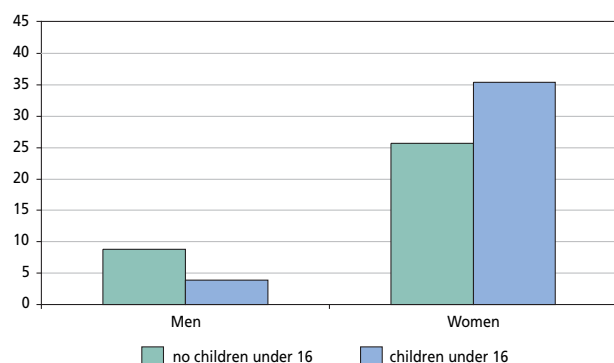
### Working parents

If attention is focused on the working parents of children aged under 16, the differences between the sexes is even more pronounced. Working fathers tend to have a more negative assessment of their work–life balance than working

Table 9.1: Working hours and family life, by sex, EU27 (%)

Do your working hours fit in with your family or social commitments outside work?	Men		Women	
	with no dependent children under 16	with dependent children under 16	with no dependent children under 16	with dependent children under 16
very well	31.3	24.4	36.6	32.9
well	48.4	48.7	47.7	48.8
not very well	15.4	20.0	13.1	14.7
not at all well	5.0	6.9	2.6	3.6

**Figure 9.4: Incidence of part-time work, by sex and household situation, EU27 (%)**



mothers (27% of fathers compared to 18% of mothers), as Table 9.1 indicates.

The same determining factor in this case is the volume of weekly working hours: the different take-up of part-time work between men and women creates an even larger gender time gap for working parents.

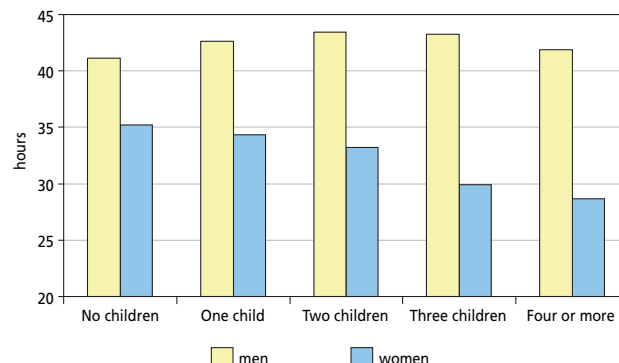
While the incidence of part-time work among men in general is low, men without children are twice as likely to work part time (9%) as are men with children (4%), as Figure 9.4 shows. By contrast, parenthood for women implies an increased incidence of part-time work. Both trends contribute to the growing incidence of ‘one-and-a-half’ worker households, with a full-time working father and a part-time working mother.

It is also the case that working fathers tend to work longer weekly hours as their parental responsibilities grow. Working fathers living with two children aged under 16 years work more than two hours extra each week, compared to men without children (see Figure 9.5). Only among fathers with extended family responsibilities (three or more children) is there a slight reduction in weekly working hours.

The opposite is the case for working mothers: they work fewer hours than women without children, although this is largely due to the prevalence of part-time work among working mothers. Among women who work full time, the average weekly working hours increase according to the number of children they have.

The divergent pattern of weekly working hours for men and women with children is reflected in the growing gap in satisfaction with work-life balance. Working parents, both male and female, tend to have lower levels of satisfaction with work-life balance; however, the higher uptake of part-time work offsets to an extent the dissatisfaction levels of

**Figure 9.5: Weekly working hours, by household situation, EU27 (%)**



working mothers. For working fathers, a longer working week, possibly combined with changing social expectations regarding the domestic role of fathers (and, possibly, frustration at their inability to fulfil such expectations) may contribute to their relative dissatisfaction with their work-life balance.

## Paid and unpaid working hours

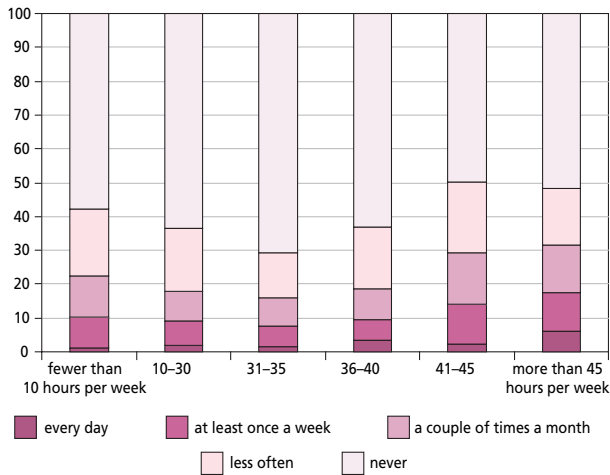
### Domestic work

Despite the increasing participation of women in the labour force, the traditional division of domestic responsibilities between men and women persists. Results from the survey reveal that a much higher proportion of working women than working men devotes time outside work to domestic responsibilities, such as caring for children, housework or cooking. Indeed, as indicated in Chapter 2 (on working time), if the estimated weekly hours spent on these forms of unpaid work are combined with hours spent in paid work, a significant reversal of the conventional picture emerges. On average, men work longer hours than women in their paid jobs; however, when paid and unpaid hours are added together, it is women who work the longest number of hours. Women’s work and life are ‘balanced’ in the sense that they devote comparable amounts of their time to both paid and unpaid work, in particular between the ages of 25 and 54 years. A man’s ‘work’ tends largely to be confined to his paid job.

**Table 9.2: Unpaid weekly working hours, by sex and age (%)**

Age of respondent	Men	Women
24 years or younger	3.2	10.4
25–39 years	9.2	31.8
40–54 years	8.6	26.9
55 years or older	5.2	17.9

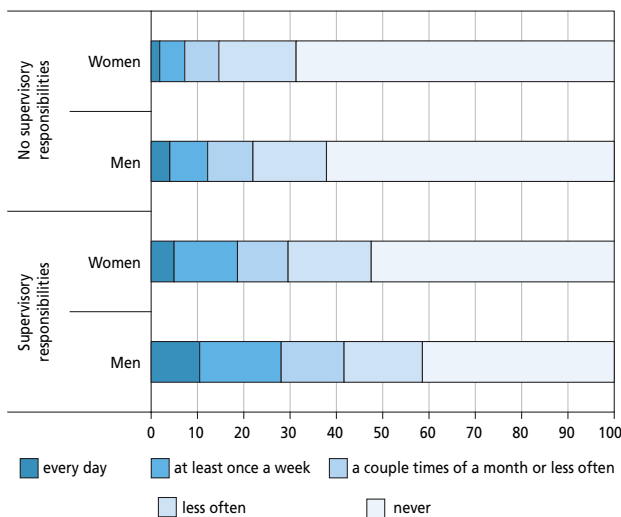
**Figure 9.6: Extent of out-of-hours contact, by length of average working week, EU27 (%)**



**Work and non-working time**

A new question (introduced in the survey in 2005) assesses the extent to which work impinges on non-working life: it asks workers whether they are contactable in relation to their main paid job outside normal working hours. The growth of faster communication technologies (phone lines, mobile phones and broadband internet/email) over the past five years has made such contact possible for the majority of Europeans. For certain categories of workers – e.g. those with supervisory responsibilities, or the self-employed – this can blur the boundaries between work and non-work. The same communication technologies that make contact possible may also make further work possible, effectively extending working hours by stealth. In essence, this can be seen as a form of negative ‘flexibility’. As the survey also revealed, rather than offering some protection against out-

**Figure 9.7: Extent of out-of-hours contact, by level of responsibility and sex (%)**



of-hours contact, working long hours is associated with higher levels of contactability outside work (see Figure 9.6).

It is notable that managers (those with staff working under their supervision) report this type of contact more than do other workers, and that men, in general, appear to be more affected (see Figure 9.7).

**Type of working schedule**

Another factor that influences perceptions of work–life balance is the way in which working time is organised, both in terms of its regularity and also with reference to the ‘standard’ working schedule (around 40 hours per week, working only weekdays). Working non-standard hours (in the evening, at weekends or at night after 22.00 hours) is associated with poorer levels of work–life satisfaction. Working long working days (of more than 10 hours) on a regular basis also has a negative impact.

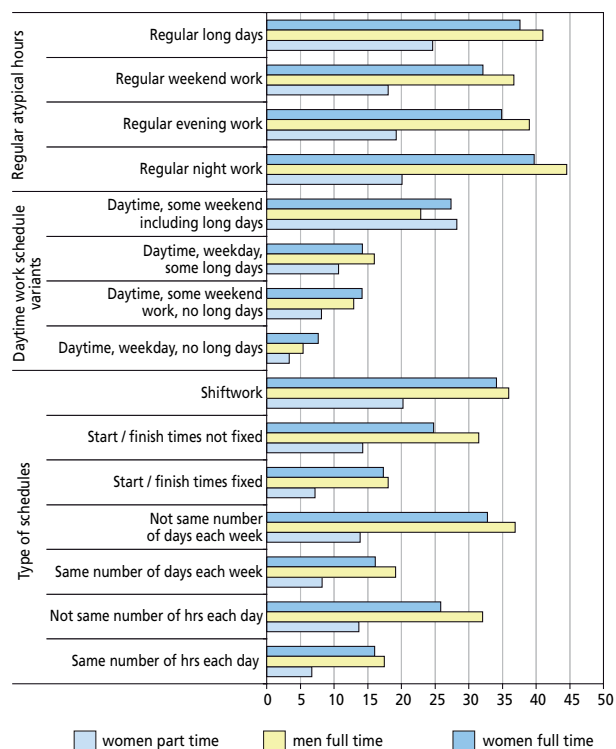
Many societal time arrangements (opening hours of shops, public institutions and schools, etc.) are organised to be broadly consistent with standard daytime working hours. It is not surprising, therefore, that the optimal schedule from a work–life balance perspective is the standard one of daytime work during weekdays, without long days. Workers who are regularly required to work outside these limits report more dissatisfaction with their work–life balance; those having to carry out night work regularly are particularly affected (see Figure 9.8).

Consistent and regular schedules lead to greater satisfaction with work–life balance, while any deviations from a consistent working pattern tend to raise the levels of dissatisfaction. Thus, working the same number of days per week or hours per day is preferable to working a variable number of days or hours; fixed starting and finishing times are considered preferable to variable ones.

Variability or ‘imposed’ flexibility that undermines the regularity or predictability of working schedules is considered very unfavourable by workers from a work–life balance perspective. Against a background of pressure to diversify working schedules – for example, from companies wishing to extend or vary operating levels and times – it is interesting to observe that the ‘old-fashioned’ working week (of around forty hours, with regular weekday, daytime schedules and little or no work at non-standard hours) is still regarded very positively in work–life balance terms. Regularity may be a more important consideration for workers than flexibility when it comes to ensuring that their working hours fit in well with their non-work commitments.

Workers who report that their working schedule changes frequently report less satisfaction with their work–life

**Figure 9.8: Dissatisfaction with work-life balance, by working schedule (%)**

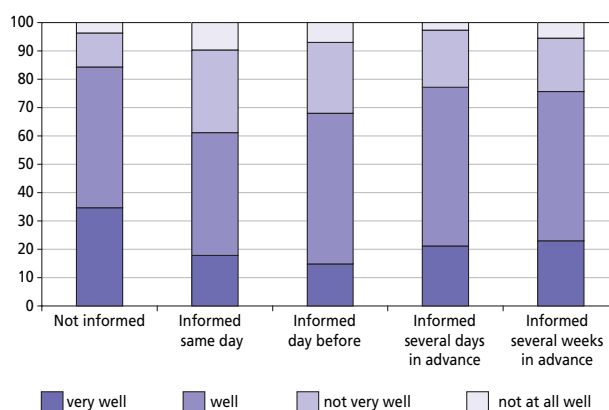


Notes: Regular weekend work is defined as working four or more Saturdays/Sundays per month. Regular night work, regular evening work and regular long days (of more than 10 hours) are defined as five instances or more per month in each case. Male part-time workers were excluded due to the small number of cases in individual categories.

balance (see Figure 9.9). Moreover, the shorter the period of notice given in changes to schedules, the greater the degree of dissatisfaction. Clearly, the ad hoc nature of such a work schedule imposes an extra burden in terms of managing non-working time.

Working-time organisation based on collective starting and finishing times is usually associated with older, traditional forms of production. In the context of the discussions on

**Figure 9.9: Perception of work-life balance, by notice given of changes to work schedule (%)**



Note: Question asked 'Do your working hours fit in with your family or social commitments outside work?'

the merits of flexible working-time arrangements, it is interesting to note that workers with such fixed, regular schedules express comparatively higher levels of satisfaction with their work-life balance.

Flexibility that extends choices to workers (for example, flexitime schemes) is marginally more favourable from a work-life balance perspective. However, paradoxically, it is those with most say in how their working time is organised – those who replied that 'working time is determined entirely by myself' – who express most dissatisfaction with how their working hours fit in with their family and social life. As a group, these respondents are the most 'empowered' in terms of working-time discretion; however, this is evidently more than counterbalanced by other factors – notably an increased number of working hours. The self-employed – as a rule those with the greatest say in how their working time is arranged – tend to work much longer hours than employees. This tends to support the case that it is the volume of hours worked – rather than control over working time – that most influences satisfaction with work-life balance.



# Satisfaction with working conditions 10

Work occupies a significant part of the waking hours of the majority of European adults and in most cases provides the basic means of economic sustenance. Work also contributes to a sense of social identity and usefulness within the context of the immediate work environment – through relationships with one’s colleagues, boss, clients, patients, etc. – and within society as a whole. Given the central place of work, a measure of the psychological well-being that individuals associate with their work can also be seen as an indicator at a collective level of how well work meets the professional, private and social needs of individual workers.

Despite the acknowledged importance of work satisfaction in employment policy and research – reflected at EU level in its inclusion as an indicator of ‘quality of work’ in the European Employment Strategy – it is important to point out that it is a subjective measure. As a consequence, it may be less empirically reliable than more objective or verifiable work–life indicators – for example, working hours or exposure to physical risks. Workers may report high levels of work satisfaction for reasons to do with personal disposition or outlook rather than the quality of the work or working conditions. A worker in an ostensibly ‘good’ job – well-paid, secure, with a generally positive working environment – may report a lower level of work satisfaction than someone in a more menial, less well-paid job, because the two have very contrasting expectations of work.

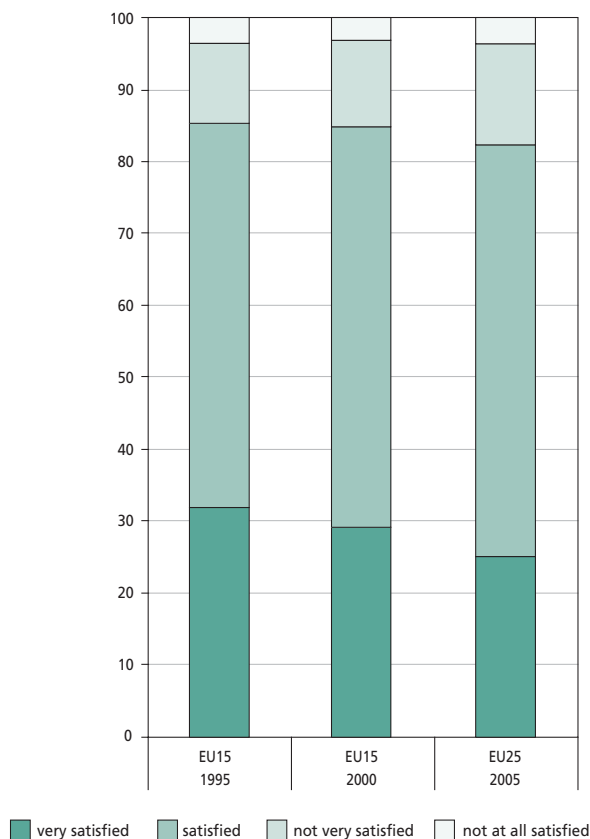
It is also the case that in all surveys workers generally appear predisposed to report high levels of satisfaction with working conditions. Over three quarters of workers will, on average, report themselves ‘content’ or ‘very content’ with their job or working conditions when questioned, and the fourth *European Working Conditions Survey* is no exception to this pattern.

## Main trends

The last three *European Working Conditions Surveys*, in 1995, 2000 and 2005, have included a question on work satisfaction or satisfaction with working conditions: in each, five out of six workers consistently reported themselves ‘satisfied’ or ‘very satisfied’ with working conditions in their main paid job.<sup>1</sup> There has been little change in the aggregate proportions of workers expressing satisfaction with working conditions, as Figure 10.1 shows.

If the EU15 countries are compared over the period 1995–2005, a remarkably consistent proportion of workers (between 83% and 85%) report themselves satisfied or very satisfied with their work. What is clear, however, is that these aggregate figures conceal large differences between different groups of countries.

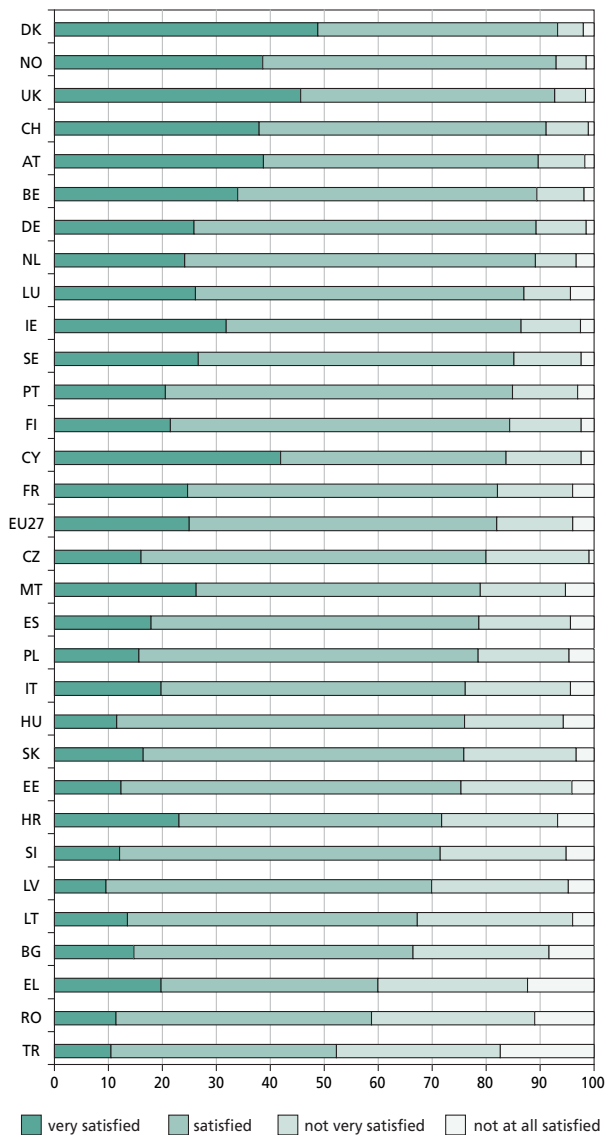
Figure 10.1: Work satisfaction trends, 1995–2005 (%)



From the more detailed country breakdown of the 2005 survey shown in Figure 10.2, it can be seen that the Netherlands and the Nordic countries generally show high levels of satisfaction with working conditions, with Denmark and Norway recording the highest levels. The difference between the old and new Member States is clear in the country comparison: most of the EU15 Member States are above the EU average, in terms of respondents reporting themselves satisfied or very satisfied with their working conditions, with the exception of three southern European countries – Italy, Spain and Greece; by contrast, all but one of the new Member States (Cyprus) are below the EU average. In general, national levels of satisfaction

<sup>1</sup> There was a change of question wording from 1995 to 2000. In 1995, the question asked was ‘On the whole, are you very satisfied, fairly satisfied, not very satisfied or not at all satisfied with your main job?’ In 2000, this was changed to ‘...are you [...] satisfied with working conditions in your main paid job?’ and this formulation has been retained in 2005.

Figure 10.2: Work satisfaction, by country (%)



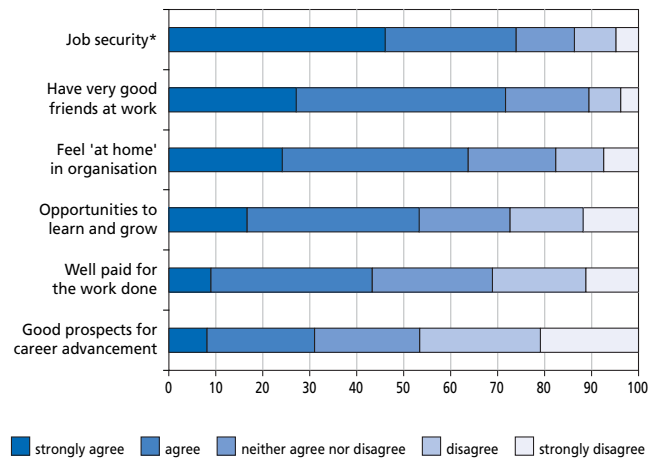
with working conditions appear to track closely standard measures of national wealth: countries with higher GDP per head report generally higher levels of satisfaction.

