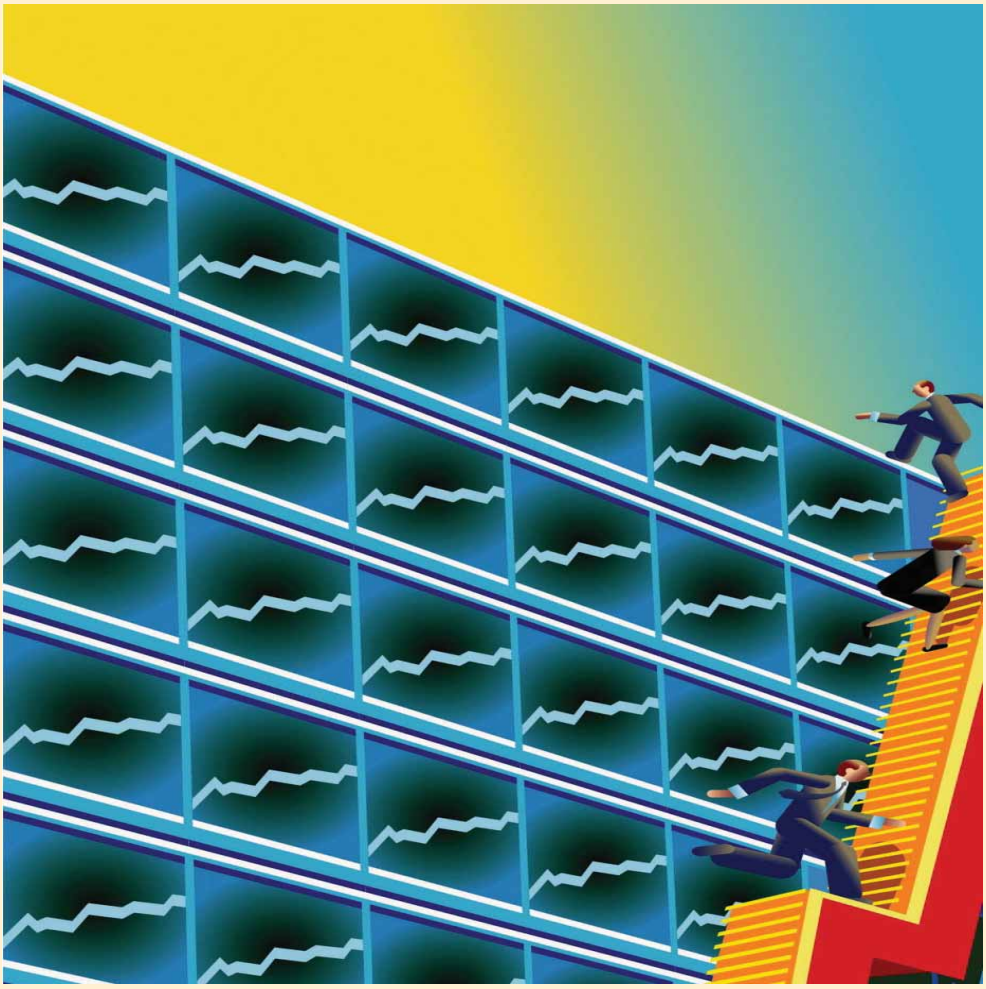
European Foundation for the Improvement of Living and Working Conditions

Working conditions of an ageing workforce



Working conditions of an ageing workforce

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European Foundation for the Improvement of Living and Working Conditions

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For every tree felled, at least one new tree is planted.

Foreword

Over the last decade, the issue of Europe's ageing population has emerged as a central priority for policymakers in the EU. This demographic shift calls into question both the sustainability of pension systems and the future of Europe's labour supply, which in turn pose serious challenges for the prospects for economic growth.

This report looks at ways in which the quality of work and employment can be promoted in order to encourage workers to remain in the labour market for a longer time and thus achieve the Lisbon and Stockholm employment targets across Europe by 2010. A prerequisite for this is increased job quality and sustainability over the lifecycle. In this context, the report focuses on four key areas: ensuring career and employment security; maintaining and promoting the health and well-being of workers; developing skills and competencies; and reconciling working and non-working life. All of these factors are significant in shaping the age structure of Europe's workforce.

The findings are based on data from the fourth European Working Conditions Survey (EWCS), carried out across 31 countries in Europe in 2005.

The report reveals how age is an important factor in describing working conditions and that significant differences emerge between younger and older workers. For instance, compared with younger workers, older workers are less exposed to physical risks in the working environment and enjoy a higher degree of autonomy in the workplace and a lower degree of work intensity. However, they have fewer opportunities with respect to involvement in new organisational forms, training and learning new things at work. Young and older workers both share a higher probability of being subjected to acts of discrimination at the workplace and, to a lesser extent, of experiencing difficulties in accessing IT. For their part, middle-aged workers carry a heavier burden in relation to caring activities outside of work, as well as reporting a lower level of satisfaction with work–life balance.

In this context, it is important to monitor the working conditions of workers approaching retirement age to determine the factors which may lead to their early exit from the labour market. To enhance the sustainability of work for older workers, measures will have to focus on these aspects in the future. At the same time, it is also important to monitor work sustainability among young workers, who face a higher incidence of job insecurity and risk exposure.

As the European Union moves towards implementing the Lisbon objectives, we trust that this report will contribute to a better understanding of what is required to improve the employment conditions of Europe's ageing workforce, as well as to facilitate the career trajectory of younger workers.

Jorma Karppinen
Director

Country codes

EU15	15 EU Member States prior to enlargement in 2004
NMS	10 New Member States that joined the EU in 2004
EU25	15 EU Member States, plus the 10 NMS
EU27	25 EU Member States, plus Bulgaria and Romania, that joined the EU on 1 January 2007

EU27

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

EWCS – Survey methodology

Quality assurance

The quality control framework of the European Working Conditions Survey (EWCS) made sure that the highest possible standards were applied to the questionnaire design, data collection and editing processes in order to strengthen the robustness of the research and ensure the accuracy, reliability and comparability of the survey data. A wide range of information on the survey's methodology and quality control processes was published on the EWCO (European Working Conditions Observatory) website. As part of the quality control procedures, the Foundation also conducted a qualitative post-test for the modules on training and job development in five countries (Austria, Czech Republic, Finland, Portugal and the UK) to understand better the survey capacity to measure complex phenomena and improvements of the questionnaire in future editions of the survey.

Geographic coverage

The evolution of the EWCS follows the changes in the EU itself over the last 15 years. In 1990/91 the survey covered the 12 EU Member States that made up the EU at that time; 15 countries were covered in 1995/96 and 16 in 2000 (including Norway for the first time). The 2001 EWCS was an extension of the 2000 survey to cover the then candidate countries (Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia and Romania). The survey was subsequently extended to Turkey in 2002. The fourth major wave in 2005 had a larger geographic coverage encompassing 31 countries, including the 27 EU Member States, plus the candidate countries Croatia and Turkey, as well as the EFTA countries, Switzerland and Norway.

Questionnaire

The survey questionnaire was developed with the support of a questionnaire development group involving members of the Foundation's Governing Board, representatives of the European social partners, other EU bodies (European Commission, Eurostat, the European Agency for Safety and Health at Work), international organisations (OECD, ILO), national statistical institutes as well as leading European experts in the field. The questionnaire was translated into 27 languages and 15 language variants.

The fourth EWCS questionnaire consists of more than 100 questions and sub-questions covering a wide range of work-related aspects, such as job characteristics and employment conditions, occupational health and safety, work organisation, learning and development opportunities, and work–life balance. Although the total number of questions has been steadily increasing since the first survey in 1990/91, the core variables of the questionnaire have been maintained, so that trends and changes in working conditions in the EU over the last 15 years can be examined.

Sample

The survey sample is representative of persons in employment (employees and self-employed), aged 15 years and over, resident in each of the surveyed countries. In the 2005 edition of the survey, around 1,000 workers were interviewed in each country, with the exception of Cyprus, Estonia, Luxemburg, Malta and Slovenia, where the number of persons interviewed totalled 600. The survey sample followed a multi-stage, stratified and clustered design with a 'random walk' procedure for the selection of the respondents.

Fieldwork

In total, 29,680 workers were interviewed face-to-face in their homes from 17 September to 30 November 2005, within different timespans in each country and an average of seven weeks. The fieldwork was coordinated by Gallup Europe and a network of national contractors carried out the data collection in each country.

Weighting

Data is weighted against the European Labour Force Survey figures. Variables used for the weighting are: sex, age, region (NUTS-2), occupation (ISCO) and sector (NACE).

Access to the survey datasets

The complete set of survey datasets is accessible via the UK Data Archive (UKDA) of the University of Essex at www.esds.ac.uk. To access data files, users are required to register to the UKDA. Information on the registration procedure is available at **www.esds.ac.uk/aandp/access/login.asp**. The archive also provides access to survey documentation and guidance for data users. Users are recommended to read supplementary supporting documentation on the methodology provided on this website before working with the data.

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Executive summary

Population ageing reflects the success of societies in securing higher living standards, which in turn results in increased longevity. However, the continued growth of older populations also poses serious challenges for policymakers, particularly in relation to economic growth. Increased expenditure on health and care for elderly people, and in particular a critical labour shortage as larger cohorts of workers retire at the same time, are some of the negative implications of population ageing which are set to pose a serious threat to macroeconomic performance and competitiveness, particularly in European countries. The European Commission forecasts that by 2030, the European Union will face a shortage of some 20.8 million people (6.8%) of working age.

As a result, Europe has developed a wide range of policy responses in relation to the ageing problem. More specifically, the Lisbon European Council of 2000 and the Stockholm European Council of 2001 agreed new strategic goals for strengthening employment, economic reform and social cohesion in a knowledge-based economy. One of the principal goals is to increase the overall employment rate to 70%, the proportion of women in employment to 60% and the average employment rate of older people aged 55–64 years to 50% by 2010. Nonetheless, the results are variable in this regard across EU Member States.

In order to achieve the Lisbon and Stockholm targets, it is important to encourage workers to remain in the labour market for a longer time. A prerequisite for this aim is increased job quality and sustainability over the lifecycle. In this context, four key areas have been identified, all of which are significant in shaping the age structure of the workforce: career and employment security; health and well-being; skills development; and reconciliation of working and non-working life. Analysis of these four areas forms the basis of this report. The following sections will list some of the key findings outlined in this report relating to these four aspects, largely based on the results of the 2005 European Working Conditions Survey (EWCS).

Career and employment security

Ensuring career and employment security is important for promoting quality of work and employment. According to the 2005 EWCS data, significant variations emerge across age groups in the main characteristics of employment, such as the following:

- low-educated workers and self-employed people are mainly composed of older workers;
- older workers are over-represented in agricultural activities and, although to a lesser extent, in more knowledge-intensive sectors such as education; in contrast, their presence is below average in the hotels and restaurants and trade sectors;
- the incidence of part-time work declines as age increases and rises again in the oldest age group; the latter also have a greater choice over whether or not to work part time;
- temporary employment contracts are clearly concentrated among the youngest workers, although their prevalence increases somewhat among the oldest age group, especially among female workers.

In relation to the key issues of employment security, job satisfaction and age discrimination in the workplace, the following findings emerge:

- younger workers experience a higher incidence of job insecurity, while older workers seem to be more 'protected' against such risks; nonetheless, both older and younger female workers appear to be more exposed to job insecurity;
- regarding the link between employment arrangements and job satisfaction, the EWCS data show that temporary contracts have a negative impact on workers' job satisfaction, especially if associated with low employment security;
- the effects of age on job satisfaction appear to be significant only among the youngest age group aged 15–24 years, who report a lower probability of being satisfied than other age groups;
- the youngest and oldest age groups face the highest risk of age discrimination in the workplace, although there has been a slight decrease in the proportion of workers who report having been subjected to age discrimination, in particular among younger workers;
- interestingly, a positive correlation emerges between education and skill levels and age discrimination, with the less-educated and skilled workers reporting lower levels of discrimination.

In relation to the earnings profile of workers in the EU27, an inverted U-shape structure emerges, with the proportion of people with earnings above the median rising up to the age of 45–54 years, and then declining. This profile, which is similar to the usual earnings profile by age, may reflect the fact that workers' productivity initially increases as they gain on-the-job experience but then plateaus or declines after a given age.

Health and well-being

Three aspects of the health and well-being dimension are examined in the report: risk exposure, work organisation and health problems.

In relation to the issue of risk exposure:

- a trend towards a reduction in risk exposure emerges with increasing age, although a worsening in working conditions is detected among those aged 45–55 years, particularly among women;
- older workers report higher exposure levels to risks associated with physical position and repetitive movements or heavy workloads;
- over the past 10 years, no particular improvements in worker exposure to physical risks have been observed in the EU15, although some improvements have been observed for workers aged 55 years and over.

The issue of work organisation, another aspect affecting workers' health and well-being, is addressed by looking at three areas: the degree of autonomy at work, the intensity of work and the spread of new high-performance work organisations (HPWOs). Some of the key findings in this regard reveal that:

- work intensity decreases while autonomy rises with increasing age, especially when comparing the values of the extreme age groups;
- involvement in HPWOs is low among older workers, whereas it is more widespread among younger workers;

- working conditions appear to be most critical for the youngest generations, while conditions experienced by older workers seem to be more favourable.

In relation to workers' perception of their health status and of their ability to continue working at the age of 60, the findings show that:

- young workers are least aware of the impact of work on their health, while those aged 45–54 years show a significantly higher probability of recognising this correlation;
- working conditions involving exposure to physical risks, high work intensity and non-standard working hours result in a greater perception of the impact of work on health;
- the proportion of workers who believe that their health or safety are at risk due to their working conditions has dropped significantly among those aged over 55 years;
- the proportion of respondents who think they will be able to, or want to, do the same job at the age of 60 increases with age;
- perceiving an effect of work on health, the presence of discrimination or violence at the workplace or employment contracts with low security significantly reduce respondents' perception that they will be able to do the same job at 60 years of age.

Skills development

The findings in this context show that:

- older workers receive less training than younger workers, and women have fewer opportunities in this respect compared with men;
- the opportunity to learn new things at work is mainly given to adults, while women, especially older women, receive fewer opportunities than men;
- the introduction of new technology has been found to be biased against low-skilled workers, and while it appears to have improved job opportunities in some fields, it has resulted in job losses for older workers;
- other things being equal, older workers have a 10% lower probability of using computers at work than workers aged 25–35 years; however, in the EU15, a substantial decline has been recorded in the proportion of workers never using computers at work, the largest improvement being with respect to older workers.

Reconciliation of working and non-working life

Policies promoting a better balance between work and family responsibilities are encouraged by the European Commission and represent a major challenge for most European governments. The EWCS data provide some additional insight into this issue, including the following findings:

- only a slight tendency towards a decline in the number of working hours is detected as workers age;
- more generally, inflexible working time arrangements may discourage older workers from continuing to work for longer due to the difficulties in reconciling work and family life;

- the proportion of workers who report having some power in choosing the organisation of their working time increases with age, although this is higher among those with non-standard working hours than on average;
- older workers do not seem to carry as heavy a burden in terms of family responsibilities compared with middle-aged and female workers; however, although older workers show a lower engagement in caring for children, they have a higher likelihood of caring for an elderly or disabled relative compared with other age groups;
- employment contracts and working time arrangements play an important role in determining workers' satisfaction with work–life balance: lower levels of satisfaction are reported by those with non-standard working schedules, low levels of job security or employability, or higher caring responsibilities.

Conclusions

Age is an important factor in describing working conditions, with significant differences emerging between younger and older workers for most job characteristics. To cite just a few examples, younger workers are the most exposed to physical risk factors at the workplace and the least satisfied with working conditions. On the other hand, they receive more training opportunities and are more involved in HPWOs. Conversely, older workers are more 'protected' against risk exposure and have a higher degree of autonomy at the workplace and a lower degree of work intensity; however, they receive fewer opportunities with respect to involvement in new organisational forms, training and learning new things at work. Younger and older workers share a higher probability of being subjected to acts of discrimination at the workplace and, to a lesser extent, facing difficulties in accessing information technology. However, adult workers carry a heavier burden in relation to caring activities outside of work and report lower levels of satisfaction with work–life balance.

An important target in terms of age concerns workers approaching retirement age, notably those who are between 45 and 54 years old. Thus, monitoring the working conditions of this group of workers in order to ascertain potential factors that could determine their premature exit from the labour market represents a crucial aim. Research on the issue of older workers' employability, in fact, has pointed out how the low participation of older people in the labour market is the result of a combination of wage conditions, rigidity in workplace organisation, inadequate skills and competencies and poor health status, rather than the wish to retire early. Moreover, the analysis in this report has indicated that workers facing the worst working conditions and who are eligible to retire have probably already left the labour market.

In an effort to sum up the role of the different working conditions in determining older people's participation rates and to give a rough evaluation of how different factors facilitate or hinder the employment of older workers, the report concludes by correlating some aspects of working conditions with older workers' employment rates. Accordingly, positive correlations are found with respect to work autonomy, the presence of HPWO, and access to learning and training. On the other hand, a clearly negative correlation is detected between employment rates and exposure to physical risks at work. At the same time, the correlation between satisfaction and employment participation appears to be positive.

Introduction

European Working Conditions Survey

The European Working Conditions Survey (EWCS) aims to provide an overview of the state of working conditions throughout Europe and an indication of the extent and type of changes affecting the workforce and the quality of work. Eurofound conducts this survey every five years: the 2005 EWCS constitutes the fourth wave of this survey, the previous waves being carried out in 1990, 1995 and 2000. Topics covered in the survey include working time, work organisation, pay, work-related health risks and health outcomes and access to training.

Since the 2005 EWCS, Eurofound has been engaged in more in-depth analysis of its findings on key themes relating to working conditions in the EU. This report addresses the key theme of the working conditions of Europe's ageing workforce and its findings are based on data from the 2005 EWCS.

The challenge of ageing

In one sense, population ageing represents a human success story: increased longevity, one important determinant of our ageing society, is a direct reflection of the success of societies in securing higher living standards. However, the steady, sustained growth of older populations also poses challenges for policymakers in many societies.

Although there is no single way in which population ageing affects economic growth, many sources indicate that the net impact of the ageing process may be negative. On the one hand, ageing is associated with increasing expenditure on health and care for elderly people, given that health expenditure per person is higher for older people, as well as on pensions (see, for example, United Nations, 2002b). This rise in public expenditure, in the absence of any significant change in labour force participation patterns, will in turn increase the fiscal burden and public debt (Roseveare et al, 1996; Fougère and Mérette, 1998; Grant et al, 2004). Once the baby boom generation approaches retirement age, larger cohorts of workers will be retiring while the numbers of new labour market entrants will be insufficient to replace them. As a result, a major labour shortage is expected, which will pose a serious threat to macroeconomic performance and competitiveness, despite productivity and technological advances.

Experts forecast that this shortage will be particularly severe in Europe. In 2005, the European Commission presented its Green Paper *Confronting demographic change: A new solidarity between the generations*, documenting how the European Union (EU) is facing an unprecedented demographic change that will have a major impact on the whole of society and on the labour market (European Commission, 2005b). By 2030, it is estimated that the EU will lack 20.8 million people (6.8%) of working age.

European policy context

The Lisbon European Council of 2000 agreed a new strategic goal for the EU aiming to strengthen employment, economic reform and social cohesion as part of a knowledge-based economy. More specifically, it stated that by 2010, the overall aim of employment and economic policies should be to raise the employment rate to 70% and increase the proportion of women in employment to 60%.

In addition, the 2001 Stockholm European Council agreed to 'set an EU target for increasing the average EU employment rate among older women and men aged 55–64 years to 50% by 2010'. The

2002 Barcelona European Council emphasised the Stockholm target by concluding that 'a progressive increase of about five years in the effective average age at which people stop working in the European Union should be sought by 2010'.

The Lisbon, Stockholm and Barcelona targets are embedded in the European Employment Strategy, which aims to 'create more and better jobs'. The general objective is to increase labour market participation for all groups of workers and to reduce inequalities, including those relating to age. The new employment strategy explicitly includes promoting active ageing in the sense of increasing labour force participation, working for more years and remaining at work for longer (European Commission, 2003).

The joint report from the European Commission and the European Council, *Increasing labour force participation and promoting active ageing,* puts forward a lifecycle approach (European Commission, 2002). The importance of a global approach to the 'working lifecycle' and the need to develop new forms of solidarity between generations based on mutual support and the transfer of skills and experience is also clearly stated in the EU Green Paper on confronting demographic change (European Commission, 2005b).

Recognising the limited progress achieved so far towards the Lisbon and Stockholm targets, the European Council decided in 2005 to relaunch the Lisbon Strategy and refocus priorities on economic growth and employment. As part of this effort, the new employment guidelines for 2005 to 2008, decided in July 2005, acknowledge a serious risk to the long-term sustainability of the EU economy and call for measures capable of increasing employment rates and labour supply, along the lines already put forward in the Lisbon Strategy. The eight employment guidelines fall into three broad categories for action:

1. attracting and retaining more people in employment, increasing labour supply and modernising social protection systems;
2. improving the adaptability of workers and enterprises;
3. increasing investment in human capital through better education and skills.

The guidelines also include numerous indications which are relevant to the ageing issue:

- Guideline 17 – implementing employment policies aimed at achieving full employment, improving quality and productivity at work and strengthening social and territorial cohesion: this indicates the priority of attracting and retaining more people in employment, increasing the labour supply and modernising social protection systems. In this context, special attention should be paid to tackling the low employment rates of older workers and young people as part of a new intergenerational approach;
- Guideline 18 – promoting a lifecycle approach to work which targets different age groups, in particular younger and older workers;
- Guideline 20 – improving the matching of labour market needs, which includes recognition that enterprises will have to cope with an ageing workforce and fewer young recruits.

At the same time, the guidelines explicitly indicate that to ensure that supply meets demand in practice, lifelong learning systems must be affordable, accessible and responsive to changing needs.

This is particularly important as lifelong learning has been detected as an important factor for extending the working life.

Text box 1: Age management at the workplace

Extending the working life necessitates working differently throughout the lifecycle – an objective which can only be achieved if governments, employers, trade unions and civil society jointly promote, develop and implement age-friendly employment measures and policies (OECD 2006; Weiler, 2005b; Phillipson and Smith, 2005). It requires, among other measures, an understanding of how companies manage their older workforce, which constraints are in place on this particular aspect of human resource management (HRM) and which institutional aspects are crucial in framing the behaviour of economic actors. In this context, two very important aspects are the design and implementation of active ageing practices at the workplace.

