

## Overview and recommendations

### What are these Guidelines?

These *OECD Guidelines* aim to support the measurement of the quality of the working environment by official statistics. They describe the conceptual frameworks that have underpinned the measurement initiatives undertaken in this field in the past, discuss their operationalisation and methodological issues, and propose different survey modules that could be included by national statistical offices (NSOs) in their regular household surveys. In particular, the *Guidelines* are intended to:

- improve the international comparability of measures of working conditions by providing guidance to NSOs and other data producers;
- summarise the large body of research on the effects of the working environment on workers' well-being and provide a unifying conceptual framework capturing the main channels through which the working environment affects workers;
- operationalise this conceptual framework and propose several survey modules to be integrated into surveys run by NSOs;
- in the longer run, increase the number of countries for which comparable measures of the quality of the working environment are produced, so as to improve the monitoring of job quality across countries and over time.

### What is the working environment?

The “working environment” is understood in this report – as in the broader OECD framework on job quality – as a *combination of job characteristics* defining the setting where workers operate. The concept is multidimensional and encompasses a broad range of non-pecuniary characteristics of a job, ranging from the nature of the work tasks assigned to each worker to the physical and social conditions under which these tasks are carried out, the characteristics of the firm or organisation where the work takes place, the scheduling of working time, the prospects that the job provides to workers and the intrinsic rewards associated with the job. The concept denotes those *observable characteristics* of the job as they are experienced by workers.

Following this definition, a number of *guiding principles* for measurement follow. First, the working environment should be measured by looking at *outcomes* rather than *procedures*. While labour-market policies, labour codes and firm-level practices influence, to a significant extent, working conditions at both the country and the firm levels, the job conditions experienced by individual workers may be very different from what existing procedures suggest. For instance, the maximum working hours can be set at 35 hours per week by national legislation, but some workers may routinely work longer hours than this. The quality of the working environment, therefore, is best captured by focusing on

outcomes, with data on procedures and regulations used only as a second-best solution in the absence of outcome measures.

Second, the focus should be on outcomes as experienced by *individual workers* rather than what is observed at the aggregate level. As the working environment differs across workers (even when employed by the same firm), its measurement should be individual-based. Differences in the quality of the working environment are typically larger across workers within the same country than they are across countries.

Lastly, quality measures should capture, as much as possible, *objective* aspects of the job rather than *subjective* evaluations of it, which nevertheless do provide useful complementary information. While the quality of the working environment refers to a combination of objective job features, how workers evaluate their own job obviously varies from one worker to another. However, the consequences (or subjective impacts) of a good or bad quality of the working environment are logically distinct from the quality of the working environment *per se*, as workers' evaluations and experiences of their job are shaped by factors other than the working environment itself (e.g. personal characteristics or family circumstances). For this reason, these *Guidelines* recommend focusing on objective aspects of the working environment, but also that surveys include – when space allows – questions on how the working environment impacts workers' subjective well-being and productivity.

### Why have these *Guidelines* been produced?

There is a strong policy need for better measures of job quality in general, and of the quality of the working environment in particular. A long-standing tradition of empirical research has linked various aspects of the working environment to workers' physical and mental well-being. For instance, epidemiological research has established a robust link between working conditions and physical health outcomes across different countries and groups of workers. Links have also been established between a poor work environment and the mental health of workers.

From a policy perspective, good data on the working environment are crucial to: 1) measure social conditions and their progress for an entire country or community along the lines described in the Stiglitz Commission report; 2) improve workers' health and well-being, as there is increasing concern that more intensive work systems, combined with greater competitive pressures at the international level, may give rise to higher levels of mental-health problems (OECD, 2015); 3) increase productivity and competitiveness, as there is evidence that the quality of the working environment is important for work performance, an effect that may become stronger in a technologically advanced economy.

Along these lines, the OECD *Guidelines* complement the OECD's Job Quality Framework as well as the 2015 UNECE's *Handbook on Measuring Quality of Employment*, a set of internationally agreed principles for compiling statistics on the quality of employment. The OECD *Guidelines* look in greater depth at some of the UNECE dimensions and sub-dimensions that relate to the working environment – namely safety and fair treatment at work (sub-dimensions 1.a and 1.c), working time and work-life balance (dimension 3), skills development and training (dimension 6), employment-related relationships and work motivation (dimension 7).

Another objective of the *Guidelines* is to help close the gap in terms of the geographical coverage of existing data. Few non-European OECD countries currently produce statistics on the quality of the working environment and, even when they do so, these measures usually focus on the physical aspects of the work, ignoring other important facets such as task

discretion and autonomy, or learning opportunities at work. The OECD *Guidelines* propose a set of questions to capture the several facets of the concept that should be measured, and that could help both data users and data producers (e.g. national statistical offices) with limited experience in collecting statistics in this field.