### Indicators of satisfaction with work

The fourth *European Working Conditions Survey* includes a number of new questions which are intended to throw light on the different elements of work satisfaction. As indicated above, working conditions surveys tend to reveal a high proportion of individuals who report satisfaction with their work. However, to gain a more accurate picture of work satisfaction, it is necessary to examine in detail the various

factors contributing to satisfaction, such as income, working time arrangements, possibilities for skills development and career advancement, and the degree of individual control over work.<sup>2</sup>

Figure 10.3: Satisfaction with positive job elements (%)



Note: Data based on answers to questions 37 a–f.

\* Job security: Results were obtained from a reverse coding of the answers to Q37a, 'I might lose my job in the next six months'. For instance, 'strongly agree' in the above legend is a reverse coding of the response 'strongly disagree' to this question.

The questions (37 a–f in the questionnaire) relating to these factors are in the form of statements and do not explicitly mention 'satisfaction'; nevertheless, they can be considered useful proxies for frequently cited components of job or work satisfaction. Thus, a respondent who agrees or strongly agrees with the statement 'I am well paid for the job I do' can reasonably be said to be expressing a positive opinion about or satisfaction with their pay.

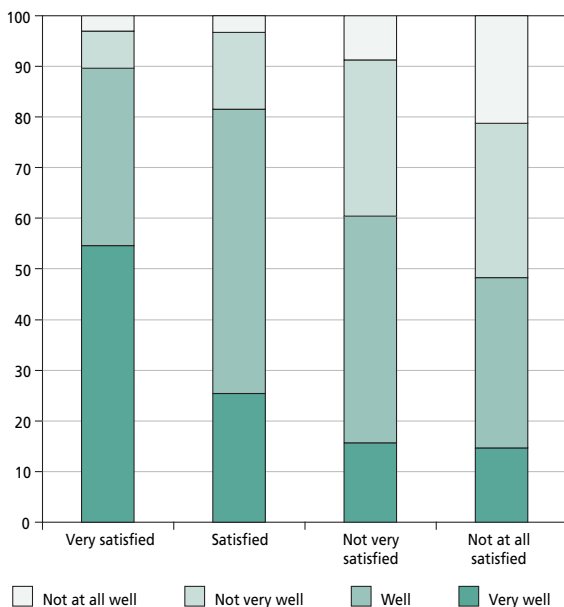
In general, the high level of general work satisfaction demonstrated in the single question on satisfaction with working conditions (question 36) is only partially reflected in respondents' assessment of key elements of work satisfaction – see Figure 10.3. Once these are considered on an individual basis, a more nuanced picture emerges. For the two questions relating to the respondent's sense of social integration in the company, ('feel at home in the organisation' and 'have very good friends at work'), there are comparably high proportions of positive responses. Similarly, the majority of respondents were also optimistic about their job security: only 13% – less than one in seven – considered it likely that they would lose their job over the

<sup>2</sup> See the Foundation study, *Measuring job satisfaction in surveys*, available online at <http://www.eurofound.europa.eu/ewco/reports/TN0608TR01/TN0608TR01.htm>

ensuing six months. However, at least one third of workers consider themselves to be underpaid; while about the same proportion are optimistic about their prospects for career advancement in their current job. Figure 10.3 indicates, in particular, that workers are much less optimistic about their prospects for career or personal development in their work than the high levels of overall satisfaction with working conditions might suggest.

Respondents who reported that their working hours fitted not very well or not at all well with their family or social commitments not surprisingly reported lower levels of satisfaction with working conditions (Figure 10.4).

**Figure 10.4: Level of work–life balance and satisfaction with working conditions (%)**



Note: Responses ('very well', 'well' etc.) are based on answers to question 18: 'Do your working hours fit in with your family or social commitments outside work?'

Based on an analysis of the correlation between the main job satisfaction question (Q36) and other questions with a possible bearing on job satisfaction (Q18, Q25 h–m, Q27, Q37 a–f and EF5), the most important factors correlated with general satisfaction with working conditions are a sense of belonging in one's company or organisation ('I feel at home in this organisation') and a perception of being well rewarded.

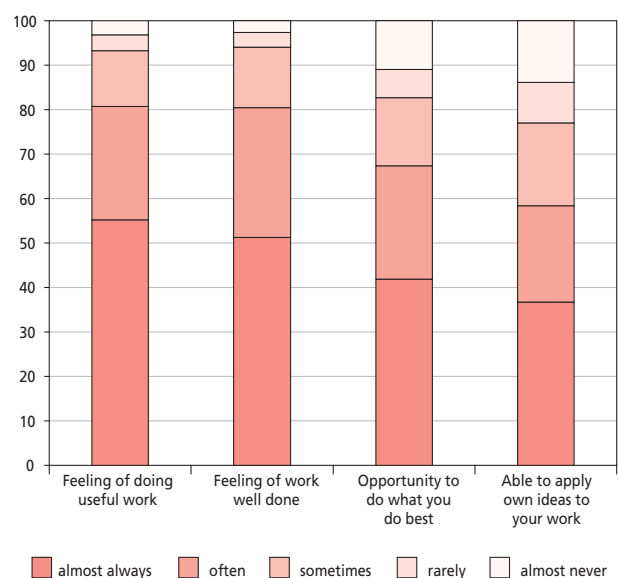
Significantly, the perception of being well paid appears to be much more important than actual income itself (as indicated by the place of respondents in the income distribution scale). Developmental possibilities in work

('opportunities to learn and grow' and 'prospects for career advancement') and work–life balance are also significantly correlated with overall satisfaction with working conditions.

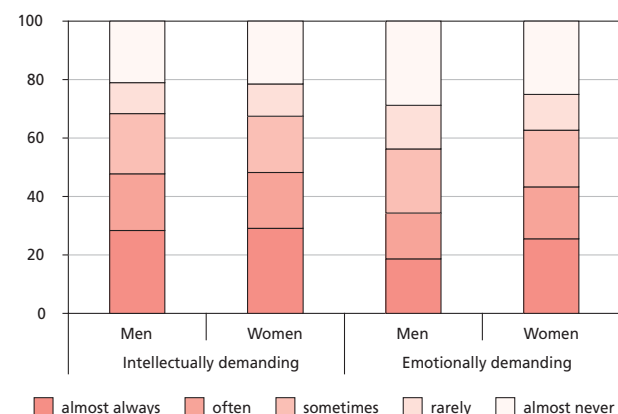
**Intellectual and emotional demands**

A second set of questions (25 h–m in the questionnaire), introduced for the first time in the 2005 survey, explores aspects concerning psychological well-being at work: the feeling of doing useful work and a job well done, finding work either intellectually or emotionally demanding, having opportunities to do one's best and apply new ideas in the job. As with the previous questions related to work satisfaction, the overall picture is positive (Figure 10.5). A high proportion of workers in Europe consider that they do useful work and that their job gives them the feeling of work

**Figure 10.5: Aspects of work-related well-being (%)**



**Figure 10.6: Intellectual and emotional demands of work, by sex (%)**



well done: the ratio of such positive statements to negative statements is over 10:1. In terms of how work presents opportunities for using one’s own ideas, the responses are still positive but less emphatically so. Two out of three workers report that they often or almost always have the opportunity to do what they do best at work.

Figure 10.6 indicates that broadly similar proportions of men and women consider their work to be intellectually demanding (just under 50% of both indicate that this is often or almost always the case), while more women than men find that their work imposes emotional demands.

### Dissatisfaction with work

Given the high levels of overall satisfaction with working conditions reported in the survey, it is worthwhile concentrating on the minority of workers actively dissatisfied with work and see how these are distributed according to standard background variables (age, sex, employment status, education etc.)

In general, men, particularly younger men, report higher levels of job dissatisfaction than do women. By occupational type, white-collar workers report less dissatisfaction than do blue-collar workers. Public-sector workers are less dissatisfied than their private-sector counterparts and, among employees, those with an indefinite-term contract have higher levels of satisfaction with their working conditions than their fixed-term or temporary-agency counterparts (grouped under ‘Temporary’ in Figure 10.7).

There is a clear relationship between the educational level attained by respondents and their satisfaction with working conditions: lower levels of educational attainment are associated with higher levels of job dissatisfaction. It is also the case that higher levels of education are associated with greater work satisfaction: 51% of workers with an advanced third-level degree (ISCED 6<sup>3</sup>) report being ‘very satisfied’ compared to an average of 25% for the sample as a whole.

It should be emphasised that in most categories less than one in five workers declare themselves to be ‘not very satisfied’ or ‘not at all satisfied’ with their work. It is true that blue-collar workers, workers with a lower secondary level of education or less, those holding temporary or fixed-term contracts and male workers under 30 years of age report higher levels of dissatisfaction; however, even in these groups, the proportion of dissatisfied workers is around one in four or lower.

Figure 10.7: Dissatisfaction with working conditions, by group (%)

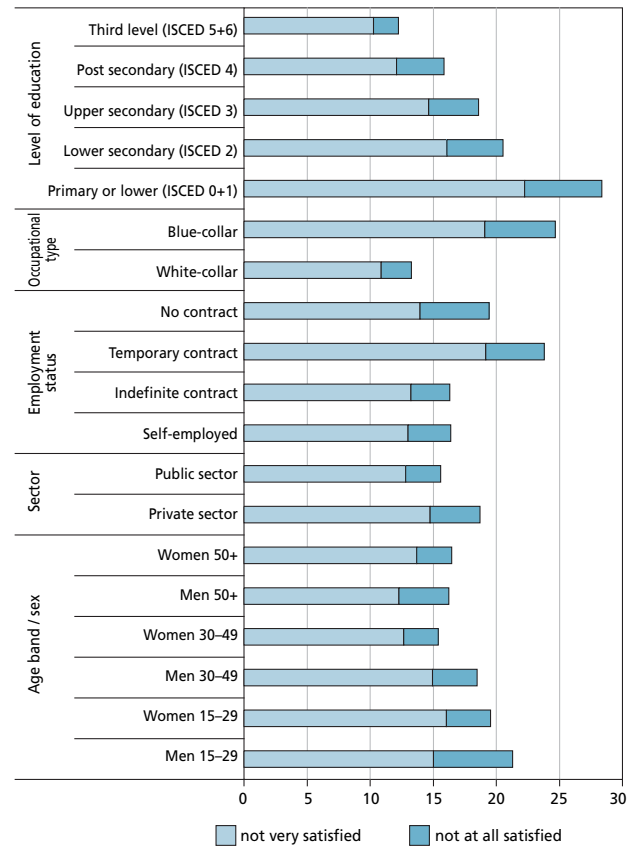
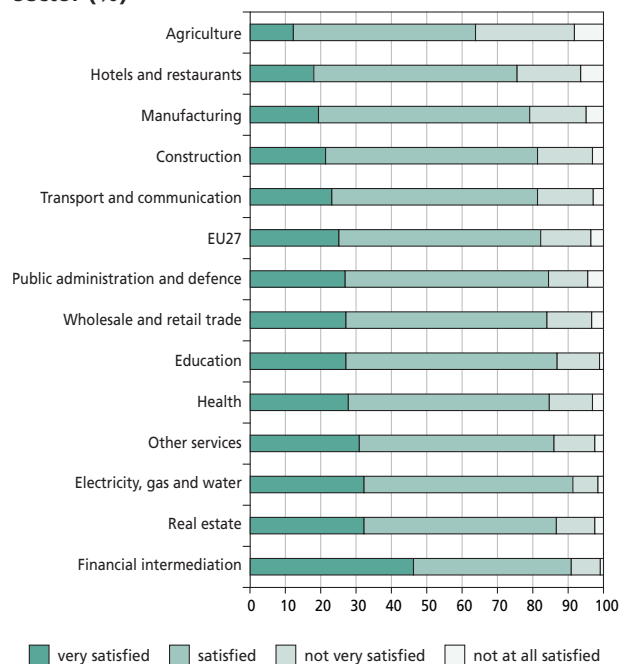


Figure 10.8: Satisfaction with working conditions, by sector (%)



<sup>3</sup> ISCED (International Standard Classification of Education) is a classification system designed by UNESCO in the early 1970s to serve ‘as an instrument suitable for assembling, compiling and presenting statistics of education both within individual countries and internationally’.

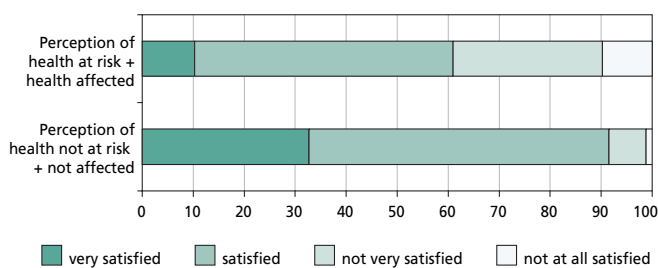
There is a contrast between high satisfaction levels in predominantly office-based service sectors (such as financial intermediation and real estate) and low levels in traditional, non-service sectors. In particular, there are notably high levels of job dissatisfaction in the agriculture and fishing sectors, where overall sectoral retrenchment may contribute to such dissatisfaction, in combination with other negative work aspects identified elsewhere in this report – long working hours and high levels of physical risk exposure (see Figure 10.8).

### Key determinants of work satisfaction

Various work-related factors impact on reported levels of satisfaction with working conditions. Long or non-standard working hours, high levels of work intensity, low levels of job control and exposure to physical or psychological risks (with the associated negative effects on health) all tend to be linked to lower levels of satisfaction. By contrast, greater autonomy over how work is carried out and greater intellectual demands (without excessive pressure or work intensity) tend to be associated with high levels of satisfaction with working conditions.

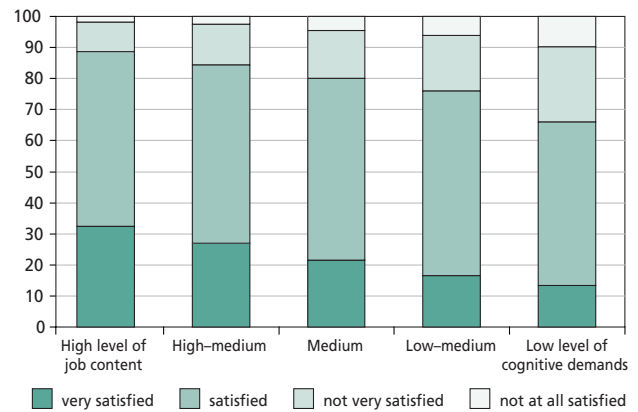
An important indicator of work satisfaction is the extent to which respondents consider that their health and safety are

**Figure 10.9: Satisfaction with working conditions, by extent of health outcomes (%)**



at risk or affected by their work. As Figure 10.9 shows, workers who report that their work affects their health and that their health and safety is at risk in their workplace are much more likely to be dissatisfied in their work than those who do not consider their health to be affected or at risk.

**Figure 10.10: Work satisfaction and cognitive demands (%)**



Note: The level of job content is a composite variable (Cronbach's alpha 0.64) based on the average scores for Q23c (job involves solving unforeseen problems on your own), Q23d (monotonous tasks – reverse coded), Q23e (complex tasks) and Q23f (learning new things).

Jobs that involve solving unforeseen problems, performing complex tasks and learning new things are associated with higher levels of work satisfaction (see Figure 10.10). In this case, level of job content may just be one of a number of contributing factors to greater work satisfaction. Jobs that make more sophisticated intellectual demands tend to be associated with higher educational qualifications and also with higher levels of pay, both of which independently correlate with greater work satisfaction.

# Income and payment systems 11

Although not directly related to conditions of work, pay is still a crucial element in understanding and explaining working conditions. The link between pay and work is obvious: the employment contract is an exchange of labour (and time) for money. Because pay is essentially a reward for work carried out, some sort of relationship between pay and working conditions can be expected.

In this sense, pay plays an indirect but very important role in the fourth *European Working Conditions Survey*. While the survey does not focus directly on labour income (there are other statistical sources specifically designed for this),<sup>1</sup> income is one of the most important secondary variables. In earlier chapters, income has been used for that purpose, as an independent or secondary variable. This chapter concentrates on what findings from the survey regarding income reveal about aspects such as the gender pay gap.

## Measuring pay in the survey

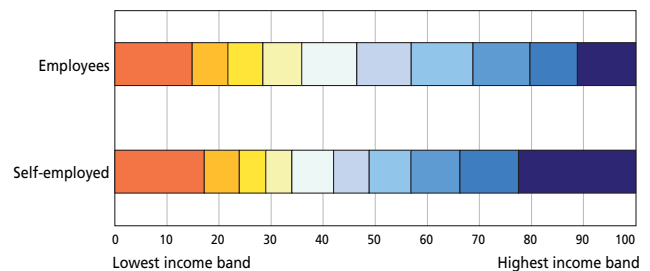
It is always difficult to collect information about pay, especially in international surveys. Very often (although not equally often in all countries) people are quite reluctant to declare their earnings; even if this reluctance can be overcome, the complexity and divergence of pay systems in different countries means that the problem of defining a common, comparable base remains. In order to take this into account, a new approach to measuring pay was introduced. In the fourth *European Working Conditions Survey*, pay was measured by asking the respondents to position their usual monthly earnings in their main paid job on a 10-point scale corresponding to the 10 income deciles in each country. Then they were asked about the components (fixed and variable) of their labour income, in order to take into account the variability of pay systems.<sup>2</sup>

In taking this approach, the intention is to have information on income which is both meaningful in the national context and easy to compare at the European level; moreover, this approach has the advantage of providing both relative and absolute information about the labour earnings of the respondent. Because the income bands used roughly correspond to the distribution of income broken down into 10 parts (deciles), the results should provide roughly comparable income groups: for example, someone positioned in the lower income band in Portugal would

have the same relative position in their labour market as someone positioned in the lower band in Ireland, despite differences in absolute income.

Figure 11.1 shows the proportion of respondents in each income band in the EU, differentiating for employees and the self-employed. Each of the income bands roughly corresponds to 10% of the respondents. However, income bands work much better for employees than for the self-employed whose earnings are much more difficult to measure: the self-employed show a much more polarised distribution of income than the employees, with more people both at the top and at the bottom end of the scale.

**Figure 11.1: Distribution of income, by employment type, EU27 (%)**



## Determinants of pay in the EU

Pay is generally used in this report as a secondary variable: the analysis shows how pay relates to other issues, such as working time or position in an organisation. However, it is also interesting to look at pay as the dependent variable and try to explain its determinants.

The measure does not study monthly pay directly: rather, the position of individuals in the wage structure of their country is analysed.<sup>3</sup> In order to simplify the interpretation of results, the income variable has been transformed from a 10-point to a 3-point scale. This means that respondents are classified according to whether they are in the bottom, middle or top third of the population in their country, in terms of the earnings received from their main paid job. The aim of this analysis is to explain what determines the probability (or risk) of falling in the bottom, middle or top third of the income scale.

<sup>1</sup> For example, the European Earnings Structure Survey, carried out by national statistical institutes under the umbrella of Eurostat.

<sup>2</sup> For a more detailed discussion about the methodology used for measuring earnings in the survey, see Annex 2. The methodology is further discussed in *Construction of income bands for the 4th European Working Conditions Survey*, available online at <http://www.eurofound.europa.eu/docs/ewco/4EWCS/4EWCSincomebands.pdf>

<sup>3</sup> The survey is more suited to studying income from a relative than from an absolute perspective (as explained in the previous section); in addition, a relative approach makes it easier to explore the determinants of income from a European perspective (relative positions are intrinsically comparable, whereas absolute pay is nationally-specific).

### Deriving the income variable and its determinants

In order to study the determinants of pay, a multivariate statistical model was used. This means that each variable is controlled by all the others so that the individual impact of each variable can be assessed. For instance, the gap between pay for men and women appears bigger than it actually is, a large proportion of the gap being due to the greater take-up of part-time work by women (who earn less because they work fewer hours). To properly examine the impact of one specific variable on pay, the effect of other variables such as part-time status has to be controlled for. This is done in Table 11.1, using a multinomial logistic regression model. The table includes two types of determinants: job-related and individual-related determinants.

