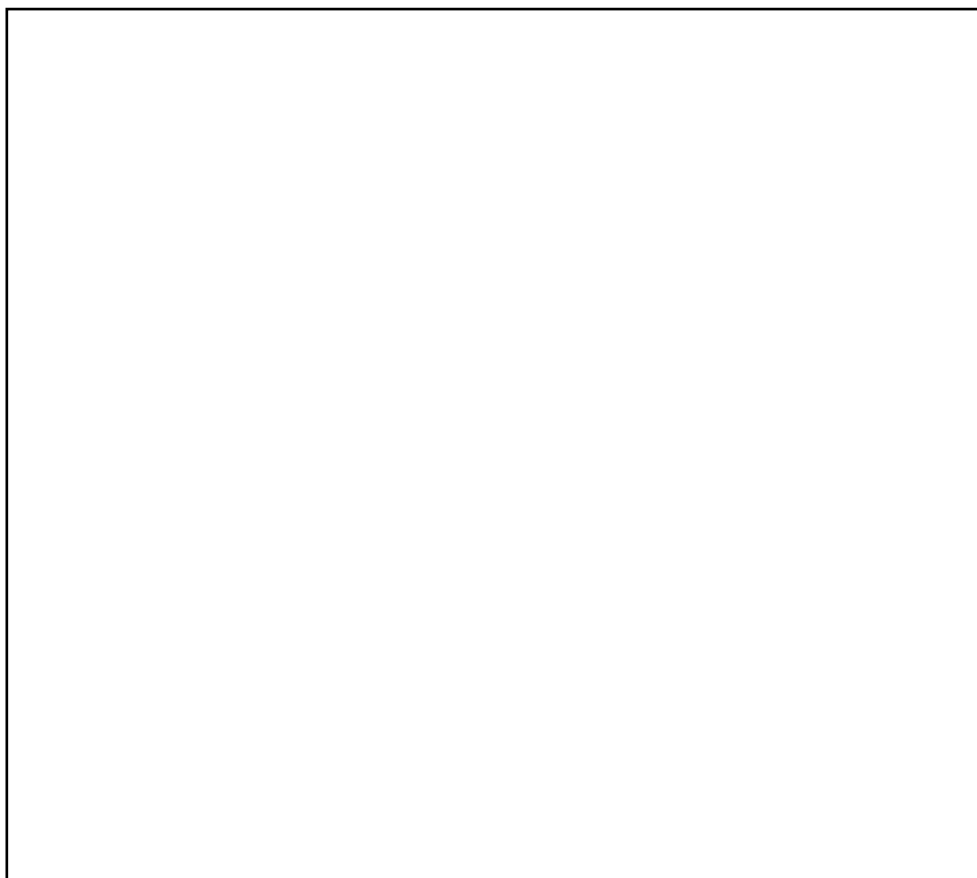




# Who needs up-skilling?

## Low-skilled and low-qualified workers in the European Union



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## Country codes and acronyms used

### Country codes (EU27)

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

### Acronyms used

<b>Eurofound</b>	European Foundation for the Improvement of Living and Working Conditions
<b>EWCS</b>	European Working Conditions Survey
<b>LFS</b>	Labour Force Survey

*Skills, skills, skills!* This is the mantra of modern labour and social policies. Up-skilling is seen as a win-win solution and it is commonly agreed that up-skilling lies in the interests of individual employees, as well as employers and, indeed, society at large.

For workers, developing skills can lead to a more interesting job and wage increases, as well as boosting one's human capital, which, in turn, ensures greater employability in the long term. For employers, up-skilling of workers can facilitate innovation and introduction of new business technologies, as well as enhancing workers' motivation and consequently increasing productivity.

Combining the two types of advantages, up-skilling of the labour force in general increases competitiveness of the economy as a whole. It is especially important given the ageing of European populations and the pressure that will be put on the next generations of workers, proportionally smaller, to support the growing segment of older society. In other words, future workers and workers who are only now entering the labour market will need to be both greatly motivated and adaptable in the labour market because the sustainability of the European social model relies heavily on them. Furthermore, with older generations of workers exiting the labour market, a shortage of some more traditional skills sets, such as skilled tradesmen, is becoming apparent.

Workers' employability is paramount. It has been conceptualised as workers' unemployment insurance, complementary to that offered by the company or state. According to Sanders and De Grip (2004), lifetime employment has been replaced with the paradigm of lifetime employability. Therefore, skills development is a cornerstone of active labour market policies and shifting from job security to employment security is the philosophy behind the European Commission's flexicurity strategy.

The strategic importance of skills has been recognised both at European and national levels. Supporting the Lisbon Strategy, and in line with the European Employment Strategy (EES), the Commission's *Integrated Guidelines for Growth and Jobs (2005-2008)* address the need to improve the match of jobs and skills in the labour market, enhance investment in human capital and adapt education and training systems in response to new competence requirements (European Commission, 2005). The Council's 2007 Resolution on new skills for new jobs (4.12.2007) operationalises these requirements and singles out the raising of overall skills levels, giving priority to the education and training of those with low skills.

In the fast-changing world of today and in economies that rely on knowledge and complex skills, workers with low skills are in danger of finding themselves outside the mainstream. Increasingly, a polarisation is seen between high-skilled jobs and low-skilled jobs and the divide between knowledge workers and service workers is growing, with consequences in the working conditions of both. Low-skilled workers are at high risk of becoming 'poor' as this reports shows, with low skills being related to low pay and also to some extent to precarious employment.

This paper will address the situation of low-skilled workers in the EU27 Member States by analysing cross-sectional data showing the distribution of such workers in these countries and analysing their working conditions compared to those of other groups of workers.

## Data

The report is based mainly on data from the the *Fourth European Working Conditions Survey* (EWCS), commissioned by the European Foundation for the Improvement of Living and Working Conditions, or Eurofound (Parent-Thirion et al, 2007). For the definitions of low-qualified and low-skilled workers, data from the Labour Force Survey (LFS) are used instead of the EWCS due to the LFS's larger sample size, allowing for more robust background analysis. Data from the LFS are from the 3rd quarter of 2005, approximately the same time period as that in the 4th EWCS fieldwork. The sample universe is the same in both surveys.

## Concepts

Eurofound's framework on quality of work and employment focuses on four aspects of work life: 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 (Eurofound, 2002). In the mapping exercise of low-skilled workers, emphasis is placed on the themes that are especially important where low-skilled workers are concerned, such as job security and pay, physical and cognitive work demands, and training and career opportunities. The structure of this report will follow these themes.

## Definitions

Since the results drawn from a survey are dependent on the concepts and operationalisations used when collecting and analysing the data, it is important to consider carefully both the content of the concept of 'low-skilled workers' and how it is measured.

In cross-national surveys such as the EWCS and the LFS, statisticians and researchers aim at comparability between statistics of different countries. One way to approach comparability is to use internationally agreed standards. The ISCO-88 classification has become the most widely used occupational classification standard in international comparisons and is also commonly used in studies of 'low-skilled workers' (Bergman and Joye, 2001, p. 7). In addition to vocational qualifications, it is common to use education levels as a proxy of workers' skills (Bevan and Cowling, 2007, p. 12). A third common way to differentiate 'low-skilled' workers is to use pay levels since low skills and low pay are often related.

Using the ISCO-88 classification, 'low-skilled workers' are often defined as workers who have basic educational levels (ISCED 0-2).<sup>1</sup> They can also be defined based on occupation: they work in elementary, operating and sales occupations, requiring first and second skills levels (ISCO sub-groups 5-9).<sup>2</sup> In the majority of cases, the income of 'low-skilled workers' is below the median rate of pay, which is why they can be described as 'low-paid workers' (Nativel, 2006, p. 40).<sup>3</sup>

In this report, two types of worker will be the subject of analysis:

- *low-qualified workers*, defined as workers who have basic educational levels (ISCED 0-2);
- *low-skilled workers*, defined as workers in elementary occupations (ISCO 5-9).

<sup>1</sup> 0 = pre-primary education; 1 = primary education or first stage primary education; 2 = lower secondary or secondary stage of basic education.

<sup>2</sup> 5 = service workers and shop and market sales workers; 6 = skilled agricultural and fishery workers; 7 = craft and related trades workers; 8 = plant and machine operators and assemblers; 9 = elementary occupations.

<sup>3</sup> According to Nativel (2006), low-pay is correlated with precarious employment.

# Describing low-qualified and low-skilled workers

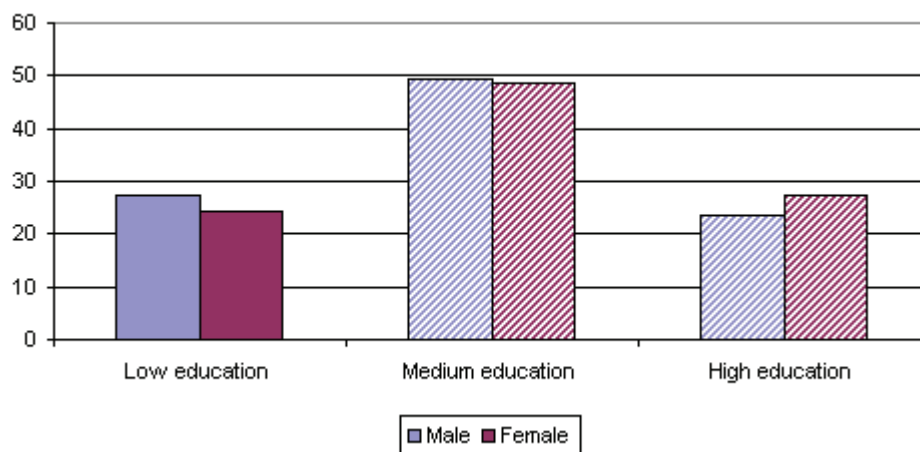
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## Workers with basic education

To start the analysis of low-qualified workers, it is informative to first look at the education levels of European workers. According to LFS data, almost half of the workers in the EU27 (49%) have a medium level of education and there are slightly more people with low education than there are with high education (see Figure 1).

Those below upper secondary-level education are defined as ‘low-qualified’ (*highlighted in solid colour in Figure 1*). Overall, 26% of workers in the EU27 are low-qualified, with more men than women in this group (27% men and 24% women). However, as the LFS sample includes only individuals who are working and as women are outside the labour market more often than men, there may be more low-qualified women than men who are not in employment.