In sum, the set of survey questions on the quality of the working environment proposed in the *Guidelines* aim to contribute to:

- improve the *international comparability* of measures in this field by providing a common reference point for national statistical agencies
- increase *data availability on less conventional aspects* of the working environment such as psychological risks, emotional demands and intrinsic rewards
- increase the *periodicity of the data collected*, facilitating monitoring and policy intervention
- raise the *number of countries* for which high-quality measures of the quality of the working environment are produced.

### How should these *Guidelines* be used?

These *Guidelines* are intended as a resource for both data producers and data users interested in the measurement of the quality of the working environment. Readers of the *Guidelines* will find different parts of this document valuable depending on their needs.

- Chapter 2 describes the current situation of data on the working environment. It also provides an overview of various policy initiatives that have focused on the broader notion of job quality and on how the concept of the working environment features in them. It then describes existing data sources and measurement initiatives in this field, identifying a number of gaps.
- Chapter 3 describes the existing evidence and conceptual frameworks that help to understand how the working environment impacts upon workers' well-being and their health and productivity. First, it documents the significant inequalities in working conditions that exist between different groups of workers. Second, it assesses the evidence on how the quality of the working environment affects workers' psychological and physical health and well-being with the help of the main theoretical frameworks used in research. Third, it reviews evidence on how the quality of the working environment affects workers' attitudes to work and their performance on the job.
- Chapter 4 presents the measurement framework used to describe the quality of the working environment; this framework focuses on those key job characteristics that could be observed by a third party at the level of individual workers. Other approaches to the notion of the quality of the working environment used in the literature, such as "job satisfaction" and the "person-job fit" approaches are also described; these approaches should be understood as measuring how the working environment, alongside a range of other factors (such as earnings and personal circumstances), might have an impact on workers' well-being.
- Chapter 5 explains how this measurement framework can be operationalised through survey questions. This is done by assessing the statistical validity of data sourced from surveys covering various job characteristics. For each characteristic, the chapter presents questions from existing international and national surveys, describes how these dimensions have been operationalised, and examines the extent to which questions from different international surveys produce consistent results across countries.

- Chapter 6 raises a number of methodological issues that need to be considered when collecting information on the quality of the working environment. It notes the importance of collecting data that cover the characteristics of both jobs and workers and that are relevant to both employees and self-employed workers. The chapter also reviews evidence on how survey modes and the place of interview affect the quality of data on the working environment collected through surveys.

The *Guidelines* also include two annexes:

- Annex 5.A reviews the consistency of country scores when assessing various job characteristics based on different international surveys. This evidence provides an additional criterion for question selection when designing a survey on the quality of the working environment.
- Annex 6.A proposes three prototype question modules on the working environment.
  - ❖ An extended module contains 25 questions selected from existing national and international surveys related to the 17 job characteristics used in the measurement framework. This module aims to provide a comprehensive assessment of the working environment, and could be implemented around every four to six years to get an in-depth appreciation of how the working environment has been changing.
  - ❖ A condensed module asks 13 questions pertaining to 11 job characteristics. The items included are those with the highest relevance to workers' well-being and with the strongest evidence on their statistical reliability.
  - ❖ Finally, a core module provides a minimal set of questions on the working environment (four) that could be included in general social surveys and implemented on a yearly basis.

## Main recommendations and guidance

The main conclusions and recommendations from these *Guidelines* are summarised below. These are organised under five headings, each reflecting the content of the substantive chapters of the *Guidelines*.

### **Stocktaking of data and policy initiatives**

#### **Policy initiatives**

- Concerns about job quality have featured prominently in the policy agenda. In Europe, the Lisbon and Nice European Councils in 2000 were among the first high-profile policy initiatives recognising the importance of job quality. In this respect, the European Commission and Council developed a set of indicators presented at the European Council in Laeken (Belgium) in 2001. Following the adoption of the European Union's Lisbon agenda, both EU employers' and trade unions' associations have proposed their own sets of job quality indicators.
- The International Labour Organisation (ILO) launched its Decent Work Agenda in 1999, adopting a set of indicators in 2012 in order to monitor implementation. More recently, the United Nations Commission for Europe (UNECE) set up an expert group – composed of representatives of the ILO, Eurostat, the OECD, Eurofound, the UNECE and Women in Informal Employment Globalising and Organising (WIEGO) as well as national statistical offices – and developed a *Handbook* to define *employment quality*.