Thus, identifying good practices and disseminating them through networks constitute a key part of EU strategies, policies, programmes and knowledge management. This goal has been recognised as an integral part of the Open Method of Coordination (OMC), now widely practised in the EU. The rationale is that by exposing different countries, programmes and projects to validated good practice, the overall performance of the EU can be improved through mutual learning.

Since the mid-1990s, the European Foundation for the Improvement of Living and Working Conditions (hereafter 'Eurofound') has conducted research on age management – firstly, across the 'older' 15 EU Member States (EU15) and then in the 10 new Member States that joined the EU in 2004 (NMS)[1]. Eurofound has gathered and analysed company cases of good practice in age management designed to improve job opportunities and working conditions for older workers in relation to issues such as recruitment, training, flexible working, health and ergonomics. The analysis of these cases helps provides a better understanding of what works in practice and what conditions need to be in place for employers and workers to develop new age management practices which aim to extend working lives and postpone effective labour market exit.

In addition to the pioneering work of Eurofound in this area, other analyses and dissemination of good practice in age management at the workplace worth mentioning include: the dissemination work conducted by the EQUAL programme[2], the European Agency for Safety and Health at Work (OSHA)[3] and the European Network for Workplace Health Promotion (ENWHP)[4], as well as the Commission's report *Ageing and employment: Identification of good practice to increase job opportunities and maintain older workers in employment* (European Commission, 2006a). Other examples can be found in an analysis produced by the Intergroup on Ageing of the European Parliament and the European Older People's Platform (AGE)[5].

As a follow-up to its 2005 Green Paper, the Commission issued its Communication, *The demographic future of Europe – from challenge to opportunity,* in October 2006 (European Commission, 2006b). It examines the possibilities for Europeans to confront the demographic challenge by drawing on the renewed Lisbon Strategy for growth, jobs and sustainable development. The Green Paper concludes that the challenge of an ageing population can be addressed if conditions are created in support of people who wish to realise their desire to have children and take full advantage of the

[1] http://www.eurofound.europa.eu/areas/populationandsociety/ageingworkforce.htm
[2] http://ec.europa.eu/employment_social/equal/index_en.cfm
[3] http://osha.europa.eu/
[4] http://www.enwhp.org/index.php?id=4
[5] http://www.age-platform.org

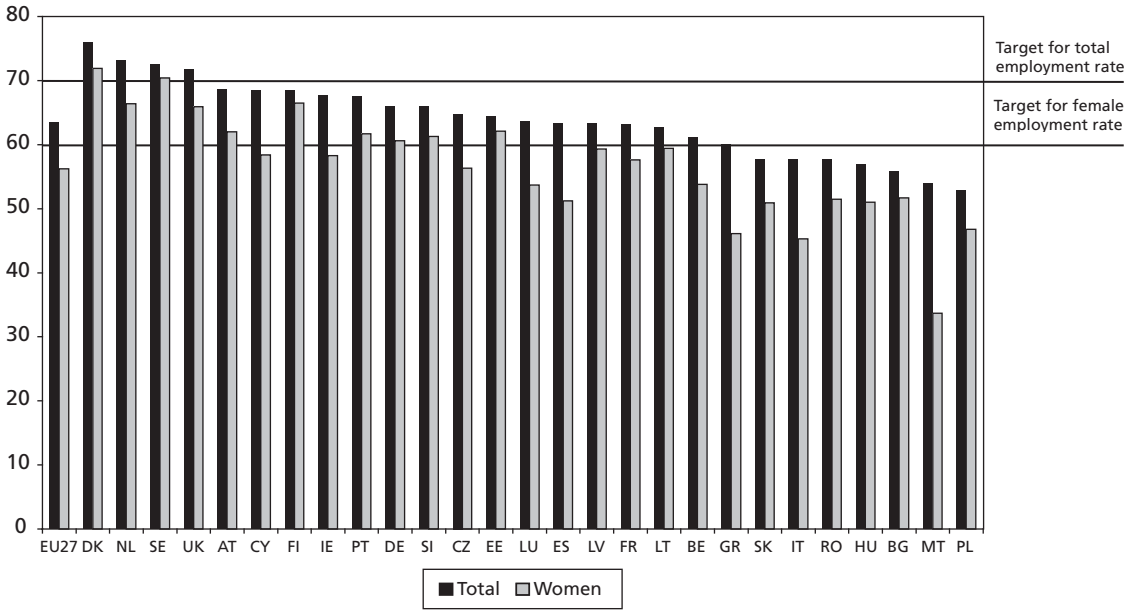
opportunities offered by longer and more productive lives in better health. Moreover, the importance of active ageing, the combating of age discrimination and the improvement of lifelong learning are stressed as means for encouraging people to consider working for longer.

The debate on the need to strengthen solidarity between the generations is further extended in the Commission's May 2007 Communication, *Promoting solidarity between the generations*, adopted in order to help Member States meet the demographic challenge and to achieve a better work–life balance for their citizens (European Commission, 2007). The Commission clearly states that the balance in European societies rests on a set of intergenerational solidarity relationships which are more complex than in the past. Equality between men and women, and equal opportunities in general, would therefore appear to be among the key conditions for establishing a new solidarity relationship between the generations. National family policies will strengthen solidarity between generations by encouraging a better response to the needs of families regarding childcare and dependency care and a more balanced distribution of family and domestic responsibilities. The anticipated outcome is a better quality of life for all people, as well as an environment which is more conducive to the fulfilment of family plans. The new orientations for family policies will also contribute to growth and employment, notably by facilitating increased labour force participation among women.

Employment in EU Member States

In relation to current employment rates, the following data show the situation of the EU as a whole and of the individual 27 EU Member States (EU27) with respect to the Lisbon and Stockholm targets. In 2005, the overall average employment rate and the average employment rate for women in the EU27 were about 6.6 and 3.8 percentage points below the respective Lisbon and Stockholm employment targets for 2010 (Figure 1).

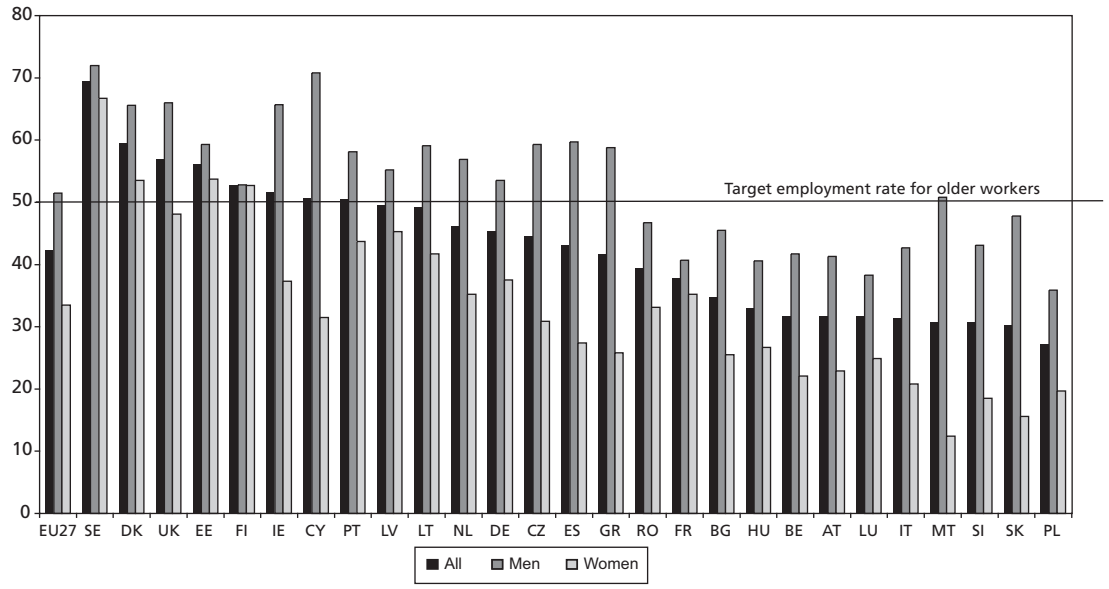
Figure 1 Employment rates of women, by country, 2005 (%)



Source: Eurostat, 2005

The employment rate of older people was somewhat lower, falling to 7.7 percentage points below the 2010 target rate (Figure 2). Nonetheless, the progress towards the target rates is deemed quite substantial for older workers in the last year, while it is considered more moderate with respect to the overall and female employment rates (European Commission, 2006c).

Figure 2 Employment rates of older workers aged 55–64 years, by sex and country, 2005 (%)



Note: Data for Romania refer to 2002 findings due to a break in the data series.
Source: Eurostat, 2005

Although the Lisbon and Stockholm employment rate targets are collective targets for the EU as a whole, it is interesting to examine the position of individual Member States in this respect. In 2005, only four countries – Denmark, the Netherlands, Sweden and the UK – reached the 70% employment target rate (Figure 1). Other countries – Bulgaria, Hungary, Italy, Malta, Poland, Romania and Slovakia – fell below the target rate by more than 10 percentage points. The situation is slightly better with respect to the female employment target rate, with 10 countries – Austria, Denmark, Estonia, Finland, Germany, the Netherlands, Portugal, Slovenia, Sweden and the UK – already achieving this rate and two countries – Latvia and Lithuania – following close behind. However, the gap is still high in some countries, especially in southern Europe, such as in Greece, Italy and Malta.

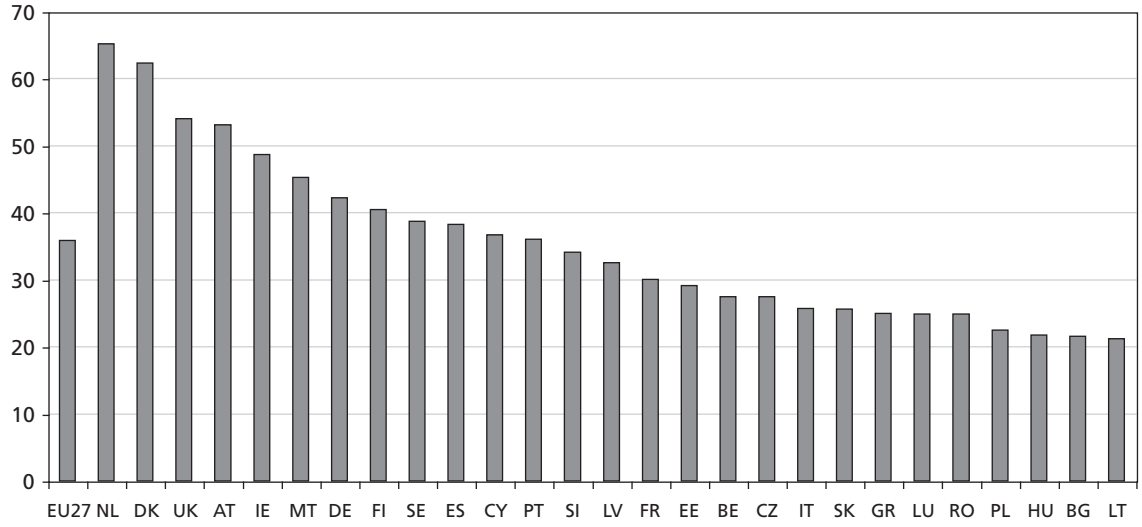
In terms of the employment rate of older people aged 55–64 years, only eight of the 27 countries were above the 50% target rate, with some countries only reaching a rate of about 30% – namely, Italy, Malta, Poland, Slovakia and Slovenia (Figure 2). As regards older men, in 11 countries – mostly the new Member States but also Austria, Belgium, France and Italy – the employment rate is below the 50% target. Conversely, a growing trend in the increased labour market participation of older women is observed; this is related to the general trend towards higher participation observed among successive cohorts of women – thus, the increase in younger women's participation in recent decades is reflected in the current higher participation rates of older women. Despite this positive trend, the growth has not been sufficient for reaching the 50% target rate for older women, with the exception of Denmark, Estonia, Finland and Sweden. For other countries – such as Malta, Poland, Slovakia and

Slovenia – older female workers' employment rate is lower than 20%, or just above 20% in the case of Italy.

According to the European Commission report *Employment in Europe 2006*, older workers have accounted for a substantial proportion of about one-third of the rise in employment between 2004 and 2005 (European Commission, 2006c). Thus, compared with the negligible contribution of younger people, older workers have emerged as the group that is making the greatest progress towards the Lisbon and Stockholm employment targets.

Nonetheless, even if it is not the object of a specific target, youth employment is a highly important theme in Europe's employment strategy. The European Youth Pact adopted by the European Council in March 2005, as part of the revised Lisbon Strategy, explicitly recognises the importance of fostering the integration of young people in society and working life, and making better use of their potential, for ensuring a return to continued and sustainable growth in Europe. In terms of employment rates of young people aged 15–24 years, notable disparities emerge across the EU countries, ranging from an employment rate of 65% in the Netherlands to as low as 21% in Lithuania (Figure 3).

Figure 3 Employment rates of people aged 15–24 years, by country, 2005 (%)



Source: Eurostat, 2005

Moreover, in contrast to the employment rates of older people, which have risen strongly in recent years in almost all Member States, those of younger people have fallen substantially in a large majority of countries; of course, this also reflects the more recent trend towards higher participation in education among young people.

On a more positive note, in 2005, for the first time in several years, the average youth unemployment rate in the EU declined by 0.4 of a percentage point compared with 2004; this was mainly attributed to the drop in youth unemployment in most of the new Member States – especially in Estonia, Latvia, Lithuania, Poland and Slovakia – as well as in Spain. However, at 18.5% in the EU27 as a whole, the youth unemployment rate still remains about twice as high as the overall unemployment rate, pointing to an over-supply of relatively low-skilled, inexperienced young workers (European Commission, 2006c).

Text box 2: Role of education in determining future employment rates

Many projections on labour force participation assume constant activity rates by age group and gender. This allows for an investigation of the effects of demographic change, assuming that the characteristics and behaviour of the population within each age group and gender class remain the same.

Simplistic as this approach may seem, it is used by many authoritative forecasters (see, for example, OECD, 2004a). First of all, it provides a useful benchmark, and secondly, it does not require predictions of a change in behaviour, which is generally a difficult task. However, at least one characteristic has been found to be extremely relevant in explaining activity rates, particularly as regards older people (Leombruni and Villosio, 2006), as well as change in the medium to short term in an almost entirely deterministic way – that is, education. This is because formal education cannot be reversed and is generally achieved when people are young: a person who holds a university degree when they are 30 years old will still have a university degree when they are aged 50. Simple cell-based models that control only for age and gender implicitly assume that all other individual characteristics remain constant. Hence, they assume that the distribution of education for those aged 50–55 years, for example, will be the same in 2030 as that of those who are currently in this age group. However, since it is known that education is increasing in many European countries, this is equivalent to assuming that education can indeed be reversed, or that it will become increasingly less important in explaining activity rates.

Figures 4 and 5 show the comparison of a forecasting model that also controls for education, and where education is projected forward in time (Model 2), with the outcomes of a model which only controls for sex and age (Model 1). Both models use United Nations (UN) population projections (http://unstats.un.org/unsd/demographic/default.htm) and estimation of activity rates based on 2005 Labour Force Survey (LFS) data. Model 1 assumes constant activity rates by five-year age class and sex. Model 2 assumes constant activity rates by five-year age class, sex and education, and projects forward in time the distribution of educational level in the following way: cohorts aged 25 years or over in the base year maintain their education distribution as they grow older; and new cohorts from age 25 upwards have the same education distribution as the cohort aged 25 years in the base year. Based on the way they are computed, the forecasts obtained by Model 2 are quite prudential and should thus be regarded as providing a lower bound to the activity rates.

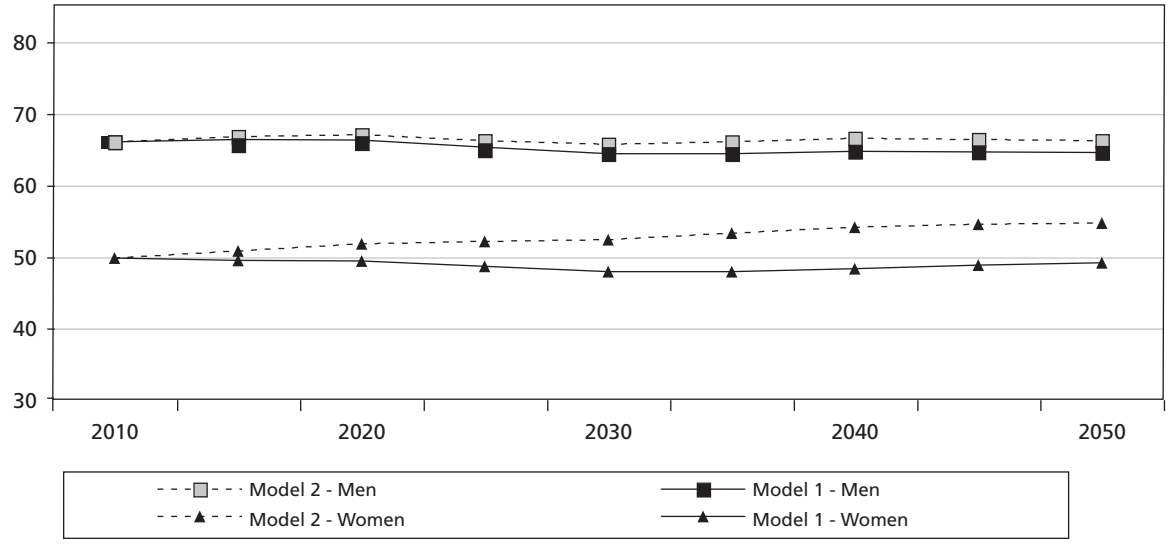
The impact of the implicit trend in education estimated in the data will lead to a substantial increase in the activity rates, especially for women (Figure 4). Overall, the activity rate for people aged 50–64 years is expected to increase – due to a prudential estimate of the impact of education – from 57.8% in 2010 to 60.5% in 2050; thus, the 60% threshold will already be reached by 2040.

The (prudentially) estimated increase in labour force participation due to the change in the education distribution is alone enough to revert the negative effects on the activity rate of ageing when considering the 25–64 years working age population (Figure 5).

Quality and sustainability of work

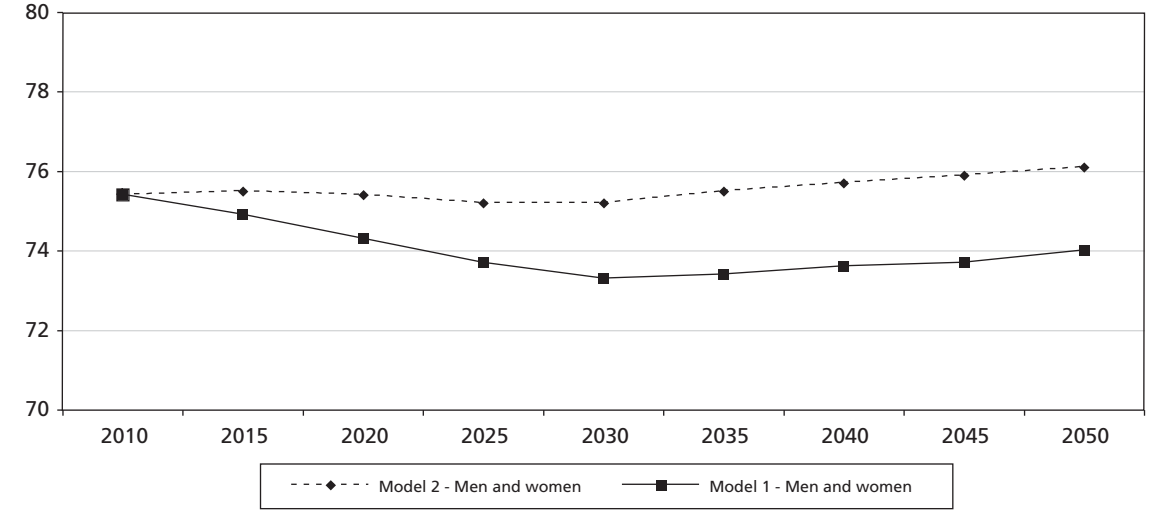
An important aspect when discussing the issue of attracting people – especially older persons – into the labour market or maintaining workers in employment is that of job and employment quality. A positive link emerges between employment growth and quality of work as well as between quality of work and productivity. All of these correlations are highly significant with regard to the ageing of the workforce. In fact, job quality has been recognised as a key factor in enticing older people back into the labour market and in preventing their early withdrawal from the labour market.

Figure 4 Activity rates of 50–64 year olds, comparison between Model 1 (without controls for education) and Model 2 (with controls for education) for EU27 (%)



Source: UN population projections and LFS 2005

Figure 5 Activity rates of 25–64 year olds, comparison between Model 1 (without controls for education) and Model 2 (with controls for education) for EU27 (%)



Source: UN population projections and LFS 2005

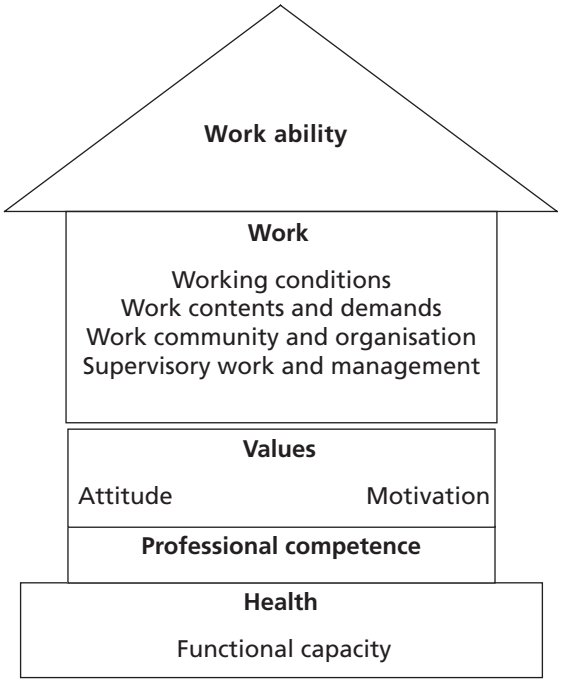
At the root of this close link between quality of work and employment is the concept of 'work ability maintenance' (Ilmarinen, 2005). Work ability is predominantly a matter of striking a proper balance between work and personal resources – namely, health, professional competence and values – over the lifecycle (Figure 6). During the different stages of a person's working life, both their personal resources and working conditions will inevitably change – for example, due to the effects of ageing and the advent of new technologies.

