Chapter 5

Well-being in the workplace: Measuring job quality

While employment is a strong determinant of people's life satisfaction, what matters is not just having a job, but also what kind of job. Measuring the quality of employment is challenging, as it covers many different aspects, from work content and autonomy in decision-making to interactions with colleagues and support from managers, as well as more traditional dimensions such as earnings and job security. Job quality is analysed by bringing together various measurement frameworks and by looking at a range of indicators. A special focus is put on subjective well-being in the workplace which is a function of various requirements and opportunities that people face at work. Work autonomy, well-defined work goals, appropriate feedback on the work performed and supportive colleagues are conducive to personal accomplishment. When combined with negative work atmosphere and poor workplace organisation, heavy workloads and great time pressures can impair health. These aspects of employment quality are, however, difficult to convert into cross-country comparable indicators as their measurement partly relies on workers' subjective judgement about their job. Further work is needed to enable the implementation of such indicators in an international context.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Introduction

Employment is not only one of the major drivers of material living standards but it is also one of the most powerful determinants of people's quality of life. As people spend a majority of their daily life at work and work for a significant part of their life, employment can provide not just a salary but an opportunity for people to grow, to develop new skills and ambitions and to feel useful in society. But it is not just a question of having a job, it is also a matter of job quality. So what are the elements that make up a quality job? What role do elements such as relations with colleagues and management, overwork or underwork, working hours or job (in)security play?

Broadly speaking, employment quality can be thought of as those aspects of a job that contribute to people's well-being, by impacting on material living standards or their quality of life at work. Employment quality has attracted increased interest in the international academic and statistical community in recent years, and considerable progress towards establishing a measurement framework has been achieved over the last decade. In particular, various dimensions of employment quality have been identified. Further work is however needed to go beyond the conceptual stage and to build an operational framework for analysing employment quality.

Only a few dimensions of employment quality were taken into account in the 2011 edition of *How's Life?* The overall aim of this chapter is, where possible, to fill some of these gaps, and to highlight areas for future work. The first section presents a brief overview of existing international frameworks for defining and measuring employment quality. The next two sections present a number of indicators that could complement the list currently used in the two dimensions of the OECD well-being framework that are most directly related to employment quality: "Jobs and earnings" and "Work-life balance". Some of these proposed indicators could be added to the OECD well-being framework in the future, but many of them raise a number of methodological and implementation issues. In particular, indicators that refer to work organisation and workplace relationships will require further development before they can be used in an international context.

Measuring employment quality

The impact of work and employment on people's well-being has been investigated from many different perspectives and approaches (for a comprehensive review, see Muños de Bustillo et al., 2011). Psychologists, sociologists and economists have developed theories and searched for empirical evidence that link workers' well-being to specific aspects of their job, so as to identify those job attributes that are of greatest importance to the worker. Drawing on this evidence, frameworks for measuring employment quality have been developed. Although they vary in scope, these frameworks show a significant degree of convergence in the main dimensions retained to characterise the concept of employment quality. Taken together, these frameworks make it possible to draw up a list of dimensions to be considered when developing indicators on quality of work and employment.

A brief overview of international measurement frameworks

Several major initiatives have been taken at international level to establish guidelines for measuring different concepts related to employment quality and for collecting indicators that would allow cross-country comparisons. However, this remains an unfinished task and no internationally comparable database on employment quality currently exists. The international academic and statistical community continues to play an active role in this area, however, as witnessed by the recent release of the International Labour Organization (ILO) manual on concepts and definitions of decent work indicators (ILO, 2012). The manual provides a detailed description of indicators to be developed for monitoring the progress made in implementing the ILO *Decent Work* Agenda, as well as methodological and practical guidelines for producing and using these indicators. This constitutes a significant step towards an operational and policy-oriented concept of Decent Work. Likewise, the United Nations Economic Commission for Europe (UNECE), in collaboration with Eurostat and the ILO, is developing operational guidelines for measuring the various dimensions listed in its framework for *Measuring Quality of Employment* (UNECE, 2010). At the European level, a comprehensive report has been released recently by the European Foundation for the Improvement of Living and Working Conditions (Eurofund), which proposes and implements a framework for measuring job quality in 33 European countries over the period 1995-2010 (Eurofound, 2012).[1]

These recent initiatives have suggested indicators that can be divided into two broad categories, with some of the proposed frameworks more narrowly focused on the quality of jobs and others following a broader approach (see Table 5.1). The first category of indicators refers to the characteristics of the job and of the broader work environment that shape quality of work at *individual level*. Three main aspects can be distinguished:

- First, the terms and conditions set out in the employment contract, such as earnings, working hours, contract duration, etc. These contractual provisions form the basis of all existing frameworks for measuring employment quality.
- Second, the work environment matters a great deal for the well-being of workers. For instance, a recent OECD study on mental health at work shows that workplace relationships and work organisation are important for employee well-being and mental health (OECD, 2012). Therefore, indicators that describe organisational aspects of the work environment (e.g. work content, work autonomy, learning opportunities, safety at work), together with indicators on the work relationships between colleagues and with management and supervisors, need to be considered when measuring quality of employment. These important aspects of employment quality are mentioned in the UNECE framework, as well as in the Eurofound framework.
- Third, the institutional and policy framework governing the labour market also contributes to shape quality of work at individual level. Jobs do not exist in a vacuum: social and employment policies in place provide workers with a range of employment-conditional benefits, such as in-work benefits for low-income families, unemployment and health insurance benefits, paid sick leave, pension rights, etc. Taking into account these aspects of employment quality is particularly important when undertaking international comparisons, as there are large differences between countries in the range of employment-conditional benefits that are available, and in the entitlement rights that employment and social policies provide to workers. These are included in both the ILO Decent Work framework, and in the UNECE framework for Measuring Quality of Employment.

Table 5.1. **Main dimensions of work and employment quality**

Selected international frameworks

Dimensions	Examples of suggested indicators	ILO (2012)	UNECE (2010)	Eurofound (2012)	*How's Life?* (2011)
	Work and employment quality at the individual level				
Earnings	Average earnings, share of low paid workers, rate of in-work poverty	X	X	X	X
Working hours and working time arrangements	Average actual or usual hours worked per week or year, share of involuntary part-time employment, share of workers with excessive or unsocial hours of work, share of workers with short-term flexibility over working time	X	X	X	X
Job security	Share of temporary workers, share of workers with short job tenure, share of self-employed workers	X	X	X	X
Life-long learning	Share of working age population or employed persons participating in education and training, share of employed persons who have more/less education than is normally required in their occupation	X	X	X	X
Safety and health at work	Occupational injury rate, occupational disease contraction rate, stress at work, share of workers with high exposure to physical health risk factors	X	X	X	X
Work organisation and content	Subjective indicators of autonomy at work, work intensity, workers self-assessment of the extent to which they do a useful work, satisfaction with type of work in present job		X	X	
Workplace relationships	Subjective indicators of relationships with colleagues and supervisors, discrimination, harassment		X	X	
Social security system					
Unemployment insurance and other cash income support	Unemployment insurance coverage, replacement rate, beneficiaries of cash income support	X	X		
Family friendly policy	Entitlements to maternity/parental leave, annual leave, childcare facilities, employment situation of mothers of young children	X	X		X
Pension	Pension coverage	X	X		
Health insurance	Health insurance coverage, employees with supplemental medical insurance plan, share of employees entitled to sick leaves	X	X		
	Work and employment quality at the aggregate level				
Broad economic and social context		X			
Labour market performance	Unemployment rate, employment rate, participation rate	X			X
Social dialogue at work	Union density rate, collective bargaining coverage rate, share of enterprises belonging to employer organisations	X	X		
Social situation	Income inequality, education of adult population	X			X
Macroeconomic performance	GDP growth rate, labour productivity, inflation rate	X			
Inequalities and ethics of employment					
Equal treatment	Gender wage and employment gap, occupational segregation, employment situation of disabled workers, ethnic minorities and immigrant workers	X	X		X
Work that should be abolished	Child labour, forced labour	X	X		

Note: ILO (International Labour Organization); UNECE (United Nations Economic Commission for Europe); Eurofound (European Foundation for the Improvement of Living and Working Conditions).

Source: ILO (2012), *Decent work indicators: Concepts and definitions*, ILO manual, First edition, Geneva; UNECE (2010), *Measuring Quality of Employment – Country Pilot Reports*, Geneva; Eurofound (2012), *Trends in job quality in Europe*, Publications Office of the European Union, Luxembourg.

The second broad category of indicators refers to the broad economic and social context that shapes quality of work at the *aggregate level*. Although context factors do not inform on the quality of existing jobs *per se*, they provide useful indications when drawing conclusions from cross-country comparisons or comparisons over time in employment quality. For instance, a number of contextual factors – such as unemployment rate – may affect the

well-being of workers by increasing their fear of job loss or by deteriorating workplace relationships. More generally, in the current context of mass unemployment in many OECD countries, improving job quality can hardly be regarded as a stand-alone objective. Potential trade-offs between job quality and job quantity have to be taken into consideration so as to improve the quality of people's working life, beyond the quality of existing jobs *per se*.

Which employment quality indicators measure people's well-being?

Existing frameworks for measuring employment quality overlap to a large extent with the well-being framework used in *How's Life?*, as they typically aim at measuring both work-related material conditions and the quality of life at work, the two main domains used in *How's Life?* to describe current well-being. However, there is not an exact match between existing frameworks for measuring employment quality and the OECD well-being framework for measuring people's well-being, for two main reasons.