- Finally, in 2015 the OECD presented its Job Quality Framework, which was subsequently adopted by the G20; in this context, the OECD also developed a composite Job Strain index to measure the prevalence of jobs in which workers face an imbalance between job demands and job resources. The notion of job quality features prominently in the ongoing preparation of the new OECD Job Strategy, to be presented for adoption at the OECD Ministerial Council Meeting of June 2018.

### **Available data**

A large number of surveys have been launched to measure several aspects of the working environment. The main data sources used in these *Guidelines* are: 1) the European Working Conditions Survey (EWCS), which is the most important international data source on the quality of the working environment currently available, as it covers a wide range of topics and has been conducted in most European countries every five years since 1991; 2) the European Social Survey (ESS), a research programme co-funded by the European Commission, the European Science Foundation and national research bodies; 3) the International Social Survey Programme (ISSP), a continuous programme of cross-national surveys that has been running since 1984, which has included a rotating Work Orientations module in 1987, 1998, 2005 and 2015/6; 4) the Gallup World Poll (GWP), conducted yearly since 2005 in over 160 countries, based on samples that are representative of the civilian, non-institutionalised population aged 15 and over; 5) national surveys such as the French *Enquête Santé et Itinéraire Professionnel* (2006 and 2012), the *British Skills and Employment Surveys* (2012 and 2006) and the *Effort-Reward Imbalance Questionnaire*.

### **Data gaps and limitations**

Despite the range of data on the quality of the working environment that is collected through various international and national household surveys, this information remains limited in many important respects:

- In terms of comprehensiveness, while there is good coverage of some aspects of the working environment for many countries, other aspects are not covered at all, or covered less well. For example, physical risk factors and work intensity are generally well covered, while data on workers' self-realisation or on the quality of management practices are seldom collected.
- Comparability is limited both across countries and in terms of different sources available for the same country. Some data sources enable international comparisons, but most of them are limited to European countries. Only a few of these sources (ISSP, GWP and ESS) cover non-European countries, but the information on the working environment collected by these is less detailed.
- In terms of frequency, the only high-quality survey on the working environment that is conducted regularly is the EWCS, which is repeated every four or five years. The ISSP Work Orientation module, currently the only survey gathering information for a large number of non-European countries, is carried out only every 8-10 years.
- Finally, most international surveys have small sample sizes (between 500 and 3 000 individuals per country), which limits the scope for disaggregating data by age, occupation or industry.

### **Understanding the quality of the working environment**

In order to target policy initiatives, it is important to know whether there are large inequalities between different groups of workers in the quality of their working environments, whether disadvantages tend to be cumulative or counter-balancing, and how specific aspects of the working environment affect individual workers – in terms of their well-being, motivation and ability to work effectively.

#### ***Inequalities in the working environment***

- While women experience much lower pay and career opportunities than men, there are no significant differences between men and women in the quality of the working environment.
- While part-timers have poorer training opportunities, job control and security, their jobs are better than those of full-time workers in terms of work pressure and the physical work environment.
- Young workers are disadvantaged with regard to job control, work pressure, the physical work environment and job insecurity, but they are as likely as others to have training opportunities.
- The three groups of workers that do experience cumulative disadvantages across a wide range of dimensions of the work environment are the low-skilled, those employed in the hotel and restaurant sector, and temporary workers.

#### ***Main conceptual frameworks***

Over recent decades, an impressive body of research has demonstrated the relevance of the quality of the working environment for workers' well-being and health conditions. The three most influential models in this field have, however, emphasised different drivers of workers' well-being and psychosocial risks:

- The *demand-control model*, developed in the 1980s by Robert Karasek and colleagues, stresses the importance of job control in reducing the risk of ill health resulting from high job demands.
- The *effort-reward imbalance model*, developed by Johannes Siegrist, has emphasised the importance of norms of reciprocity and perceived fairness between the effort required of workers and the rewards that they receive in terms of pay, status recognition and security.
- The *job demands-resources model*, developed more recently by Demerouti and colleagues, has pointed to the importance of balancing the demands of the job and the resources that are available to workers to meet those demands.

While the first two models have identified distinct sets of risk factors, providing complementary explanations of the ways in which the working environment affects workers' psychological and physical health, the third model seeks to bring together the mechanisms highlighted by the other two into a broader framework, emphasising the importance of a broader range of factors in the working environment for the worker's well-being.

As the job demands-resources model includes a broader range of factors, it has been used as the main workhorse to measure the quality of the working environment in the OECD Job Quality framework. This model is also used in these *Guidelines* to identify whether a given characteristic of the working environment can be understood as either a job demand or a job resource.