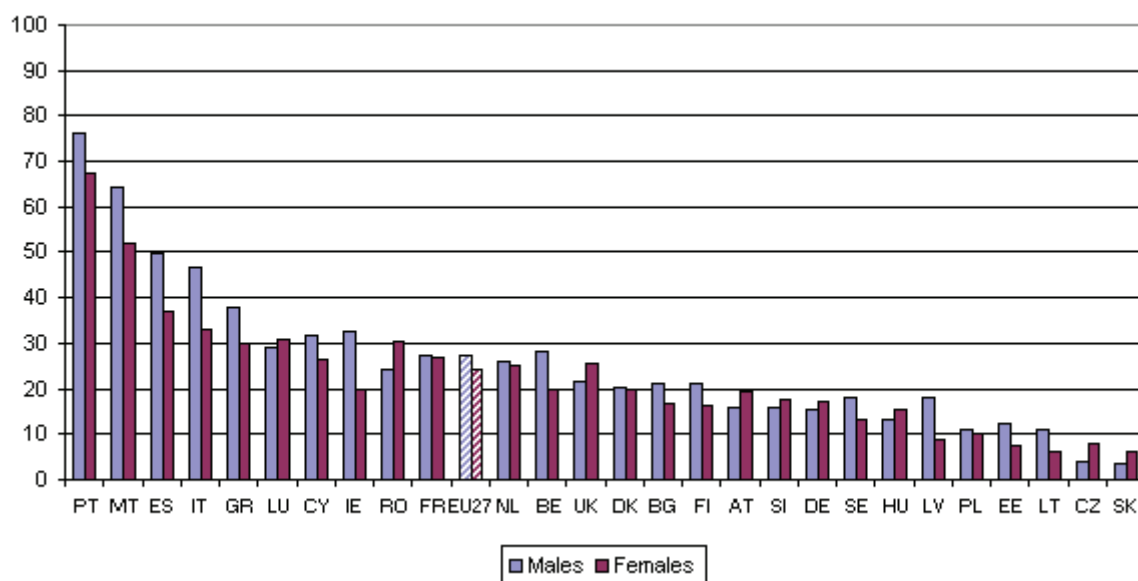
Figure 1: Levels of education in EU27, by gender (%)



Note: Low-qualified workers indicated by solid colour:  
Source: LFS 2005/3

There are large differences to be seen in the proportion of low-qualified workers by country in the EU – from about 70% in Portugal to about 5% in Slovakia (see Figure 2). In Mediterranean countries, the share of low-qualified workers is considerable: for example, in Portugal, Malta, Spain and Italy, over 40% of workers have basic educational levels. On the other hand, in many Eastern European and Baltic countries, the share of low-qualified workers is small: for example, in Slovakia, the Czech Republic and Lithuania, less than one-tenth of the working population is low-qualified.

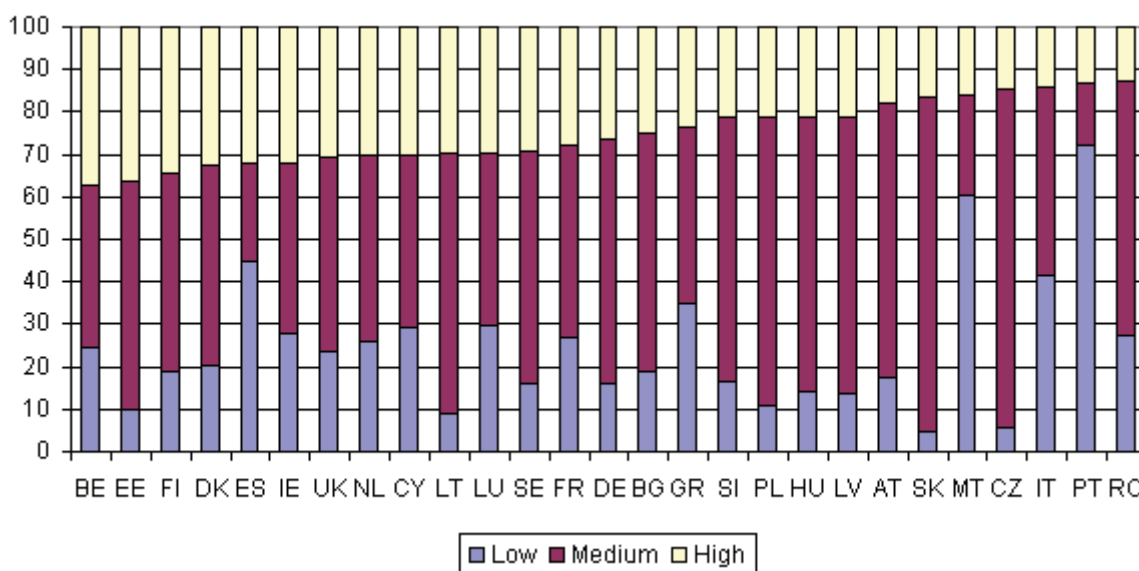
Figure 2: Low-qualified workers in EU27, by country and gender (%)



Source: LFS 2005/3

Explanations are not straightforward, but certainly the long-term efficiency of the education system and education policy is one explanation. Many workers in Eastern European countries have medium levels of education, this is for example the case of 80% of workers in the Czech Republic and in Slovakia (see Figure 3), the two countries with the smallest number of low-qualified workers (see Figure 2).

Figure 3: Levels of education in EU27, by country (%)



Source: LFS 2005/3

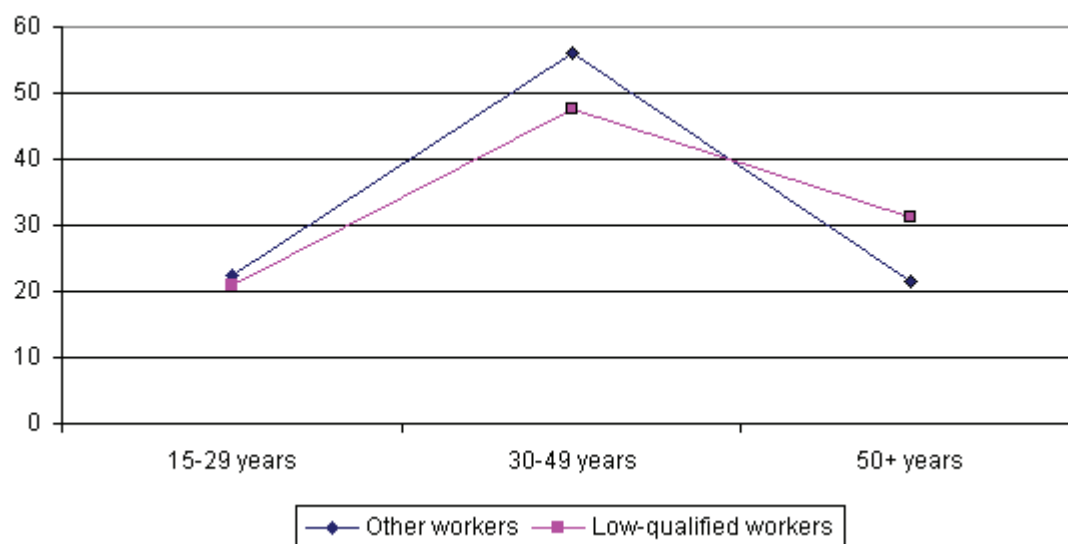
In many Eastern and Southern European countries, the proportion of people with high education is relatively small (although the picture is not quite so simple; for example, in Spain over 30% of workers have high education).



One thing that might shed some light on the country differences in the number of low-qualified workers is the number of school drop-outs or those who leave school early. In Southern European countries especially, a considerable number of young people do not complete their education. The issue is on the European agenda, with reduction in the number of early school-leavers being one of the objectives highlighted in the revised Lisbon Strategy for creating more and better jobs (European Commission, 2005).

Most low-qualified workers (48%) are in the age group 30-49 years, whereas only just over 20% are in the age group 15-29 (see Figure 4). The remainder of low-qualified workers (31%) are over 50 years of age. The age structure of workers with higher qualifications is somewhat different: over 55% are middle-aged and only about 20% are aged 50 and over. In the youngest group of workers (15-29 year-olds), the proportion of low-qualified workers and of other workers is very similar (about 20%).

Figure 4: Age of low-qualified workers (%)



Source: LFS 2005/3

When the proportion of low-qualified workers and those with higher qualifications is examined by age group, it is clear that low qualifications are more common among older workers, aged 50+ years, than in the other two age groups (see Figure 5). Low qualifications are also slightly more common among the youngest age group (15-29 years) compared to the middle-aged group (30-49 years).

Figure 5: Low-qualified workers, by age group (%)

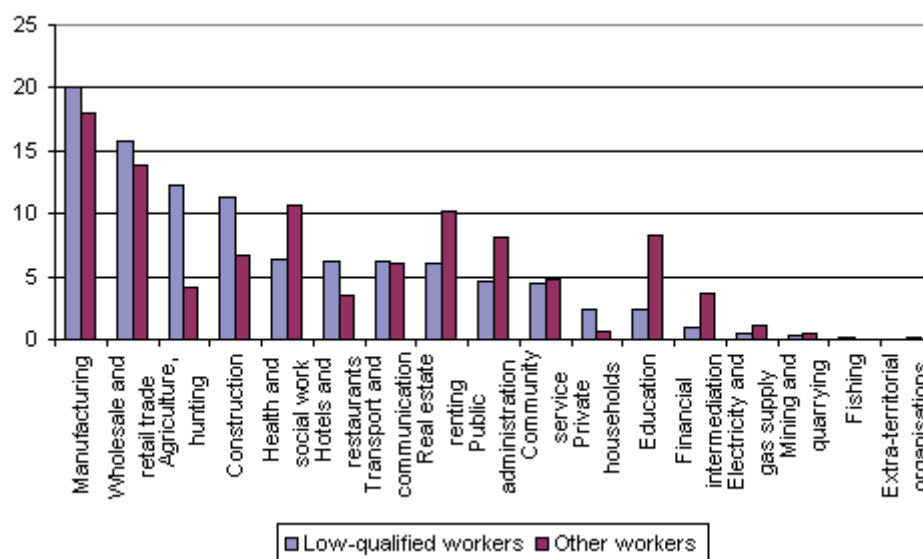


Source: LFS 2005/3

One explanation for the differences in age structure of low-qualified workers and others could be that workers in the youngest age group are still studying and therefore do not have the academic certificates for their higher level of studies. On the other hand, the differences in the proportion of low-qualified workers and others in the 30-49 and 50+ age groups could be attributed to the fact that nowadays more Europeans complete a higher level of education compared to 10 or 20 years ago.