First, employment quality cuts across several dimensions of the OECD well-being framework, rather than being a stand-alone dimension of people's well-being. Among the 11 well-being dimensions considered in *How's Life?* only two focus explicitly on employment quality: "Jobs and earnings" and "Work-life balance". The first of these two dimensions refers to work-related aspects of material living conditions, but is not limited to the quality of existing jobs. This dimension also includes broad indicators of labour market performance such as employment and unemployment rates. The "Work-life balance" dimension describes a number of work-related aspects of quality of life but not all of them, as other aspects are taken into account in other dimensions of *How's Life?* This is notably the case for lifelong learning, which not only is an important facet of employment quality, but also a key component of education and training systems. As such, lifelong learning is part of the "Education and skills" dimension of *How's Life?* Yet, two broad categories of indicators could be added to the OECD well-being framework so as to better account for quality of work when measuring people's well-being:

- The first category of indicators refers to the income volatility associated with labour market risks such as job loss and/or large drops in earnings. Yet, the impact of labour market shocks on people's incomes is strongly affected by the policy supports available to workers (e.g. unemployment benefits and social assistance). This could be accounted for in the "Jobs and earnings" dimension of the OECD well-being framework; alternatively, a more direct measure of economic insecurity among the employed population could be used (e.g. the incidence of in-work poverty).
- The second category of indicators refers to the organisational and social aspects of the work environment. These important aspects of employment quality could well complement the set of indicators in the "Work-life balance" dimension of the OECD well-being framework.

Second, *How's Life?* is intended to provide an *operational* framework for measuring people's well-being, and therefore, the approach concentrates on well-being *outcomes*, as opposed to well-being *drivers* measured by input or output indicators. However, existing frameworks for measuring employment quality do not make such a distinction. Most often, they mix up indicators that measure the well-being outcome of high or low quality jobs with indicators that refer to general factors behind employment quality, such as the characteristics of industrial relations systems or social security expenditure.

The operational nature of the OECD well-being framework has several implications for the following two sections of this chapter, which aim at filling some of the gaps that were identified in the first edition of *How's Life?* In particular, this chapter proposes a few additional indicators of employment quality and carries out exploratory analysis that would be instrumental in developing new indicators in the future. The following criteria have guided the choice of the additional indicators:

- First, they should measure a well-being *outcome* of employment quality. At first glance, this condition would exclude all policy indicators from the OECD well-being framework, as such indicators typically refer to drivers rather than outcomes. However, the distinction between drivers and outcomes is not always clear-cut. This is notably the case for replacement incomes that are provided to the unemployed through unemployment insurance and assistance schemes. These constitute an important source of income for many active households in the current context of high unemployment. More generally, the issue at stake here is how to account, within the OECD well-being framework, for the fact that barriers between employment, unemployment and inactivity are increasingly permeable, which may have consequences for the well-being of people in different countries as they move between these categories. These issues will be addressed in the next section.
- Second, additional indicators should fulfil standard statistical requirements. In particular, as in the case of all the headline indicators used in this report (see Chapter 1), any additional indicators should have face validity, be commonly used and accepted, ensure cross-country comparison and comparison over time, and to the extent possible, rely on official sources. Still, a number of important dimensions of employment quality raise complex measurement issues, and the available indicators pertaining to them do not fulfil all the criteria listed above. Further methodological and statistical work is therefore needed before such indicators can be included in the OECD well-being framework. Aspects such as work organisation and workplace relationships are a case in point. They refer to many different features of a job, which interact with each other to form the overall quality of the work environment. From a methodological point of view, a solid conceptual framework is required to identify which aspects of the work environment are most relevant and which kinds of interaction should be accounted for. From a statistical perspective, the measurement of these dimensions of employment quality relies to a large extent on self-reported data, which potentially raise cross-country comparability issues that also need to be considered. These various issues will be discussed later in this chapter.
- Third, additional indicators should *bring sufficient additional information to justify their inclusion*. Any additional indicator brings some tensions between, on the one hand, providing a more comprehensive picture of well-being within the OECD well-being framework and, on the other hand, the wish to limit the number of indicators included in the set. Therefore, any complementary indicator should contain information that differs substantially from that embodied in already existing *How's Life?* indicators, and be sufficiently important to warrant increasing the size and complexity of the dataset. Each section of the chapter discusses the value-added of additional indicators in more detail.

Jobs and earnings in fast-changing labour markets

Labour market patterns have changed markedly over the past decades. In particular, the fast-changing nature of people's employment situation and earnings has become an important feature of modern labour markets. As underlined by the ILO, these changes have

a number of implications for measuring labour market performances.[2] Likewise, labour market dynamism has implications for measuring work and employment quality, as it affects the well-being of workers through lower employment stability and greater income volatility, which may result in financial stress for households. This section starts by looking at whether people's standard labour market status (employed, unemployed or inactive) is significantly related to their subjective well-being. It then looks at selected features of employment instability and discusses economic insecurity associated with work.

How does working affect subjective well-being?

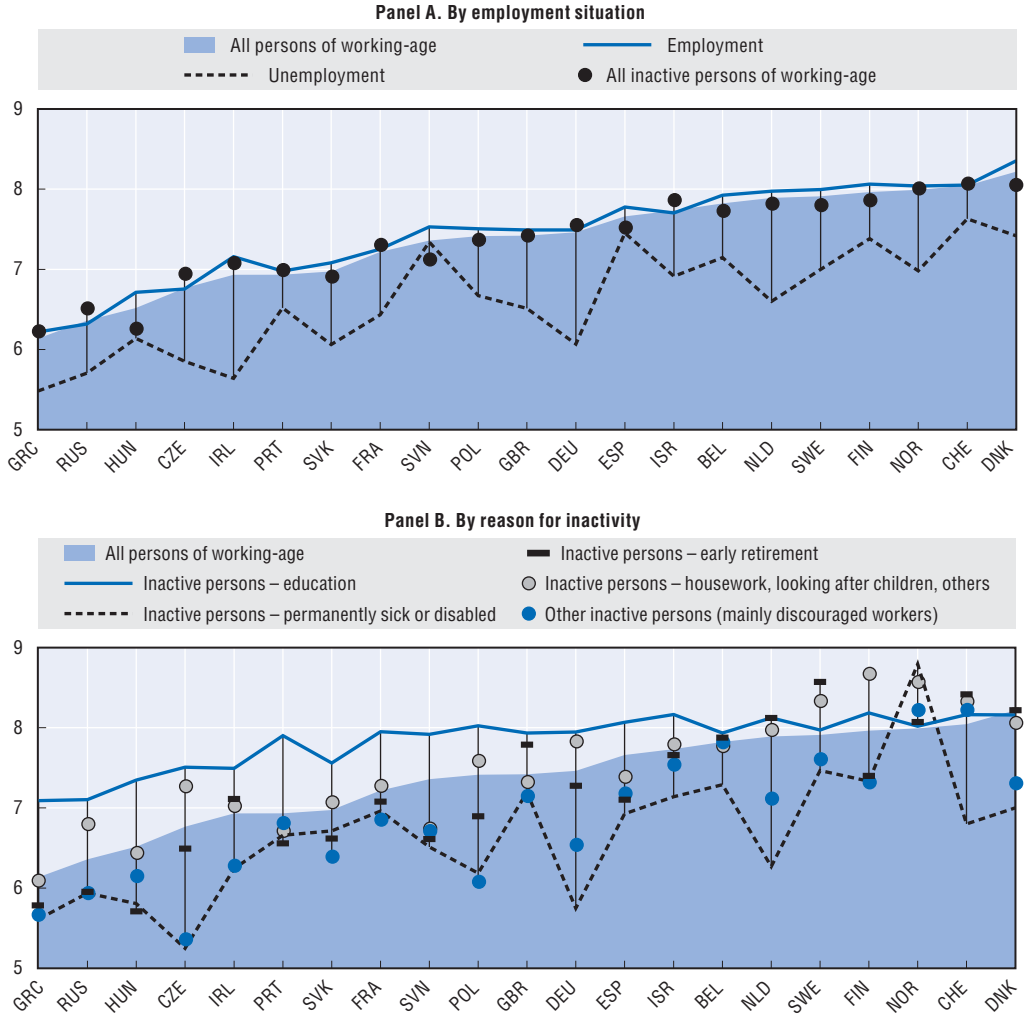
Having a job is a prerequisite to having a good quality job. Although not directly related to employment quality *per se*, people's labour market status is a strong determinant of life satisfaction. Hence, it is a key element of the OECD well-being framework for measuring people's well-being. A growing body of evidence shows that, for people who want to work, not having a job is major source of low subjective well-being (e.g. Clark, 2010; Latif, 2010; Dolan et al., 2008; McKee-Ryan et al., 2005; Blanchflower and Oswald, 2002; Theodossiou, 1998). In this respect, whether people are in or out of paid work by choice is central to understanding the subjective well-being outcomes of joblessness.

Self-reported levels of life satisfaction vary substantially according to whether people are in paid work, unemployed, or not working but not seeking work (inactive), as shown by the European Social Survey:

- Joblessness does not impact the well-being of inactive persons and of unemployed persons in the same way (Figure 5.1, Panel A). As expected, life satisfaction is significantly lower among unemployed workers, compared with their employed counterparts, in virtually all European countries. For the unemployed, the link between joblessness and low subjective well-being is more direct, as this population group is both available for work and actively seeking employment; hence, failure to find a job may be expected to translate into lower life evaluations. By contrast, inactive persons – who are, by definition, either not available or not engaged in active job search, or both at the same time –, may have chosen deliberately not to work. In that case, joblessness would not be expected to affect their subjective well-being to a great extent and this is borne out by the survey.
- However, inactivity covers a large range of situations and self-reported life satisfaction among inactive persons varies widely according to the reason for being inactive (Figure 5.1, Panel B). This reason in itself may constitute a strong determinant of subjective well-being. Unsurprisingly, people who are inactive due to permanent sickness or disability report the lowest degree of life satisfaction in most countries. A large body of literature suggests that people with disability face a double penalty: in many countries, there are strong barriers to the employment of disabled persons whereas many of them would like to work and would be able to do so (OECD, 2012). Relatively low levels of life satisfaction are also found among people who have taken early retirement and among discouraged workers, who are available and would like to work but do not seek employment because they believe that, for various reasons, there are no jobs available for them. This suggests that inactivity for these two population groups does not reflect a deliberate choice, but rather results from bad economic conditions or unfavourable personal characteristics, such as lack of adequate skills, which make these people unfit for the labour market. By contrast, people in education, who have most likely chosen inactivity for the purpose of pursuing their studies, report a high degree of life satisfaction in most countries.

Figure 5.1. **Life satisfaction and labour market status**

Happiness index, scale 0-10, 2010



Note: The happiness index is the weighted average of individual answers to the following question: "Taking all things together, how happy would you say you are?". The answers are rated on a scale ranging from zero (for "extremely unhappy") to ten (for "extremely happy").