### ***Impacts on productivity***

- The research evidence on the effects of the working environment on firms' productivity is less substantial than that available with respect to the effects on workers' well-being. The strongest evidence relates to its impact on absences from work, job turnover and job performance.
- The research on work engagement, organisational commitment and innovative behaviour point in a similar direction. Evidence indicates that the quality of the working environment has either positive effects or no effects on firms' performance. There is, in other words, no support for the view that the pursuit of a good working environment comes at a cost for organisational performance.

### ***Measuring the quality of the working environment***

This section lays out the measurement framework used to assess the quality of the working environment. A number of general criteria are established, before describing the key job characteristics of the working environment. This approach is then compared to other alternatives.

#### ***General criteria***

- *Outcomes rather than procedures.* Work regulations provide a weak basis for assessing working conditions. These *Guidelines* hence recommend focusing on outcomes to measure the working environment. Major issues with focusing on procedures are the substantial variation between countries, industries and firms with respect to compliance, and the delay between the moment when the regulations are set in place and when they produce their effects in the workplace.
- *Individual rather than aggregate measures.* The working environment is a multidimensional concept that can be captured only at the individual level through the use of micro-level data. Another advantage of defining the quality of the working environment at the individual level is that it allows going beyond country averages to look at inequalities.
- *Objective rather than purely subjective aspects.* These *Guidelines* conceptualise the working environment as a collection of job features that are observable by a third party, implying somehow an objective standpoint. However, the consequences of the working environment on the subjective well-being of workers provide complementary information to be included in surveys.

#### ***Identifying key job characteristics***

A careful review of previous research and intensive consultation with the Expert Group created to support the production of these *Guidelines* have identified 17 key job characteristics, viewed either as a job resource or a job demand, organised into six broad dimensions:

- The physical and social environments of work include physical risk factors and physical demands (i.e. job demands) and social support at work (i.e. job resources).
- Job tasks capture work intensity and emotional demands (i.e. job demands) and autonomy or task discretion (i.e. job resources).
- Organisational characteristics cover organisational participation and workplace voice, good managerial practices, task clarity and performance feedback (i.e. job resources).

- Working-time arrangements are related to unsocial work schedules (i.e. job demands) and the flexibility of working hours (i.e. job resources).
- Job prospects are linked to perceptions of job insecurity (i.e. job demands), training and learning opportunities as well as opportunities for career advancement (i.e. job resources).
- The intrinsic aspects of the job refer to opportunities for self-realisation and intrinsic rewards (i.e. job resources).

Taken together, these six dimensions allow a comprehensive assessment of the working environment, suitable for comparing countries, sectors and firms. Key advantages of the job characteristics approach are its reliability, the ability to test for its validity, comparability across respondents, countries and time and its policy amenability. It is, however, costly to implement due to the volume of information needed.

### **Other approaches**

- A simpler approach consists of using a subjective measure of job satisfaction as a single indicator of job quality, an approach that has the advantage of capturing the individual preferences of workers. However, job satisfaction also has drawbacks: 1) it captures other aspects of the job that are not related to the quality of the working environment, such as earnings; 2) its determinants are difficult to uncover; and 3) adaptation to bad jobs may send an inaccurate signal about the quality of these jobs.
- The “person-fit” approach posits that the quality of the working environment can be assessed by looking at the match between the characteristics of the worker and those of the job: strain arises when there is a mismatch between the person and the environment, which could be due to the lack of adequate means to meet the person’s needs, or because the abilities of the person fall short of the job demands. Despite its flexibility, this measurement approach is affected by self-selection of workers to well-fitting jobs, downward adaptation and limited cross-country comparability.

### **Statistical validity of survey questions**

Most of the 17 job characteristics identified by these *Guidelines* are covered by various international and national surveys. Evidence from these surveys can be used to evaluate the convergent validity of the survey questions pertaining to each of these job characteristics. Key conclusions include the following:

- While available surveys provide good coverage of some aspects of the working environment, other aspects are less well covered. For example, the seven international surveys considered include questions on physical risk factors and work intensity, but only two of them have questions on the opportunities that a job provides for workers’ self-realisation and on the quality of management practices. Comparative information on several aspects of the working environment (e.g. physical demands, task discretion and autonomy, training and learning opportunities at work, intrinsic rewards of one’s job, the work-life balance, unsociable work hours and the flexibility of working hours) is currently available only for European and a few other OECD countries.
- Despite their uneven coverage, most of the job characteristics discussed in the *Guidelines* have been measured in fairly reliable ways across surveys. More specifically, survey questions on physical risk factors, training opportunities, job insecurity, social support at work, opportunities for career advancement and self-realisation, task discretion and autonomy, and the flexibility of working hours produced similar values for the countries



covered by different surveys. The results for other job characteristics, such as intrinsic rewards, are more sensitive to the question wording (e.g. negative or positive wording) and the response scales used.