Failure to maintain work ability throughout the entire working life results in a deterioration of the very foundations on which it is based, that is, the personal resources, resulting in loss of balance and the

collapse of the 'work ability model' in adult age. Having lost the ability to maintain a good balance, older workers will tend to leave employment as soon as possible.

Since some changes are inevitably associated with age, maintaining the work ability of an ageing workforce means taking action to make work sustainable in all its dimensions – working conditions, work contents, organisation and management. To this end, the notions of cooperation and involvement are of essential importance. As Peltomäki et al (2002) outline: 'Work ability maintenance means methodical and purposeful actions taken in cooperation with the employer and employees, as well as cooperative organisations in the workplace, in order to support and promote the work ability and health of everyone in work life' (cited in Ilmarinen, 2005, p.137).

Figure 6 Work ability model



Source: Adapted from Ilmarinen, 2005, p. 133

Peltomäki adds that:

> *The most important practical objectives of work ability maintenance are to improve work and the work environment, develop the work community and work organisations, and promote the health and professional competence of employees.*
>
> *The basis for work ability maintenance is the active commitment and participation of different parties in the work community and workplace and their possibility to affect health and safety at work and other workplace health promotion activities.*
>
> (cited in Ilmarinen, 2005, p.137)

For these reasons, job quality has been rated as a key priority since the European Council of Lisbon (2000). It was also one of the three overarching objectives in the Commission's employment guidelines for the 2003–2005 period, together with full employment and social cohesion. Moreover,

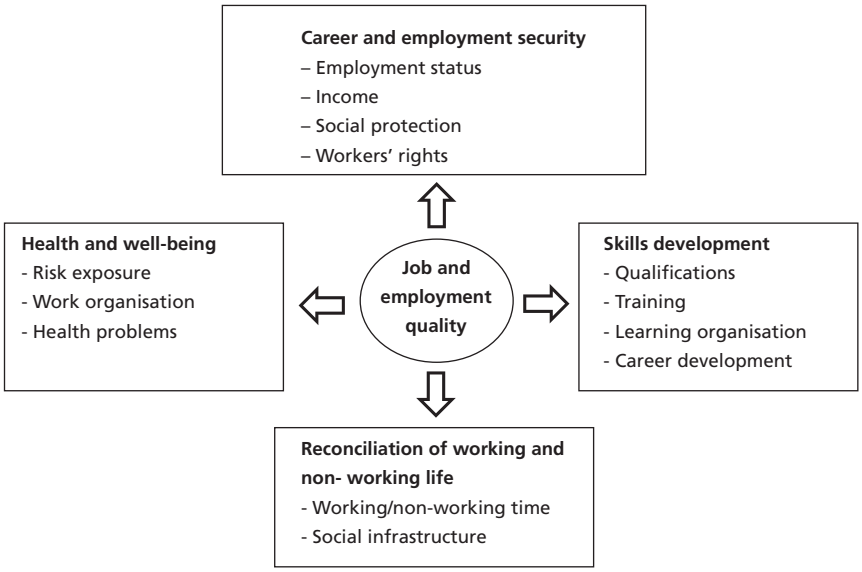
it is mentioned in the *Employment Guidelines 2005–2008* as one of the policies to be fostered by EU Member States (European Commission, 2005c).

'Quality' is a multidimensional concept and depends on a number of components which interact with one another. In 2001, the Council agreed to assess progress in job quality using a set of indicators built on the 10 dimensions of quality of work identified by the European Commission in 2001: intrinsic job quality; skills, lifelong learning and career development; gender equality; health and safety at work; flexibility and security; inclusion and access to the labour market; work organisation and work–life balance; social dialogue and workers' involvement; diversity and non-discrimination; and overall work performance. For each of these dimensions, one or more indicators were proposed – and adopted at the Laeken European Council in December 2001 – as a means of assessing quality of work in Europe and monitoring its evolution over time.

Given the difficulties involved in collecting relevant information and evaluation data relating to the new Member States, the Commission focused on the situation in the EU15. It found that the performance of European countries in the context of these 10 dimensions of quality of work was encouraging in some respects, although there was scope for considerable improvement in each of these dimensions.

This grid of quality indicators can be further improved by taking into account other aspects that contribute to determining job quality and that can be derived from the European Working Conditions Survey (EWCS). In order to investigate job quality, in 2002, Eurofound proposed an analytical framework based on the criteria identified at the Stockholm European Council in 2001. Eurofound organised the factors having a major impact on job quality into four key dimensions and produced a useful model (Figure 7), addressing the correlations between working conditions and ageing as a function of the quality of work concept.

Figure 7 Quality of work and employment model



Source: European Foundation for the Improvement of Living and Working Conditions, 2002, p. 6

Based on this model, the promotion of quality of work and employment involves:

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

These four aspects will be investigated and developed in the following chapters of this report, analysing the EWCS data and taking into account differences across age groups and the specific effects of age. A central focus is how age is an important factor in describing working conditions and how it is an important dimension of the analysis of EWCS data. Thus, the focus of the report will be the analysis of quality of work from an age perspective and of the sustainability of jobs across ages. In order to achieve the Lisbon and Stockholm targets, it is essential to retain workers in the labour market for longer. A prerequisite for this is job sustainability over the life cycle.

The report's analysis will only indirectly point to factors that may enable people to stay in work for longer, since the survey does not record people who are no longer at work nor their reasons for leaving the labour market. However, the analysis does bear witness to the fact that workers facing the worst working conditions and those who are eligible to retire are more likely to leave the labour market.

Career and employment security

1

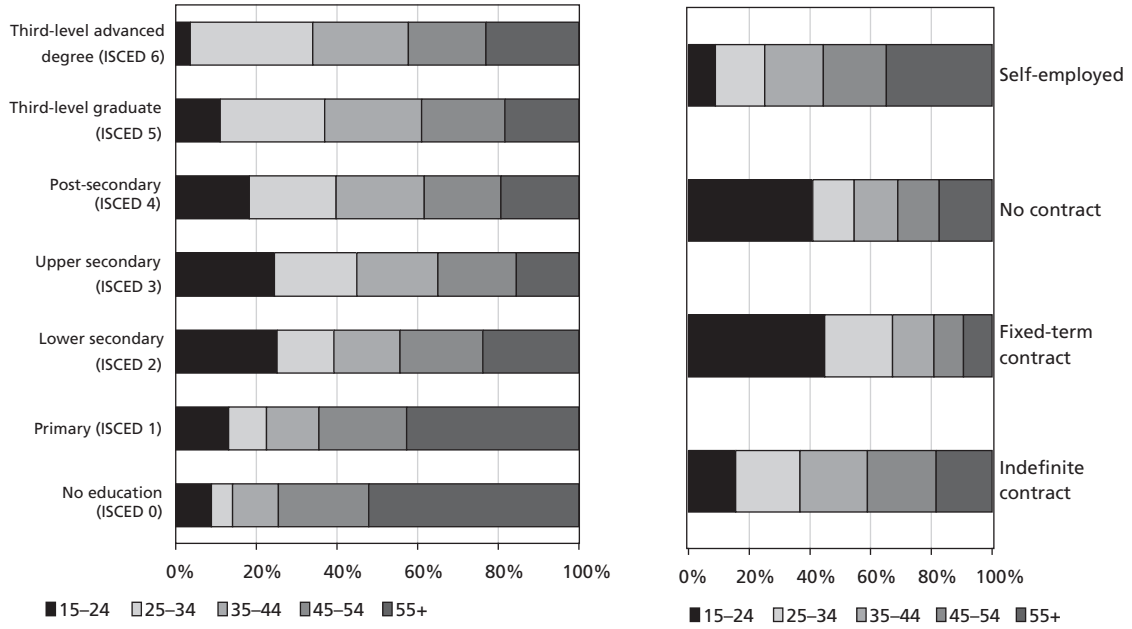
Ensuring career and employment security is an important aspect of promoting quality of work and employment. This chapter will analyse the following key aspects across age groups: employment characteristics and the distribution of non-standard employment contracts; job satisfaction; discrimination and harassment in the workplace; and income earned.

Characteristics of employment

Significant variations emerge across age groups in relation to the main characteristics of employment. According to EWCS data (2005), older workers represent only 22% of workers with a higher education – in other words, those who have completed a third-level education (ISCED 5 and 6)[6]; they account for 36% of workers with a lower level of education – that is, those with a lower secondary education (ISCED 2) – while they account for about 50% of those with either a primary education (ISCED 1) or no education (ISCED 0). This compares with 15% and 31%, respectively, of workers in the 25–34 age group (Figure 8).

Over 40% of temporary employment contracts are held by workers below the age of 24. Workers in this age group also represent the majority (about 40%) of workers with no employment contract whatsoever. At the same time, older workers constitute some 35% of those who are self-employed.

Figure 8 Age distribution of employment, by education and type of employment contract (%)



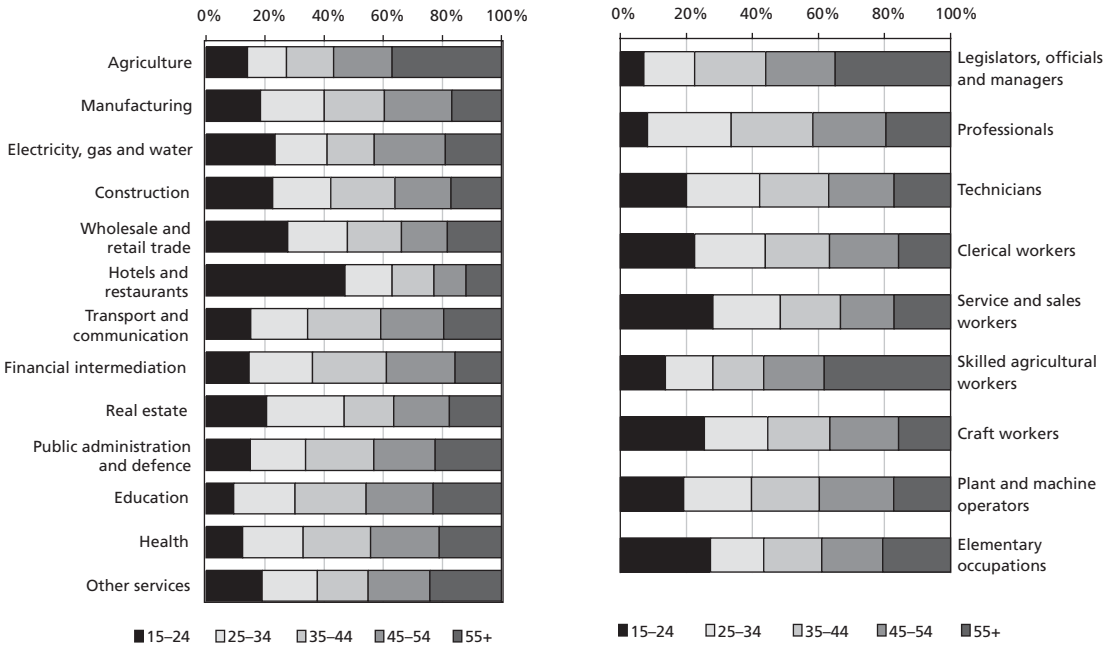
Source: EWCS, 2005

In terms of economic sectors, older workers are also overrepresented in agricultural activities and to a lesser extent in more knowledge-intensive sectors such as education (Figure 9). Conversely, their prevalence in the hotels and restaurants sector is below average, with this sector showing the highest

[6] ISCED (International Standard Classification of Education) is a classification system designed by UNESCO in the early 1970s to serve 'as an instrument suitable for assembling, compiling and presenting statistics of education within individual countries and internationally'.

presence of younger workers, together with the trade sector. Given the importance of the agricultural sector in relation to older people's employment, unsurprisingly, older workers represent about 40% of those working in skilled agricultural occupations. Moreover, their prevalence in occupations such as legislators, senior officials and managers is higher than average, pointing to a stronger polarisation of older workers with respect to the other age groups.

Figure 9 Age distribution of employment, by sector and occupation (%)



Source: EWCS, 2005

According to the European Commission (2006c), older workers aged 55–64 years accounted for a substantial proportion of about one-third of the rise in employment between 2004 and 2005, while younger people aged 15–24 years only made a negligible contribution to this increase. The contribution of older people to employment growth has been mostly felt in the services sector, but also to a certain extent in industry. Furthermore, older people accounted for almost all of the net increase in employment in 'public administration and defence, compulsory social security' and 'transport, storage and communication' during this period. In contrast, there has been a net decrease in the employment of younger persons, resulting mainly from a decline in youth employment in the manufacturing sector and in agriculture, although this has been offset to a limited extent by increased employment in the services sector.

Text box 3: Self-employment

According to data from EWCS, in 2005, self-employment in the EU27 accounted for about 16% of total employment, with particularly high levels of 25.4% overall observed in the southern European countries of Cyprus, Greece, Italy, Malta, Portugal and Spain. Conversely, lower levels of self-employment of 10.9% overall were found in the continental European countries of Austria, Belgium, France, Germany and Luxembourg. This great variation largely depends on the sector composition of employment and in particular on the importance of the agricultural sector, as it is estimated that some 55% of workers in agriculture are self-employed. Given that rates of

self-employment increase with age (see Table 1), a significant proportion of self-employed people are middle-aged and older workers, with about half of workers in this group being aged 45 years or over. A higher proportion of workers in this category also tend to be male and with a lower level of education.

The higher prevalence of self-employment among older workers is also found when cross-country differences are controlled for in terms of economic structure and job characteristics. The typical features of self-employed people described above are even stronger among older workers, as they show the highest proportion of men as well as those with low education levels in the self-employed category. For instance, one out of four older self-employed workers has an education lower than secondary level, which is two-and-a-half times greater than the average. This is clearly related to the fact that about one-third of these workers are employed in the agricultural sector, which is almost twice as many as the other age groups combined.

The increased frequency of self-employment among older men has been widely documented (see, for example, Blanchflower and Oswald, 1998; Zissimopoulos and Karoly, 2007). It has also been linked to shifts from waged and salaried employment into self-employment at the end of a work career and/or to differences in the disposition to retire among waged and salaried workers compared with those who are self-employed (Fuchs, 1982).

Table 1 Incidence of self-employment, by age, sex, education and sector (%)

		Age groups					
		15–24	25–34	35–44	45–54	55+	Total
Incidence of self-employment (self-employed people as proportion of total employees)		6.6	13.6	16.3	17.5	28.8	16.4
Distribution of self-employed people		4.8	18.7	28.0	26.2	22.3	100
Sex	Men	59.3	62.8	62.0	66.8	72.8	65.7
	Women	40.7	37.2	38.0	33.2	27.2	34.3
	All	100.0	100.0	100.0	100.0	100.0	100.0
Level of education	No education	0.8	0.4	0.2	0.6	4.1	1.2
	Primary education	0.5	2.9	4.1	9.1	20.2	8.6
	Secondary education	88.0	64.4	71.6	63.1	58.5	65.9
	Third-level education	10.7	32.3	24.2	27.2	17.2	24.3
	All	100.0	100.0	100.0	100.0	100.0	100.0
Sector	Agriculture and fishing	8.4	16.2	19.0	17.2	30.5	20.1
	Manufacturing	24.3	26.4	22.0	30.7	29.4	26.9
	Wholesale and retail trade	27.6	19.7	32.7	20.4	18.4	23.7
	Other services	39.6	37.7	26.3	31.8	21.5	29.3

Source: EWCS, 2005

Non-standard employment contracts

In recent years, the highest rise in employment has been found among those working on non-standard employment contracts, such as part-time and fixed-term contracts.

Moreover, the flexible organisation of work – for instance, working at home, temporary work, fixed-term work, seasonal work and part-time work – has been highlighted as a factor enabling people to remain at work for longer and for reducing the practice of early retirement.

Part-time employment

The incidence of part-time employment forms a U-shaped structure across age groups (Table 2): accordingly, its incidence is higher among young people (24.7%), while it declines as age increases and rises again in the oldest age group (55 years and over), where more than one out of five workers holds a part-time job (22.1%). This U-shaped structure persists even when distinguishing between male and female workers. Overall, however, the incidence of part-time work is four times higher among women than men, while older female workers show the highest proportion of part-time employment at 37% compared with 12% of older men.

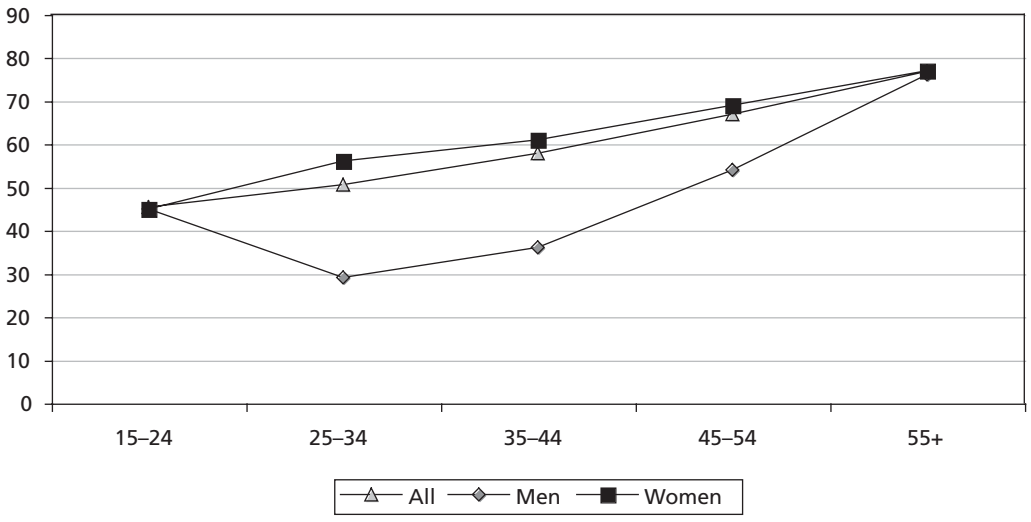
Table 2 Workers on part-time employment contracts, by age and sex (%)

	Age groups					
	15–24	25–34	35–44	45–54	55+	Total
All	24.7	13.5	16.3	13.4	22.1	16.7
Men	19.8	5.2	3.8	3.8	12.0	7.1
Women	30.9	23.2	31.5	25.5	37.0	28.7

Source: EWCS, 2005

An interesting question in relation to part-time jobs concerns the voluntary or involuntary nature of this type of employment contract. In the EWCS, workers were asked if they would like to work full time, more hours but not full time, the same number of hours or fewer hours. The findings show that part-time work appears to be an involuntary choice for a considerable proportion of young and adult workers, while it seems to be much more of a voluntary choice for both older and female workers (Figure 10). It is worth noting that no gender difference emerges among workers in the youngest and oldest age groups in terms of the degree of voluntariness, pointing to an interest in this type of employment contract among young workers to allow them to combine work and education, and among older workers to enable them to reconcile work and other family or social commitments. Conversely, male workers in the central age groups show the lowest incidence of voluntary part-time work.

Figure 10 Part-time workers not wanting to work more hours or full time ('voluntary part-timers'), by age and sex (%)



Source: EWCS, 2005

Diffusion of part-time work is considered to be a factor for creating greater opportunities for a more phased transition into retirement and, in general, for enhancing the employability of older workers. Comparing the 2005 EWCS data with that from the 2000 survey, the findings show that part-time employment has increased, particularly among older workers, by 4.6% in relation to an overall average increase in part-time employment of 0.6% (data on part-time employment is not available in the 1995 EWCS).

According to 2006 data from the Organisation for Economic Co-operation and Development (OECD), little evidence of any significant correlation across countries exists between the incidence of part-time work among older workers and the overall employment rate of older people. However, a somewhat stronger positive and statistically significant correlation emerges between the incidence of part-time work and the age of retirement. Other research also points to the growing demand for part-time employment contracts among older workers of retirement age. A 1993 survey (European Commission, 1998) reveals that almost two-fifths of retired people in 12 EU Member States would have liked to continue working, while over half of them would have liked to continue working in a part-time capacity. Similarly, Penner et al (2002) found that about 13% of older workers in the US who left their jobs between 1992 and 2000 stated that they would have continued working if their employer had allowed them to work fewer hours for less pay.

Temporary employment contracts

Temporary employment contracts – including fixed-term contracts, temporary agency contracts, apprenticeships or other training schemes, and jobs with no contract – are clearly concentrated among the youngest workers: only 49% of workers aged 15–24 years hold an indefinite-term contract, also referred to as open-ended employment contract (Table 3). Temporary employment contracts or no contracts are also prevalent among those aged 24–34 years (24%); their frequency declines among adult workers but increases slightly again among those in the oldest age group, especially among older female workers.

Table 3 Dependent workers, by type of employment contract, age and sex (%)

	Contract type	Age groups				
		15–24	25–34	35–44 years	45–54 years	55+ years
All	Open-ended contract	49	76	83	86	82
	Temporary contract	38	19	12	9	10
	No contract	13	5	5	5	8
Men	Open-ended contract	46	78	85	88	85
	Temporary contract	38	17	9	7	7
	No contract	16	5	6	5	8
Women	Open-ended contract	52	74	80	83	78
	Temporary contract	38	20	14	10	13
	No contract	10	6	6	7	9

Source: EWCS, 2005

During the last decade, temporary employment has grown in many European countries, with only a few of the countries experiencing a stable development in this respect (see OECD, 2002). This growth has raised concerns that temporary jobs may be outnumbering more stable forms of employment and

thus creating an additional source of insecurity for workers. In this sense, the rise in temporary employment has been charged with perpetuating the gap between permanent and temporary workers, such that workers on temporary employment contracts, especially early on in their careers, may continue in precarious employment for a long time before moving to permanent employment (Gagliarducci, 2005).

However, the simple definition of temporary employment does not give an indication of the degree of insecurity associated with it: for instance, it does not reflect the specific duration of a contract nor, more importantly, the average time elapsed between one contract and the next. The EWCS does not provide any information in relation to the latter point; with respect to the duration of such contracts, some indications could in principle be derived from the variable responses given to Question 3c of the survey, which asks about the exact duration of the contract. However, the high frequency of non-response could bias the results.