Source: ESS (2010), *European Social Survey, Wave 5*.

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This descriptive analysis does not allow inferring any causal links between people's subjective well-being and their current labour market situation. There is, however, good evidence that unemployment *does* reduce people's sense of well-being (Winkelmann and Winkelmann, 1998; Clark, Lucas et al., 2004). The evidence presented above also suggests that inactive people are very heterogonous in terms of the reasons behind their labour market status and the associated subjective well-being outcomes. In fact, many workers find themselves in borderline situations, mid-way between inactivity and unemployment, the so-called "marginally attached to the labour force" such as discouraged workers, or mid-way between unemployment and employment, such as underemployed workers doing only a few hours or days a week, or seasonal jobs, when they would prefer to work full-time. The subjective well-being consequences of being marginally attached to the labour force may differ

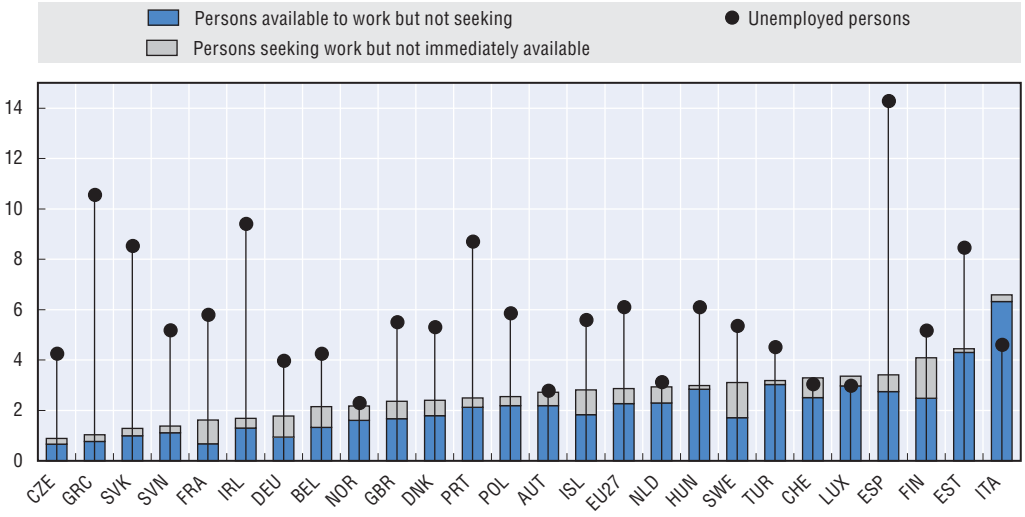
substantially from that of being unemployed or deliberately inactive. Likewise, underemployment may have its own consequences for the subjective well-being of workers, which differ from those associated with full employment or full unemployment. The existence of such borderline situations raises the question as to whether broad indicators of labour market performance, such as the unemployment rate and the employment rate, are sufficient to describe the relationship between people's subjective well-being and their employment situation. This concern echoes a long-standing debate among labour economists and policy makers about the limitation of using a single indicator, namely the unemployment rate, to measure labour market slack. Indeed, underemployment and marginal attachment to the labour force provide indications on unmet needs for work beyond those among the unemployed.

While many OECD countries produce internationally comparable indicators of underemployment, which is typically measured as the incidence of involuntary part-time (people with a part-time job who would like to work more hours or full-time), no such indicators exist for inactive persons marginally attached to the labour force. Measures of this concept are limited to European countries where, as part of a new set of indicators to supplement the unemployment rate, Eurostat produces a measure of the so-called "potential additional labour force" which focuses on persons outside the labour force but not completely detached from the labour market (de la Fuente, 2011a and 2011b). These persons do not fulfil all the International Labour Organization (ILO) criteria to define unemployment, hence they are not classified as unemployed, but they share some characteristics with the unemployed. The "potential additional labour force", as defined by Eurostat, comprises two groups of inactive persons: those seeking work but not immediately available; and those available to work but not seeking employment. This second group includes, among others, discouraged jobseekers and persons prevented from job seeking due to personal or family circumstances. As Figure 5.2 shows, these two categories of inactive persons represent a significant share of the population aged 15-74: around 3% on average in the EU27, as compared to 6% of unemployed persons. In countries such as Norway, Austria, the Netherlands, Switzerland, Luxembourg and Italy, the share of persons marginally attached to the labour market is similar or even higher than that of the unemployed.

From a well-being perspective, the notion of marginal attachment to the labour market is of particular interest: it refers to those who are more likely than other inactive people to experience low well-being as a consequence of joblessness, since they have indicated interest in employment (by seeking a job or by expressing availability for work). Many non-European OECD countries also measure this group as part of their labour force surveys and publish extended indicators of labour market slack, but the definitions used are very disparate. For instance, in the United States, the Bureau of Labor Statistics uses a more restrictive definition of marginal attachment to the labour force, which refers to individuals who have searched for work during the previous 12 months and are available to take a job during the reference week, but had not looked for a job in the past 4 weeks (Haugen, 2009). In other countries, such as Canada, Israel or Japan, the focus is put on discouraged workers, who are available and would like to work but do not seek employment because they believe that, for various reasons, there are no jobs available for them. Further efforts are therefore needed to reach a consensus on a standard international definition of "persons marginally attached to the labour market". This objective is in the agenda of the next International Conference of Labour Statisticians (to be held in late 2013). To this end, the ILO is working on

Figure 5.2. **People marginally attached to the labour force in Europe**

Percentage of population aged 15-74, 2011



Note: Persons marginally attached to the labour force are persons not immediately available to work but actively seeking a job, and persons available but not seeking.
Source: Eurostat, database on *Employment and Unemployment (Labour Force Survey)*.

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a definition of persons marginally attached to the labour force and has put forward a proposal for defining this category of inactive persons that is broadly in line with the Eurostat definition of the "potential additional labour force" (ILO, 2013).

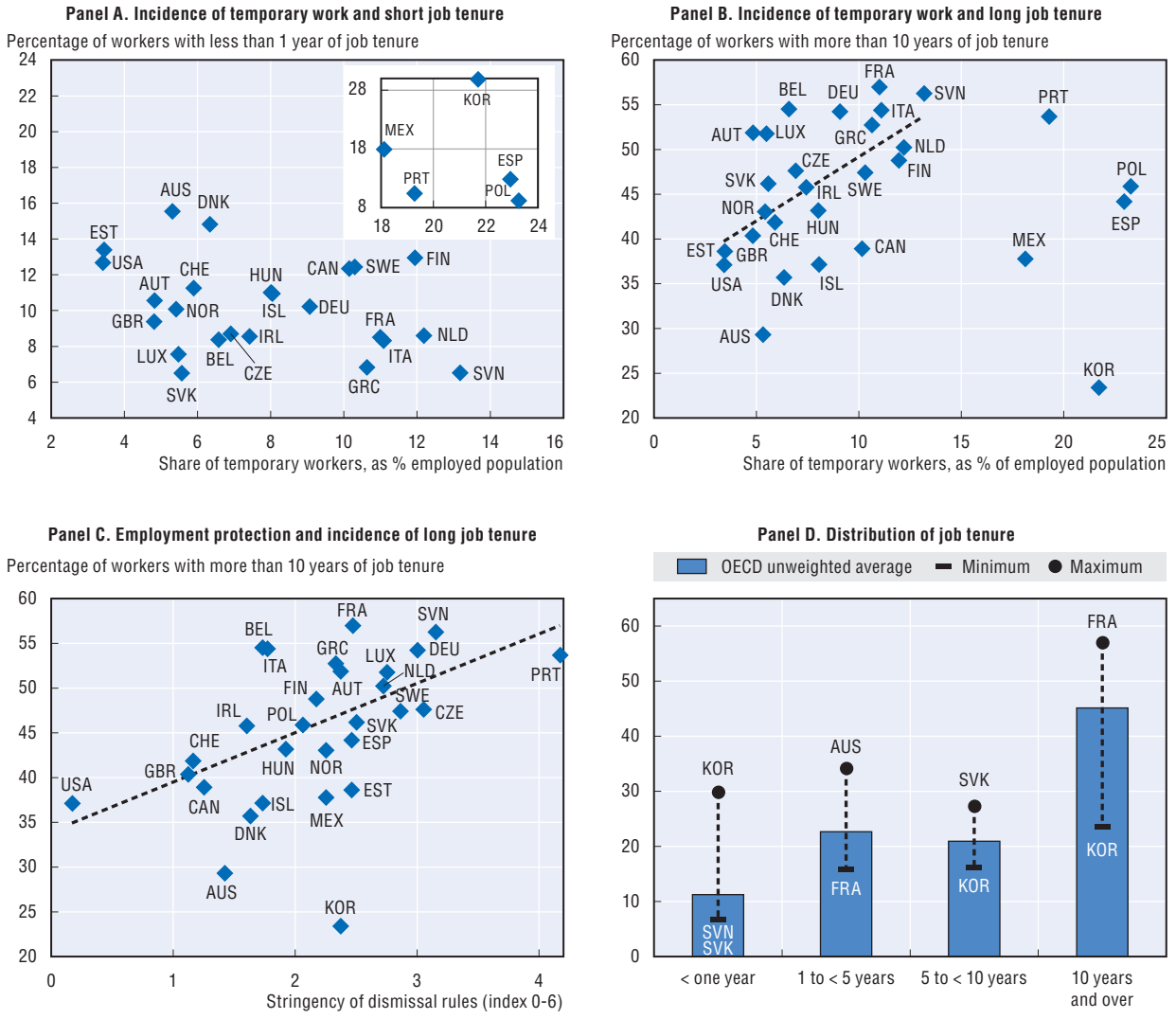
Job security

Modern labour markets are characterised by a continuous reallocation of labour and other productive resources across firms and sectors. While this process of "creative destruction" is one of the engines of economic growth, it may have detrimental effects on people's well-being by lowering workers' sense of job security. Existing frameworks for measuring employment quality typically retain two measures as proxies for job insecurity: the proportion of workers with short job tenure; and the incidence of temporary work. Both measures have their own advantages and drawbacks. Moreover, as shown in Figure 5.3 (Panel A), there is little correlation across countries between these two indicators, which suggests that they capture different aspects of job security.