When exploring sectors of work, low-qualified workers are most often found in the manufacturing sector (20%), in wholesale and retail trade (16%), in agriculture and hunting (12%), and in construction (11%) (see Figure 6). Generally these sectors are labour-intensive, although many workers with higher education also work in the manufacturing and wholesale/retail trade sectors. However, there are more people with basic education levels working in these sectors than workers with higher education levels, as well as in the hotels and restaurants sector and in private households.

Figure 6: Low-qualified workers, by sector (%)



Source: LFS 2005/3

Most low-qualified workers are employees (77%). However, when compared to other groups of workers, employee status is more common for workers with higher education than for low-qualified workers (*see Table 1*). When compared to other workers, those with basic education are more often family workers<sup>4</sup> (4% compared to 1%) and self-employed without employees (14% compared to 9%). Family workers, as part of unregistered employment, are a specifically vulnerable group, with no recognised rights as such in most of the EU countries. Furthermore, family worker' status is more common among low-qualified women than men. On the other hand, low-qualified men are more often self-employed without employees compared to low-qualified women.

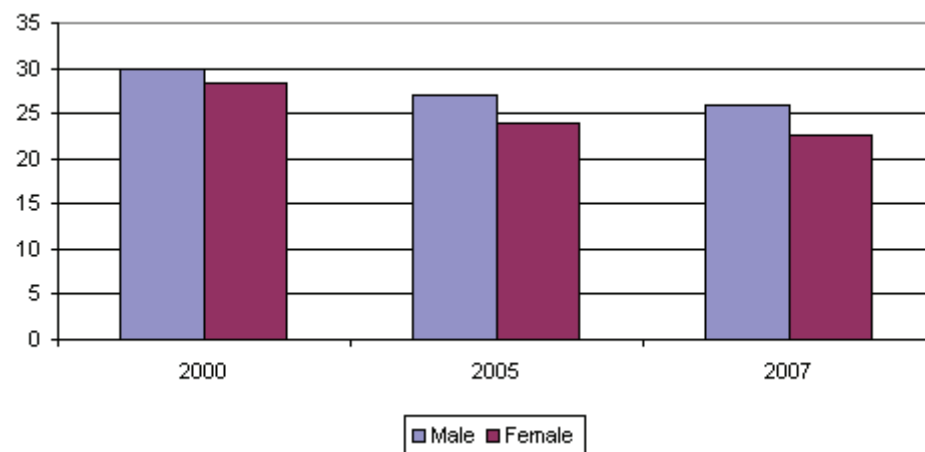
Table 1: *Work status of low-qualified workers (%)*

		Employee	Family worker	Self-employed with employees	Self-employed without employees	%
Male	Other workers	81	1	6	11	100
	Low-qualified workers	75	2	6	17	100
Females	Other workers	89	2	2	7	100
	Low-qualified workers	80	7	2	11	100

Source: LFS 2005/3

The percentage of low-qualified workers has decreased from 2000 to 2007 (*see Figure 7*). The pace is faster among women than men. Since working women have been more educated than working men already for some years now, the education gap between female and male workers seems to be increasing.

Figure 7: *Low-qualified workers in EU27, by gender and year (%)*



Source: LFS 2000, 2005, 2007

## Workers in low-skilled occupations

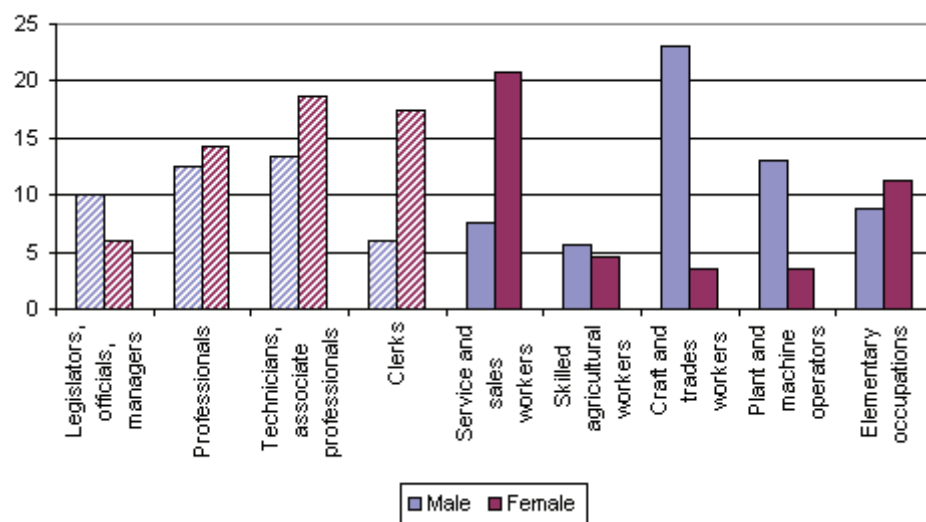
The group of low-skilled workers includes service workers and shop and market sales workers, skilled agricultural and fishery workers, craft and related trades workers, plant and machine operators and assemblers, and workers in elementary occupations. Other groups of workers, more highly skilled, include legislators, senior officials and managers,

<sup>4</sup> 'Family workers are persons who help another member of the family to run a farm or another business, provided that they are not classed as employees' (Eurostat).

professionals, technicians and associate professionals, and clerks. When low-qualified and low-skilled workers are compared, the proportion of low-skilled workers is significantly higher than the proportion of low-qualified workers (the difference is approximately 20 percentage points). According to the LFS, 58% of male workers and 44% of female workers in the EU27 countries are in low-skilled occupations, compared to 27% of men and 24% of women belonging to the low-qualified group.

Men and women tend to work in different types of occupation. As seen in Figure 8 (where low-skilled occupations are highlighted in solid colour), men are much more often working as craft and related trades workers and as plant and machine assemblers and operators compared to women. On the other hand, women are clearly dominant as service and sales workers (and as clerks, which is a higher skilled occupation). There are more male-dominated occupations defined as low-skilled occupations than female-dominated ones.

Figure 8: *Type of occupation, by gender (%)*



Note: Low-skilled occupations indicated by solid colour.  
Source: LFS 2005/3

Most low-skilled workers are found in the sectors of manufacturing, wholesale and retail trade, construction, and agriculture and hunting, with more than 60% of such workers concentrated in these areas (see Figure 9). It is reasonable to say that low-skilled workers are often found in sectors that are traditionally male-dominated.

Figure 9: Low-skilled workers, by sector (%)

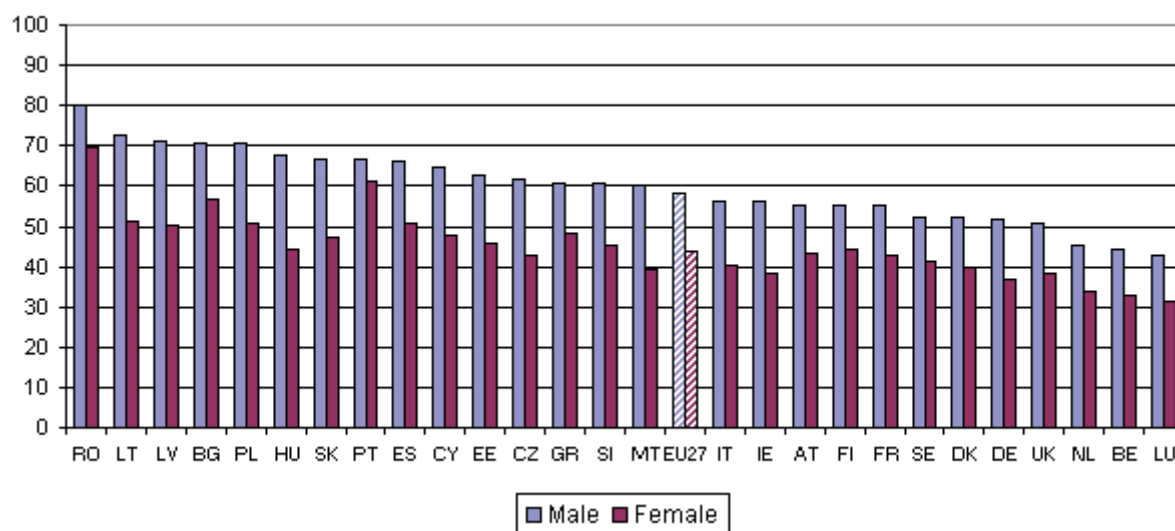


Source: LFS 2005/3

For other groups of workers, in addition to manufacturing and wholesale/retail trade, many work in health and social work, the real estate business and the education sector.

Comparing low-skilled workers by country gives quite a different picture to that of low-qualified workers (*compare Figure 10 and Figure 2*). The differences for low-skilled workers between countries are not as great as for low-qualified workers, with percentages varying between about 40% and 70%, compared to the country differences for low-qualified workers of between 5% and 70%. Also, the positions of the countries change. The differences seem to point to variations in national education levels and also to varying labour market structures, with some countries having both high-qualified workers and large numbers of low-skilled jobs. This seems to be the case in, for example, Slovakia, the Czech Republic, Poland, Latvia and Hungary.

