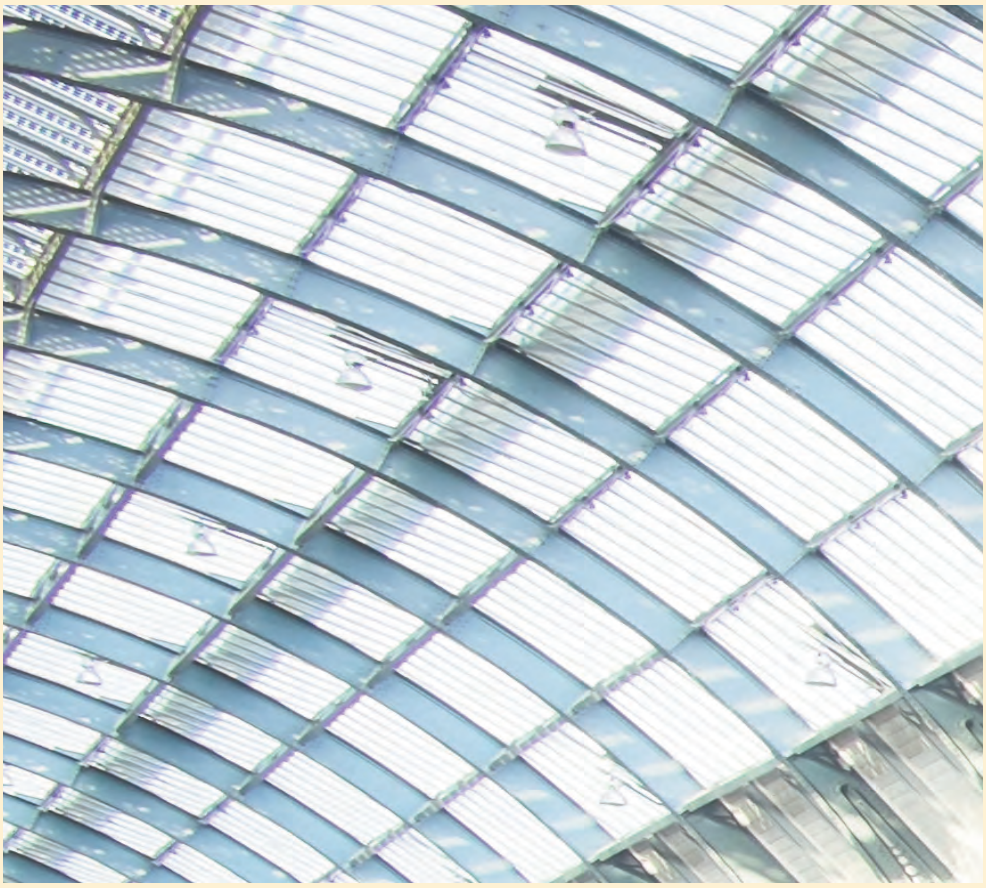
Eurofound

Working conditions and job quality: Comparing sectors in Europe

Overview report



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Country codes

EU28 – 28 EU Member States

AT	Austria	**FI**	Finland	**MT**	Malta
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EL	Greece	**LV**	Latvia	**UK**	United Kingdom
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Abbreviations used in the report

EWCS	European Working Conditions Survey
ISCED	International Standard Classification of Education
EU LFS	European Union Labour Force Survey
NACE	Nomenclature générale des activités économiques dans les Communautés européennes (General industrial classification of economic activities within the European Communities)

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Research project: Fifth European Working Conditions Survey

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Introduction

This report and the accompanying 33 sectoral information sheets aim to capture the diversity prevalent across sectors in Europe in terms of working conditions and job quality. The report provides a comparative overview of sectors and gives background information that enables the results presented in the individual information sheets to be interpreted. The information sheets indicate how each sector compares to the European average for all sectors, as well as highlighting differences and similarities among different groups of workers.

The sectoral analysis builds on the overview report and secondary analyses of the fifth European Working Conditions Survey (EWCS). The research highlights trends across sectors in terms of working time and work–life balance, work organisation, skills and training, employee representation and the psychosocial and physical environment. It identifies sectors that score particularly well or particularly poorly regarding four indicators of job quality. Finally, some light is shed on differences between sectors in terms of the health and well-being of workers and the perceived sustainability of work.

Policy context

Since its inception, the European Union has paid considerable attention to employment, and improving working conditions is one of its key policy goals. The sectoral perspective is highly relevant to the improvement of working conditions, as many interventions to improve working conditions are organised and implemented at this level. Focusing on the sectoral level has the potential to identify and promote good practices with regard to working conditions, as well as highlighting sectors in which there may be particular problems.

In order to meet the objectives of the EU's Europe 2020 Strategy to achieve high participation in employment, the issue of sustainable work and employment needs to be given priority. For work and employment to be sustainable, steps need to be taken to avoid workers experiencing multiple disadvantages in terms of working conditions and job quality.

Social partners and other policymakers in the sectors – both at European and national level – have great potential to undertake and foster good practices with regard to working conditions and job quality, which is essential in view of the Europe 2020 goals. In order to tailor the information to the needs of sectoral policymakers, the selection of sectors in the report aimed to reflect the structure of the European sectoral social dialogue committees as closely as possible.

Key findings

Large differences are found across sectors in terms of working time and the duration and organisation of work. Consequently, sectors differ substantially in terms of work–life balance, which is relatively poor in accommodation, food and beverage services and transport and storage, for example.

There is also considerable variation between sectors in relation to work organisation. In some sectors less than half of the workers work in teams, while in other sectors three-quarters of workers do so. There is similar variation in relation to task rotation and autonomous multiskilling. Sectors with particularly high levels of teamwork, task rotation and autonomy are human health services, residential care and social work.

Just over half (55%) of EU28 workers reported that their skills correspond well with their duties and there is limited variation between sectors on the level of skills match, which ranges from 47% to 60%. However, sectors differ on whether any mismatch that exists is the result of over-skilling or under-skilling.

Sectors differ considerably in terms of the availability of an employee representative at the workplace level. Employee representatives are available to around three-quarters of workers in utilities supply and the chemical industry, but to less than one-quarter of workers in food and beverage services and activities of households.

Exposure to psychosocial risk – in terms of experiencing job strain – is relatively high in the metal industry, transport and storage, the agro-food industry, and textiles and clothing. In terms of physical risks, there is a very clear difference between the services-oriented sectors and the production-oriented sectors, with the former, unsurprisingly, showing considerably lower levels of risk exposure than the latter.

Sectors were compared in terms of four job quality indicators. The following sectors score relatively well on all four indicators of job quality (earnings, prospects, intrinsic job quality and working time quality): the chemical industry, utilities supply, banking, insurance, real estate activities, legal and accounting activities, and financial services. Sectors that score relatively poorly on all four indicators are: administrative services, the agro-food industry, food and beverage services, textiles and clothing, transport and storage, and construction.

In these sectors, a significant proportion of workers are faced with multiple disadvantages, such as low pay, relatively high levels of exposure to both physical and psychosocial risks, irregular working time arrangements, little or no control over working time and few prospects for career improvement. In terms of health and well-being, workers in sectors with poor job quality are approximately twice as likely to report negative outcomes for health and well-being as workers in sectors with good job quality. Similarly, workers in sectors with poor job quality are about half as likely to report the ability to do their job when they are 60 as workers in sectors with good job quality.

It should be noted that sectors are not homogenous, and that they differ in terms of the variation in working conditions and job quality between different groups of workers in the sector. In many service-oriented sectors, workers in manual occupations experience considerably poorer working conditions in terms of exposure to physical as well as psychosocial risks. Also, in many sectors women are worse off in terms of earnings and prospects and young workers are relatively likely to find themselves faced with multiple disadvantages. The information sheets for each of the sectors provide more insight into these differences within sectors.

Policy pointers

In view of the objectives of the Europe 2020 Strategy, high priority needs to be given to the issue of sustainable work and employment, as this is a precondition for meeting the objective of high participation in employment.

Steps need to be taken to avoid workers experiencing multiple disadvantages in terms of working conditions and job quality. This requires the specific attention of governments, social partners and individual employers. Stakeholders within the sectors – whether at European, national or local level – are in a position to organise and implement the necessary interventions.

The issue of multiple disadvantages requires particular focus in sectors that have been identified as having relatively poor job quality. Workers in these sectors are shown to report lower levels of health and well-being.

The sectoral information sheets reveal that there is also substantial variation within sectors, between men and women, younger and older workers and workers in different occupations. Therefore, policymakers in sectors that on average score relatively well in terms of job quality should consider measures to identify workers in the sector that are less well off in multiple respects.

In endeavouring to address the situation of multiple disadvantages, policymakers should try to identify and promote win-win arrangements, as working conditions associated with positive worker health and well-being are often also associated with high worker motivation, creativity and commitment, leading to good levels of work sustainability and therefore, ultimately, the productivity of organisations. Employers' organisations and trade unions can help individual companies in shaping these arrangements.

Introduction

Work plays a significant role in the lives of people, workplaces and society. Since its inception, the European Union (EU) has paid considerable attention to work, and improving working conditions is one of its key policy goals. The sectoral perspective is highly relevant to the improvement of working conditions as many interventions to improve working conditions are organised and implemented at this level. The sectoral level has the potential to undertake and promote good practices with regard to working conditions.

This report and the 33 sectoral information sheets that Eurofound has produced as part of the research aim to capture the diversity between sectors in terms of working conditions and job quality. This research study is similar to – albeit a more extensive exercise – the report *A sector perspective on working conditions* (Eurofound, 2009) and the accompanying sectoral profiles that were published following the fourth wave of the European Working Conditions Survey (EWCS). Comprising a resource for stakeholders at European, national and sectoral level, these products can assist in the development of evidence-based policies designed to keep workers happier and healthier for longer, thus allowing them to contribute optimally to organisational productivity and development.

The information sheets on individual sectors show how key aspects of each sector compare with average figures for all sectors in the 28 EU Member States (EU28), as well as delineating patterns in relation to differences and similarities across groups of workers within the sector. The comparative report not only facilitates comparisons between sectors, it also provides background and methodological information, in order to enhance the results presented in the individual information sheets.

Working conditions comprise a focal point of Eurofound and the agency also has a long tradition in research on job quality. In 2002, Eurofound developed an analytical framework for the quality of work and employment (Eurofound, 2002b). The framework emphasised the multidimensionality of quality of work – the activity to be carried out at the workplace – and employment – the (legal) relationship between worker and employer. Four complementary dimensions were distinguished: 1) employment and career security; 2) health and well-being of workers; 3) skills and competences; and 4) reconciliation of work and private life. This framework is central to much of Eurofound's research and has underpinned the development of the questionnaires for Eurofound's longest running survey: the European Working Conditions Survey, first carried out in 1990.

The overview report for the fifth EWCS (Eurofound, 2012a) provides a description of the development over time of a range of dimensions of working conditions and job quality, as well as highlighting inequalities between different groups of workers. It shows that changes over time in terms of the four dimensions are limited, and that inequalities consequently persist or are even increasing, with unfavourable circumstances tending to cluster together. The in-depth analyses of the fifth EWCS cover many facets of working conditions and job quality, again building on the original 2002 analytical framework described above.

In the report *Trends in job quality in Europe* (Eurofound, 2012f), Green and Mostafa draw on the four dimensions in the analytical framework, but combine the various elements differently. Focusing on characteristics of the job only, and only including characteristics that have an unambiguous positive or negative relationship with well-being, they constructed four indicators of job quality:

1. Earnings.
2. Working time quality (including duration, scheduling, discretion over working time and short-term flexibility).
3. Prospects (including job security, career progression and contract quality).
4. Intrinsic job quality (including skills and discretion, good social environment, good physical environment and work intensity).

Three other secondary analyses focused on specific aspects of work and employment, relating them to the four indicators. *Health and well-being at work* (Eurofound, 2013b) shows how intrinsic job quality and prospects are related to workers' well-being. The analysis presented in *Women, men and working conditions in Europe* (Eurofound, 2013d) shows that men clearly have higher earnings than women, but that the differences on other job quality indicators are much less pronounced, with men having slightly better prospects, and women having slightly better intrinsic job quality and working time quality, indicating differences between men and women in the compromises they often have to make. The report *Sustainable work and the ageing workforce* (Eurofound, 2012e) confirms the link between good job quality and sustainability, but also points to the importance of other individual and structural characteristics, such as work–life balance and employability.

A further three secondary analyses mainly looked at different aspects of work and employment, rather than the characteristics of the job as presented in the job quality indicators. In *Working time and work–life balance in a life course perspective* (Eurofound, 2013e), life-course profiles are developed, showing that in most countries the parenting phase is a critical period when it comes to the integration and participation of women in the labour market. Nordic countries appear to have designed their institutions in such a way as to achieve a more equal time allocation between men and women. In *Work organisation and employee involvement in Europe* (Eurofound, 2013f), the results show that employee involvement – whether through granting workers more control over their work or through organising employee voice on an organisational or strategic level – is positively associated with both organisational productivity and employee well-being. Finally, the report *Quality of employment conditions and employment relations* (Eurofound, 2013c) focuses on the role of the employment relationship in shaping working conditions, showing a strong relationship between the quality of contractual arrangements and job control, sustainability and satisfaction.

The first chapter outlines the methodology underlying the analysis in this report as well as in the 33 sectoral information sheets, describing the data used, the survey design and implementation, the process of selecting of sectors and constructing indicators. This is followed by chapters outlining the comparative results for the 33 selected sectors in terms of the structure of the workforce, working conditions, job quality and the health and sustainability of work.

Methodology 1

Data sources

This report mainly uses data from the fifth European Working Conditions Survey (EWCS). Neither the report nor the sectoral information sheets include information on the financial and economic performance of businesses and organisations in the various sectors of activity. This is primarily because comparable European statistics are only available for the business economy. Eurostat's Structural Business Statistics (SBS) cover NACE Rev 2 sections B to N and Division 95, which include industry, construction, and distributive trades and services. It contains separate information on financial services but does not cover agriculture, public administration or (largely) non-market services such as education and health. Statistics that are only available for part of the workforce were excluded.

Eurostat's Labour Force Survey (EU LFS) does provide statistics on the structural characteristics of the entire EU28 workforce. Where these statistics were available, descriptive results are based on the EU LFS. More information on data collection for the EU LFS is available on the Eurostat website (Eurostat, 2013).

Survey design and implementation

The EWCS aims to measure working conditions across European countries in a comparative way. This enables the analysis of relationships between different aspects of working conditions, the identification of groups at risk and issues of concern, as well as areas of progress, and the monitoring of trends over time. These analyses contribute to European policy development, in particular on issues relating to the quality of work and employment.

Following earlier editions of the EWCS in 1991, 1995, 2000 and 2005, a fifth wave of the survey was fielded in 2010 and involved interviewing almost 44,000 workers on their working and employment conditions. Targeting all residents aged 15 or over who were in employment at the time of the survey ('having worked for pay or profit for at least one hour in the week preceding the interview' – ILO definition), it covered the 28 current European Member States as well as Turkey, Montenegro, the Former Yugoslav Republic of Macedonia, Norway, Albania and Kosovo.

The main topics covered in the fifth EWCS are: job context; working time; work intensity; physical factors; cognitive factors; psychosocial factors; violence, harassment and discrimination; work organisation; skills, training and career prospects; social relationships; work–life balance; financial security; job fulfilment; and health and well-being. Gender mainstreaming was an important concern when designing the questionnaire. Attention was paid to developing gender-sensitive indicators, as well as ensuring that the questions capture the work of both men and women.

Gallup Europe was contracted by Eurofound to carry out the fieldwork. Preparation for the survey included a review of the EWCS production process and design of a strict quality assurance framework. Face-to-face interviews were carried out at respondents' homes (outside the workplace) and the average duration was 44 minutes. The overall response rate for the fifth EWCS was 44%, though there was considerable variation in the participation rates in the different countries – for general methodological information, see the web pages on methodology (Eurofound, 2013a); for more information on quality assurance, see the web pages on quality assurance (Eurofound, 2012c).

The questionnaire was developed by Eurofound in close cooperation with a questionnaire development group, including members of Eurofound's Governing Board, representatives of the European social partners, other EU bodies (European Commission, Eurostat and the European Agency for Safety and Health at Work), international organisations (OECD, ILO), national statistical institutes and leading European experts in the field. It was translated into 32 languages including the key minority languages of the surveyed countries. Nine of the languages were used in more than one country and adapted to the cultural context where necessary. The source questionnaire and all translated versions, as well as more information on the questionnaire development and translation process, are available on the Eurofound website (Eurofound, 2012d).

In each country, a multistage, stratified random sampling design was used. In the first stage, primary sampling units (PSUs) were sampled, stratified according to geographic regions (NUTS 2 level or below) and level of urbanisation. Subsequently, households in each PSU were sampled. Exceptions were Denmark and Finland, where unclustered stratified random samples were used. In countries where an updated, high-quality address or population register was available, this was used as the sampling frame. If such a register was not available, enumeration procedures that ensured the random selection of households were applied. Finally, a screening procedure was used to select the eligible respondent within each household. The target number of interviews was 1,000 in all countries except Slovenia (1,400), Italy, Poland and the UK (1,500 each), Germany and Turkey (2,000 each), France (3,000) and Belgium (4,000). The Belgian, French and Slovenian governments took up the option offered by Eurofound to pay for an addition to the initial sample size – for further details, see the web pages on sampling (Eurofound, 2011).

The fifth EWCS included three open-ended questions in order to record each respondent's occupation and the economic activity of the organisation or company they work for. After the data were collected, the answers were coded according to international classification systems for occupation (ISCO-88 and ISCO-08) and the activity of companies and organisations (NACE Rev. 1.1 and 2.0). The question about the respondent's level of education was recoded into International Standard Classification of Education (ISCED) categories in order to make the country-specific education categories internationally comparable. The income questions referred to the national currency in each country, which was subsequently converted into euros according to the exchange rates at the time of conversion (1 March 2010); see also the web pages on coding (Eurofound, 2012b).

As in previous waves of the EWCS, three types of weights were applied to ensure that results based on the fifth EWCS data can be considered representative for workers in Europe. Selection probability weights hence correct for unequal selection probabilities due to the fact that households are sampled in order to reach workers. Post-stratification weights are used to correct for any remaining discrepancies between the distribution of the sample and the distribution of the population within each country. Supra-national weights are applied to correct for the fact that the relative sample size for each country does not correspond to the relative size of their workforce (see also Eurofound, 2010b).

All survey data have limitations, and this survey is no different. Indicators are self-reported by the respondents. Although this method has limitations, it is particularly appropriate for those indicators (mostly psychosocial) that cannot be observed by an external observer. The method is also cost-effective. The questionnaire design makes use of questions that have been validated and/or used in other surveys. Some questions are unique to the EWCS, however, and extensive testing of these questions in all the surveyed countries was not possible. The survey is cross-sectional so causal relations cannot be drawn based on the data. The EWCS can point out relationships between work and health but it does not include workers who have exited the labour market for health reasons. In addition, while many of the effects of work on health do not occur immediately, this survey measured both the possible risks and the health outcomes at the same point in time. Based on both this 'healthy worker effect' and the absence of a time lag between risk exposure and health outcome, it can be expected that the results show an underestimation of the impact of work on health.

Finally, as the survey is highly harmonised, it allows for comparisons across countries. Nevertheless, differences between countries may be a result of cultural differences in the interpretation of certain concepts, making it impossible to translate a question completely equivalently.

Selection of sectors

The selection of sectors – as the units of comparison in this report and as the entities for which sectoral information sheets are produced – took its lead from the breakdown of the fifth EWCS dataset by NACE rev2 2-digit categories.

Table 1: *Selection of sectors of activity*

	Label	NACE	Comments	N
1	Agriculture*	1		1,293
2	Manufacturing**	10–33		4,987
3	Agro-food industry*	10, 11		838
4	Textiles and clothing*	13, 14		468
5	Chemical industry*	20–22		599
6	Metal industry*	25–30	Includes activities covered by SSDC shipbuilding.	1,382
7	Furniture*	31		351
8	Electricity, gas, steam and air conditioning supply (utilities supply)	35	Includes activities covered by SSDCs electricity, gas.	405
9	Industrial cleaning*	81		562
10	Construction*	41–43		2,521
11	Sale of motor vehicles	45		786
12	Wholesale	46	Covered by SSDC commerce	881
13	Retail	47	Covered by SSDC commerce	4,157
14	Transport and storage	49–53	Includes activities covered by SSDCs civil aviation, inland waterways, maritime transport, postal services, railways, road transport.	1,882
15	Accommodation	55	Covered by SSDC Horeca.	387
16	Food and beverage service activities	56	Covered by SSDC Horeca. Also includes activities covered by SSDC contract catering.	1,349
17	Media and communications	18, 58–61, 63	Includes activities covered by SSDCs audiovisual services and telecommunications.	822
18	Computer programming, consultancy and related activities	62		349
19	Financial services**	64–66		1,112
20	Banking*	64		644
21	Insurance*	65		343
22	Real estate activities	68		307
23	Professional, scientific and technical activities**	69–75		5,857
24	Legal and accounting activities	69		441
25	Administrative and support service activities**	77–82		1,291
26	Public administration	84	Includes activities covered by SSDC local and regional government and SSDC central administration	2,475
27	Education*	85		3,157
28	Human health activities	86	Covered by SSDC hospitals and healthcare	2,060
29	Residential care activities	87	Covered by SSDC hospitals and healthcare	824
30	Social work activities without accommodation	88		875
31	Arts, entertainment and recreation	90–93	Includes activities covered by SSDCs live performance, professional football, sport and active leisure.	680
32	Other service activities	94–96	Includes activities covered by SSDC personal services.	1,235
33	Activities of households as employers	97		541

Note: SSDC = sectoral social dialogue committee
*Category closely corresponds with the activities covered by the sectoral social dialogue committee of the same name.
** Category encompasses some subcategories.

The cases in the EWCS dataset were collapsed with the aim of optimising correspondence with the structure of European sectoral social dialogue committees.[1] Collapsing categories is required to ensure the number of cases in each category is sufficiently large to reliably present breakdowns for the variables of interest. The threshold for maintaining a category was set at 300 cases.

Information on the structure of sectoral social dialogue committees was derived from the overview of sectoral social dialogue committees as published by the European Commission in 2010 (European Commission, 2010; an updated overview is now available, see European Commission, 2013). Where no correspondence with sectoral social dialogue committees could be established, decisions for collapsing were based on the hierarchy in the NACE classification and substantive distinctions within the clusters in this classification.

Construction of indicators

The variables from the EWCS often needed to be manipulated to facilitate presentation and interpretation. This section briefly outlines these data manipulations, to help the reader interpret the results presented in this report (the questionnaire is available at Eurofound, 2012d). To allow for quick comparisons between sectors and with the European average, most of the composite indicators were indexed, using the EU28 average as a baseline (100). This was done by dividing all scores on an indicator by the EU28 average score and subsequently multiplying all values by 100.

Education and work classification

As was mentioned in the section on survey design, education is measured using national-level lists of educational tiers, which have been classified according to the ISCED classification. For the sectoral analyses the ISCED classification was collapsed into three categories: primary (ISCED categories 0, 1 and 2), secondary (ISCED categories 3 and 4), and tertiary education (ISCED categories 5 and 6).

Occupation is based on two open-ended questions that have been coded into the ISCO 08 classification of occupations. Subsequently, the occupational categories of manager, professional, technician and associate professional, clerical support worker, and service and sales worker have been classified as ‘clerical’, and the occupations of skilled agricultural, forestry and fishery workers, craft and related trades workers, plant and machine operators, and assemblers, and elementary occupations have been classified as ‘manual’. Armed forces occupations have been excluded from this simplified classification.

Working hours

The indicator of part-time work is based on an open-ended question asking for the number of hours the respondent usually works each week. Part-time work is defined as working 34 hours or less.

A composite indicator of the extent to which working times are atypical has been constructed by averaging the proportion of Saturdays, Sundays, evenings and nights that workers work per month. A composite indicator for the irregularity of working times has also been constructed, by counting the number of confirmative answers to the questions on whether respondents work the same number of hours every day, the same number of days every week, the same number of hours every week and whether they have fixed starting and finishing times.

[1] European sectoral social dialogue committees were established by the European Commission in 1998 (Commission Decision of 20 May 1998 – 98/500/EC) and are intended to promote dialogue between the social partners in the sectors at the European level.

Working time preference has been captured by comparing the number of hours respondents reported they work every week with the number of hours they said they would prefer to work, taking the need to earn a living into account.

Employee representation

The availability of an employee representative to workers at their workplace was measured by combining the answers to the question of whether there is an employee acting as an employee representative at their workplace and whether or not, in the last 12 months, they had raised a work-related problem with an employee representative. In other words, if a respondent answered yes to either of these two questions, an employee representative is assumed to be available to workers in the establishment.

Job autonomy

A composite indicator for the level of job autonomy was constructed by combining the answers to the questions of whether respondents are able to choose or change the order of their tasks, their methods of work and their speed or rate of work, whether they have a say in the choice of their working partners and whether they can take a break when they wish.

A composite indicator for the level of work intensity was constructed by combining the answers to the questions that asked to what extent respondents have to work to tight deadlines and at high speed.