In theory, temporary work and job insecurity are closely related: by definition, fixed-term contracts do not provide any guarantee with respect to the continuation of the employment relationship after the end of the contract. However, the rules governing the use of temporary employment (e.g. the types of jobs for which fixed-term contracts are allowed and their duration) vary widely across countries, implying that temporary jobs are associated with different degrees of precariousness in different countries (Venn, 2009; OECD, 2013). Moreover, it can be argued that the incidence of temporary work is primarily a measure of labour market duality, rather than an *average* measure of job insecurity. Indeed, the incidence of temporary work tends to be higher in countries with strict dismissal rules for regular workers, as it often provides firms with a buffer against fluctuations in demand. This factor may contribute to creating a dual labour market, characterised by both a high share of temporary workers and a relatively high share of

Figure 5.3. **Temporary work and job tenure**

Dependent employment, 2011



Note: Job tenure indicators are calculated for the employed population aged 30-64. No data are available for Chile, Israel, Japan, New Zealand and Turkey. The indicator of temporary work is calculated for the employed population aged 25-64. Data refer to 2005 for Australia, 2004 for Mexico and 2005 for the United States.

In Panel B the cross-country correlation between the incidence of temporary work and that of long job tenure is 0.55 when excluding Korea, Mexico, Poland, Portugal and Spain; 0.01 otherwise.

In Panel C the cross-country correlation between the incidence of long job tenure and the employment protection index is 0.60 when excluding Korea; 0.49 otherwise. For a detailed description of OECD indicators of employment protection, see OECD (2013), "Protecting Jobs, Enhancing Flexibility: A New Look at Employment Protection Legislation", in *OECD Employment Outlook 2013*.

Source: OECD (2013), *OECD Employment and Labour Market Statistics* (database), *http://dx.doi.org/10.1787/lfs-data-en*.

StatLink http://dx.doi.org/10.1787/888932889098

workers with very long job tenure. By contrast, temporary work is less prevalent in countries with less stringent employment protection legislation; the downside, however, is that regular workers face greater job insecurity as they can be dismissed easily during periods when firms implement reductions in workload. Figure 5.3 (Panel B) shows that countries with the lowest proportions of temporary workers also tend to have the lowest shares of workers with very long job tenure, and vice versa.

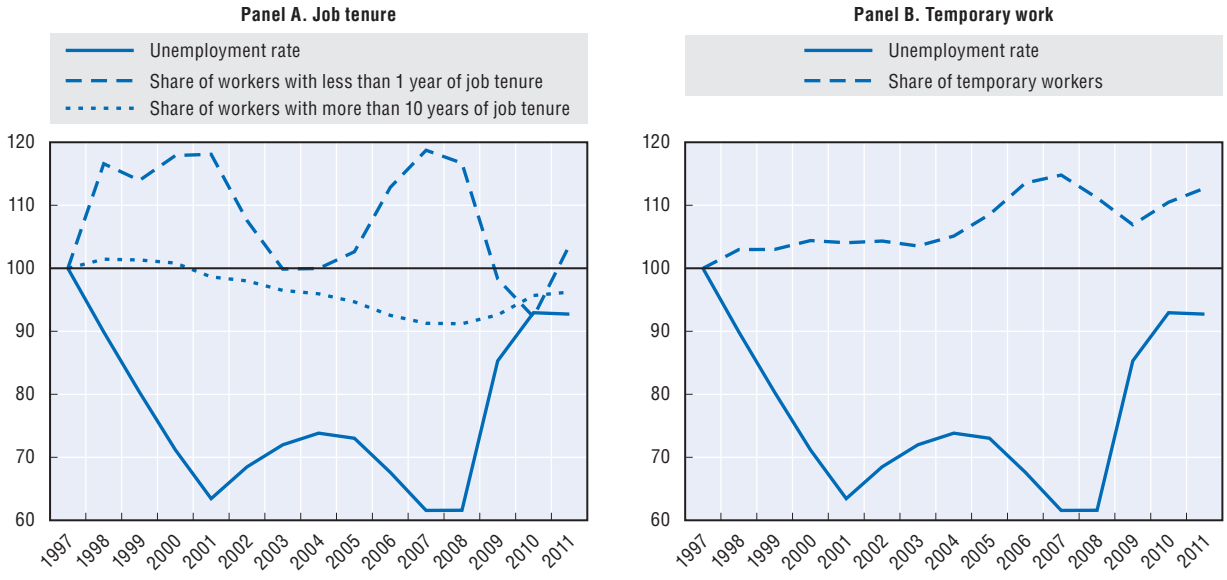
Job tenure indicators have the advantage of focusing on the length of time workers have been with their current employer, regardless of the length of their contract. This, for instance, allows for the fact that fixed-term contracts may be renewed with the same employer over extended periods of time. Nonetheless, job tenure indicators measure job stability rather than job security. How long someone stays with the same employer and when they leave is something that can be decided by the employer *or* by the worker, and job quits (i.e. people deciding to leave) account for a large proportion of total job separations (OECD, 2009).[3] Since people are less likely to quit just after starting a new job, very short job tenure (less than one year) would seem to offer a more comprehensive measure of job insecurity than the incidence of temporary work as it accounts for worker turnovers in both *temporary* and *regular* employment. In addition, although voluntary job departures contribute to explaining the share of workers with very long job tenure (more than 10 years), there is a significant cross-country correlation between this indicator and the stringency of national dismissal rules (Figure 5.3, Panel C), as measured by the OECD index on employment protection for regular workers (OECD, 2013). This relationship suggests that the share of workers with very long job tenure could constitute a good proxy of employment security.

Employment stability, as measured by job tenure indicators, varies widely across countries (Figure 5.3, Panel D). On average in the OECD area, 10% of workers aged 30-64 have less than one year of job tenure, a share that ranges from 6% in the Slovak Republic and Slovenia to 30% in Korea. Cross-country differences in the share of workers with very long job tenure are even more pronounced. Only 23% of workers aged 30-64 have more than 10 years of job tenure in Korea while this proportion reaches 57% in France, with an OECD average of 46%. Taken together, the incidence of temporary work or short job tenure, and the relationship between employment protection levels (EPL) and long job tenure (Figure 5.3, Panels A and C) suggest that the dual labour markets that prevail in countries such as Spain, Portugal and Poland are associated with only average, or even lower than average, degrees of job insecurity. Portugal is a case in point, as stringent EPL by OECD standards results in above-average incidence of both temporary work and very long job tenure.

Another important aspect is the extent to which these various indicators can be used to monitor changes in job security over time. In this respect, the share of workers with very short job tenure has a major drawback for monitoring job security trends as it is highly sensitive to the business cycle (since it reflects net job creation, in addition to worker reallocation across existing jobs). Therefore, changes over time in the share of workers with short job tenure reflect first and foremost fluctuations in economic activity, rather than changes in job insecurity (Figure 5.4, Panel A). On average, across the 14 OECD countries for which longitudinal data are available, the share of workers with short job tenure has declined dramatically over recent years, falling by 26% between 2007 and 2010. However this fall should not be interpreted as reflecting an improvement in job quality in the aftermath of the crisis, but rather a slowdown in job creation and higher job losses – when a large number of workers risk losing their jobs, those first laid off are often workers with shorter tenure, including workers hired on fixed-term contracts. In short, job insecurity is driven by both cyclical and structural factors that need to be disentangled before drawing conclusions about trends in employment quality over time.

Figure 5.4. **Job tenure, temporary work and the business cycle**

Unweighted average across 14 OECD countries, 1997 = 100



Note: The unweighted average includes Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden and the United Kingdom.

Source: OECD (2013), *OECD Employment and Labour Market Statistics* (database), *http://dx.doi.org/10.1787/lfs-data-en*.

StatLink *http://dx.doi.org/10.1787/888932889117*

By comparison, the share of workers with very long job tenure and the incidence of temporary work are much less sensitive to the business cycle (see Figure 5.4). On average, the proportion of workers with very long job tenure rose by only 4% between 2007 and 2010, with a similar fall the incidence of temporary work. Moreover, the long-term trends of these two indicators are consistent with the weakening of the "job for life" model that characterised most OECD countries in the past. Beyond short-term fluctuations, some OECD countries have recorded a trend decrease in the share of workers with very long job tenure over the period 1997-2007, and a similar increase in the incidence of temporary work.

In summary, no simple proxy measure of job insecurity exists that could be used for comparisons both across countries and over time. As a default option, the share of workers with very long job tenure should be considered for inclusion in the OECD well-being framework as an additional indicator of job security. In particular, the combination of this indicator and the temporary work indicator would provide a more accurate picture of job insecurity in countries such as Spain, Portugal and Poland, where a majority of workers benefit from highly protected jobs while many others are in temporary jobs. This would also facilitate cross-country comparisons over time in job security patterns, as the share of workers with long job tenure is not highly sensitive to business cycle fluctuations.

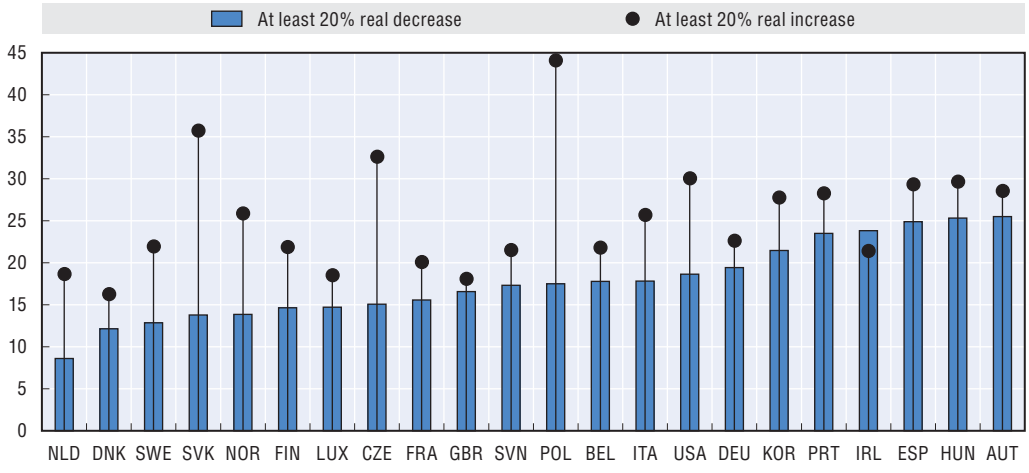
Earnings and economic security

An important dimension of quality of jobs is the salary or wage they pay and the extent to which these allow the employee to earn a decent living. The OECD well-being framework accounts for this dimension by including an aggregate indicator of labour income, namely the average gross annual earnings of full-time employees. But another key issue for workers' well-being is the extent to which earnings fluctuate over time due to the dynamic nature of labour markets.