Figure 10: Low-skilled workers in EU27, by country and gender (%)



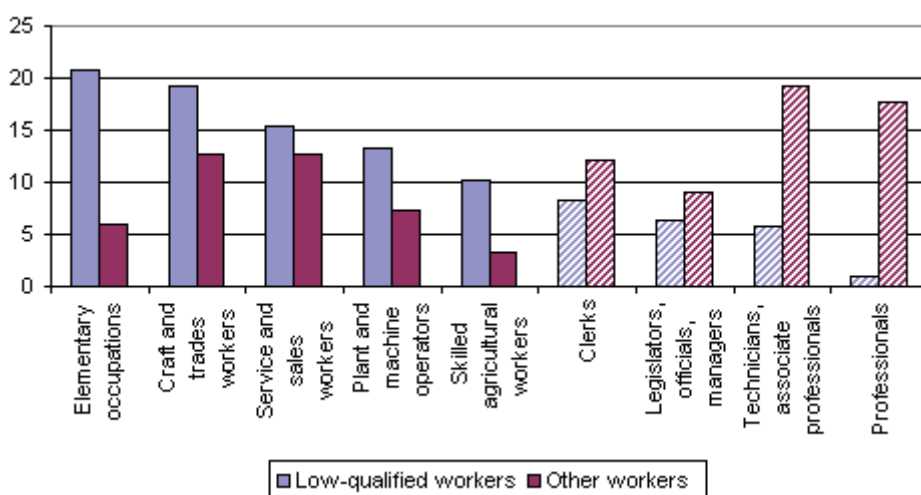
Source: LFS 2005/3

There are more low-skilled workers in Eastern European and in some Southern European countries compared to the EU27 average. Over 60% of workers in Romania, Bulgaria, Portugal, Lithuania, Poland and Latvia are in low-skilled occupations. At the other end of the scale, about 40% of workers in Luxembourg, Belgium and the Netherlands are in low-skilled occupations.

As the country comparisons indicate, the concepts of low-qualified and low-skilled work overlap, but not completely. There are instances where highly educated people are engaged in low-skilled occupations and vice versa.

Figure 11 shows the proportion of low-qualified workers and other groups of workers according to their occupation (low-skilled occupations are highlighted in solid colour). Low-qualified workers are most commonly found in elementary occupations, craft and related trades, and service and sales, with over 15% of such workers engaged in each of these occupations. Other groups of workers are most often technicians and associate professionals (19%) and professionals (18%). But there are also workers with a higher education engaged in low-skilled occupations: for example, 13% of such workers are in the craft and related trades, while a further 13% are in service and sales.

Figure 11: Occupations of low-qualified workers (%)



Note: Low-skilled occupations indicated by solid colour.

Source: LFS 2005/3

The number of low-qualified people in high-skilled occupations is relatively small, although it is noteworthy that 6% of low-qualified people work as legislators, senior officials and managers, compared to 9% of workers with a higher education. In the ISCO-88 classification of occupations, there is no specified skills level for the group 'legislators, senior officials and managers', whereas 'professionals' and 'technicians and associate professionals' are classified as occupations requiring 3rd- and 4th-level skills (tertiary education) (*see Appendix 1*). This could explain, at least partly, the surprising finding mentioned above – that low-qualified workers are represented to some extent in the occupation category 'legislators, senior officials and managers'.

Regardless of education, men occupy low-skilled occupations more often than women (*see Figure 12*). Overall, 82% of low-qualified men are engaged in low-skilled jobs, whereas only 74% of low-qualified women work in low-skilled jobs. A significant proportion of low-qualified women (25%) were found to work in high-skilled occupations. One explanation for this may be that women work much more often as clerks compared to men, an occupation that is considered 'high-skilled' even if it only requires a skills level involving secondary education according to the ISCO-88 classification (*see Appendix 1*). Furthermore, 49% of men with higher than basic education work in low-skilled jobs, while the equivalent

for women is 33%. This situation could be analysed as illustrating the secondary nature of women's employment – in a male-dominated 'breadwinner'-type society, men cannot afford not to work, even if the work does not match their qualifications.

Figure 12: Education and occupation, by gender (%)

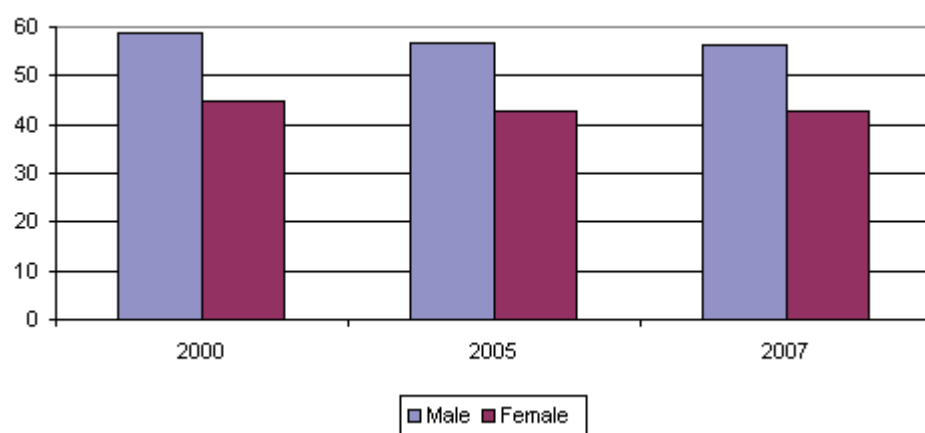


Source: LFS 2005/3

As data from the 4th EWCS show, there is still gendered segregation in the labour market (Burchell *et al*, 2007). This may explain to some extent the greater share of men in low-skilled occupations (*see Figure 12*) since many of these occupations are traditionally considered as 'male' territory (e.g. craft and related trades workers, and plant and machine operators and assemblers). Of the low-skilled occupations, only among service and sales workers are there clearly more females than males (*see Figure 8*).

The number of people working in low-skilled occupations has decreased slightly for both men and women in EU27 countries from 2000 to 2007 (*see Figure 13*). Overall, 53% of workers were engaged in low-skilled occupations in 2000 compared to 50% in 2007.

Figure 13: Workers in low-skilled occupations in EU27, by gender and year (%)



Source: LFS 2000, 2005, 2007

This chapter has clarified those groups of European workers defined in this research as ‘low-skilled’ and ‘low-qualified’. Even though low qualifications and low-skilled work often go together, this is not always the case. The group of low-skilled workers is larger than the group of low-qualified workers and as low-skilled workers represent a variety of occupations, the group may be somewhat more heterogeneous compared to workers with low levels of education.

The following chapters focus on selected dimensions of quality of work and employment that have been raised in the European agenda, especially in connection with the two groups in question – low-skilled and low-qualified workers.



# Employment and working conditions

## 4

When considering low-skilled work, it is important to look at workers' employment conditions – their job security and pay. These aspects are crucial since they shed light on the often quoted argument that low-skilled and low-qualified workers are in a vulnerable position in the labour market and that they are at risk of unemployment (Giguère, 2006, pp. 25-26). On the other hand, working environment and content of work are also significant aspects since low-skilled or low-qualified and other groups of workers are clustered in somewhat different jobs.

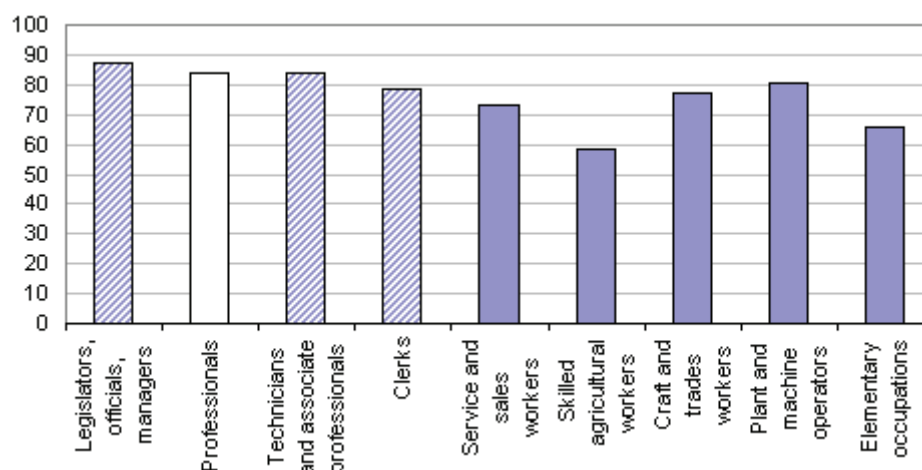
The EWCS provides a means of getting a detailed understanding of the situation of European workers because this survey also covered subjective questions on various aspects of working conditions. Thus, data from the EWCS are used in this chapter and in Chapter 5 on training and career opportunities.

### Job security and pay

As mentioned in Chapter 2, besides occupation and education level, there is a third way to differentiate low-skilled and low-qualified workers and this is to use pay levels since low skills and low pay are often related. Such workers can therefore also be referred to as 'low-paid workers'. Indeed, most low-qualified workers, especially women, have a low income. Low pay may expose this group to 'in-work' poverty.

Furthermore, job security for low-skilled and low-qualified workers is not as good as it is for other groups of workers. This is an important issue to take into account when considering employability of the group. Both workers in low-skilled occupations and low-qualified workers are less likely to be on an indefinite contract than other groups of workers. In general, in most occupations, about 80% of employees have indefinite employment contracts (*see Figure 14, with low-skilled occupations in solid colour*). Such contracts are most common in high-skilled occupations engaging legislators, officials and managers; technicians and associate professionals; and professionals. Only plant and machine operators benefit from indefinite contracts in the same proportion (80%), making this the most secure of the low-skilled occupations in terms of employment contracts. Similarly, when it comes to low-qualified employees, a smaller proportion (73%) of them have indefinite contract compared to employees with higher education (79%).

Figure 14: *Indefinite contracts, by occupation (%)*



Note: *Low-skilled occupations indicated by solid colour.*

Source: EWCS 2005

In the EWCS, four kinds of 'temporary employment contracts' are considered: a fixed term contract, a temporary employment agency contract, an apprenticeship or other training scheme, and no contract. A fixed term contract is the most common of these temporary contracts. Low-skilled workers have fixed term contracts slightly more often than

other groups of workers (13% compared to 11% respectively). Interestingly, low-skilled people work without a contract more than twice as often as other workers. The situation is similar for low-qualified workers (*see Figure 15*): 13% of them have a fixed term contract and 10% have no contract. This compares with 12% of other (more qualified) workers on fixed term contracts and 6% with no contract.