Risks

A composite indicator for exposure to posture- and movement-related risks was constructed by averaging the proportion of working time respondents reported they were exposed to vibrations, tiring or painful positions, lifting or moving people, carrying or moving heavy loads, standing and repetitive hand or arm movements.

A composite indicator for exposure to biological and chemical risks was constructed by averaging the proportion of working time respondents reported they were breathing in smoke, fumes, powder or dust, breathing in vapours, handling or being in skin contact with chemical products or substances, and handling or being in direct contact with materials that can be infectious.

A composite indicator for exposure to ambient risks was constructed by averaging the proportion of working time respondents reported they were exposed noise, high and low temperatures.

Social environment and work quality

Indicators for ‘good social environment, working time quality, intrinsic job quality and prospects’ were developed by Green and Mostafa for the report *Trends in job quality in Europe* (Eurofound, 2012f), where more information on these indicators can be found. For the purposes of this report, a slightly different indicator was used for earnings than was used in the report on trends in job quality. To make the distribution less skewed – and reflecting the fact that an additional euro is much more relevant for someone on a low income than for someone on a high income – the natural log of the monthly earnings was taken. Subsequently, the log scores of these earnings were used to form a scale that goes to 100, as is the case for Green and Mostafa’s indicators for good social environment, working time quality, intrinsic job quality and prospects.

Mental well-being

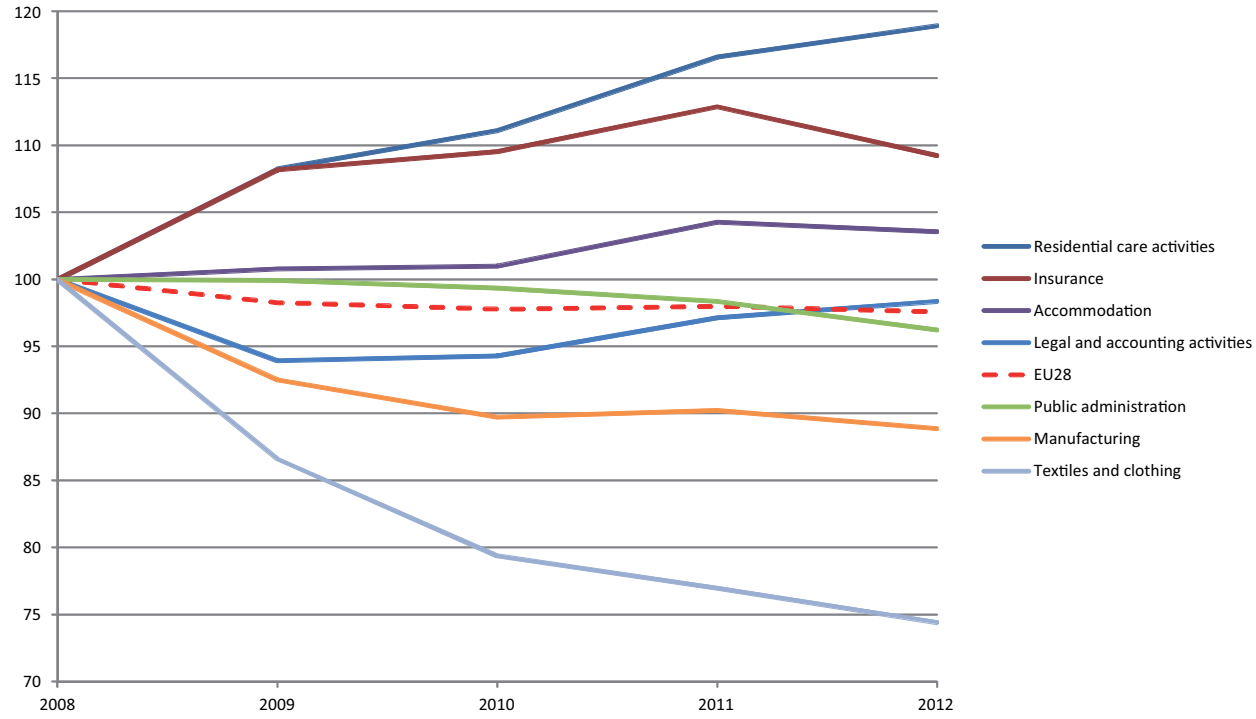
The composite indicator of mental well-being is the so-called WHO-5 Well-being Index. It consists of five items that ask about the extent to which the respondent has 1) felt cheerful and in good spirits; 2) felt calm and relaxed; 3) felt active and vigorous; 4) has woken up feeling fresh and rested; and 5) has felt their daily life was filled with things that interest them.

Structure of the European workforce 2

The fifth EWCS was carried out in 2010, in the middle of the worst recession to hit Europe since the 1930s. The economic downturn resulted in a shrinking European workforce. However, not all sectors were impacted in the same way, or to the same degree. This section will show the differences between sectors in terms of their relative employment levels and employment development, as well as the distribution within the sectors in relation to workplace size, gender, age, employment status and employment type.

Figure 1 depicts seven sectors that can be seen as extreme examples of different types of development in employment. The employment numbers have been indexed using the 2008 level as the baseline (100). Textiles and clothing is the sector that took the biggest hit of all sectors and is the most extreme example of those sectors that saw a drop in employment in the years before the survey that continued in subsequent years. This pattern was also found in the following sectors: furniture; construction; media and communications; wholesale; and agriculture. Manufacturing represents those sectors that took a big hit between 2008 and 2010 but where employment levels stabilised between 2010 and 2012. This pattern was also found in banking, the chemical industry, the agro-food industry, transport and storage, sales of motor vehicles, retail, other service activities, financial services and in the EU28 as a whole.

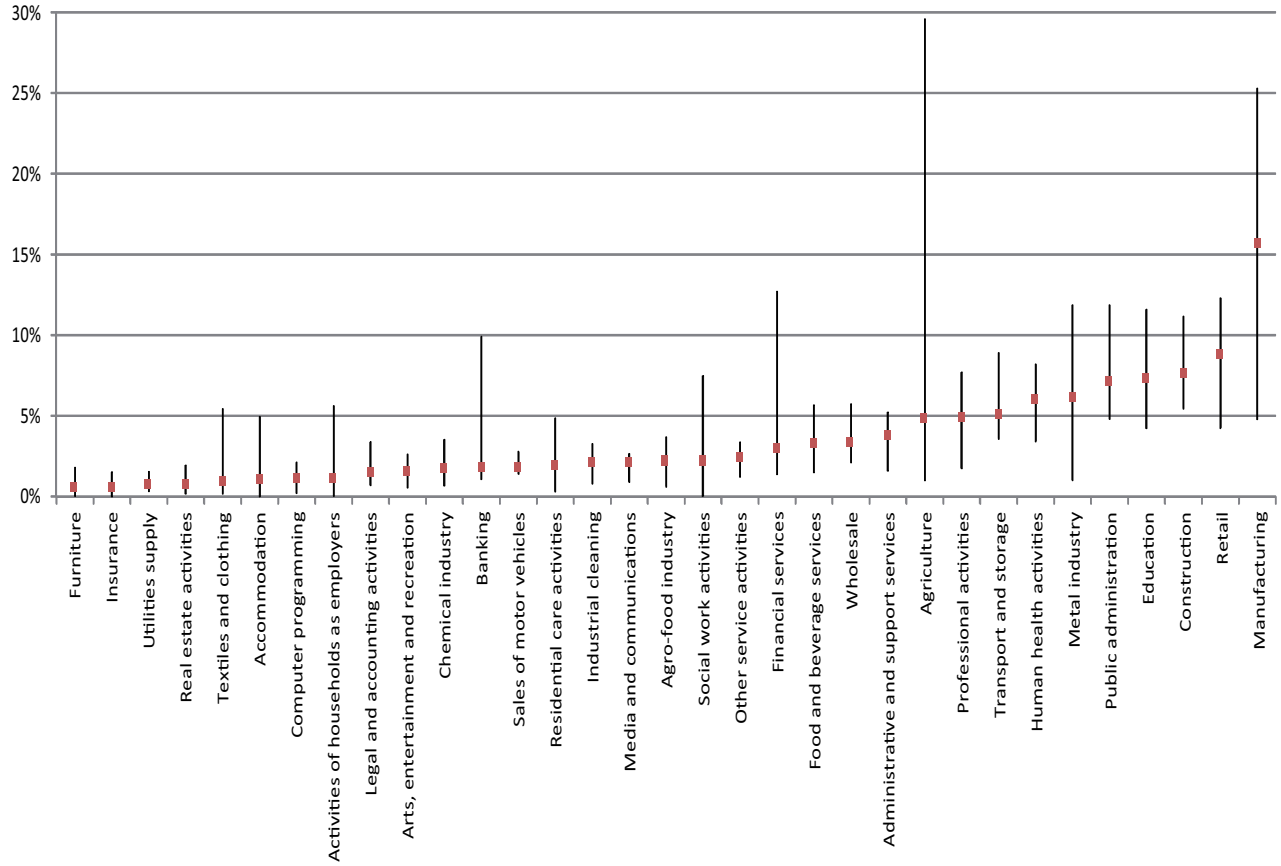
Figure 1: *Developments in employment between 2008 and 2012*



Source: *EU Labour Force Survey*

Legal and accounting activities was the only sector that saw a fairly big drop in employment between 2008 and 2010 and a fairly large increase in employment between 2010 and 2012. Public administration also showed a unique pattern: initial stability followed by a decrease in employment between 2010 and 2012. Accommodation was the only sector where employment remained stable between 2008 and 2010 and increased afterwards. Insurance, which also represents utilities supply, saw an increase in employment between 2008 and 2010, and fairly stable employment levels since. Finally, residential care activities is the most extreme example of the following sectors: arts, entertainment and recreation; activities of households; food and beverage services; human health activities; real estate activities; professional activities; administrative and support services; social work activities (without accommodation); industrial cleaning; and computer programming. Despite the recession, all of these sectors saw consistently rising employment levels between 2008 and 2012.

Figure 2: *Sector as proportion of total EU workforce*



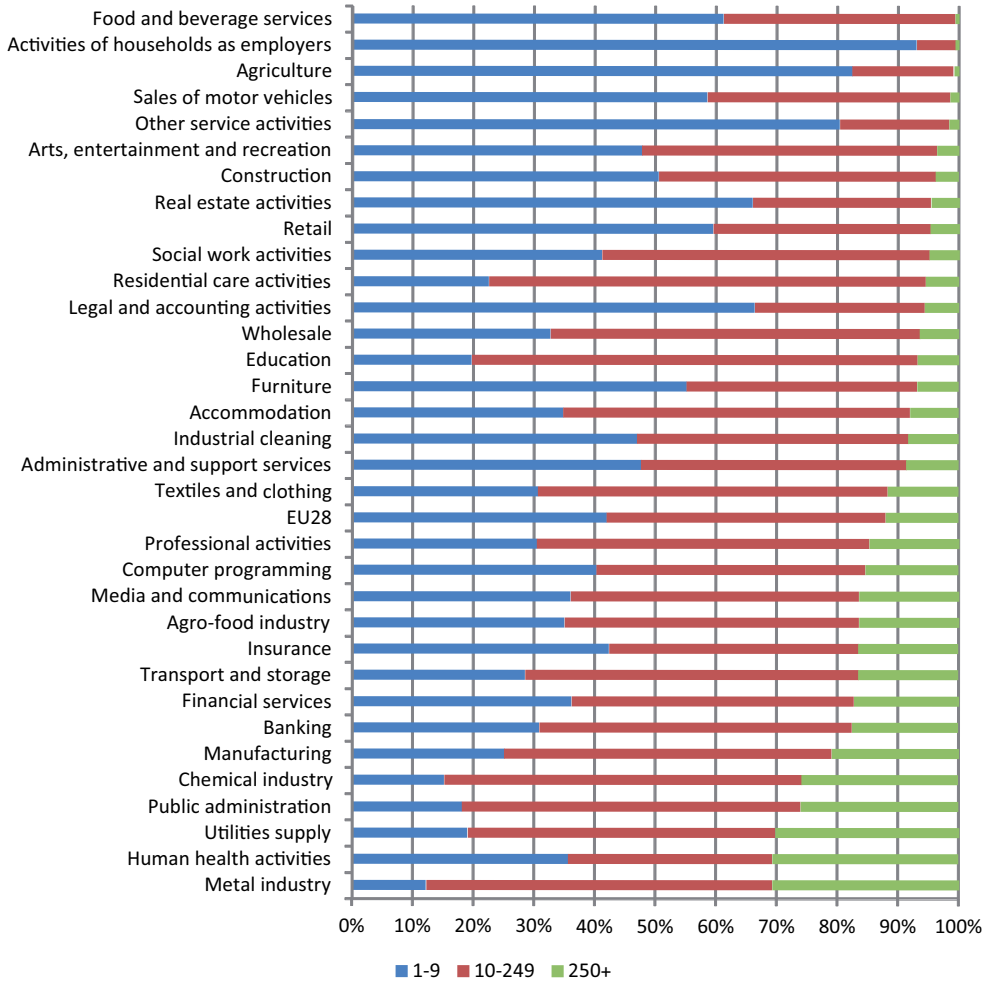
Source: *EU Labour Force Survey*

Figure 2 shows the proportion of the EU workforce employed by each sector. It also indicates the minimum and maximum proportions across all EU Member States. For instance, 3% of the European workforce is employed in financial services. This sector employs only 1.4% of the workforce in Romania, but is one of the largest employers in Luxembourg, where it employs almost 13% of workers. Most sectors are distributed fairly evenly across Europe, with national-level employment proportions not differing much from the European average. Exceptions to this were defined as those sectors with a range that was two times the EU proportion of employment: these include residential care activities, real estate activities, insurance, furniture, social work activities (without accommodation), financial services, accommodation, activities of households, banking, textiles and clothing, and – most dramatically – agriculture. Agriculture employs around 5% of the European workforce, but employs almost 30% of workers in Romania, and less than 1% of workers in Malta.

Figure 3 depicts the sectors' structure according to the size of workplaces as reported by respondents. The predominance of micro, small and medium-sized workplaces is marked in all sectors.[2] Manufacturing, specifically the metal and chemical industries, and human health activities, utilities supply, and public administration differ from the other sectors in that they have a larger share of workers in workplaces with 250 workers or more (between 20% and 30%). In all the other sectors, over 80% of workers report working in micro, small or medium-sized workplaces.

[2] This refers to the size of the workplaces, which should not be mistaken for companies or organisations. A company or organisation may consist of several workplaces of different sizes.

Figure 3: *Workplace size*



Source: *Unless otherwise indicated, the source for all figures in the report is the fifth EWCS*

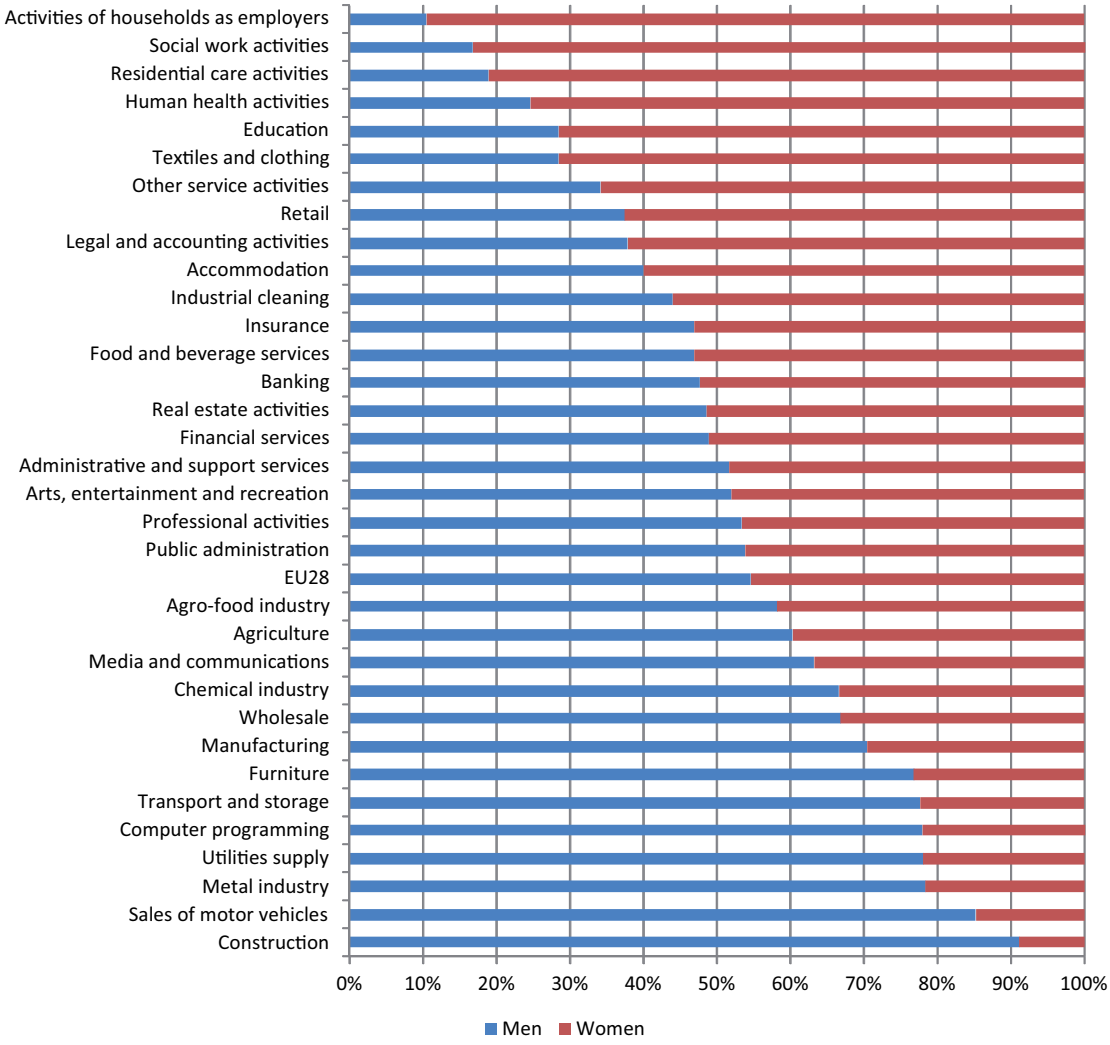
Sectors in which the great majority of workers are in workplaces with less than 10 workers (labelled 'micro workplaces') are: activities of households; agriculture; other services activities; legal and accounting activities; real estate activities; food and beverage services; and retail. This may explain some of the findings for these sectors described later in this report, such as the relatively high incidence of teamwork and multitasking.

Figure 4 displays the degree of gender segregation that still exists in the employment structures in the EU. Adopting the method used by Fagan and Burchell (Eurofound, 2002a), it is possible to classify the sectors according to the prevalence of male and female workers. Following their approach, the categories of 'sale of motor vehicles' and 'construction' would be classified as 'very male-dominated', whereas all sectors in Figure 4 ranked between agriculture and the metal industry would be classified as 'male-dominated'.

The sectors ranked between the agro-food industry and industrial cleaning would be classified as 'mixed', those between accommodation and human health activities as 'female-dominated', while activities of households, social work and residential care are classified as 'very female-dominated'. It should be noted that occupations within each sector are likely to differ in terms of their gender distribution. For instance, construction as a sector is very male-dominated, but many women in construction are clerical support workers. The category of 'clerical support workers in construction' would consequently be classified as female-dominated, with women constituting 79% of its workers. This provides an

interesting indication of relevant factors when seeking to implement actions to promote equal gender participation in any sector.

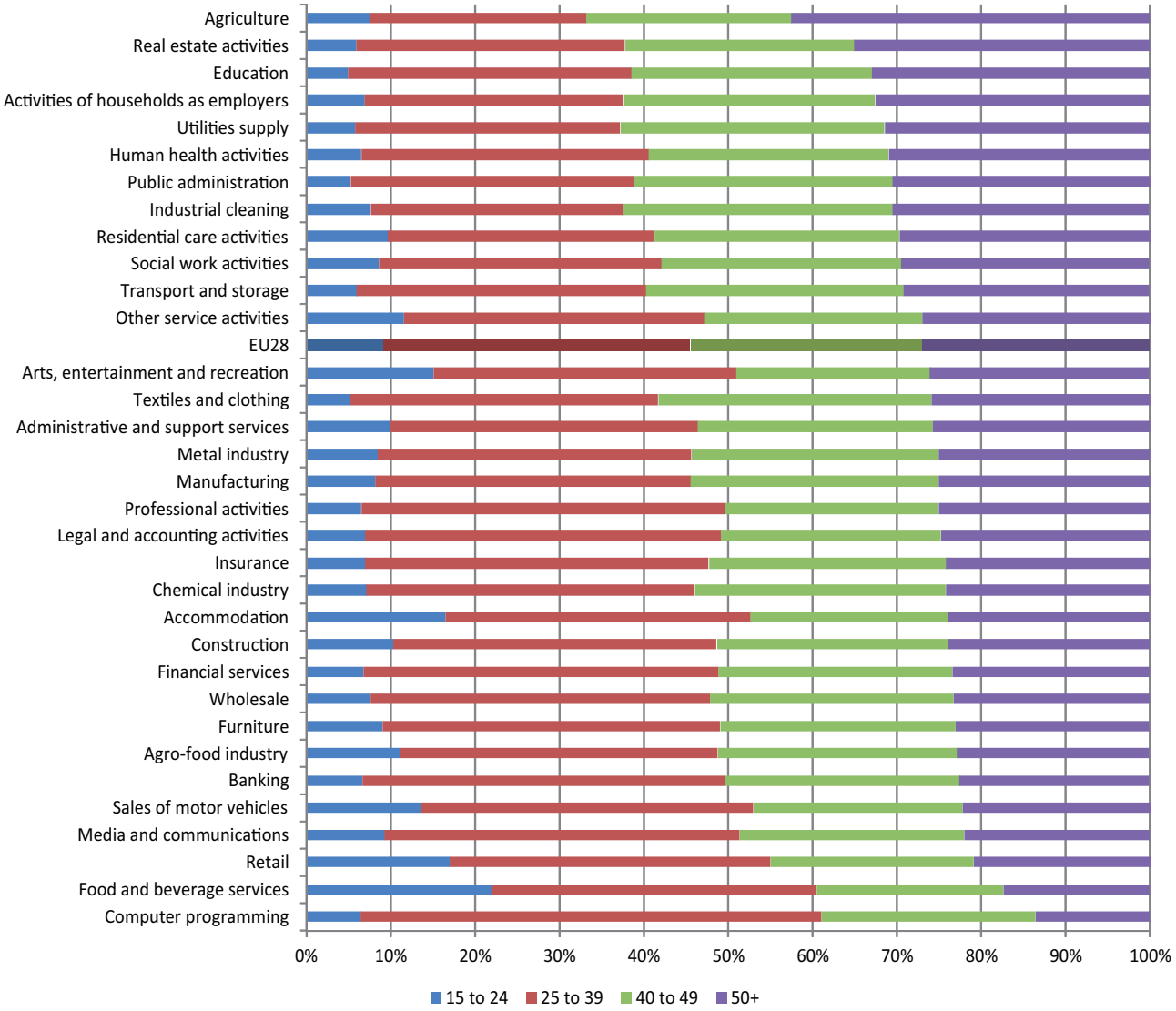
Figure 4: *Gender distribution*



Source: *EU Labour Force Survey*

Almost two-thirds of workers in the EU (64%) are aged between 25 and 49 years (see Figure 5). Across the sectors, the relative size of this age group varies between 50% of workers in agriculture up to 80% of workers in computer programming. Food and beverages (22%), retail and accommodation (both 17%), and arts, entertainment and recreation (15%) have relatively large shares of young workers (15–24 years). Overall, workers in food and beverage services and computer programming are the youngest: in both sectors more than 60% of workers are less than 40 years. In contrast, the highest proportions of older workers can be found in the following sectors: agriculture; real estate activities; education; activities of households; utilities supply; human health activities; public administration; and industrial cleaning. At least 30% of workers in these sectors are aged 50 or older.