On the other hand, holding an open-ended employment contract does not necessarily preclude workers from losing their job and workers on such contracts may be no more secure than those on temporary contracts. The concept of precariousness is indeed a very generic one and generally refers to all situations where there is significant uncertainty about the employment outlook, as in the case of temporary jobs, especially when the probability of contract renewal is low. However, it may also encompass permanent jobs in cases where firing costs are negligible.

Thus, in the case of temporary employment contracts, insecurity does not relate as much to the contract duration, but rather to the lower possibility for contract renewal compared with that of permanent workers. Moreover, temporary contracts may reduce the employability of workers due to their lower opportunities to receive formal training, as well as on-the-job learning, while executing their usual tasks or rotating several different tasks. All of these factors influence the worker's capacity to remain an attractive candidate in the labour market, as reflected in the findings of the EWCS. The survey's findings about training, learning and gaining knowledge and experience through rotating tasks and working in teams have been used to build an indicator of employability. This can be used, in turn, to further distinguish temporary workers into two groups according to their low or high level of employability and hence the level of insecurity associated with such workers. This indicator has been devised by conducting a factor analysis of the EWCS questions (Q. 28, Q. 23c, Q. 23e, Q. 23f, Q. 37e, Q. 26a and Q. 26b). The indicator has been standardised to a zero average value; thus, individuals with a negative value are considered as having low employability, while those with a positive value are deemed as having high employability. The EWCS data show that about half of temporary workers have low employability and that this proportion increases with age; moreover, temporary female workers have a lower employability than men, especially in the older age group.

As already discussed, permanent workers can also perceive a risk of job insecurity if they are concerned that they might lose their job. Data from the EWCS indicates that, on average, 26% of workers on indefinite-term contracts believe that they could lose their job in the next six months; younger and female workers are most at risk in this respect. Thus, despite being on an open-ended contract, these workers are not sheltered from insecurity.

By analysing the proportions of workers on temporary contracts with low levels of employability and those on 'precarious' open-ended contracts, it is possible to get an idea of the distribution of insecure

employment contracts across age groups (Table 4). Therefore, the definition of precarious employment in this report goes beyond the formal definition of contract type, looking instead at the actual content of insecurity in employment. As expected, younger workers (15–24 years) encounter a higher incidence of job insecurity, with almost 33% of young dependent employees having an insecure employment contract, while older workers appear to be more 'protected' against such risks. A distinction according to sex shows that female workers, especially younger women, also experience a higher risk of employment insecurity than men.

Table 4 Workers on insecure employment contracts, by age and sex (%)

	Age groups				
	15–24	**25–34**	**35–44**	**45–54**	**55+**
All	32.7	29.7	27.4	27.9	22.9
Men	29.5	27.5	27.0	27.4	20.3
Women	36.0	31.1	25.7	26.5	24.9

Note: Figures relate to workers on temporary employment contracts with low levels of employability or those on indefinite-term contracts who think that they could lose their job in the next six months.

Source: EWCS, 2005

Job satisfaction

In relation to the links between job satisfaction and workers' well-being, a vast array of literature in the fields of psychology and economics supports the claim that job satisfaction is a good measure of overall individual well-being (Diaz-Serrano and Cabral Vieira, 2005). Moreover, job satisfaction has been recognised as an important factor in relation to active ageing and achievement of the Stockholm and Barcelona targets: the EU High Level Group on the future of social policy stressed that 'extending working life would be helped by increasing job satisfaction' (European Commission, 2004a).

Following the influential research of Hamermesh (1977) and Freeman (1978), a growing body of literature has been concerned with the determinants of job satisfaction. Substantial evidence exists of a meaningful correlation between job satisfaction, as well as many individual and job characteristics, and other behaviours such as absenteeism, job performance and employees' willingness to help co-workers and their organisation. Moreover, job satisfaction is considered to be a good predictor of the intentions or decisions of employees to leave a job (Blanchflower and Oswald, 1998; Borjas, 1979; Clark et al, 1996 and 1998; Böckerman and Ilmakunnas, 2007; Khaneman and Krueger, 2006).

In the EWCS, workers were asked about their overall level of satisfaction with their working conditions on a scale from 1 (very satisfied) to 4 (not at all satisfied). Simple statistics reveal a low level of variability across sex and age groups, even if women appear to be on average more satisfied than men with their working conditions and if satisfaction levels seem to increase slightly with age.

Table 5 Satisfaction with working conditions, by age and sex (%)

	Age groups					
	15–24	25–34	35–44	45–54	55+	Total
All	78.8	81.0	82.4	81.8	83.5	81.7
Men	78.1	79.7	80.6	81.8	83.2	80.7
Women	79.7	82.5	84.6	81.9	84.0	82.8

Note: Workers reported to be 'satisfied' or 'very satisfied' with their working conditions

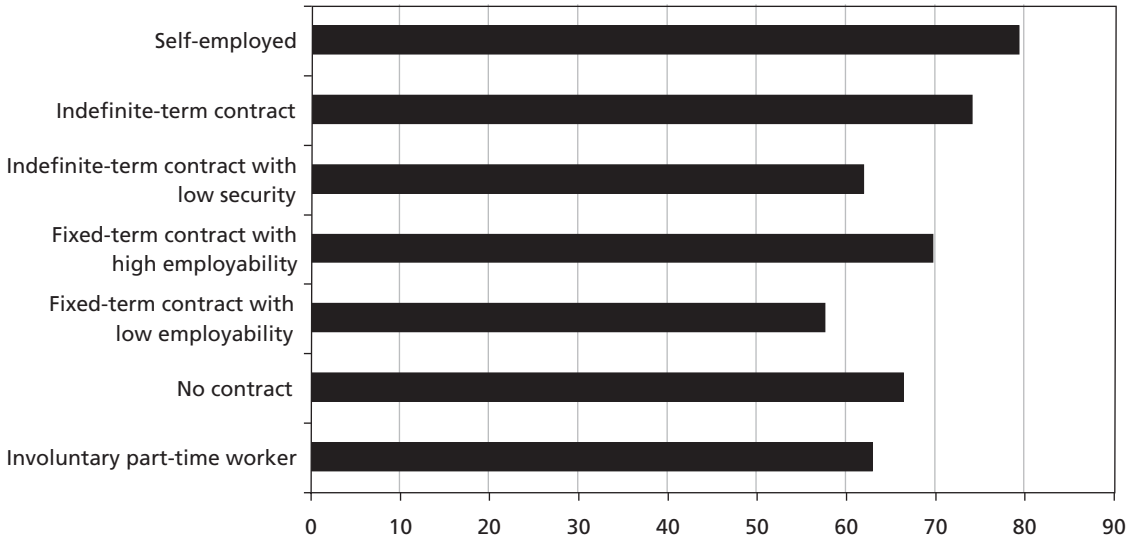
Source: EWCS, 2005

However, a multivariate analysis that takes into account a number of job and personal characteristics shows that gender does not have an effect on satisfaction; moreover, the effect of age on job satisfaction is found only among workers aged 15–24 years who report a lower probability of being satisfied than the other groups. The EWCS also contains other questions analysing workers' satisfaction with specific aspects of their jobs: for instance, Question 25 assesses work situations in terms of aspects such as assistance given/received by colleagues and bosses or autonomy in the workplace, while Question 37 explores other aspects of the job such as precariousness, career prospects and opportunities. Answers to all of these questions are strongly correlated with the overall indicator of satisfaction. Assuming that overall satisfaction is a linear combination of satisfaction in different domains, and based on the standard assumption that each domain satisfaction is a linear function of a number of job and personal characteristics, a reduced form of the job satisfaction equation can be obtained by simply regressing job satisfaction on these covariates in a logit framework.

Other results of the multivariate analysis suggest that temporary employment contracts have a negative impact on worker satisfaction (Figure 11). Using the previously outlined classification of employment contracts, it is found that fixed-term contracts with low employability are associated with the lowest level of satisfaction, followed by open-ended contracts with low security (where workers believe they could lose their job in the next six months), jobs with no contract and fixed-term contracts with high employability. All of these employment contract types result in lower levels of worker satisfaction compared with those on 'secure' open-ended contracts. This is not a new finding: for instance, Kaiser (2002) finds that fixed-term jobs, both full time and part time, imply a loss of job satisfaction. The effect is particularly evident in terms of 'overall job satisfaction' and regarding satisfaction with levels of job security. Similarly, de Graaf-Zijl (2005) finds that on-call work, fixed-term contract work and agency work all lead to lower levels of satisfaction with job security among workers.

Conversely, self-employed workers report higher levels of job satisfaction than dependent workers, a finding which is consistent with those of Blanchflower and Oswald (1998). The latter show that, all else being equal, those who are self-employed report being more satisfied than employees. Meanwhile, no significant difference emerges in satisfaction levels between part-time and full-time workers, with the exception of part-time workers who would like to work more hours.

Figure 11 Impact of contract type on probability of being satisfied with working conditions (%)



Note: The graph shows the estimated probability of being satisfied or very satisfied with working conditions derived from a logit model, using age, sex, education, occupation, types of contract, sector and countries as covariates. The confidence level for the values reported is <0.001.
Source: EWCS, 2005

Discrimination and harassment in the workplace

In light of major demographic changes, the issue of age discrimination has increased in importance in most EU countries. Age discrimination does not only concern people above a particular age, but affects many age groups in different ways, with the strongest implications being evident for the youngest and oldest individuals. Manifestations of age discrimination against older workers might include various actions. Some of these may be explicit, such as excluding older workers from promotion, training and benefits, including age limits in recruitment advertisements or refusing to hire older workers. Other manifestations may be more subtle, such as limiting the job responsibilities and duties of older workers, dealing with job redundancies by encouraging older workers to retire early or reducing incentives for people who are willing to continue working beyond the 'normal' retirement age. All of these actions reinforce a stereotype of older workers as being the most dispensable group in the workforce.

Young workers are also at risk of age discrimination – or so-called 'reverse ageism'. In particular, they risk being denied access to jobs or suffering from unfair work allocation. Many groups of workers may also face multiple forms of discrimination. For instance, women returning to work from caring responsibilities, older ethnic minorities and older disabled people are among those who are at risk of the greatest levels of discrimination.

The European Council Directive 2000/78/EC[7] establishing a general framework for equal treatment in employment and occupation included age as one of the grounds for discrimination which is prohibited. Member States were required to transpose this directive by December 2003, although

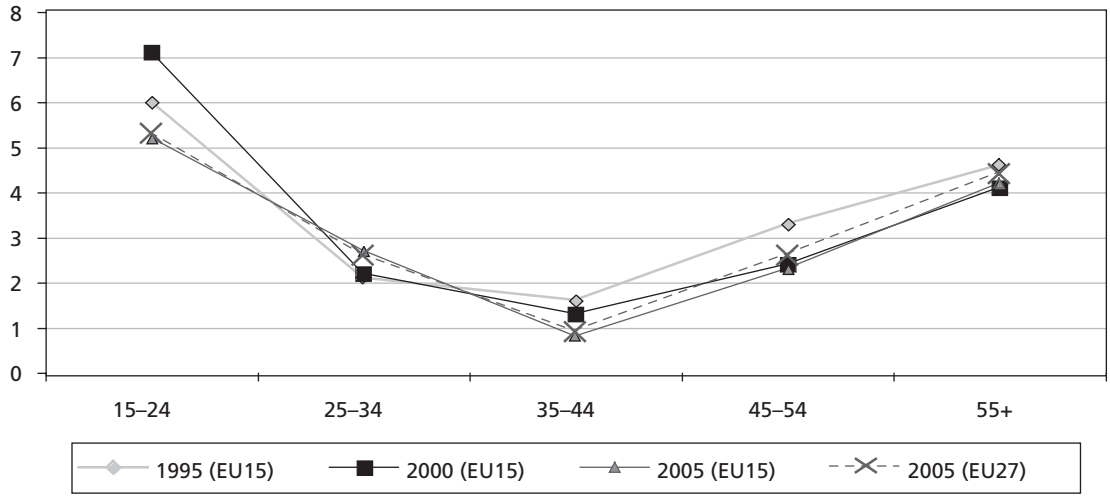
[7] http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=32000L0078&model=guichett

some Member States were allowed to extend this time limit with respect to the age provisions for a maximum of a further three years. The 10 new Member States that joined the EU on 1 May 2004 were required to transpose the directive before their entry date. Thus, by 2007, all Member States should have adopted the directive's age provisions.

According to the EWCS data, age discrimination at work does not appear to be widespread; however, a clear U-shaped pattern emerges as age increases, confirming that the age groups most at risk of discrimination are younger and older workers.

Looking at the evolution of discrimination over time in the EU15, the evidence shows a slight decrease in the proportion of workers who report being subject to acts of discrimination due to age – particularly among younger workers (Figure 12). However, the findings cited in this report constitute only a small proportion of work-related manifestations of age discrimination, since they encompass only those occurring at the workplace and not forms of discrimination which take place during recruitment.

Figure 12 Workers exposed to age discrimination, by age, 1995–2005 (%)



Source: EWCS, 1995–2005

The findings also point to the incidence of multiple forms of discrimination: those who reported being subjected to age discrimination also indicated that they had experienced other forms of discrimination and/or violence. In particular, a clear interplay emerges between the incidence of gender discrimination and age discrimination: nearly 42% of women who reported experiencing age discrimination also cited acts of bullying or harassment at the workplace, compared with 6% of female workers overall and about 30% of men citing age discrimination (Table 6). Moreover, almost 23% of women who reported experiencing age discrimination also cited gender discrimination, compared with an overall average incidence of gender discrimination of about 2% among female workers.

These findings are confirmed by other studies, many of which point to the different ways in and degrees to which men and women experience age discrimination. For instance, Itzin and Phillipson

(1995) introduced the concept of 'gendered ageism' to describe the combination of ageism and sexism factors, concluding that 'it would appear that age and ageism is, in fact, significantly gendered and that sexism operates always with a dimension of ageism'.

Table 6 Incidence of multiple discrimination and age discrimination, by sex (%)

Workers who reported experiencing at work…	Total (average)		Among those subject to age discrimination	
	Men	Women	Men	Women
Threat of physical violence	5.9	6.2	16.0	24.7
Physical violence from people in own workplace	1.7	2.0	8.8	12.2
Physical violence from other people	4.6	4.0	9.5	14.5
Bullying/harassment	4.3	6.1	30.1	41.9
Sexual discrimination/discrimination linked to gender	0.6	2.1	6.8	22.7
Unwanted sexual attention	0.8	2.9	3.8	24.2
Age discrimination	2.5	2.8	-	-
Discrimination linked to nationality	1.1	0.9	8.1	11.1
Discrimination linked to ethnic background	0.8	0.7	5.2	8.0
Discrimination linked to religion	0.5	0.5	4.6	5.4
Discrimination linked to disability	0.5	0.3	4.5	5.0
Discrimination linked to sexual orientation	0.2	0.2	3.9	1.8

Source: EWCS, 2005

The U-shaped profile of age discrimination is also confirmed when individual and job characteristics – such as age, gender, nationality, education, type of contract, occupation, sector, company size and country – are taken into account: all other things being equal, workers in the 15–24 age group and those aged over 55 years more frequently report having experienced age discrimination than other age groups. Not surprisingly, self-employed workers, as well as those working on their own, are less likely to experience age discrimination. In addition, individuals working part time or less than 35 hours a week report lower levels of age discrimination.

Interestingly, the analysis reveals a positive correlation between age discrimination and education and skill levels, with those who are less educated and less skilled reporting lower levels of discrimination. This seemingly counterintuitive result is nevertheless consistent with the low level of awareness about age discrimination, which could be more widespread among low-skilled workers. It has been claimed that while many older people confirm that they do not receive the same treatment or access to a given service, they do not perceive such differences as a form of discrimination (see, for instance, data on discrimination on the AGE website[8]). The sectors in which age discrimination is reported most frequently are the commerce and the health and education sectors, where the presence of older workers is considerable. Finally, older foreign workers report a higher probability of being subjected to age discrimination, confirming that age discrimination can intersect with other forms of discrimination.

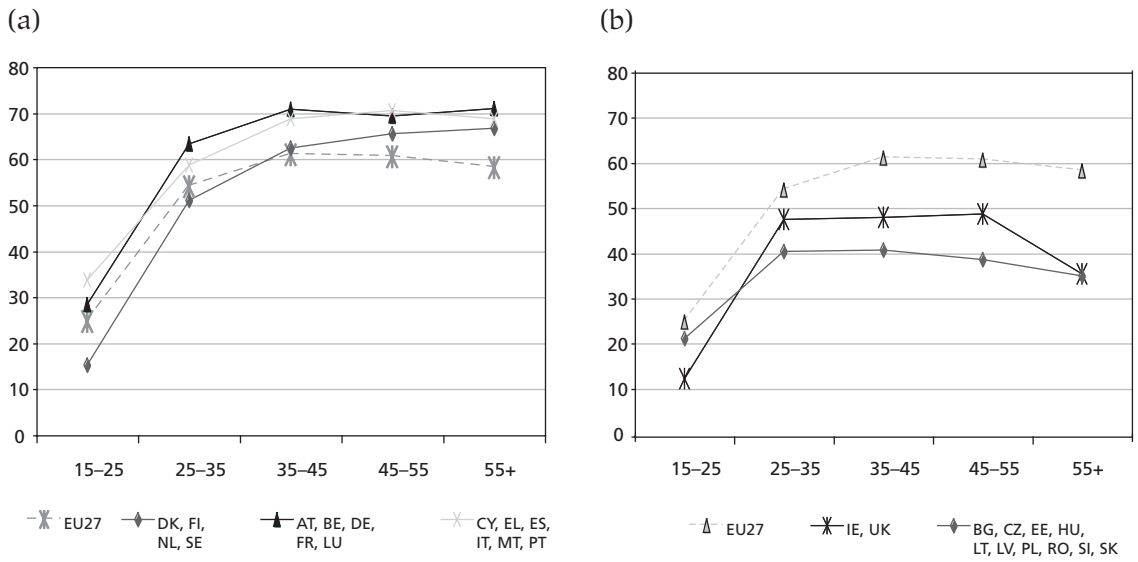
[8] http://www.age-platform.org/EN/rubrique.php3?id_rubrique=41

Wage profiles by age

In the EWCS, respondents were asked to rate their typical monthly earnings received from their main paid job on a 10-point scale, which corresponds to the 10 income deciles in each country. A useful characteristic of the income bands available in the EWCS is that they enable a comparison to be made between individuals in different countries: in other words, people in the lower income band in Hungary should be comparable to those in the lower band in Ireland (see Parent-Thirion et al, 2007, p. 83; Fernández Macías, 2006). Because of the way they are designed – which is based on the real income deciles in each country – each of the income bands should roughly correspond to 10% of respondents in each country. Nonetheless, it should be noted that, looking at the cross-country distribution, respondents are not equally distributed throughout these bands; rather, there are countries where either the low-income population or high-income groups are underrepresented. This is probably due to the high non-response rates in relation to this specific question. Non-response is unequally distributed across countries and categories of workers: those with higher or more unstable earnings are more likely to refrain from answering this particular survey question.

Figure 13 illustrates an earnings profile which is based on calculating the proportion of workers who receive earnings above the median – that is, those workers earning more than the midpoint of all incomes in the EU countries – by age group . The EU27 profile reveals an inverted U-shape, with the proportion of workers with earnings rising above the median up as far as the 45–54 age group and then declining after this. The profile, which is similar to the typical earnings profile by age, may reflect the fact that workers' productivity initially increases as they gain on-the-job experience but then plateaus or declines after a given age.

Figure 13 Workers with earnings above the country-specific median wage, by age and country (%)



Source: EWCS, 2005

However, this pattern differs between countries. In eastern European countries, as well as Ireland and the UK, the decline in earnings at older ages is more pronounced (Figure 13b). Conversely, in southern, northern and continental European countries, wages tend to increase more sharply with age and show little or no tendency to decline in the older age groups (Figure 13a).

This pattern is consistent with the findings of other surveys. For instance, data on mean and median earnings from both the Eurostat Structure of Earnings Survey (SES) and the EU Statistics on Income and Living Conditions (SILC) show a flat profile for eastern European countries, while for the EU15 countries average earnings continue to rise as far as the 55–64 age group and decline only after the age of 65 years.

Average earnings profiles such as these confound pure age effects with the effects of other characteristics, such as education and occupation. For instance, if younger workers are better educated than older ones, this is reflected in a declining earnings profile. If part-time and atypical employment contracts, associated with lower earnings, are more widespread among younger workers, this tends to push up the average earnings of older workers.

In addition to composition effects, selection effects will also explain cross-country differences. If low-paid workers are more likely to retire early than highly paid workers, this will result in a higher average wage level for older workers in countries where early retirement is more common.

In order to isolate the effects of the various determinants on the earnings profile, the report estimates the probability of having earnings above the median as a function of education and seniority, as well as age, gender and other individual characteristics and job-related variables (Table 7). The results are corrected using the Heckman selection correction procedure, taking into account the fact that missing values on earnings are not completely random, but depend on some individual characteristics and job-related variables which also influence wage levels.

The results of the model – which correspond to the EWCS results (see Parent-Thirion et al, 2007, p. 84) – show that the probability of having earnings above the median:

- is lower for women;
- increases with education;
- is lower for dependent workers on temporary contracts and part-time workers, while self-employed people are not statistically different from dependent employees;
- increases with skill and tenure;
- is higher for workers with a supervisory role and for those working over 40 hours a week;
- is lower in small companies compared with medium and large ones.

Turning to the effects of age on wages, the age effect almost disappears: a lower and statistically significant probability of having earnings above the median only exists for the first age group (15–25) while no significant differences emerge among the other age groups.