Figure 15: *Temporary employment contracts (%)*

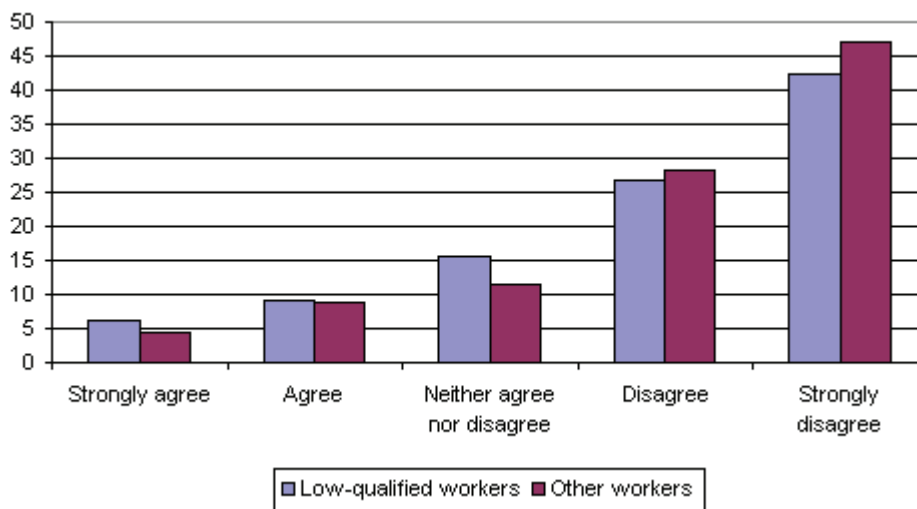


Source: EWCS 2005

The type of employment contract is of concern to ‘employees’ only. It is not relevant to many low-skilled and low-qualified workers, who are found in the category of ‘self-employed without employees’ or ‘family workers’ (*see Table I*). The ‘status’ of such employment is definitively linked with risky employment conditions and precarious employment.

In the EWCS, respondents were asked about subjective experiences of job security. Specifically, they were asked to evaluate if they thought that they would lose their job in the near future. Low-qualified workers reckoned this to be the case more often than other workers (*see Figure 16*): 15% of low-qualified workers ‘strongly agreed’ or ‘agreed’ with the statement ‘*I might lose my job in the next 6 months*’ – a proxy for subjective employment insecurity used in the EWCS – compared with 13% of other workers. There were fewer low-qualified workers (69%) who ‘disagreed’ or ‘strongly disagreed’ with the statement, while the proportion of other workers disagreeing was notably larger (75%).

Figure 16: Possibility of losing job in next 6 months (%)



Source: EWCS 2005

The same pattern is seen when analysing the responses of low-skilled workers: 20% of plant and machine operators, 19% of workers in elementary occupations and 17% of craft and trades workers agreed with the statement 'I might lose my job in the next 6 months' (see Figure 17, with low-skilled workers in solid colour). These percentages are higher than those in other occupations. However, there were two notable exceptions. Firstly, from those occupations that are categorised as low-skilled, only skilled agricultural workers deviated from the pattern. Second, among those occupations classified as highly skilled, it was more common among clerks to worry about losing their job compared to other occupations in this category.

Figure 17: Possibility of losing job in next 6 months, by occupation (%)

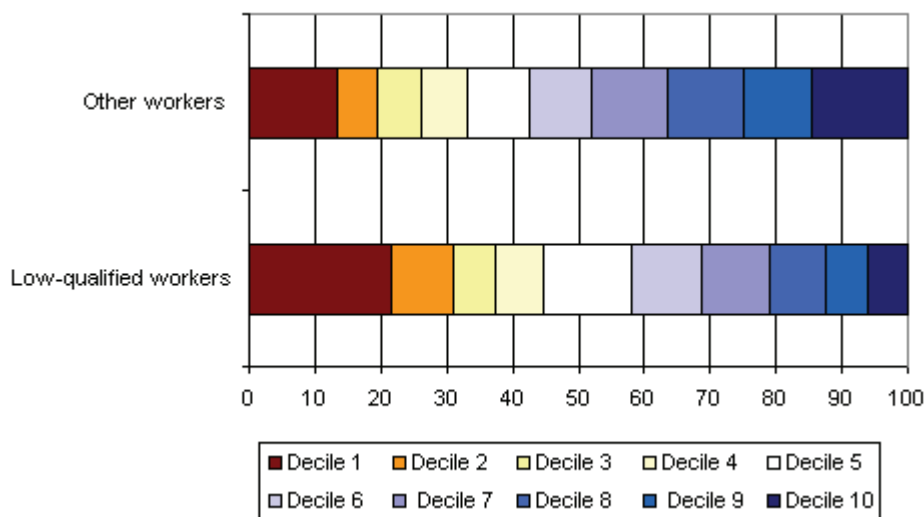


Source: EWCS 2005

Another important aspect of employment conditions of low-skilled or low-qualified workers is pay. In the EWCS, pay is measured on a 10-point scale corresponding to the 10 income deciles or categories, each representing 10% of the respondents in a country (Parent-Thirion *et al*, 2007, pp. 83, 99). Generally, the distribution of income of other groups of workers is more even than the income distribution of low-qualified workers, although there are more other workers

in the highest income deciles than in the lowest ones (see Figure 18). Overall, 36% of other workers belong to the highest three income deciles and 26% belong to the lowest three deciles. The income distribution of low-qualified workers is somewhat different: almost one-quarter (22%) of low-qualified workers are concentrated in the lowest income decile alone, more than in any other decile. However, this only implies that low-qualified workers are at risk of being poor in relative terms, i.e. they earn less than other workers. The figure does not give information on absolute wages and their real term earnings.

Figure 18: *Income of low-qualified workers and other workers, by income decile (%)*

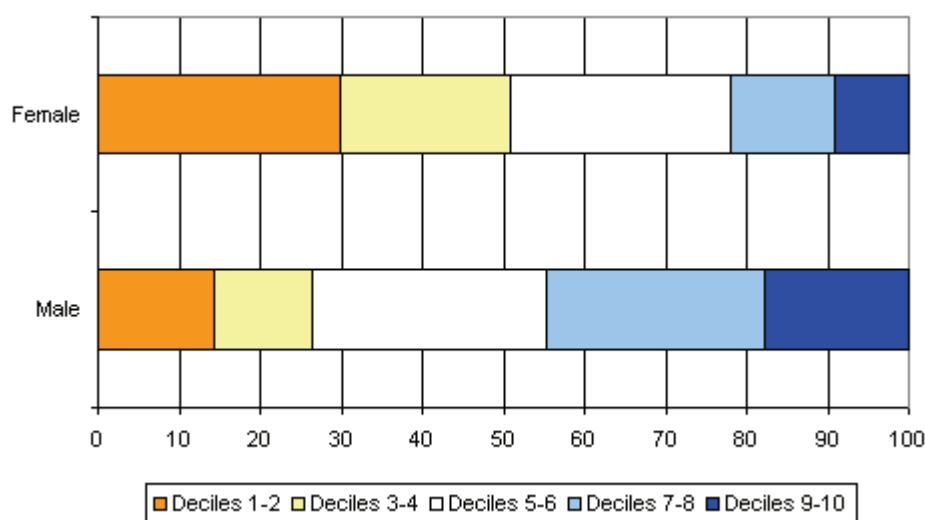


Source: EWCS 2005

Analysing total income, it is obvious that part-time workers earn less than full-time workers. This is often given as a reason why women's income is smaller than that of men, since women more often work part-time compared to men. Nevertheless, when part-time work is excluded from the observation, there is still a gender gap in the income of male and female full-time workers; women are particularly underrepresented in the top third of the income scale (Parent-Thirion *et al*, 2007, p. 86).

Furthermore, when low-qualified workers are examined, the income gap persists (see Figure 19). Overall, 51% of low-qualified women are in the lowest income categories (Deciles 1-4) compared to 27% of low-qualified men. Men and women are represented more equally in the middle income categories (Deciles 5-6). But again, in the highest income categories (Deciles 7-10), there are significantly more men than women – 45% of men and 22% of women with basic education are in these top 4 deciles.

Figure 19: Income of low-qualified full-time workers, by gender (%)



Source: EWCS 2005

As low-qualified women occupy high-skilled occupations more often than low-qualified men, the income gap is difficult to explain. It might relate to the segregated labour market and the gendered division of labour, where men and women are working in different occupations. It seems that the occupations of women are perceived to be less valuable in relation to pay, despite the skills levels that the occupations require. Also, employment status could explain some of the pay differences – for example, low-qualified women are more often working as ‘family workers’ and less often ‘self-employed’ compared to low-qualified men.

## Physical and cognitive demands

The working environment comprises physical as well as cognitive and social aspects of work. Not surprisingly, low-qualified workers and those with a higher education face somewhat different challenges in their work. For example, hard physical working conditions are more common for low-qualified workers, whereas workers with higher education have more cognitive demands in their work.

Examining the physical work environment, low-qualified workers are exposed to harsh working conditions more often than other groups of workers, including such conditions as vibrations from tools, loud noise, high and low temperatures, breathing in smoke and vapours, handling chemicals and tobacco smoke. Low-qualified workers face many of these types of conditions ‘all the time’ or ‘almost all the time’ when working, in fact almost twice as often as workers with higher education (*see Appendix 2*). Vibrations from tools or machinery are reported most often: 16% of low-qualified workers, compared to 9% of other workers, experience vibrations ‘all of the time’ or ‘almost all of the time’ when working. More than one-tenth of low-qualified workers also report experiencing loud noise, high temperatures and smoke ‘all of the time’ or ‘almost all of the time’ when working.

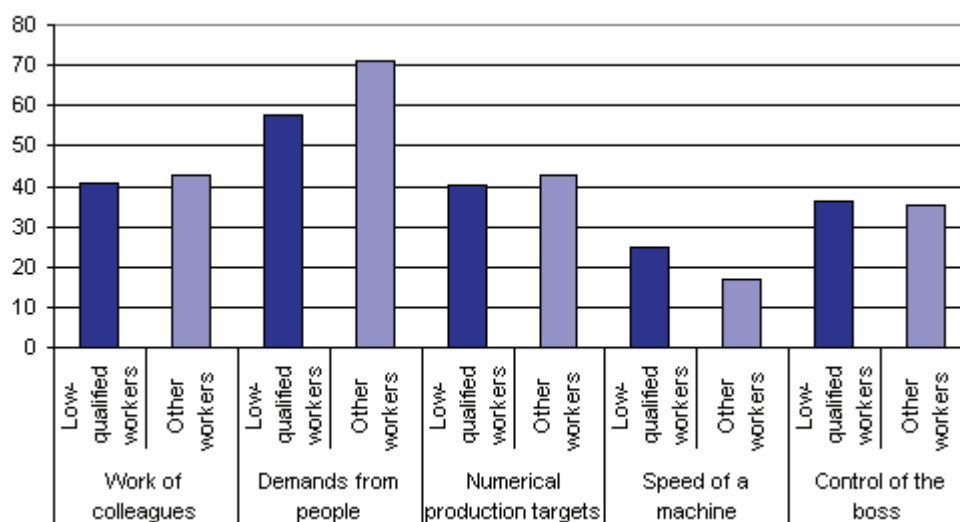
When the four most commonly reported types of harsh working conditions (i.e. vibrations, loud noise, high temperatures and smoke) are examined by occupation, the two groups most affected are plant and machine operators and assemblers, and craft and related trades workers, with the percentage of people experiencing these conditions ‘all of the time’ or ‘almost all of the time’ varying from 16% to 31%. Skilled agricultural and fishery workers report high temperatures more often than workers in other occupations – 16% of them experience high temperatures ‘all of the time’ or ‘almost all the time’ when working. It is evident that low-skilled men in particular work under such harsh physical conditions since the above mentioned occupations are clearly male-dominated.