Each year, many workers experience large fluctuations in gross earnings, due to changes in working hours, movements in and out of work, and changes in pay (OECD, 2011). But there are significant cross-country differences in the incidence of earnings volatility (Figure 5.5). In the mid-2000s, overall earnings volatility was highest in Austria, Hungary, Korea, Portugal and Spain, which all had a high incidence of both large increases and large decreases in earnings. In these countries, more than one in four employees aged 25-59 experienced increases in their gross earnings by 20% or more from one year to the next, while, more than one in five saw their gross earnings decline by 20% or more. Excluding the Czech Republic, the Slovak Republic and Poland, which experienced annual GDP growth in excess of 6% during the period under examination, there is a high degree of symmetry between increases and decreases in earnings: countries with a large proportion of workers experiencing an increase in earnings also tend to have a large proportion of workers experiencing a decrease in earnings.

Figure 5.5. **Year-to-year earnings volatility**

Proportion of workers experiencing large changes in gross earnings from one year to another, dependent workers aged 25-59, mid 2000s



Note: Estimates refer to workers aged between 25 and 59 years in order to minimise the impact of young people entering the labour market and older workers transitioning into retirement. Data refer to 2004-07 for all countries except Italy and Portugal (2006-07), France (2005-06), Denmark (2004-05) and the United States (1995-96).
The cross-country correlation between the incidence of large increases in earnings and that of large decreases is 0.72 when excluding the Czech Republic, the Slovak Republic and Poland (0.31 otherwise).
Source: OECD (2011), "Earnings Volatility: Causes and Consequences", in *OECD Employment Outlook 2011*, *http://dx.doi.org/10.1787/empl_outlook-2011-5-en*.

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Unemployment spells are clearly important contributors to earnings losses (Venn, 2011). As it is often difficult for workers to predict changes in earnings and to assess whether these are temporary or permanent, large drops in individual earnings may be associated with increased risks of financial stress and poverty. Hence, current earnings may not adequately reflect the monetary benefits of having a job in a context of high labour market uncertainty if workers are concerned about their future as well as their current material conditions. Income prospects of workers are also shaped by the various types of income support to which they are entitled in case of large drops in earnings. In particular, unemployment insurance (UI) systems provide households with a buffer against

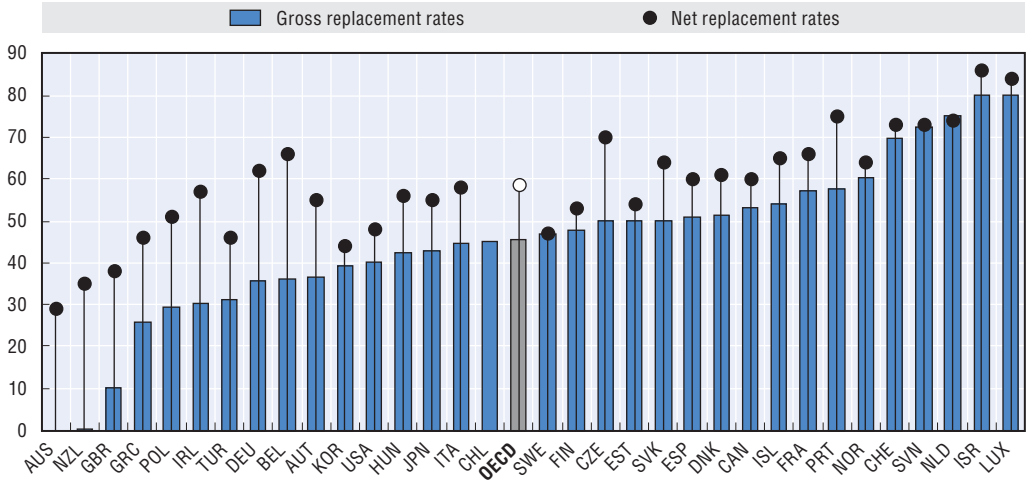
temporary declines in earnings. It follows that UI benefits can be seen as an aspect of employment quality throughout people's working life. Clark and Postel-Vinay (2009) show, for example, that workers feel more secure about their labour market situation in countries that offer stronger income support to job-seekers.

On average, across the 33 OECD countries for which data are available, UI benefits amount to 47% of previous gross earnings during the initial phase of unemployment (Figure 5.6). This gross replacement rate varies widely across countries, ranging from more than 70% in Switzerland, Slovenia, the Netherlands, Israel and Luxembourg to less than 30% in the United Kingdom, Greece, Poland, Australia and New Zealand. It is important to note that gross replacement rates do not take into account the effects of various kinds of taxes and other benefits on disposable income. Therefore, cross-country differences are driven by two main factors:

- The first factor refers to the generosity of national UI systems, which is partly measured by the amount of UI benefits that are provided to the beneficiary population. Comparable data on coverage rates (i.e. the proportion of eligible people receiving unemployment benefits) would be required in order to provide a more comprehensive picture of the generosity of national UI systems across countries. No such data exist at present.[4]
- The second driver is the balance between income support provided to unemployed people through unemployment insurance and social assistance (whose benefits are mean-tested on household income or assets). For instance, there is no UI system in Australia and New Zealand since these two countries depend entirely on social assistance.

Figure 5.6. **Unemployment insurance benefits**

Initial phase of unemployment, single person without children who previously earned the average wage, 2011



Note: The gross replacement rates express gross unemployment benefits received when not working as a percentage of previous gross earnings. Net replacement rates, calculated taking into account tax-benefit regimes, show the proportion of in-work income that is maintained when someone is unemployed. Net replacement rates are calculated based on household net income, which takes into account the amount of cash benefits received as well as the amount of taxes and social security contributions paid by the household. They express the household net income during unemployment as a percentage of the household net income while in work.

Source: OECD (2012), "Taxes and benefits", *OECD Social Expenditure Statistics* (database), *http://dx.doi.org/10.1787/data-00201-en*.

StatLink http://dx.doi.org/10.1787/888932889155

Having worked for a significant period of time is both necessary and sufficient for employees to receive UI benefits in case of job loss: this eligibility criterion constitutes a strong link between UI benefits and employment quality. But in terms of social protection, the UI benefits received are not the whole story. Other factors such as taxes, social assistance, family benefit and housing benefit are taken into account to calculate the net replacement rate, which measures the proportion of disposable income maintained in case of job loss (for further details, see *www.oecd.org/els/social/workincentives*). These additional elements are not directly related to employment quality, but they are crucial for evaluating the net impact of job loss on household disposable income.[5] In short, net replacement rates provide useful indications on the overall degree of social protection in case of job loss, while gross replacement rates inform on specific entitlement rights that employment provides to workers. In this respect, it is worth noting that cross-country differences in net replacement rates are less pronounced than with gross replacement rates (Figure 5.6).

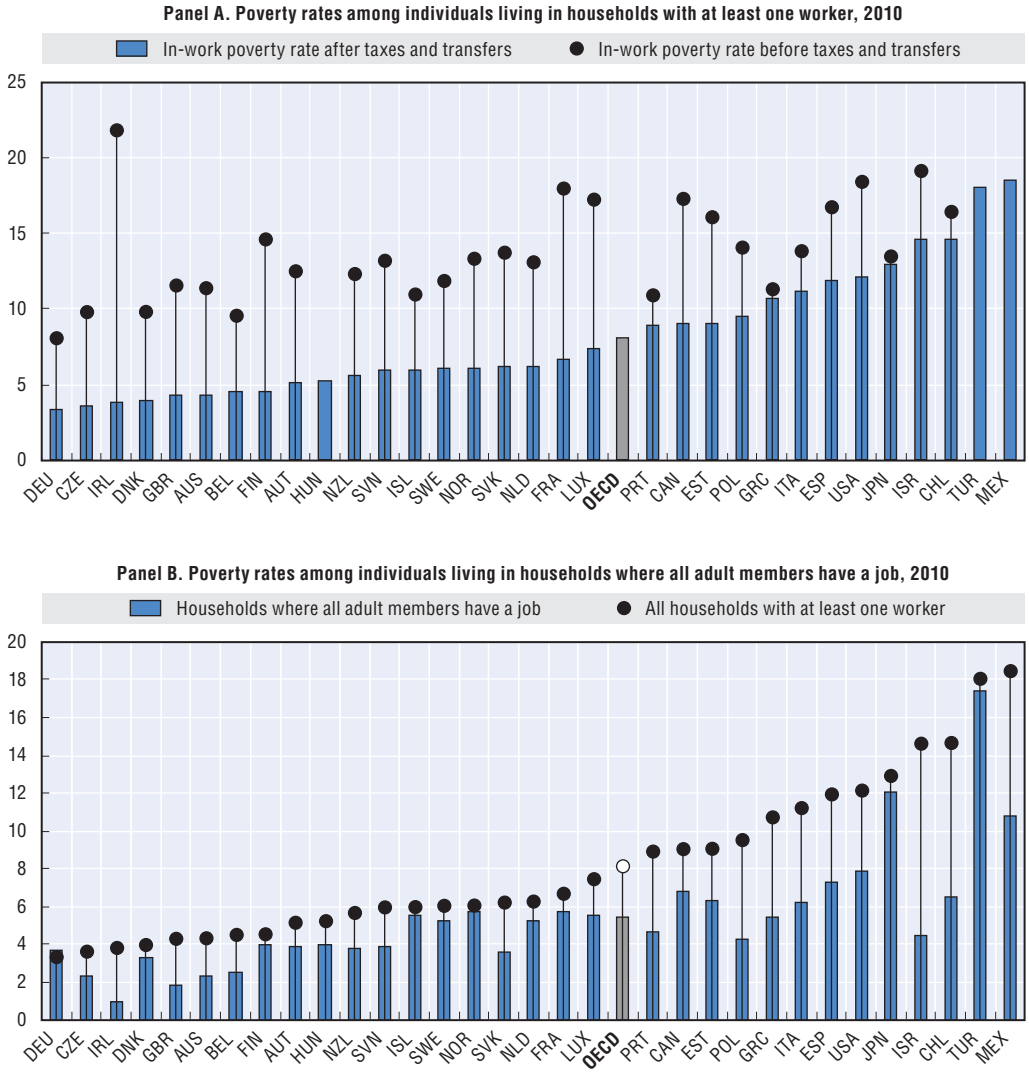
In-work poverty

Welfare systems in OECD countries are designed not only to cushion households against temporary drops in earnings but also to provide income support to vulnerable groups who face difficulties in entering the core labour market and who alternate between employment, unemployment and inactivity, often adding to the ranks of the working poor (OECD, 2009). As in-work poverty reflects different forms of precarious employment (low working hours and hourly pay among full-time workers, frequent moves between low-paid work and joblessness), its incidence informs about the quality of employment.