Table 7 Determinants of the probability of having earnings above the median

Determinants		Parameter estimate	Significance	Odds ratio
Age group	15–25	-0.539	***	0.583
	25–35	-0.023		0.977
	35–45	0.090		1.094
	55+	-0.107		0.899
Individual characteristics	Women	-0.656	***	0.519
	Foreigners	-0.152		0.859
	Tenure	0.014	***	1.014
Type of contract	Self-employed	-0.132		0.876
	Temporary contract	-0.358	***	0.699
Education	No education	-0.819	***	0.441
	Primary education	-0.494	***	0.610
	Third-level education	0.567	***	1.763
Occupation	High-skilled white-collar worker	0.409	***	1.505
	High-skilled blue-collar worker	-0.010		0.990
	Low-skilled blue-collar worker	-0.187	***	0.829
	Supervisory role	0.471	***	1.602
Part-time worker		-1.019	***	0.361
No. of weekly working hours	Less than 35 hours	0.062		1.064
	Over 40 hours	0.241	***	1.273
Company size	One employee	-0.171		0.843
	Micro (2–9 employees)	-0.310	***	0.733
	Small (10–49 employees)	-0.018		0.982
	Large (over 250 employees)	0.091		1.095

Sector dummies: Yes
Country dummies: Yes
Number of observations: 19,899
Censored: 2,466, uncensored: 17,433
Wald chi2(59)=1,675.60 (0.000)
Wald test of independent equations (rho = 0): chi2(1) = 3.80 Probability > chi2 = 0.0512
Note: For all workers surveyed in the EWCS, the dependent variable 'y' is a binary variable taking the value of '1' if the worker declares earnings above the median and the value of '0' otherwise. Selection of respondents is corrected using the Heckman procedure. The selection equation gives the probability of response and contains the same variables as above, in addition to some indicators that affect the probability of non-response but that do not affect earnings. These variables are required for identification and are as follows: the number of minutes the interview lasted; the number of persons present during the interview; respondent cooperation; and willingness to participate in a follow-up interview. The Wald test indicates that the probability of having earnings above the median and of response are not independent equations; the correction for selection is thus required.
Source: EWCS, 2005

One of the factors which is considered to be a significant obstacle for improving the labour market position and participation of older workers is the discrepancy – whether real or perceived by the employer – between (declining) productivity and (increasing) wages at older ages.

In its 1998 *Employment outlook*, OECD finds a negative, although not significant, cross-country correlation between the earning premiums of older workers compared with younger workers and

older workers' share of total employment. It concludes: 'There is only weak evidence that the earnings of older workers are lower relative to young workers in countries where older workers represent a larger share of total employment. This may indicate that workers of different ages are close substitutes in production, so that an increased supply of older workers can be employed without a significant fall in their relative wages' (OECD, 1998a, p. 123).

Nevertheless, in subsequent years, this relationship seems to have become stronger and OECD indicates in its *Employment outlook 2006* that 'there is some evidence of a negative impact of seniority wages on employment opportunities for older male workers … Thus, it would appear employers are more likely to hire and retain older (male) workers, all else equal, in countries where wages rise less steeply with age than they are in those countries where wages rise more steeply' (OECD, 2006, p. 68).

In analysing the EWCS data, no significant evidence emerges of an earnings premium for older workers, once observable job-related variables and individual characteristics are taken into account. Performing the same analysis on older workers only, some country-specific effects in determining earnings for older workers do emerge, once individual and job-related determinants are accounted for. However, these country-specific effects do not seem to correlate with the employment rates of older workers: the correlation between the estimated probabilities of having earnings above the median for older workers with the same characteristics in different countries and the employment rate of workers aged 55–64 years is close to zero.

Health and well-being 2

This chapter will examine three particular aspects of the health and well-being dimension – risk exposure, work organisation and health problems – and their impact on perceived job sustainability.

Risk exposure

Health, in its context as a functional capacity, constitutes one of the components of work ability: the more this component deteriorates, the harder it is to maintain an equilibrium. Among the factors that have a considerable impact on workers' health is periodic exposure to physically hazardous working conditions. However, other important factors, which are not considered in this report due to the lack of data, are those related to lifestyle, including, for example, diet, alcohol consumption, smoking and physical exercise – factors for which awareness-building campaigns should be performed at workplaces.

Older workers may be particularly at risk from exposure to difficult working conditions – such as heavy physical work or restrictive postures – as these can amplify the natural deterioration of the body related to the ageing of sensorial and physical capacities (Ilmarinen, 2005).

The findings in Table 8 show the proportion of respondents in the EWCS (2005) who replied that they were exposed to physical risks for at least half of their working time. Following the approach of Ilmarinen (2005), the table distinguishes between workers under 55 years of age and those aged over 55 years. Comparing older workers with the rest of the workforce (see last column of table), it emerges that, for all risks, older workers report a lower exposure level than their younger counterparts, although the differences never exceed five percentage points.

Table 8 Exposure to physical risks, by age, EU27 (%)

		Age		Difference (percentage points) (b)-(a)
		<55 yrs (a)	55+ yrs (b)	
Load/position risks	Standing or walking	60.8	60.6	-0.2
	Repetitive hand or arm movements	52.1	49.3	-2.8
	Tiring or painful positions	31.5	30.0	-1.6
	Carrying or moving heavy loads	21.4	17.0	-4.4
Work environment risks	Noise	20.6	16.9	-3.7
	Vibrations	17.6	15.3	-2.3
	High temperatures	16.7	13.3	-3.4
	Low temperatures	12.4	11.5	-0.9
	Breathing in smoke, fumes, powder or dust, etc.	13.5	10.4	-3.1
	Tobacco smoke from other people	12.9	10.3	-2.5
Biological/chemical and radiation risks	Handling/contact with chemical products or substances	8.6	6.2	-2.4
	Handling/contact with materials that may be infectious	6.0	4.8	-1.2
	Breathing in vapours such as solvents and thinners	6.5	4.6	-1.9
	Radiation	2.6	2.0	-0.7
Lifting	Lifting or moving people	5.5	4.3	-1.3

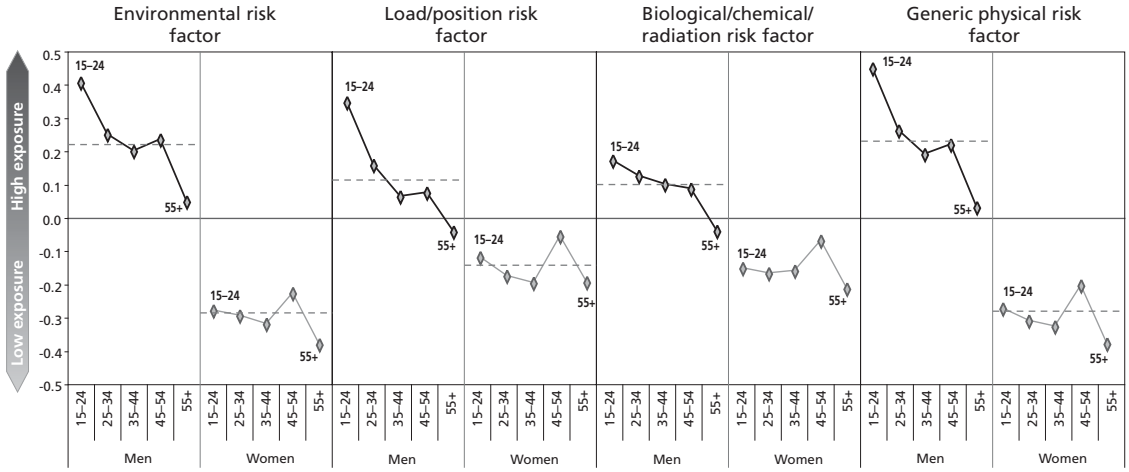
Note: Findings relate to those who are exposed to such risks for at least half of their working time.

Source: EWCS, 2005

Distinguishing between different risks, older workers report higher exposure levels for the risks associated with physical position and repetitive movements, or carrying or moving heavy loads. In absolute terms, the highest physical risk factor is standing or walking at work, a condition that applies to about three out of five older workers for at least half of their work schedule.

To gain a better overview of workers' exposure to physical risks in 2005 and of how risk exposure is distributed across ages, the report condenses, by means of a factor analysis, all of the risks reported above into a single index, which measures the level of general exposure to physical risks. This indicator can be interpreted as one of the dimensions of work sustainability over age. To facilitate interpretation, the index has been standardised: 0 represents average exposure, while positive values denote exposure greater than the average and negative values indicate lower than average exposure. Furthermore, in order to display this general factor more accurately, the index has been split into three sub-factors which measure physical work environment risks; physical load/position risks; and biological/chemical and radiation risks. Figure 14 shows the average values obtained for these factors, distinguished according to sex and age.

Figure 14 Mean values for observed physical risk factors, by sex and age, EU27, 2005



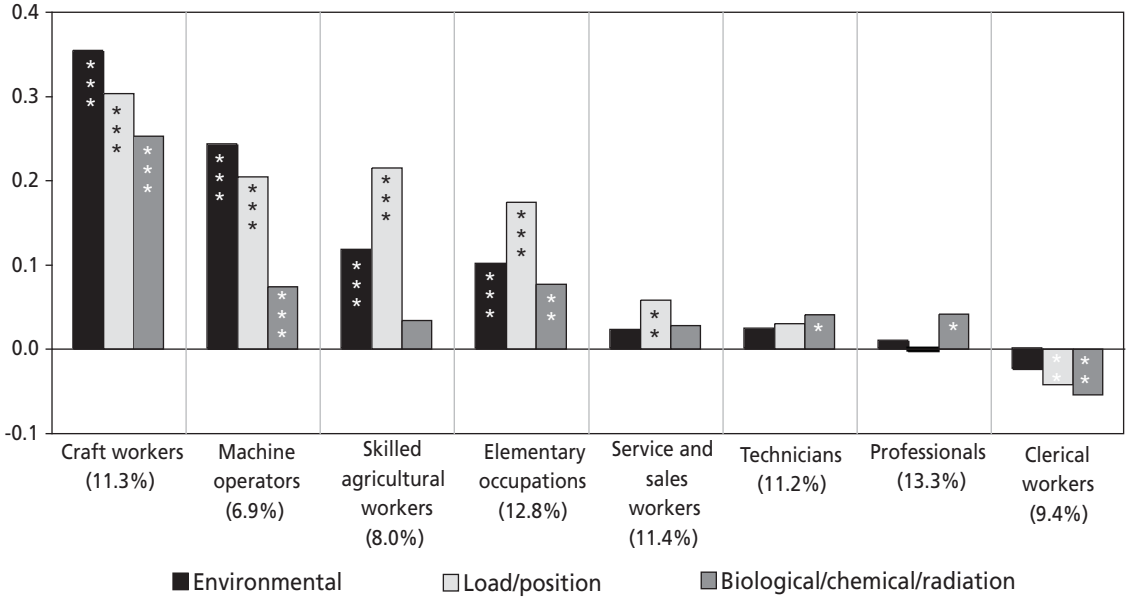
Note: The horizontal dotted lines represent mean values for each sex.
Source: EWCS, 2005

For all factors, the scores for male workers are invariably higher than those obtained for women, indicating a higher level of risk exposure for men (Figure 14). This result is not surprising, since the most hazardous jobs – such as in the construction and manufacturing sectors – are characterised by a strong male presence. At the same time, a trend showing a reduction in risks with increasing age seems to emerge, with considerable differences in risk exposure between the extreme groups, especially among male workers. However, a worsening in working conditions is detected in the 45–55 age group; the increase in physical risk exposure is particularly strong among female workers in this age group, who show higher scores for all factors compared with women in the other age groups. Since the analysis records the risk exposure levels only of those who are still in employment, it is plausible to assume that those who are facing the highest exposure levels and are eligible to retire have left the labour market. This is reflected in the significant differences between the index values of those in the 45–55 age group and those aged 55 years and over. In this context, a critical situation

can be discerned for women aged 45–54 years. These results are also confirmed when taking into account the effects of variables, such as occupation, sector, country and company size, in a multivariate regression analysis.

To conclude this analysis of workers' exposure to physical risk factors in 2005, it is worthwhile examining in greater detail the situation of older workers in relation to potential differences across occupations and sectors. Some occupations and sectors are more exposed to risky working conditions than others. Figures 15 and 16 present the occupations and sectors in decreasing order according to their impact on generic exposure to physical risks. The values shown on the vertical axis are the conditional risk factors indices, while the percentage values in brackets indicate the distribution of older workers across the particular occupations or sectors.

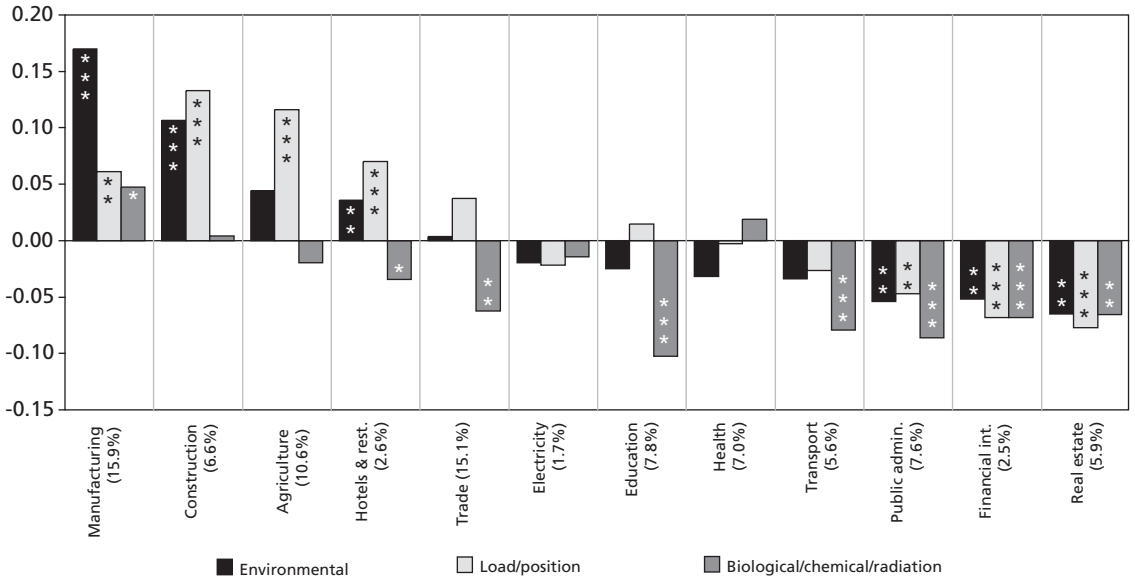
Figure 15 Physical risk factors of older workers, by occupation, EU27, 2005



Note: The values of the risk factors have been obtained from a multivariate model that takes into account the other individual characteristics and job-related variables. Significance levels: * p<0.10; ** p<0.05; ***p<0.001.
Source: EWCS, 2005

Evidently, craft workers, machine operators, skilled agricultural workers and those in elementary occupations face significantly higher risk levels (Figure 15). This applies to all three physical risk factors analysed – environmental, load/position and biological, chemical and radiation – albeit with some differences: working as craft workers or machine operators entails a higher exposure to risks arising from the physical working environment, while skilled agricultural workers and those in elementary occupations are more exposed to position and load risks. It should be noted that the situation is most critical for craft and related trades workers also in relation to load/position risks and exposure to biological, chemical or radiation risks. Clerical workers appear to have the lowest risk of exposure.

Figure 16 Physical risk factors of older workers, by sector, EU27, 2005



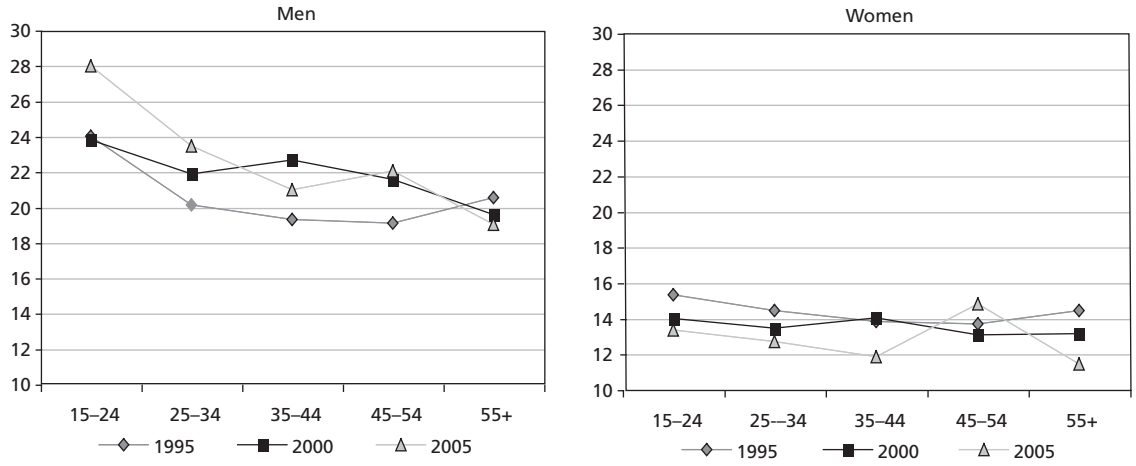
Note: The values of the risk factors have been obtained from a multivariate model that takes into account the other individual characteristics and job-related variables. Significance levels: * p<0.10; ** p<0.05; ***p<0.001.
Source: EWCS, 2005

Given the links existing between occupations and sectors, it is not surprising that older workers in sectors such as manufacturing, construction and agriculture are most exposed to physical risks (Figure 16). Workers in the hotels and restaurants sector should also be added to this list, especially due to the heavy loads and difficult work positions entailed in such work. Lower levels of exposure to risks are experienced by people working in real estate, financial intermediation, and public administration and defence.

The analysis can also provide an insight into how exposure to physical risks has evolved over the last decade. Notwithstanding the continued growth of the services sector and the reduced importance of sectors traditionally characterised by physically demanding working conditions, such as agriculture and manufacturing, and despite progress and technological innovation, no significant improvements in workers' exposure to physical risks have been observed in the EU15 over the past 10 years (Parent-Thirion et al, 2007, p. 29).

In order to compare physical risks reported in the different waves of the EWCS, a 'generic physical risk factor' was constructed, containing only the variables present in all three surveys. Values of the generic physical risk factor over the period in question, 1995–2005, point to a deterioration in the working conditions of men; on the other hand, the results for women reflect a general situation of stability related to certain improvements made during the last five years (Figure 17).

Figure 17 Trends in the generic physical risk factor, by age and sex, EU15, 1995–2005



Source: EWCS, 1995–2005

In terms of age groups, the situation appears to be clearly varied. For the youngest males and workers aged 45–54, the growth in exposure levels is significant, while for all other workers conditions remained mostly stable with some improvements observed for workers aged 55 years and over. However, it should be highlighted from the outset that these positive changes may be linked to the early exit from employment of precisely those older workers who were involved in particularly physically demanding jobs. Thus, it is useful to monitor the exposure to physical risks of workers approaching retirement aged 45–54 years, as well as that of younger workers.

These results still hold true when possible changes in the employment and production structure during the last 10 years are taken into account.

Work organisation

Work organisation is another factor affecting workers' health and well-being. The impact of this factor on work ability maintenance does not relate to functional capacity alone: it also affects motivational aspects, such as satisfaction with one's job. In this analysis, consideration is also taken of the degree of autonomy at work, work intensity and the spread of new high-performance organisational forms.

The first two factors are usually combined in Karasek's widely quoted model of job strain (Karasek, 1979): according to this model, organisational conditions entailing high psychological demands combined with low autonomy levels will generate stress and ensuing negative effects on health as well as job satisfaction.

The third aspect of work organisation included in this analysis is the involvement of workers in what is referred to as 'high-performance work organisation' (HPWO). The latter is a form of work organisation characterised by horizontal hierarchical structures, task rotation, teamwork and active involvement of the workers, including those who are unskilled, in decision-making processes. In some working environments in particular – for instance, those in which non-standard problems requiring creative solutions have to be addressed – this type of organisation improves worker efficiency, productivity and satisfaction (Bauer, 2004). The new forms of work organisation, such as

HPWO, are seen as a key tool for making Europe a more competitive and dynamic knowledge-based economy, as defined by the Lisbon Strategy. The two fundamental concepts underlying such forms of work organisation are productivity and occupation: 'HPWO, with teamwork as one of its core functions, aims to be more innovative, flexible and more productive, placing the importance on both the organisation and the worker. A company using the HPWO model invests in its human resources and supports employees' technical and innovative skills, which contribute to employability' (Kyzlinková et al, 2007, p. 36).

The findings in Table 9, similar to the approach taken for reported risk exposure, give an insight into those most affected by the three organisational factors – autonomy at work, intensity of work and HPWO for both older and younger workers. The answers to the first set of questions show positive differentials in favour of older workers, thereby indicating a greater degree of autonomy for these workers compared with the other groups. Conversely, with regard to the second and third sets of questions, the percentages relating to older workers are almost invariably lower than those obtained for the other workers, reflecting lower levels of work intensity and lower involvement in HPWO forms.