Standing or walking is the most common type of straining physical movement reported by both low-qualified workers and other groups of workers, with 58% of low-qualified workers and 39% of other workers standing or walking all or almost all of their working time (*see Appendix 3*). Like standing or walking, other straining physical movements are also more common in the occupations of low-qualified workers than other workers. For example, 45% of workers with basic education do repetitive movements and 25% have tiring positions all or almost all of the time at work; this compares with 31% and 13% respectively for other groups of workers. Straining physical movements are most commonly found, for both low-qualified workers and others, in the manufacturing and wholesale/retail trade sectors. However, low-qualified workers engaged in physically demanding work are also often found in the construction sector and in agriculture and hunting.

In addition to physical demands, workers may experience other kinds of pressure stemming from their work environment. For example, 27% of low-qualified workers and 25% of other workers work at high speed ‘all of the time’ or ‘almost all of the time’. However, tight deadlines are found to be slightly more common for other workers than for low-qualified workers: one-quarter of low-qualified workers and 29% of other workers have tight deadlines ‘all of the time’ or ‘almost all of the time’ at work.

The pace of work for low-qualified is more often dependent on the speed of a machine than the work of other workers (25% compared to 17%, *see Figure 20*). Being controlled by a superior (or boss) is equally common to both groups. Other workers, however, report more often than low-qualified workers that their pace of work depends on numerical production targets, on the work of colleagues and, most significantly, on demands from people (e.g. customers). Thus, other workers (with higher education) seem to have to cooperate at work more than low-qualified workers. For example, 57% of other workers are involved in teamwork compared to 49% of low-qualified workers.

Figure 20: Factors influencing working conditions (%)



Source: EWCS 2005

Even when the working environment is reasonably fixed, there may still be room to maneuver in terms of scheduling tasks, selecting suitable methods and prioritising jobs. Autonomy, or the ability to have an influence over one’s work, allows workers to cope better with demands arising from their working environment. Low-qualified workers, however, have considerably less autonomy at work compared to workers with higher qualifications and thus they do not have the same opportunities to adjust to work demands as other workers do. This might contribute to the polarisation of working conditions of the two groups and put low-qualified workers in a more strenuous situation in their jobs.

Generally, more than half of all workers perceive that they have autonomy at work concerning speed of work, working methods and choosing or changing the order of tasks. Differences in the levels of autonomy of low-qualified workers and other workers are about 10 percentage points (see Figure 21).

Figure 21: *Autonomy or ability to influence own work (%)*

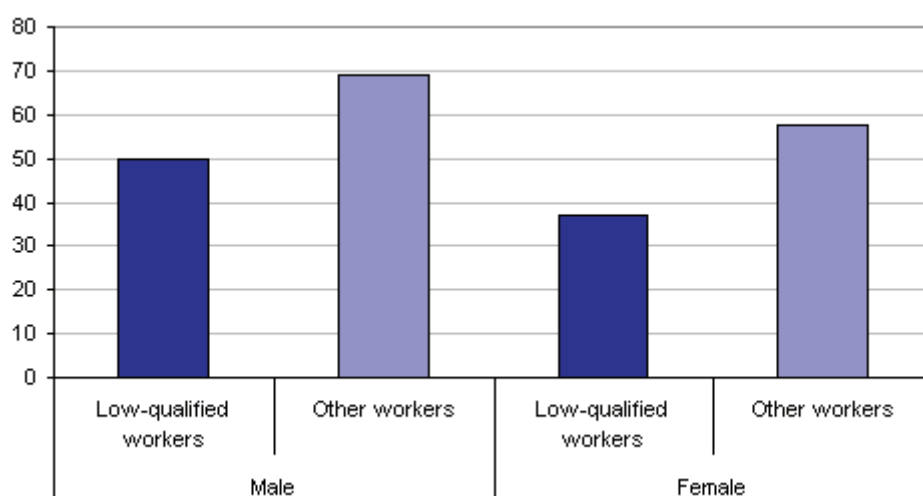


Source: EWCS 2005

Examining the content of work, low-qualified workers, and especially low-qualified women, report considerably more often having to do monotonous tasks compared to workers with higher education. 51% of low-qualified women and 49% of low-qualified men state that their job involves monotonous tasks, compared to 43% of other female workers and 40% of other male workers – a difference of almost 10 percentage points.

The gap between low-qualified workers and other workers is even wider when complex tasks are examined. 50% of low-qualified men and 37% of low-qualified women consider their work involves complex tasks, compared to 69% of other male workers and 58% of other female workers (see Figure 22). It is noteworthy that men, significantly more often than women, think that their job involves complex tasks.

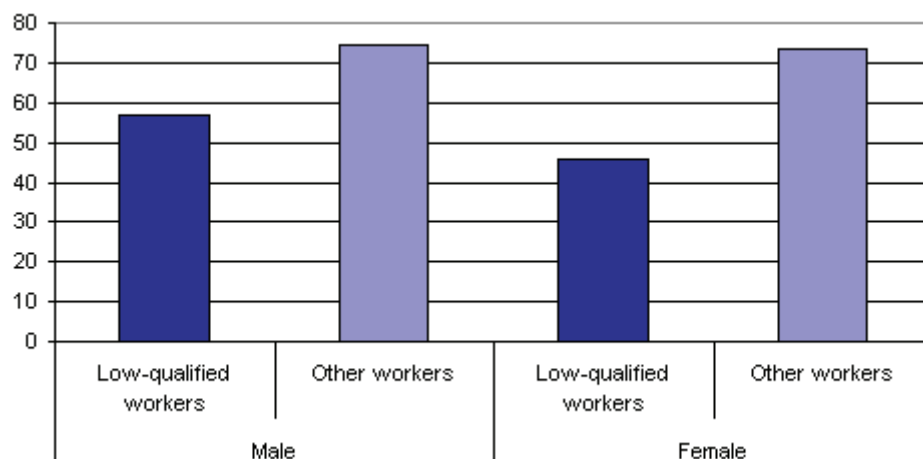
Figure 22: *Work involving complex tasks, by gender (%)*



Source: EWCS 2005

Most workers say that their job includes solving unforeseen problems on their own: 75% of men and 68% of women with basic education say so, compared to 86% of other male workers and 80% of other female workers. Learning new things in the job is not as common. Other workers state much more often than low-qualified workers that their work involves learning new things, the percentages being almost equal for men and women with higher education (75% and 74% respectively), compared to 57% of low-qualified men and only 46% of low-qualified women (see Figure 23).

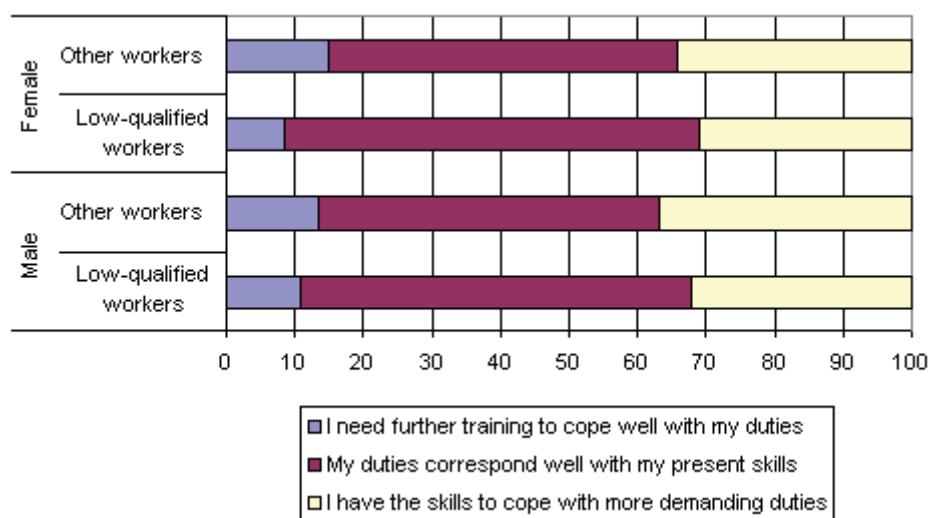
Figure 23: Work involving learning new things, by gender (%)



Source: EWCS 2005

Compared to other groups of workers, low-qualified workers think more often that their skills and duties match or are in balance – 60% of women and 57% of men with basic education think this, compared to 51% of other female workers and 50% of other male workers (see Figure 24). Other workers, however, think more often than low-qualified workers that they need further training in order to cope well with their duties (14% of other workers compared to 10% of low-qualified workers). This is reasonable since, as described above, workers with higher levels of education often report having to do complex tasks in their work and having to learn new things. Somewhat more surprising is the finding that other workers report more often than low-qualified workers that they have skills to cope with more demanding duties.