Welfare systems considerably reduce the risk of in-work poverty, but do not solve all problems. On average in the OECD area, 8% of individuals living in a working household (i.e. household with at least one worker) were poor in 2009, a proportion that would have reached 14% in the absence of social transfers (Figure 5.7, Panel A). Poverty is measured against the typical living standards in each country: individuals whose (equivalised) household disposable income falls below half the median value of disposable incomes in their country are classified as being in poverty. Cross-country differences of in-work poverty rates are sizeable, ranging between 5% or less in Ireland, the Czech Republic, the United Kingdom, Denmark, Finland, Germany, Australia and Austria, and 12% or more in Greece, Spain, the United States, Japan, Switzerland, Israel, Turkey and Mexico.

These rates of in-work poverty go beyond employment quality considerations, however. Since they focus on household incomes, as opposed to individual earnings, they not only reflect situations where having a job does not allow to earn a decent living; they are also shaped by the proportion of households with an unemployed (or inactive) member. Hence, the relationship between employment quality and poverty could be better described by the rate of poverty among individuals living in households where *all* adult members have a job. In most countries, this latter is significantly lower than the rate of poverty among all working households (i.e. the total rate of in-work poverty), with an OECD average of 5.4% (against 8.1%). Strikingly, the higher the total rate of in-work poverty, the larger the difference between these two indicators (Figure 5.7, Panel B). This means that in countries such as Israel, Chile, and Mexico, the higher incidence of in-work poverty is explained, in large part, by one adult member in the household being out of work.

Figure 5.7. **In-work poverty**



Note: The rate of in-work poverty is calculated as the percentage of individual living in households with a working-age head and at least one worker, whose equivalised disposable income falls under half the median value of disposable incomes in their country. The rate of in-work poverty before taxes and transfers is calculated as the percentage of individuals living in households with a working-age head and at least one worker, whose equivalised income before taxes and transfers falls under half the median value of disposable incomes in their country. Poverty rates refer to 2009 for Chile, Hungary, Ireland, Japan, New Zealand and Turkey.

Source: OECD (2013), "Income Distribution", *OECD Social Welfare Statistics* (database), *http://dx.doi.org/10.1787/data-00654-en*.

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There are several reasons for including the incidence of in-work poverty in the OECD well-being framework. From a conceptual perspective, in-work poverty is a central aspect of employment quality, as employment should ensure an adequate standard of living to workers and their families. Indeed, strategies to fight in-work poverty are at the forefront of the policy agenda in many countries, in particular in the context of the current economic crisis. From a methodological perspective, the OECD indicators on in-work poverty would seem to satisfy most of the selection criteria. In particular, they have face validity, cover virtually all OECD countries, come from official sources, ensure comparability across

countries, and are updated on a regular basis. These indicators will be investigated further in the context of a major project on job quality that has been recently launched by the OECD and aims at assessing job quality and its links to labour market performance and well-being.

Beyond Work-life balance: Measuring quality of life at work

Within the OECD well-being framework, the relationship between work and personal life falls under the "Work-life balance" dimension, which describes the extent to which people are able to achieve a right balance between time spent at work and time available for personal and family life. Work may interfere with personal life through many channels, above and beyond the time constraints that it imposes. In particular, the extent to which work impacts on physical and mental health is a key determinant of an individual's ability to combine work and personal life. Workers' exposure to physical health risk factors is taken into account in the OECD well-being framework by the inclusion of a standard measure of safety at work, namely the incidence of workplace accidents. But individuals' exposure to psychological health risk factors at work is not accounted for, despite abundant evidence that workers' mental health status is a major outcome of quality of life at work (OECD, 2012). However, no measurement framework currently exists that would allow cross-country comparisons in quality of life at work. This section makes a first attempt to fill in this gap.

Achieving the right balance between requirements and opportunities at work

Numerous studies on occupational health have been conducted over the past three decades, showing that work organisation and workplace relationships can have a profound impact on employee well-being and mental health. Several theories have been developed that predict negative consequences of work for the mental health of workers who are exposed to certain psychosocial risk factors. One basic premise of these theories is that stress is a normal part of life as long as people can manage it, and the same holds for work-related stress. Hence, what matters for quality of life at work are the mechanisms by which normal work-related stress turns into "bad" stress, i.e. stress that leads to a mental illness.

While several models have been developed to identify the job characteristics that are important for workers' well-being and mental health, the two most influential are the demand-control model and the effort-reward imbalance model (Bakker and Demerouti, 2007; van Vegchel et al., 2005a; van Vegchel, et al., 2005b). The demand-control model argues that high job demands, such as work overload and time pressure, have detrimental effects on mental health when individuals have no decision latitude on their work tasks (Karasek, 1979). The effort-reward imbalance model emphasises the role of workers' rewards – such as earnings, esteem, promotion prospects and job security – rather than the control structure of work (Siegrist, 1996). It argues that the most stressful work conditions are those where the reward does not match the effort made by the worker. These two conceptual frameworks are supported by a large body of empirical research linking poor workplace organisation with mental disorders (e.g. Stansfeld and Candy, 2006; van Vegchel et al., 2005a; van der Doef and Maes, 1999).

Until recently, less attention had been paid to the fact that work also creates opportunities for personal accomplishment, which have positive effects on people's mental health and well-being. Recent models of occupational health address this issue by incorporating a broader range of working conditions that can generate either psychological costs or psychological benefits for the worker. The job demands-job resources model is an example of such an approach (Bakker and Demerouti, 2007). In this model, "job demands"

refer to those aspects of the job that require sustained physical and psychological efforts, such as performing physically demanding tasks, dealing with heavy workload, time pressures and conflicting demands, or facing job insecurity. Conversely, "job resources" refer to those job attributes that may be conducive to personal accomplishment or that are instrumental in achieving work goals; they include work autonomy and job reward, but also opportunities to learn, support from colleagues and managers, well-defined work goals and appropriate feedback on the work performed. The basic premise of this model is that job resources may induce a motivational process, whereas job demands may result in health impairment, notably when employees do not have adequate job resources at their disposal to meet these demands. A growing body of research provides strong evidence for the relationships between job demands and work-related mental illnesses, and between job resources and workers' commitment (e.g. Alarcon, 2011; Schaufeli, Bakker and van Rhenen, 2009; Mauno, Kinnunen and Ruokolainen, 2007; Demerouti, Bakker and Bulters, 2004; Hakanen and Schaufeli, 2012).

How does the work environment affect health and well-being?

This section presents various indicators of the work environment and of work-related health outcomes, using data from the European Survey on Working Conditions (ESWC). This survey lends itself rather well to this task as it includes many questions dealing with the two aspects. With respect to job demands, the indicators include: *i)* the overall work pressure faced by employees; *ii)* the existence of conflicts between job requirements and personal ways of thinking or behaving (the so-called "emotional demand"); *iii)* the exposure to physical health risk factors at work; and *iv)* intimidation in the workplace. Indicators of job resource includes: *i)* work autonomy; *ii)* opportunities to learn at work; *iii)* well-defined work assignments; *iv)* good management practices; and *v)* supportive colleagues. Each of these indicators of job demand and job resource is constructed from a set of ESWC questions reported in Table 5.2.

Two indicators of self-reported health status are also presented. The first indicator provides information on the exposure to health risk factors at work, as measured by the share of workers reporting that work impairs their health. The second indicator refers to the mental health status of individuals based on a set of five items: feeling cheerful, feeling calm, feeling active, waking up fresh and rested, and life-fulfilling (OECD, 2012). The WHO defines mental health as "a state of well-being in which the individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" A single mental health index has been compiled for each individual by averaging answers from these five items (each of them being scored on a same scale from 0 = "all of the time" to 5 = "at no time").