Table 9 Positive work organisation indicators, by age (%)

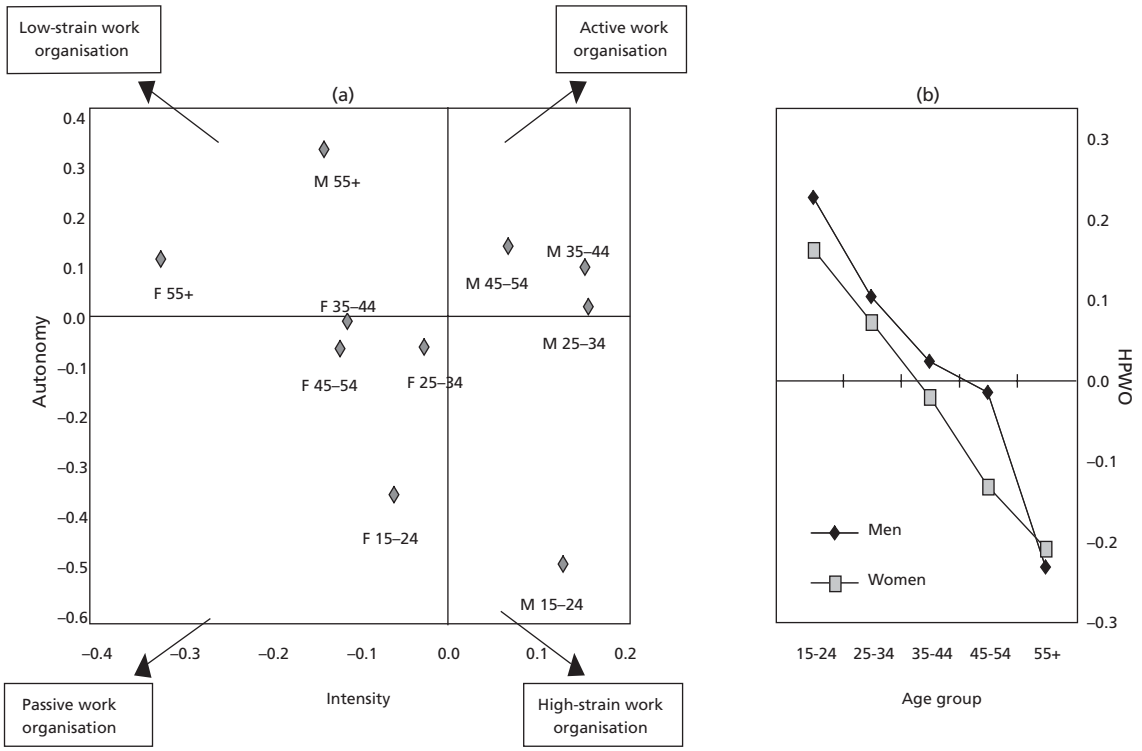
Indicators		Age		Difference (percentage points) (b)-(a)
		<55 yrs (a)	55+ yrs (b)	
Autonomy	Have the opportunity to do what one does best (sometimes or more often)	82.1	87.0	4.9
	Able to apply own ideas in work (sometimes or more often)	76.2	82.1	5.9
	Able to choose/change speed/rate of work	68.1	76.4	8.2
	Able to choose/change methods of work	65.9	74.3	8.5
	Free to decide when to take holidays/days off (sometimes or more often)	66.5	71.5	5.0
	Able to choose or change order of tasks	62.1	71.5	9.4
	Can take a break when desired (sometimes or more often)	62.5	71.0	8.5
	Have influence over choice of working partners (sometimes or more often)	35.7	42.5	6.9
Intensity	Have enough time to get the job done (sometimes or more often)	88.0	88.2	0.2
	Job involves working to tight deadlines (half of the time or more)	50.3	41.4	-8.9
	Job involves working at very high speed (half of the time or more)	48.6	38.9	-9.7
HPWO	Can get assistance from colleagues (sometimes or more often)	85.6	77.9	-7.7
	Can get assistance from superiors/boss (sometimes or more often)	76.8	66.6	-10.1
	Can get external assistance (sometimes or more often)	50.6	50.1	-0.5
	Job involves working in a team	56.1	48.3	-7.8
	Job involves rotating tasks	44.9	35.4	-9.5
	Pace of work dependent on colleagues' work	43.4	33.4	-10.0

Source: EWCS, 2005

To portray more clearly the differences in the organisational models in which workers are involved, three indices for autonomy, intensity and involvement in HPWO have been constructed for the purposes of this analysis (Figure 18). The indices have been constructed on the basis of a factor analysis conducted on the abovementioned EWCS data in 2005. Intensity and autonomy levels are combined (Figure 18a) in order to show in which organisational forms (Karasek's model) the different groups of workers, defined by sex and age, are employed.

In terms of gender differences, men are exposed to more intense working conditions than women. However, men also benefit from a higher degree of autonomy, although this increased autonomy applies mainly to adult male workers; the values for men aged 15–24 years are, in contrast, lower than those obtained for female workers in the same age group. It appears that intensity decreases while autonomy rises with increasing age, especially when comparing the values of the extreme age groups.

Figure 18 Observed average values for work organisation factors, by sex and age, EU27, 2005



Note: Part (a) is based on Karasek's job strain model linking intensity of work (job demands) to the level of autonomy (job control); part (b) displays the high performance work organisation (HPWO) factor.

Source: EWCS, 2005

Once again, these initial analyses provide evidence that working conditions for the youngest age group are the most critical, while the conditions experienced by older workers – and to some extent, in this case, also by workers aged 45–54 years – seem more favourable. As previously mentioned, it cannot be determined whether this is due to an adaptation of organisational models to an ageing workforce or rather because of the early exit from employment of workers engaged in physically demanding work. A negative implication for workers aged over 55 years, on the other hand, is their low involvement in HPWO, whereas young workers' involvement in this form of organisation seems

to be more widespread (Figure 18b). Possible factors that may hinder the involvement of older workers in new work models could include, for instance, their difficulty in adapting to organisational forms other than those that they have been accustomed to for many years. In view of the impact of HPWOs on the development of professional and relational skills, mental functional capacity and worker satisfaction – all of which play a role in fostering the extension of people's working lives – devising ways to promote a more widespread involvement in HPWOs represents an important aim.

The gender and age-related differences discussed so far are confirmed when the effects of a number of factors are also controlled for – such as occupation, sector, type of contract, country and company size. Men display significantly higher values for all three factors, while the results for older workers show that they have greater autonomy, reduced work intensity and reduced incidence of HPWOs.

Focusing on older workers only, and looking at how different occupations and sectors are distributed based on Karasek's job strain model, significant differences begin to emerge (Figure 19). The transport and manufacturing sectors appear to be the most critical, showing a prevalence of high-strain work organisations. Characterised by a low level of autonomy and high level of work intensity, workers employed in these sectors – about 20% of whom are aged over 55 years – have a higher risk of stress and dissatisfaction and the ensuing risk of an early exit from employment. Not surprisingly, machine operators and craft workers are particularly at risk.

Conversely, sectors such as agriculture, hotels and restaurants and other services show a prevalence of low-strain work organisations, in which, despite some differences, autonomy is high and work intensity is low. No specific sectors can be singled out in relation to 'passive work organisations' – with the possible exception of the health sector. Elementary occupations, which cut across sectors, are concentrated to a significant extent in this quadrant, showing low levels of both autonomy and work intensity. Service and sales workers appear to be in a similar situation, although with greater autonomy and lower intensity of work.

Finally, the construction sector and, to a lesser extent, the real estate sector show a prevalence of 'active work organisations', which are characterised by high levels of both autonomy and work intensity.

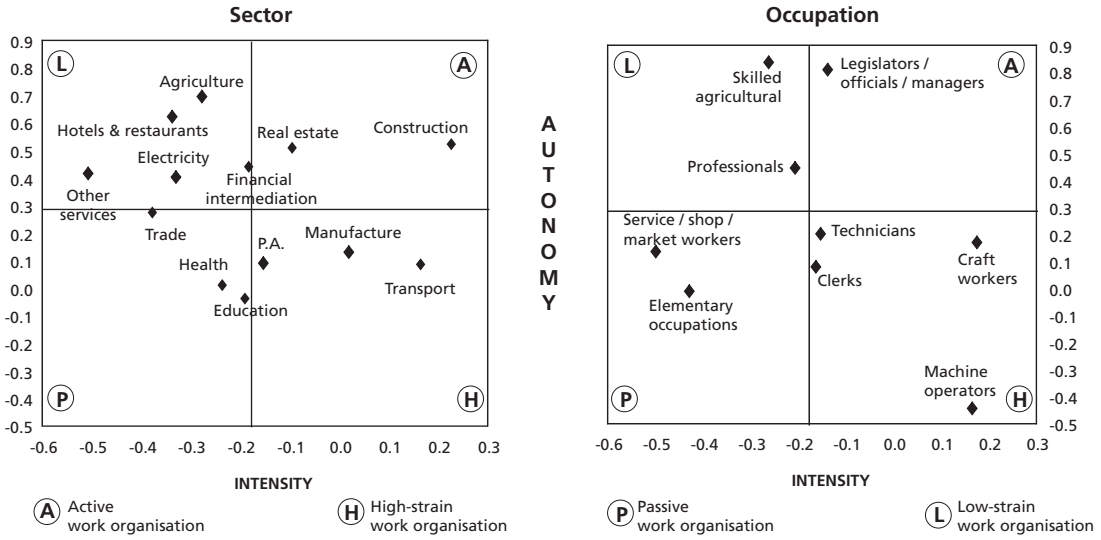
In order to determine to what extent the three factors of work organisation have changed over the last five to 10 years, eight EWCS questions – which have remained the same throughout the various waves – were used in the 2005 survey.

Over the last 10 years, older workers have displayed a high degree of autonomy, which is consistently higher than the levels of other workers; moreover, this difference has increased progressively over time. In contrast, older workers' level of work intensity and involvement in HPWOs were lower compared with their younger colleagues, although both aspects seem to have increased over the last five to 10 years.

A multivariate analysis was conducted in order to assess the effects of individual and job characteristics on the changes that have taken place in the organisation of work (Figure 20); this 'analysis of variance' (ANOVA) is used to isolate the effects of variables, such as gender, age, job, sector, country and the interactions thereof, and to estimate the marginal means of the organisational factors in the various surveys. The analysis shows that, over the last 10 years, levels of autonomy in

the EU15 have fallen significantly, particularly among young and female workers; however, they have remained relatively stable for older workers. Moreover, older workers are the only age group for which work intensity has not increased over the years. On the other hand, the situation is far from positive in relation to older workers' involvement in HPWOs, with no real appreciable improvement in the low values being observed over this period. Instead, the progressive spreading of these new organisation forms has mainly concerned the younger generations.

Figure 19 Older workers' predicted average values for intensity and autonomy factors by sector and occupation, EU27, 2005



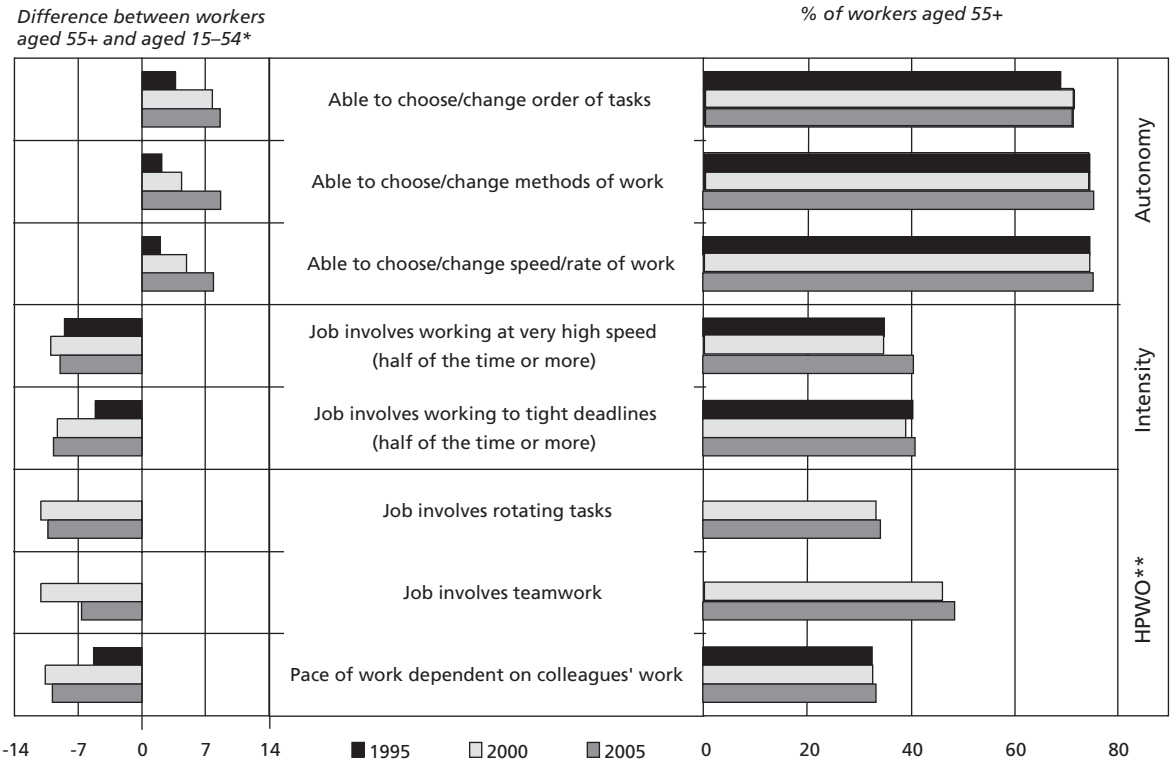
Note: Based on Karasek's job strain model of linking intensity of work (job demands) to the level of autonomy (job control).
Source: EWCS, 2005

Impact of work on health

Workers' health bears a major share of the 'weight' of working conditions in the work ability; hence, it must be taken into account in efforts aimed at maintaining work ability throughout the lifecycle. In the case of older workers, their health has been identified for a long time as one of the key variables in determining their participation in the labour marker (see, for instance, Sickles and Taubman, 1986). As demonstrated by Nicoletti and Peracchi (2001) on the basis of European Community Household Panel (ECHP) data on workers aged 50–69 years, poor health conditions greatly reduce the probability of being employed while increasing the probability of leaving the labour market within a year's time.

With increasing age, a person's health tends to deteriorate, especially in terms of sensory functions, such as eyesight and hearing, and physical functional capacity. Less clear-cut are the changes affecting people's mental functional capacity, since some mental characteristics may also improve. At the same time, lifestyle and working conditions may accelerate the natural deterioration of people's health (Ilmarinen, 2005).

Figure 20 Indicators for work autonomy, intensity and HPWO levels of older workers , EU15, 1995–2005



Note: Percentages in part (b) relate to affirmative responses given by older workers. * Difference is expressed in percentage points. ** Percentages for HPWO refer to 2000–2005 period only.

Source: EWCS, 1995–2005

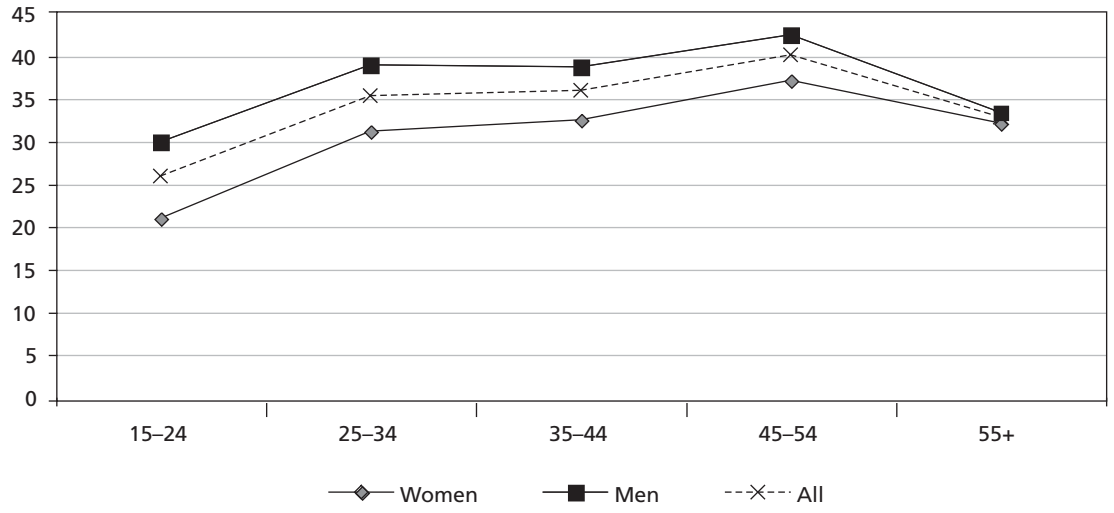
The EWCS does not provide for objective measures of workers' health conditions and the impact of work on people's health. Instead, it records how respondents perceive their health status. This section will give an outline of these findings, bearing in mind some important data limitations:

- persons not in employment are not interviewed and therefore, especially when dealing with older workers, the findings may reveal better working conditions than is actually the case and a lower impact on health due to a process of self-selection (people who keep working are precisely those in better health);
- workers' health status changes the impact of work on their health – this is particularly relevant if comparing workers from different age groups, since, as already indicated, health tends to deteriorate with age. In the survey, health data are very limited;
- even people's perceptions are age dependent, since value systems, beliefs and reference aspirations may differ.

Thus, the results obtained for respondents aged over 55 years should be interpreted with caution. Nevertheless, the analyses that follow can be used to determine which working conditions generate a greater perceived impact on health and to identify possible age-related differences among workers under the age of 55.

A direct correlation seems to exist between age and the proportion of workers who believe that work affects their health status (Figure 21). However, older workers aged 55 years and over are an exception in this context, as the proportion of workers in this age group who believe that work affects their health exceeds only the percentage recorded for the youngest 15–24 age group.

Figure 21 Workers perceiving an impact of work on their health, by age and sex, EU27, 2005 (%)



Source: EWCS, 2005

The existence of age-related differences in people's perception of the impact of work on their health is evaluated by means of a multivariate model, in order to check for the effects of factors such as sex, work characteristics (such as occupation and sector) and working conditions (Table 10). Accordingly, male and young workers are the least aware of the impact of work on their health, while those aged 45–54 years have a significantly higher probability of recognising this correlation. As can be expected, particularly stressful or tiring working conditions – such as those involving exposure to physical risks, high work intensity and non-standard working hours (see Chapter 4 for a more detailed discussion on working time and an index of non-standard working hours) – result in a greater perception of the impact of work on health. In contrast, autonomy at work has the opposite effect. Moreover, the impact of work emerges as a significant factor in relation to workers' perception of having had to recently cope with health problems: for these individuals, the probability of stating that their health is affected by their work is 6.3 times greater.

Table 10 Effects of sex, age and working conditions on the probability of thinking that work affects one's health, EU27, 2005

Factors		B	Significance	Odds ratio
Male workers		-0.114	**	0.892
Age group	15–24	-0.511	***	0.600
	25–34	0.038		1.039
	35–44	0.108		1.114
	45–54	0.304	***	1.356
Working conditions	Exposure to physical risks	0.677	***	1.969
	Autonomy at work	-0.048	**	0.953
	Non-standard working hours	0.521	***	1.684
	High-performance work organisation (HPWO)	-0.024		0.977
	Work intensity	0.313	***	1.367
	Absence attributable to work	1.845	***	6.331

Notes: *p<0.10, ** p<0.05, *** p<0.001. Logit model. Dependent variable = 1 if respondents answer yes to the question 'does your work affect your health?' Other controls: sector, occupation, company size, type of employment contract and country.

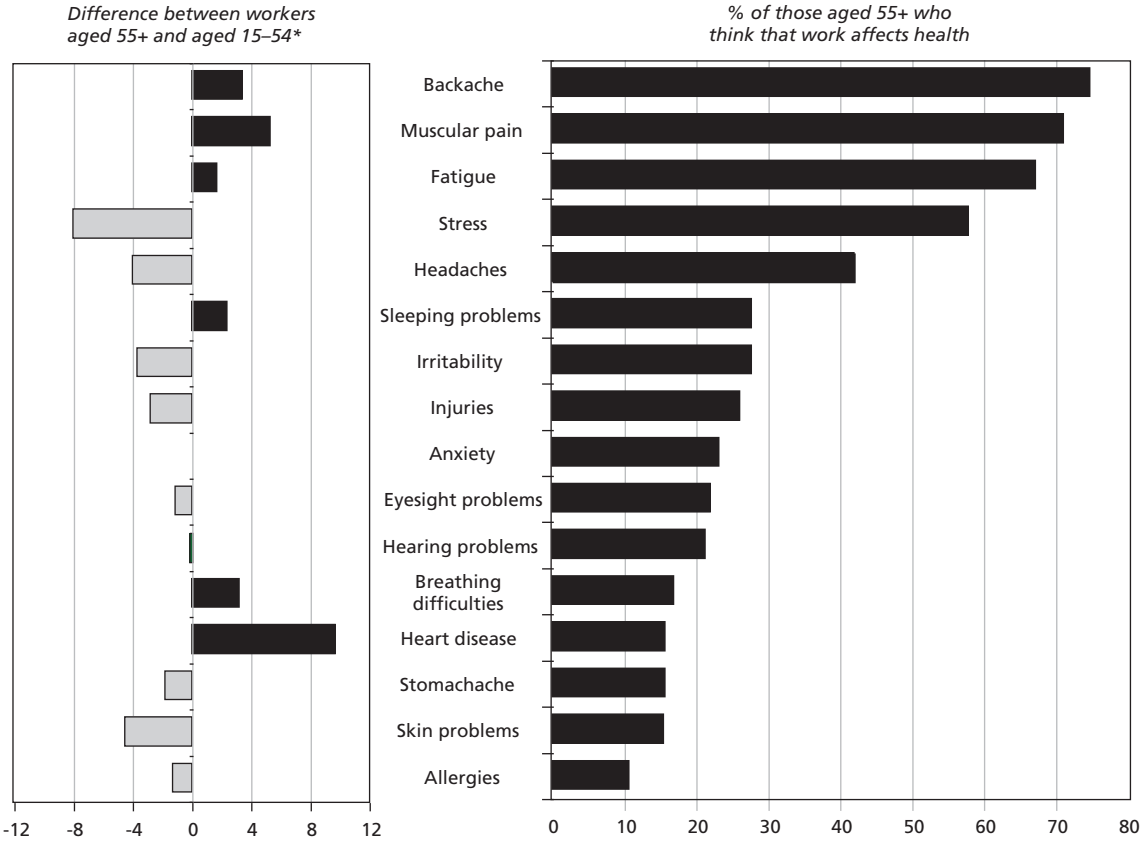
Source: EWCS, 2005

In relation to workers who declare that work has an impact on their health, the EWCS also records which individual symptoms are reported. Figure 22 lists the symptoms most frequently reported by older workers who declare that their health is affected by work (Figure 22b); it also shows the difference between older workers and their younger colleagues in relation to the reporting of such symptoms (Figure 22a).

The most widespread work-related problems reported by workers aged over 55 years all relate to physical functional capacity, which, due to ageing, tends to deteriorate among workers in this age group. Next in line are general fatigue, along with stress symptoms and headaches, followed by psychosomatic symptoms – such as sleeping disorders, anxiety and irritability (Ilmarinen, 2005). Older people are also susceptible to sensory difficulties, such as vision and hearing problems, along with heart disease and respiratory difficulties, all of which are closely correlated with ageing. The other symptoms observed appear to be more prevalent among the youngest age group, particularly with regard to stress.

To conclude this section, it is worthwhile examining some of the trends identified by comparing the results of the last three European working conditions surveys (1995, 2000 and 2005). In all three waves of the EWCS, respondents were asked the following question (Q. 32): 'Do you think your health or safety is at risk because of your work?' Based on the responses to this question, it appears that over the last decade, the percentage of workers who believe that their health or safety is at risk due to their working conditions has fallen significantly among those aged over 55 years – particularly among women in this age group (Table 11).