Figure 24: Skills and duties match, by gender (%)

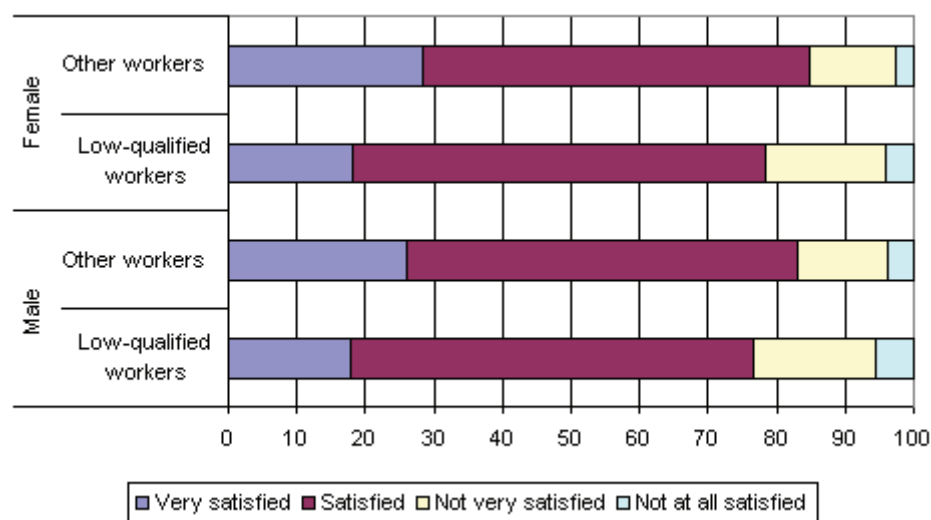


Source: EWCS 2005



Since the physical and cognitive demands at work of low-qualified workers and other workers differ to some extent (e.g. low-qualified workers experience harsh physical working conditions more often than other workers and the content of their work is not as complex as that of other workers), it is important to examine if the differences in working conditions (as well as in employment conditions) are reflected in general job satisfaction. As Figure 25 shows, satisfaction with working conditions is generally very high, but low-qualified workers are somewhat less satisfied with their working conditions than other groups of workers. Generally, women are slightly more satisfied with their working conditions than men, with 77% of men and 78% of women with basic education being ‘very satisfied’ or ‘satisfied’ with their working conditions, compared with 83% of other male workers and 85% of other female workers (*see Figure 25*). Differences in the levels of job satisfaction are greatest among those who say that they are ‘very satisfied’ with their working conditions – low qualified workers are significantly less often ‘very satisfied’ with their working conditions compared to other groups of workers.

Figure 25: Satisfaction with working conditions, by gender (%)



Source: EWCS 2005

Overall, it is fair to say that the employment and working conditions of low-qualified workers and low-skilled workers are in many respects worse than the conditions of other groups of workers. Chapter 5 will provide an insight into workers’ own possibilities to improve their situation, to develop at work and to possibly gain employability and advance in their career.

# 5

## Training and career opportunities

Since training is commonly cited as one answer to decreasing the vulnerability of low-skilled or low-qualified workers, it is worth examining workers' understandings of their training and career possibilities (De Grip, 2005). As seen in Chapter 4, low-qualified workers more often have monotonous tasks to perform in their work and less learning opportunities compared to other groups of workers. Training and career advancement could be an answer to achieving a more diverse job content.

There is evidence from previous studies that low-skilled workers have fewer opportunities to acquire new skills than skilled workers. For example, according to the OECD (2003), 13% of workers in low-skilled occupations in OECD countries participated in employer-sponsored continuous vocational training (CVT) courses, while the percentage for workers in high-skilled occupations was almost three times higher (38%). A similar pattern was found between different educational groups: 16% of workers with less than secondary education and 35% of workers with tertiary education had CVT. Allen and De Grip (2007) have found that jobs characterised by repetitiveness, hierarchical control mechanisms and low levels of autonomy may stifle learning opportunities for workers, whereas more complex jobs with changing job contents provide opportunities for lifelong learning.

In the EWCS, respondents were asked about participation in four types of training: training paid for or provided by employer, training paid for by oneself, on-the-job training, and other forms of on-site training and learning. Since there was no question about the content of the training, it is unclear whether the training was aimed at improving skills in a specific task or of a more general nature.<sup>5</sup> On the other hand, the EWCS contained questions asking if the job offered good prospects for career advancement and if there were opportunities to learn and grow at work. Analysing responses to these questions may show if low-qualified workers consider that they have promotional opportunities in their work.

### Training

All forms of training are much more common to other groups of workers than they are to low-qualified workers (*see Table 2*). The most common form of training for low-qualified workers is on-the-job training: 15% of low-qualified workers have participated in this over the past 12 months (compared to 28% of other workers). Training provided by the employer is the most common form of training for other workers: 30% have participated in this over the last 12 months (compared to only 13% of low-qualified workers).

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<sup>5</sup> Qualitative post-test analysis done after the 2005 survey provides an insight into the respondents' thoughts (Sutela and Lehto, 2007, pp. 52-56). Training provided by an employer is perceived to contain specialist training necessary for a particular job, mandatory training, and training to develop skills and abilities and sometimes also teambuilding exercises. Training paid for by employees themselves is thought of as being targeted to current or anticipated job to make up for shortfalls or to get further qualifications. Understanding of on-the-job training and on-site training are fragmented.

Table 2: *Participation in training over last 12 months, by gender (%)*

			%
<b>Training provided by the employer</b>	Male	Low-qualified workers	14
		Other workers	29
	Female	Low-qualified workers	12
		Other workers	31
<b>On-the-job training</b>	Male	Low-qualified workers	16
		Other workers	28
	Female	Low-qualified workers	14
		Other workers	31
<b>Other forms of on-site training/learning</b>	Male	Low-qualified workers	8
		Other workers	19
	Female	Low-qualified workers	7
		Other workers	21

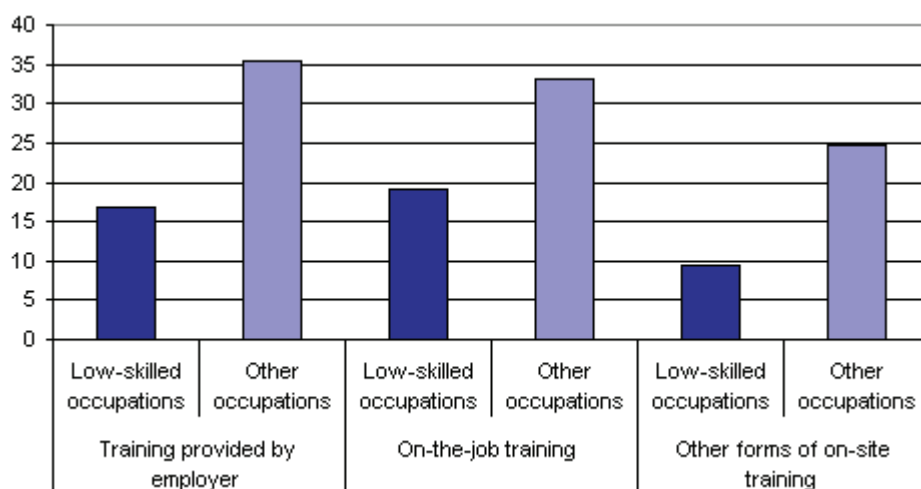
Source: *EWCS 2005*

Training paid for by oneself is the most unusual form of training among all workers. Only 3% of low-qualified workers and 7% of other workers have paid for their own training over the last 12 months. This may be because workers often consider that the training provided by their employer is sufficient (Sutela, 2007). Also, workers, especially low-qualified ones, may not have the resources to pay for training themselves.

Among other groups of workers, women participate in training more than men, whereas the opposite is true for low-qualified workers. It is important to consider why low-qualified workers do not have training as often as other workers and also why low-qualified women have the least training. What are the obstacles to taking part in training for men and women? Sutela (2007) found that both structural barriers (e.g. costs, time pressure and family responsibilities) and motivational aspects were important. Are some groups of workers encouraged more than others to overcome these obstacles and to develop skills and advance in their career?

Training is also less common in low-skilled occupations than in higher skilled ones (*see Figure 26*). Over the past 12 months, 17% of workers in low-skilled occupations have undergone training paid for by their employer, 19% have had on-the-job training and 9% have had other forms of on-site training. These figures compare to 35%, 33% and 25% respectively of workers in other occupations. However the participation rates for low-skilled workers are slightly higher than the rates for low-qualified workers.

Figure 26: Participation in training over last 12 months, by occupation (%)

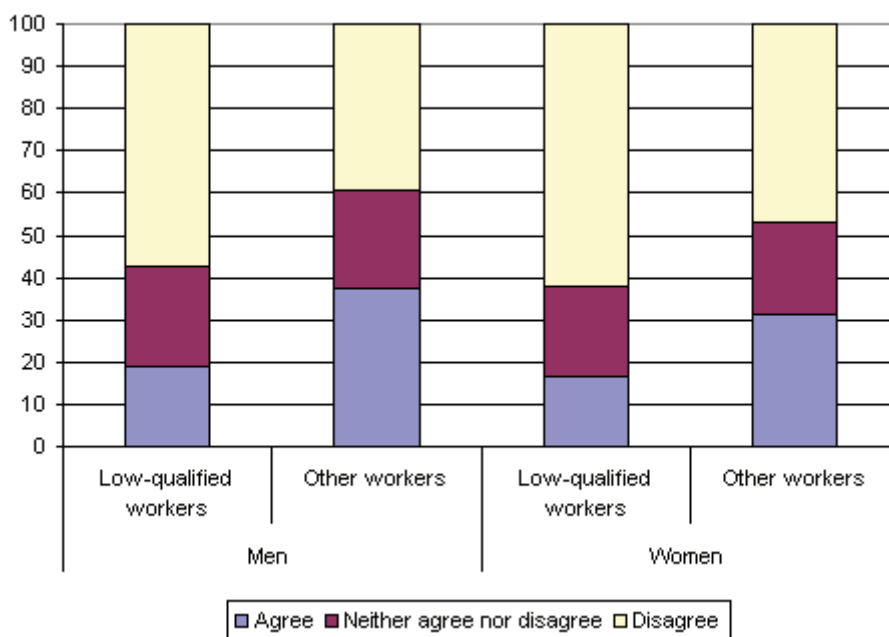


Source: EWCS 2005

## Career prospects

In addition to participation in training, respondents in the EWCS were asked about their career prospects and possibilities to learn and grow at work. Low-qualified workers consider themselves to have fewer chances to develop compared to workers with higher qualifications: 19% of men and 16% of women with basic education ‘strongly agree’ or ‘agree’ with the statement ‘My job offers good prospects for career advancement’, compared to almost twice those percentages for workers with higher education (38% of men and 31% of women) (see Figure 27). In contrast, 59% of low-qualified workers ‘strongly disagree’ or ‘disagree’ with the statement ‘My job offers good prospects for career advancement’, compared to a much smaller proportion of other workers (43%).