**Table 11.1: The determinants of pay in EU27, employees only**

		Odds pay low/medium	Odds pay high/medium	
Job-related variables	Occupation	Senior managers	0.32 **	4.10 **
		Professionals	0.28 **	2.63 **
		Technicians	0.48 **	1.72 **
		Clerical workers	0.57 **	1.55 **
		Service and sales workers	0.78 **	1.42 **
		Skilled workers	0.64 **	1.10
		Machine operators	0.55 **	1.18
		Unskilled workers (ref.)	ref.	ref.
	Part-time	Part-time	5.90 **	0.67 **
		Full-time (ref.)	ref.	ref.
	Tenure	(years)	0.96 **	1.03 **
	Supervisory role	Not supervisor (ref.)	ref.	ref.
		Supervisor of fewer than 10 people	0.52 **	1.50 **
		Supervisor of more than 10 people	0.38 **	2.85 **
	Sector	Agriculture	1.69 **	1.20
		Manufacturing and utilities (ref.)	ref.	ref.
		Construction	0.44 **	1.02
		Retail and other services	1.05	0.98
		Transport and communication	0.70 **	1.21 *
		Real estate and financial intermediation	0.92	1.35 **
Public administration and defence		0.93	1.42 **	
Education and health		0.85	0.77 **	
Size of company	Micro enterprise (fewer than 10 employees.) (ref.)	ref.	ref.	
	Small enterprise (10–49 employees)	0.64 **	1.15 *	
	Medium enterprise (50–249 employees)	0.64 **	1.09	
	Large enterprise (250+ employees)	0.58 **	1.41 **	
Type of contract	Not indefinite-term	1.50 **	0.69 **	
	Indefinite-term (ref.)	ref.	ref.	
Individual characteristics	Sex	Female	2.55 **	0.43 **
		Male (ref.)	ref.	ref.
	Education	Primary or no education (ISCED 0–1) (ref.)	ref.	ref.
		Lower secondary education (ISCED 2)	0.94	1.40 *
		Upper secondary education (ISCED 3)	0.69 **	1.84 **
		Post-secondary (ISCED 4)	0.47 **	1.77 **
		Tertiary education (ISCED 5–6)	0.38 **	3.73 **

Note: \*significant at 5%; \*\* significant at 1%; Nagelkerke's pseudo  $r^2 = 0.46$

The interpretation of a multinomial logit model is not straightforward. Essentially, the coefficients in the table show how the variables in the table affect the odds that the individual falls into the low-pay or high-pay categories (with the middle category as a reference). To read the coefficients, each of them has to be compared with the reference category (indicated by ref.) For instance, the odds that a part-time worker falls into the bottom category are 5.9 times higher than the odds for a full-time worker doing so: this shows that part-time work is one of the main determinants for falling into the low-pay category in the EU. Coefficients below 1 indicate lower probabilities than the reference category: for instance, the odds that those with university education will fall into the lower income category are 0.38, compared to the odds for those with primary or no education (the reference category) doing so. The pseudo  $r^2$  statistic indicates that overall the model explains around half the variability of the dependent variable, and the asterisks indicate the statistical significance of each coefficient.

The statistical model (described in the text box opposite) shows that variables related to the type of job have the strongest impact on the relative position of the respondent in the income scale. The most important determinants are occupation and employment status. Occupation has a strong impact: managers and professionals have a much greater chance of being in the highest pay category and a much smaller chance of falling into the lowest category than the other occupations. By contrast, having a part-time job is likely to put a respondent into the lower pay category; it also means that they are very unlikely to make it into the top third of the income scale. Other variables with a substantial impact on pay are length of job tenure and supervisory role. The impacts of sector, company size and type of contract are less important, but still significant.

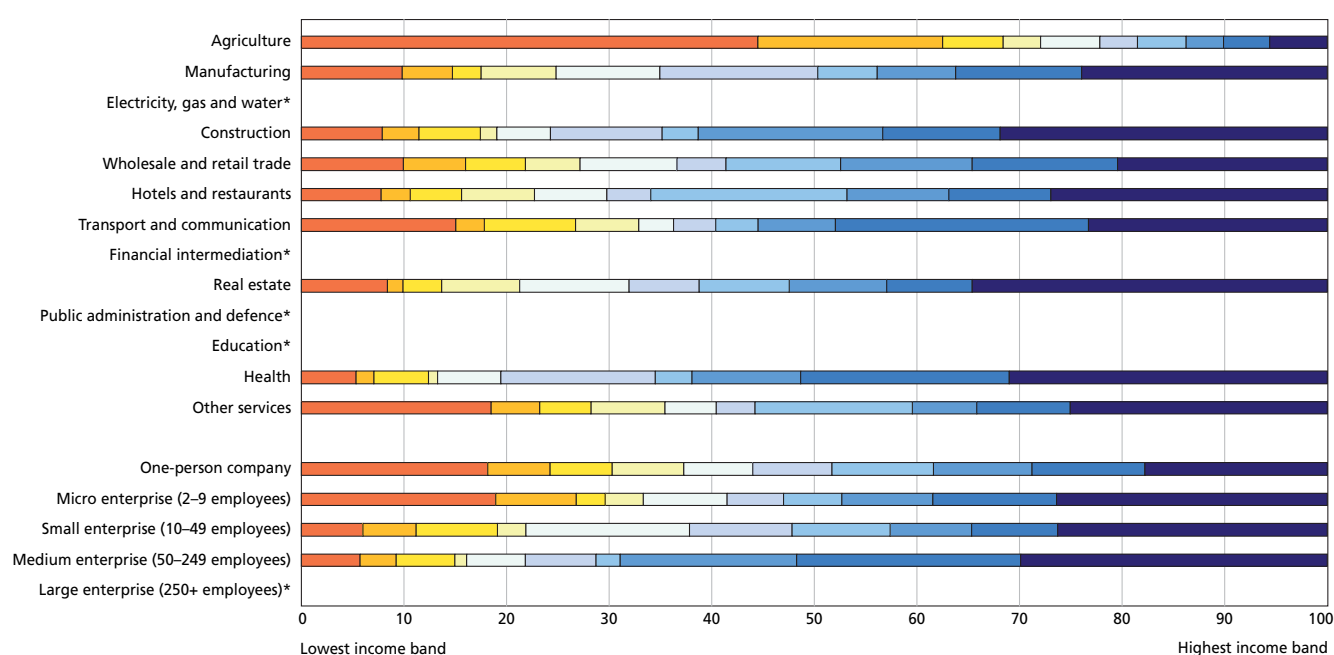
After job-related variables, coefficients related to sociodemographic variables are included. Age is not introduced in the model because it is already indirectly covered by years of tenure (so adding age does not increase the explanatory power of the model). It is interesting to note that the sex of the respondent still has a strong impact on the income position, even after controlling for all the other variables in the model. That means that a woman still has a significantly higher chance of falling into the lower income category and a significantly lower chance of falling into the high income category than does a man with a similar occupation, employment status, tenure, etc. This can be contrasted with previous analyses of the gender pay gap,

which are based on estimating the difference in absolute pay for two people who have exactly the same job but are of different sex. Such 'pay gaps' are usually smaller than the difference found in this model, which also includes the 'position gap', the dependent variable being a measure of the respondent's relative position in the income distribution of the country. The model is therefore very sensitive to the fact that women tend to have lower-paid jobs, even if those jobs have similar characteristics to those occupied by men.

The relationship between education and pay is indirect: a respondent's educational level affects their chances of having a particular occupation, which then determines pay. Having a university degree, however, is still one of the most important predictors for falling into the top third of the income scale.

All of the above analysis concerns employees only. For the self-employed, the measure of earnings is much less precise and reliable (see Figure 11.2). The survey therefore provides only information on the distribution of income for different sectors and sizes of establishment. This shows that the agricultural sector has a very different profile of self-employment than all the other sectors, with a much lower monthly income. Transport and other services also show lower-than-average pay. In contrast, it appears that those who are self-employed in manufacturing and in real estate are more likely to be in the top income levels. There is also a clear relationship between the size of establishment in

**Figure 11.2: Income levels of the self-employed, by sector and size of establishment, EU27 (%)**



\*Not enough data available



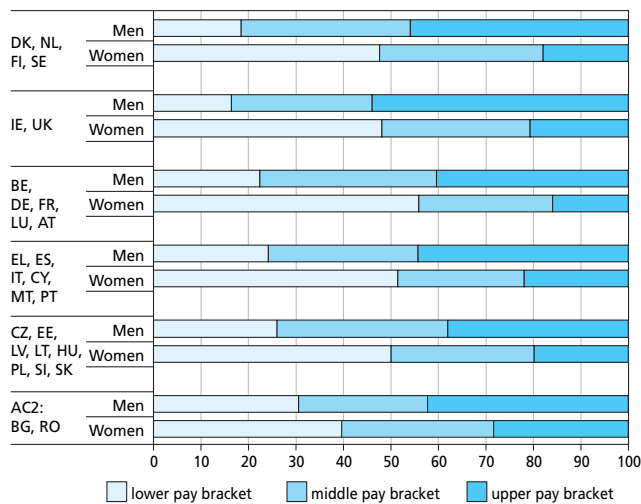
which a self-employed person works and their average monthly earnings: the bigger the establishment, the higher the earnings.

### Gender and pay

Analysing the differences between the relative pay of men and women in different country groups produces some striking results. Figure 11.3 shows the percentage of men and women in each of the three earnings groups (bottom, middle and top third of the scale). In all country groups (except for the acceding countries), around half of all women are positioned in the bottom third of the scale. In most cases only around 20% of men occupy this position, whereas they are clearly overrepresented in the top third of the scale. This is partly due to the fact that women are much more likely to work part time, and part-time workers (also included in the figure) are disproportionately represented in the bottom third of the pay scale.

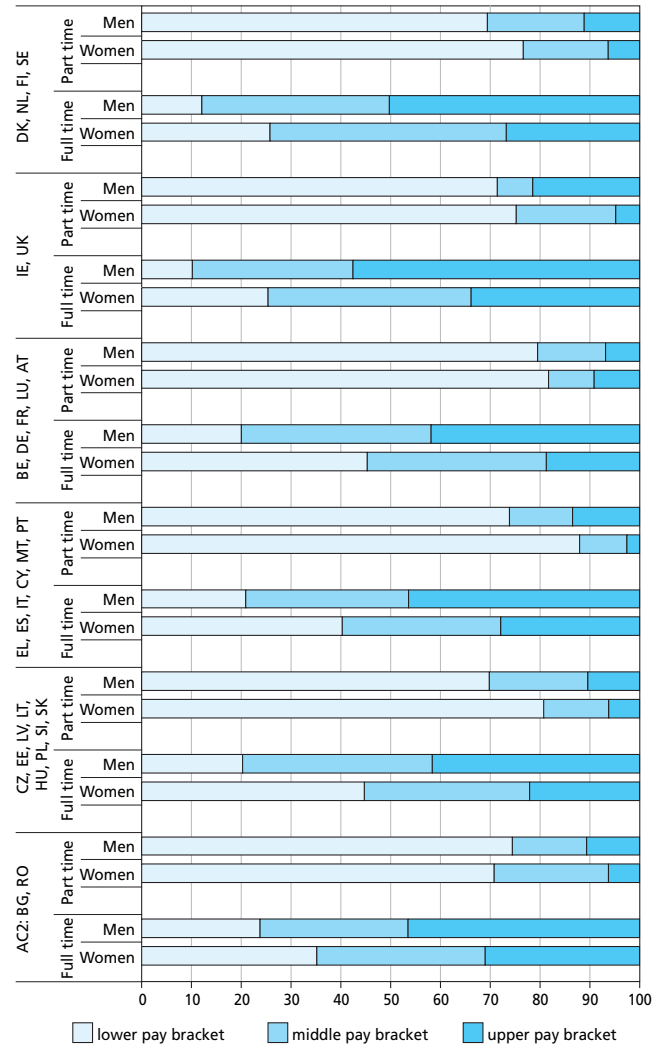
Figure 11.4 also shows findings for gender-related pay in different country groups: however, it differentiates between full-time and part-time status. It becomes clear that the position of women lower down the income scale is in part due to their higher take-up of part-time work: within part-time work, the differences in wages for male and female workers are relatively small. However, when full-time employment is studied, the wage gap between men and women is still very important, almost as big as the wage gap before part-time status was controlled for. For all country groups, women are particularly underrepresented in the top third of the income scale.

**Figure 11.3: Gender differences in pay, by country group (%)**



Note: Findings apply only to employees.

**Figure 11.4: Gender differences in pay, by full-time/part-time status, by country group (%)**

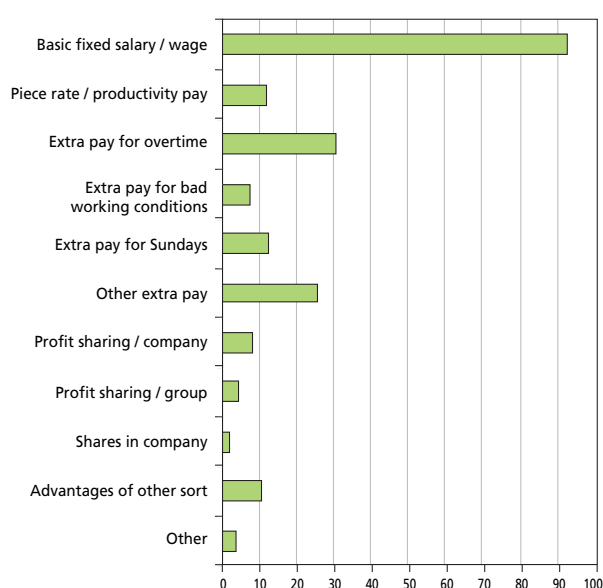


Note: Part-time status is controlled for. Findings apply only to employees.

### Components of pay

The fourth *European Working Conditions Survey* also provides an overview of the different pay systems in Europe, by analysing the findings concerning the different components of pay. This information derives from a question (Question EF6) that asks the respondents what elements are included in the remuneration of their main paid job: for example, basic fixed salary, piece rate or productivity payments, payment for overtime or Sunday work, compensation for poor/dangerous working conditions, payment from financial participation schemes, etc.

Figure 11.5 shows the overall results of this indicator, for EU27 employees. In the vast majority of cases (more than

**Figure 11.5: Components of pay, EU27 (%)**

Note: Findings apply to employees only.

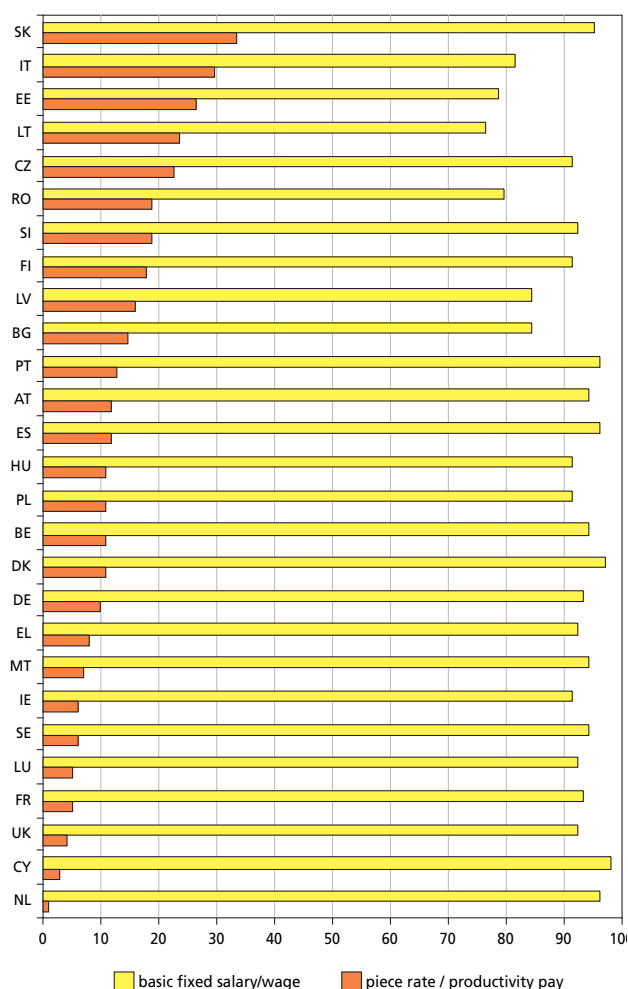
95%), there is a basic fixed component in pay. In more than half of the cases, however, employees' pay includes some variable component. The most common variable components of pay are also the most traditional: extra pay for overtime (which is an element of pay for roughly one third of employees) and other forms of extra pay. Piece rate/productivity payment is relatively uncommon in the EU27 as a whole: just around 12% of employees have such a pay component. Forms of employee participation in company profits or shares are even less common, not reaching 10% overall.

There are important differences between countries, as a look at the distribution of each variable in different countries shows. Figure 11.6 shows the prevalence of fixed-pay and variable pay components (piece rate or productivity pay). Again, the predominance of a fixed salary in all countries is clear: only in the Baltic States, Bulgaria and Romania does the proportion of employees without a fixed pay component approach 20%. As for piece rate or productivity components of pay, the variation between different countries is quite large: they are relatively common in most eastern European countries, but in most of the EU15 the proportion of workers with piece rate/productivity pay components is almost negligible. Only in Finland and Italy is it a significant component.

Figure 11.7 shows the distribution of different types of extra pay. Overtime pay is the most widely used extra component of pay, being paid to at least 20% of the employees in all countries, except Lithuania. It is particularly common in

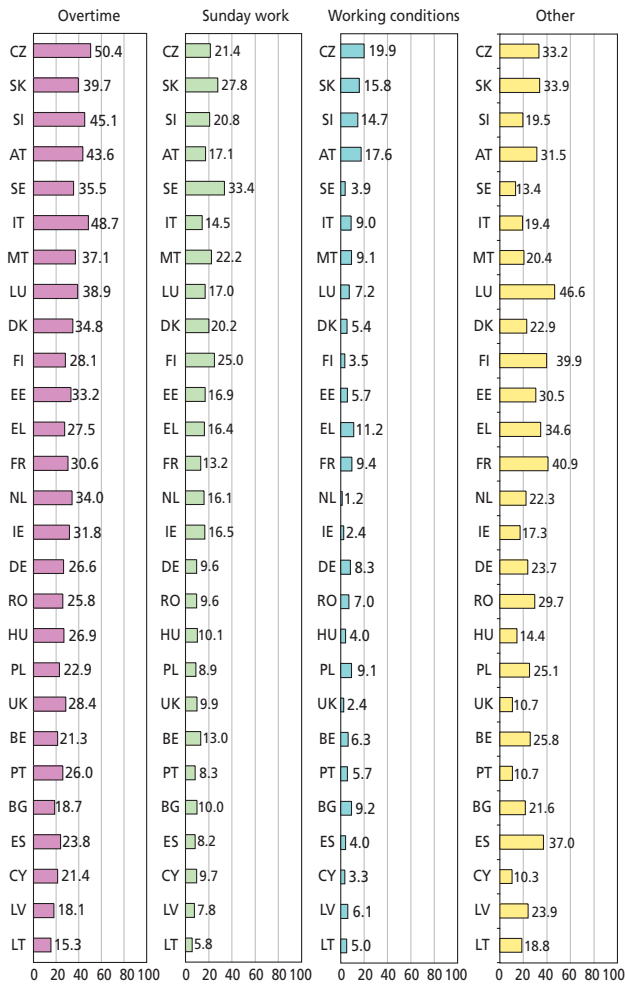
Austria, the Czech Republic, Italy and Slovenia. Extra pay for poor working conditions is relatively rare except in Austria, the Czech Republic, Slovakia and Slovenia. Finally, Finland, Slovakia and Sweden stand out in terms of extra pay for Sunday work. It is difficult to find a clear pattern in terms of the groups of countries making use of any particular type of extra pay; this probably reflects the fact that extra pay components are more directly determined by the economic sector in which the establishment operates than by national socio economic models.

Finally, Figure 11.8 shows the percentage of employees in different countries whose pay includes some form of participation in company profits or shares in their companies. Compared to the previous indicators, the percentages in this case are much lower. The most common form of financial participation is company profit-sharing, whereby employees share in the profits of the company in which they work. Profit-sharing is quite common in

**Figure 11.6: Fixed and piece rate/productivity pay, by country (%)**

Note: Findings apply to employees only.

Figure 11.7: Extra pay components, by country (%)



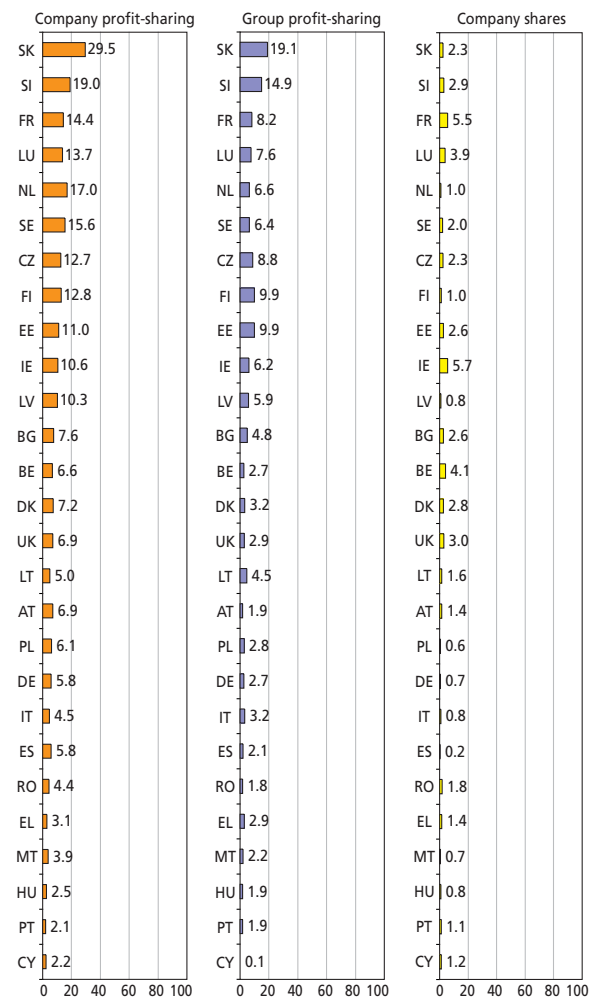
Note: Findings apply to employees only.