Figure 22 Percentage of older workers reporting individual symptoms, EU27, 2005



Note: Percentages relate to older workers who believe that work affects their health. Difference between older workers and other workers (a) is expressed in percentage points.

Source: EWCS, 2005

Table 11 Workers reporting that their health or safety is at risk due to work, by sex and age, EU15, 1995–2005 (%)

	All		Men		Women	
	All ages	55+	All ages	55+	All ages	55+
1995	28.6	28.9	33.3	29.3	22.1	28.3
2000	27.9	26.2	32.0	28.7	22.6	21.6
2005	25.3	20.9	29.8	23.4	19.6	17.3

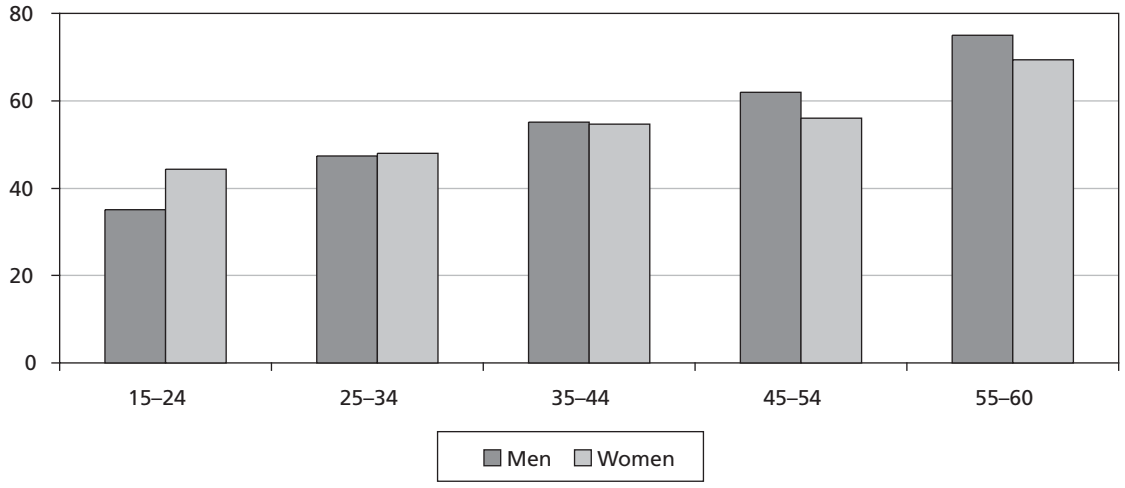
Source: EWCS, 1995–2005

Perceptions about working at the age of 60

An interesting feature of the EWCS is that it explicitly aims to identify workers' notions about the relationship between their working conditions and job, and their attitudes about working until the age of 60. Similar to previous EWCS findings, the latest EWCS data (2005) show that the proportion of respondents who believe that they will be able to, or want to, do the same job at 60 years of age increases with age (Figure 23). As already stated: 'For younger employees, the prospect of remaining in the same job until the age of 60 is difficult to imagine, while the closer workers get to 60, the more

likely it seems. However, it is probably also true that adjustments occur during one's working life both in terms of the job itself and the notion of links between age and work' (Molinié, 2003, p. 66).

Figure 23 Workers reporting ability to do the same job at the age of 60, by age and sex, EU27, 2005 (%)



Source: EWCS, 2005

Some gender variability emerges in the findings, especially among the younger and older age groups. More specifically, a greater proportion of younger female than male workers aged 15–24 years perceive that they will be able to do the same job at the age of 60, while a lower proportion of older female workers aged 55 years and over believe this to be the case compared with their male counterparts. Perceptions about an extended working life depend, in part, on the worker's job characteristics.

The main results obtained from a multivariate logit regression analysis on the perception of being able to do the same job at the age of 60 are summarised in Table 12. Accordingly, the effects of exposure to physical risks on this perception are found only in relation to load/position risks, which tend to diminish such perceptions. As regards work organisation factors, a higher degree of work intensity leads to a lowered perception of capacity to work at the age of 60, while for autonomy at work and HPWO the correlation goes the other way round – in other words, they result in a more favourable perception in this respect.

Perceptions that work impacts on health, and also that discrimination or violence occur at the workplace, significantly reduce workers' belief that they will be able to do the same job at 60 years of age. Moreover, employment contracts associated with low security or precariousness significantly reduce the likelihood of workers perceiving that their job will still be sustainable when they reach the age of 60. Shift work has a similar effect on this perception, and a clear difference emerges between workers who can choose their own work schedule and those who cannot, with better perceptions emerging among the former. As expected, workers who report that they are satisfied with their work–life balance have better perceptions than the average concerning their capacity of being able to do their job at the age of 60 (see Chapter 4 for a more extensive discussion on work–life balance).

Table 12 Workers' perception of being able to do same job at the age of 60 (logit regression analysis)

Factors		Parameter estimate	Significance	Odds ratio
Female		-0.196	***	0.822
Age group	15–24	-1.308	***	0.270
	25–34	-1.171	***	0.310
	35–44	-0.861	***	0.423
	45–54	-0.631	***	0.532
Employment contract	Indefinite-term contract and low security	-0.284	***	0.753
	Fixed-term contract and high employability	-0.025		0.975
	Fixed-term contract and low employability	-0.064		0.938
	No contract	-0.263	***	0.769
	Self-employed	0.155	**	1.168
Working time/schedule	Shift work	-0.225	***	0.799
	Can adapt working hours (at least within certain limits)	0.228	***	1.257
Exposure to physical risks	Exposed to environmental risks	0.039		1.039
	Exposed to physical load/position risks	-0.396	***	0.673
	Exposed to biological, chemical and radiation risks	0.039		1.040
Work organisation	Autonomy at work	0.189	***	1.208
	Work intensity	-0.142	***	0.868
	Involved in HPWO	0.037	*	1.038
Work affects health		-0.750	***	0.473
Violence/discrimination In workplace	Subjected to violence/harassment (over past 12 months)	-0.190	***	0.827
	Subjected to discrimination (over past 12 months)	-0.491	***	0.612
Work–life balance (good/very good)		0.454	***	1.575

Notes: *p<0.10, ** p<0.05, *** p<0.001. Other controls: sectors, occupations and country.

Source: EWCS, 2005

Skills development 3

In terms of new opportunities arising from the ageing process, an important possibility is the increase and lifelong accumulation of human capital, defined by the OECD as 'the knowledge, skills, competences and other attributes embodied in individuals that are relevant to economic activity' (OECD, 1998b, p. 9, cited by Schuller, 2001). Educational qualification, access to training and lifelong learning are recognised as important factors for extending the working life. However, an age gap in people's participation in continuous education and training emerges in many literature sources (OECD, 2006; European Commission, 2006a; Tergeist and Wooseek, 2003; Bassanini et al, 2005).

Many authoritative institutions agree on the need for greater investment in Europe in skills development and, more specifically, in human capital in order to improve access to employment for all age groups, to raise productivity levels and quality at work and to build a workforce that can adapt to change.

Training

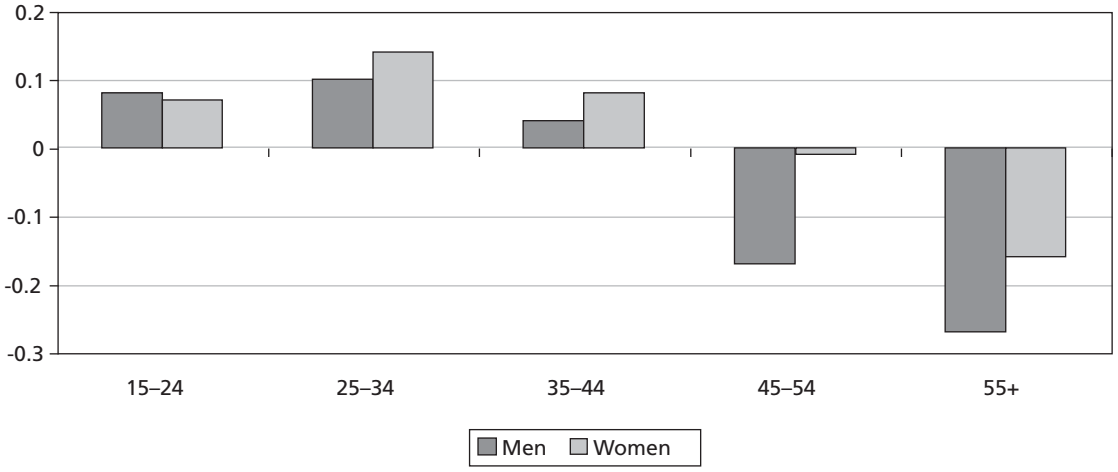
In its 2004 *Employment outlook*, the OECD reports a strong association, at individual level, between people's training profile and their employment outcomes. On average, adults who spend 10% more time on education or training are more likely to show a higher probability of being active by almost 0.4 percentage points and a lower probability of being unemployed by almost 0.2 percentage points. Importantly, these results hold true even after controlling for selection bias, suggesting the existence of a causal link between training and individual labour market performance. Moreover, in the 2006 *Employment outlook*, the OECD shows that a positive and statistically significant correlation across countries exists between the incidence of training for older workers and the average effective age of retirement.

The 2005 EWCS identifies different types of training (Q. 28): training paid for or provided by the employer; training paid for by the worker; on-the-job training; and other forms of on-site training and learning, such as self-learning and online tutorials. For each worker, by means of a factor analysis, all of these dimensions are condensed into a single standardised indicator. Positive values for the indicator signify that workers receive higher than average training, while negative values indicate lower than average training (Figure 24).

Secondary analysis on the third wave of the ECWS reveals marked disparities between age groups in employees' access to training, even if a slight increase in the provision of training courses to older workers can be detected between 1995 and 2000 (Molinié, 2003). The situation is not much different in 2005: accordingly, the training indicator decreases as age increases, indicating that older workers receive less training than younger workers do.

On average, women receive more training than men do, with the exception of those under 24 years of age. However, after controlling for the different individual and job-related characteristics of men and women, this positive gender gap vanishes and women appear to receive fewer training opportunities compared with their male counterparts. On the other hand, the age gap in access to training persists when also taking into account the different job and employment characteristics of younger and older workers. The latter findings were obtained from an OLS regression analysis, with the indicator of training as a dependent variable and individual and job-related characteristics as independent variables. The findings also show that training opportunities increase with job tenure, education, skill and company size, while they diminish for those working part-time jobs.

Figure 24 Values for training indicator, by age and sex, EU27, 2005



Source: EWCS, 2005

Learning

According to the European Commission (2006a, p. 102), older workers participate in lifelong learning to a lesser extent than their younger colleagues. Nevertheless, participation in lifelong learning is difficult to measure, as learning takes different forms – basic, formal and informal learning (OECD, 2005). Moreover, the different surveys that can be used to measure the learning development opportunities do not treat the diverse forms of learning in the same way.

The EWCS sheds light on the issue of developing human capital through learning new things at work. In order to consider the different opportunities for learning in a job, all of the relative information recorded in the survey has been condensed into a single indicator of learning. This indicator is devised from the following variables used in the survey (Questions 23c, 23e and Q23f):

- the job involves solving unforeseen problems or complex tasks;
- the job involves learning new things;
- workers have opportunities to learn and grow at work.

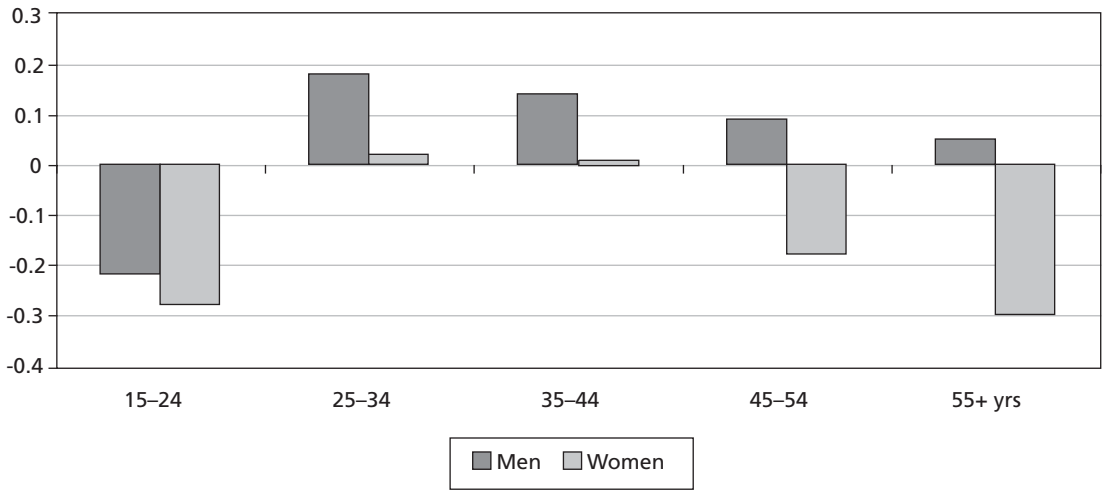
The learning indicator is devised in a similar way to the training indicator: thus, positive values indicate higher than average opportunities for learning, while negative values indicate lower than average learning opportunities (Figure 25).

As the results for this indicator show, mainly adults benefit from learning opportunities: such opportunities are highest among those aged 25–34 years and lowest among workers in the youngest (aged 15–24) and oldest (aged 55+) age groups. Women, especially those in the oldest age group, seem to have a lower opportunity for learning than men do.

Results from an OLS multivariate regression analysis – in which the learning indicator is a dependent variable and individual and job-related characteristics are independent variables – suggest that age and gender disparities regarding opportunities for learning persist, once the main individual and job-related characteristics are controlled for. The results also show that learning is positively correlated

with education, skill and tenure and that it is higher in larger companies, as well as in the services sector.

Figure 25 Values for learning indicator, by age and sex, EU27, 2005



Source: EWCS, 2005

Access to information technology

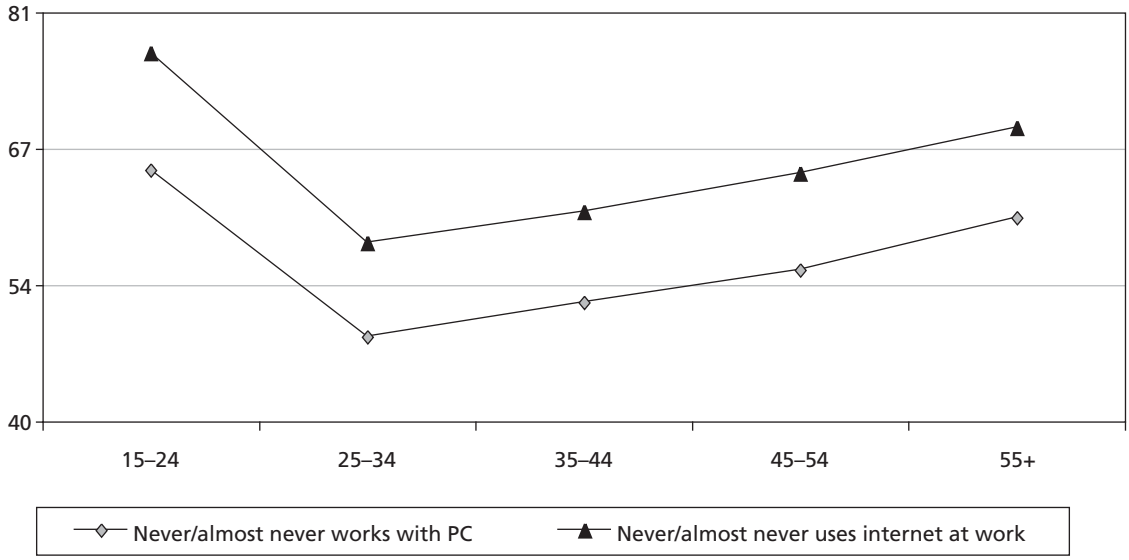
In order to have a more employable and adaptable workforce which, in turn, increases countries' employment and labour market participation rates, the skill content of the EU working age population – particularly of older workers – needs to be enhanced. An important issue in this context concerns access to new technologies, especially information technology (IT).

The introduction of new technologies over the last decade has certainly increased productivity and job quality in European countries. Nevertheless, their introduction has been found to be biased against low-skilled workers. Moreover, according to research, IT appears to have improved job opportunities in some fields, but resulted in job losses for older workers (Crépon et al, 2003).

Data from the EWCS also shed light on this issue, as the survey asks workers how often they use a personal computer (PC) and the internet (Figure 26). The results reveal a U-shaped profile in relation to the proportion of respondents who do not use IT at work. More specifically, the share of workers aged 25–44 years not using a computer or the internet for professional purposes is higher than that of older workers.

Differences in access to IT across age groups still persist once the country-specific productive structure and individual characteristics of workers are controlled for: results of a logit regression analyis on the probability of using computers at work reveal that, all other things being equal, older workers have in fact a 10% lower probability of using computers at work than workers in the 25–34 age group. The other results of this analysis are also in line with expectations: more skilled and educated workers have a higher probability of using computers, as well as those employed in the services sector and in larger companies.

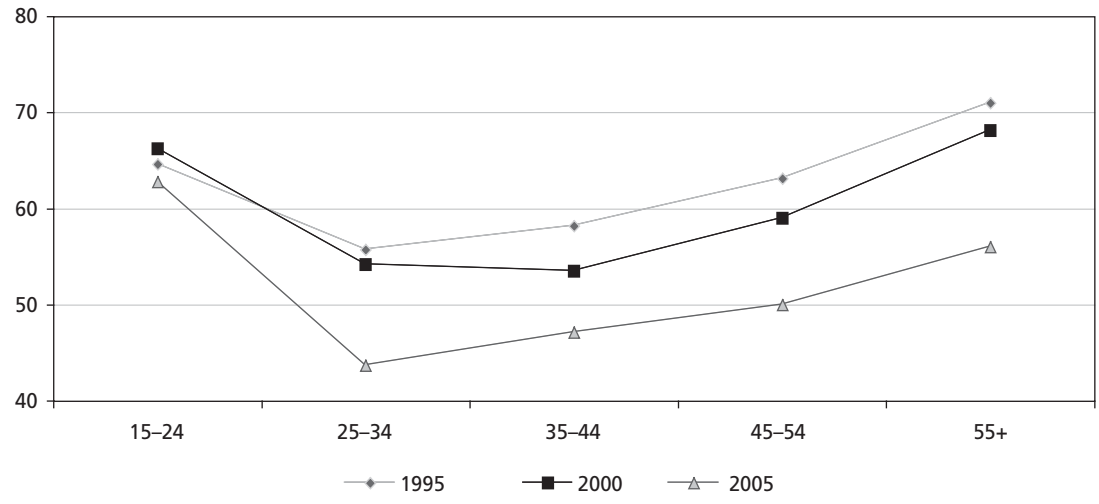
Figure 26 Workers with little or no access to a PC or the internet, by age, EU27, 2005 (%)



Source: EWCS, 2005

For the EU15, it is possible to compare the situation with that observed in the 1995 and 2000 EWCS (Figure 27). Notably, a substantial decrease in the proportion of workers who rarely or never use computers at work has been registered. In 1995, the average share stood at 61%, subsequently falling to 58% in 2000 and to 50% in 2005. Moreover, the largest improvement in this context is found with respect to older workers, for whom the share of workers excluded from IT has dropped by about 15 percentage points in 10 years.

Figure 27 Workers who rarely or never use computers at work, EU15, 1995–2005 (%)



Source: EWCS, 1995–2005

4 Reconciling working and non-working life

Policies aimed at promoting a better balance between work and family responsibilities are encouraged by the European Commission and represent a major challenge for most European governments. The EWCS data give additional insight into this issue.

Working time arrangements

Existing analysis of data from the EWCS series have pointed to a trend towards a reduction in paid working hours, especially in the original EU15 countries but also more increasingly in the new Member States. Also emerging is the existence of a large variability in working hours across countries, with eastern and southern European countries having the longest hours, and central and northern European countries showing the shortest number of hours (Parent-Thirion et al, 2007, p. 17).

Distribution of working hours across age groups shows only a slight tendency towards a decline in the number of hours of older workers (Table 13). Some studies have highlighted the significance of constraints on changing working hours, which may be 'pushing' workers into early retirement (see, for example, Gustman and Steinmeier, 2004; Penner et al, 2002). More generally, inflexible working time arrangements may discourage older workers from remaining in employment for longer because of difficulties experienced in reconciling work with family life.

Table 13 Working time arrangements of workers, by age and sex, EU27, 2005

		Age groups					
		15–24	25–34	35–44	45–54	55+	Total
All	Average number of paid weekly working hours	35.5	39.0	39.2	39.4	37.8	38.6
	Non-standard working hours	29.2%	32.3%	30.6%	28.9%	28.0%	30.1%
	Flexible schedule	51.9%	53.6%	56.6%	53.2%	58.0%	54.7%
	Shift work	17.4%	16.7%	15.4%	14.3%	9.2%	14.9%
Men	Average number of paid weekly working hours	37.0	42.1	43.3	42.3	41.2	41.8
	Non-standard working hours	28.3%	38.2%	37.0%	32.7%	31.0%	34.3%
	Flexible schedule	49.9%	56.7%	58.9%	56.9%	62.2%	57.3%
	Shift work	16.5%	16.6%	16.4%	14.5%	9.2%	15.0%
Women	Average number of paid weekly working hours	33.7	35.4	34.2	35.7	33.0	34.7
	Non-standard working hours	30.4%	25.3%	23.0%	24.1%	23.7%	24.8%
	Flexible schedule	54.5%	50.0%	53.7%	48.6%	51.9%	51.5%
	Shift work	18.4%	16.9%	14.2%	14.1%	9.2%	14.7%

Source: EWCS, 2005

The 2005 EWCS covers various aspects of working time, which can be analysed in order to detect how different working schedules are distributed across age groups. The following sections look briefly at the incidence of non-standard working hours, flexible schedules and shift work. The general finding is that data on working hours outside of the 'normal' working day do not point to a great variability across age groups, except in relation to shift work, the incidence of which declines as age increases.