- There is good evidence of convergent validity for a number of survey questions. Regarding job demands, this is the case of data on working in noisy or polluted environments, carrying heavy loads, experiencing stress and worry due to work and working during weekends, as well as hours worked per week and the perceived risks of losing one's job in the near future. Regarding job resources, this concerns data on assistance from co-workers, ability to organise the order of tasks, involvement of staff in work organisation, ability to decide about breaks or holidays, availability of training, learning new things on the job, and good opportunities for career advancement.

### **Methodological issues**

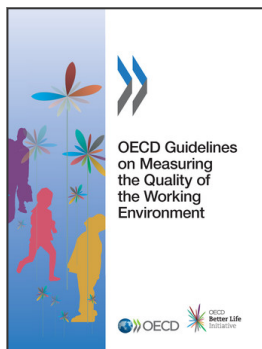
Implementing surveys on the working environment requires making decisions about what aspects to measure and the best approaches to measuring them. General principles in this field include the following:

- *Data sources.* Primary sources of data should be preferred over secondary ones. The most appropriate sources for measuring the working environment are sample surveys covering the whole working population.
- *Unit of analysis.* The preferred unit of analysis should be the individual worker, rather than the firm or the country. Firm-level data may provide a shortcut to measuring some aspect of the working environment, in so far as management and HR practices influence working conditions, but also conceal differences across workers.
- *Self-employed workers.* The working environment is as relevant to the self-employed as it is to employees; thus, self-employed individuals should not be excluded from surveys designed to measure the quality of the working environment. Carefully worded questions that refer to the job rather than to firm-specific practices allow the same questions to be asked to both employees and self-employed workers. However, surveys should also contain questions to identify the self-employed, who often self-select into jobs with specific job characteristics, such as high autonomy.
- *Contextual questions.* The questions specifically measuring the quality of the working environment should be complemented with contextual questions covering eligibility (e.g. paid work, main job and employment status), demographic characteristics (e.g. age, gender and ethnicity), contract (e.g. temporary or permanent contracts) and employment characteristics (occupation, industry, working hours and job tenure) as well as items on workers' well-being outcomes and at-work productivity.
- *Proxy respondents.* Survey questions on the working environment cannot be answered by proxy respondents. If the survey vehicle that contains questions on the working environment allows proxy responses in its design, skip patterns should be used to prevent proxy respondents from providing answers to these questions.
- *Survey mode.* Self-administered surveys (telephone or internet surveys) produce lower response rates and higher non-completion rates than interviewer-led surveys. Also, individuals respond more negatively to questions of a subjective nature in self-administered surveys. More factual questions – as recommended in these *Guidelines* – are less likely to be affected by survey mode effects.

- *Sampling frame.* The sample should be representative of the working population. The most appropriate sampling frame is hence represented by all individuals within an age band who have done paid work in the reference week of the survey. However, household surveys or social surveys with a sampling frame that covers all people living in private households can also be used for measuring the quality of the working environment. In these cases, sample weights should be applied in order to correct for over-representation of members of the same household.
- *Survey frequency.* Statistics on the quality of the working environment should be collected on a regular basis. If collected approximately every five years, specialised working conditions surveys may capture major changes in the quality of the working environment. More frequent (i.e. annual or quarterly) collection of core questions on the working environment in general surveys, on the other hand, would allow working conditions to be more closely monitored for policy action.

## Conclusions

As compared to other aspects of the “Beyond GDP” agenda, a substantial body of evidence and statistical practice already exists in the field of the working environment, mainly reflecting long-established regulations to address health and safety concerns in the workplace. But both the nature of the working environment and the key aspects shaping it have evolved over time, reaching beyond the physical risk factors that were the focus of traditional health and safety regulations, to encompass a much broader range of socio-environmental aspects. In a context where changes in work organisations and labour-market practices increasingly highlight the limits of metrics exclusively focused on the *quantitative* aspects of jobs (e.g. employment counts based on whether people have worked for at least one hour during the survey reference week), and where disparities in how labour markets shape people’s lives depend on the *quality* of the jobs that people hold, policy demands for better metrics of people’s working conditions are bound to increase in the future, as witnessed *inter alia* by the inclusion of targets relating to job quality and decent work in the 2030 Agenda.



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