Figure 27: Job offering good prospects for career advancement, by gender (%)

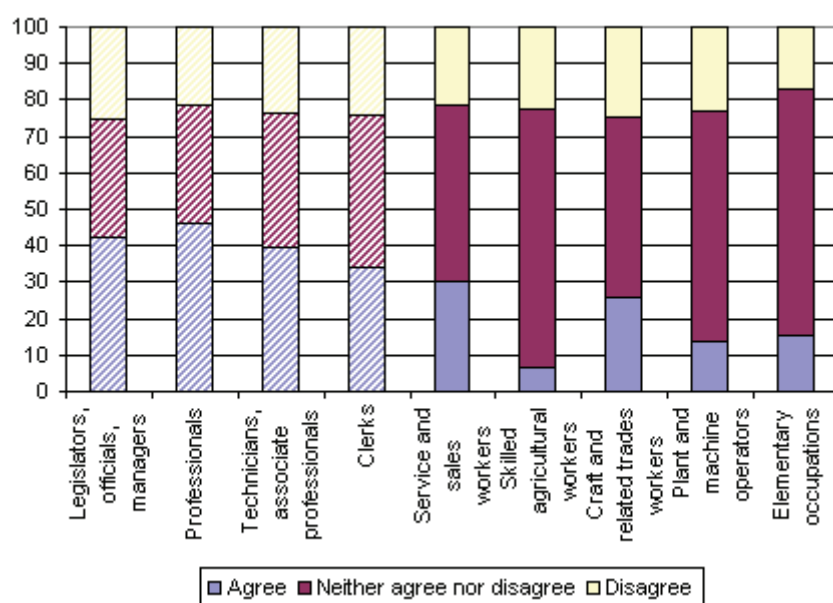


Source: EWCS 2005

Even if prospects for career advancement are not considered to be good very often, there may still be opportunities to learn and grow at work. 39% of low-qualified workers and 58% of other workers say that they do have opportunities to learn and grow at work, while 39% of low-qualified workers and 24% of other workers think the opposite. Significantly more men than women with basic education say that work offers possibilities for personal development – 42% of low-qualified men and 34% of low-qualified women think that they have opportunities to learn and grow at work.

Perceptions of career prospects also vary by occupation (*see Figure 28*). Generally, high-skilled occupations offer better possibilities to advance one's career compared to low-skilled occupations (*indicated by solid colour in Figure 28*): 46% of professionals, 42% of legislators, officials and managers, and 40% of technicians and associate professionals consider having advancement possibilities. In contrast, low-skilled occupations are below the 31% average for all occupations. Amongst those working in low-skilled occupations service and sales workers report having the highest expectations (30%) that their work offers them good prospects for career advancement.

Figure 28: Prospects for career advancement, by occupation (%)



Note: Low-skilled occupations indicated by solid colour.

Source: EWCS 2005

In summary, the same trend seen for career advancement (with workers in low-skilled occupations having worse career prospects compared to other workers) applies also to good opportunities in job to learn and grow at work, even if people generally agree more often with having possibilities for personal development than with having good career prospects.

Analysis of the 4th European Working Conditions Survey (EWCS) shows that low-skilled and low-qualified workers are the group that fares worst with regard to their labour market situation. Firstly, they are more likely to be in precarious employment compared to other groups of workers, especially those working without an employment contract. Also, low-skilled and low-qualified workers more often fear losing their jobs than other workers. Lastly, low-qualified workers, especially low-qualified women, tend to be concentrated in the low-income category. In highly regulated labour markets, the low-skilled are more likely to experience joblessness; in de-regulated markets, they are more likely to experience low pay (Esping-Andersen, 2007).

Examining the working conditions of low-skilled and low-qualified workers, a dominant pattern emerges of more demanding physical work compared to other groups of workers, coupled with less cognitive demands. Autonomy at work, another important aspect of working conditions, is at a considerably lower level for low-skilled and low-qualified workers compared to others. Work autonomy is crucial when coping with work intensity, which is generally on the increase in people's working lives. As a result of all the different aspects of employment and working conditions, low-skilled and low-qualified workers are slightly less satisfied with their working conditions than other workers. This is an area where individual workplaces could contribute to enhance the conditions of work for low-skilled workers, for example, through HRM policies and work organisation.

Training is a crucial aspect in the labour market situation of low-skilled workers. The EWCS confirms that when it comes to training, low-skilled and low-qualified workers receive less training than other workers. Interestingly, low-qualified workers think more often than others that their skills and duties are in balance. Workers with higher skills or in jobs with higher qualifications state more often than low-qualified workers that they need further training to cope with the demands of the job, but they also say more often that they would have the skills to cope with more demanding duties. Furthermore, low-qualified workers are worse off than other categories of workers when it comes to opportunities to learn and grow at work and advance in their career. Low-qualified women report the least opportunities for both personal and professional development at work. The question arises – why is the culture of learning throughout the career not present among all workers?

Exploring different forms of flexibility, it is found that offering training to low-skilled workers contributes mostly to their internal flexibility, i.e. ability to take up other posts and jobs within a company or organisation they are already working for. Previous studies point to separate labour markets for low- and high-skilled employees, and training seems to help low-skilled workers to advance in their own internal labour market (Maxwell, 2006). According to a study by Sanders and De Grip (2004), low-skilled workers who participate in training are more likely than others to move to other jobs within the company. Workers' task flexibility did not have such an effect on internal employability. However, neither participation in training nor task flexibility contribute to external employability of low-skilled workers.

The meaning of employability might be different for low-skilled workers compared to other groups of workers. Optimally, workers' employability increases with the work experience they gain from different jobs. Moving from one job to another would then also mean advancing in a career. For low-skilled workers, however, career advancement seems to be limited to their own internal labour market and there is a danger that they will move from one job with harsh working conditions to another with similar characteristics.

Attitudes towards training and learning might also contribute to the increasing polarisation of the workforce and the growing divide between low- and high-skilled workers, which could be difficult to overcome. Social mobility chances seem to depend increasingly on the skills levels. The 'skills upgrading' mantra does not seem to have reached those who need the training most. The important question is how to motivate these workers (who, for example, might have dropped out of school) to take part in training and to continue with their education.

Addressing the low-skilled population is an especially sensitive issue, which needs the involvement of all stakeholders. The challenge lies in attracting low-skilled workers into participation in training and in seeing the longer term benefits that it brings. On the employers' side, the importance of providing training to this group of workers and encouraging them to take part in it, as well as recognising their skills developed in non-formal settings, are important factors. Finally, there is a place for the public authorities to offer leverages for both parties, for example, through financial incentives.

Low-skilled workers, if equipped with adequate training and up-skilling programmes, offer the untapped potential to address skills gaps and shortages in sectors lacking a labour force. But even more importantly, improving the employment and working conditions of low-skilled workers is a goal in itself when seen in the wider context of social justice and inclusion. There are signs of an increasing polarisation of the workforce as economic growth and job creation do not automatically lead to equal distribution of wealth and opportunities.

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# Appendix 1: ISCO-88 classification

Table A1.1: *Skills levels of ISCO-88*

Skill level	Education qualification
1st skill level	Primary education (approximately 5 years)
2nd skill level	Secondary education (between 5 and 7 years)
3rd skill level	Tertiary education (between 3 and 4 years), not leading to a university degree
4th skill level	Tertiary education (between 3 and 6 years), leading to a university degree or equivalent

Source: *Bergman and Joye (2001, p. 7)*

Table A1.2: Major groups and skills levels of ISCO-88

Code	Major groups	Skills level
1	Legislators, senior officials and managers	n/a
2	Professionals	4th
3	Technicians and associate professionals	3rd
4	Clerks	2nd
5	Service workers and shop and market sales workers	2nd
6	Skilled agricultural and fishery workers	2nd
7	Craft and related trades workers	2nd
8	Plant and machine operators and assemblers	2nd
9	Elementary occupations	1st
0	Armed forces	n/a

Source: *Bergman and Joye (2001, p. 8)*

## Appendix 2: Harsh physical working conditions

Table A2.1: *Harsh physical working conditions (%)*

		All/ almost all of the time	3/4 of the time	1/2 of the time	1/4 of the time	Never/ almost never	%
<b>Vibrations from tools</b>	Low-qualified workers	16	4	6	9	65	100
	Other workers	9	2	3	7	79	100
<b>Loud noise</b>	Low-qualified workers	15	5	7	9	64	100
	Other workers	10	4	5	10	72	100
<b>High temperatures</b>	Low-qualified workers	11	4	10	9	67	100
	Other workers	5	3	6	9	78	100
<b>Low temperatures</b>	Low-qualified workers	7	4	9	11	70	100
	Other workers	3	2	6	9	80	100
<b>Breathing in smoke</b>	Low-qualified workers	10	4	4	7	74	100
	Other workers	6	2	3	6	83	100
<b>Breathing in vapors</b>	Low-qualified workers	5	2	3	6	85	100
	Other workers	3	1	2	5	90	100
<b>Handling chemicals</b>	Low-qualified workers	6	2	3	8	82	100
	Other workers	4	2	2	6	87	100
<b>Tobacco smoke</b>	Low-qualified workers	10	2	4	8	76	100
	Other workers	6	2	4	7	81	100

Source: *EWCS 2005*

## Appendix 3: Straining physical movements

Table A3.1: *Straining physical movements at work (%)*

		<b>All/ almost all of the time</b>	<b>3/4 of the time</b>	<b>1/2 of the time</b>	<b>1/4 of the time</b>	<b>Never/ almost never</b>	<b>%</b>
<b>Tiring positions</b>	Low-qualified workers	25	9	12	16	39	100
	Other workers	13	6	8	14	59	100
<b>Moving heavy loads</b>	Low-qualified workers	16	6	11	16	51	100
	Other workers	8	4	6	14	69	100
<b>Standing/ walking</b>	Low-qualified workers	58	8	9	8	17	100
	Other workers	39	7	10	13	30	100
<b>Repetitive movements</b>	Low-qualified workers	45	10	9	10	26	100
	Other workers	31	8	9	11	41	100

Source: *EWCS 2005*