Figure 5: *Age distribution*

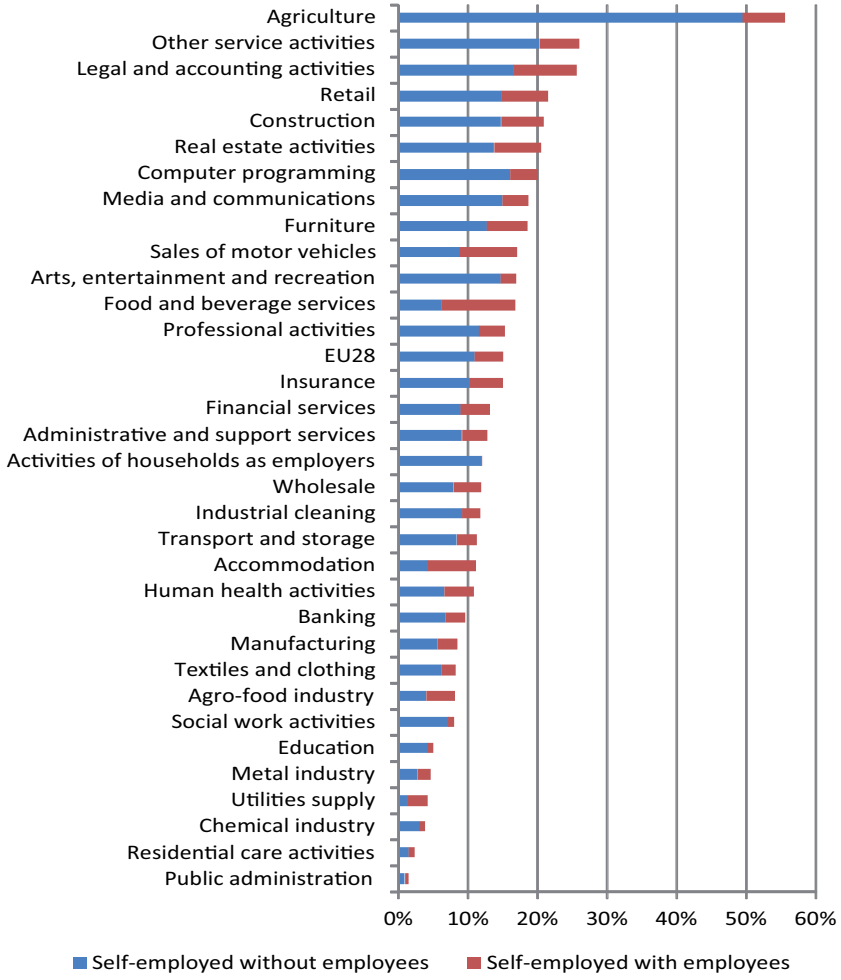


Source: *EU Labour Force Survey*

The fifth EWCS shows that about 15% of the workers in the EU28 are self-employed. However, as shown in Figure 6, the share of self-employed people varies greatly across the different sectors. Agriculture stands out with over half of its workers (55%) being self-employed. Computer programming, real estate activities, construction, retail, legal and accounting activities and other services also display relatively large shares of self-employed workers (between 20% and 26%). In education, the metal industry, utilities supply, the chemical industry, residential care and public administration, self-employment is least prevalent with no more than 5% of workers being self-employed.

Self-employed people without employees represent about 11% of all the workers in the EU whereas the self-employed with employees represent just 4%. Likewise, those who are self-employed without employees form the vast majority of self-employed people in most sectors, with the exception of utilities supply, the agro-food industry, accommodation and food and beverage services, where the proportion of self-employed people with employees is higher than that of self-employed people without employees.

Figure 6: *Self-employment*

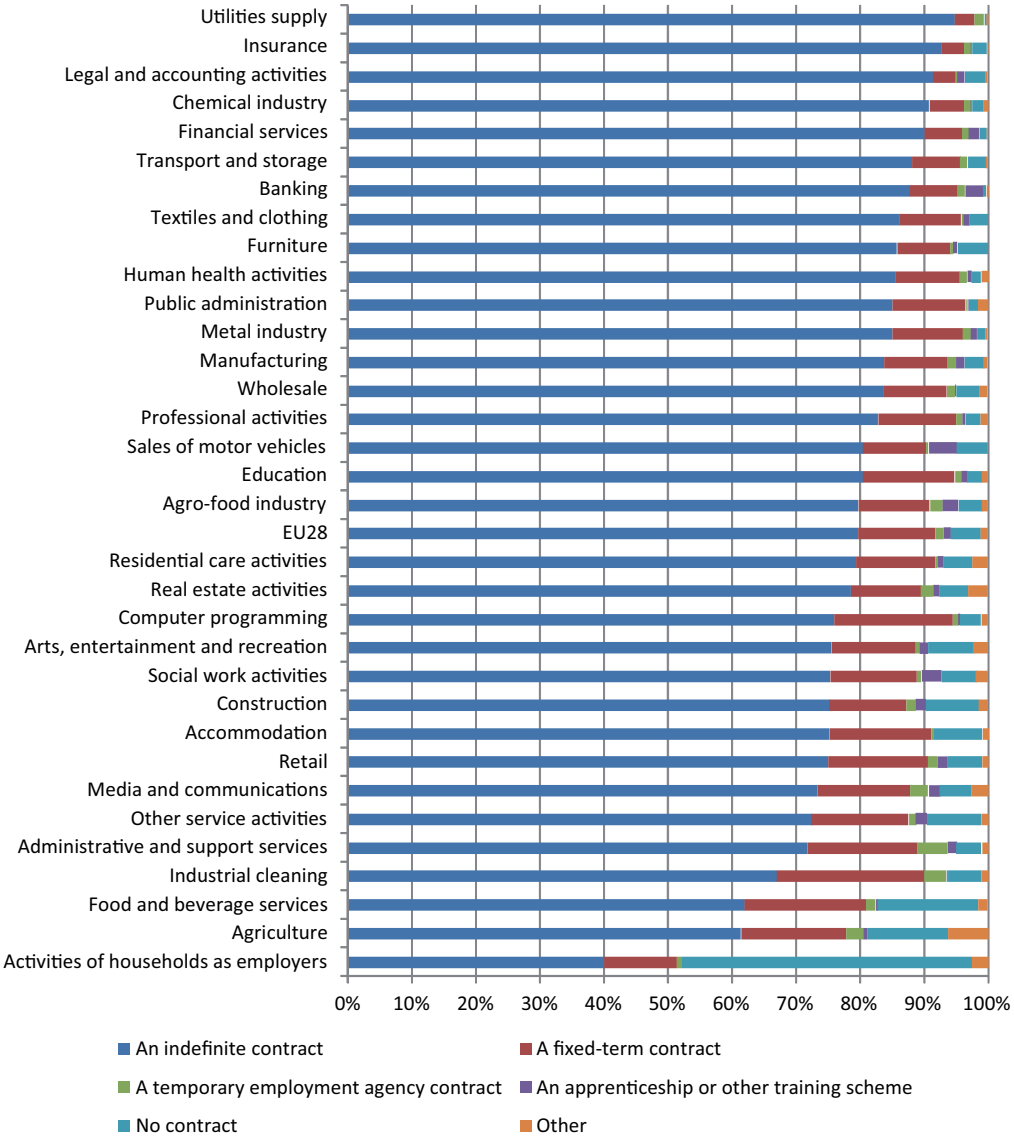


Indefinite contracts comprise the predominant contractual arrangement in the EU. Around 80% of workers in the EU have an indefinite contract, and about 14% report to be on a fixed-term contract (see Figure 7). An indefinite contract provides a high level of security in the labour market, and in relation to social benefits and rights.

Temporary employment agency contracts were reported by 1.3% of workers, and apprenticeships were reported by 1.1% of workers. Interestingly, 5% of workers reported having no contract.[3] Most sectors mirror this structure, albeit with variations in the relative prevalence of the different contracts. The sole exception is the category of activities of households, in which the number of those reporting having no contract (45%) is much higher than in any other category, and is even higher than the proportion on indefinite contracts (40%). The following sectors stand out for having a very low share of non-indefinite contracts (below 10%): utilities supply; insurance; legal and accounting activities; the chemical industry; and financial services. By contrast, the food and beverages sector and agriculture stand out for having quite large proportions of people on contracts that are not indefinite, particularly fixed-term contracts and no contracts. Industrial cleaning, administrative services, other services and media and communication also display significant shares of contracts that are not indefinite, particularly fixed-term contracts.

[3] Unfortunately, it is not possible to assess the extent to which these situations correspond to indefinite employment relationships without a written contract (oral contracts are valid in some countries) or simply to situations where no legal arrangement is in place that defines the relationship between employee and employer.

Figure 7: *Employment types (employees only)*



Working conditions 3

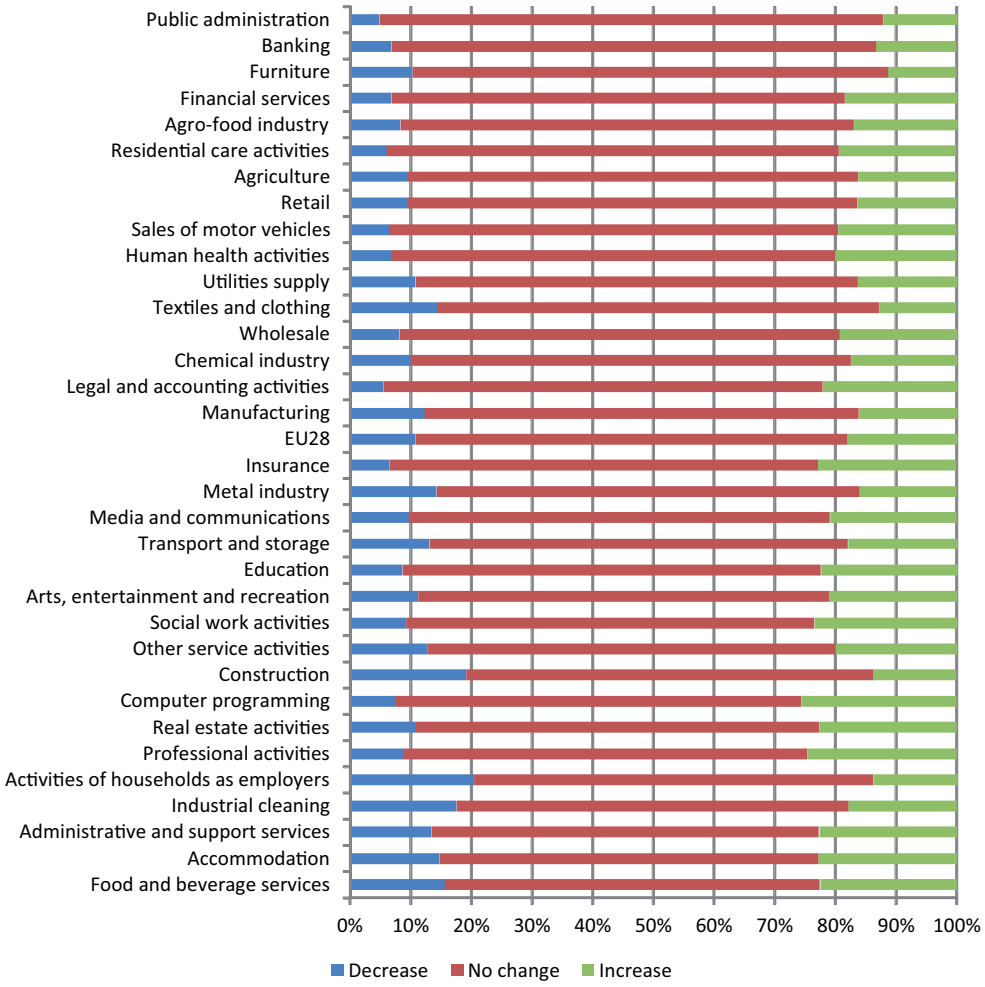
Working conditions can be viewed as the result of the interaction between characteristics of a job, the work, the company, and the individual. This chapter looks at recent changes in working conditions, as well as issues related to working time and work–life balance, work organisation, skills and training, employee representation, and the psychosocial and physical environment.

Developments over time

In order to gain some insight into the impact of the recession on working conditions, respondents were asked whether they had experienced any changes in their working hours or pay in the 12 months preceding the survey. In all sectors the majority of workers reported no change in their working hours (71% in the EU28). However, it is important to note that a significant proportion of workers reported an increase in the hours they worked (see Figure 8).

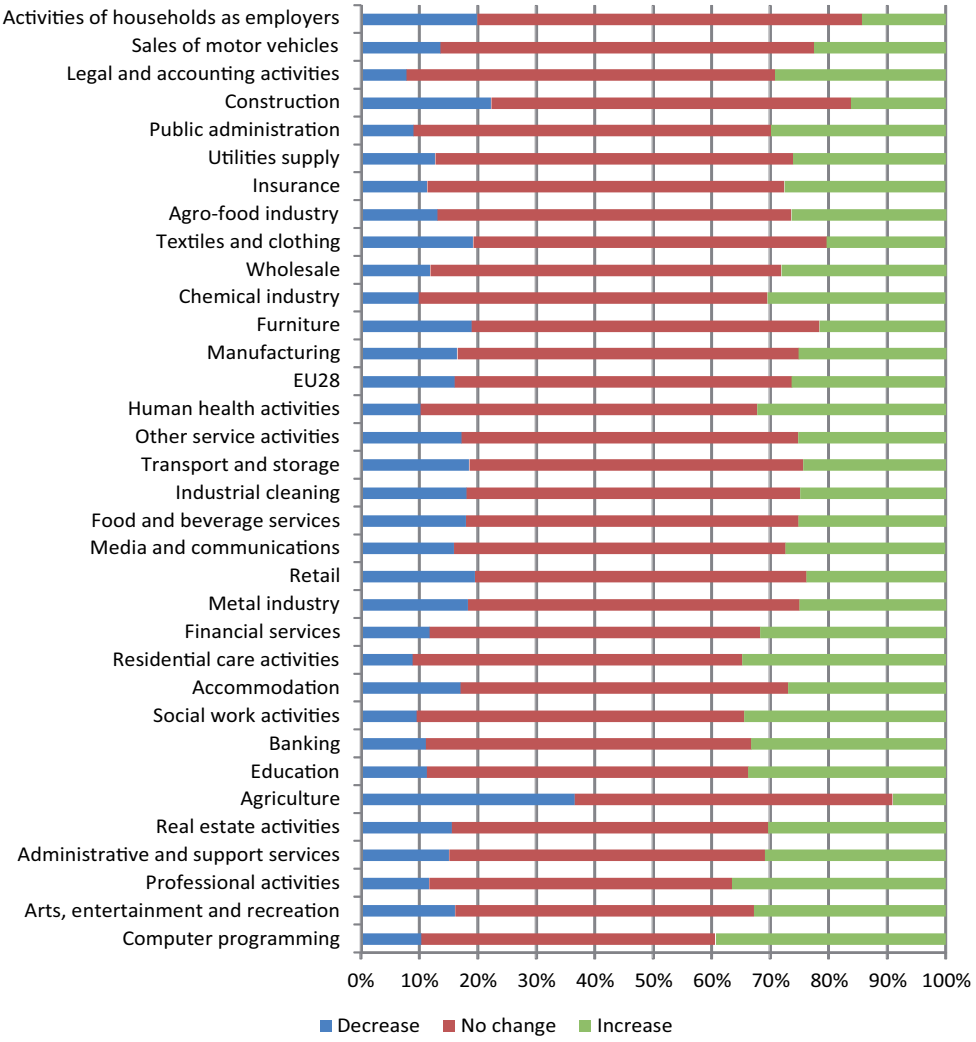
These shares varied from 11% in the furniture sector to 26% in computer programming, with an EU28 average of 18%. In all registered sectors, some workers reported a decrease in their hours worked, but in most cases this share was smaller than the share reporting an increase. The only exceptions are textiles and clothing, construction, and activities of households, possibly due to the decrease in economic activity in these sectors in the years preceding 2010. Around 20% of workers in construction and in activities of households reported a decrease in the number of hours worked.

Figure 8: *Changes in hours worked in past year*



Similarly, with regard to changes in salary or income, a majority of workers across sectors reported no changes during the year prior to the survey (58% in the EU28). In most sectors, a significant minority of workers reported an increase in their salary or income, ranging from 9% in agriculture to 39% in computer programming. At the same time, in most sectors a smaller minority of workers reported a decrease in their salaries or income as well. The exceptions are agriculture, activities of households, and construction, where the proportion of workers reporting a decrease in their salaries or income is greater than those reporting an increase. Agriculture is exceptional in this respect, with 37% of workers reporting a salary decrease. Other sectors with a relatively large share of around 20% of workers reporting a decrease in their salaries or income are: construction; activities of households; textiles and clothing; furniture; retail; and transport and storage. In light of inflation and combining those that reported no change (58%) or a decrease of their income (16%), the implication is that three-quarters of workers in the EU were financially less well off in 2010 than they were 2009.

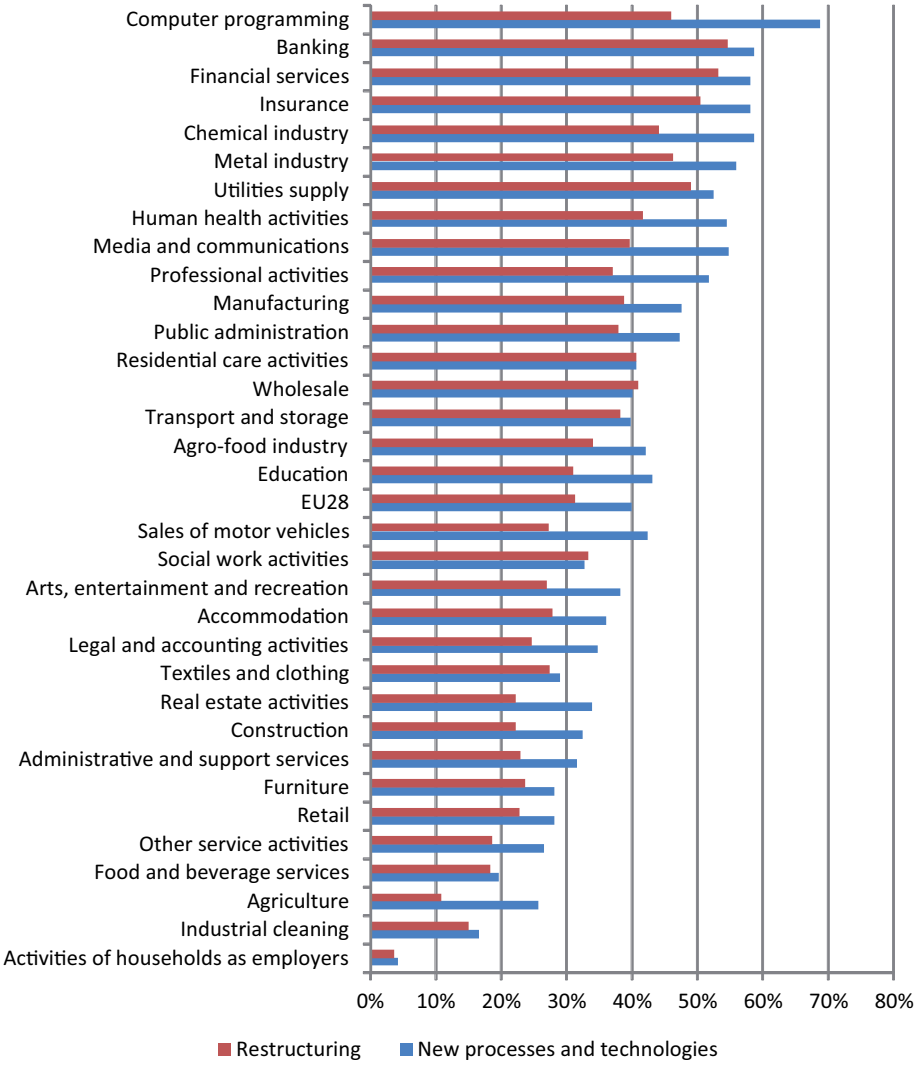
Figure 9: *Changes in salary or income in year prior to survey*



The fifth EWCS captured the extent to which organisational change impacted on workers' immediate working environment during the three preceding years. Figure 10 shows the proportions of workers reporting that 'new processes and technologies' and 'substantial restructuring or reorganisation' had taken place in their workplace in the three years preceding the survey.[4] Sectors vary greatly in terms of the reported level of organisational change. Only a few workers in the activities of households sector (less than 5%) reported either new processes and technologies or restructuring or reorganisation. At the other end of the spectrum, more than half of the workers in sectors such as insurance, financial services, and banking reported having been exposed to both new processes and technologies and to restructuring and reorganisation at their workplaces.

In computer programming, the highest proportion of workers (over two-thirds) reported they were introduced to new processes and technologies, while only 46% reported that restructuring or reorganisation took place.

Figure 10: *Restructuring and introduction of new technologies in the three years prior to survey*

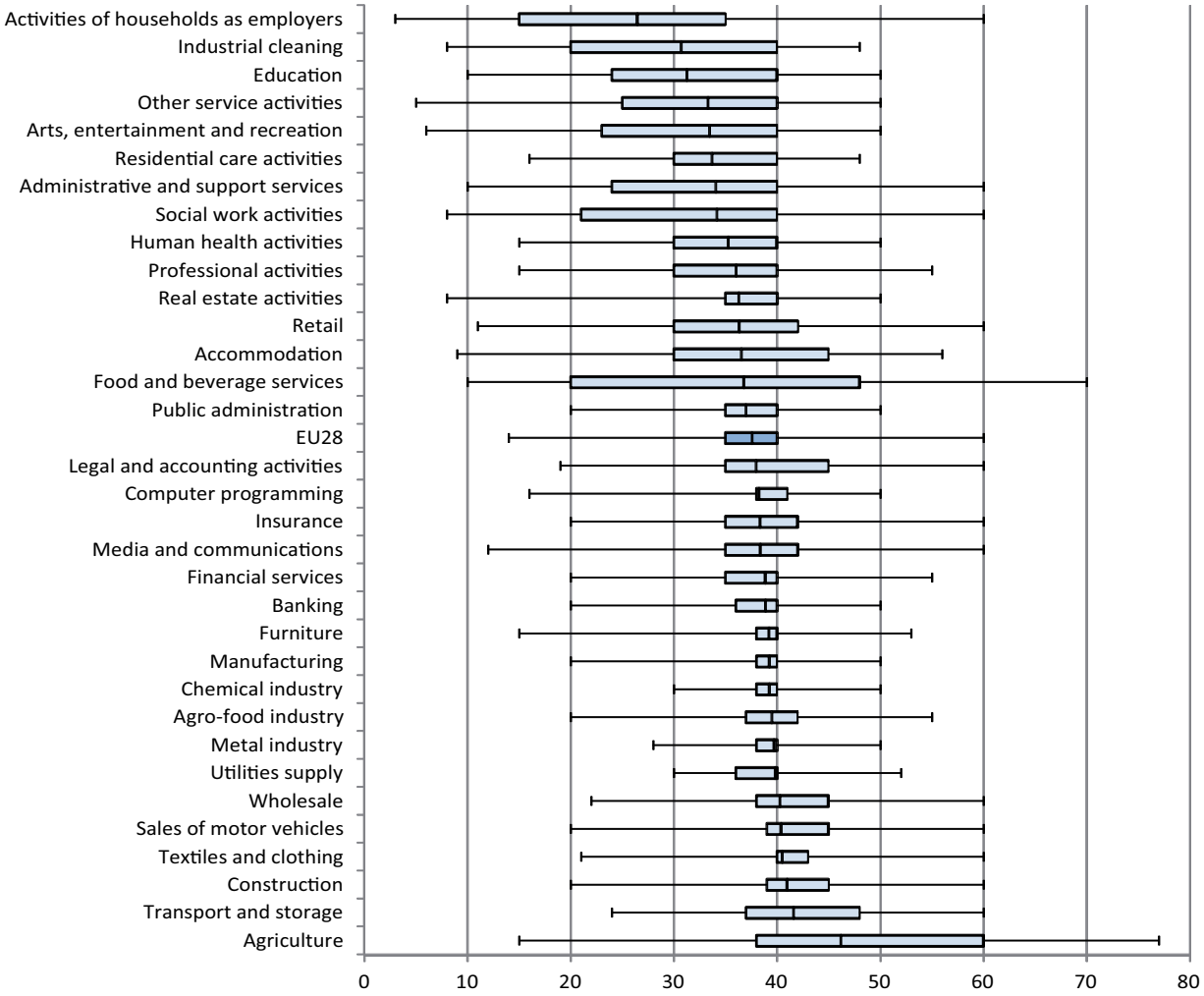


[4] The limitations of these questions are discussed on page 30 of the fifth EWCS overview report (Eurofound, 2012).

Working time and work–life balance

The reported number of hours people usually work per week varies considerably across sectors. Figure 11 shows the average working hours in each sector, and also the distribution of working hours. The average working week varies from 26.5 hours per week in activities of households to 46.2 hours in agriculture. It is also in agriculture that we find the widest range of working hours: 5% of workers in this sector report working 15 hours per week or less, while another 5% report working 77 hours per week or more. The chemical industry, the metal industry and utilities supply sectors have the narrowest ranges: 90% of workers in these sectors work 30–50 hours per week and half work around 40 hours per week on average.