Non-standard working hours

To take into account the different forms of atypical work schedules recorded in the EWCS, a composite index of non-standard working hours has been built, which represents the proportion of workers for whom long working hours, evening, Sunday or night work is not an occasional activity. In particular, the index reports the proportion of workers for whom at least one of the following occurrences applies: working evenings or schedules exceeding 10 hours more than 10 times a month; working more than two Sundays a month; working more than four nights a month. The index shows only a slight tendency towards a decrease in non-standard working hours for older workers, although some differences are found in relation to components of the indicator (Table 13). The incidence of long working hours as well as Sunday work in fact increases as workers get older. This is partly related to the fact that substantial proportions of older workers are self-employed and employed in the agricultural sector. On the other hand, the incidence of night work is higher among younger workers.

Flexible schedules

In the EWCS, respondents were asked the following questions: 'Do you work the same number of hours every day?'; 'Do you work the same number of days every week?'; 'Do you work fixed starting and finishing times?' Based on the proportion of respondents who answered 'no' to at least one of these questions, it emerges that almost 55% of workers have flexible work schedules (Table 13), with percentages ranging from nearly 52% among the youngest workers (15–24 years) to 58% among the oldest workers (over 55 years). The major source of flexibility is the variability in hours for older workers and in days for younger workers. Moreover, reported flexibility seems to be higher among male workers than their female counterparts. When taking into account differences across age groups in terms of occupation and sectors, and in particular the role of self-employment and the agricultural sector, older workers appear to have the most regular working hours, while the gender differences are confirmed; these results are based on a logit regression analysis on the probability of working the same number of hours and days with the same starting and finishing times.

Shift work

In relation to the proportion of shift workers – which in this case refers only to those who work alternating/rotating shifts or permanent shifts – a reverse age pattern is found: the incidence of shift work ranges from just over 9% in the oldest age group to about 17% in the youngest age group, with no significant gender differences emerging (Table 13). The presence of age differences in shift work is also confirmed when job-related characteristics are controlled for; however, a lower female involvement in shift work emerges in this context (results of logit regression on probability of working shifts). An interesting factor in this context is the extent to which the company or worker has control over working time arrangements. In the EWCS, respondents were asked how their working time arrangements are set. Based on the proportion of those who responded that they can either set their working hours within certain limits or that their working hours are entirely determined by themselves, it emerges that the share of workers who report having some discretionary power in choosing the organisation of their working time increases with age. This therefore points to a growing degree of voluntariness with age in choosing working time arrangements. Such a finding is not surprising, since having a say in choosing one's working time arrangements often depends on the worker's position within the organisation, which, in turn, also depends on age. Furthermore, it emerges that, for older workers in particular, the proportion of workers who are able to choose their working time arrangements is higher than average among those with non-standard working hours (Table 14). This result suggests that, for a substantial proportion of older workers, non-standard working time arrangements may be the more desired option for better reconciling work and non-working life.

Table 14 Workers reporting ability to choose their working time arrangements, by age, EU27, 2005 (%)

	Age group					
	15–24	25–34	35–44	45–54	55+	Total
All	22.7	31.8	35.2	35.3	46.4	34.4
Among those with flexible schedules	35.6	46.1	48.8	50.5	64.1	49.2

Source: EWCS, 2005

Activities outside of work

Based on the results of the EWCS, the main activities carried out by workers outside of work are as follows: 'caring for and educating one's own children', 'cooking and housework' and 'sporting, cultural or leisure activities outside of home'. As expected, in relation to older workers, a lower engagement in caring for children is found on the one hand, along with an increasing likelihood of caring for elderly or disabled relatives on the other – albeit lower than that observed among workers aged 44–54 years (Table 15). Moreover, older workers quite seldom take training or education courses, while they are more likely than other age groups to be engaged in voluntary or charitable activities.

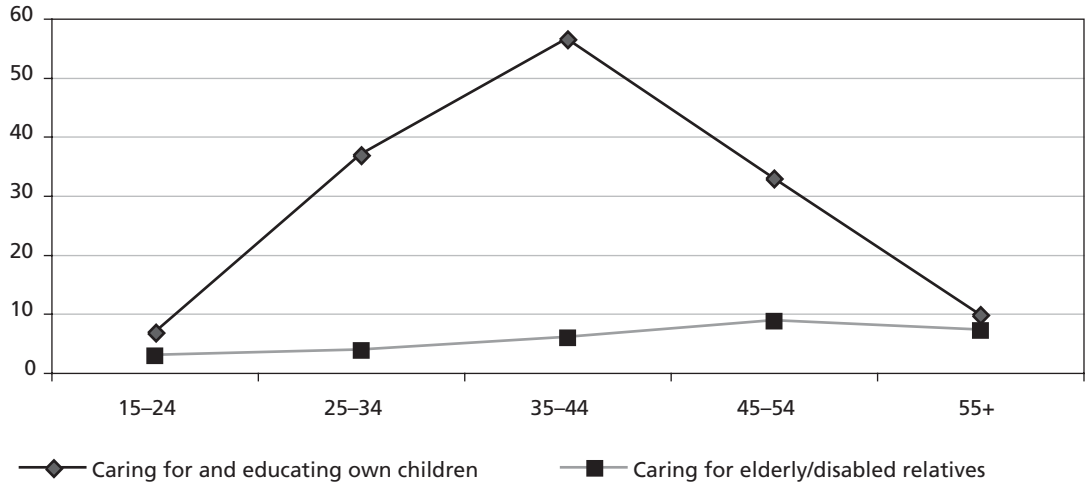
Table 15 Workers involved in activities outside of work, by age, EU27, 2005 (%)

Type of activity	Age group					
	15–24	25–34	35–44	45–54	55+	Total
Voluntary or charitable activity	16.2	21.7	25.0	26.4	27.6	23.9
Political/trade union activity	4.5	5.7	7.5	9.0	7.7	7.3
Caring for and educating own children	11.6	48.3	69.9	49.1	21.7	47.4
Cooking and housework	69.9	83.1	83.0	81.2	74.4	80.1
Caring for elderly/disabled relatives	12.2	16.5	21.8	25.6	21.0	20.3
Taking a training or education course	29.6	28.0	28.3	25.6	19.5	26.7
Sporting, cultural or leisure activity	66.4	68.8	63.8	60.4	56.4	63.5

Source: EWCS, 2005

Focusing only on activities related to family responsibilities ('caring for and educating one's own children' and 'caring for elderly or disabled relatives') and on those individuals engaged in such work at least every second day for less than one hour, a convex profile emerges across age groups in relation to childcare (Figure 28). At the same time, a gradually increasing profile by age is found with respect to the care of elderly or disabled persons. The EWCS assessed this aspect in an effort to identify workers who report a considerable burden in caring activities. In relation to those with childcare duties, the EWCS only interviewed workers with children in their household, as very few individuals without children in the household spend time engaged in childcare, with the exception of parents who are divorced or separated.

Figure 28 Workers involved in caring activities outside of work, by age and type of activity, EU27, 2005 (%)



Source: EWCS, 2005

These results also hold true when controlling for the effects of age, gender and other individual and job-related characteristics on the probability of spending time caring for children or elderly or disabled people (results based on two logit models on the probability of spending time caring for children/elderly people, with age, gender, household composition, full-time and part-time work as covariates). Other things being equal, older workers are less likely to care for their children: this is not surprising since their children are probably grown up. As expected, the major burden is borne by adult workers aged 25–34 years, especially by women. Moreover, the time spent caring for children decreases if the person's partner does not work. On the other hand, the activity of caring for elderly or disabled people is mainly carried out by women, adult and older workers, especially if working part time.

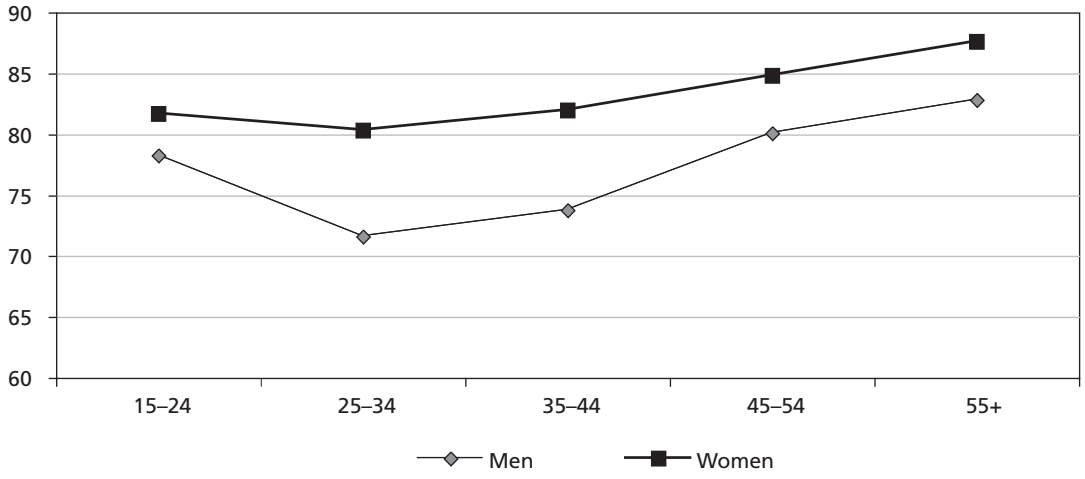
To conclude, older workers do not seem to carry a heavy burden in terms of family responsibilities; instead, middle-aged workers and women face a more critical situation in this respect. Nonetheless, a few words of caution are necessary in this context. Firstly, it is possible that the activities of caring for grandchildren are not properly recorded in the EWCS, as the survey refers specifically to 'caring for and educating one's *own* children'; thus, older workers' engagement in caring activities may be underestimated. Moreover, since the survey does not include individuals no longer at work, many of whom may have retired early due to family responsibilities, these results only reveal part of the picture regarding the role of family responsibilities in the context of older workers' employment situation.

Work–life balance

Non-standard working hours offer increased flexibility to employers when matching their staffing and production requirements. When freely chosen, they also offer workers greater flexibility to reconcile their working time with other activities. However, 'unsocial' working hours can also be a potential source of conflict between job requirements and family life (Presser, 2003).

The EWCS gives an insight into workers' perceptions of how well their working time arrangements fit in with family or social commitments outside of work (Figure 29). This, in turn, allows for an analysis of workers' work–life balance across age groups and, in particular, of the impact of family responsibilities and working time on the degree of satisfaction with work–life balance.

Figure 29 Workers reporting good or very good work–life balance, by age and sex, EU27, 2005 (%)



Source: EWCS, 2005

The data show, on average, a lower degree of satisfaction being reported by adult workers compared with the youngest and oldest cohorts. By gender, men appear to be less satisfied with their work–life balance than women. This unexpected result, as highlighted by Parent-Thirion et al (2007, p. 72), is related to the fact that the working time arrangements of women, largely among those who work part time, allow for better reconciliation between work and family duties compared with those of men.

However, taking into account all working conditions in terms of working hours and schedules, the gender effect in satisfaction with work–life balance disappears. This finding is based on results from a logit model, where the dependent variable equals 1 if the worker reports that working hours fit in well or very well with family or social commitments outside of work (Q.18 = 1 or 2) and the independent variables are gender, age, employment status, working time, caring activities, sector and country. This particular analysis also reveals that older workers report a higher degree of satisfaction in balancing work activities with family and social commitments (Table 16).

The analysis also points to the important role played by the type of employment contract and working time arrangements in determining satisfaction with work–life balance (Table 16). Low levels of satisfaction are reported by those with non-standard work schedules or who are engaged in shift work, as well as those who are 'often' contacted for jobs outside of work. On the other hand, part-time workers and people who are self-employed report a higher degree of satisfaction. However, employment contracts associated with low security or employability reduce workers' positive perception of work–life balance. A high level of involvement in caring activities also worsens people's perception of work–life balance.

Table 16 Effects of individual and job-related characteristics on work–life balance

		Parameter estimate	Significance	Odds ratio
Female		0.075	*	1.078
Age group	**15–24 years**	-0.427	***	0.653
	25–34 years	-0.549	***	0.577
	35–44 years	-0.353	***	0.703
	45–54 years	-0.096		0.909
Employment contract	**Indefinite-term contract and low security**	-0.411	***	0.663
	Fixed-term contract and high job employability	-0.282	***	0.754
	Fixed-term contract and low job employability	-0.389	***	0.678
	No contract	0.128		1.137
	Self-employed	0.145	**	1.156
Working time/ schedule	**Non-standard working hours**	-0.877	***	0.416
	Work on Saturdays	-0.214	***	0.807
	Part-time work	0.697	***	2.008
	Irregular schedule	-0.642	***	0.526
	Shift work	-0.334	***	0.716
	Contacted (for job) outside of work (at least once a week)	-0.207	***	0.813
Caring for children	**Sometimes (at most twice a week)**	-0.182	**	0.833
	Often (every day or every second day)	-0.14	**	0.869
Caring for elderly/ disabled person	**Sometimes (at most twice a week)**	-0.181	**	0.835
	Often (every day or every second day)	-0.027		0.973

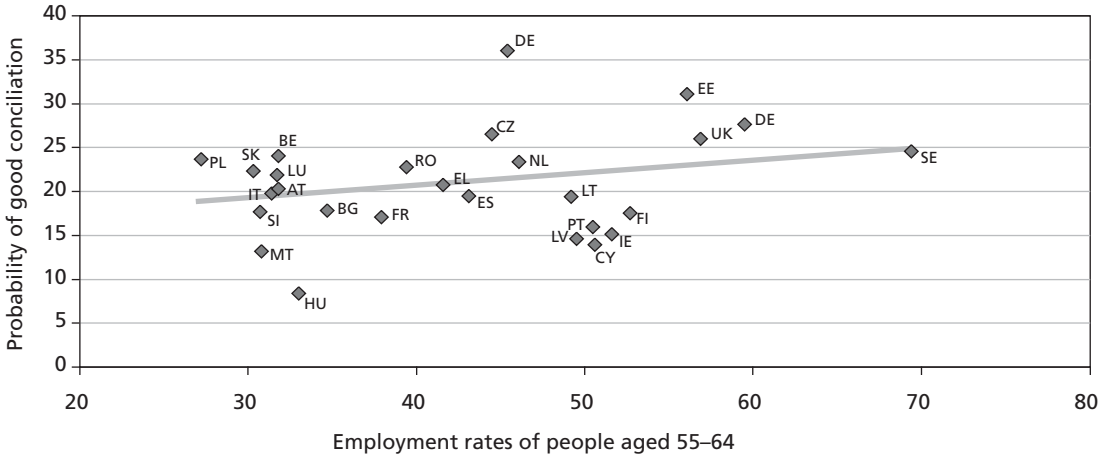
Notes: * p<0.10, ** p<0.05, *** p<0.001. Other controls: spouse/partner, other paid job, sectors and country.

Source: EWCS, 2005

These results are in line with those of the *Employment outlook 2004* by the OECD, which reports that the percentage of workers declaring a conflict between their working hours and family and social commitments is significantly higher for workers with children, long working hours, high-intensity jobs, non-standard working hours (evenings, nights or weekends) or for those whose work schedules are variable and unpredictable. Moreover, the same OECD study reports that this proportion is significantly lower among workers who have some control over their working time and among older workers compared with their younger counterparts – even after controlling for the presence of children and for employment status, working hours and other working time arrangements.

Much of the debate about extending working lives stresses the importance of helping specific sectors of the population – including young women and older people – to participate in the labour market. Some evidence regarding the relationship between older workers' degree of reconciliation between working and non-working activities and their employment rates (based on Eurostat data) is provided by a simple correlation between these two variables for the EU27 countries (Figure 30). It should be noted that country data about the probability of good reconciliation are derived from the country dummies of the logit model used to determine the effects of individual and job-related characteristics on reconciling work and non-working life.

Figure 30 Correlation between employment rates of older workers and the estimated country average for the probability of good work–life balance, EU27 (%)



Source: EWCS, 2005 and Eurostat, 2007

There are, of course, many dimensions that this data is not able to control for, such as organisational settings and the degree of satisfaction with the work–life balance of workers who have left the labour market. However, a slight positive correlation can be detected between employment rates and this simple indicator of reconciliation.

Greater choice in working time arrangements is required for groups with substantial family responsibilities, such as older women. Nevertheless, when not freely chosen, long and non-standard working hours may make it more difficult for workers to reconcile work with family life. The results of this analysis suggest that policies are needed at both national and company level to tackle these barriers. Such policies will not only help people achieve a greater balance between working and non-working activities, but also improve their participation in the labour market.

Conclusions 5

The secondary analysis of EWCS data outlined in this report has highlighted how age is an important factor in describing working conditions. For most job-related characteristics, significant differences emerge between younger and older workers. For instance, young workers are more exposed to physical risk factors at the workplace and are less satisfied with working conditions. On the other hand, they receive more training and are more involved in HPWOs. Conversely, older workers are more 'protected' from risk exposure, have a higher degree of autonomy in the workplace and a lower degree of work intensity. However, they have fewer opportunities with respect to involvement in new organisational forms, training and learning new things at work.

Young and older workers both share a higher probability of being subjected to acts of discrimination at the workplace and, to a lesser extent, of experiencing difficulties in accessing IT. For their part, adult workers carry a heavier burden in relation to caring activities outside of work, as well as reporting a lower level of satisfaction with work–life balance.

Significance of working conditions

In terms of age, the key target group concerns workers approaching retirement age (45–54 years). It has emerged how important it is to monitor the working conditions of this group of workers in particular in order to ascertain the presence of factors that could determine their early exit from the labour market. In fact, research on the issue of older workers' employability has highlighted how the low participation rates of older people in the labour market are the result of a combination of factors – such as wages, rigidity in workplace organisation, inadequate skills and competencies and poor health status – rather than the wish to retire early (OECD, 2006). In this context, it is also important to monitor the sustainability of work for the youngest workers, who face a higher incidence of job insecurity and risk exposure.

At the same time, the analysis has pointed to evidence implying that workers who are facing the worst working conditions and are eligible to retire have probably left the labour market. Unfortunately, clear-cut evidence regarding this point cannot be derived from the EWCS, as it does not record information on people no longer in employment.

However, the EWCS findings can give important clues regarding the sustainability of jobs across ages. In order to achieve the Lisbon and Stockholm targets, it is essential to keep workers in the labour market for a longer time. A prerequisite for this objective is improved job sustainability over the lifecycle. Such an objective encompasses different issues, including career and employment security, health and well-being, skills development and reconciliation of working and non-working life. All of these factors play a role in shaping the age structure of the workforce.

Older workers' employment participation

In order to identify the role of the different aspects of working conditions in determining older people's participation rates and to give a rough evaluation of how different factors facilitate or hinder the employment of older workers, some aspects of working conditions have been correlated with older workers' employment rates (Eurostat, 2007). These aspects have been analysed in this report; each of these aspects is summarised in an index based on workers aged 55 years and over, reflecting the working conditions of older people and the overall working population, as well as reflecting

synthetic indicators of working conditions for each country (Table 17). Moreover, since the EWCS does not record people no longer at work, many of whom may have left their employment partly due to unfavourable working conditions, the same indicators have been computed for workers aged 45–54 years. As already outlined, workers in this age group are an important target in terms of extending people's working lives: these workers are approaching retirement age and their average working conditions reflect the conditions that workers who were eligible to retire from the labour market faced at the time of their retirement decision.

Many aspects of working conditions correlate strongly with older workers' employment rate: in particular, correlations are higher among the 45–54 working age population, whose working conditions can be interpreted as reflecting the average conditions facing older workers who are deciding whether or not to retire. Positive correlations are found especially in relation to work autonomy, the presence of HPWOs and access to learning and training.

On the other hand, a clearly negative correlation emerges between employment participation and exposure to physical risks at work. Not surprisingly, the correlation between satisfaction and employment is positive.

Table 17 Correlation between employment rates of older workers and indicators of working conditions, EU27, 2005

	55+	All age groups	45–54
Exposure to physical risks	-0.138	-0.260	-0.349
Autonomy at work	0.036	0.379	0.363
HPWO	0.307	0.337	0.325
Work intensity	0.140	0.146	0.148
Learning	0.005	0.323	0.266
Training	0.306	0.362	0.375
Conciliation	0.330	0.222	0.209
Satisfaction	0.167	0.263	0.186

Source: EWCS, 2005

Most of these relationships have been discussed in the previous chapters, especially in relation to the role of training, new technologies and physical risks. The role of HPWOs in enhancing older workers' employability is also highlighted in other research; for instance, Bauer (2004) finds that a higher involvement in HPWOs is associated with greater job satisfaction and increasing the employee's perception of overall utility from working.

Working conditions do not appear to have the same effect on older workers' employment rates when discriminating according to gender (Table 18). For instance, the positive correlation between learning and training and employment is higher among women, while for men autonomy at work and involvement in HPWOs appears to have a stronger effect on employment rates.

Table 18 Correlation between employment rates of workers aged 45–54 years and indicators of working conditions, by sex, EU27, 2005

	Men aged 45–54	Women aged 45–54
Exposure to physical risks	-0.189	-0.053
Autonomy at work	0.325	0.231
HPWO	0.315	0.288
Work intensity	0.180	0.133
Learning	0.176	0.323
Training	0.262	0.439
Conciliation	0.014	0.160
Satisfaction	0.249	-0.019

Source: EWCS, 2005

At the same time, job satisfaction and exposure to physical risks appear to be correlated more strongly with the employment rates of men, showing only a minimal degree of association with respect to the employment rates of older female workers.

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The issue of Europe's ageing population is a central priority for policymakers in the EU, both in terms of the sustainability of pension systems and the future of Europe's labour supply, which impact in turn on economic growth. The report looks at ways in which the quality of work and employment can be promoted, in order to encourage workers to remain in the labour market for a longer time and thus achieve the Lisbon and Stockholm employment targets across Europe by 2010. The analysis is based on findings from the fourth European Working Conditions Survey carried out in 31 countries, including the 27 EU Member States. The report highlights four factors which are key to shaping the age structure of Europe's workforce: ensuring career and employment security; maintaining and promoting the health and well-being of workers; developing skills and competencies; and reconciling working and non-working life. The findings show that improving working conditions leads to better job sustainability over the lifecycle, which in turn can prevent early exit from the labour market and encourage stronger participation rates among older workers.

The European Foundation for the Improvement of Living and Working Conditions is a tripartite EU body, whose role is to provide key actors in social policymaking with findings, knowledge and advice drawn from comparative research. The Foundation was established in 1975 by Council Regulation EEC No. 1365/75 of 26 May 1975.

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