Slovakia (where almost 30% of employees are involved), and relatively common in France, Luxembourg, the Netherlands, Slovenia and Sweden. Company profit-sharing is very rare in most southern European countries and in Hungary and Romania. Group-profit sharing, in general, is less common, but the patterns are essentially the same as for company-profit sharing.

The other important form of financial participation is equity-sharing, which means that employees actually own part of the company. This form of financial participation is much rarer: only 5% of employees in France and Ireland engage in it. In Belgium, Bulgaria, Denmark, Estonia, Slovenia and the UK, around 3% of employees receive shares in their companies. In all other countries, the figure is even lower.

In general, the findings for financial participation from this survey are consistent with previous research carried out by the Foundation, with some qualifications.<sup>4</sup> This survey found the general levels of financial participation to be lower, but this probably reflects the fact that previous research was based on a sample of large companies only, in which financial participation is much more common; moreover, it surveyed companies, rather than individual workers (not necessarily all workers within a company will have access to financial participation systems, even if they exist). The results from the fourth *European Working Conditions Survey* indicate that financial participation is very rarely used as a component of pay in most European countries

Figure 11.8: Forms of employee participation in profits and shares (%)



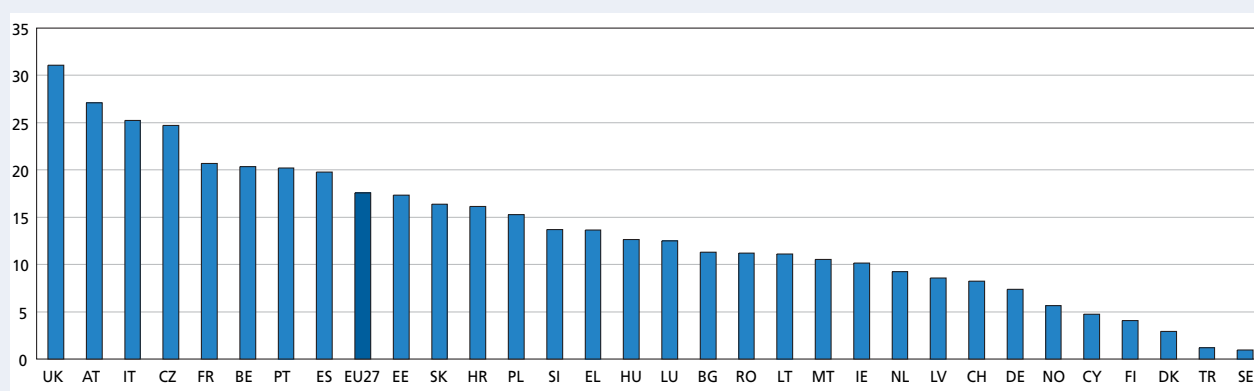
Note: Findings apply to employees only.

<sup>4</sup> See *Financial participation in the EU: Indicators for benchmarking*, available online at <http://www.eurofound.europa.eu/publications/htmlfiles/ef0480.htm>

### Non-response to the question on earnings

Normally the issue of non-response to a question is of interest only to methodologists; sometimes, however, the non-response can hide information that is as interesting as the results of the actual responses themselves. One of the best examples of this is non-response to the income question. Questions about income in surveys routinely have much lower response rates than any other question, as people tend to be reluctant to provide information about how much they earn. Interestingly, however, this does not hold true for all European countries: the percentage of people refusing to disclose their earnings varies more between countries than do many of the other variables studied in this report. Figure 11.9 shows the variation of non-response to the question on income in all the countries covered by the survey. In some countries (particularly Netherlands and the Scandinavian countries, but also Germany, Switzerland and Turkey), the level of non-response is almost negligible (around or below 5%). In other countries, however, more than one in four respondents is not willing to disclose their income (particularly in Austria, the Czech Republic, Italy and the UK).

**Figure 11.9: Non-response to question on earnings, by country (%)**



Occupation and employment status also makes a substantial difference to the level of non-response. On average, 16% of respondents did not answer this question; however, this rose to 24% in the case of senior managers and 21% for the self-employed. Men are slightly more reluctant to disclose their pay than are women (a non-response rate that is 4 percentage points higher) and older workers are considerably less keen on reporting their income than are younger workers (a difference of almost 10 percentage points). Sector does not appear to make any difference.

Understanding the conditions under which people work across the different EU Member States and other European countries is central to achieving improved quality of work, greater productivity and increased employment – the Lisbon objectives in the employment domain. The Foundation's *European Working Conditions Survey* presents the views of workers on a wide range of issues including work organisation, working time, equal opportunities, training, health and well-being and job satisfaction. With its five-year cycle, the survey represents an effective means of tracking over time the impact of crucial issues and events: EU enlargement, the ageing workforce and pressures associated with an ever-increasing pace of life.

In this, the fourth *European Working Conditions Survey*, the results show that despite the dramatic changes seen in Europe's workforce over the last five years, triggered by the accession of 10 new Member States, the increase in non-traditional forms of employment such as part-time and temporary work, and greater numbers of women entering the labour market, working conditions have remained relatively stable on average throughout the EU.

Overall, the findings highlight the fact that most European workers (over 80%) are satisfied with their working conditions and are happy with their work–life balance. Job satisfaction is largely associated with job security, a positive working atmosphere and good opportunities to learn and grow.

Feeding information on these issues of key importance into the debate at European and national level is a key element of the Foundation's activities. In an effort to do this effectively, the Foundation has, in recent years, focused its research and information activities in the area of working conditions and employment on four main policy areas: ensuring career and employment security; maintaining the health and well-being of workers; developing skills and competencies; and reconciling work–life balance. The main conclusions of the survey's findings are also presented in this way below.

## **Ensuring career and employment security**

The current policy objectives reinforce the key role that work plays in the lives of European citizens. Under this heading, the report looks at access and conditions of employment, status, salary and rights attached to work. Participation rates are high on the political agenda. Therefore, it is important to look at the issue of changing demographics. The survey results highlight the fact that with the gradual ageing of Europe's population, many European countries will lose around 15% of their workforce to retirement in the next 10 years. The substantial

proportions of workers (16%) in the 40–54 years and older age group indicates a significant ongoing policy challenge, particularly for Austria, Belgium, France, Germany and Luxembourg, the Netherlands and the Scandinavian countries. The results also underline the importance of improving and developing working conditions to enable older workers to remain in the workforce for as long as possible and to facilitate the career trajectory of younger workers.

The survey results also show that while women have increased their participation in the workforce, they still lag behind men: more women are moving into managerial roles but the gender pay gap still exists, with women still more likely than men to be found in the lower income groups. This highlights the continuing challenges to the equal opportunities objectives. In the EU27, more men than women are in employment and many sectors are still largely dominated by one sex. Women account for the majority of workers in health, education, other services, hotels and restaurants and the wholesale and retail trade. These four sectors employ more than half of all women in employment. Therefore it is clear that any changes in the working conditions in these sectors would have a considerable impact on the quality of work and employment for women.

In terms of pay differences, the survey reveals that occupation, gender and employment status (whether people work full or part time) are the most important determinants. Part-time workers, workers on temporary contracts, and workers in the agricultural sector are more likely to fall into the lower income categories, while senior officials, managers or professionals, and persons in a supervisory capacity are most likely to belong to the higher income categories.

## **Maintaining the health and well-being of workers**

In terms of health and well-being, the results show that a declining proportion (35%) of European workers considers their health and safety at risk because of their work, although workers in the NMS report significantly higher levels than those in the EU15. The most often reported health symptoms are musculoskeletal disorders (backache and muscular pains), followed by fatigue, stress, headaches and irritability. Other symptoms such as problems with eyesight, hearing and skin, and respiratory problems are all reported by fewer than 10% of workers. The people who report that their health is affected by work usually report between two and six symptoms.

The proportion of the European workforce employed in traditional, physically demanding sectors such as

manufacturing and agriculture is declining; however, the proportion of workers reporting repetitive hand or arm movements (the most commonly cited physical risk) has increased overall. Again, the gender differences are apparent, with women more exposed than men to some risks, and vice versa. Although the findings show that violence at work remains relatively limited, it is most common in sectors where women constitute the majority of the workforce.

Underlining the need for a better understanding of the role of work organisation in this area, the findings show that work intensity is clearly on the increase, with rising numbers working at high speed and to tight deadlines: one quarter of all workers reports having to work at very high speed all or nearly all of the time. Nevertheless workers' autonomy levels are high, although the results show that levels of autonomy are not increasing.

### Developing skills and competencies

Promoting and encouraging lifelong learning has become one of the EU's key policy objectives. It is also central to the life-course approach that looks at flexible working initiatives and corresponding social security arrangements as part of the flexicurity debate.

In terms of skills and training, the report shows that a majority of workers report that work is interesting and offers new opportunities to learn, although access to training has not improved. This is particularly the case for older and less qualified workers, highlighting a deficit in progress towards the life long learning objective.

The survey results also show that one of the most important changes in the workplace is the increasing use of information technology. Computer use has risen considerably across Europe and younger workers use computers twice as much as older workers. Around 26% of workers now work with computers all, or almost all, of the time; in 1990, the equivalent figure was around 13%. Moreover, people clearly link the use of the new technology

to better career prospects. However, a sizeable proportion of workers still never use internet or email.

Alongside these dimensions, it is important to highlight that the survey provides the possibility of assessing how work in itself is changing; it is becoming, possibly less rapidly than expected, more knowledge and technology based and is developing a stronger customer orientation.

### Reconciling work–life balance

With the objective of increasing women's participation in the workforce high on the agenda and against the backdrop of an ageing population, it is important to reflect on the duration, times and predictability of work with a view to ensuring a more positive work–life balance for both women and men. The findings show, however, that even women working part time work more hours in total than men working full time, taking into account other tasks related to caring, household duties, etc. Furthermore, the perceived increase in implementation of flexible working hours is not as widespread as it would appear: on the contrary, in most instances, working schedules are still fixed by companies and while part-time work is increasing, the proportion of workers with atypical schedules remains low.

A large majority of workers are satisfied with their work–life balance. Since 1991, there has been a steady reduction in the length of the EU working week – a trend that changed in 2005 following the accession of the NMS, where average working hours are longer. It is interesting to note that work–life balance is perceived most positively by those working regular and predictable schedules.

Placing the key findings of the fourth *European Working Conditions Survey* in this policy context again highlights the pertinence of this survey in charting the trends of working conditions and employment in an enlarged Europe over the last 15 years, to provide timely and comprehensive information for policymakers as they shape the future of working and, indeed, living conditions throughout Europe.

## Annex 1: Survey methodology

The *European Working Conditions Survey* (EWCS) is carried out by the European Foundation for the Improvement of Living and Working Conditions, an autonomous EU agency with a tripartite Governing Board based in Dublin. Gallup Europe was contracted by the Foundation to carry out the fieldwork of the EWCS 2005.

Between 19 September and 30 November 2005, the Foundation carried out its fourth *European Working Conditions Survey*. Almost 30,000 European workers were interviewed in 31 countries (all EU25 Member States plus Bulgaria, Croatia, Norway, Romania, Turkey and Switzerland), answering more than 100 items on a wide range of issues regarding their employment situation and working conditions. This provides a unique source of information on the conditions of work in different European countries and a source which is entirely comparable (the same questionnaire was used in all countries covered). It also allows for analysis of the current situation in the context of the last 15 years as this is the fourth time this survey has been conducted.

The previous surveys were carried out in 1991, 1995 and 2000 (including the candidate countries, now the new Member States, in 2001). The number of questions and issues covered has increased with each subsequent survey, but a core of key questions remained the same, in order to study trends in working conditions. The development of the survey reflects also the development of the EU itself: from covering only 12 countries in 1991, it covered 15 in 1995 and 2000 (extended to cover the 10 former candidate countries in 2001), to 25 EU countries plus four acceding and candidate countries and two members of the European Free Trade Association in 2005.

Preparation of the fourth survey included the review of the EWCS statistical production process and the design of a strict quality assurance framework relying on current best methods. The production process was examined, sub processes identified, actors' roles described, performance targets fixed and performance indicators selected and monitored. The quality assurance framework has guided the implementation of the fourth survey. Quality control was performed by internal and external agents. A minimum of 10% of interviews and 10% of routes have been checked in each country.

### Questionnaire design and translation process

The questionnaire, in common with previous editions of the EWCS, was developed in close cooperation with the expert questionnaire development group (see Annex 4). This group was composed of representatives of the national institutes that carry out this type of survey at national level, members of the tripartite Governing Board of the Foundation (employer associations, trade unions and governments), the European Commission and other EU bodies (Eurostat, the European Agency for Safety and Health at Work), international organisations (OECD, ILO), as well as leading European experts in the field of working conditions and survey methodology. While the priority was to retain trend questions in order to preserve and extend the time series, a certain number of new areas were identified where the survey's scope could be usefully extended (access to training, work engagement and commitment, job security, the collective dimension of work, the blurring boundaries of work and non-work life). New questions introduced were, where possible, based on existing questions already successfully used in other similar national surveys. In the case of certain background demographic variables, including highest completed education level, net monthly job income and household composition, more extensive question formulations were developed in order to create richer future analytical possibilities. Out of the 63 questions contained in the questionnaire, 31 are unchanged, 26 are modified and six are new.

The questionnaire was translated into 27 different languages, with nine of these used in more than one country. The translation process implemented for the survey was based on current good practice in the multilingual translation of international survey questionnaires: for trend questions, existing translations from previous surveys were retained except in a small number of cases where problems were identified and new revised translations introduced. For new and modified questions, the English master version was subject to parallel translation into the main target languages by independent translators familiar with survey research in the working conditions area. These parallel translations were merged into a final draft which was then translated back into English to identify and resolve remaining problems or ambiguities. The majority of the translations were also subject to final vetting by national experts from the expert development questionnaire group who assisted the Foundation in this task. In general, they rated positively the quality of the individual translations and in some cases proposed some important fine-tuning.

### Sampling design

The sample of the EWCS is representative of the persons in employment (employees and self-employed, according to the Eurostat definition) during the fieldwork period in each of the countries covered.<sup>1</sup>

In each country, the EWCS sample followed a multi-stage, stratified and clustered design with a ‘random walk’ procedure for the selection of the respondents at the last stage (except for Belgium, Netherlands, Sweden and Switzerland, where the selection of the respondents was made using a phone register). All interviews were conducted face-to-face in the respondent’s own household.

The sampling design had the following stages:

1. **Stratification of primary sampling units (PSUs) according to region and urbanisation level:** as is the usual practice in face-to-face surveys, the interviews to be conducted in each country were clustered in a number of PSUs (each of them corresponding to a ‘random walk’ starting address) which were allocated to geographic areas stratified by region<sup>2</sup> and urbanisation level.<sup>3</sup> That is to say, in each country a table of population by region and urbanisation level was created, and the PSUs were allocated to the cells according to the proportion of population in each cell.
2. **Random selection of starting addresses within each PSU:** within each stratum, each PSU was randomly assigned an address from which the ‘random walk’ would start.
3. **‘Random walk’ procedure for the selection of the household:** starting from the assigned address, the interviewer followed a strictly pre-defined procedure (‘random walk’) to select the households to contact for interviewing.<sup>4</sup> Once a household was selected, it could not be substituted even if there was nobody at home, until four attempts to contact the interviewer had been unsuccessful (at different times and days). The ‘random walks’ were scheduled at a time of the day when the

employees and self-employed were available (normally, in the evenings and weekends).

4. **Selection of the interviewee within the household:** once a successful contact was achieved, the interviewer had precise instructions to: first, identify how many employed persons (according to the Eurostat definition) inhabited the house; and second, whenever more than one person in employment was identified, the person whose birthday was the latest should be selected for the interview.

In Belgium, Netherlands, Sweden and Switzerland, a different procedure for the selection of the respondent was followed. Previous experiences of ‘random walk’ surveys had proven quite unsuccessful in these countries (with very low response rates), so it was decided to use phone directories to select the interviewees, randomly selecting

**Table A1: Number of interviews (after quality control)**

<b>Austria</b>	1009	<b>Luxembourg</b>	600
<b>Belgium</b>	1003	<b>Malta</b>	600
<b>Bulgaria</b>	1134	<b>Netherlands</b>	1025
<b>Cyprus</b>	600	<b>Poland</b>	1000
<b>Czech Republic</b>	1027	<b>Portugal</b>	1000
<b>Denmark</b>	1006	<b>Romania</b>	1053
<b>Estonia</b>	602	<b>Slovakia</b>	1024
<b>Finland</b>	1059	<b>Slovenia</b>	600
<b>France</b>	1083	<b>Spain</b>	1017
<b>Germany</b>	1018	<b>Sweden</b>	1059
<b>Greece</b>	1001	<b>United Kingdom</b>	1058
<b>Hungary</b>	1001		
<b>Ireland</b>	1009	<b>Croatia</b>	1011
<b>Italy</b>	1005	<b>Norway</b>	1000
<b>Latvia</b>	1003	<b>Switzerland</b>	1040
<b>Lithuania</b>	1017	<b>Turkey</b>	1015

<sup>1</sup> ‘Employed persons are persons aged 15 and over, who during the reference week performed work, even for just one hour per week, for pay, profit or family gain or were not at work but had a job or business from which they were temporarily absent because of, e.g., illness, holidays, industrial dispute and education or training’ (Eurostat, Labour Force Survey: Concepts, Definitions and Classifications, 2005).

<sup>2</sup> In principle, the definition of region was to follow the NUTS-2 European Standard definition. In practice, while this was the case in most countries, in some cases NUTS-1 was used, as NUTS-2 was too detailed and implied an unrealistic sampling stratification.

<sup>3</sup> Unfortunately, there is no homogeneous EU-comparable classification of urbanisation levels, so in each country the urbanisation category used for stratification is different (in most cases, based in the categories used in the national census). It was decided that it was better to stratify according to some urbanisation category even if it was not homogeneous, because it would lead to a better spread of the sample in the territory (within each region).

<sup>4</sup> Basically, this procedure stated that, starting from the assigned address, the interviewer should select each third building to the left; if there was more than one floor, to go to the third one; if there was more than one household in each floor, to select the third one starting from the left, etc. These strict and cumbersome rules ensure a properly random selection of the households to be contacted.



from numbers within the strata defined in stage 1.<sup>5</sup> This only affected the method for the selection of the interviewee (that is, Stages 2-5 of the sampling design), but not the *logic* for the selection of the interviewees (employed persons according to the Eurostat definition, randomly selected) or the mode of interviewing (which was exactly the same, face-to-face interviews in the household of the respondent). So the resulting interviews are entirely comparable.

The target number of interviews was 1,000 in all countries except Cyprus, Estonia, Luxembourg, Malta and Slovenia, in which it was 600. The number of interviews actually carried out in each country is summarised in Table A1. Paper-and-pencil interviews (PAPI) were used in all countries except in the Czech Republic, Denmark, Germany, the Netherlands and Slovakia, where interviews were collected using computer-assisted personal interviews (CAPI).

### Fieldwork outcome and response rates

The fieldwork was carried out from 17 September 2005 to 30 November, with different durations by country but an average of seven weeks. The total number of interviewers involved in the survey fieldwork was 2,745 who in total visited 72,300 households, out of which 29,766 interviews were actually carried out.

This means that more than 40,000 attempts at contacts or interviews were not possible or unsuccessful. In general, face-to-face surveys involving random walk tend to face considerable (and increasing) difficulties in reaching the respondent (not only because of refusals and no response, but because of more mundane problems like difficulties in accessing the building, empty households, etc). In the fourth *European Working Conditions Survey*, it is important to note an additional difficulty: once a successful contact was made, the interviewer still had to select eligible interviewees in the household according to a very strict definition (the Eurostat definition of persons in employment, which in some cases can be quite difficult to apply to real-life situations, especially in less standard-

industrial types of employment such as agricultural work, family business, etc.) which obviously increased the number of unsuccessful visits.<sup>6</sup>

Table A2 shows the achieved response rates in the fourth survey, calculated following the most widely accepted standard definitions.<sup>7</sup> The cooperation rate (coop3) is the proportion of completed interviews to all eligible units ever contacted.<sup>8</sup> This shows that overall, two thirds of the eligible respondents (that is, households in which there were employed persons according to the Eurostat definition) that were contacted did cooperate with the EWCS. The proportion is quite similar (and high) in all countries except for the cases in which phone screening procedures were applied, which had a much lower response rate (it is normally easier to refuse an interview by phone than at the door of your household).