Figure 11: *Distribution of working hours*

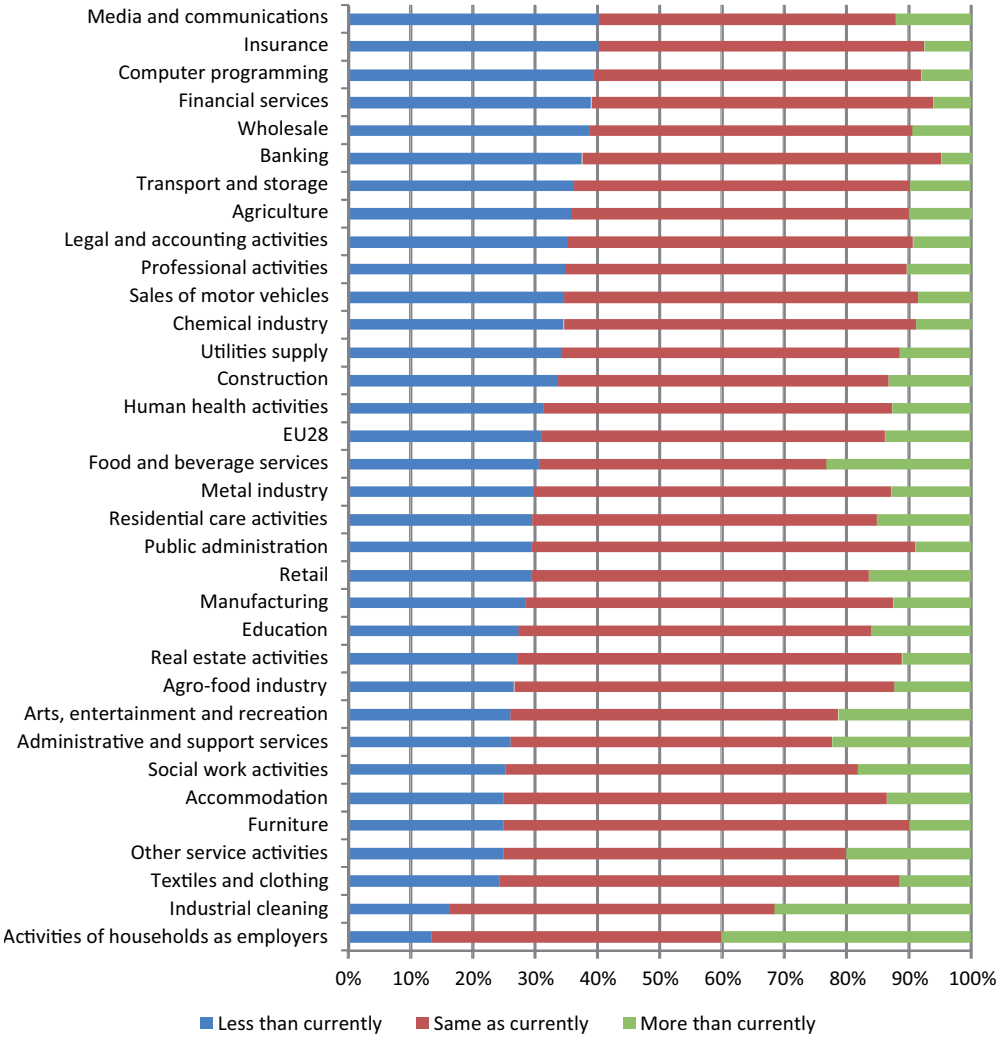


Note: The extremities of the lines represent the fifth and 95th percentile. The extremities of the boxes mark the first and third quartiles. The line in the box indicates the average.

The EWCS asks questions not only about actual working time but also about preferred working time (while keeping in mind the need to earn an income). This made it possible to establish whether workers would like to work more hours, fewer hours or the same number of hours as they were working at the time of the survey (Figure 12).

The pattern in all sectors is similar to that in the EU28 as a whole. The largest proportion of workers prefer to work the same number of hours: 55% in the EU28, varying between 46% in food and beverage services and 65% in furniture. The second largest share say they want to work fewer hours: 31% in the EU28, varying between 24% in the textiles and clothing sector and 40% in media and communications. The smallest share want to work more hours: 14% in the EU28, varying between 5% in banking and 23% in food and beverage services. The two exceptions to this pattern are industrial cleaning and activities of households, in which the share of those preferring to work more hours is much higher than that of those wanting to work fewer hours. It should also be noted, as shown above in Figure 11, that these two sectors are among those in which workers report shorter working weeks in their main jobs. In addition, part-time work is relatively prevalent in these two sectors: 47% of workers in industrial cleaning and 70% of workers in activities of households work 34 hours or less, figures that are much higher than the EU28 average of 24%. Similar levels are only found in social work activities (45%) and education (51%). These sectors have a relatively low prevalence of part-time work: the metal industry (8%), the chemical industry (8%) and utilities supply (9%).

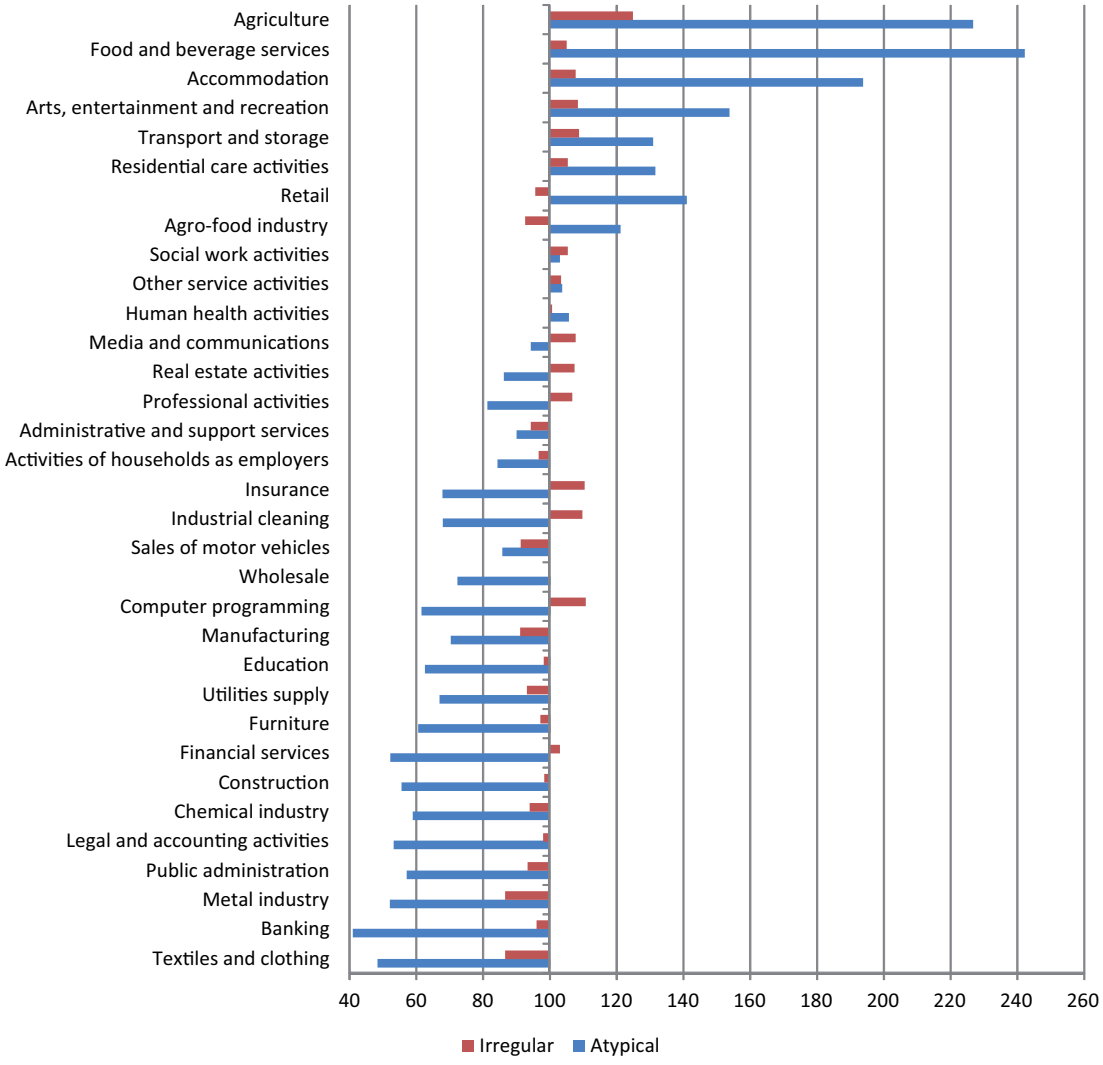
Figure 12: *Working time preferences*



The duration of working time is not the only factor that affects workers' well-being and performance; the way in which working time is organised also has an impact. Figure 13 shows the extent to which sectors differ from the EU28 average in the prevalence of working atypical hours (weekends, evenings and/or nights) and of working irregular hours (working a different numbers of hours every day and different numbers of days every week).

Differences between sectors are much larger for atypical working times than for irregular working times. Agriculture stands out regarding irregular working hours, which might not be surprising due to the nature and specific characteristics of the work performed in this sector. Atypical hours are particularly prevalent in food and beverage services, agriculture, accommodation, and the arts, entertainment and recreation sector. Financial services, the metal industry, and legal and accounting activities are among the sectors with the smallest shares of workers reporting atypical working hours.

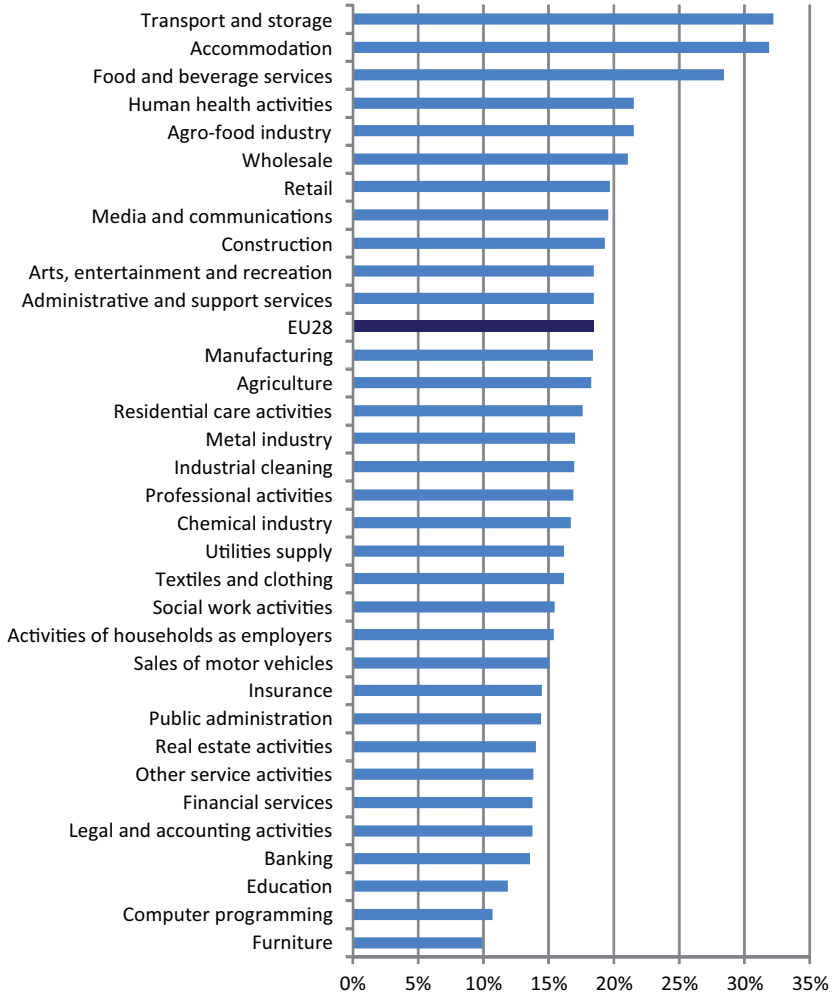
Figure 13: *Indices of working atypical and irregular hours*



Note: EU28=100

Work–life balance is likely to be impacted by working time duration and arrangements (see for instance, Eurofound, 2012f). Figure 14 shows the proportions of workers reporting a poor match between working hours and family or social commitments. With an EU28 average of 18%, this varies between just 10% in furniture and 32% in transport and storage. It is important to note that transport and storage, accommodation, and food and beverage services all display a relatively high prevalence of poor work–life balance and have relatively large proportions of workers doing atypical and irregular hours (see Figure 13). Although agriculture shows relatively high indices of atypical and irregular working hours, it stands on a par with the EU28 average, with 18% of workers reporting poor work–life balance. Sectors with low levels of reported poor work–life balance, such as education, computer programming, and furniture, are also sectors where workers tend to work typical and regular hours.

Figure 14: *Poor work–life balance*



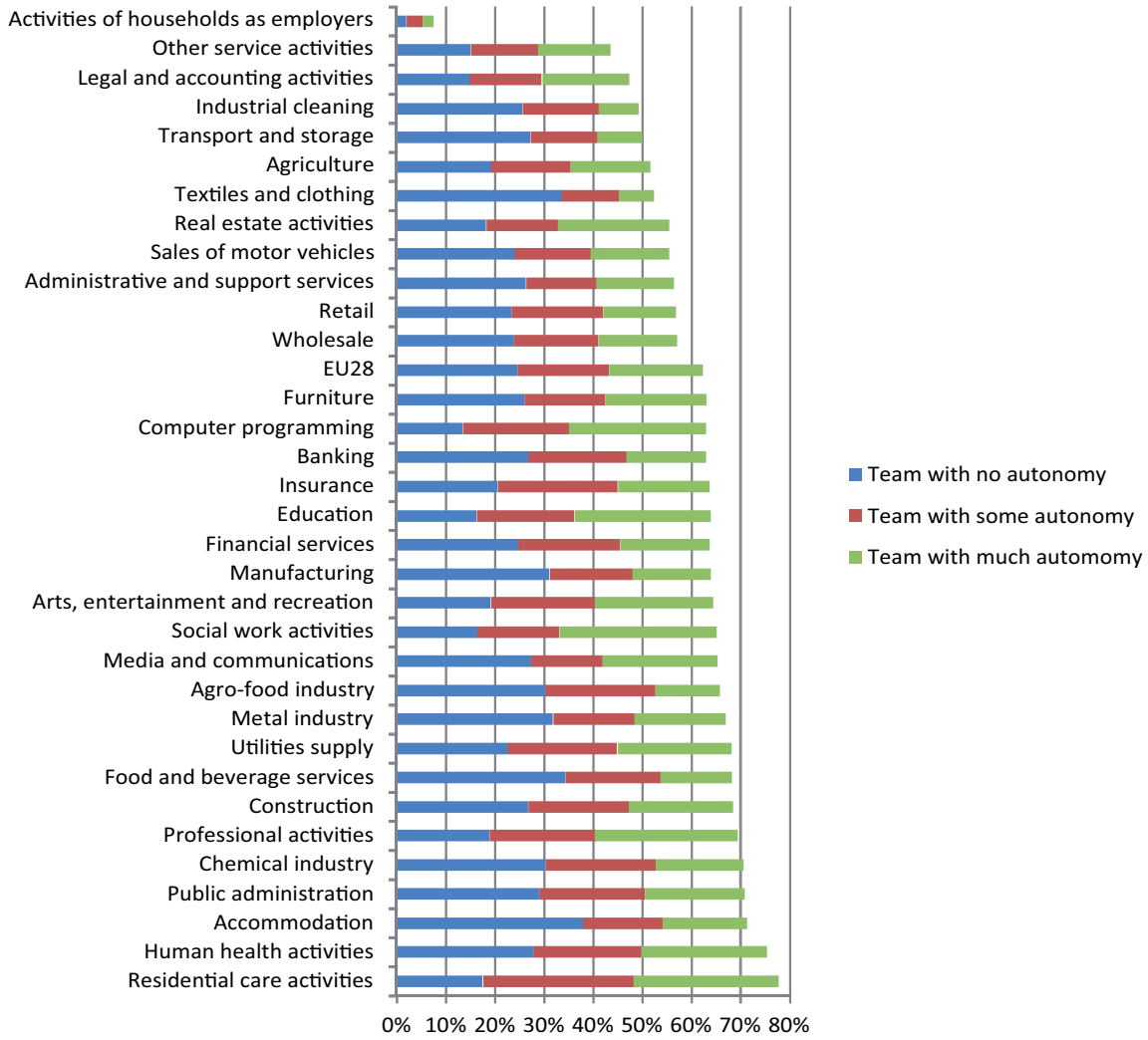
Work organisation

Another important aspect of working life is the way in which work is organised, including the allocation of tasks, the level of discretion workers have in carrying out those tasks, and pressures under which tasks are carried out. Teamwork has been considered as an alternative to traditional models of work organisation and can assume a variety of forms. It can be an efficient and effective way of making use of workers' skills and creativity, as well as fostering motivation and well-being, particularly when teams are given autonomy over their work.

The EWCS analyses different types of teamwork according to the level of autonomy workers have within the teams: 'no autonomy', 'some autonomy' and 'much autonomy'. Using these data, Figure 15 shows the prevalence of the different forms of teamwork in the different sectors. Activities of households has the lowest levels of team work (7%): this is not very surprising, given that over 90% of workers in activities of households work in workplaces with less than 10 workers. Among the other sectors, the prevalence of teamwork varies between 44% of workers in other services activities and 78% of workers in residential care.

Considerable differences are also found regarding team autonomy. In sectors such as residential care, professional activities, social work, education, and computer programming, semi-autonomous teamwork is much more prevalent than is management-directed teamwork. In textiles and clothing, accommodation, and transport and storage, the opposite holds true: the proportion of workers in teams with no autonomy is considerably bigger than that of workers in teams with at least some autonomy.

Figure 15: *Teamwork and team autonomy*



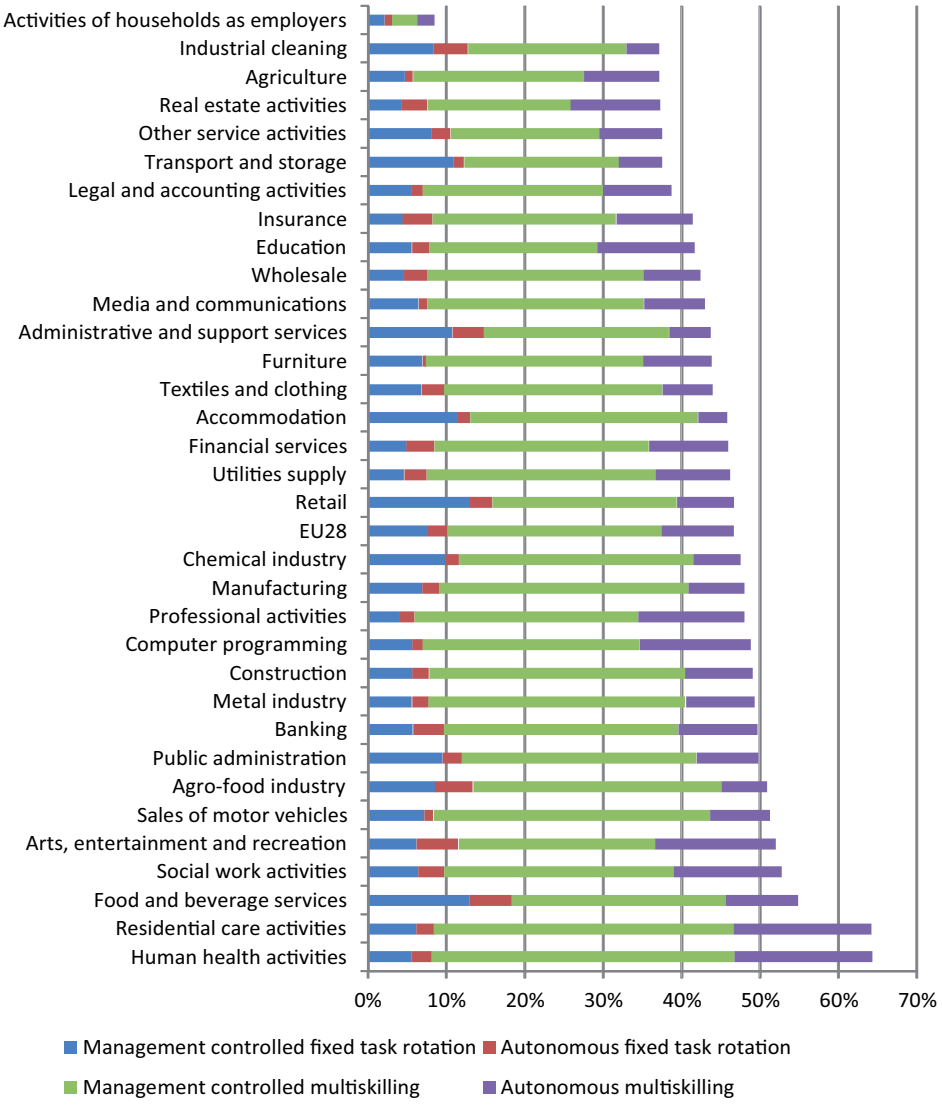
Another important feature of work organisation at the workplace captured by the EWCS is task rotation. Depending on how it is implemented, task rotation may or may not require different skills from the worker ('multiskilling' versus 'fixed task rotation') and is either controlled by management or by the workers themselves (autonomous). Task rotation has

been shown to be beneficial for worker well-being, and autonomous multiskilling systems are particularly associated with higher worker motivation as well as better company performance.

Figure 16 shows that some type of task rotation was reported by 47% of the workers in the EU28. This varies across the sectors, from around 37% in agriculture, real estate activities, and other services activities, to 64% in residential care and human health activities. Activities of households stands out again with the lowest level of multitasking reported by the workers: only 8%.

'Management controlled multiskilling' is the most common type of task rotation in all the sectors, while 'autonomous fixed task rotation' is the least prevalent. At EU level, the share of workers reporting 'management controlled fixed task rotation' is the same as those reporting 'autonomous multiskilling'. This pattern varies considerably across the sectors. In residential care and human health activities, for example, 'autonomous multitasking' was reported by about 18% of the workers, whereas those reporting 'management controlled fixed task rotation' did not exceed 6%. In contrast, 'management controlled fixed task rotation' was reported by 11% of workers in accommodation and 13% of workers in retail, compared to 4% and 7%, respectively, reporting 'autonomous multitasking'.

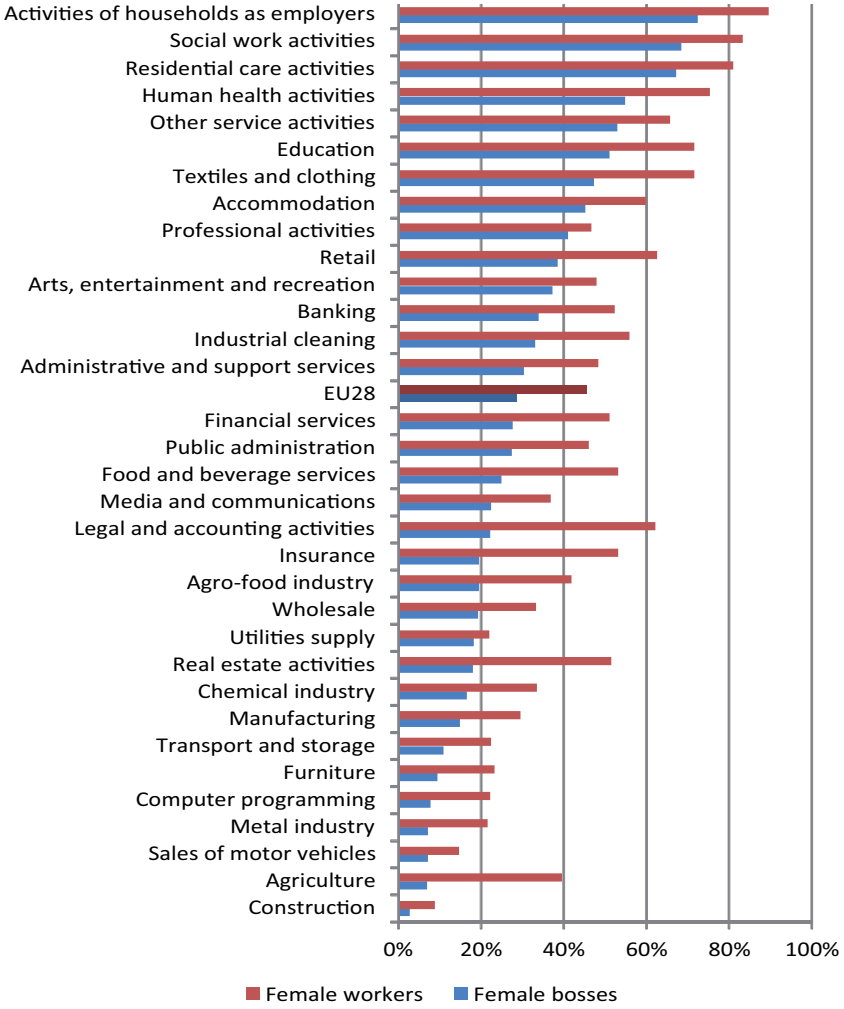
Figure 16: *Multitasking and multiskilling*



The division of tasks between men and women is also related to work organisation. Chapter 2 shows that sectors differ greatly in terms of the proportions of male and female employees. Similar differences are found when looking at the proportions of female managers, but as shown in Figure 17, the same pattern does not always emerge. Despite the fact that 46% of the EU28 workforce are women, only 29% of workers report that their immediate superior is female. Female bosses are least prevalent in construction (3%), agriculture, sales of motor vehicles, and the metal industry (7%), which are all very male-dominated sectors.

Female bosses are most prevalent in education (51%), other services (53%), human health activities (55%), residential care activities (67%), social work (68%) and activities of households (72%). Nevertheless, even in these sectors the proportion of female bosses is considerably lower than the proportion of female workers, and in none does the proportion of female bosses exceed the proportion of workers. These discrepancies are greatest in agriculture, construction, and the metal industry and smallest in utilities supply, residential care activities, and professional activities.