Figure 5.8 shows the relationship between these two health indicators and each component of job demands (Panel A) and job resources (Panel B), taken separately. Some of the main patterns highlighted here include:

- For each job demand indicator, workers with more demanding jobs report more frequently that they are exposed to health risk factors at work and tend to show poorer mental health status than workers facing comparatively low levels of demand (Panel A). Differences between these two groups of workers are sizeable: whatever the type of job demand considered, between 40% and 50% of those workers facing relatively high levels

Table 5.2. **Indicators of job demands and job resources**

Job demands		Job resources	
Components	Underlying ESWC questions	Components	Underlying ESWC questions
Work pressure	Work usually more than 50 hours per week Not enough time to get the job done Working hours do not fit in with family and social commitments outside work Work at very high speed Work to tight deadline	**Work autonomy**	Can choose or change the order of tasks Can choose or change methods of work Can choose or change speed or rate of work Able to apply own ideas in work
Emotional demand	Handle angry clients Job involves tasks that are in conflict with personal values Job requires hiding personal feelings	**Learning opportunities**	Employer provided training or on-the-job training Job involves learning new things Job involves solving unforeseen problems
Physical health risk factors	Exposure to high noise Exposure to high temperature Exposure to low temperature Tiring and painful positions Carrying or moving heavy loads	**Task clarity**	Well-defined work goals Feedbacks from manager Manager good at planning and organising work
Workplace intimidation	Verbal abuse Threats and humiliating behaviour Bullying or harassment	**Management practices**	Helps and supports from manager Feel respected as a person by manager Manager good at resolving conflicts Encouragement from manager to participate in important decisions
		Colleagues' support	Helps and support from colleagues Feel "at home" at work Have very good friends at work

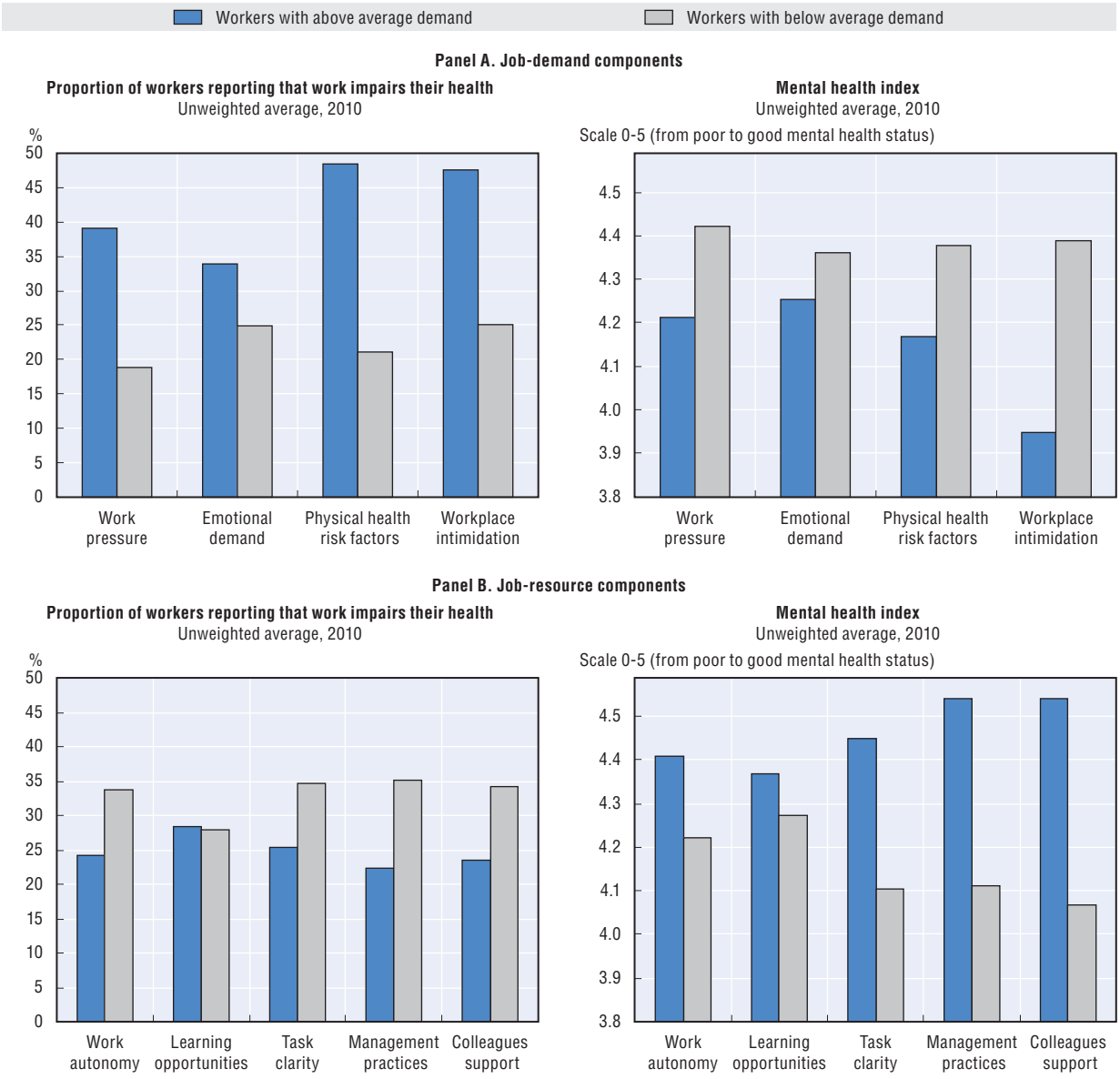
Note: For each component of the job demand (resp. job resource), a summary score has been compiled for each individual by averaging answers from the corresponding ESWC questions in the European Survey on working Condition (ESWC), each of this question being scored (or rescored) on a yes/no scale.

of demand report that their work impairs their health, against 20%-25% among workers. By comparison, the relationship between job demands and an individual's mental health status is relatively weak, except in the case of workplace intimidation.

- Likewise, benefiting from adequate job resources is associated with reduced exposure to work-related health risk factors and better mental health status, except in the case of learning opportunities that are not – or only weakly – related to these health variables (Panel B). While differences in self-reported exposure to health risk factors at work are less pronounced than with the job demand indicators, there is a strong relationship between the amount of resources that workers have at their disposal and their mental health status. Three types of job resources appear to play a predominant role in this respect: well-defined work assignments, good management practices and supportive colleagues.

This descriptive analysis suggests that the quality of the work environment matters for workers' health, although it does not allow for inferring any causal links. There is, however, growing evidence that this relationship *is* causal in nature, with longitudinal analyses showing that work organisation and workplace relationships affect people's mental health and subjective well-being (e.g. Schaufeli, Bakker and van Rhenen, 2009; Mauno, Kinnunen and Ruokolainen, 2007). Yet, indicators on the quality of the work environment require further development before they could be added in the OECD well-being framework for measuring people's well-being. First, their inclusion would significantly increase the size and complexity of the dataset since many different features of a job would have to be taken into account. The literature on occupational health brings some elements of answer to this dimensionality problem. In particular, it provides guidelines – supported by empirical evidence – on how to aggregate the large number of indicators related to work organisation

Figure 5.8. **Link between job demands, job resources and workers' health in Europe**



Note: For each component of job demands and job resources, the employed population has been divided into two groups: employees who show an above-average score on each specific component in their country, and employees with a below-average score. Then, the proportion of individuals reporting high exposure to health risk factors at work and the mental health index have been calculated among these two groups of workers separately in each country.

The unweighted average includes 22 OECD countries: Austria, Belgium, the Czech Republic, Germany, Denmark, Spain, Estonia, Finland, France, the United Kingdom, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Slovenia, the Slovak Republic and Sweden.

Source: Eurofound (2010), *European Survey on Working Conditions, Wave 5*.

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and workplace relationships into few synthetic indices that could describe the overall quality of the work environment (see Annex 5.A1 for further details). Second, the extent to which such a measurement framework could be used for cross-country comparisons needs to be investigated further since the underlying indicators primarily rely on workers' subjective judgement about their job, which can be biased due to various factors such as questionnaire design or cultural response bias (OECD, 2013).

Statistical agenda ahead

This chapter has stressed the importance of better accounting for the diversity of people's labour market situations within the OECD well-being framework. This could be achieved by adding an indicator on persons marginally attached to the labour force. In this respect, the new ILO guidelines will help to extend the country coverage of comparable measures beyond the European scope. Further work is also needed to better characterise the relationship between well-being and the labour market attachment of inactive persons, in order to ensure that such indicators have face validity with respect to measuring people's well-being. Indeed, most available studies on the well-being effect of joblessness focus on the unemployed; much less attention has been paid to the extent to which joblessness affects the well-being of various categories of inactive persons.

Another aspect of employment quality that could have important implications for people's material conditions over their working life is the economic security provided by their employment. As jobs for life are becoming more rare, it is crucial that people have sufficient protection for negative employment-related shocks. Two kinds of indicators are needed to describe these: the degree to which workers' incomes are maintained during periods outside employment, and the proportion of the unemployed population receiving such benefits. Various indicators of replacement income are available for most OECD countries, but there are no cross-country comparable data on the coverage rate of various benefits, in particular on UI. This constitutes another item in the statistical agenda on employment quality.

Finally, the literature on occupational health provides useful conceptual frameworks – supported by strong empirical evidence – that can serve as a basis for developing indicators on work organisation and workplace relationships. These aspects of the work environment are important dimensions of employment quality. Negative work atmosphere and poor workplace organisation impair workers' mental health and well-being, while a stimulating work environment may be conductive to personal accomplishment for workers. However, further work is needed to enable the implementation of such indicators in an international context. Indeed, dimensions such as work organisation and workplace relationships do not easily translate into cross-country comparable indicators as their measurement partly relies on workers' subjective judgement about their job. Harmonised household surveys are required for international comparability to be achieved, since subjective judgements can be affected by the survey design, the wording of the questions, the question ordering, etc. No harmonised surveys exist at present that could provide a good coverage of OECD countries, including non-European OECD member countries. This means that guidelines will need to be developed at the international level on how to measure the key aspects of work organisation and workplace relationships in an international context. This issue will be addressed as part the new OECD project on job quality: "Defining, Measuring and Assessing Job Quality and its Links to Labour Market Performance and Well-Being". The overarching aim of this project is to bring job quality to the forefront of the policy debate, by arguing that labour market performance should be assessed in terms of the increase in both the number and the quality of job opportunities. Drawing on existing and ongoing work on employment quality, done both inside and outside the OECD, this project aims at developing an *operational* framework for analysing employment quality in the context of labour market performance and overall well-being.

Conclusions

While the OECD well-being framework covers most of the relevant dimensions of employment quality, this chapter has identified a number of additional indicators that would add valuable information on both material conditions and quality of life as shaped by people's work experiences. Some of the proposed indicators could be added to the OECD well-being framework in a near future, while others raise methodological and implementation issues that need to be addressed first. An additional issue is how best to manage the trade-off between adding new indicators to *How's Life?* in order to better capture employment quality and the risk of increasing the size and complexity of the *How's Life?* indicator set.