The contact rate measures the proportion of all contacted households to all households eligible,<sup>9</sup> and it is around 0.8 in all countries, with very small variations from country to country except for the countries with phone screening which again have a lower rate. The refusal rate (ref2) measures the proportion of refusals to the total number of potentially eligible cases.

The response rate (rr3) is calculated as the proportion of completed interviews to the total number of eligible cases.<sup>10</sup> The overall response rate of the fourth survey is 0.48, which is a reasonable response rate for this type of survey. In most countries, the response rates are around this average of 0.5 or above, with eight countries below a 0.4 response rate (Belgium, Finland, Luxembourg, Netherlands, Poland, Slovenia, Switzerland and the United Kingdom). As discussed above, three of the countries in which phone screening was used for increasing response rates actually have the lowest response rates of the overall survey (Belgium, Netherlands and Switzerland), which indicates that the attempt at increasing response rates was disappointing (although it is not clear what the response rates would have been had the random route been retained even in these countries). The very low response rate in

<sup>5</sup> In some countries, the phone registers did not allow the selection of individual phone numbers according to the geographic location, so the households were matched to each of the strata after the first contact by phone.

<sup>6</sup> Overall, there were almost 19,000 successfully contacted households in which there were no employed persons at all.

<sup>7</sup> American Association for Public Opinion Research (2004), *Standard definitions: Final dispositions of case codes and outcome rates for surveys*, 3rd edition, Lenexa, Kansas.

<sup>8</sup> This 'cooperation rate' is very often reported as 'response rate', which is wrong according to the internationally agreed definitions. As we will see, the response rate is the proportion of completed interviews relative to all eligible cases (not only the cases actually contacted). The 'response rate' reported in the third *European Working Conditions Survey* was actually this 'cooperation rate'.

<sup>9</sup> The denominator includes in this case, apart from interviews (total and partial) and refusals, non-contacts, 'others', and an estimation of the number of potentially eligible cases from all cases in which the eligibility is unknown (an estimation which is based in the proportion of households with employed persons in the households actually contacted).

<sup>10</sup> The denominator of the formula is the same as in the contact rate.

Table A2: Response rates

	<i>cooperation rate</i>	<i>contact rate</i>	<i>refusal rate</i>	<i>response rate</i>		<i>cooperation rate</i>	<i>contact rate</i>	<i>refusal rate</i>	<i>response rate</i>
AAPOR code:	<i>coop3</i>	<i>con2</i>	<i>ref2</i>	<i>rr3</i>	AAPOR code:	<i>coop3</i>	<i>con2</i>	<i>ref2</i>	<i>rr3</i>
EWCS 2005	0.66	0.78	0.25	0.48					
F2F sampling, overall	0.69	0.80	0.23	0.51					
Telephone sampling overall	0.53	0.68	0.30	0.34	Malta	0.60	0.86	0.31	0.47
Austria	0.71	0.88	0.25	0.61	Netherlands	0.44	0.66	0.35	0.28
Belgium	0.50	0.72	0.34	0.34	Poland	0.53	0.69	0.31	0.35
Czech Republic	0.84	0.85	0.13	0.69	Portugal	0.73	0.95	0.24	0.67
Cyprus	0.88	0.75	0.08	0.57	Slovenia	0.52	0.77	0.34	0.37
Denmark	0.66	0.70	0.21	0.42	Slovakia	0.81	0.79	0.14	0.58
Estonia	0.72	0.83	0.20	0.54	Spain	0.68	0.97	0.31	0.66
Finland	0.63	0.68	0.21	0.35	Sweden	0.63	0.80	0.28	0.47
France	0.74	0.81	0.20	0.58	United Kingdom	0.48	0.77	0.36	0.34
Germany	0.88	0.76	0.08	0.61					
Greece	0.63	0.83	0.29	0.49	Bulgaria	0.75	0.91	0.21	0.65
Hungary	0.61	0.91	0.33	0.51	Croatia	0.61	0.77	0.29	0.45
Ireland	0.81	0.72	0.12	0.51	Romania	0.85	0.85	0.11	0.67
Italy	0.64	0.78	0.27	0.49	Turkey	0.88	0.78	0.09	0.64
Latvia	0.77	0.89	0.20	0.65					
Lithuania	0.83	0.84	0.13	0.64	Norway	0.74	0.81	0.20	0.57
Luxembourg	0.41	0.88	0.46	0.32	Switzerland	0.59	0.59	0.22	0.32

Luxembourg is a usual outcome of door-to-door surveys in this country. The three countries in which response rates are lower than expected are Poland, Slovenia and the United Kingdom.

## Weighting

In the fourth *European Working Conditions Survey*, three types of weighting have been applied to the data in order to enhance the representativity of results:

**1 Selection probability weighting:** the ‘random walk’ selects households and within households, respondents. This has the unintended consequence of giving more probability of selection to respondents living in smaller households (in a one-person household, the probability of being selected is 100%, whereas it falls to 50% in a two-person household, etc.). This has been corrected by applying selection probability weights.<sup>11</sup> In

order to have unbiased results, the data must always be weighted by this selection probability weight.<sup>12</sup>

**2 Non-response (or post-stratification) weighting:** different types of eligible respondents have different response rates, which can lead to biased estimations. The usual way to minimise this effect is to generate a weight that corrects the biased response rates for some key variables, so that the bias is minimised. Obviously, that requires knowing the real population figures for the variables used for producing these non-response weights: in this case, it was assumed that the figures of the European Labour Force Survey (LFS) are the real figures, to generate a weight that adjusts these results to the results of the LFS for the following variables: sex, age, region (NUTS-2), occupation (ISCO at 1 digit) and sector (NACE at 1 digit). The method followed to calculate these weights was the raking method, which carries out an iterative process of estimation of the

<sup>11</sup> Which simply means multiplying each case by the number of eligible persons (i.e. persons in employment) in the household.

<sup>12</sup> The variable holding this weight in the dataset is ‘w1’.

weights that would be required for each case in order to replicate with the survey data the marginals of the LFS in terms of the weighting variables. This weight incorporates the selection probability weight, and must be always used when trying to make unbiased point estimates.<sup>13</sup>

- 3 Cross-national weighting:** this final step in the weighting is applied in order to be able to do cross-national estimations. The weights of all respondents in each country are multiplied by the proportion that this country represents in the total employed population in the respective cross-national area. When trying to estimate values for cross-national areas, the corresponding cross-national weighting must be applied.<sup>14</sup>

### Limitations of the survey

The main objective of the fourth *European Working Conditions Survey* is to provide comparable information on the conditions of work and employment of employed persons in different EU countries. It is not aimed at studying the situation in each country in depth. The sampling design reflects these aims: with a sample of 1,000 interviews in each country, the survey is not the correct statistical source for making a detailed analysis of the working conditions of specific groups within specific EU countries. What it can provide is a reliable comparison of working conditions in different EU countries, and when using data aggregated at the EU or EU-region level, the survey can be used to carry out detailed analysis of working conditions according to different employment characteristics or sectors of activity. The survey is a unique source of information in providing strictly comparable data on working conditions at a European level, but for carrying out detailed analysis in one specific country, the reader should refer to the existing national working conditions surveys.<sup>15</sup>

On a more general level, it should be noted that EU averages often hide differences between countries and sectors, and different paths of evolution. When looking at the EU27 aggregates, the reader should bear in mind that five countries in Europe account for more than half of European workers and therefore strongly influence averages: Germany (17%), United Kingdom (14%), France (12%), Italy (11%) and Spain (9%). It is also important to be aware that since the last time the survey was performed (in 2000), the EU has enlarged by 12 new Member States. This

means that when considering differences between the last two waves, readers should remember that the average now reflects the inclusion of 12 new countries. The same goes for differences between 1990-91 and 1995, the period during which three new countries joined the European Union: Austria, Finland and Sweden.

The *European Working Conditions Survey* is a survey that captures the working conditions of European workers *as they are perceived and reported by them*. In some cases, the information captured in the survey is quite factual, so that the difference between perceived reality and reality can be assumed to be only minor (such as in reported working hours, or in employment status). In other cases, we are asking the respondent to subjectively evaluate their situation, so that the problem of perceived vs 'real' is simply irrelevant. But there are some cases in which this might be a real problem, such as those questions in which the respondent is asked to report on a 'factual' aspect of work which is very strongly affected by subjective evaluations: some examples of these are the questions about health outcomes of work, exposure to risks or the questions about work intensity. Of course, this is not necessarily a weakness, or a problem in itself: in most cases, it is the perceived reality that has social effects, not reality itself (if a worker perceives – correctly or not – that her job has a negative impact on her health, she may change jobs or take frequent sick leave). But it is important to have this qualification in mind when interpreting the results.

Finally, it is also important to be cautious when interpreting the results of an international survey: all international surveys based in pre-coded interviews suffer from the difficulties of translating the questions into different languages, cultures and contexts, which always involves a certain degree of misunderstanding. The EWCS is not an exception to this: although the economic structures in Europe are becoming more similar, and probably also the conceptualisations of work, we are still quite far from a homogeneous understanding of work throughout Europe. The understanding of concepts such as 'task' or 'harassment' varies considerably between cultures and yet in both cases they have been confronted with exactly the same questions. There are several ways in which the Foundation has tried to deal with this issue: firstly, by using already validated questions (tested in previous surveys) which are as factual as possible in their wording and scales; secondly, by trying to develop the best possible translation

<sup>13</sup> The non-response weighting is held in variable 'w4' in the dataset.

<sup>14</sup> There are various cross-national weights in the dataset, all starting by 'w5' and followed by the EU region covered.

<sup>15</sup> <http://www.eurofound.europa.eu/ewco/surveys/index.htm>.

process, taking into account not only linguistic issues, but also cultural and contextual ones;<sup>16</sup> and thirdly, by measuring complex phenomena (e.g. job intensity) using several different questions, so that it is possible to cross-check answers for (in)consistencies. But still, there are certainly some limitations in the comparability of some of

the most complex concepts studied in this survey. At the time of writing this report, a qualitative post-test on some of the dimensions covered in the survey was being carried out in five countries, in an effort to access some qualitative information on these difficulties of understanding of the questionnaire concepts in different countries.

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<sup>16</sup> For a detailed explanation of the questionnaire translation process in the survey, see: *Questionnaire translation process in the 4th European Working Conditions Survey*, <http://www.eurofound.europa.eu/docs/ewco/4EWCS/4EWCStranslationprocess.pdf>

## Annex 2: Calculation of income deciles

Giving the respondents a scale on which they can place themselves tends to produce higher response rates than enquiring directly about earnings. The problem facing international surveys, however, is how to make the scales meaningful in each country (by adapting them to the national pay levels) but also comparable internationally. The Foundation's approach to this issue in the fourth *European Working Conditions Survey* was to ensure that the national 10-point scales roughly matched the real distribution of earnings. Using Eurostat's European Earnings Structure Survey 2002, the earnings of each EU country were divided into 10 bands (called 'deciles', each representing 10% of the respondents), and ranked from low to high.

Table A3 shows, for instance, that the lowest 10% of wage earners in Denmark receives less than €2,018 in gross wages per month, the second 10% receives between €2,018 and €2,359 per month, etc., up to the highest 10% of wage earners, who earn more than €5,059 per month. This table was then adjusted to indicate net, rather than gross, earnings and the effects of inflation from 2002 to 2005 were included. Finally, some figures were rounded (to make them easier to read) and presented to the fieldwork institutes in each country for consultation. The resulting national income bands are shown in Table A4. In each country, the respondents were asked to indicate in which band their income lies.

**Table A3: Structure of Earnings Survey 2002 – gross monthly earnings in EUR (deciles)**

	D10	D20	D30	D40	D50	D60	D70	D80	D90
AT	1027	1230	1411	1576	1745	1935	2166	2500	3153
BE	1551	1735	1880	2013	2155	2318	2541	2901	3600
CY	730	886	1020	1168	1349	1557	1830	2242	2941
CZ	264	317	362	405	450	498	556	632	773
DE	1330	1706	1969	2182	2395	2628	2926	3375	4209
DK	2018	2359	2620	2875	3138	3415	3751	4219	5059
EE	140	191	234	283	332	392	473	588	831
ES	741	855	957	1071	1216	1406	1639	1951	2558
FI	1513	1683	1826	1971	2123	2300	2523	2837	3363
FR	1184	1360	1546	1756	2005	2333	2783	3458	4690
EL	631	720	802	895	1017	1189	1424	1753	2277
HU	206	225	259	300	342	387	439	514	649
IE	1151	1444	1694	1964	2244	2577	2976	3545	4333
IT	1145	1270	1386	1508	1648	1819	2042	2357	2921
LT	125	143	173	211	255	303	362	436	569
LU	1543	1817	2061	2300	2542	2828	3219	3779	4762
LV	103	103	120	139	172	224	291	386	573
NL	1350	1631	1895	2106	2309	2540	2863	3267	3972
MT	-	-	-	-	-	-	-	-	-
PL	259	322	378	433	493	561	645	761	988
PT	417	484	555	633	739	873	1061	1354	1781
SE	1747	1910	2039	2169	2308	2476	2707	3065	3835
SI	450	526	620	713	821	946	1096	1319	1770
SK	173	213	247	277	307	341	384	447	558
UK	1310	1549	1800	2069	2379	2762	3246	3869	4941

**Table A4: Bands for the income question in the fourth *European Working Conditions Survey***

	<i>Currency</i>	<i>D10</i>	<i>D20</i>	<i>D30</i>	<i>D40</i>	<i>D50</i>	<i>D60</i>	<i>D70</i>	<i>D80</i>	<i>D90</i>
AT	EUR	700	800	900	1000	1100	1200	1300	1400	1700
BE	EUR	850	900	950	1000	1050	1100	1150	1300	1600
CY	CYP	400	500	600	700	800	900	1000	1300	1700
CZ	CZK	7800	9500	10600	11700	12800	14400	15500	18200	21500
DE	EUR	800	1000	1100	1150	1250	1350	1500	1700	2000
DK	DKK	9000	10500	11500	12500	13500	14500	16000	18000	21000
EE	EEK	1750	2500	3000	3500	4250	5000	6000	7500	10000
ES	EUR	600	650	700	750	850	950	1100	1300	1700
FI	EUR	600	750	910	1020	1100	1200	1340	1520	1890
FR	EUR	800	900	950	1050	1200	1350	1600	2000	2500
EL	EUR	450	500	550	600	700	800	950	1150	1500
HU	HUF	50000	60000	75000	80000	100000	120000	140000	160000	200000
IE	EUR	1200	1350	1500	1650	1800	2050	2300	2600	3000
IT	EUR	600	750	850	900	1000	1100	1200	1350	1600
LT	LTL	430	500	600	700	800	900	1000	1300	1500
LU	EUR	1200	1400	1600	1800	2000	2200	2400	2800	3400
LV	LVL	80	100	120	140	180	220	260	300	400
NL	EUR	1050	1150	1250	1350	1450	1600	1800	2100	2500
MT	MTL	200	280	350	400	450	500	650	700	800
PL	PLZ	800	1000	1150	1300	1500	1700	2000	2400	3000
PT	EUR	300	350	400	450	550	650	750	900	1200
SE	SEK	11000	12000	13000	14000	15000	16000	17500	20000	25000
SI	SIT	80000	95000	110000	125000	140000	155000	175000	205000	260000
SK	SKK	6500	8000	9000	10000	11000	12500	14000	16500	20000
UK	GBP	900	950	1000	1100	1250	1400	1650	2000	2500
NO	NOK	225000	250000	270000	290000	310000	330000	360000	410000	440000
CH	CHF	1600	2800	3500	4100	4600	5000	5600	6500	8100
BG	BGN	100	130	150	160	180	200	230	270	360
HR	HRK	1500	2000	2500	3200	3800	4500	5500	6000	7000
RO	RON	320	360	400	440	540	650	700	860	1200
TR	TRL	200	350	450	550	650	800	1000	1500	2000

Source: Eurostat.

Note: results refer only to employees working in establishments with 10 or more employees. In the countries not covered in the European Earnings Structure Survey (MT, NO, CH, BG, HR, RO, TR), the national fieldwork institutes were asked to provide similarly constructed income bands. For more detailed information on the income tables, refer to <http://www.eurofound.eu.int/docs/ewco/4EWCS/4EWCSincomebands.pdf>

Background variables (EU27 aggregates)

Place of work and work organisation	Sex		Age								Sector: IACS: main codes							Occupation: 1st level ISCO codes							Type of employment						
	m	f	<=24		25-39		40-54		55+		Agric	Manuf	Units	Const	Retail	Hotel	Trans	Financ	Rt_est	Publhd	Educ	Health	Occupation: 1st level ISCO codes								
			<=24	25-39	40-54	55+	isco0	isco1	isco2	isco3													isco4	isco5	isco6	isco7	isco8	isco9	isco10	self	emp
Q10. Working at company / org. premises	69.8	76.5	75.5	74.2	72.3	67.6	49.4	82.5	67.4	81.1	75.5	80.3	82.4	81.2	76.9	78.2	75.2	80.2	73.3	47.0	61.0	67.4	61.0	77.7	55.1	76.6					
Q11. Working from home	9.5	6.8	5.7	8.7	8.7	8.7	8.7	6.1	5.9	9.1	14.8	19.2	14.8	19.2	14.8	19.2	14.8	19.2	14.8	19.2	14.8	19.2	14.8	19.2	14.8	19.2					
Q11b. Working directly with people who are not employees (eg. customers)	59.5	66.0	60.9	64.8	60.9	61.9	26.3	37.7	61.4	65.6	74.4	63.4	63.4	81.7	79.7	78.6	77.2	69.3	66.2	78.8	47.0	40.4	48.8	40.2	73.6						
Q11c. Working with computers	48.1	48.5	35.1	51.1	45.3	39.8	9.9	36.8	58.3	62.6	48.7	17.0	48.3	9.9	75.8	63.4	60.9	70.1	76.0	34.7	5.4	16.2	11.6	15.4	66.0						
Q11d. Using internet / email for work	34.5	38.0	23.5	41.9	36.0	30.9	7.5	26.4	47.9	25.1	30.7	15.0	36.0	81.6	68.8	52.8	47.8	37.3	60.9	66.1	56.3	59.9	25.0	3.4	10.6						
Q20a. A short repetitive task of <10m	23.8	25.8	25.8	23.3	20.6	26.4	28.2	19.9	32.7	26.5	37.7	28.5	37.7	17.2	17.2	20.6	17.2	21.9	25.7	24.3	30.6	30.8	28.7	24.0	23.9						
Q20b. A long repetitive task of <10m	37.4	41.0	46.9	37.7	38.4	31.7	38.0	42.9	41.7	49.1	41.7	49.1	41.7	49.1	41.7	49.1	41.7	49.1	41.7	49.1	41.7	49.1	41.7	49.1	41.7						
Q20c. Working to tight deadlines	62.4	56.1	67.3	61.1	58.9	50.3	61.2	65.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5						
Q20d. Pace of work dependent on numerical production / perform. targets	67.7	54.4	59.2	65.3	62.6	52.1	62.5	69.1	64.1	72.2	52.9	66.7	72.2	62.9	66.7	72.2	62.9	66.7	72.2	62.9	66.7	72.2	62.9	66.7	72.2						
Q20e. Pace of work dependent on colleagues	44.9	38.8	52.3	45.0	39.3	33.4	33.3	51.6	46.3	47.6	65.3	47.1	51.5	31.1	30.9	46.8	48.6	41.0	41.0	38.8	30.1	45.3	41.5	34.4	29.8						
Q20f. Pace of work dependent on customer demands	65.4	71.4	69.6	70.0	65.7	68.0	29.6	54.7	65.3	67.4	82.0	71.6	70.6	72.8	82.9	76.2	74.8	72.4	81.9	47.4	64.9	77.2	68.5	48.7	51.7						
Q20g. Pace of work dependent on automated equipment / machine	47.6	35.1	40.3	44.3	42.7	34.5	40.1	50.1	63.3	41.1	14.6	23.5	13.1	38.1	33.7	36.7	38.6	36.3	31.6	39.9	28.4	29.5	21.4	27.4	35.9						
Q20h. Pace of work dependent on an unforeseen task	31.3	34.4	28.1	36.0	32.0	29.5	21.8	29.0	39.0	31.4	34.1	34.6	25.2	40.0	37.5	35.6	30.9	47.4	38.4	31.7	38.6	33.0	20.8	28.2	16.7						
Q20i. Pace to interrupt a task in order to take on an unforeseen task	62.8	64.1	45.9	64.1	65.3	71.5	57.3	71.5	72.3	57.9	62.6	58.8	57.8	65.8	58.1	55.4	71.8	75.2	67.4	85.3	68.1	86.7	83.2	73.4	63.7						
Q20j. Can choose / change order of tasks	67.2	66.7	50.9	66.7	69.7	74.3	76.4	56.6	74.5	63.4	65.8	58.1	62.7	76.7	79.5	70.5	79.9	66.3	82.2	80.7	73.8	68.3	63.3	87.9	63.5						
Q20k. Can choose / change methods of work	69.1	69.3	57.4	70.2	69.5	76.4	83.8	60.8	82.9	65.5	66.7	57.8	62.7	86.8	62.7	67.6	79.5	66.3	82.2	80.7	73.8	68.3	63.3	87.9	63.5						
Q20l. Can get assistance from colleagues if asked	68.1	66.8	76.0	69.1	65.2	62.2	58.5	62.2	58.5	62.2	58.5	62.2	58.5	62.2	58.5	62.2	58.5	62.2	58.5	62.2	58.5	62.2	58.5	62.2	58.5						
Q20m. Can get assistance from supervisors / boss if asked	54.5	58.1	64.0	58.5	53.5	48.9	43.3	55.7	62.0	35.1	30.5	27.5	21.1	38.6	36.6	34.6	38.6	36.6	34.6	38.6	36.6	34.6	38.6	36.6	34.6						
Q20n. Can get external assistance if asked	32.7	30.5	26.8	32.7	32.0	31.2	26.4	34.4	41.9	21.6	26.6	33.4	24.6	29.5	21.1	28.7	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3						
Q20o. Has influence over choice of working partners	28.6	18.7	14.0	24.3	25.0	31.2	41.9	21.6	26.6	33.4	24.6	29.5	21.1	38.6	36.6	34.6	38.6	36.6	34.6	38.6	36.6	34.6	38.6	36.6	34.6						
Q20p. Can take break when wishes	47.5	41.0	32.5	43.8	45.3	56.0	65.3	38.5	57.4	46.9	43.1	37.0	46.8	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6						
Q20r. Has enough time to get the job done	68.8	70.6	71.6	68.6	68.9	72.8	75.1	70.4	72.6	64.3	70.5	70.6	65.6	61.0	69.5	70.3	65.8	65.3	67.9	66.9	71.2	71.6	67.1	69.1	69.5						
Q20s. Task rotation	44.5	42.6	49.9	46.3	42.0	35.4	35.8	46.4	48.6	44.7	42.5	40.8	44.7	42.5	40.8	44.7	42.5	40.8	44.7	42.5	40.8	44.7	42.5	40.8	44.7						
Q20t. teamwork	57.4	52.3	58.7	56.7	54.8	48.3	49.8	58.8	60.4	64.3	45.8	58.5	51.1	52.5	49.0	67.0	56.1	67.7	55.4	59.6	60.3	48.9	52.3	48.8	61.6						
Q20u. Immediate boss is a woman	9.4	42.0	25.4	24.9	23.1	26.9	10.6	13.6	11.8	11.8	11.8	11.8	11.8	26.2	14.9	25.5	20.8	24.3	27.1	28.9	32.3	27.8	35.3	15.0	7.4						