Figure 17: *Female workers and workers with a female boss*

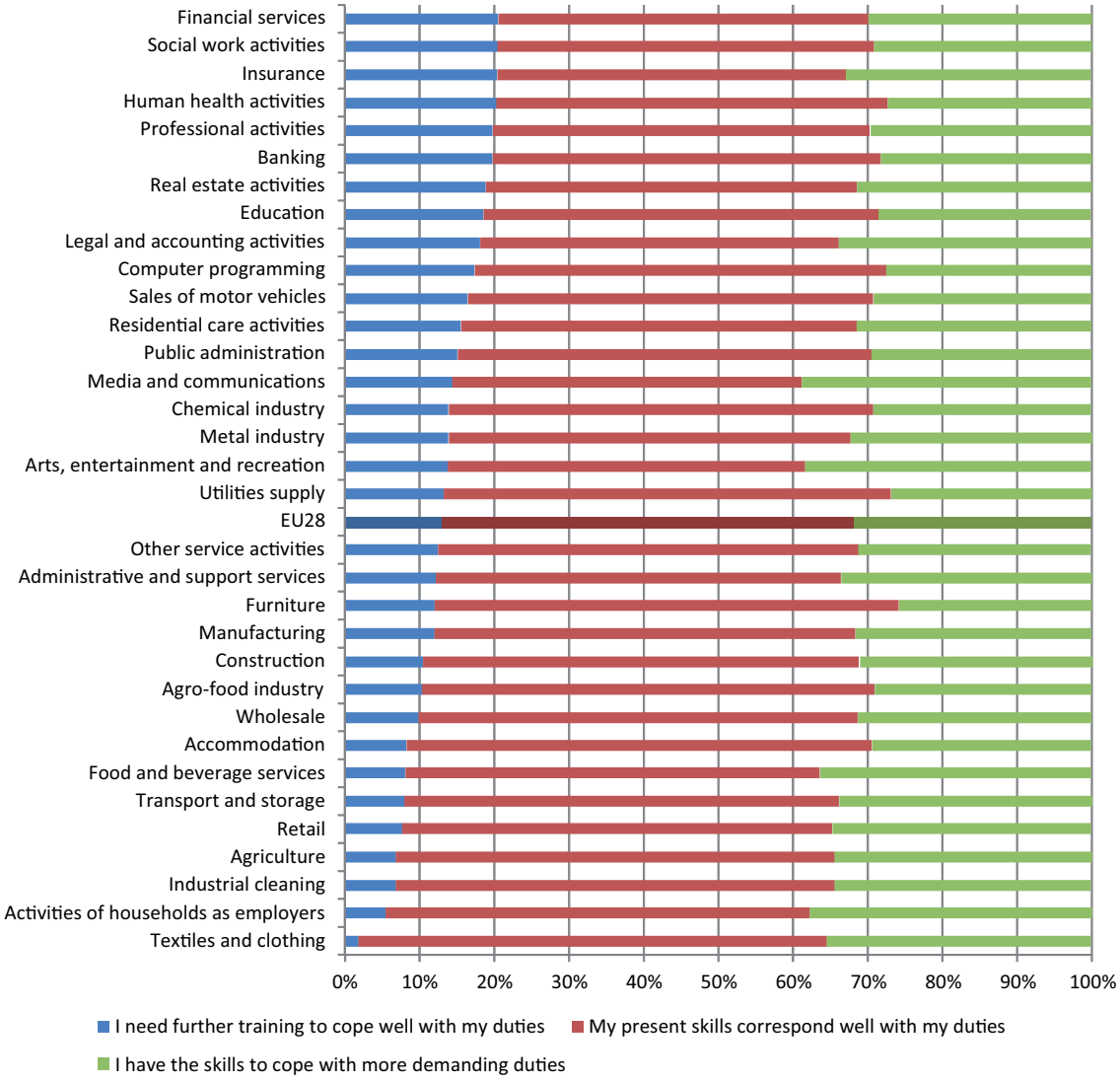


Skills and training

The match between workers' skills and the tasks they are expected to carry out in their job is an important factor in training. Figure 18 shows that in the EU28, the majority of workers (55%) considered that their skills at the time of the survey corresponded well with their duties. Similar results are found within different sectors, where the reported level of skills match ranges from 47% in insurance and media and communications to 60% in textiles and clothing, accommodation, the agro-food industry and furniture.

In the EU28, over one-quarter of workers reported they had the skills to cope with more demanding duties. These workers represent a particularly high proportion of those in media and communications (39%), arts and entertainment (38%) and activities of the household (38%). In the EU28, 13% of workers reported needing further training in order to manage their current duties, but this share varies quite considerably across the different sectors. It was reported by only about 2% of workers in textiles and clothing, compared to around 20% of those in financial services, social work, insurance, human health, professional activities and banking.

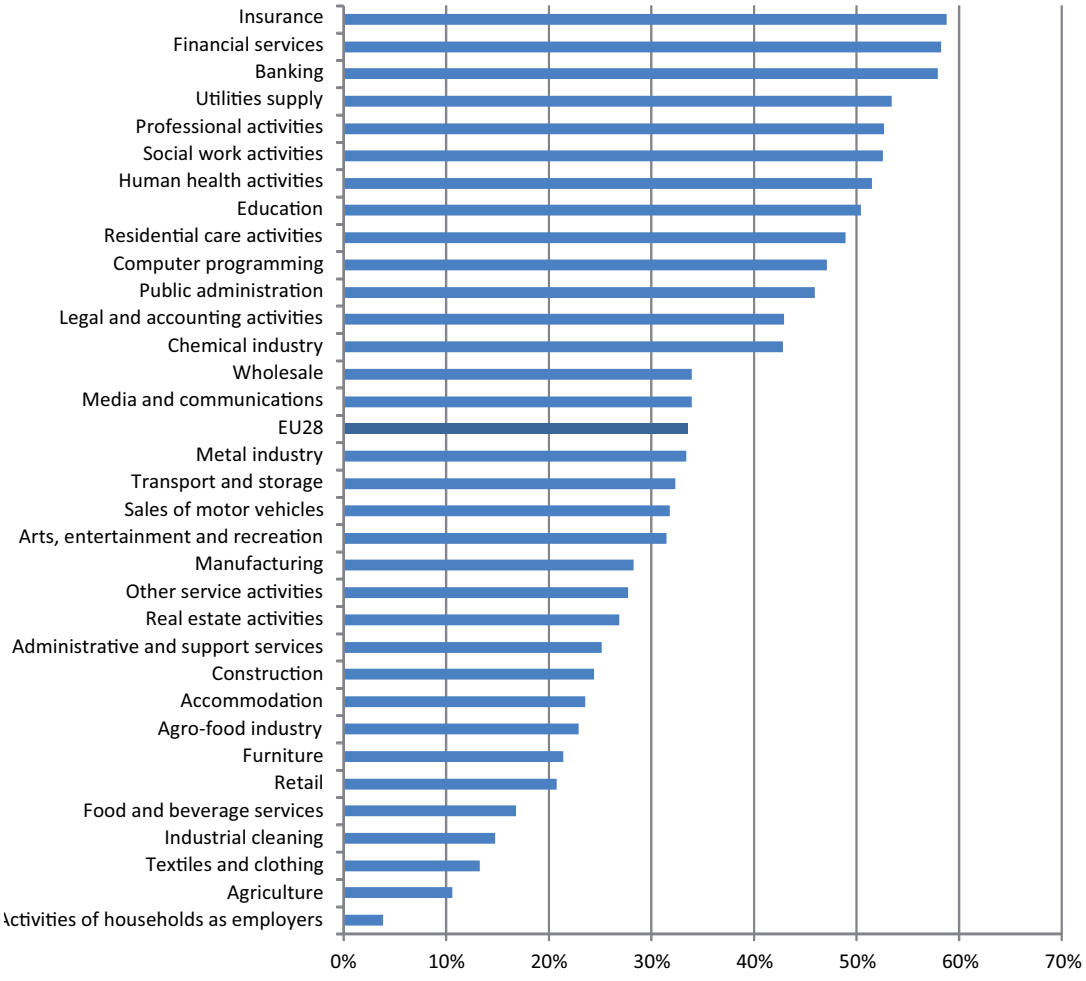
Figure 18: *Match between skills and tasks*



The EWCS asks workers whether they have received training paid for by their employer (or by themselves if they are self-employed) in the past 12 months (Figure 19). Overall, 34% of workers in the EU28 reported that they had received training paid for by their employers.[5] However, the differences between sectors are large. Almost 60% of workers in insurance, financial services and banking reported receiving employer-paid training, as did over 50% of workers in utilities supply, professional activities, social work, human health and education. At the other end of the spectrum, only a small proportion of workers reported receiving training paid for by the employer in the following sectors: activities of households (4%), agriculture (11%) and textiles and clothing (13%).

Figures 18 and 19 show that sectors where a relatively high proportion of workers report needing further training to manage their current duties (such as financial services, insurance, social work and human health) also have relatively high proportions of workers who report having received training paid for by their employer. Jobs in these sectors tend to be high-skilled and the skill requirements tend to be quite dynamic: this is reflected both in the fact of workers reporting the need to update their skills and in their employers responding to that need.

Figure 19: *Workers having received employer-paid training*



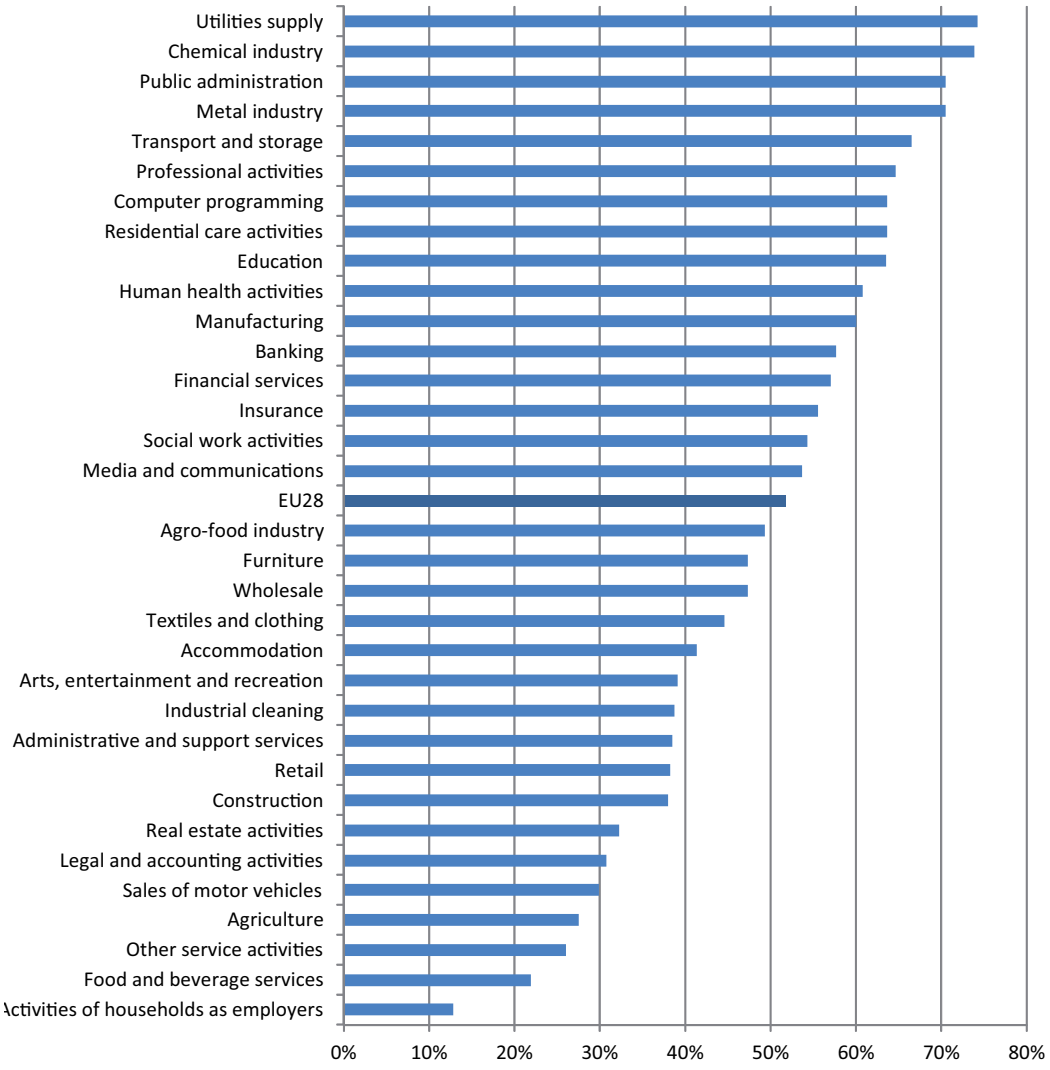
[5] It is not possible, however, to go into detail, such as the number of training events, training course content, duration, time schedule (including if it is considered as working time, private time, or both), or certification.

Employee representation

The EWCS contains fairly limited information on formal employee representation. It asks whether an employee representative is present at the workplace and whether workers have raised an issue with an employee representative in the previous year. Figure 20 shows the combined results of these questions – whether an employee representative has been considered to be 'available' if they are present at the workplace, or when an issue was raised.

Overall, 52% of workers in the EU28 report that an employee representative is available at the workplace. Sectors differ considerably in terms of the reported availability of an employee representative at the workplace level. Employee representatives are reported to be available to 74% of workers in utilities supply and the chemical industry, compared to 13% of those in activities of households, 22% in food and beverage services, 26% in other services and 27% in agriculture. Workplace size is an important explanatory factor here.

Figure 20: *Employee representative at the workplace*



The 2002 Information and Consultation Directive (2002/14/EC) established a general framework for informing and consulting employees. It stipulates that employee representation must be organised in workplaces with 50 employees or more. Consequently, it follows that sectors with a greater prevalence of larger workplaces also show a more widespread availability of employee representatives at the workplace.

Psychosocial and physical environment

Health and safety policy is an important competence of the EU. Article 153 (paragraphs 1 and 2) of the Treaty on the Functioning of the European Union (TFEU) authorises the Council to adopt, by means of directives, minimum requirements as regards:

> *improvement in particular of the working environment to protect workers' health and safety.*

Directive 89/391 places an explicit responsibility on the employer to adapt

> *the work to the individual, especially as regards the design of work places, the choice of work equipment and the choice of working and production methods.*

Confronting new and increasing risks and improving the measurement of progress are important objectives of the European Community Strategy for Health and Safety at Work (2007–2012).

The EWCS has been extended throughout its 20-year existence and its questionnaire has to some extent paralleled – albeit with a slight delay – the growing focus on the health and well-being of the workforce, as outlined by Anttonen and Räsänen (2009) and further elaborated by Schulte and Vainio (2010). Initially, the questionnaire mainly focused on physical risk factors but was gradually expanded to include psychosocial risk factors, and more general information on well-being at work.

These developments have resulted in a series of changes, such as an increase in the number of risk factors measured by the survey, and, in particular, more attention given to so-called 'psychosocial' risks. More attention is also devoted to describing the combined exposure of workers to multiple risk factors as well as to identifying and understanding risk exposure in relation to other work characteristics (or quality of work and employment dimensions).

Two of the main psychosocial risks that are receiving much attention relate to the balance between job control and work demands and the issue of adverse social behaviour, including different types of violence and harassment.

Theoretical models are important because they provide an explanation for associations between work and health, select the relevant component from the complex reality and allow for generalisation beyond single observations. The 'job demand and job control' model of the American sociologist Robert Karasek explains stress at work as the interaction between psychological demands from work and the degree of control or decision latitude of the worker (see Karasek, 1979). Although it has received some criticism (see for instance Mansell and Brough, 2005), this model is widely used. It hypothesises that job strain – work-related stress – is highest when workers are put under high work demands while being limited in the extent to which they control the way in which they carry out their job.

Figure 21: *Distribution of sectors by average levels of job autonomy and work intensity*

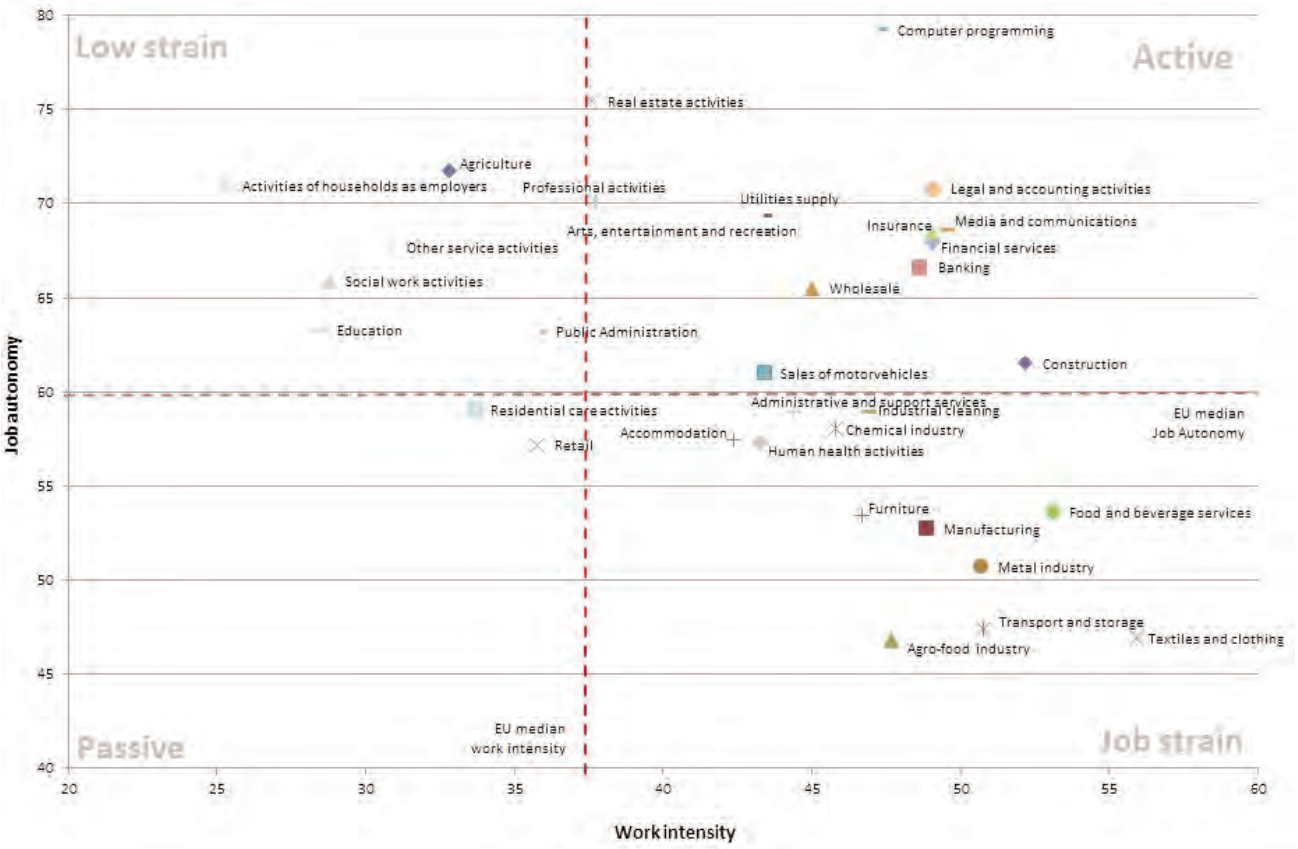


Figure 21 shows the distribution of sectors based on their average levels of job autonomy and work intensity.[6] It shows that some service sectors, like computer programming, legal and accounting activities, media and communications, and financial services, are positioned in the top-right quadrant. Workers in these sectors tend to be in 'active jobs' with relatively high levels of work intensity but also with relatively high levels of autonomy. Although their jobs can be very demanding, they have sufficient discretion to choose the way in which they do their job as well as to develop coping strategies through active learning, and are challenged into developing their potential to the full.

Workers in residential care and retail are in the bottom-left 'passive jobs' quadrant, although both sectors are very close to the EU median on both dimensions. 'Passive'jobs' are characterised by relatively low levels of intensity and autonomy. Their jobs are often not sufficiently challenging and although workers in these types of jobs do not run a great risk of work-related stress, 'the model predicts that [these] jobs at the opposite extreme (defined as "passive jobs") induce a decline in overall activity and a reduction in general problem-solving activity' (Karasek, 1979, p. 288). Workers in these jobs are not in a position to change much about the content of their work or how they go about it.

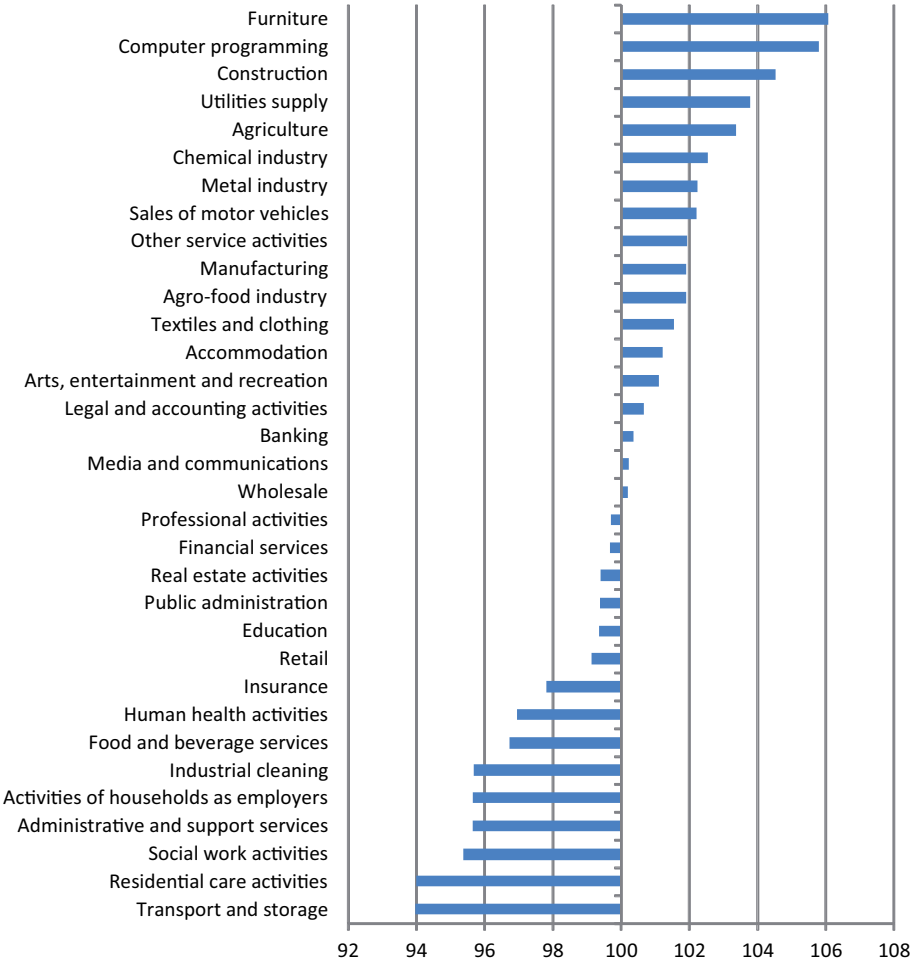
[6] The average masks differences between groups of workers within the sectors – more information on this can be found in each of the individual information sheets.

Agriculture, education, social work, activities of households, public administration and other services are in the upper-left quadrant: 'low-strain jobs'. These jobs are characterised by relatively low levels of work intensity and relatively high levels of job autonomy. Workers in this category are usually at low risk of stress, and are less likely to suffer from frustration and loss of motivation than those in passive jobs. However, their jobs might not challenge them to realise their full potential.

Finally, textiles and clothing, transport and storage, and the agro-food industry, among others, can be found in the bottom-right 'job strain' quadrant. This is the most problematic category, as many of these jobs are characterised by higher than average levels of intensity as well as lower than average levels of autonomy. Workers therefore run the risk of accumulating high levels of unresolved strain, which can cause unhealthy stress levels and consequently a range of stress-related illnesses such as cardiovascular disease and mental health problems.

The social environment in which workers carry out their jobs is an indicator of the job quality index. Together with job autonomy and work intensity, it is one of the key aspects for assessing the psychosocial work environment. It summarises the quality of social relationships at the workplace, which can manifest themselves positively (a good level of social support) as well as negatively (for example, through abuse or bullying). Both dimensions are important for the social environment. A good social environment is characterised by high levels of social support and the absence of adverse social behaviour. Figure 22 shows that differences between sectors are not very large. The lowest scores, found in transport and storage and residential care activities, are only 6% lower than the EU28 average. The highest scores, found in furniture and computer programming, are only 6% higher.