Notes

1. This report is based on data from the European Survey on Working Conditions (EWCS), which constitutes a unique source for the study of job quality across European countries and over time. This survey is funded, designed and co-ordinated by the Foundation and covers many aspects of work and employment quality, ranging from earnings to psychosocial health risk factors.
2. The ILO report notes that: "some aspects of the current international standards for labour force statistics are now out of date" (ILO, 2013:9).
3. On average over the period 1995-2007, OECD (2009) finds that separations initiated by employers amount to no more than one fourth of total job separations in the five OECD countries for which data were available, namely Australia, France, Germany, the United Kingdom and the United States.
4. While the ILO Social Security Inquiry database contains indicators on the coverage of UI benefits, this database does not cover all OECD countries.
5. Taxes, social assistance, family benefit and housing benefit are not directly linked to individuals' employment history. Rather, they are mean-tested on household income and they are often affected by household composition. Net replacement rates are higher for families with children than for childless households, since families with children receive higher social transfers and often benefit from more favourable tax treatments. Therefore, indicators reported in Figure 5.6 constitute a lower-bound estimate of net replacement rates since they refer to a single person without children.

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ANNEX 5.A1

Interactions between job demands and job resources

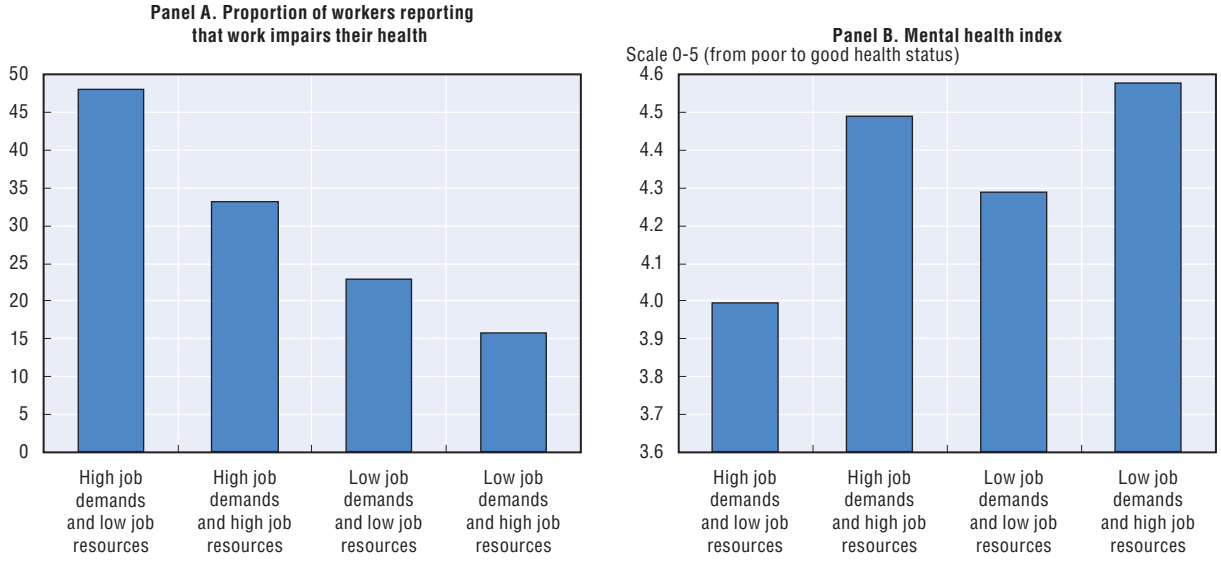
How do job demands and job resources interact with each others to shape the overall quality of life at work? The literature on occupational health suggests that there are both additive and compensating effects between the various aspects of the work environment (Hu et al., 2011). Further, it argues that with respect to the quality of life at work, these additive and compensating effects are more important than those of each individual component, taken in isolation.

From a well-being perspective, two groups of workers are of particular interest. First, are those workers who are exposed to high job demands while having few job resources at their disposal. These are most likely to experience low well-being at work and work-related health problems. Second, are workers characterised by reasonable levels of job demands coupled with abundant job resources. Figure 5.A1.1 suggests that the interaction between job demands and job resources matters for the well-being of workers. For each worker, two composite indicators (of total job demands, on one side, and of total job resources) have been constructed by averaging the different components of these two dimensions. The thresholds for defining high and low scores on these two summary indicators are set to their respective national average. As a result, four groups of workers can be distinguished in each country: employees in strained job (i.e. high job demands and low job resources); employees benefiting from a stimulating work environment (i.e. low job demands and high job resources); employees for which high levels of resources may reduce the negative health impact of high levels of job demands; and employees who simultaneously face low levels of job demands and job resources.

As shown in Figure 5.A1.1, there is a strong relationship between the quality of the work environment and the health impact of work as perceived by individuals. On average across the 22 European countries for which data are available, 47% of workers in strained jobs report high exposure to work-related health risk factors, against 15% among the group of workers who benefit from the most stimulating work environment (Panel A). This latter group also shows better mental health than the former group of workers (Panel B). Figure 5.A1.1 also suggests that job resources provide a buffer against the negative effects of excessive job demands on employee health and well-being. As compared to workers lacking adequate resources to meet the high levels of job demands they are exposed to, workers with more job resources at their disposal report much less frequently that work impairs their health (33%, against 47%). The mental health index for this group of workers is similar to that observed among workers who benefit from the best work environment. While this analysis does not allow to infer any causal links, it suggests that the various

Figure 5.A1.1. **Job demands, job resources and workers' health**

Unweighted average, 2010



Note: The unweighted average includes 22 OECD countries: Austria, Belgium, the Czech Republic, Germany, Denmark, Spain, Estonia, Finland, France, the United Kingdom, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Slovenia, the Slovak Republic and Sweden.
For the description of the variables description, please see Table 5.2.
Source: Eurofound (2010), *European Survey on Working Conditions, Wave 5*.

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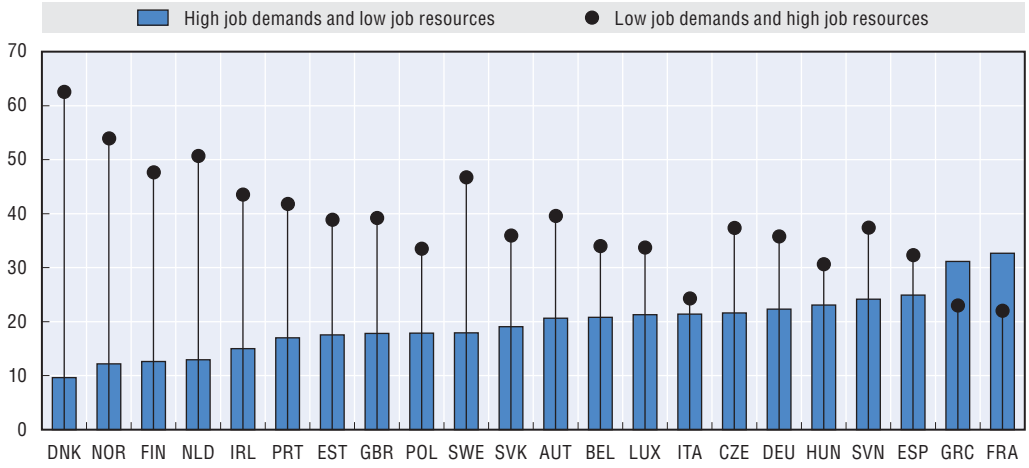
aspects of work organisation and workplace relationships analysed here do matter for the well-being of workers, and that they interact with each others to shape the overall quality of life at work.

The approach followed so far has consisted in comparing the health outcomes of different work environments within a same country. A difficult question is whether this measurement framework can be used for cross-country comparisons in quality of life at work. Comparing the quality of life at work across countries requires establishing common criteria for characterising the various work environments in all countries, i.e. a common threshold for defining high and low levels of total job demand, and a common threshold for defining high and low levels of job resources. For illustrative purposes, these two thresholds have been set at the average value of the two composite indices across the 22 European countries analysed. By characterising the level (low versus high) of total job demands and total job resources, respectively, that each individual face in every country, these illustrative thresholds allow calculating the share of individuals affected by low quality of life at work in each country.

Figure 5.A1.2 shows the incidence of poor and good work environments in the 22 European countries for which data are available. It suggests that, while good work environments are more widespread than poor ones in virtually all countries, there is wide cross-country variation. About 30% of workers are in strained jobs in Greece and France, against 10% or more in Denmark, Norway, Finland and the Netherlands. Symmetrically, less than one in four workers benefit from abundant job resources while facing relatively low levels of job demands in Italy, Greece and France, while this proportion exceeds 45% Denmark, Norway, Finland, Sweden and the Netherlands.

Figure 5.A1.2. **Quality of the work environment in selected European countries**

Proportion of workers reporting high (low) job demands coupled with low (high) job resources, 2010



Note: For the description of the variables, please see Table 5.2.

Source: Eurofound (2010), *European Survey on Working Conditions, Wave 5*.

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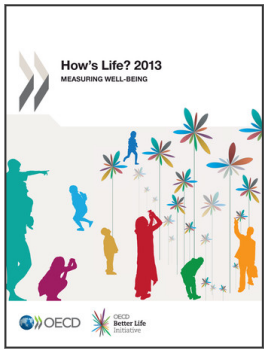
These cross-country comparisons should be considered with caution. First, they rely on methodological choices that may affect cross-country comparisons. In particular, the framework used in this section for measuring quality of life at work implies defining: a set of (mainly) qualitative variables to measure the various job demands and resources; a normalisation procedure to compare qualitative variables measured on different scales; a criterion to identify good and bad achievements; and an aggregation procedure to calculate total job demand and total job resource. Second, many aspects of life quality at work relies on workers' subjective judgement about their job, which raises a number of issues for cross-country comparisons (OECD, 2013). For instance, individuals in different countries may report similar work experiences in a different way due to cultural differences. Therefore, further work is need to ensure that this measurement framework makes it possible to compare quality of life at work across countries in a meaningful way.



From:

How's Life? 2013

Measuring Well-being

Access the complete publication at:
https://doi.org/10.1787/9789264201392-en

Please cite this chapter as:

OECD (2013), "Well-being in the workplace: Measuring job quality", in *How's Life? 2013: Measuring Well-being*, OECD Publishing, Paris.

DOI: https://doi.org/10.1787/how_life-2013-9-en