Job content and training	Sex		Age								Sector: IACS: main codes							Occupation: 1st level ISCO codes							Type of employment						
	m	f	<=24		25-39		40-54		55+		Agric	Manuf	Units	Const	Retail	Hotel	Trans	Financ	Rt_est	Publhd	Educ	Health	Occupation: 1st level ISCO codes								
			<=24	25-39	40-54	55+	isco0	isco1	isco2	isco3													isco4	isco5	isco6	isco7	isco8	isco9	isco10	self	emp
Q23a. Meeting precise quality standards?	77.6	69.9	71.8	75.6	75.0	70.0	63.2	84.4	86.0	84.4	86.0	84.4	86.0	84.4	86.0	84.4	86.0	84.4	86.0	84.4	86.0	84.4	86.0	84.4	86.0						
Q23b. Assessing quality of own work	73.3	69.8	59.6	73.8	73.5	71.6	66.0	74.0	81.1	78.2	87.7	82.0	78.3	77.3	84.7	88.9	79.7	83.6	78.2	75.2	78.2	75.2	84.1	80.8	76.9						
Q23c. Solving unforeseen problems	83.5	77.8	68.2	82.5	82.9	81.8	73.8	87.8	73.8	87.8	73.8	87.8	73.8	87.8	73.8	87.8	73.8	87.8	73.8	87.8	73.8	87.8	73.8	87.8	73.8						
Q23d. Monotonous tasks	41.8	44.3	51.0	43.3	41.8	38.1	54.2	49.1	42.8	49.1	41.8	49.0	45.7	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4						
Q23e. Complex tasks	64.2	53.4	46.4	62.9	61.3	55.6	50.9	60.8	79.1	69.8	46.4	37.6	70.0	68.3	61.6	68.3	61.6	68.3	61.6	68.3	61.6	68.3	61.6	68.3	61.6						
Q23f. Learning new things	70.0	67.8	68.0	73.7	67.7	62.0	58.0	67.1	83.6	59.4	68.0	62.7	58.7	53.6	59.5	85.4	76.3	77.8	84.4	83.0	77.5	89.6	83.7	71.5	61.3						
Q23g. Able to apply own ideas in work	60.2	56.5	39.9	57.6	63.0	67.2	66.6	50.4	57.9	60.0	56.2	58.0	62.2	62.2	58.0	62.2	58.0	62.2	58.0	62.2	58.0	62.2	58.0	62.2	58.0						
Q23h. Job skills match: need more training	12.7	13.6	16.4	15.6	11.5	7.6	9.1	12.3	14.9	12.7	10.1	5.7	9.0	15.4	14.8	16.3	19.8	19.6	13.1	22.3	18.3	13.9	9.7	8.9	12.2						
Q23i. Job skills match: correspond well	51.7	52.9	48.3	49.9	53.2	60.3	59.9	51.8	49.7	54.8	52.9	57.4	53.4	51.0	49.6	50.0	46.6	50.0	46.6	50.0	46.6	50.0	46.6	50.0	46.6						
Q23j. Job skills match: could cope with more demanding duties	35.6	33.5	35.2	34.6	35.2	34.0	35.0	35.9	38.3	32.5	37.0	36.9	37.6	32.8	35.1	33.5	30.8	29.4	31.9	31.7	35.1	34.8	36.7	33.3	34.4						
Q23k. Has undergone paid for training in previous 12 months	25.3	27.1	21.0	29.1	27.2	19.1	7.9	22.4	35.5	18.5	20.3	11.9	28.2	42.8	26.2	42.6	40.8	40.8	40.8	40.8	40.8	40.8	40.8	40.8	40.8						

Violence, harassment and discrimination	Sex		Age								Sector: IACS: main codes							Occupation: 1st level ISCO codes							Type of employment						
	m	f	<=24		25-39		40-54		55+		Agric	Manuf	Units	Const	Retail	Hotel	Trans	Financ	Rt_est	Publhd	Educ	Health	Occupation: 1st level ISCO codes								
			<=24	25-39	40-54	55+	isco0	isco1	isco2	isco3													isco4	isco5	isco6	isco7	isco8	isco9	isco10	self	emp
Q24a. Threats of physical violence	5.9	6.2	5.6	7.1	5.7	4.2	2.5	1.8	3.2	2.5	4.2	2.5	1.8	3.2	2.5	1.8	3.2	2.5	1.8	3.2	2.5	1.8	3.2	2.5							
Q24b. Physical violence from colleagues	1.7	2.0	2.0	2.1	1.8	1.0	1.2	1.1	1.9	1.0	0.7	1.3	1.8	0.0	0.5	3.4	3.7	6.1	1.5	1.8	3.0	1.0	2.5	1.4	1.3						
Q24c. Physical violence from other people	4.6	4.0	4.0	4.8	4.3	3.2	0.9	1.5	4.3	1.9	4.5	7.5	7.3	3.1	1.4	8.7	5.2	11.4	6.2	4.8	4.1	4.1	6.9	1.6	1.5						
Q24d. Bullying / harassment	4.3	6.1	5.8	5.1	5.1	4.3	3.1	4.1	5.6	3.0	5.9	8.5	6.9	2.7	3.1	5.3	6.6	8.7	4.0	5.8	5.2	6.0	3.7	4.5	5.8						
Q24e. Unwanted sexual attention	0.8	2.9	3.6	2.2	1.2	0.6	0.3	1.4	0.5	0.8	1.9	3.9	2.6	2.0	1.3	1.3	2.0	3.3	2.5	1.5	2.1	2.4	2.6	0.9	0.7						
Q24f. Age discrimination	2.5	2.8	2.8	5.4	1.9	2.0	4.4	1.9	2.1	1.7	2.1	3.4	3.1	2.6	2.6	2.5	2.6	3.3	3.0	2.9	2.3	3.6	3.7	2.2	2.7						

Physical work factors	Sex		Age								Sector: IACS: main codes							Occupation: 1st level ISCO codes							Type of employment						
	m	f	<=24		25-39		40-54		55+		Agric	Manuf	Units	Const	Retail	Hotel	Trans	Financ	Rt_est	Publhd	Educ	Health	Occupation: 1st level ISCO codes								
			<=24	25-39	40																										





Country data

Place of work and work organisation	Countries																			
	AE	AG	AL	AM	AN	AO	AR	AT	AU	BZ	BE	BG	BH	BR	CA	CH	CX	CY	DE	DK
q111: Working at company / org, premises	72.8	73.1	73.5	71.1	68.0	62.0	74.8	77.0	74.8	75.7	79.4	63.4	39.3	78.7	75.8	76.9	49.3	87.2	63.8	77.8
q112: Teleworking from home	8.5	14.7	7.1	8.4	7.0	5.5	3.9	5.2	13.7	7.8	7.8	3.6	3.1	14.0	14.2	10.1	2.1	2.0	8.5	11.6
q113: Working directly with people who are not employees (eg. customers)	62.4	64.1	66.3	51.5	34.7	28.6	63.4	41.0	53.2	72.0	60.8	38.0	63.0	63.0	63.0	63.0	58.5	65.1	66.2	50.5
q114: Working with computers	4.5	4.7	4.9	32.9	16.6	15.6	56.1	21.9	34.9	35.9	53.3	44.7	41.7	30.8	30.9	34.6	58.8	29.4	45.2	71.0
q115: Using internet / email for work	36.0	37.6	39.5	26.4	10.1	12.6	45.8	14.9	33.3	36.9	32.0	26.2	30.3	26.2	31.7	46.1	31.7	46.1	31.7	37.5
q20a: < 30min repetitive tasks of < 10m	24.7	24.6	26.2	15.6	8.4	6.8	18.6	27.4	18.7	23.1	30.9	24.9	18.5	24.2	24.6	17.4	31.7	26.7	12.2	21.5
q20b: > 30min repetitive tasks of < 10m	39.0	38.9	40.4	30.1	41.2	52.1	25.7	33.8	37.6	46.9	42.8	38.4	35.0	47.8	35.4	28.2	40.8	44.6	29.6	46.1
q20c: Working at very high speed	59.6	59.7	61.1	51.5	57.5	71.3	60.5	27.2	60.4	75.5	72.2	57.0	73.3	60.0	49.7	42.0	66.6	72.5	39.5	48.9
q20d: Working at light speed	61.8	61.9	62.4	59.1	59.9	68.9	61.2	53.6	71.2	68.8	70.9	59.6	68.4	55.1	54.3	57.3	59.2	68.8	51.0	58.5
q20e: Working at work dependent on colleagues	42.2	41.9	42.1	40.4	47.4	47.5	41.2	54.5	42.3	49.4	38.3	38.4	44.3	37.5	42.3	43.5	43.4	48.7	59.5	43.4
q20f: Pace of work dependent on direct demands from customers etc	66.0	69.0	71.0	57.2	52.9	48.7	51.5	70.3	73.0	68.9	62.1	72.3	69.2	73.4	69.5	72.0	74.4	56.7	55.5	64.1
q20g: Pace of work dependent on automated equipment / machine	18.8	18.7	18.5	19.4	20.3	28.1	19.0	17.3	23.2	14.6	19.5	24.3	18.2	14.1	11.4	19.9	16.8	21.1	23.3	14.7
q20h: Pace of work dependent on loss	32.7	35.3	34.0	42.3	42.7	31.0	32.6	32.6	32.6	19.8	31.5	33.2	42.4	38.7	35.5	34.4	25.1	53.1	47.0	44.6
q20i: Have to interrupt a task in order to take on an unforeseen task	65.4	63.6	64.0	61.1	60.3	74.1	72.7	57.7	58.0	84.8	52.4	65.1	58.7	60.0	72.0	71.3	60.4	53.4	63.2	57.2
q24a: Can choose / change order of tasks	66.9	67.4	66.2	62.8	59.0	80.4	76.3	54.1	56.4	80.7	70.6	70.8	59.6	54.5	67.9	69.5	71.4	81.0	82.8	73.3
q24b: Can choose / change speed of work	69.2	69.0	68.9	69.8	71.1	66.2	62.8	59.0	80.4	76.3	54.1	56.4	59.6	54.5	67.9	69.5	71.4	81.0	82.8	73.3
q25a: Can get assistance from colleagues if asked	67.6	67.1	65.5	76.6	74.5	40.7	67.3	77.1	87.4	64.9	83.9	61.0	70.1	50.8	82.8	71.8	85.7	68.4	71.6	79.9
q25b: Can get assistance from supervisors / bosses if asked	56.1	56.1	54.5	65.8	56.6	23.7	51.0	58.9	63.6	77.2	61.3	46.2	61.5	36.7	74.7	33.6	65.2	78.7	61.5	59.0
q25c: Can get external assistance if asked	31.6	32.0	30.6	40.1	25.7	10.7	28.8	26.5	49.1	55.9	29.5	34.7	25.6	33.8	16.3	47.7	14.3	22.4	42.3	44.9
q25d: Has influence over choice of working partners	24.2	23.7	23.5	24.6	33.2	41.3	29.0	24.8	20.2	36.4	17.9	23.6	35.5	24.2	23.4	28.6	20.3	30.8	28.8	21.4
q25e: Can take break whenever	44.6	44.4	44.7	43.2	47.0	56.5	47.4	24.4	35.5	57.7	26.6	50.3	50.0	39.7	52.2	56.6	47.8	44.1	53.1	33.4
q25f: Able to apply own ideas in work	69.1	69.8	70.2	67.3	58.0	66.2	74.4	57.8	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1
q27: Job/skills match need more training	13.1	13.3	13.0	14.9	10.0	14.3	11.0	5.5	12.2	13.8	21.8	20.1	14.1	7.6	10.5	8.8	14.3	7.5	14.5	21.8
q27: Job/skills match correspond well	52.3	52.5	52.2	54.3	48.3	50.2	60.7	63.6	55.8	52.9	50.6	48.3	46.5	57.2	48.0	47.4	57.9	51.1	54.6	48.4
q27: Job/skills match could cope with more demanding duties	34.6	34.2	34.8	30.9	47.1	35.5	28.2	30.9	33.3	27.1	31.7	39.5	35.2	45.6	43.8	27.8	41.4	30.9	32.1	37.4
q28a: 1 - Has undergone paid-for training in previous 12 months	26.1	27.1	27.3	25.6	10.2	6.7	40.5	7.6	26.6	36.3	25.3	29.8	13.1	18.9	24.4	37.3	16.9	19.5	22.0	22.7

Job content and training	Countries																			
	AE	AG	AL	AM	AN	AO	AR	AT	AU	BZ	BE	BG	BH	BR	CA	CH	CX	CY	DE	DK
q23a: Meeting precise quality standards	74.2	74.7	75.0	72.8	66.2	76.1	73.3	60.4	69.3	79.4	71.4	67.3	58.2	74.2	76.1	72.8	76.8	66.1	71.5	58.6
q23b: Assessing quality of own work	71.8	72.6	72.9	70.5	58.8	80.0	69.3	55.7	73.9	88.7	64.8	88.7	78.5	64.2	83.0	74.0	77.0	64.5	83.9	73.6
q23c: Solving unforeseen problems	80.8	81.3	81.4	80.8	73.2	77.8	72.6	80.1	93.2	77.4	85.2	75.0	79.6	86.0	73.9	88.6	79.6	71.7	68.7	84.4
q23d: Monotonous tasks	42.9	43.0	41.9	49.0	41.9	63.8	31.4	58.1	55.6	43.8	28.5	36.6	40.8	46.3	39.5	44.1	39.6	52.4	42.7	48.2
q23e: Complex tasks	59.4	59.5	59.0	62.4	57.1	47.4	52.3	66.2	67.7	74.6	71.6	62.3	57.0	63.9	57.2	59.2	58.2	58.2	58.2	58.2
q25f: Learning new things	69.1	69.8	70.2	67.3	58.0	66.2	74.4	57.8	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1
q27: Job/skills match need more training	13.1	13.3	13.0	14.9	10.0	14.3	11.0	5.5	12.2	13.8	21.8	20.1	14.1	7.6	10.5	8.8	14.3	7.5	14.5	21.8
q27: Job/skills match correspond well	52.3	52.5	52.2	54.3	48.3	50.2	60.7	63.6	55.8	52.9	50.6	48.3	46.5	57.2	48.0	47.4	57.9	51.1	54.6	48.4
q27: Job/skills match could cope with more demanding duties	34.6	34.2	34.8	30.9	47.1	35.5	28.2	30.9	33.3	27.1	31.7	39.5	35.2	45.6	43.8	27.8	41.4	30.9	32.1	37.4
q28a: 1 - Has undergone paid-for training in previous 12 months	26.1	27.1	27.3	25.6	10.2	6.7	40.5	7.6	26.6	36.3	25.3	29.8	13.1	18.9	24.4	37.3	16.9	19.5	22.0	22.7

Violence, harassment and discrimination	Countries																			
	AE	AG	AL	AM	AN	AO	AR	AT	AU	BZ	BE	BG	BH	BR	CA	CH	CX	CY	DE	DK
q29a: Threats of physical violence	6.0	6.1	6.3	5.2	3.7	4.4	8.3	2.9	5.5	5.0	4.5	6.6	4.5	4.7	6.9	7.9	1.4	2.2	4.3	4.7
q29b: Physical violence from colleagues	1.8	1.9	2.1	0.8	1.2	2.5	3.4	0.7	0.9	1.6	1.0	2.8	3.2	0.8	0.8	0.4	1.0	1.8	0.4	1.0
q29c: Physical violence from other people	4.3	4.4	4.6	3.5	3.1	3.6	5.2	1.7	3.5	2.4	3.5	4.5	2.5	3.7	7.1	5.6	1.0	1.7	5.1	2.7
q29d: Bullying / harassment	5.1	5.1	5.4	3.8	4.0	5.2	8.5	1.8	2.9	7.3	4.1	6.5	9.2	2.8	7.7	9.0	2.3	3.0	8.0	12.0
q29e: Unwanted sexual attention	1.8	1.8	1.7	2.2	1.4	2.4	1.9	1.1	4.8	2.8	1.1	2.2	2.0	0.7	1.5	2.2	0.9	0.8	1.1	2.8
q29f: Age discrimination	2.7	2.7	2.6	3.2	2.7	2.6	3.2	1.6	5.7	2.0	2.9	2.3	4.2	4.0	2.4	4.4	2.6	2.6	4.8	3.7

Physical work factors	Countries																			
	AE	AG	AL	AM	AN	AO	AR	AT	AU	BZ	BE	BG	BH	BR	CA	CH	CX	CY	DE	DK
q10a: Vibrations	24.2	24.2	23.1	25.4	25.7	17.8	24.8	25.4	33.3	30.0	32.9	38.4	34.9	31.0	31.9	25.7	23.9	25.3	37.4	40.0
q10b: Noise	30.1	30.2	28.7	38.8	28.0	29.1	25.2	39.3	30.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
q10c: High temperatures	24.9	23.9	23.4	26.4	41.1	36.0	29.9	29.1	22.5	20.5	23.7	14.0	14.6	18.9	36.7	18.9	17.7	21.7	23.1	26.6
q10d: Low temperatures	22.0	21.1	20.4	25.5	36.1	39.3	16.4	28.6	21.3	19.9	18.3	20.1	39.0	28.6	23.9	15.3	13.6	32.7	30.6	21.7
q10e: Breathing in smoke, fumes, powder or dust etc	19.1	18.6	17.6	24.6	27.7	38.0	15.0	23.3	23.9	13.2	19.3	27.5	27.3	20.1	19.9	14.2	15.6	17.9	27.9	26.3
q10f: Breathing in vapours such as solvents and thinners	11.2	11.2	10.9	13.0	11.9	9.4	8.8	14.1	16.6	4.5	13.8	12.3	11.3	14.7	13.5	6.3	9.1	9.1	12.3	15.5
q10g: Radiation	4.6	4.6	4.6	4.7	4.6	4.7	4.6	4.7	4.6	4.7	4.6	4.7	4.6	4.7	4.6	4.7	4.6	4.7	4.6	4.7
q10h: Tobacco smoke from other people	20.1	19.9	19.7	20.9	22.4	28.8	18.6	14.4	20.4	27.5	25.6	27.2	37.2	28.2	19.9	5.8	9.1	19.0	28.9	17.2
q10i: Infectious materials	9.2	8.9	9.0	8.0	15.6	9.6	10.0	7.6	9.1	10.5	8.7	11.5	9.4	9.9	9.2	3.7	5.6	11.3	13.1	9.8
q10j: Lifting or pulling positions	45.5	44.7	44.4	46.4	57.7	68.0	39.4	45.9	30.0	33.5	46.4	50.9	66.2	42.8	52.8	31.6	48.9	59.6	48.5	47.2
q10k: Carrying or moving heavy loads	8.1	8.1	8.1	4.8	9.4	6.5	10.7	3.6	8.6	6.0	6.9	5.0	5.7	12.4	10.9	9.0	3.9	5.9	4.5	5.9
q10l: Crawling or moving heavy loads	35.0	34.5	33.9	38.0	42.8	50.2	30.6	36.0	31.2	29.8	31.3	39.7	41.3	40.7	39.2	32.1	28.5	29.0	41.4	25.6
q10m: Repetitive hand or arm movements	72.6	72.6	72.9	71.0	76.8	79.1	71.0	59.6	73.5	73.8	75.0	72.8	74.9	72.0	74.1	80.4	64.7	70.5	70.2	59.1
q10n: Repetitive hand or arm movements	62.3	61.5	61.5	61.5	74.9	78.8	52.4	67.6	66.6	61.2	56.9	65.4	76.8	64.5	60.7	51.5	64.6	64.5	59.1	69.3
q10o: Wearing personal protective clothing or equipment	34.0	33.6	32.0	42.8	39.6	19.3	28.7	26.6	47.9	25.9	34.7	38.1	18.5	31.2	27.8	42.5	32.3	47.4	40.8	39.3



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## Household data

---

(NEW)

**HH1. I'd like to start by asking you a few questions about your household. Including yourself, can you please tell me how many people live in this household?**

Number of people living in household:.....