Figure 22: *Index of good social environment*

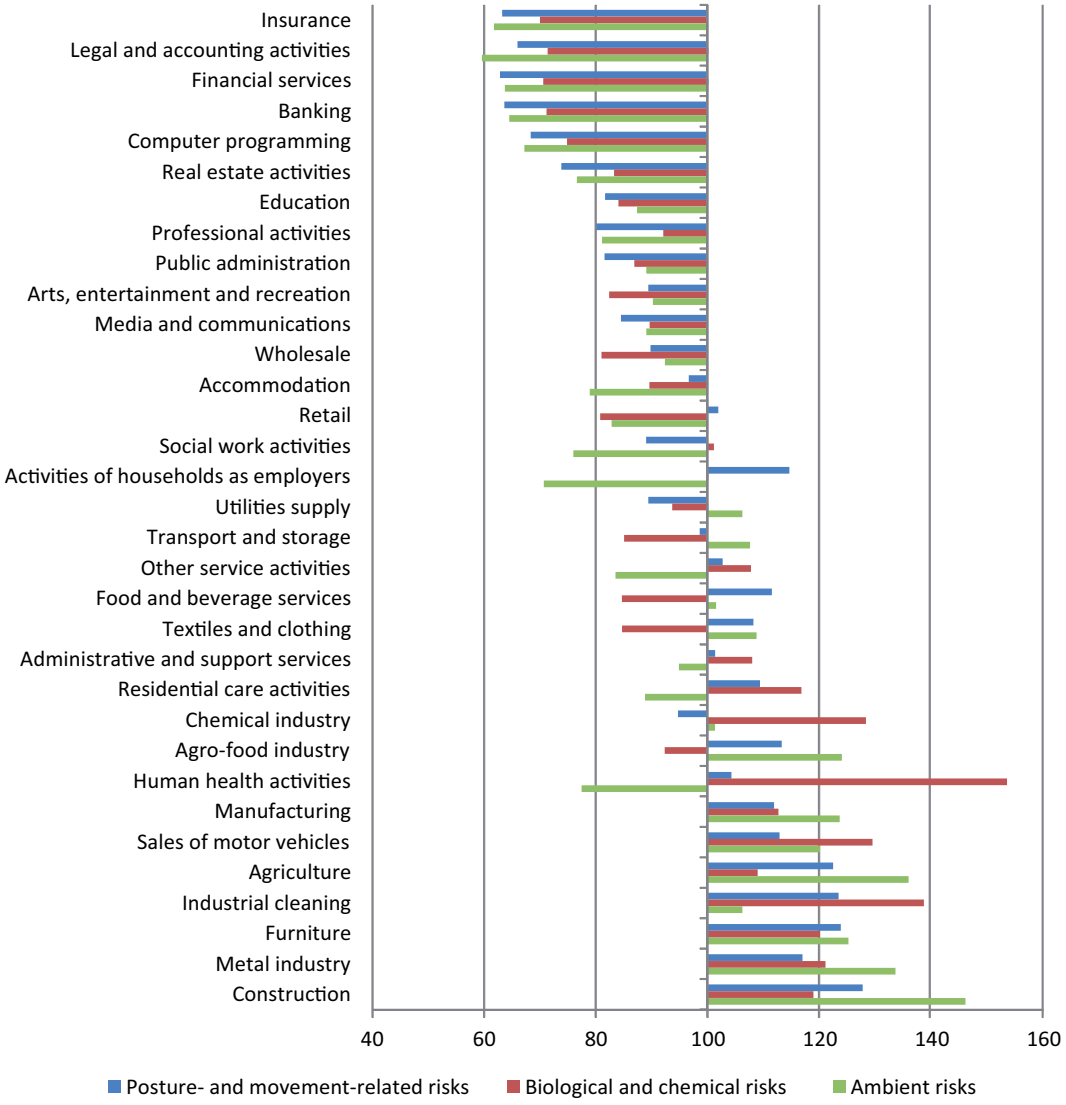


Note: EU28 = 100

Apart from psychosocial environmental factors, the fifth EWCS included questions on a wide range of physical risks. To facilitate comparisons between various sectors, indices were constructed, combining questions on ergonomic risks, biological and chemical risks and ambient risks.

Figure 23 shows the relative levels of exposure to posture- and movement-related risks, biological and chemical risks, and ambient risks for each sector. A clear pattern is that risks tend to cluster together. One group of sectors with predominantly 'office' jobs – all sectors ranked between insurance and real estate activities – show markedly lower levels of exposure to all three types of physical risks than the EU28 average. On the other side, in another group of sectors – ranked between manufacturing and construction – relatively high levels of exposure are found for all three types of physical risks.

Figure 23: *Indices of exposure to physical risks*

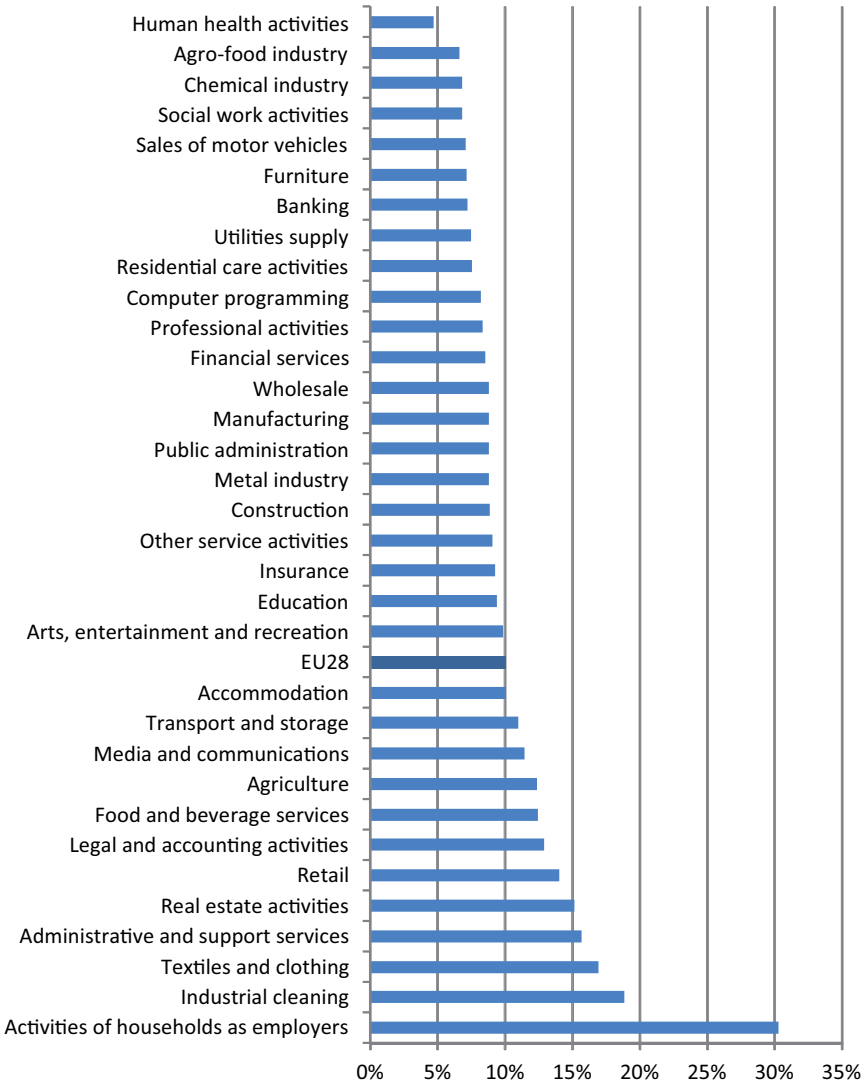


Note: EU28 = 100

Finally, there are some sectors where the relative exposure levels are very different for the three types of risks. For example, human health activities show the highest level of exposure to biological and chemical risks but a relatively low level of exposure to ambient risks. The same pattern, though less pronounced, is found for the chemical industry and for residential care. Similarly, exposure to posture- and movement-related risks is relatively high in activities of households, while exposure to ambient risks is low.

In order to prevent accidents and diseases and to deal with existing risks, EU Directive 89/391 obliges companies to inform workers about their health and safety risks at work. In the fifth EWCS, workers reported the extent to which they felt they were sufficiently informed about workplace risks (Figure 24). The vast majority of workers in the EU28 (90%) reported they are 'well informed' or 'very well informed'. This implies that one in ten workers are 'not very well informed' or 'not at all informed' about health and safety risks at work. Activities of households is exceptional in this respect, having a particularly large proportion of workers reporting they are not well informed (30%). But this share is also relatively large in real estate (15%), administrative support (16%), textiles and clothing (17%) and industrial cleaning (19%).

Figure 24: *Workers not well informed about health and safety risks at work*



Note: This figure presents figures on those who reported being either not very well or not at all well informed about health and safety risks at work.

More than 15% of workers in textiles and clothing and in industrial cleaning are not well informed about health and safety risks at work. Sectors where workers report they are well informed are: human health activities, the agro-food industry, the chemical industry and social work, where less than 7% of workers report a lack of information on workplace risks. Interestingly, in human health activities, the agro-food industry and the chemical industry sectors, workers report relatively high levels of exposure to biological, chemical and ambient risks.

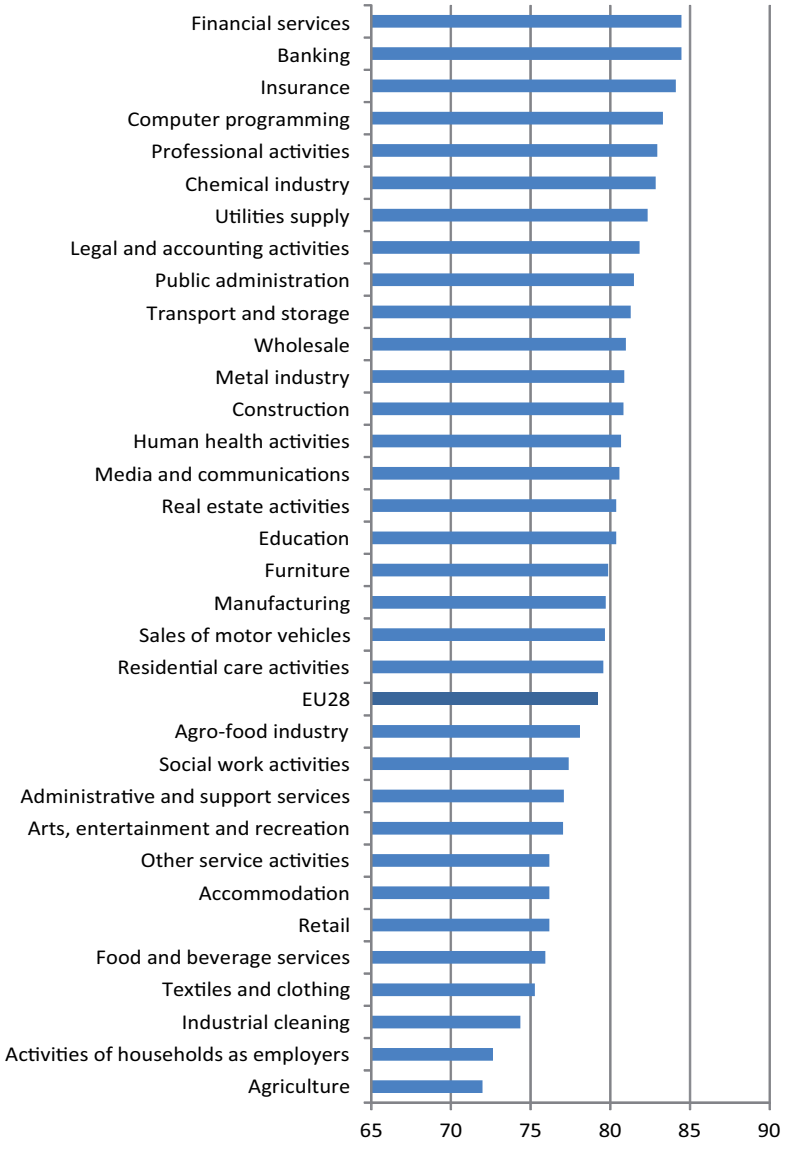
Job quality 4

The introduction to the report referred to the analysis by Green and Mostafa (Eurofound, 2012f) of job quality as being comprised of four dimensions: earnings, working time quality, intrinsic job quality and prospects. This chapter presents the findings for each of these four core dimensions. It also identifies the extent to which workers in each sector report a relatively good or a relatively poor job quality across all four dimensions.

The level of monetary reward is a core element of job quality, and the main element of reward is pay (or earnings for the self-employed). It has been widely found that wages in Europe vary across industries, and that differences exist even among otherwise similar groups of workers (Magda et al, 2011). The scale is based on the natural logarithm of reported monthly earnings, converted into a scale ranging between 0 and 100.

Figure 25 shows how earnings vary across sectors in Europe. They are highest in financial services, banking, insurance and computer programming, and lowest in agriculture and activities of households, followed by industrial cleaning, textiles and clothing, food and beverage services, retail, accommodation and other services.

Figure 25: *Earnings*

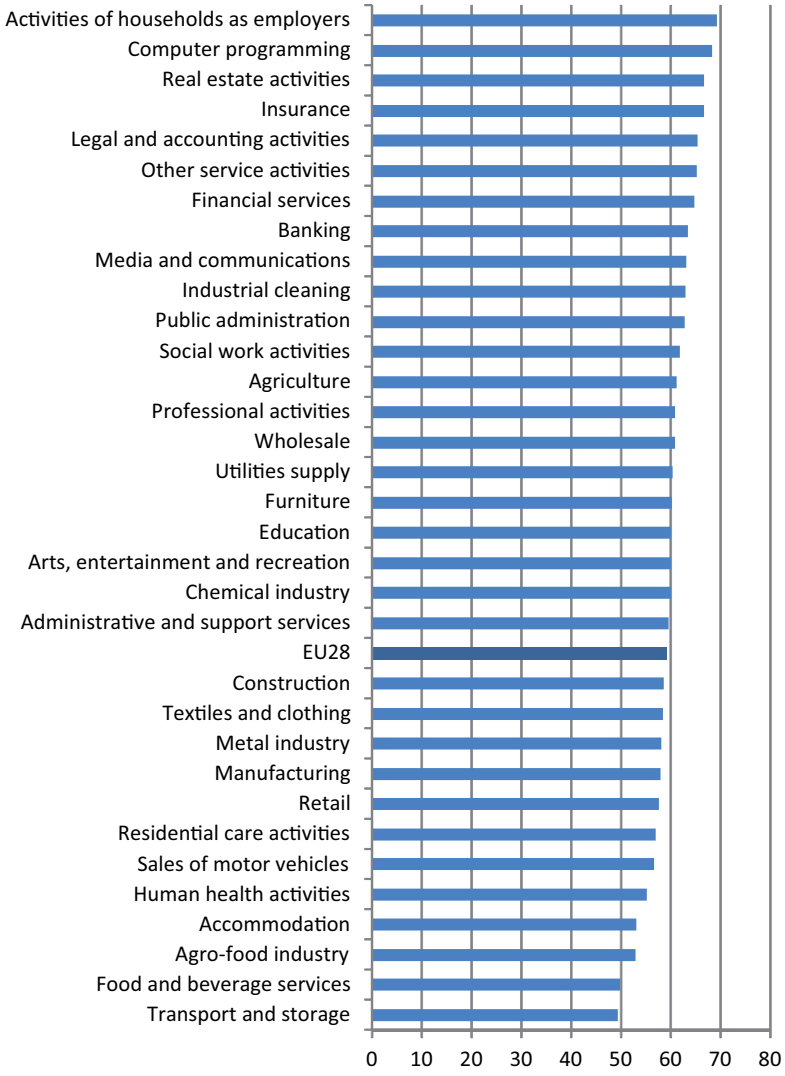


Note: Monthly earnings based on the scale 0–100

Working time quality includes work duration, scheduling, discretion and short-term flexibility over working time. It is indicative of the extent to which job demands can be expected to fit well with private demands, including some of the indicators discussed in Chapter 3.

While the activities of households sector has a low earnings score, it has the highest score for working time quality (Figure 26). Other sectors with a relatively good working time quality include computer programming and clerical service activities such as real estate, insurance, and legal and accounting services. Jobs with the lowest working time quality are found in transport and storage, food and beverage services, the agro-food industry, accommodation and human health activities. It must be noted that working a higher number of hours results in a lower score on the index, which implies that those working in short part-time jobs get a high score on the working time quality indicator. Scores on the indicators of earnings (which is based on monthly earnings) and prospects are usually much lower for these jobs.

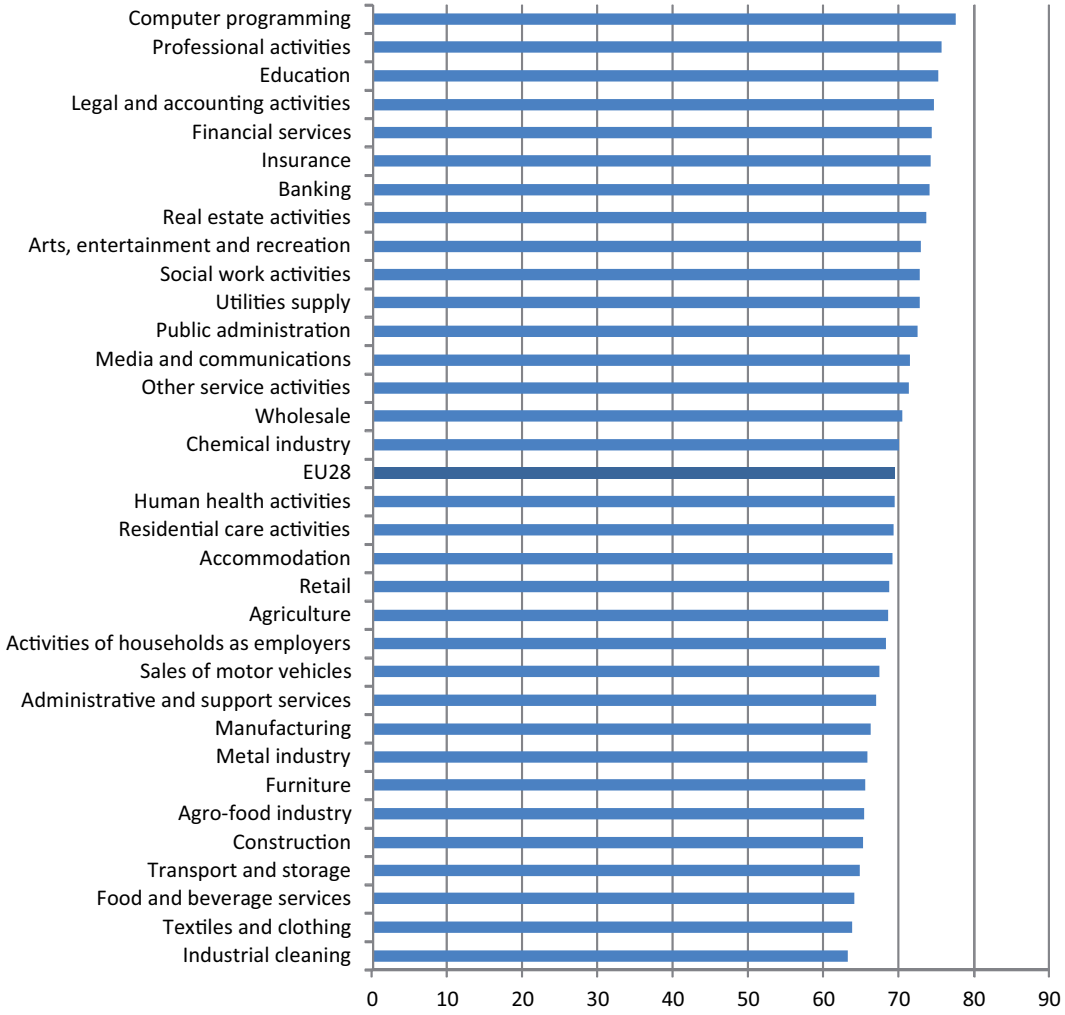
Figure 26: *Working time quality*



The third dimension of job quality – intrinsic job quality – is about work and its environment. This dimension is made up of four subdimensions: the quality of the work itself, the social environment in which workers are situated, the physical environment, and the intensity or pace of the work. It also includes many of the indicators discussed in Chapter 3. This dimension is calculated by weighing these four subdimensions equally, thereby giving them equal importance.

As shown in Figure 27, the lowest levels of reported intrinsic job quality are found in industrial cleaning, textiles and clothing, food and beverage services, and transport and storage. Jobs with relatively good intrinsic quality are found in computer programming, professional activities, education, and clerical service activities such as legal and accounting activities, financial services, insurance and banking.

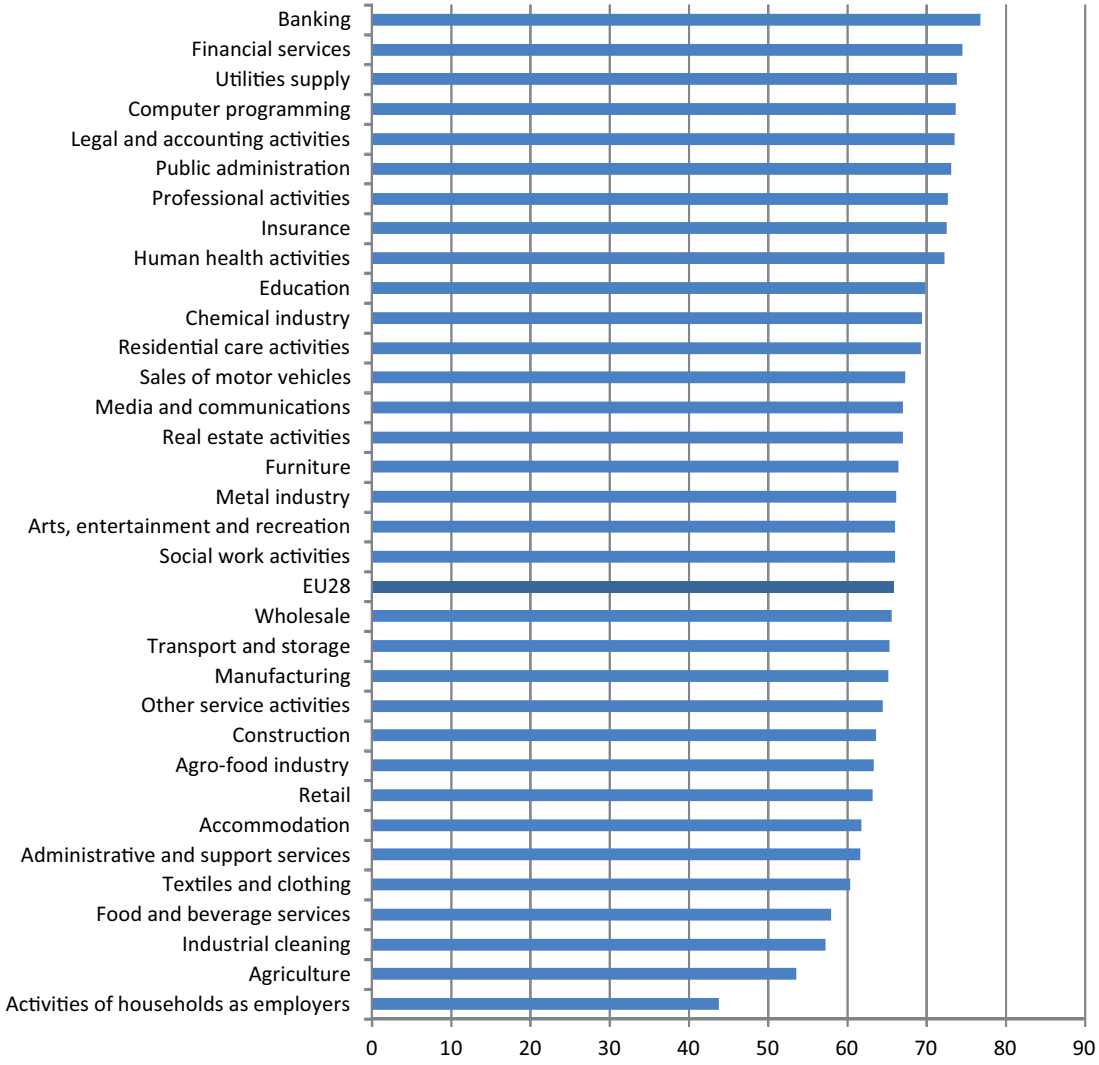
Figure 27: *Intrinsic job quality*



The last dimension of job quality considered here is prospects. This refers to aspects of a job that contribute to a person's need for employment. This need is related to the need for income, employment continuity and enhancement. Key features include job security and prospects of advancement in a job.

Prospects are particularly good for jobs in banking, financial services, utilities supply and computer programming (see Figure 28). Interestingly, these sectors also have relatively good intrinsic job quality and some involve relatively high earnings. Jobs with the worst prospects are found in activities of households, agriculture, industrial cleaning, food and beverage services, and textiles and clothing.

Figure 28: *Prospects*



The rankings of the sectors on each of the individual dimensions are interesting in their own right, as they show the extent to which various aspects of jobs in each of the sectors can be expected to have a positive impact on worker well-being. However, as poorer quality in one dimension, such as lower earnings, can be offset by better quality in another dimension, such as better intrinsic job quality, it is important to look at the overarching picture. Closer consideration makes it possible to identify those sectors with predominantly high-quality jobs and those with predominantly low-quality jobs. This can be done by ranking the sectors on each of the dimensions and then identifying those that are in either the top or bottom half of the ranking on all four of the dimensions. When looking at the averages, as they are presented in Figures 25–28, the following sectors emerge as having predominantly high-quality jobs: banking, computer programming, utilities supply, financial services, insurance, legal and accounting activities, media and communications, professional activities, public administration and real estate activities. The sectors with predominantly low-quality jobs

are: accommodation, administrative services, the agro-food industry, food and beverage services, retail, manufacturing, and textiles and clothing. The remaining 16 sectors score relatively well on one or more dimensions but score relatively poorly on others.