--	--

99 - Refusal (spontaneous)

(NEW)

**HH2.**

INTERVIEWER: NOW OBTAIN INFORMATION THAT YOU NEED TO ENTER ON HOUSEHOLD GRID ON NEXT PAGE, STARTING WITH THE RESPONDENT

- a. (INTERVIEWER.: CODE GENDER OF RESPONDENT IN GRID BELOW)
- b. Starting with yourself, how old are you?
- c. (INTERVIEWER.: SKIP FOR RESPONDENT)

SHOW CARD D

- d. What is your principal economic status?

(NEW)

**HH3.**

INTERVIEWER: FOR SECOND HOUSEHOLD MEMBER, START WITH THE OLDEST MEMBER OF THE HOUSEHOLD. REPEAT GRID QUESTIONS A-D FOR ALL OTHER HOUSEHOLD MEMBERS.

**Now thinking about the other members of your household, starting with the oldest ...**

- a. Could you tell me whether this is a male or a female?
- b. How old is he/she?

SHOW CARD C

- c. What is this person's relationship to you? Is he/she your ...?

SHOW CARD D

- d. And what is this person's principal economic status?

**HOUSEHOLD GRID**

		<b>A</b>		<b>B</b>	<b>C</b>	<b>D</b>
		INTERVIEWER: Code for respondent		Age	Relationship to respondent	Principal economic status?
		Male	Female		Code from list below	Code from list below
1	Respondent	1	2	.....		01 02 03 04 05 06 07 08 09 10 88 99
2	Person 2	1	2	.....	01 02 03 04 05 06 07 08 88 99	01 02 03 04 05 06 07 08 09 10 88 99
3	Person 3	1	2	.....	01 02 03 04 05 06 07 08 88 99	01 02 03 04 05 06 07 08 09 10 88 99
4	Person 4	1	2	.....	01 02 03 04 05 06 07 08 88 99	01 02 03 04 05 06 07 08 09 10 88 99
5	Person 5	1	2	.....	01 02 03 04 05 06 07 08 88 99	01 02 03 04 05 06 07 08 09 10 88 99
6	Person 6	1	2	.....	01 02 03 04 05 06 07 08 88 99	01 02 03 04 05 06 07 08 09 10 88 99
7	Person 7	1	2	.....	01 02 03 04 05 06 07 08 88 99	01 02 03 04 05 06 07 08 09 10 88 99
8	Person 8	1	2	.....	01 02 03 04 05 06 07 08 88 99	01 02 03 04 05 06 07 08 09 10 88 99
9	Person 9	1	2	.....	01 02 03 04 05 06 07 08 88 99	01 02 03 04 05 06 07 08 09 10 88 99
10	Person 10	1	2	.....	01 02 03 04 05 06 07 08 88 99	01 02 03 04 05 06 07 08 09 10 88 99

888 - DK/No opinion (spontaneous)  
999 - Refusal (spontaneous)

RELATIONSHIP CODES [CARD C]	ECONOMIC STATUS CODES [CARD D]:
01 - spouse/partner 02 - son/daughter 03 - parent, step-parent or parent in law 04 - daughter or son in law 05 - grandchild 06 - brother/sister (incl. half and step siblings) 07 - other relative 08 - other non relative  88 - DK/No opinion (spontaneous) 99 - Refusal (spontaneous)	01 - at work as employee or employer/self-employed 02 - at work, on child-care leave or other leave 03 - at work as relative assisting on family farm or business * 04 - unemployed less than 12 months 05 - unemployed 12 months or more 06 - unable to work due to long-term illness or disability 07 - retired 08 - full time homemaker/ responsible for ordinary shopping and looking after the home 09 - in education (at school, university, etc.) / student 10 -other  88 - DK/No opinion (spontaneous) 99 - Refusal (spontaneous)  * If paid a formal wage or salary for work in family farm or business, code as 1 ('at work as employee')



## Main questionnaire

(MODIFIED)

**Q1A Are you a citizen of ...(country where the survey is being carried out)?**

1 - Yes ----- > **GO TO Q2A**

2 - No ----- > **CONTINUE WITH Q1B.**

8 - DK/no opinion (spontaneous) ----- > **GO TO Q2A**

9 - Refusal (spontaneous) ----- > **GO TO Q2A**

(MODIFIED)

**Q1B Are you a citizen of ...?**

1 - Another EU member state [IN NON-EU COUNTRIES: An EU member state]

2 - One of the EU candidate countries (i.e. Romania, Bulgaria, Turkey, Croatia)

3 - Another country \_\_\_\_\_

8 - DK/no opinion (spontaneous)

9 - Refusal (spontaneous)

(TREND)

**Q2A What is the title of your main paid job? By main paid job, we mean the one where you spend most hours.**

INTERVIEWER.: ASK AND WRITE IN FULL DETAILS - PROBE FOR AS MUCH INFORMATION AS POSSIBLE WITH VIEW TO OBTAINING ACCURATE 2-DIGIT ISCO CLASSIFICATION

.....

.....

88 - DK/no opinion (spontaneous)

99 - Refusal (spontaneous)

(TREND)

**Q2B How old were you when you stopped full-time education?**

Age: .....

77 - if still studying

99 - Refusal (spontaneous)

(NEW)

**Q2C How many years have you been in paid employment since the age at which you stopped full-time education?**

Number of years:.....

77 - if still a full time-student

99 - Refusal (spontaneous)

(TREND)

**Q2D How many years have you been in your company or organisation?**

Number of years:.....

--	--

- 00 - if less than 1 year
- 77 – not applicable
- 88 - DK/no opinion (spontaneous)
- 99 - Refusal (spontaneous)

(TREND)

**Q3A Are you mainly ... ?**

SHOW CARD Q3A - READ OUT - ONE ANSWER ONLY!

- 1 - Self-employed without employees ----- > **GO TO Q4**
- 2 - Self-employed with employees ----- > **GO TO Q4**
- 3 - Employed----- > **CONTINUE WITH Q3B**
- 4 - Other ----- > **GO TO Q4**
- 8 - DK/no opinion (spontaneous) ----- > **GO TO Q4**
- 9 - Refusal (spontaneous) ----- > **GO TO Q4**

--

(MODIFIED)

**Q3B What kind of employment contract do you have?**

SHOW CARD Q3B - READ OUT - ONE ANSWER ONLY!

- 1 - An indefinite contract ----- > **GO TO Q4**
- 2 - A fixed term contract----- > **CONTINUE WITH Q3C**
- 3 - A temporary employment agency contract ----- > **GO TO Q4**
- 4 - An apprenticeship or other training scheme ----- > **GO TO Q4**
- 5 - No contract ----- > **GO TO Q4**
- 6 - Other (spontaneous) ----- > **GO TO Q4**
- 8 - DK/no opinion (spontaneous) ----- > **GO TO Q4**
- 9 - Refusal (spontaneous) ----- > **GO TO Q4**

--

(TREND)

**Q3C What is the exact duration of the contract in number of years and months?**

INTERVIEWER.: IF LESS THAN 1 YEAR, CODE '00' IN BOX 'YEARS' AND ENTER THE NUMBER OF MONTHS IN BOX 'MONTHS' - IF "DK/NO OPINION", CODE '88' IN BOTH BOXES. IF THE FIXED-TERM CONTRACT DOES NOT HAVE AN EXACT DURATION CODE '77' IN BOTH BOXES

Number of years:.....

--	--

- 00 - if less than 1 year
- 77 – no exact duration
- 88 - DK/no opinion (spontaneous)
- 99 - Refusal (spontaneous)

Number of months:.....

--	--

- 77 - no exact duration
- 88 - DK/no opinion (spontaneous)
- 99 - Refusal (spontaneous)

(TREND)

**Q4 What is the main activity of the company or organisation where you work ?**

INTERVIEWER.: ASK AND WRITE IN FULL DETAILS - PROBE FOR AS MUCH INFORMATION AS POSSIBLE!

--	--

- .....
- 
- 88 - DK/no opinion (spontaneous)
  - 99 - Refusal (spontaneous)

(MODIFIED TREND) (EF2000)

**Q5 Are you working in the ...?**

- 1 - private sector
  - 2 - public sector
  - 3 - joint private-public organisation or company
  - 4 - non-for-profit sector, NGO
  - 5 - other
- 
- 8 - DK/no opinion (spontaneous)
  - 9 - Refusal (spontaneous)

--

(TREND)

SHOW CARD Q6

**Q6. How many people in total work in the local unit of the establishment where you work?**

- 01 - 1 (interviewee works alone)
  - 02 - 2-4
  - 03 - 5-9
  - 04 - 10-49
  - 05 - 50-99
  - 06 - 100-249
  - 07 - 250-499
  - 08 - 500 and over
- 
- 88 - DK/no opinion (spontaneous)
  - 99 - Refusal (spontaneous)

--	--

(TREND)

**Q7 How many people work under your supervision, for whom pay increases, bonuses or promotion depend directly on you?**

- ..... Number of people: \_\_\_\_\_
- 0000 - none
  - 8888- DK/no opinion (spontaneous)
  - 9999 - Refusal (spontaneous)

--	--	--	--

(TREND)

**Q8a How many hours do you usually work per week in your main paid job?**

INTERVIEWER: EXCLUDING LUNCH BREAK AND EXCLUDING TIME SPENT TRAVELLING TO AND FROM WORK - IF 30 MINUTES OR MORE, ROUND UP TO NEXT HOUR

Number of hours per week:.....

--	--	--

888 - DK/no opinion (spontaneous)

999 - Refusal (spontaneous)

(NEW)

**Q8B How many days per week do you usually work in your main paid job?**

Number of days per week:.....

--

8 - DK/no opinion (spontaneous)

9 - Refusal (spontaneous)

(MODIFIED)

**Q9A Besides your main paid job, do you have any other paid job(s)?**  
(IF YES) Is it / are they...?

SHOW CARD Q9A - READ OUT - ONE ANSWER ONLY!

1 - No other paid job ----- > **GO TO Q10**

2 - Yes, regular ----- > **CONTINUE WITH Q9B**

3 - Yes, occasional ----- > **GO TO Q10**

4 - Yes, seasonal ----- > **GO TO Q10**

5 - Other (spontaneous) ----- > **GO TO Q10**

8 - DK/no opinion (spontaneous) ----- > **GO TO Q10**

9 - Refusal (spontaneous) ----- > **GO TO Q10**

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(MODIFIED)

**Q9B How many hours a week on average do you work in job(s) other than your main paid job?**

INTERVIEWER.: IF 30 MINUTES OR MORE, ROUND UP TO THE NEXT HOUR

Number of hours:.....

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888 - DK/no opinion (spontaneous)

999 - Refusal (spontaneous)

(MODIFIED)

**Q10 Please tell me, using the following scale, are you exposed at work to ...?**

SHOW CARD Q10 WITH SCALE - ONE ANSWER ONLY PER LINE!

“R”	READ OUT –ROTATE – MARK IN COLUMN “R” WHERE YOU START ASKING WITH AN “X” MARK	All of the time	Almost all of the time	Around $\frac{3}{4}$ of the time	Around half of the time	Around $\frac{1}{4}$ of the time	Almost never	Never	DK	Ref.
	A - Vibrations from hand tools, machinery, etc.	1	2	3	4	5	6	7	8	9
	B - Noise so loud that you would have to raise your voice to talk to people	1	2	3	4	5	6	7	8	9
	C - High temperatures which make you perspire even when not working	1	2	3	4	5	6	7	8	9
	D - Low temperatures whether indoors or outdoors	1	2	3	4	5	6	7	8	9
	E - Breathing in smoke, fumes (such as welding or exhaust fumes), powder or dust (such as wood dust or mineral dust) etc. (MODIFIED)	1	2	3	4	5	6	7	8	9
	F - Breathing in vapours such as solvents and thinners (NEW)	1	2	3	4	5	6	7	8	9
	G - Handling or being in skin contact with chemical products or substances (MODIFIED)	1	2	3	4	5	6	7	8	9
	H - Radiation such as X rays, radioactive radiation, welding light, laser beams	1	2	3	4	5	6	7	8	9
	I - Tobacco smoke from other people (NEW)	1	2	3	4	5	6	7	8	9
	J - Handling or being in direct contact with materials which can be infectious, such as waste, bodily fluids, laboratory materials, etc (NEW)	1	2	3	4	5	6	7	8	9

(MODIFIED)

**Q11 Please tell me, using the same scale, does your main paid job involve ...?**

SHOW SAME CARD (Q10) WITH SCALE - ONE ANSWER ONLY PER LINE!

“R”	READ OUT –ROTATE – MARK IN COLUMN “R” WHERE YOU START ASKING WITH AN “X” MARK	All of the time	Almost all of the time	Around ¾ of the time	Around half of the time	Around ¼ of the time	Almost never	Never	DK	Ref.
	A - Tiring or painful positions	1	2	3	4	5	6	7	8	9
	B - Lifting or moving people (NEW)	1	2	3	4	5	6	7	8	9
	C - Carrying or moving heavy loads	1	2	3	4	5	6	7	8	9
	D - Standing or walking (NEW)	1	2	3	4	5	6	7	8	9
	E - Repetitive hand or arm movements	1	2	3	4	5	6	7	8	9
	F - Working at company / organisation premise	1	2	3	4	5	6	7	8	9
	G - Teleworking from home with a PC	1	2	3	4	5	6	7	8	9
	H - Working at home, excluding telework	1	2	3	4	5	6	7	8	9
	I - Working in places other than home or company/ organisation premises, e.g. client’s premises, on the road	1	2	3	4	5	6	7	8	9
	J - Dealing directly with people who are not employees at your workplace such as customers, passengers, pupils, patients, etc.	1	2	3	4	5	6	7	8	9
	K - Working with computers: PCs, network, mainframe	1	2	3	4	5	6	7	8	9
	L – Using internet / email for professional purposes (NEW)	1	2	3	4	5	6	7	8	9
	M - Wearing personal protective clothing or equipment	1	2	3	4	5	6	7	8	9

(MODIFIED)

**Q12 Regarding the health and safety risks related to performance of your job, how well informed would you say you are?**

- 1 - Very well informed
- 2 - Well informed
- 3 - Not very well informed
- 4 - Not at all well informed
- 7 - Not applicable (spontaneous)
- 8 - DK/no opinion (spontaneous)
- 9 - Refusal (spontaneous)

(TREND)

**Q13 In total, how many minutes per day do you normally spend travelling from home to work and back?**

Number minutes per day:.....

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888 - DK/no opinion (spontaneous)

999 - Refusal (spontaneous)

(TREND)

**Q14A Normally, how many times a month do you work at night, for at least 2 hours between 10.00 pm and 05.00 am?**

Number of nights per month:.....

--	--

00 - never

88 - DK/no opinion (spontaneous)

99 - Refusal (spontaneous)

(TREND)

**Q14B And how many times a month do you work in the evening, for at least 2 hours between 6.00 pm and 10.00 pm?**

Number of evenings per month:.....

--	--

00 - never

88 - DK/no opinion (spontaneous)

99 - Refusal (spontaneous)

(TREND)

**Q14C And how many times a month do you work on Sundays?**

Number of Sundays per month:.....

--	--

00 - never

88 - DK/no opinion (spontaneous)

99 - Refusal (spontaneous)

(TREND)

**Q14D And how many times a month do you work on Saturdays?**

Number of Saturdays per month:.....

--	--

00 - never

88 - DK/no opinion (spontaneous)

99 - Refusal (spontaneous)

(TREND)

**Q14E And how many times a month do you work more than 10 hours a day?**

Number of times the person works more than 10 hours a day:.....

--	--

00 - never

88 - DK/no opinion (spontaneous)

99 - Refusal (spontaneous)

(MODIFIED)

**Q15A Do you work part-time or full-time?**

- 1 - Part-time ----- > CONTINUE WITH Q15B
- 2 - Full-time ----- > GO TO Q16A
- 9 - Refusal (spontaneous) ----- > GO TO Q16A

(MODIFIED)

**Q15B Would you like to work...?**

- 1 - Full-time
- 2 - More hours but not full-time
- 3 - The same number of hours
- 4 - Less hours
- 8 - DK/no opinion (spontaneous)
- 9 - Refusal (spontaneous)

(MODIFIED)

**Q16A Do you work...?**

READ OUT	Yes	No	DK	Refusal
A - The same number of hours every day	1	2	8	9
B - The same number of days every week	1	2	8	9
C - Fixed starting and finishing times	1	2	8	9
D - Shifts	1	2	8	9



IF Q16A\_D "SHIFTS"=1 "YES" GO TO Q16B, ALL OTHERS GO TO Q17A

(MODIFIED)

**Q16B Do you work...?**

SHOW CARD Q16B - READ OUT - ONE ANSWER ONLY!

- 1 - daily split shifts (with a break of at least 4 hours in between)
- 2 - permanent shifts (morning, afternoon or night)
- 3 - alternating / rotating shifts
- 4 - Other (spontaneous)
- 8 - DK/no opinion (spontaneous)
- 9 - Refusal (spontaneous)



(MODIFIED)

**Q17A How are your working time arrangements set?**

SHOW CARD Q17A - READ OUT - ONE ANSWER ONLY!

- 1 - They are set by the company / organisation  
with no possibility for changes ----- > CONTINUE WITH Q17B
- 2 - You can choose between several fixed working  
schedules determined by the company/ organisation ----- > CONTINUE WITH Q17B
- 3 - You can adapt your working  
hours within certain limits (eg. flexitime) ----- > GO TO Q18
- 4 - Your working hours are entirely determined by yourself ----- > GO TO Q18
- 8 - DK/no opinion (spontaneous) ----- > GO TO Q18
- 9 - Refusal (spontaneous) ----- > GO TO Q18

(MODIFIED TREND)

**Q17B Do changes to your work schedule occur regularly? (IF YES) How long before are you informed about these changes?**

SHOW CARD Q17B - READ OUT - ONE ANSWER ONLY!

- 1 - No
- 2 - Yes, the same day
- 3 - Yes, the day before
- 4 - Yes, several days in advance
- 5 - Yes, several weeks in advance
- 6 - Other (spontaneous)
- 8 - DK/no opinion (spontaneous)
- 9 - Refusal (spontaneous)

(TREND)

**Q18 In general, do your working hours fit in with your family or social commitments outside work very well, well, not very well or not at all well?**

- 1 - Very well
- 2 - Well
- 3 - Not very well
- 4 - Not at all well
- 8 - DK/no opinion (spontaneous)
- 9 - Refusal (spontaneous)

(NEW)

**Q19 In the past twelve months, have you been contacted, e.g. by email or telephone, in matters concerning your main paid job outside your normal working hours?**

SHOW CARD Q19 - READ OUT - ONE ANSWER ONLY!