This initial distinction does not take into account the fact that sectors differ in terms of the characteristics of their workers. Sectors differ in the extent to which they are male- or female-dominated, average workplace size, the age and education of workers, and the prevalence in different European countries. All of these factors are likely to impact on the sector average for each of the job quality indicators. It can therefore be argued that to give a fair representation of the relative job quality in sectors it is necesary to correct for the composition of the workforce in each sector. When controlling for composition effects based on gender, age, education, workplace size and country, slightly different results emerge. The following sectors score well on all job quality indicators: the chemical industry, utilities supply, banking and insurance, real estate activities, legal and accounting activities, and financial services. It should be noted that computer programming, media and communications, public administration and professional activities have dropped out of this group – their favourable scores were particularly closely correlated with the level of education of the workers in these sectors. The chemical industry, nonetheless, has entered the group: workers in this sector score relatively well on the job quality indicators compared to workers with similar characteristics.

In the bottom group are administrative services, the agro-food industry, food and beverage services, textiles and clothing, transport and storage, and construction. This implies that the relatively low scores on the job quality indicators that were found for accommodation, retail and manufacturing can largely be explained by the differences in gender, age, education, workplace size and country. Yet, workers in construction and transport and storage score relatively poorly on the four job quality indicators compared to workers in other sectors with similar characteristics. In these sectors, as in administrative services, the agro-food industry, food and beverage services, and textiles and clothing, specific attention needs to be paid to the fact that a large number of workers are facing multiple disadvantages, as these workers are particularly at risk of suffering from poor mental and physical well-being.

Health and sustainability of work 5

Establishing the relationship between work and health is not a straightforward matter. While health is to a large degree affected by the work environment, it is also determined by the personal behaviour, lifestyle and living conditions, institutional and economic context, and genetic make-up of workers. Simultaneously, their health is likely to affect the choices workers make or see themselves forced to make in terms of their career and their employment in general, the opportunities they are offered, and the general attitude of other workers towards them.

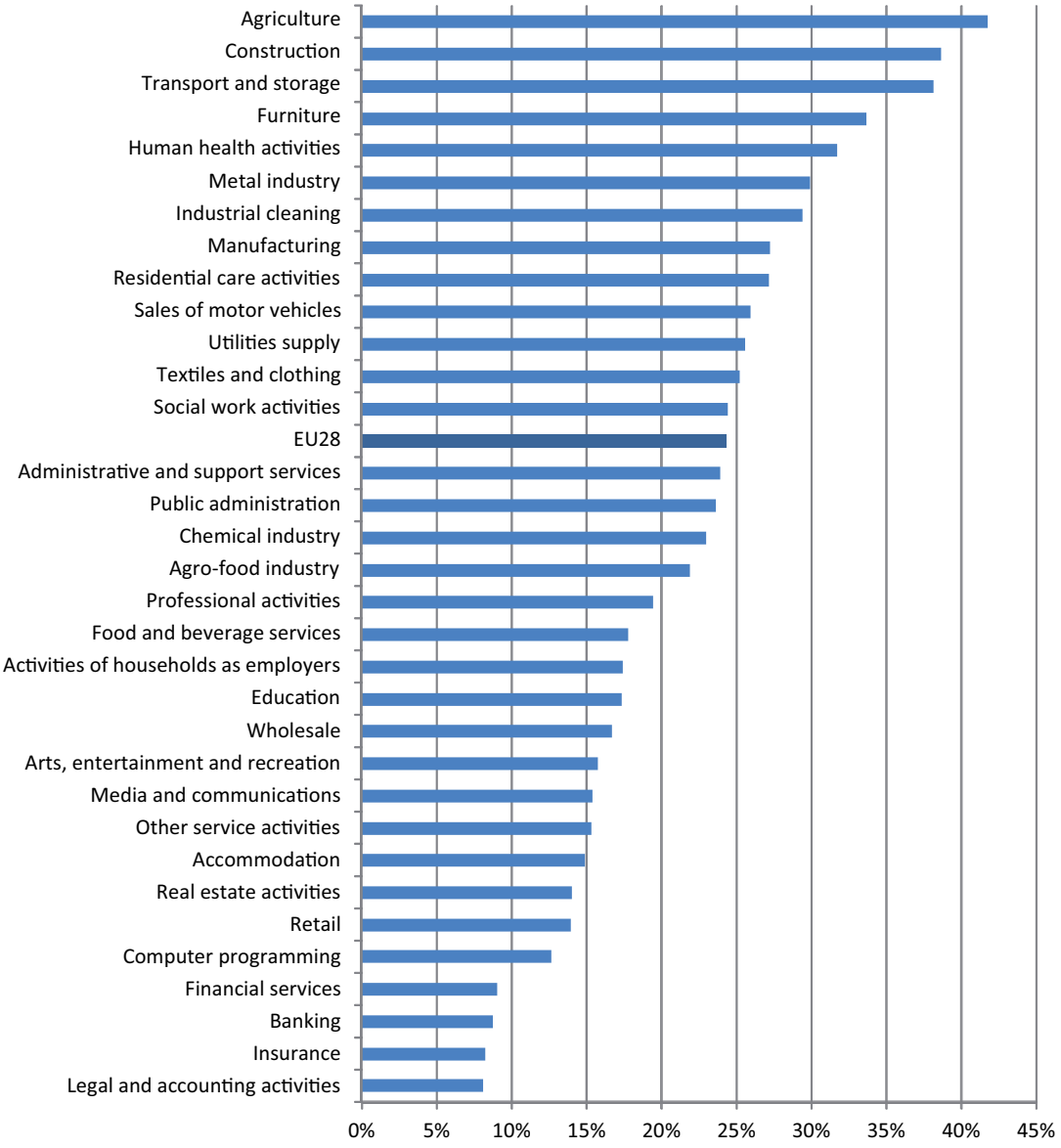
In the workplace, workers are exposed to different risks with specific health impacts. Exposure to some risks has a direct impact on health: for example, exposure to loud noise may lead to temporary or long-term hearing problems. This might also be true for work-related stress, which can impact directly on physical or mental health. Exposure to other risks impacts health indirectly: for example, work-related stress has been shown to be related to smoking and eating and drinking behaviour that negatively affects health.

Nonetheless, many health problems are caused by a wide range of factors, rather than a single physical or psychosocial risk. Furthermore, the effect of exposure to risk factors is likely to vary depending on a wide number of individual factors, such as genes, lifestyle and socioeconomic status.

This chapter looks at health and well-being outcomes and sustainability of work variation across economic sectors, including health risk, self-reported health, accidents, absenteeism, presenteeism and ability to work at the age of 60.

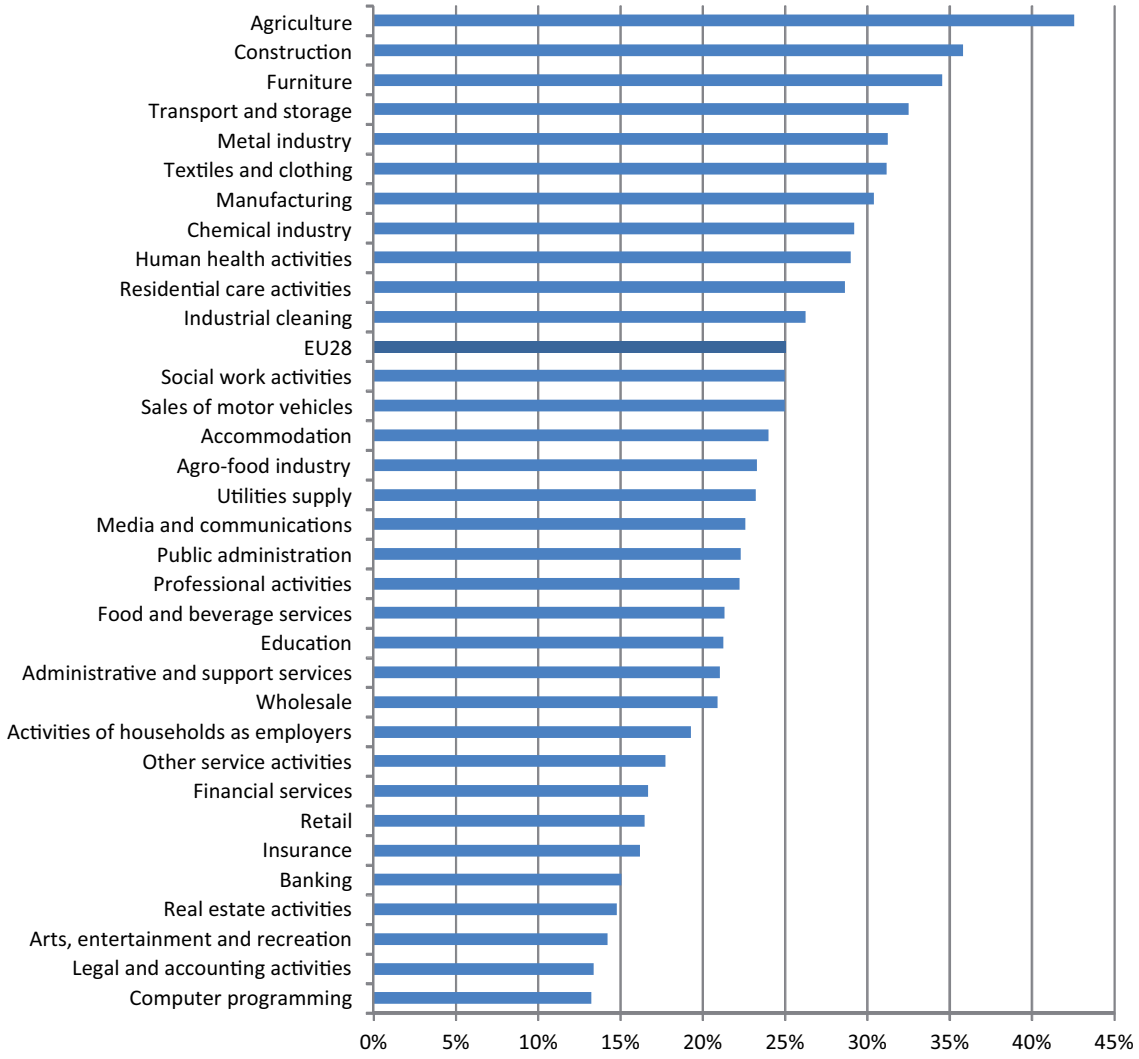
One major question in the EWCS asks respondents whether they feel their health and safety is at risk because of their work, to which 24% respondents in the EU28 respond positively (see Figure 29). This proportion of workers is highest in agriculture, construction, and transport and storage (between 38% and 41%). A very different situation is found in legal and accounting activities, insurance, banking and financial services, where less than 10% of workers feel their health and safety is at risk because of work.

Figure 29: *Health is at risk because of work*



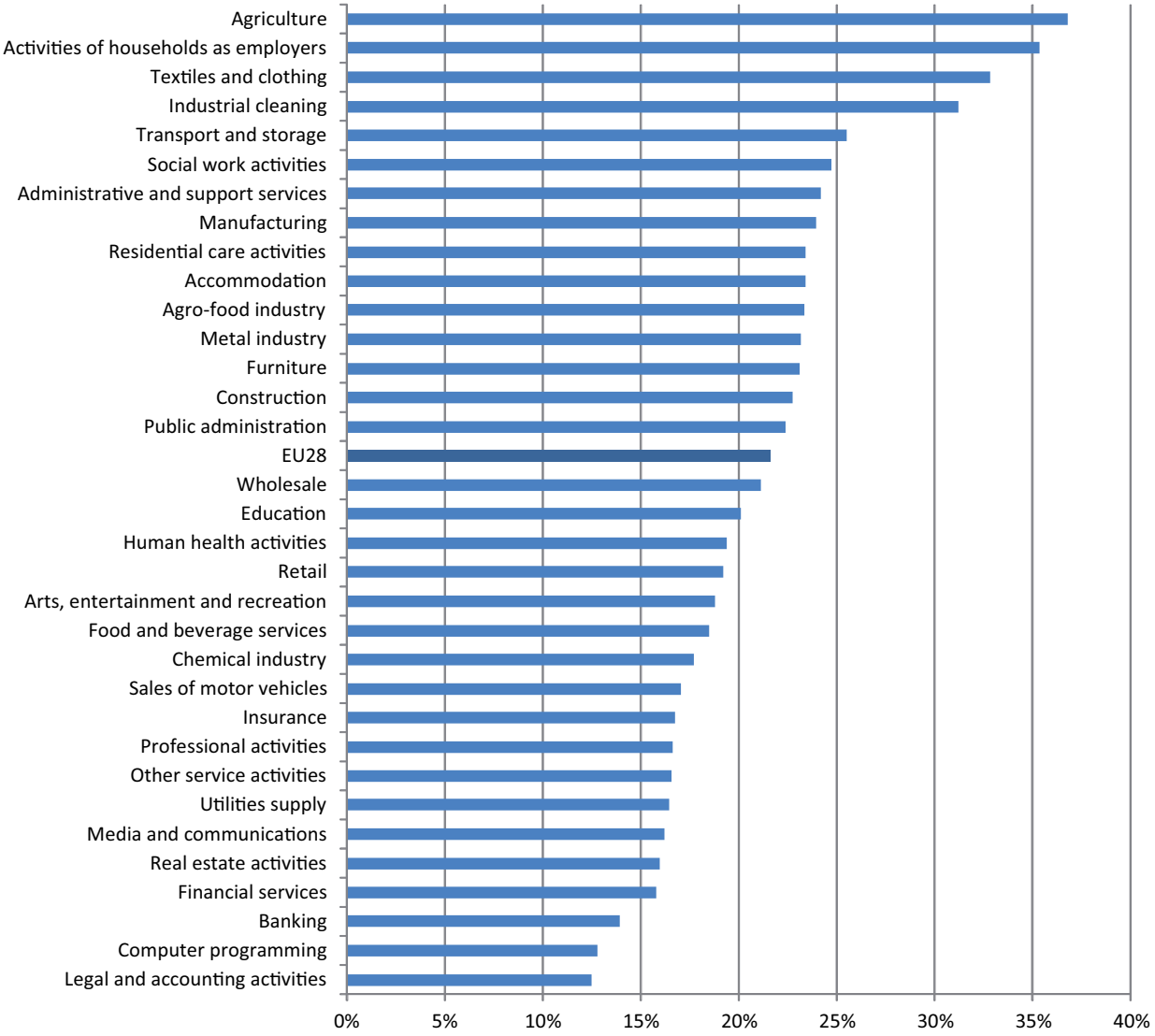
Another question asks whether workers feel that their work affects their health negatively, to which 25% responded positively (Figure 30). As was the case for reported health and safety risks, the highest proportions of workers reporting a negative effect of work on health are found for agriculture, construction, furniture, and transport and storage (between 32% and 42%). Similarly, the lowest proportion of workers reporting a negative effect of work on health are found in banking, real estate activities, arts, entertainment and recreation, legal and accounting activities, and computer programming. All of these sectors also had low proportions of workers reporting health and safety risks.

Figure 30: *Work affects health negatively*



Workers were not only asked to assess the relationship between work and health, they were also asked to provide assessments of their own health situation. Figure 31 shows the proportions of workers reporting poor health. Poor health is reported by 22% of workers in the EU28 but varies considerably across sectors. Sectors with the highest percentages of workers reporting their health is at risk because of work also have a high proportion of workers reporting poor health, ranging from 37% for agriculture to 26% for transport and storage. Other sectors falling within that range are activities of households, textiles and clothing, and industrial cleaning. However, the proportion of workers in construction and in furniture reporting poor health is closer to the EU28 average than would be expected from the proportion of workers reporting their health being at risk because of work and reporting that their work affects their health negatively. At the opposite side of the spectrum, a relatively low proportion of workers report poor health in legal and accounting activities and computer programming. Both are also sectors with a relatively small share of workers reporting a negative impact of work on health.

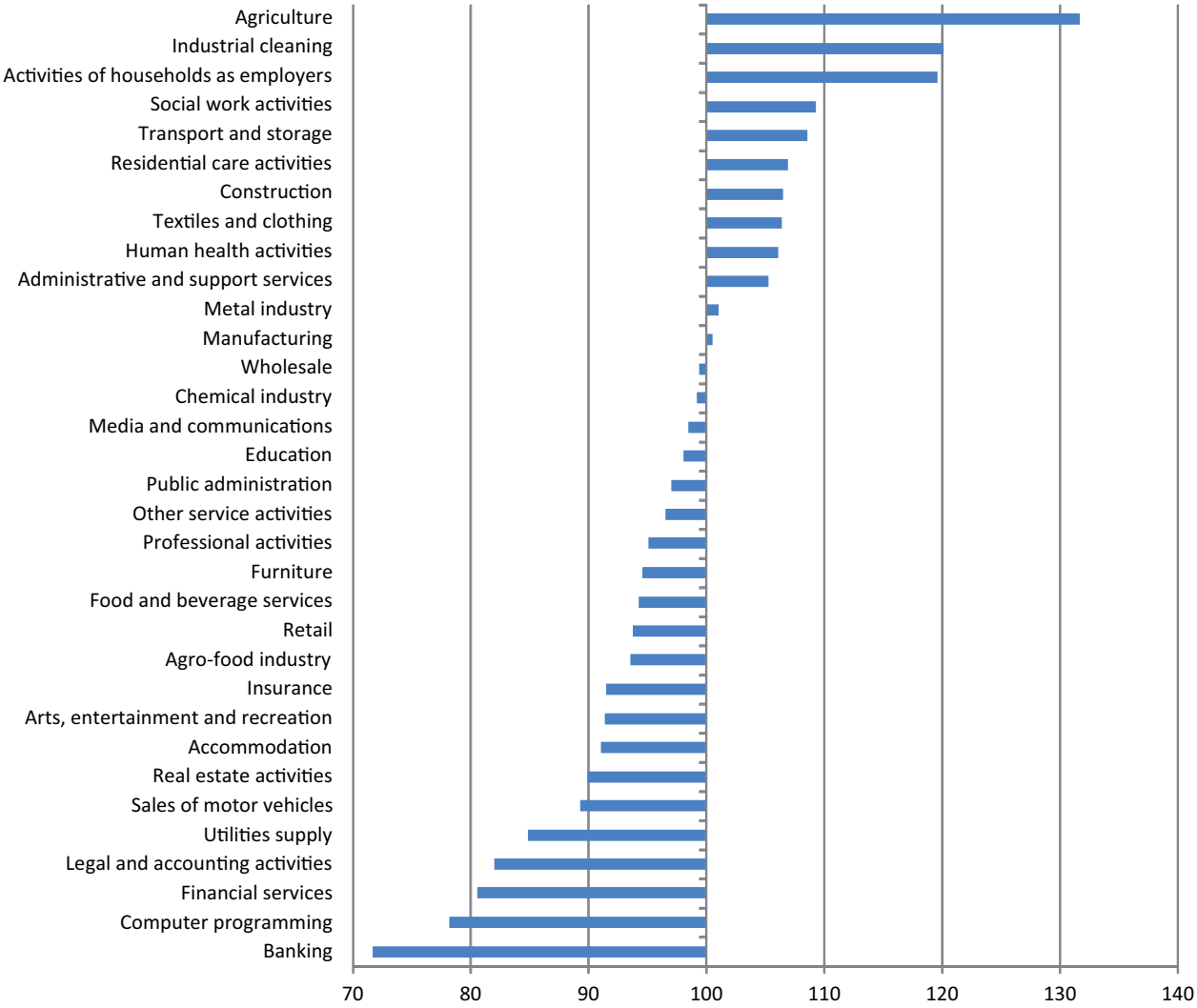
Figure 31: *Poor health*



Note: This includes those who rated their health as being fair, bad or very bad.

In addition to this overall health assessment, respondents were asked to indicate whether or not they suffered from any of a number of health symptoms. Figure 32 displays an index that is based on the number of health symptoms reportedly suffered by respondents in each of the sectors. The pattern revealed is very similar to that of the previous figures. The average number of health symptoms reported by workers in agriculture is more than 30% higher than that reported by workers in the EU28 as a whole. The average number of reported health symptoms is also particularly high in industrial cleaning and activities of households. At the other end of the scale are financial services, computer programming and banking – where the average number of reported health symptoms is between 19% and 28% lower than in the EU28 as a whole.

Figure 32: *Index of number of reported health symptoms*

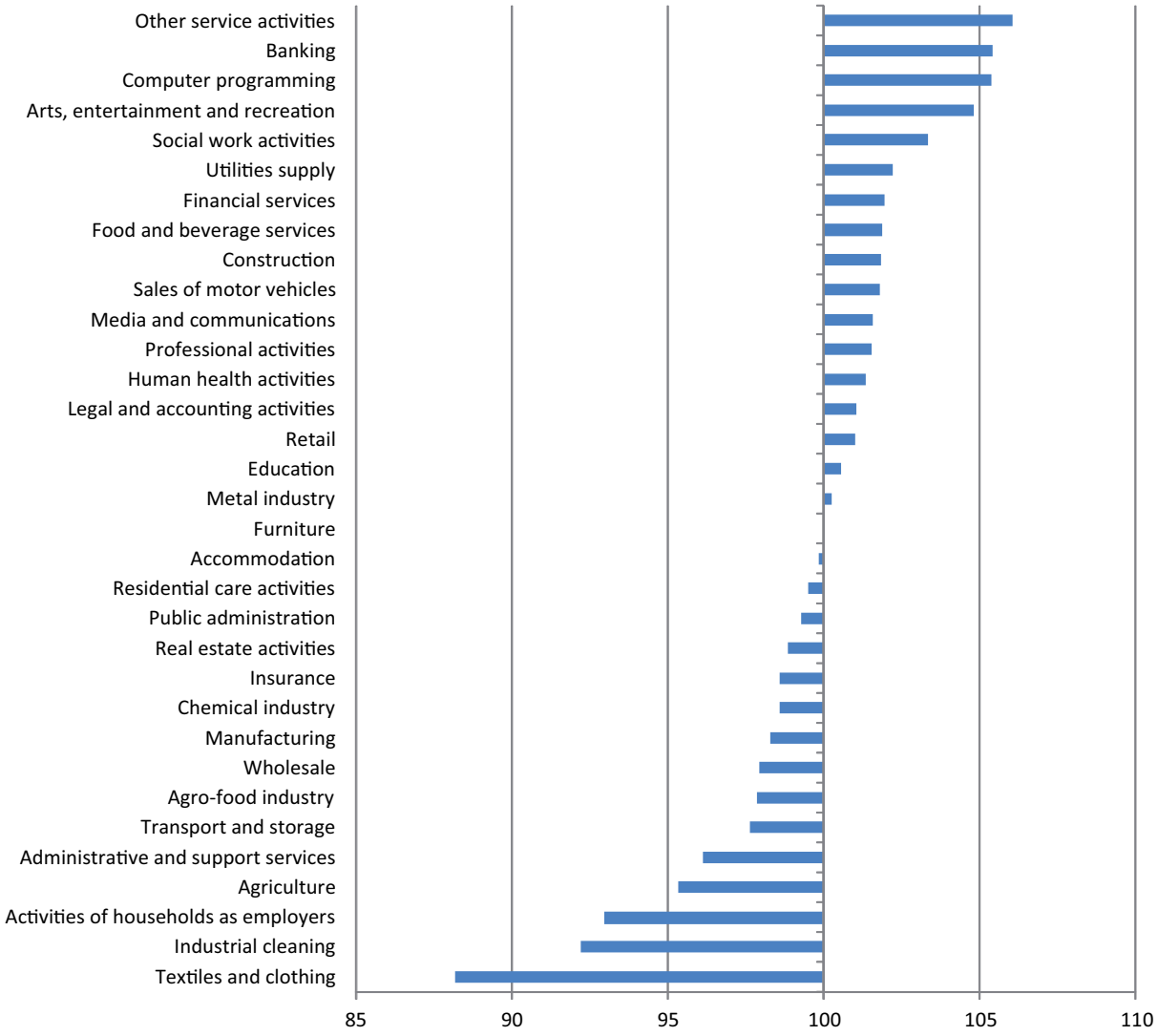


Note: EU28 = 100

The EWCS also includes a set of questions designed to gauge the mental well-being of workers (see Chapter 1). As with physical health, mental well-being is related to various factors, including the interplay between work and life in general. Poor mental health can hamper labour market participation throughout the life course.

Figure 33 shows that differences between sectors with regard to mental well-being are a lot smaller than differences in self-reported health and in the number of reported health symptoms. However, sectors with larger proportions of workers reporting poor physical health also have larger shares of workers reporting poor mental well-being; examples here include textile and clothing, industrial cleaning, activities of households and agriculture. The following sectors have relatively high levels of mental well-being: other services, banking, computer programming, and arts, entertainment and recreation.