- 1 - Every day
- 2 - At least once a week
- 3 - A couple of times a month
- 4 - Less often
- 5 - Never
- 8 - DK/no opinion (spontaneous)
- 9 - Refusal (spontaneous)

(MODIFIED)

**Q20A Please tell me, does your job involve short repetitive tasks of less than...?**

INTERVIEWER: IF NECESSARY, SPECIFY THAT WE MEAN TASKS AND NOT MOVEMENTS SUCH AS CLICKING THE MOUSE BUTTON!

READ OUT	Yes	No	DK	Refusal
A - 1 minute	1	2	8	9
B- 10 minutes	1	2	8	9

(TREND)

**Q20B And, does your job involve ...?**

SHOW CARD Q20B WITH SCALE -ONE ANSWER ONLY PER LINE!

"R"	READ OUT –ROTATE – MARK IN COLUMN "R" WHERE YOU START ASKING WITH AN "X" MARK	All of the time	Almost all of the time	Around ¾ of the time	Around half of the time	Around ¼ of the time	Almost never	Never	DK	Refusal
	A - working at very high speed	1	2	3	4	5	6	7	8	9
	B- working to tight deadlines	1	2	3	4	5	6	7	8	9

(TREND MODIFIED, C to include 'or performance')

**Q21 On the whole, is your pace of work dependent, or not, on...?**

READ OUT	Yes	No	DK	Refusal
A - the work done by colleagues	1	2	8	9
B - direct demands from people such as customers, passengers, pupils, patients, etc.	1	2	8	9
C - numerical production targets or performance targets	1	2	8	9
D - automatic speed of a machine or movement of a product	1	2	8	9
E - the direct control of your boss	1	2	8	9

(TREND)

**Q22A How often do you have to interrupt a task you are doing in order to take on an unforeseen task?**

SHOW CARD Q22A - READ OUT - ONE ANSWER ONLY!

- 1 - Very often ----- > **CONTINUE WITH Q22B**
- 2 - Fairly often ----- > **CONTINUE WITH Q22B**
- 3 - Occasionally ----- > **CONTINUE WITH Q22B**
- 4 - Never ----- > **GO TO Q23**
- 8 - DK/no opinion (spontaneous) ----- > **GO TO Q23**
- 9 - Refusal (spontaneous) ----- > **GO TO Q23**



(TREND)

**Q22B For your work, are these interruptions...**

SHOW CARD Q22B - READ OUT - ONE ANSWER ONLY!

- 1 - Disruptive
  - 2 - Without consequences
  - 3 - Positive
- 
- 7 - Not relevant (spontaneous)
  - 8 - DK/no opinion (spontaneous)
  - 9 - Refusal (spontaneous)

(TREND)

**Q23 Generally, does your main paid job involve, or not ...?**

READ OUT	Yes	No	DK	Refusal
A - meeting precise quality standards	1	2	8	9
B - assessing yourself the quality of your own work	1	2	8	9
C - solving unforeseen problems on your own	1	2	8	9
D - monotonous tasks	1	2	8	9
E - complex tasks	1	2	8	9
F - learning new things	1	2	8	9

(TREND)

**Q24 Are you able, or not, to choose or change...?**

READ OUT	Yes	No	DK	Refusal
A - your order of tasks	1	2	8	9
B - your methods of work	1	2	8	9
C - your speed or rate of work	1	2	8	9

(MODIFIED)

**Q25 For each of the following statements, please select the response which best describes your work situation.**

SHOW CARD Q25 WITH SCALE - ONE ANSWER ONLY PER LINE!

READ OUT	Almost always	Often	Sometimes	Rarely	Almost never	DK	Refusal
A - You can get assistance from colleagues if you ask for it	1	2	3	4	5	8	9
B - You can get assistance from your superiors / boss if you ask for it (MODIFIED)	1	2	3	4	5	8	9
C - You can get external assistance if you ask for it (MODIFIED)	1	2	3	4	5	8	9
D - You have influence over the choice of your working partners	1	2	3	4	5	8	9
E - You can take your break when you wish	1	2	3	4	5	8	9
F - You have enough time to get the job done	1	2	3	4	5	8	9
G - You are free to decide when to take holidays or days off	1	2	3	4	5	8	9
H - At work, you have the opportunity to do what you do best (NEW)	1	2	3	4	5	8	9
I - Your job gives you the feeling of work well done (NEW)	1	2	3	4	5	8	9
J - You are able to apply your own ideas in your work (NEW)	1	2	3	4	5	8	9
K - You have the feeling of doing useful work (NEW)	1	2	3	4	5	8	9
L - You find your job intellectually demanding (NEW)	1	2	3	4	5	8	9
M - You find your job emotionally demanding (NEW)	1	2	3	4	5	8	9

(MODIFIED)

**Q26A Does your job involve rotating tasks between yourself and colleagues?**

1 – Yes ----- > **CONTINUE WITH Q26A.1.**

2 - No ----- > **GO TO Q26B**

8 - DK/no opinion (spontaneous) -- > **GO TO Q26B**

9 - Refusal (spontaneous) ----- > **GO TO Q26B**

(NEW)

**26A.1 Do the tasks require different skills?**

1 - Yes

2 - No

8 - DK/no opinion (spontaneous)

9 - Refusal (spontaneous)

(NEW)

**26A.2 Who decides the division of the tasks?**

READ OUT	Yes	No	DK	Refusal
A - Your boss / manager	1	2	8	9
B - Decided by people who are rotating tasks	1	2	8	9

(MODIFIED)

**Q26.B Does your job involve doing all or part of your work in a team?**

1 - Yes ----- &gt; CONTINUE WITH Q26.B1.

2 - No ----- &gt; GO TO Q27

8 - DK/no opinion (spontaneous) ----- &gt; GO TO Q27

9 - Refusal (spontaneous) ----- &gt; GO TO Q27

(NEW)

**Q26B.1 Do the members of the team decide by themselves...?**

READ OUT	Yes	No	DK	Refusal
A - ...on the division of tasks	1	2	8	9
B - ... who will be head of the team	1	2	8	9

(MODIFIED)

**Q27 Which of the following alternatives would best describe your skills in your own work?**

SHOW CARD Q27 - READ OUT - ONE ANSWER ONLY!

1 - I need further training to cope well with my duties

2 - My duties correspond well with my present skills

3 - I have the skills to cope with more demanding duties

8 - DK/no opinion (spontaneous)

9 - Refusal (spontaneous)

(MODIFIED)

**Q28 Over the past 12 months, have you undergone any of the following types of training to improve your skills or not?**

READ OUT	Yes	No	DK	Refusal	IF YES, indicate total number of days... 888 - DK 999 - Refusal
A - Training paid for or provided by your employer, or by yourself if you are self-employed	1	2	8	9	.....
B - Training paid for by yourself (NEW)	1	2	8	9	.....
C - On-the-job training (co-workers, supervisors) (NEW)	1	2	8	9	
D - Other forms of on-site training and learning (e.g. self-learning, on-line tutorials etc) (NEW)	1	2	8	9	
E - Other (SPONTANEOUS)	1	2	8	9	

(MODIFIED)

**Q29 Over the past 12 months, have you or have you not, personally been subjected at work to...?**

READ OUT	Yes	No	DK	Refusal
A - threats of physical violence	1	2	8	9
B - physical violence from people from your workplace	1	2	8	9
C - physical violence from other people	1	2	8	9
D - bullying / harassment (MODIFIED)	1	2	8	9
E - sexual discrimination / discrimination linked to gender (MODIFIED)	1	2	8	9
F - unwanted sexual attention	1	2	8	9
G - age discrimination	1	2	8	9
H - discrimination linked to nationality	1	2	8	9
I - discrimination linked to ethnic background	1	2	8	9
J - discrimination linked to religion	1	2	8	9
K - discrimination linked to disability	1	2	8	9
L - discrimination linked to sexual orientation	1	2	8	9

INTERVIEWER, QUESTIONS Q30 AND Q31 SHOULD BE ASKED TO EMPLOYEES ONLY!  
IE. THOSE WHO ANSWERED “3” TO Q3A

(TREND 1995)

**Q30 Over the past 12 months, have you, or not...?**

READ OUT	Yes	No	DK	Refusal
A - Had a frank discussion with your boss about your work performance?	1	2	8	9
B - Been consulted about changes in the organisation of work and / or your working conditions?	1	2	8	9
C - Been subject to regular formal assessment of your work performance? (NEW)	1	2	8	9
D - Discussed work-related problems with your boss?	1	2	8	9
E - Discussed work-related problems with an employee representative?	1	2	8	9

(TREND)

**Q31 Is your immediate boss a man or a woman?**

1 - A man

2 - A woman

7 - Not applicable (spontaneous)

8 - DK/no opinion (spontaneous)

9 - Refusal (spontaneous)

ASK ALL!

(TREND)

**Q32 Do you think your health or safety is at risk because of your work?**

1 - Yes

2 - No

8 - DK/no opinion (spontaneous)

9 - Refusal (spontaneous)

(MODIFIED)

**Q33 Does your work affect your health, or not?**1 - Yes ----- > **CONTINUE WITH Q33A**2 - No ----- > **GO TO Q34a**8 - DK/no opinion (spontaneous) --- > **GO TO Q34a**9 - Refusal (spontaneous) ----- > **GO TO Q34a**

(MODIFIED)

**Q33A How does it affect your health?**

SHOW CARD Q33A - READ OUT – MULTIPLE ANSWERS POSSIBLE!

	Mentioned	Not mentioned	DK	Refusal
A - hearing problems	1	2	8	9
B - problems with your vision	1	2	8	9
C - skin problems	1	2	8	9
D- backache	1	2	8	9
E - headaches	1	2	8	9
F - stomach ache	1	2	8	9
G - muscular pains in shoulders, neck and/or upper/lower limbs (MODIFIED)	1	2	8	9
H - respiratory difficulties	1	2	8	9
I - heart disease	1	2	8	9
J - injury(ies)	1	2	8	9
K - stress	1	2	8	9
L - overall fatigue	1	2	8	9
M - sleeping problems	1	2	8	9
N - allergies	1	2	8	9
O - anxiety	1	2	8	9
P - irritability	1	2	8	9
Q - other (SPONTANEOUS)	1	2	8	9

(MODIFIED)

**Q34A In your main paid job, over the past twelve months, have you been absent for any of the following reasons?**

READ OUT	Yes	No	DK	Refusal
A - Maternity or paternity leave	1	2	8	9
B - Educational leave	1	2	8	9
C - Family-related leave	1	2	8	9
D - Health problems	1	2	8	9
E - Other reasons	1	2	8	9

**IF “YES”  
CONTINUE  
WITH Q34B**



IF Q34A.D = "1" CONTINUE WITH Q34B, ALL OTHERS GO TO Q35.

**Q34B Over the past 12 months how many days in total were you absent from work for reasons of health problems?**

Number of days:.....

--	--	--

888 - DK/no opinion (spontaneous)

999 - Refusal (spontaneous)

(MODIFIED)

**Q34C Of the days of absence indicated above, can you indicate how many days were attributable to the following:**

READ OUT	Number of days	DK	Refusal
C1 - Accident(s) at work	.....	8	9
C2 - Health problems caused by your work	.....	8	9

ASK ONLY IF RESPONDENT IS BELOW 60 YEARS OF AGE.

(TREND)

**Q35 Do you think you will be able to do the same job you are doing now when you are 60 years old?**

1 - Yes, I think so

2 - No, I don't think so

3 - I wouldn't want to

8 - DK/no opinion (spontaneous)

9 - Refusal (spontaneous)

(TREND)

**Q36 On the whole, are you very satisfied, satisfied, not very satisfied or not at all satisfied with working conditions in your main paid job?**

1 - Very satisfied

2 - Satisfied

3 - Not very satisfied

4 - Not at all satisfied

8 - DK/no opinion (spontaneous)

9 - Refusal (spontaneous)

(NEW)

**Q37 How much do you agree or disagree with the following statements describing some aspects of your job?**

SHOW CARD Q37 WITH SCALE - READ OUT – ONE ANSWER PER LINE!

READ OUT	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	DK	Refusal
A - I might lose my job in the next 6 months	5	4	3	2	1	8	9
B - I am well paid for the work I do	5	4	3	2	1	8	9
C - My job offers good prospects for career advancement	5	4	3	2	1	8	9
D - I feel myself 'at home' in this organisation	5	4	3	2	1	8	9
E - At work, I have opportunities to learn and grow	5	4	3	2	1	8	9
F - I have very good friends at work	5	4	3	2	1	8	9

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## Demographics

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(MODIFIED)

**EF1 What is the highest level of education or training that you have successfully completed?**

*Note: LFS question; additional explanation of ISCED classification and correspondence to local qualifications will be provided in each country*

- 1 - No education
- 2 - Primary education(ISCED 1)
- 3 - Lower secondary education(ISCED 2)
- 4 - Upper secondary education (ISCED 3)
- 5 - Post-secondary including pre-vocational or vocational education but not tertiary (ISCED 4)
- 6 - Tertiary education – first level (ISCED 5)
- 7 - Tertiary education – advanced level (ISCED 6)
- 9 - Refusal (spontaneous)

(TREND)

**EF3 Are you, in your household, the person who contributes most to the household income?**

- 1 - Yes
- 2 - No
- 3 - Both equally (SPONTANEOUS)
- 8 - DK/no opinion (spontaneous)
- 9 - Refusal (spontaneous)

(MODIFIED)

**EF4 How often are you involved in any of the following activities outside work**

SHOW CARD EF4 WITH SCALE- READ OUT – ONE ANSWER PER LINE!

INTERVIEWER: IF FOR ANY OF THE ITEMS FROM ‘A’ TO ‘G’ IN QUESTION EF4 THE ANSWER IS “everyday for 1 hour or more”, CONTINUE WITH EF4.1.

(EF4A-EF4G=1 CONTINUE WITH EF4.1)

**EF4.1. How many hours per day are you involved in any of the following activities outside work?**

READ OUT	EF4.										EF4.1.		
	Everyday for 1 hour or more	Everyday or every second day for less than 1 hour	Once or twice a week	Once or twice a month	Once or twice a year	Never	Not applicable	DK	Refusa 1	Number of hours	DK	Ref.	
A - Voluntary or charitable activity	1	2	3	4	5	6	7	8	9	.....	88	99	
B - Political/trade union activity	1	2	3	4	5	6	7	8	9	.....	88	99	
C - Caring for and educating your children	1	2	3	4	5	6	7	8	9	.....	88	99	
D - Cooking and housework	1	2	3	4	5	6	7	8	9	.....	88	99	
E - Caring for elderly/disabled relatives	1	2	3	4	5	6	7	8	9	.....	88	99	
F - Taking a training or education course	1	2	3	4	5	6	7	8	9	.....	88	99	
G - Sporting, cultural or leisure activity outside your home	1	2	3	4	5	6	7	8	9	.....	88	99	

(TREND)

**EF5 Presently, what is on average your net monthly income from your main paid job?**

SHOW CARD EF5 - READ OUT!

INTERVIEWER.: IF NECESSARY, EXPLAIN NET MONTHLY INCOME IS THE INCOME AT ONE'S DISPOSAL AFTER TAXES AND SOCIAL SECURITY CONTRIBUTIONS!

- 01 - A
- 02 - B
- 03 - C
- 04 - D
- 05 - E
- 06 - F
- 07 - G
- 08 - H
- 09 - I
- 10 - J
- 11 - K
- 12 - L

- 88 - DK/no opinion (spontaneous)
- 99 - Refusal (spontaneous)

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INTERVIEWER: QUESTION EF6. SHOULD BE ASKED ONLY TO THOSE WHO ARE NOT SELF-EMPLOYED!

IF Q3A =3 OR Q3A =4!

(MODIFIED)

**EF6 What does your remuneration include?**

SHOW CARD EF6 - READ OUT - MULTIPLE ANSWERS POSSIBLE!

	Mentioned	Not mentioned	DK	Refusal	
A - Basic fixed salary/wage	1	2	8	9	
B - Piece rate or productivity payments	1	2	8	9	
C - Extra payments for additional hours of work/overtime	1	2	8	9	
D - Extra payments compensating for bad or dangerous working conditions	1	2	8	9	
E - Extra payments compensating for Sunday work	1	2	8	9	
F - Other extra payments	1	2	8	9	
G - Payments based on the overall performance of the company (profit sharing scheme) where you work	1	2	8	9	→ GOTO EF6G_1
H - Payments based on the overall performance of a group	1	2	8	9	→ GOTO EF6H_1
I - Income from shares in the company your work for	1	2	8	9	
J - Advantages of other nature (for instance medical services, access to shops, etc.)	1	2	8	9	
K - Other (SPONTANEOUS)	1	2	8	9	

If EF6.G=1

**Thinking about the payments based on the overall performance of the company (profit sharing scheme):**

	Yes	No	DK	Refusal
EF6G_1 - Are the payments based on the overall performance of the company calculated according to a predefined formula?	1	2	8	9
EF6G_2 - ... do you receive these payments on a regular basis?	1	2	8	9

If EF6.H=1

**Thinking about the payments based on the overall performance of a group:**

	Yes	No	DK	Refusal
EF6H_1 - Are the payments based on the overall performance of a group calculated according to a predefined formula?	1	2	8	9
EF6H_2 - ... do you receive these payments on a regular basis?	1	2	8	9

INTERVIEWER: END OF THE QUESTIONNAIRE UNLESS THE PERSON IS SELF-EMPLOYED.

QUESTION EF7. SHOULD BE ASKED ONLY TO SELF-EMPLOYED PEOPLE!

IF Q3A =1 OR Q3A =2!

(MODIFIED)

**EF7 What does your remuneration include?**

SHOW CARD EF7- READ OUT - MULTIPLE ANSWERS POSSIBLE!

	Mentioned	Not mentioned	DK	Refusal
A - Income from self-employment such as own business, profession or farm	1	2	8	9
B - Payments based on the overall performance of the company (profit sharing scheme) where you work	1	2	8	9
C - Payments based on the overall performance of a group	1	2	8	9
D - Income from shares in the company your work for	1	2	8	9
E - Other (SPONTANEOUS)	1	2	8	9

If EF7.B=1

**Thinking about the payments based on the overall performance of the company (profit sharing scheme):**

	Yes	No	DK	Refusal
EFB_1 - Are these payments based on the overall performance of the company calculated according to a predefined formula?	1	2	8	9
EF7B_2 - ... do you receive these payments on a regular basis?	1	2	8	9

If EF7.C=1

**Thinking about the payments based on the overall performance of a group:**

	Yes	No	DK	Refusal
EF7C_1 - ... are these payments calculated according to a predefined formula?	1	2	8	9
EF7C_2- ... do you receive these payments on a regular basis?	1	2	8	9

**P14 Thank you for participating in the fourth European Foundation Working Conditions survey. The Foundation is planning to conduct a small number of follow-up interviews (length: maximum one hour) with respondents over the coming six months.**

**Would you be willing to participate in such a follow-up Interviewers?**

1 - Yes

2 - No

## Interview protocol

**P.1 Date of the interview:** Day:   Month:

**P.2 Time of the beginning of the interview:** Hour:   Minutes:    
 USE 24 HOUR CLOCK

**P.3 Number of minutes the interview lasted:** Minutes:

**P4 Number of persons present during the interview, including interviewer.**

- 1 - Two (Interviewer and respondent)
- 2 - Three
- 3 - Four
- 4 - Five or more

**P5 Respondent cooperation**

- 1 - Excellent
- 2 - Fair
- 3 - Average
- 4 - Bad

**P6 Size of locality (LOCAL CODES)**

**P7 Region (LOCAL CODES)**

**P8 Postal code**

**P9 SAMPLE POINT NUMBER**

**P10 INTERVIEWER NUMBER**

**P11 WEIGHTING FACTOR**

**P12A Fixed telephone available in the household?**

- 1 - Yes
- 2 - No

**P12B Mobile telephone available in the household?**

- 1 - Yes
- 2 - No

**P13 Language of interview**



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*Work occupies a central position in the day-to-day lives of most Europeans. Working conditions such as working time, job content, pace of work, pay levels and health and safety have a huge influence on individual well-being and satisfaction. EU policymakers recognise that improving working conditions is crucial to achieving a better quality of work, greater productivity and increased employment – the Lisbon objectives. In this context, the Foundation’s European Working Conditions Surveys, conducted every five years, have been providing a valuable insight into key aspects of work since 1990. This report analyses the findings of the fourth European Working Conditions Survey, carried out in autumn 2005 across 31 countries, including the 27 EU Member States. Based on workers’ responses, it paints a broad and varied picture of the physical, intellectual and psychological dimensions of work and its impact on personal fulfilment and work-life balance.*



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