Figure 33: *Index of mental well-being*

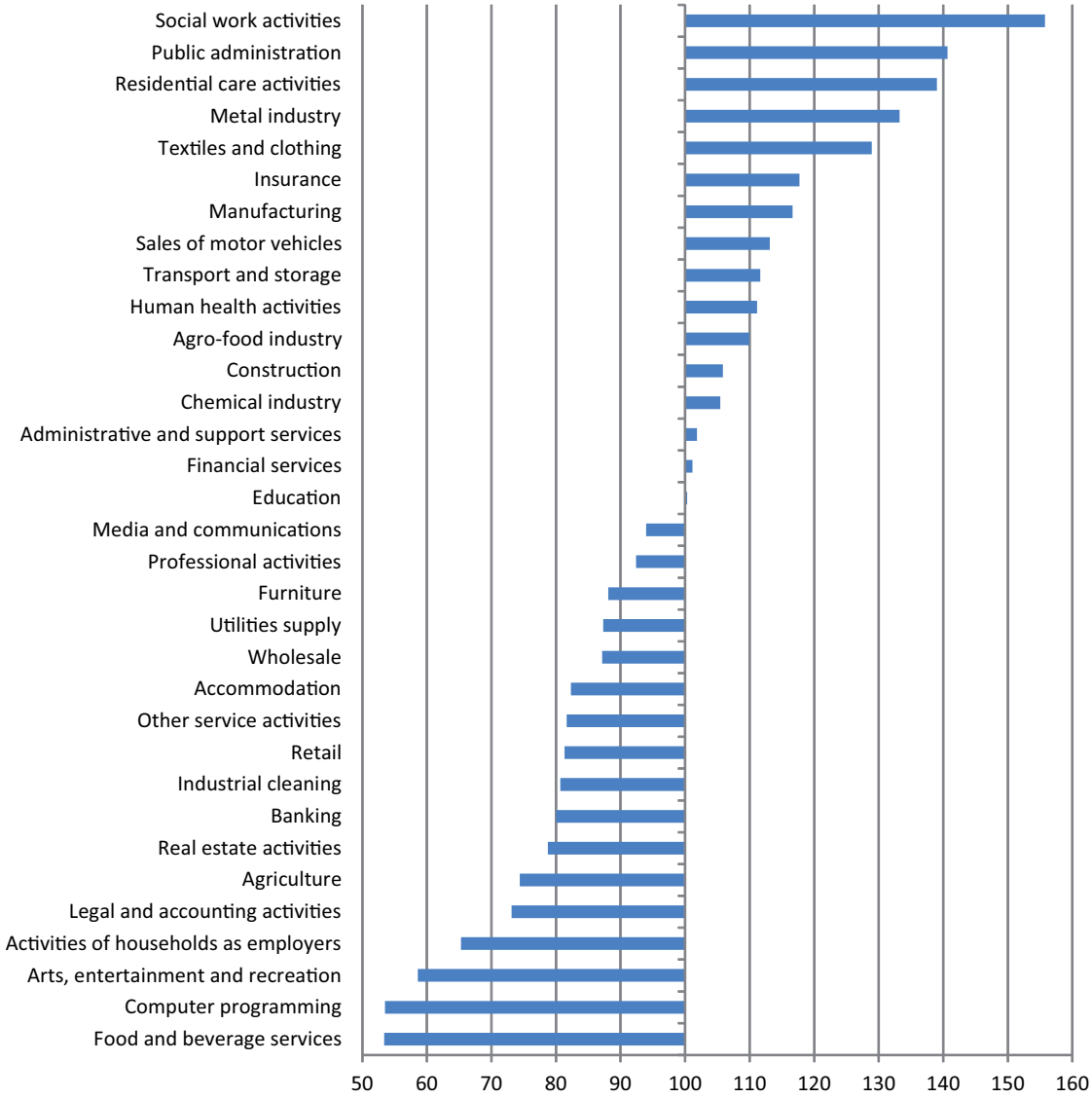


Note: EU28 = 100

Poor health contributes to increased levels of absenteeism through a higher prevalence of sick leave. The EWCS provides information on absence from work due to health reasons and due to accidents at work as well as presenteeism, which is defined as continuing to work when sick. Previous studies, which have related sickness leave to various aspects of the work situation, have highlighted the combination of work-related, personal and institutional factors.

An index was created based on the number of days that workers reported having been absent from work for health reasons. Figure 34 shows that differences between sectors are huge. The highest level of absenteeism is found for social work – with levels of absenteeism 56% higher than the EU28 average – followed by public administration, residential care activities and the metal industry, where absenteeism exceeds the EU28 average by more than 30%. The lowest levels of absenteeism are found in food and beverage services and computer programming; the average number of days lost to absenteeism in these sectors is just over half of that for the EU28 as a whole. There is a relationship between absenteeism for health reasons and self-reported health results in both textiles and clothing and computer programming: textiles and clothing has a high proportion of workers with self-reported poor health, while computer programming has a low proportion.

Figure 34: *Index of absenteeism*



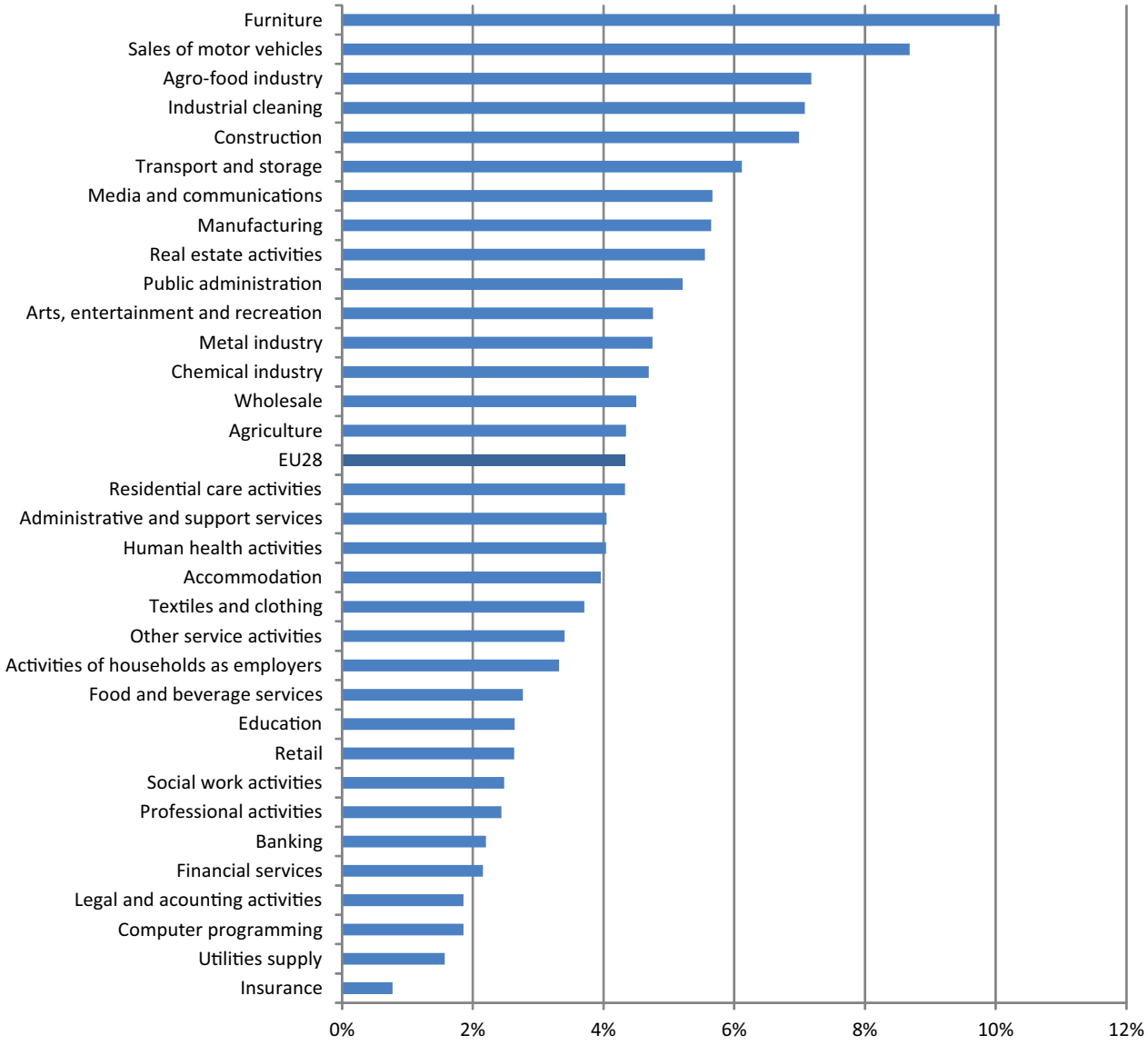
Note: EU28 = 100

For some other sectors, however, relative positions regarding the self-reported health status of workers do not match levels of absenteeism; for instance, absenteeism is relatively prevalent in public administration, while self-reported health problems are not. This shows that more factors than health status contribute to absenteeism.

Absenteeism due to accidents can be seen as an indicator of the safety of jobs and workplaces. This analysis only considers the prevalence of absenteeism due to accidents, and not its duration (see Figure 35). Just over 4% of European workers reported having had an accident in work resulting in absenteeism in the 12 months preceding the survey. The highest proportion of workers reporting absenteeism due to accidents is found in furniture (10%). Other sectors with a relatively high proportion of workers having taken sick leave due to an accident at work are: sales of motor vehicles, the agro-food industry, industrial cleaning and construction. Sectors with the lowest proportions of workers reporting absenteeism due to work accidents are: insurance, utilities supply, computer programming and legal and accounting activities, and banking (all less than 2%).

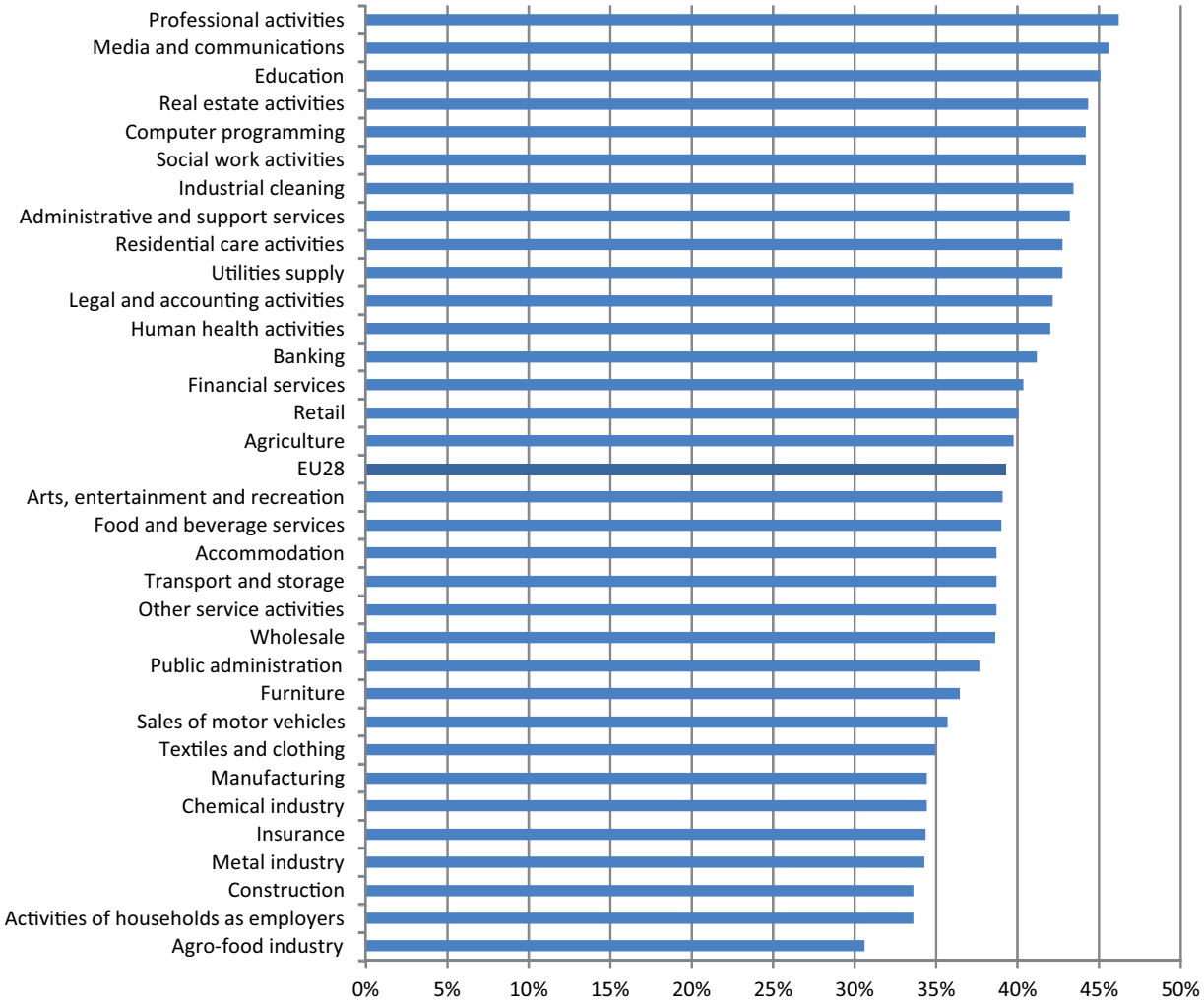
The ranking of sectors regarding this indicator differs from how they rank regarding absenteeism in general. Those sectors where workers report higher levels of exposure to physical risks are also the sectors where more workers report absenteeism due to accidents at work.

Figure 35: *Absenteeism due to an accident at work*



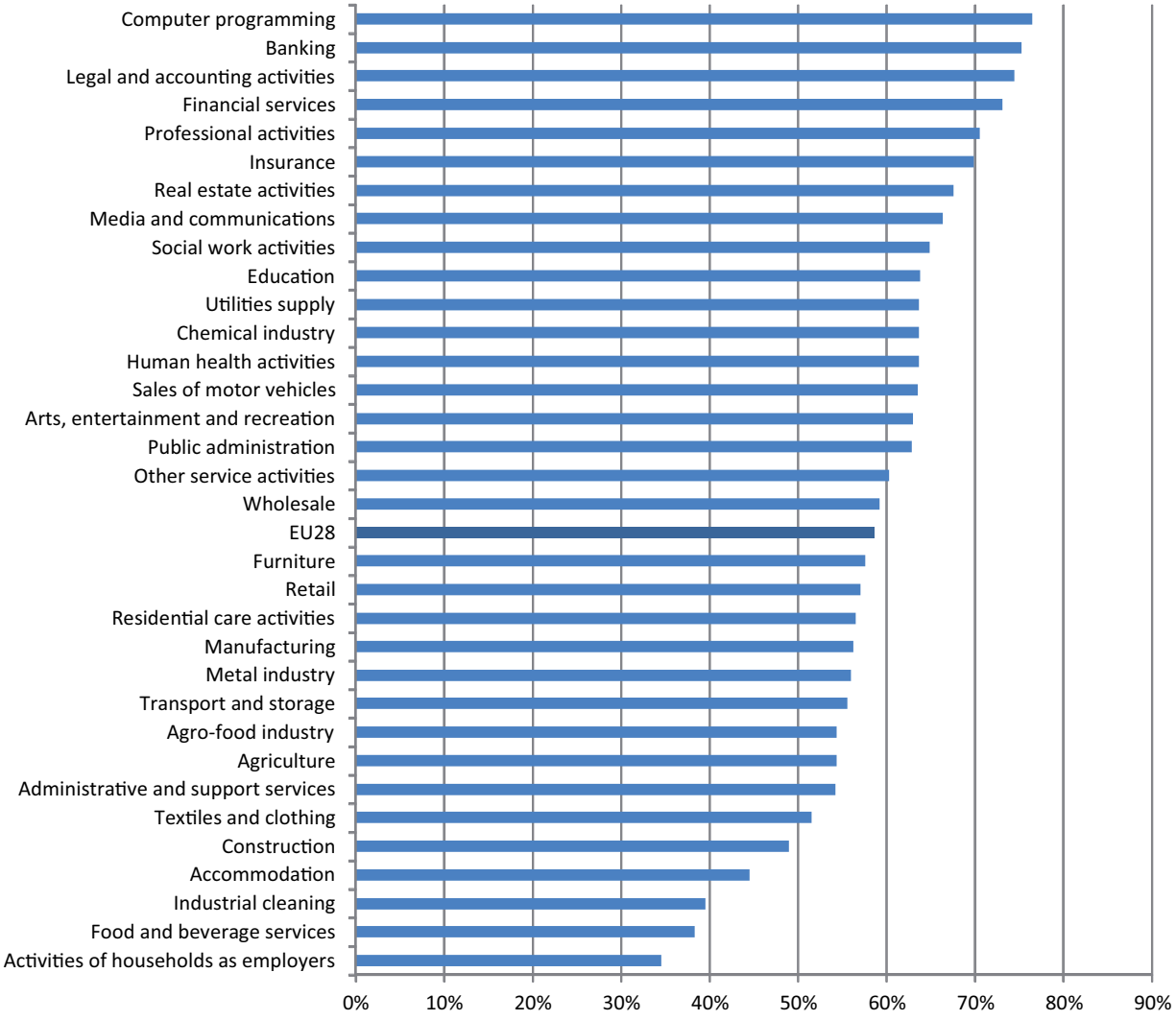
Presenteeism is often a sign of high work pressures, social expectation or job insecurity. It can have serious negative consequences for health and can lead to a reduction in productivity. Overall, 39% of workers in the EU28 report having worked when they were sick (Figure 36). Differences between sectors are not very large: the highest levels are found in professional activities, media and communications, and education (between 45% and 46% of workers), and the lowest levels are found, quite close together, in the agro-food industry, activities of households and construction (ranging between 30% and 34%).

Figure 36: *Working when sick*



Workers' health as well as the perceived impact of work on health has an impact on whether individuals feel able to keep doing their work at a later age. The EWCS monitors the extent to which people believe they would be able to do the same job when they are 60 years old. Well over half (59%) of all European workers responded positively to the question (Figure 37). The perceived sustainability of jobs varies considerably between sectors. Workers are more likely to think they will not be able to do their current job when aged 60 years in sectors where work tends to be physically demanding, such as: activities of households, food and beverage services, industrial cleaning, accommodation, construction, and textiles and clothing. In sectors with good job quality, such as computer programming, banking, legal and accounting activities, and financial services, the proportion of workers who think they could do the same job at 60 years exceeds 70%.

Figure 37: *Willing and able to do job at 60 years*



Logistic regression analyses have been carried out to illustrate the relationship between these outcomes in terms of health and well-being and job quality, as discussed in Chapter 4 – the results of these analyses are presented in Table 2. Relative probabilities were calculated to report certain outcomes for the health and well-being of workers in the sectors with relatively poor job quality: administrative services, the agro-food industry, food and beverage services, textiles and clothing, transport and storage, and construction. They were also calculated for workers in sectors with relatively good job quality: the chemical industry, utilities supply, banking, insurance, real estate activities, legal and accounting activities, and financial services. These were then compared to workers in the other sectors. The analyses involved controlling for sex, age, education, workplace size and country.

These relative probabilities are expressed as odds ratios. For instance, workers in sectors with poor job quality have an odds ratio of 1.32 for reporting their health to be at risk because of their work. This means that they are 1.3 times as likely to report this as workers in the sectors with 'average' job quality. Workers in sectors with good job quality are only 0.61 times as likely to report their health is at risk because of their work as workers in sectors with 'average' job quality. Sectors with poor job quality can be compared with sectors with good job quality by dividing the odds ratio of the former by the odds ratio of the latter. This shows that workers in sectors with poor job quality are 2.15 times (1.31 divided by 0.61) as likely to report their health is at risk because of their work as workers in sectors with good job quality.

Table 2: *Relative probability (odds ratio) of reporting outcomes for health and well-being*

Variable	Poor job quality	Good job quality
Health at risk because of work	1.32	0.61
Work affects health negatively	1.24	0.81
Poor self-reported health	1.17	0.76
Number of health symptoms	1.20	0.76
Poor mental well-being	1.19	n.s.
Days lost due to absenteeism	n.s.	n.s.
Absenteeism due to an accident at work	1.24	0.65
Having worked when sick	0.94	n.s.
Able to do job at 60	0.73	1.32

Notes: The number of health problems and absenteeism indices have been contrasted by taking the scores above and below the median. 'Poor mental well-being' is defined in accordance with the WHO-5 indicator, taking those that scored more than 13 points on the original scale, which indicates that they are at risk of suffering from mental health problems. n.s. = not statistically significant at $p < .05$

Table 2 shows that those working in sectors with relatively poor job quality are consistently more likely to report negative outcomes for health and well-being. The difference is strongest for reporting that health is at risk, that work affects health negatively, and absenteeism due to accidents.

Workers in sectors with poor job quality are considerably less likely to report they will be able to do their job at 60 years, while the opposite is the case for workers in sectors with good job quality. For workers in sectors with good job quality, differences are strongest for reporting that health is at risk because of work, absenteeism due to accidents, and being able to do the job at 60 years. Interestingly, job quality does not impact on absenteeism and only has a small effect on presenteeism, with those working in sectors with poor job quality being less likely to report that they have worked when sick. In addition, workers in sectors with poor job quality are more likely to suffer from poor mental well-being than are workers in sectors with 'average' job quality, but no difference is found between workers with 'average' job quality and workers with good job quality.

Conclusions 6

In order to meet the objectives of the European Union's Europe 2020 strategy, sustainable work and employment should be given high priority, as this is a precondition for meeting the objective of high participation in employment. In order for work and employment to be sustainable, steps need to be taken to avoid workers experiencing multiple disadvantages in terms of working conditions and job quality. To do so, it is highly relevant to consider working conditions and job quality from a sectoral perspective. Stakeholders within the sectors – whether at an international, national or local level – can organise and implement the necessary interventions, and accommodate and stimulate good practices with regard to working conditions.

This report has shown that sectors vary in the extent to which they have been affected by the current recession, but – apart from reported changes in working time and salary – there is no clear relationship between the extent to which the recession has impacted employment in each of the sectors or the working conditions and job quality in those sectors.

Large differences are found between sectors in terms of working time – both in terms of its duration and organisation. Consequently, sectors differ considerably in relation to reported work–life balance. Accommodation, food and beverage services, and transport and storage stand out in terms of poor work–life balance levels; this is mainly due to atypical and irregular hours in all three sectors, with duration of working hours also affecting work–life balance in transport and storage.

Work organisation practices differ across sectors. In some sectors, less than half of the workers work in teams, whereas in other sectors more than three-quarters work in teams. Sectors also differ in the extent to which teams are autonomous. A similar pattern is found for task rotation and autonomous multiskilling. Sectors that stand out in this regard are human health activities, residential care and social work. In these three sectors, both teamwork and task rotation are relatively prevalent, and workers and teams enjoy relatively high levels of autonomy.

The level of skill mismatch does not vary greatly across sectors, but sectors do differ in the extent to which mismatch is a result of over-skilling or under-skilling. Over-skilling is particularly prevalent in media and communications, arts, entertainment and recreation, and activities of households. Under-skilling is most common in financial services, social work, insurance, human health, professional activities, and banking. Even greater variation is found in the extent to which training is paid for by the employer. Sectors where relatively many workers report being under-skilled, such as financial services, insurance and banking, also have a relatively high number of workers reporting to have received training paid for by their employer.

Sectors differ considerably in terms of the availability of an employee representative at the workplace level. Employee representatives are available to around three-quarters of workers in utilities supply and the chemical industry, but to less than one-quarter of workers in food and beverage services and activities of households.

Karasek's 'job demand and job control' model (Karasek, 1979) identifies workers experiencing job strain as a result of high levels of work intensity and low levels of job autonomy. These workers are at a particular risk of accumulating unhealthy levels of job-related stress. A relatively high number of workers experiencing job strain can be found in the metal industry, transport and storage, the agro-food industry, and textiles and clothing. In terms of physical risks, there is a very clear difference between the services-oriented sectors and the production-oriented sectors, with the former, unsurprisingly, showing considerably lower levels of risk exposure than the latter.

Following on from the report *Trends in job quality in Europe* (Eurofound, 2012f), sectors were compared in terms of four job quality indicators. The following sectors score relatively well on all four job quality indicators: the chemical industry, utilities supply, banking, insurance, real estate activities, legal and accounting activities, and financial services. The following sectors score relatively poorly on all four indicators: administrative services, the agro-food industry, food

and beverage services, textiles and clothing, transport and storage, and construction. In these sectors, a relatively high number of workers are faced with multiple disadvantages: they often work in jobs with low pay; experience relatively high levels of exposure to both physical and psychosocial risks; have irregular or inflexible working time arrangements; and face a low likelihood of conditions improving. These workers need the specific attention of policymakers if the Europe 2020 objectives are to be met.

The importance of focusing on workers exposed to multiple disadvantages is confirmed in Chapter 5, which shows a fairly clear pattern across sectors with regard to workers reporting a negative impact of work on health, general health issues, and, to a lesser extent, poor mental well-being. More advanced analysis shows that workers in sectors with poor job quality are often around two times as likely to report negative outcomes for health and well-being as workers in sectors with good job quality, and are about half as likely to report to be able to do their job at 60 years as workers in sectors with good job quality.

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***All Eurofound publications are available at* www.eurofound.europa.eu**

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